

Integrative Structure Validation Report

September 11, 2024 - 12:25 AM PDT

The following software was used in the production of this report:

Python-IHM Version 1.3

MolProbity Version 4.5.2

Integrative Modeling Validation Version 1.2

PDB ID	9A6U
PDB-Dev ID	PDBDEV_00000323
Structure Title	Integrative model of RPOC-FLIF by crosslinking MS and deep learning
Structure Authors	Kolja Stahl; Oliver Brock; Juri Rappsilber

This is a PDB-Dev IM Structure Validation Report for a publicly released PDB-Dev entry.

We welcome your comments at pdb-dev@mail.wwpdb.org

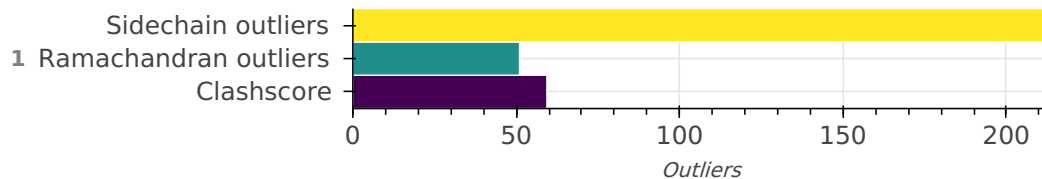
A user guide is available at https://pdb-dev.wwpdb.org/validation_help.html with specific help available everywhere you see the  symbol.

List of references used to build this report is available [here](#).

Overall quality

This validation report contains model quality assessments for all structures, data quality assessment for SAS datasets and fit to model assessments for SAS datasets. Data quality and fit to model assessments for other datasets and model uncertainty are under development. Number of plots is limited to 256.

Model Quality: MolProbity Analysis



Ensemble information ?

This entry consists of 0 distinct ensemble(s).

Summary ?

This entry consists of 1 unique models, with 2 subunits in each model. A total of 1 datasets or restraints were used to build this entry. Each model is represented by 0 rigid bodies and 2 flexible or non-rigid units.

Entry composition ?

There is 1 unique type of models in this entry. This model is titled None/None.

Model ID	Subunit number	Subunit ID	Subunit name	Chain ID	Chain ID [auth]	Total residues
1	1	1	RPOC_BACSU	A	A	1199
1	2	2	FLIF_BACSU	B	B	536

Datasets used for modeling ?

There is 1 unique dataset used to build the models in this entry.

ID	Dataset type	Database name	Data access code
1	Crosslinking-MS data	PRIDE	PXD035508

Representation ?

This entry has only one representation and includes 0 rigid bodies and 2 flexible units.

Chain ID	Rigid bodies	Non-rigid segments

Chain ID	Rigid bodies	Non-rigid segments
A	-	1-1199
B	-	1-536

Methodology and software ?

This entry is a result of 1 distinct protocol(s).

Step number	Protocol ID	Method name	Method type	Method description	Number of computed models	Multi state modeling	Multi scale modeling
1	1	AlphaLink2	AlphaLink2	None	1	False	False

There is 1 software package reported in this entry.

ID	Software name	Software version	Software classification	Software location
1	AlphaLink2	1.0	model building	https://github.com/Rappsilber-Laboratory/AlphaLink2

Data quality ?

Crosslinking-MS

Validation for this section is under development.

Model quality ?

For models with atomic structures, molprobit analysis is performed. For models with coarse-grained or multi-scale structures, excluded volume analysis is performed.

Standard geometry: bond outliers ?

There are 13793 bond outliers in this entry. A summary is provided below, and a detailed list of outliers can be found [here](#).

Bond type	Observed distance (Å)	Ideal distance (Å)	Number of outliers
CG--HG2	1.09	0.97	570

Bond type	Observed distance (Å)	Ideal distance (Å)	Number of outliers
CA--HA	1.09	0.97	1614
CB--HB3	1.09	0.97	1260
CG2--HG22	1.09	0.97	354
CG2--HG23	1.09	0.97	354
CE--HE2	1.09	0.97	183
CD--HD2	1.09	0.97	299
CD1--HD11	1.09	0.97	269
CG1--HG11	1.09	0.97	144
CE--HE1	1.09	0.97	50
CB--HB2	1.09	0.97	1260
CE--HE3	1.09	0.97	183
CB--HB	1.09	0.97	354
CG--HG	1.09	0.97	153
CD1--HD13	1.09	0.97	269
NZ--HZ1	1.01	0.89	133
CD--HD3	1.09	0.97	299
CD1--HD12	1.09	0.97	269
CG--HG3	1.09	0.97	570
NZ--HZ2	1.01	0.89	133
OG--HG	0.96	0.84	96
CD2--HD23	1.09	0.97	153
CB--HB1	1.09	0.97	119
NZ--HZ3	1.01	0.89	133

Bond type	Observed distance (Å)	Ideal distance (Å)	Number of outliers
CG1--HG13	1.09	0.97	260
OG1--HG1	0.96	0.84	94
CG2--HG21	1.09	0.97	354
CD2--HD22	1.09	0.97	153
CG1--HG12	1.09	0.97	260
CA--HA3	1.09	0.97	121
CA--HA2	1.09	0.97	121
OH--HH	0.96	0.84	46
CD2--HD21	1.09	0.97	153
N--H3	1.01	0.89	2
N--H1	1.01	0.89	2
N--H2	1.01	0.89	2
SG--HG	1.33	1.20	1
SG--HG	1.34	1.20	8
N--H	1.01	0.86	1662
NH2--HH21	1.01	0.86	95
CE2--HE2	1.08	0.93	92
CD1--HD1	1.08	0.93	102
ND2--HD22	1.01	0.86	83
NH1--HH12	1.01	0.86	95
CE3--HE3	1.08	0.93	10
CE1--HE1	1.08	0.93	116
ND2--HD21	1.01	0.86	83
CD2--HD2	1.08	0.93	116

Bond type	Observed distance (Å)	Ideal distance (Å)	Number of outliers
NH2--HH22	1.01	0.86	95
NE1--HE1	1.01	0.86	10
NE2--HE22	1.01	0.86	73
NE2--HE21	1.01	0.86	73
NH1--HH11	1.01	0.86	95
NE--HE	1.01	0.86	95
ND1--HD1	1.01	0.86	22
CZ--HZ	1.08	0.93	46
CH2--HH2	1.08	0.93	10
CZ2--HZ2	1.08	0.93	10
CZ3--HZ3	1.08	0.93	10
NE2--HE2	1.01	0.86	2

Standard geometry: angle outliers

There are 10386 angle outliers in this entry. A summary is provided below, and a detailed list of outliers can be found [here](#).

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
OD1-CG-ND2	122.60	166.59	1
OD1-CG-ND2	122.60	79.49	1
OD1-CG-ND2	122.60	164.56	1
O-C-N	123.00	61.11	1
O-C-N	123.00	61.48	1
OD1-CG-ND2	122.60	85.18	1
O-C-N	123.00	70.58	1
O-C-N	123.00	70.87	1
O-C-N	123.00	72.24	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CA-C-O-C-N	123.00	74.62	1
O-C-N	123.00	74.77	1
O-C-N	123.00	74.81	1
O-C-N	123.00	74.84	1
O-C-N	123.00	77.04	1
O-C-N	123.00	77.82	1
O-C-N	123.00	77.88	1
O-C-N	123.00	77.90	1
O-C-N	123.00	78.35	1
O-C-N	123.00	78.71	1
O-C-N	123.00	79.06	1
CA-C-N	116.20	170.67	1
O-C-N	123.00	80.07	1
C-N-CA	121.70	169.58	1
O-C-N	123.00	81.43	1
O-C-N	123.00	81.55	1
O-C-N	123.00	81.94	1
O-C-N	123.00	82.62	1
C-N-CA	121.70	166.78	1
O-C-N	123.00	83.61	1
O-C-N	123.00	83.69	1
O-C-N	123.00	83.93	1
CB-CG-OD1	118.40	174.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
C-N-CA	121.70	165.07	1
CA-C-N	116.20	163.98	1
O-C-N	123.00	85.00	1
OD1-CG-ND2	122.60	146.21	1
OD1-CG-ND2	122.60	99.57	1
O-C-N	123.00	86.30	1
NE-CZ-NH2	119.20	98.57	1
O-C-N	123.00	86.41	1
O-C-N	123.00	159.39	1
O-C-N	123.00	86.96	1
O-C-N	123.00	87.11	1
O-C-N	123.00	87.15	1
CA-C-N	116.20	160.96	1
O-C-N	123.00	87.24	1
OD1-CG-ND2	122.60	100.28	1
O-C-N	123.00	87.43	1
O-C-N	123.00	87.65	1
O-C-N	123.00	87.81	1
CA-C-N	116.20	159.91	1
CG-CD-OE1	118.40	168.64	1
O-C-N	123.00	88.06	1
O-C-N	123.00	88.07	1
O-C-N	123.00	88.51	1
C-N-CA	121.70	160.49	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
C-N-CA	121.70	160.38	1
O-C-N	123.00	88.67	1
O-C-N	123.00	88.70	1
O-C-N	123.00	88.75	1
OE1-CD-NE2	122.60	143.78	1
O-C-N	123.00	156.72	1
CD-NE-CZ	124.40	95.01	1
O-C-N	123.00	89.67	1
O-C-N	123.00	89.81	1
O-C-N	123.00	89.89	1
O-C-N	123.00	90.20	1
CG-CD-NE2	116.40	85.77	1
CA-CB-CG	112.60	92.33	1
O-C-N	123.00	90.74	1
CB-CG-OD1	120.80	161.02	1
CA-CB-CG	112.60	92.51	1
OD1-CG-ND2	122.60	142.63	1
C-N-CA	121.70	157.30	1
O-C-N	123.00	91.47	1
O-C-N	123.00	91.48	1
O-C-OXT	118.00	177.06	1
O-C-N	123.00	91.53	1
O-C-N	123.00	91.62	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CA-C-N	116.20	155.36	1
O-C-N	123.00	91.75	1
CA-C-N	116.20	154.99	1
O-C-N	123.00	91.98	1
CA-C-N	116.20	154.50	1
O-C-N	123.00	92.40	1
O-C-N	123.00	92.41	1
CB-CG-OD1	118.40	162.23	1
O-C-N	123.00	92.51	1
CA-CB-CG	112.60	93.57	1
O-C-N	123.00	92.56	1
C-N-CA	121.70	87.54	1
C-N-CA	121.70	155.82	1
CA-C-N	116.20	78.29	1
O-C-N	123.00	92.82	1
CA-C-N	116.20	153.91	1
O-C-N	123.00	92.92	1
O-C-N	123.00	93.02	1
O-C-O-C-N	123.00	93.30	1
O-C-N	123.00	93.33	1
O-C-N	123.00	93.37	1
O-C-N	123.00	93.47	1
O-C-N	123.00	93.66	1
CA-CB-CG	112.60	94.26	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CG-CD-NE2	116.40	88.94	1
O-C-N	123.00	93.75	1
C-N-CA	121.70	154.58	1
CA-C-N	116.20	152.61	1
OD1-CG-ND2	122.60	140.76	1
O-C-N	123.00	94.21	1
C-N-CA	121.70	154.06	1
O-C-N	123.00	94.38	1
O-C-N	123.00	94.43	1
C-N-CA	121.70	153.73	1
C-N-CA	121.70	153.71	1
CB-CG-CD1	120.80	94.15	1
O-C-N	123.00	94.80	1
C-N-CA	121.70	90.13	1
O-C-N	123.00	94.95	1
CB-CG-ND2	116.40	90.27	1
CA-C-N	116.20	81.38	1
CB-CG-OD1	118.40	158.44	1
O-C-N	123.00	95.22	1
O-C-N	123.00	95.28	1
CB-CG-CD	112.60	83.18	1
O-C-N	123.00	95.33	1
OD1-CG-ND2	122.60	139.84	1
CG-CD-OE1	120.80	86.35	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
O-C-N	123.00	95.46	1
O-C-N	123.00	95.47	1
O-C-N	123.00	95.49	1
C-N-CA	121.70	152.40	1
CB-CG-OD1	118.40	157.43	1
C-N-CA	121.70	152.11	1
C-N-CA	121.70	91.33	1
C-N-CA	121.70	151.81	1
C-N-CA	121.70	151.66	1
O-C-N	123.00	96.41	1
O-C-N	123.00	96.44	1
O-C-N	123.00	96.47	1
O-C-N	123.00	96.59	1
CA-C-N	116.20	149.14	1
C-N-CA	121.70	92.22	1
C-N-CA	121.70	151.14	1
O-C-N	123.00	149.03	1
CA-C-OXT	121.00	72.34	1
O-C-N	123.00	97.08	1
C-N-CA	121.70	150.83	1
C-N-CA	121.70	150.78	1
CA-C-N	116.20	148.46	1
O-C-N	123.00	97.21	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CA-C-N	116.20	148.44	1
CB-CG-CD1	120.80	144.92	1
CA-C-N	116.90	140.91	1
O-C-N	123.00	148.53	1
C-N-CA	121.70	150.29	1
O-C-N	123.00	97.68	1
O-C-N	123.00	97.72	1
C-N-CA	121.70	93.31	1
C-N-CA	121.70	93.35	1
C-N-CA	121.70	150.04	1
O-C-N	123.00	97.85	1
O-C-N	123.00	97.98	1
O-C-N	123.00	98.10	1
C-N-CA	121.70	149.69	1
C-N-CA	121.70	149.62	1
O-C-N	123.00	147.80	1
C-N-CA	121.70	149.57	1
C-N-CA	121.70	149.56	1
C-N-CA	121.70	149.54	1
O-C-N	123.00	98.25	1
O-C-N	123.00	98.36	1
CA-C-N	116.90	139.98	1
CA-CB-CG	112.60	97.24	1
CB-CG-CD	112.60	86.54	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
O-C-N	123.00	147.49	1
O-C-N	123.00	98.54	1
CA-C-N	116.20	85.77	1
CA-C-N	116.20	146.62	1
CA-C-N	116.20	146.55	1
OD1-CG-ND2	122.60	137.73	1
CG-CD-OE1	118.40	153.09	1
CA-C-N	116.90	139.52	1
O-C-N	123.00	98.96	1
CG-CD-OE1	118.40	152.93	1
O-C-N	123.00	99.00	2
CA-C-N	116.20	145.92	1
CA-C-N	116.20	145.83	1
CB-CG-CD2	120.80	143.00	1
OD1-CG-ND2	122.60	107.90	1
C-N-CA	121.70	95.26	1
O-C-O-C-N	123.00	99.70	1
C-N-CA	121.70	147.90	1
CA-C-N	116.20	145.30	1
CA-C-N	116.20	145.29	1
C-N-CA	121.70	147.85	1
O-C-N	123.00	99.78	1
O-C-N	123.00	99.86	1
O-C-N	123.00	99.87	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CA-C-N	116.20	145.05	1
O-C-N	123.00	99.92	1
CA-C-N	116.20	144.91	1
OE1-CD-OE2	122.90	157.33	1
O-C-N	123.00	100.11	1
O-C-N	123.00	145.86	1
O-C-N	123.00	100.18	1
O-C-N	123.00	100.19	1
CA-C-O	120.80	96.60	1
NE-CZ-NH1	121.50	135.73	1
OD1-CG-ND2	122.60	108.38	1
OE1-CD-OE2	122.90	88.81	1
C-N-CA	121.70	147.15	1
CB-CG-ND2	116.40	95.32	1
CD-NE-CZ	124.40	104.76	1
O-C-N	123.00	100.57	1
CD1-CG-CD2	106.30	83.87	1
CB-CG-CD1	120.80	141.81	1
O-C-N	123.00	100.63	1
CB-CG-CD	112.60	88.90	1
O-C-N	123.00	100.75	1
C-N-CA	121.70	96.76	1
OE1-CD-NE2	122.60	136.43	1
C-N-CA	121.70	146.58	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
O-C-N	123.00	100.94	1
OE1-CD-OE2	122.90	155.87	1
CG-CD-NE2	116.40	136.98	1
CA-C-N	116.20	143.60	1
CD1-CG-CD2	106.30	84.43	1
O-C-N	123.00	101.17	1
CB-CG-ND2	116.40	95.95	1
CA-C-N	116.20	143.46	1
C-N-CA	121.70	146.22	1
CA-C-O	120.80	97.65	1
O-C-N	123.00	101.27	1
CA-C-O	120.80	143.86	1
O-C-N	123.00	101.31	1
CA-C-N	116.20	143.28	1
O-C-N	123.00	101.37	1
OE1-CD-NE2	122.60	109.09	1
O-C-N	123.00	101.40	1
O-C-N	123.00	101.42	1
CA-C-N	116.20	143.13	1
CD1-CG-CD2	118.10	97.93	1
C-N-CA	121.70	145.87	1
C-N-CA	121.70	145.78	1
CA-C-N	116.20	142.92	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
OE1-CD-NE2	122.60	135.94	1
OD1-CG-ND2	122.60	135.81	1
C-N-CA	121.70	97.93	1
O-C-N	123.00	101.87	1
O-C-N	123.00	101.90	1
C-N-CA	121.70	145.40	1
O-C-N	123.00	144.06	1
CA-C-N	116.20	142.46	1
C-N-CA	121.70	145.33	1
O-C-N	123.00	102.05	1
O-C-N	123.00	102.08	1
C-N-CA	121.70	145.20	1
CA-C-N	116.20	90.10	1
O-C-N	123.00	102.15	1
CB-CG-OD2	118.40	88.47	1
O-C-N	123.00	102.23	1
OD1-CG-OD2	122.90	91.82	1
O-C-N	123.00	102.29	1
CA-C-N	116.20	90.33	1
C-N-CA	121.70	144.96	1
C-N-CA	121.70	144.95	1
O-C-N	123.00	102.34	1
CA-C-N	116.20	141.99	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
O-C-N	123.00	102.37	1
CB-CG-ND1	122.70	103.39	1
O-C-N	123.00	102.51	1
O-C-N	123.00	102.60	2
CB-CG-CD	112.60	90.93	1
O-C-N	123.00	102.62	1
O-C-N	123.00	143.24	1
CA-CB-CG	113.80	101.18	1
OE1-CD-NE2	122.60	110.01	1
C-N-CA	121.70	144.36	1
O-C-N	123.00	143.14	1
OD1-CG-ND2	122.60	110.03	1
CA-C-N	116.20	141.34	1
O-C-N	123.00	102.96	1
CA-C-N	116.20	141.25	1
CA-C-N	116.20	91.18	1
CG-CD-NE2	116.40	135.13	1
O-C-N	123.00	103.02	1
C-N-CA	121.70	99.25	1
C-N-CA	121.70	144.14	1
OD1-CG-ND2	122.60	110.14	1
CG-CD-CE	111.30	82.65	1
CA-C-N	116.20	91.30	1
C-N-CA	121.70	99.32	2

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
C-N-CA	121.70	144.05	1
CA-C-N	116.20	141.00	1
C-N-CA	121.70	144.00	1
CA-C-N	116.20	140.97	2
CB-CG1-CD1	113.80	139.79	1
O-C-N	123.00	103.23	1
CA-C-N	116.20	140.90	1
CG-CD-OE1	118.40	146.77	1
O-C-N	123.00	103.31	1
C-N-CA	121.70	143.84	1
CA-C-N	116.20	140.78	1
C-N-CA	121.70	143.80	1
C-N-CA	121.70	99.68	1
OD1-CG-OD2	122.90	152.10	1
CB-CG-OD1	120.80	96.46	1
OE1-CD-NE2	122.60	110.43	1
O-C-N	123.00	103.54	1
CA-C-O	120.80	100.16	1
C-N-CA	121.70	99.85	1
CA-C-N	116.20	91.97	1
C-N-CA	121.70	100.00	1
CG-CD-OE2	118.40	90.74	1
OD1-CG-ND2	122.60	110.63	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
O-C-N	123.00	103.86	1
C-N-CA	121.70	143.17	1
NE-CZ-NH2	119.20	129.93	1
CA-C-O	120.80	100.54	1
O-C-N	123.00	103.96	1
CA-C-N	116.20	139.92	1
CB-CG-CD	112.60	92.56	1
CG-CD1-CE1	121.20	138.88	1
O-C-N	123.00	104.15	1
O-C-N	123.00	141.84	1
C-N-CA	121.70	142.88	1
CA-C-N	116.20	139.72	1
CB-CG-OD1	120.80	97.31	1
CD1-CG-CD2	118.10	100.49	1
CB-CG-CD2	120.70	100.76	1
CB-CG-OD1	120.80	97.39	1
CD1-CG-CD2	118.60	101.08	1
O-C-N	123.00	104.34	1
C-N-CA	121.70	100.72	1
O-C-N	123.00	104.41	1
O-C-N	123.00	141.57	1
O-C-N	123.00	104.47	1
OD1-CG-ND2	122.60	111.03	1
C-N-CA	121.70	142.53	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
C-N-CA	121.70	142.46	1
C-N-CA	121.70	142.42	1
C-N-CA	121.70	142.39	1
CA-C-O	120.80	140.31	1
O-C-C-N-CA	121.70	142.32	1
CD1-CG-CD2	118.10	100.92	1
O-C-N	123.00	104.69	2
C-N-CA	121.70	142.29	1
NE-CZ-NH2	119.20	108.90	1
CA-C-O	120.80	101.37	1
CA-C-N	116.20	138.97	1
O-C-N	123.00	104.83	1
O-C-N	123.00	104.84	1
CB-CG-CD	112.60	131.86	1
CD-NE-CZ	124.40	140.26	1
CA-C-N	116.20	138.85	1
C-N-CA	121.70	101.35	1
CA-C-N	116.20	138.80	1
CA-C-N	116.20	93.60	1
CB-CG-CD	112.60	93.41	1
CA-C-N	116.20	138.75	1
OD1-CG-OD2	122.90	95.90	1
CA-C-N	116.20	138.66	1
CA-C-O	120.80	101.71	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
C-N-CA	121.70	141.90	1
CA-C-N	116.20	93.76	1
O-C-N	123.00	105.05	1
CA-C-N	116.20	138.63	1
C-N-CA	121.70	141.88	1
O-C-N	123.00	105.07	1
C-N-CA	121.70	141.87	1
C-N-CA	121.70	141.86	1
O-C-N	123.00	105.13	1
CA-C-N	116.20	138.43	1
O-C-N	123.00	105.22	1
O-C-N	123.00	105.23	1
CD-CE-NZ	111.90	76.38	1
CD1-CG-CD2	110.80	86.39	1
O-C-CB-CG-CD2	120.80	104.21	1
O-C-N	123.00	105.31	1
O-C-N	123.00	105.32	1
CA-C-N	116.20	138.29	1
CB-CG-CD	112.60	93.82	1
O-C-N	123.00	105.33	1
C-N-CA	121.70	141.52	1
O-C-N	123.00	140.61	1
CA-C-N	116.20	138.14	1
C-N-CD	125.00	80.18	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
O-C-N	123.00	105.51	1
CB-CG-CD1	120.80	104.44	1
C-N-CA	121.70	141.32	1
C-N-CA	121.70	102.12	1
CB-CG-ND2	116.40	132.72	1
CA-C-N	116.20	137.95	1
CB-CG-OD2	118.40	93.39	1
CD-NE-CZ	124.40	109.18	1
C-N-CA	121.70	102.14	1
O-C-N	123.00	140.38	1
CA-C-N	116.20	137.91	1
C-N-CA	121.70	102.16	1
CB-CG-CD2	126.80	111.60	1
CA-C-N	116.20	137.88	1
O-C-N	123.00	105.67	1
OG1-CB-CG2	109.30	87.67	1
O-C-N	123.00	140.29	1
CA-C-N	116.20	137.82	1
CA-CB-CG	112.60	101.79	1
CA-C-N	116.20	94.59	1
C-N-CA	121.70	102.27	1
C-N-CA	121.70	141.12	1
CA-C-N	116.20	137.77	1
O-C-N	123.00	105.75	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
C-N-CA	121.70	102.31	1
NE-CZ-NH1	121.50	132.26	1
CA-C-N	116.20	137.71	1
OD1-CG-OD2	122.90	97.09	1
CG-CD-OE1	118.40	143.13	1
OE1-CD-OE2	122.90	97.16	1
O-C-N	123.00	105.92	1
CA-C-N	116.90	132.90	1
O-C-N	123.00	105.98	1
CB-CG-OD2	118.40	93.94	1
C-N-CA	121.70	140.82	1
CB-CG-OD2	118.40	142.78	1
O-C-N	123.00	106.09	1
CA-C-N	116.20	137.33	1
O-C-O-C-N	123.00	106.16	1
CA-CB-CG	112.60	102.10	1
O-C-N	123.00	106.21	1
O-C-N	123.00	106.25	1
NE-CZ-NH1	121.50	111.05	1
CB-CG-CD	112.60	94.86	1
CA-C-N	116.20	95.42	1
CB-CG-CD1	120.80	105.22	1
OE1-CD-OE2	122.90	147.81	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CA-CB-CG	114.10	93.36	1
O-C-N	123.00	106.43	1
C-N-CA	121.70	140.33	1
CG-CD2-CE3	133.90	123.55	1
CG-CD-OE2	118.40	94.63	1
O-C-N	123.00	106.50	1
C-N-CA	121.70	140.25	1
CB-CG-CD	111.30	87.60	1
C-N-CA	121.70	140.23	1
C-N-CA	121.70	103.19	1
O-C-N	123.00	106.58	1
O-C-N	123.00	106.63	2
CG-CD-CE	111.30	87.78	1
C-N-CA	121.70	140.00	1
CA-C-N	116.20	136.53	1
OE1-CD-OE2	122.90	147.28	1
C-N-CA	121.70	139.98	1
O-C-N	123.00	106.76	1
CA-C-O	120.80	138.03	1
C-N-CA	121.70	139.90	1
CA-C-N	116.20	136.41	1
C-N-CA	121.70	103.53	1
O-C-N	123.00	139.15	1
CB-CG-ND2	116.40	131.54	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CA-C-N	116.20	96.05	1
CA-C-N	116.20	136.32	1
C-N-CA	121.70	139.81	1
O-C-N	123.00	106.91	2
OD1-CG-O-C-N	123.00	106.93	1
CA-C-N	116.20	136.28	1
O-C-N	123.00	106.94	1
CA-C-N	116.20	136.27	1
OE1-CD-NE2	122.60	112.56	1
CA-C-N	116.90	131.95	1
OD1-CG-OD2	122.90	146.98	1
CA-C-N	116.20	136.26	1
C-N-CA	121.70	139.73	1
CA-C-N	116.90	131.91	1
CA-C-N	116.20	136.21	1
O-C-N	123.00	107.03	1
O-C-N	123.00	138.96	1
O-C-C-N-CA	121.70	103.81	1
C-N-CA	121.70	139.58	1
C-N-CA	121.70	103.82	1
O-C-N	123.00	107.11	1
O-C-N	123.00	107.12	1
CA-CB-CG	113.80	103.89	1
CA-C-N	116.20	135.99	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
O-C-O-C-N	123.00	107.19	1
O-C-N	123.00	107.28	1
C-N-CA	121.70	139.35	1
OD1-CG-ND2	122.60	112.80	1
CA-CB-OG1	109.60	124.29	1
O-C-N	123.00	107.33	2
CA-C-N	116.20	135.74	1
C-N-CA	121.70	139.28	1
CA-CB-CG	114.10	94.58	1
C-N-CA	121.70	139.27	1
O-C-N	123.00	107.39	2
C-N-CA	121.70	139.26	1
CB-CG-CD	112.60	96.03	1
O-C-N	123.00	107.41	1
CA-CB-CG	113.90	96.37	1
CA-CB-CG	113.60	95.10	1
C-N-CA	121.70	139.23	1
CA-C-N	116.20	96.73	1
O-C-N	123.00	107.46	1
C-N-CA	121.70	139.16	1
C-N-CA	121.70	139.15	1
O-C-N	123.00	138.48	1
CA-C-N	116.20	135.53	1
CB-CG-ND2	116.40	130.89	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CA-C-N	116.20	135.48	1
CG-CD-OE1	118.40	96.23	1
CB-CG-CD	112.60	96.22	1
O-C-N	123.00	107.59	2
C-N-CA	121.70	139.04	1
CA-C-N	116.20	135.44	1
CA-C-N	116.20	135.38	1
CA-C-N	116.20	135.34	1
CB-CG-CD	112.60	96.34	1
CA-C-N	116.20	135.31	1
OD1-CG-OD2	122.90	99.98	1
CG-CD-NE2	116.40	102.09	1
C-N-CA	121.70	138.86	1
O-C-N	123.00	138.25	1
CA-C-O	120.80	104.60	1
C-N-CA	121.70	104.55	1
O-C-CA-C-N	116.20	135.24	1
CA-C-O	120.80	104.63	1
O-C-N	123.00	107.80	1
CB-CG-ND2	116.40	102.15	1
CB-CG-CD	112.60	128.74	1
CB-CG-ND2	116.40	102.18	1
CA-N-CD	112.00	98.76	1
CA-C-N	116.20	135.10	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CG-SD-CE	100.90	121.66	1
O-C-O-C-N	123.00	107.91	1
C-N-CA	121.70	138.66	1
C-N-CA	121.70	138.65	1
CB-CG-OD1	118.40	140.03	1
O-C-N	123.00	107.96	1
CB-CG-OD2	118.40	96.79	1
OE1-CD-NE2	122.60	131.99	1
CA-C-N	116.20	134.96	1
O-C-N	123.00	108.00	1
CA-C-N	116.20	134.94	1
CB-CG-OD1	120.80	102.06	1
C-N-CA	121.70	138.52	1
O-C-N	123.00	108.07	1
C-N-CA	121.70	104.90	1
O-C-C-N-CA	121.70	104.93	1
O-C-N	123.00	108.09	1
CA-C-N	116.20	134.83	1
C-N-CA	121.70	104.96	1
C-N-CA	121.70	138.43	1
O-C-N	123.00	108.15	1
OD1-CG-ND2	122.60	131.86	1
OE1-CD-NE2	122.60	113.36	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CA-CB-CG	113.90	97.28	1
CA-C-N	116.20	134.67	1
CB-CG-CD	112.60	96.91	1
O-C-N	123.00	108.25	1
CA-C-N	116.20	97.78	1
C-N-CA	121.70	105.18	1
CB-CG1-CD1	113.80	94.53	1
C-N-CA	121.70	138.18	1
CA-C-N	116.20	134.50	1
CB-CG-CD	112.60	97.05	1
OE1-CD-NE2	122.60	131.73	1
C-N-CA	121.70	138.11	2
O-C-N	123.00	108.43	1
CA-N-CD	112.00	99.25	1
CG-CD1-CE1	121.20	134.84	1
CG-CD-OE1	118.40	97.50	1
OD1-CG-ND2	122.60	113.51	1
CG-CD-OE2	118.40	97.52	1
O-C-N	123.00	108.47	1
CG-CD-OE2	118.40	97.55	1
OE1-CD-NE2	122.60	113.54	1
O-C-N	123.00	108.51	1
OD1-CG-OD2	122.90	144.63	1
C-N-CA	121.70	137.99	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CD-NE-CZ	124.40	111.73	1
CB-CG-CD	112.60	97.22	1
CA-CB-CG	112.60	103.56	1
CG-CD-OE2	118.40	97.61	1
C-N-CA	121.70	137.97	1
CA-C-N	116.20	98.15	1
C-N-O-C-N	123.00	108.60	1
OD1-CG-OD2	122.90	101.31	1
O-C-N	123.00	108.61	1
CB-CG-OD1	120.80	102.85	1
CB-CG-CD	112.60	97.39	1
CA-C-N	116.20	134.09	1
O-C-N	123.00	108.69	2
O-C-N	123.00	108.70	2
O-C-N	123.00	108.72	1
O-C-N	123.00	137.28	1
O-C-N	123.00	108.73	1
OE1-CD-OE2	122.90	144.29	1
O-C-N	123.00	108.76	1
CB-CG1-CD1	113.80	132.47	1
O-C-N	123.00	137.21	1
NE-CZ-NH2	119.20	127.18	1
CG-CD2-CE3	133.90	125.05	1
CA-C-N	116.20	133.88	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
C-N-CA	121.70	137.61	1
CB-CG-CD1	120.70	135.72	1
CB-CG-CD	112.60	97.59	1
C-N-CA	121.70	137.59	1
CG-CD-NE2	116.40	103.17	1
O-C-N	123.00	108.90	1
CA-C-N	116.20	133.82	1
OE1-CD-O-C-N	123.00	137.06	1
CA-C-N	116.20	133.77	1
CA-C-O	120.80	135.72	1
NE-CZ-NH1	121.50	112.73	1
C-N-CA	121.70	105.95	1
O-C-CA-C-O	120.80	105.96	1
O-C-N	123.00	109.04	2
CA-C-N	116.20	133.64	1
CA-C-N	116.20	98.77	1
CA-CB-CG	113.80	105.09	1
C-N-CA	121.70	106.04	1
O-C-N	123.00	109.09	1
O-C-N	123.00	109.10	1
CG-CD-CE	111.30	91.32	1
O-C-N	123.00	136.88	1
O-C-N	123.00	109.12	1
CA-C-N	116.20	133.54	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CB-CG-ND2	116.40	129.40	1
C-N-CA	121.70	137.28	1
CA-C-N	116.20	133.51	1
CA-C-O	120.80	135.51	1
O-C-N	123.00	109.16	1
CA-C-N	116.20	133.48	1
O-C-N	123.00	109.18	1
CA-C-N	116.20	133.46	1
CB-CG-OD1	120.80	138.05	1
C-N-CA	121.70	106.21	1
O-C-N	123.00	136.77	1
CB-CG-CD2	131.20	142.35	1
CG1-CB-CG2	110.80	91.93	1
CA-C-N	116.20	133.35	1
CG-CD-OE1	118.40	98.69	1
OD1-CG-ND2	122.60	131.17	1
CA-CB-CG	112.60	104.05	1
C-N-CA	121.70	106.32	1
O-C-N	123.00	109.40	1
C-N-CA	121.70	137.00	1
CA-C-N	116.20	99.22	1
CG-CD-NE2	116.40	103.67	1
C-N-CA	121.70	136.96	1
O-C-N	123.00	109.45	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CD1-CG-CD2	110.80	92.18	1
O-C-N	123.00	136.53	1
CA-C-N	116.20	99.29	1
C-N-CA	121.70	136.89	1
CA-CB-CG	113.80	105.37	1
OD1-CG-ND2	122.60	114.17	1
C-N-CA	121.70	106.58	1
O-C-N	123.00	109.56	1
CA-C-N	116.20	133.00	1
C-N-CA	121.70	136.82	1
CA-C-N	116.20	132.99	1
CA-C-N	116.20	132.97	1
C-N-CA	121.70	136.78	1
NE-CZ-NH1	121.50	113.13	1
CA-C-N	116.20	99.48	1
CG-CD1-CE1	121.20	108.66	1
OD1-CG-ND2	122.60	114.25	1
O-C-N	123.00	109.65	1
CB-CG-CD	111.30	92.11	1
CB-CG-OD1	120.80	137.47	1
CA-C-N	116.20	99.55	1
CG-CD-OE1	120.80	137.44	1
CG-CD-OE1	118.40	99.33	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CA-CB-CG	112.60	104.31	1
N-CD-CG	103.20	115.63	1
CA-C-O	120.80	106.72	1
CA-C-N	116.20	132.75	1
O-C-N	123.00	136.23	2
C-N-CA	121.70	136.57	1
O-C-N	123.00	109.80	1
C-N-CA	121.70	136.55	1
CB-CG-CD	112.60	98.60	1
ND1-CG-CD2	106.10	114.33	1
C-N-CA	121.70	136.48	1
CA-C-N	116.20	132.59	1
O-C-N	123.00	109.94	1
O-C-N	123.00	136.05	1
CG-CD-OE2	118.40	99.64	1
O-C-C-N-CA	121.70	136.36	1
C-N-CA	121.70	107.06	1
CA-C-N	116.20	132.46	1
CA-CB-OG	111.10	94.84	1
CA-C-N	116.20	99.95	1
CG-CD-CE	111.30	92.62	1
O-C-N	123.00	110.02	2
C-N-CA	121.70	107.10	1
CG-CD-OE2	118.40	137.06	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CD1-CG-CD2	118.60	130.76	1
CA-C-N	116.20	132.41	1
C-N-CA	121.70	136.28	1
O-C-N	123.00	110.06	1
C-N-CA	121.70	107.16	1
C-N-CA-C-N	116.20	100.12	1
CB-CG-CD	111.30	92.80	1
CA-C-N	116.20	132.28	1
CA-CB-CG	112.60	120.64	1
C-N-CA	121.70	107.25	1
O-C-N	123.00	135.84	2
CA-C-N	116.20	132.25	2
O-C-N	123.00	110.17	1
CB-CG-OD1	118.40	99.97	1
CB-CG-OD1	120.80	136.82	1
C-N-CA	121.70	107.30	1
CA-C-N	116.20	132.19	1
CB-CG-CD	111.30	92.93	1
CA-C-O	120.80	107.23	1
O-C-N	123.00	135.77	1
O-C-N	123.00	110.24	1
C-N-CA	121.70	107.36	1
O-C-N	123.00	110.28	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
O-C-N	123.00	110.29	1
CB-CG-ND2	116.40	104.48	1
C-N-CA	121.70	135.99	1
C-N-CA	121.70	135.98	1
NE-CZ-NH2	119.20	126.34	1
CG-CD-OE2	118.40	136.64	1
CA-C-N	116.90	128.79	1
C-N-CA	121.70	107.43	1
CA-C-N	116.20	132.05	1
O-C-N	123.00	110.33	2
C-N-CA	121.70	135.93	1
OE1-CD-NE2	122.60	114.73	1
CA-C-N	116.20	131.93	1
C-N-CA	121.70	107.55	1
O-C-N	123.00	135.57	1
CG-CD-OE1	118.40	136.46	1
CG-CD-OE2	118.40	100.34	1
O-C-N	123.00	110.45	1
CA-C-O-C-N	123.00	110.45	1
O-C-N	123.00	135.55	1
O-C-N	123.00	110.46	1
C-N-CA	121.70	107.62	1
CA-C-N	116.20	131.84	1
CD-NE-CZ	124.40	113.46	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CG-CD-NE	112.00	94.85	1
O-C-N	123.00	110.53	1
O-C-N	123.00	110.55	1
CA-CB-CG	112.60	104.83	1
C-N-CA	121.70	107.71	1
CD1-CG-CD2	110.80	93.71	1
O-C-N	123.00	110.58	1
CG-CD-OE2	118.40	100.54	1
CB-CG-CD	112.60	125.80	1
CG-ND1-CE1	109.30	96.10	1
CB-CG-CD	111.30	93.44	1
NE-CZ-NH1	121.50	113.74	1
C-N-CA	121.70	107.75	1
CA-C-O	120.80	133.95	1
O-C-N	123.00	110.62	1
C-N-CA	121.70	107.78	1
CA-CB-CG	114.10	98.67	1
CD1-CG-CD2	106.30	118.64	1
CB-CG-CD1	120.70	107.60	1
OE1-CD-NE2	122.60	114.90	1
OE1-CD-OE2	122.90	141.36	1
O-C-N	123.00	110.71	1
CA-C-N	116.20	131.51	1
O-C-N	123.00	110.76	2

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CA-C-N	116.20	131.49	1
CB-CG-OD2	118.40	100.82	1
CA-CB-CG	114.10	98.83	1
CB-CG-CD	112.60	99.64	1
OD1-CG-N-CD-CG	103.20	91.79	1
CA-C-N	116.20	100.99	1
C-N-CA	121.70	108.05	1
CB-CG-ND2	116.40	127.76	1
O-C-N	123.00	110.90	1
CG-CD-OE2	118.40	101.01	1
CA-C-O	120.80	107.96	1
C-N-CA	121.70	108.11	1
CG-CD-CE	111.30	93.93	1
CB-CG-CD	112.60	125.43	1
O-C-N	123.00	110.93	1
O-C-CA-C-N	116.20	101.14	1
OE1-CD-NE2	122.60	130.13	1
CA-C-N	116.20	131.25	1
O-C-N	123.00	135.03	1
CA-C-N	116.20	101.16	1
CA-C-N	116.20	131.23	1
CB-CG-ND2	116.40	105.13	1
CA-CB-CG2	110.50	123.26	1
CB-CG1-CD1	113.80	98.04	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CG-CD-NE2	116.40	105.14	1
CA-C-N	116.20	131.19	1
C-N-CA	121.70	108.22	1
CB-CG-CD1	110.70	88.25	1
CB-CG-OD2	118.40	101.22	1
CG-CD2-CE2	121.20	132.40	1
CA-C-N	116.20	131.11	1
CB-CG-CD2	120.80	131.96	1
CA-N-CD	112.00	122.42	1
CA-C-O	120.80	133.45	1
O-C-N	123.00	111.10	1
CA-C-N	116.20	131.08	1
CD1-CG-CD2	110.80	127.15	1
O-C-N	123.00	111.11	1
CG-CD-OE1	120.80	135.65	1
CA-C-N	116.20	131.05	1
O-C-N-CD-CG	103.20	114.32	1
CA-C-N	116.20	131.03	1
C-N-CA	121.70	135.03	1
CG1-CB-CG2	110.80	127.08	1
CG-CD-OE2	118.40	101.38	1
C-N-CA	121.70	134.98	1
O-C-N	123.00	111.21	1
O-C-N	123.00	134.79	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CG-CD-OE1	118.40	101.46	1
CB-CG-CD	111.30	94.36	1
O-C-N	123.00	111.22	1
CG-CD-NE2	116.40	105.37	1
O-C-N	123.00	134.77	1
O-C-N	123.00	111.26	1
CA-CB-CG	112.60	105.27	1
CA-C-N	116.20	130.86	1
CB-CG-OD1	120.80	106.15	1
CA-C-N	116.20	101.56	1
C-N-CA	121.70	108.54	1
CA-C-N	116.20	130.81	1
CB-CG-ND2	116.40	105.45	1
O-C-N	123.00	111.32	1
CA-C-N	116.20	130.76	1
CG-CD-CE	111.30	94.58	1
CA-C-N	116.20	130.73	1
CG-CD-NE2	116.40	127.28	1
CA-C-N	116.20	101.72	1
O-C-N	123.00	111.42	1
CA-C-N	116.20	130.67	1
CB-CG-OD2	118.40	101.76	1
O-C-N	123.00	134.57	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CG-CD-OE1	120.80	106.35	1
C-N-CA	121.70	108.70	1
CA-C-O	120.80	133.06	1
C-N-CA	121.70	108.72	1
OE1-CD-NE2	122.60	129.81	1
CA-C-CA-C-N	116.20	130.60	1
O-C-N	123.00	111.49	2
CD1-CG-CD2	118.10	128.89	1
O-C-N	123.00	134.51	1
O-C-N	123.00	111.50	1
CB-CG-CD	112.60	124.76	1
CA-C-N	116.20	130.50	1
O-C-C-N-CA	121.70	108.84	1
CA-C-N	116.20	130.48	1
CA-C-N	116.20	101.95	1
O-C-N	123.00	111.61	1
OG1-CB-CG2	109.30	95.07	1
CD1-CG-CD2	118.10	107.43	1
OE1-CD-OE2	122.90	105.86	1
C-N-CA	121.70	108.93	1
O-C-N	123.00	134.35	2
O-C-N	123.00	111.65	1
ND1-CG-CD2	106.10	113.19	1
CB-CG-CD	112.60	100.55	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CA-C-N	116.20	130.36	1
C-N-CA	121.70	134.43	1
C-N-CA	121.70	108.99	1
O-C-N	123.00	134.28	1
C-N-CA	121.70	109.01	1
O-C-N	123.00	111.73	1
CA-C-N	116.20	130.29	1
CB-CG-CD2	110.70	89.58	1
CA-C-N	116.20	102.12	1
O-C-N	123.00	111.75	1
CA-C-N	116.20	130.26	1
CG-CD-NE2	116.40	126.94	1
CB-CG-CD2	120.80	131.34	1
CG-CD-OE1	118.40	134.55	1
CA-C-N	116.20	130.23	1
CA-C-N	116.20	130.22	1
C-N-CA	121.70	109.09	1
CA-C-O	120.80	132.69	1
CB-CG-CD2	126.80	117.03	1
CA-C-N	116.20	130.15	1
O-C-N	123.00	111.84	1
O-C-N	123.00	111.85	1
C-N-CA	121.70	134.24	1
CB-CG-OD2	118.40	102.38	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CG-CD-OE2	118.40	102.41	1
CB-CG-ND1	122.70	112.30	1
CA-C-O	120.80	132.58	1
CA-C-N	116.20	130.05	1
C-N-CA	121.70	109.23	1
O-C-N	123.00	134.07	1
OD1-CG-OD2	122.90	139.50	1
C-N-CA	121.70	134.14	1
CA-C-N	116.90	106.54	1
CA-C-O	120.80	109.06	1
CA-C-N	116.20	130.01	1
CG-CD1-CE1	120.70	132.43	1
CD-NE-CZ	124.40	114.75	1
CB-CG1-CD1	113.80	99.35	1
C-N-CA	121.70	109.31	1
O-C-N	123.00	134.00	1
CB-CG1-CD1	113.80	99.36	1
OD1-CG-ND2	122.60	115.73	1
CG-CD-OE1	120.80	107.07	1
CB-CG1-CD1	113.80	128.21	1
C-N-CA	121.70	134.05	1
CA-CB-CG	113.90	101.56	1
O-C-N	123.00	112.04	1
CA-C-O	120.80	109.16	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
OG1-CB-CG2	109.30	95.63	1
O-C-N	123.00	133.90	1
CA-C-O	120.80	109.23	1
O-C-CB-CG-ND2	116.40	106.19	1
CB-CG-CD	111.30	126.95	1
CG-CD-OE2	118.40	102.75	1
O-C-N	123.00	112.12	1
C-N-CA	121.70	133.94	1
CA-C-N	116.20	102.61	1
CG-CD-OE1	118.40	102.78	1
C-N-CA	121.70	109.47	1
CG-CD-OE2	118.40	134.01	1
O-C-N	123.00	112.14	1
CB-CG-CD	112.60	101.08	1
C-N-CA	121.70	133.89	1
CB-CG-OD1	120.80	107.27	1
O-C-N	123.00	112.17	1
C-N-CA	121.70	133.87	1
CA-C-N	116.20	129.70	1
C-N-CA	121.70	109.56	1
CA-C-N	116.20	129.69	1
CG-CD-CE	111.30	95.79	1
CB-CG-CD1	126.90	137.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CA-C-N	116.20	129.66	1
C-N-CA	121.70	133.81	1
CA-C-N	116.20	129.63	1
O-C-N	123.00	112.26	1
CG-CD-OE1	120.80	134.21	2
CA-C-N	116.20	129.60	1
O-C-N	123.00	112.28	1
C-N-CA	121.70	133.76	1
C-N-CA	121.70	133.75	1
C-N-CA	121.70	109.66	1
OE1-CD-NE2	122.60	115.92	1
CD-NE-CZ	124.40	115.05	1
C-N-CA	121.70	133.71	1
C-N-CA	121.70	109.69	1
CA-C-N	116.20	129.54	1
NE-CZ-NH2	119.20	113.20	1
C-N-C-N-CA	121.70	109.72	1
O-C-N	123.00	112.36	1
C-N-CA	121.70	109.73	2
O-C-N	123.00	133.64	1
CA-CB-CG	112.60	105.95	1
CA-C-N	116.20	129.49	1
C-N-CA	121.70	109.74	1
O-C-N	123.00	133.62	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CA-C-N	116.90	126.86	1
CA-C-N	116.20	129.47	1
CA-C-N	116.20	129.44	1
CG-CD-OE1	118.40	133.62	1
O-C-N	123.00	112.42	2
C-N-CA	121.70	133.60	1
CA-C-N	116.20	129.42	1
CA-C-N	116.90	106.99	1
O-C-N	123.00	112.44	1
O-C-N	123.00	112.45	1
CA-C-O	120.80	109.61	1
O-C-N	123.00	112.48	1
CG-CD-CE	111.30	96.18	1
CD1-CG-CD2	110.80	96.34	1
CA-C-N	116.20	129.34	1
CA-C-N	116.20	129.32	1
C-N-CA	121.70	133.51	1
O-C-N	123.00	112.50	1
OG1-CB-CG2	109.30	96.19	1
CB-CG-OD2	118.40	103.33	1
CG-CD1-NE1	110.20	118.71	1
CA-C-O	120.80	131.92	1
O-C-N	123.00	112.55	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CG-SD-CE	100.90	86.53	1
O-C-N	123.00	112.56	1
CB-CG-CD	111.30	96.29	1
C-N-CA-C-O	120.80	131.88	1
OE1-CD-NE2	122.60	129.11	1
O-C-O-C-N	123.00	133.41	1
C-N-CA	121.70	110.00	1
C-N-CA	121.70	133.39	1
C-N-CA	121.70	133.37	1
O-C-N	123.00	112.63	1
C-N-CA	121.70	110.04	1
C-N-CA	121.70	110.05	1
CA-C-N	116.20	129.14	1
O-C-N	123.00	112.65	1
O-C-N	123.00	112.66	1
C-N-CA	121.70	133.33	1
O-C-N	123.00	112.67	1
C-N-CA	121.70	110.09	1
CA-C-O-C-N	123.00	112.69	1
OE1-CD-OE2	122.90	138.37	1
CG-CD-NE	112.00	97.82	1
CA-C-N	116.20	129.09	1
C-N-CA	121.70	133.29	1
O-C-N	123.00	133.30	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CG-CD-OE2	118.40	103.60	1
O-C-N	123.00	112.71	1
O-C-N	123.00	112.72	1
CG-CD-OE1	118.40	103.62	1
CA-C-C-N-CA	121.70	133.26	1
C-N-CD	125.00	98.69	1
O-C-N	123.00	133.26	1
CA-C-O	120.80	109.90	2
CG-CD-OE2	118.40	103.66	1
C-N-CD	125.00	151.27	1
CA-C-N	116.20	129.01	1
CB-CG-CD2	120.80	130.40	1
O-C-N	123.00	112.76	1
CB-CG-CD	112.60	101.72	1
CA-CB-CG	112.60	106.20	1
CA-C-N	116.20	128.99	1
CA-CB-CG	112.60	106.21	1
O-C-N	123.00	112.79	1
CD1-CG-CD2	118.60	128.17	1
C-N-CA	121.70	110.22	1
CA-C-N	116.20	128.94	1
C-N-CA	121.70	110.23	1
CG-CD-CA-C-N	116.20	128.93	1
CG-CD-OE2	118.40	103.77	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
O-C-N	123.00	112.82	1
C-N-CA	121.70	133.11	1
OE1-CD-OE2	122.90	138.12	1
CA-CB-CG	112.60	118.94	1
CA-C-N	116.20	128.87	1
CA-CB-CG	114.10	101.43	1
O-C-N	123.00	112.86	1
C-N-CA	121.70	110.30	1
O-C-N	123.00	133.12	1
C-N-CA	121.70	110.32	1
CB-CG1-CD1	113.80	127.07	1
CG-CD-CE	111.30	125.78	1
CA-C-N	116.20	103.62	1
O-C-N	123.00	133.07	1
O-C-N	123.00	112.94	2
C-N-CA	121.70	110.39	1
CA-C-N	116.20	128.75	1
C-N-CA	121.70	110.41	1
CD-NE-CZ	124.40	115.62	1
O-C-N	123.00	112.98	1
C-N-CA	121.70	110.43	1
O-C-N	123.00	133.01	1
C-N-CA	121.70	132.96	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CG-CD-OE1	118.40	132.79	1
CA-C-N	116.20	128.70	1
CG-CD-NE2	116.40	107.02	1
CA-CB-CG	112.60	106.35	1
CG-CD2-CE2	107.20	114.69	1
CB-CG1-CD1	113.80	100.70	1
O-C-N	123.00	113.02	1
CA-C-N	116.20	128.67	1
C-N-CA-C-N	116.20	128.67	1
CA-C-N	116.20	103.75	2
CA-CB-CG	112.60	106.38	1
CA-C-N	116.20	128.63	1
CA-C-N	116.20	103.77	1
O-C-N	123.00	113.06	1
CD-NE-CZ	124.40	133.09	1
CG-CD-OE2	118.40	132.66	1
CA-C-O	120.80	110.27	1
CA-C-N	116.20	103.84	1
CB-CG-ND2	116.40	125.67	1
CA-C-O	120.80	131.31	1
O-C-N	123.00	113.12	1
CB-CG-OD2	118.40	132.61	1
C-N-CA	121.70	110.58	1
C-N-CA	121.70	110.59	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CB-CG-CD	111.30	97.11	1
CG-CD-OE2	118.40	104.22	1
C-N-CA	121.70	110.62	1
CA-C-N	116.20	128.51	1
O-C-N	123.00	113.16	2
C-N-CA	121.70	110.63	1
CG-CD1-CE1	121.20	111.98	1
O-C-N	123.00	132.83	1
CA-C-O	120.80	110.35	1
CG-CD2-CE2	107.20	114.57	1
C-N-CA	121.70	110.65	1
C-N-CA	121.70	132.75	1
CA-N-CD	112.00	120.59	1
CA-CB-CG	114.10	101.84	1
CD-NE-CZ	124.40	115.82	1
O-C-N	123.00	113.20	1
NE-CZ-NH2	119.20	124.71	1
O-C-N	123.00	132.78	1
CB-CG-CD1	120.80	111.63	1
OE1-CD-OE2	122.90	137.56	1
O-C-N	123.00	113.23	1
O-C-CA-C-N	116.20	103.99	1
CB-CG-CD	111.30	97.27	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
OD1-CG-ND2	122.60	116.50	1
CA-C-N	116.20	128.38	1
O-C-N	123.00	113.26	1
C-N-CD	125.00	100.05	1
C-N-CA	121.70	132.65	1
CA-CB-CG	112.60	106.52	1
CB-CG-OD1	120.80	132.96	1
CB-CG-CD	111.30	97.32	1
C-N-CA	121.70	132.64	1
CA-C-N	116.20	128.33	1
CG-CD-NE2	116.40	107.31	1
OE1-CD-OE2	122.90	108.35	1
C-N-CA	121.70	132.61	1
CA-C-CD-CE-NZ	111.90	92.51	1
O-C-N	123.00	113.31	1
CA-C-N	116.20	128.31	1
O-C-N	123.00	113.32	1
CA-C-N	116.20	128.29	1
CB-CG-CD	112.60	102.33	1
O-C-N	123.00	113.34	1
C-N-CA	121.70	110.83	1
CA-N-CD	112.00	103.55	1
CB-CG-CD2	120.70	110.44	1
CG-CD-CE	111.30	97.42	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
OG1-CB-CG2	109.30	121.36	1
O-C-N	123.00	113.36	1
C-N-CA	121.70	110.86	1
O-C-CB-CG-OD1	120.80	132.82	1
O-C-N	123.00	113.39	1
C-N-CA	121.70	110.89	1
O-C-N	123.00	132.60	1
CA-C-N	116.20	128.20	1
OD1-CG-OD2	122.90	108.55	1
C-N-CA	121.70	110.94	1
CA-C-N	116.20	128.16	1
CA-C-O	120.80	130.96	1
OD1-CG-ND2	122.60	116.63	1
CA-C-N	116.20	128.14	1
OD1-CG-OD2	122.90	108.58	1
CB-CG-CD	112.60	102.46	1
O-C-N	123.00	132.54	1
C-N-CA	121.70	110.97	1
C-N-CA	121.70	110.98	2
C-N-CA	121.70	132.40	1
C-N-CA	121.70	111.01	1
CG-CD-OE1	120.80	108.93	1
CA-N-CD	112.00	120.30	1
N-CD-CG	103.20	94.30	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CG-CD-NE2	116.40	125.30	1
CG-CD-CE	111.30	97.66	1
C-N-CA	121.70	111.03	1
OG1-CB-CG2	109.30	97.45	1
CA-C-N	116.90	108.02	1
CB-CG-CD	112.60	122.66	1
CG-CD-OE1	118.40	132.00	1
CA-C-N	116.20	128.03	1
CB-CG-OD2	118.40	104.80	1
C-N-CA	121.70	111.07	1
C-N-CA	121.70	132.32	1
CA-C-N	116.20	128.00	1
CA-N-CG-SD-CE	100.90	87.92	1
CG-CD-OE2	118.40	131.96	1
CA-C-N	116.90	125.74	1
CB-CG-CD	112.60	102.58	1
O-C-N	123.00	113.57	1
CG-CD-OE1	120.80	132.58	1
CA-C-N	116.20	104.43	1
C-N-CA	121.70	111.11	1
CD1-CG-CD2	118.10	126.92	1
CA-C-C-N-CA	122.60	151.98	1
C-N-CA	121.70	132.27	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CA-C-N	116.20	104.46	1
CB-CG-OD1	118.40	104.91	1
C-N-CA	121.70	132.26	1
CG-CD-OE2	118.40	104.92	1
O-C-N	123.00	132.38	1
CG1-CB-CG2	110.70	128.28	1
CB-CG-ND1	122.70	113.91	1
N-CD-CG	103.20	111.99	1
O-C-N	123.00	113.63	1
CA-C-N	116.20	127.91	1
C-N-CD	125.00	101.01	1
CA-C-N	116.20	127.90	1
CA-C-N	116.20	104.51	1
O-C-N	123.00	113.66	1
O-C-N	123.00	132.33	1
CA-CB-CG	114.10	102.44	1
CG-CD-OE2	118.40	105.00	1
CA-CB-CG	104.50	115.57	1
O-C-N	123.00	132.32	1
C-N-CA	121.70	111.22	1
CB-CG-CD1	120.70	130.59	1
C-N-CA	121.70	111.23	1
CA-C-N	116.20	127.83	1
CB-CG-CD	111.30	97.93	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CA-C-O	120.80	110.92	1
O-C-N	123.00	113.72	1
CD-NE-CZ	124.40	116.28	1
CA-C-N	116.20	127.80	1
OE1-CD-OE2	122.90	108.98	1
CA-CB-OG	111.10	122.67	1
O-C-N	123.00	113.74	1
CB-CG-CD	112.60	122.43	1
CA-C-N	116.20	127.77	1
C-N-CA	121.70	132.11	1
C-N-CA	121.70	111.29	1
O-C-N	123.00	113.75	1
C-N-CA	121.70	132.08	1
O-C-N	123.00	113.78	1
C-N-CA-C-CA-C-N	116.20	127.71	1
O-C-N	123.00	113.79	1
CD-NE-CZ	124.40	116.35	1
CB-CG-OD1	120.80	109.30	1
CA-C-N	116.20	104.71	1
C-N-CA	121.70	132.04	1
CA-CB-CG	113.80	108.06	1
OE1-CD-OE2	122.90	109.12	1
C-N-CA	121.70	111.37	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
O-C-N	123.00	113.82	1
CB-CG-CD2	120.70	110.95	1
CG-CD1-NE1	110.20	102.74	1
CB-CG-CD	112.60	102.86	2
CA-C-O	120.80	111.06	1
CA-C-N	116.20	127.66	1
CG1-CB-CG2	110.80	98.20	1
C-N-CA	121.70	111.39	1
CB-CG-OD1	118.40	131.57	1
CA-CB-CG	112.60	106.88	1
O-C-N	123.00	113.86	1
C-N-CA	121.70	131.98	1
CD1-CG-CD2	118.60	110.04	1
O-C-N	123.00	113.88	1
O-C-N	123.00	132.11	1
CA-C-N	116.20	104.81	1
CA-CB-CG1	110.40	100.73	1
CA-C-O	120.80	130.47	1
CA-C-O	120.80	111.14	1
C-N-CA	121.70	111.47	1
O-C-N	123.00	113.91	1
C-N-CA	121.70	111.48	1
CA-C-N	116.20	127.55	1
C-N-CA	121.70	131.91	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
C-N-CA	121.70	111.49	1
CA-C-O	120.80	130.44	2
CA-C-N	116.20	127.53	1
O-C-N	123.00	113.94	1
CG-CD1-NE1	110.20	117.56	1
O-C-N	123.00	113.95	1
CB-CG-ND2	116.40	124.89	1
C-N-CA	121.70	131.88	2
CA-C-O	120.80	130.42	1
NE-CZ-NH2	119.20	124.29	1
C-N-CA	121.70	111.54	1
CA-C-O	120.80	130.39	1
C-N-CA	121.70	111.55	1
O-C-N	123.00	132.02	1
CA-C-N	116.20	127.47	2
C-N-CA	121.70	111.56	1
NE-CZ-NH2	119.20	114.13	1
O-C-N	123.00	114.01	1
CA-C-O	120.80	130.35	1
C-N-CA	121.70	111.58	1
CG-CD-OE1	118.40	131.33	1
CA-C-N	116.20	104.96	1
CB-CG-CD2	131.20	138.49	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CA-C-O	120.80	130.33	1
O-C-N	123.00	114.03	1
CA-N-CD	112.00	119.85	1
C-N-CA	121.70	131.79	1
CA-C-O	120.80	111.27	1
CD-NE-CG-CD-NE2	116.40	108.00	1
CA-C-N	116.20	127.39	2
CB-CG-CD	112.60	122.11	1
CA-C-N	116.20	127.38	1
CA-C-N	116.20	105.02	1
O-C-CA-C-N	116.20	105.03	1
O-C-CD1-CG-CD2	118.10	126.47	1
C-N-CA	121.70	111.66	1
O-C-N	123.00	114.09	1
C-N-CA	121.70	111.69	1
CB-CG-CD	111.30	98.51	1
OD1-CG-OD2	122.90	136.24	1
C-N-CA	121.70	131.70	1
CA-C-O	120.80	130.24	1
CA-C-N	116.20	105.11	1
CA-C-N	116.20	127.29	1
CD-CE-NZ	111.90	94.15	1
O-C-N	123.00	114.13	1
C-N-CA	121.70	111.72	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CD-NE-CZ	124.40	116.64	1
CA-C-N	116.20	127.28	1
O-C-N	123.00	114.14	1
C-N-CA	121.70	111.75	1
C-N-CA	121.70	111.77	1
OD1-CG-OD2	122.90	136.14	1
CD1-CG-CD2	118.60	126.86	1
O-C-N	123.00	131.81	1
C-N-CA	121.70	111.79	1
CA-C-N	116.20	105.20	2
C-N-CA	121.70	131.60	1
CA-C-N	116.20	105.21	1
C-N-CA	121.70	131.59	1
O-C-N	123.00	114.21	1
O-C-N	123.00	131.79	2
C-N-CA	121.70	111.82	1
ND1-CG-C-N-CA	121.70	111.83	1
C-N-CA	121.70	131.55	1
C-N-CA	121.70	111.86	1
O-C-N	123.00	114.26	1
NE-CZ-NH2	119.20	124.11	1
CD1-CG-CD2	118.60	110.42	1
C-N-CA	121.70	111.88	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CD-NE-CZ	124.40	116.77	1
CB-CG1-CD1	113.80	102.36	1
CA-C-N	116.90	125.06	1
C-N-CA	121.70	131.50	1
CG-SD-CE	100.90	112.87	1
C-N-CA	121.70	111.91	1
CA-C-O	120.80	111.56	1
OD1-CG-ND2	122.60	128.04	1
O-C-N	123.00	131.69	1
O-C-N	123.00	114.31	1
CA-C-C-N-CA	121.70	111.92	1
CG-CD-CE	111.30	98.81	1
O-C-N	123.00	114.32	1
CB-CG-OD2	118.40	105.93	1
OE1-CD-NE2	122.60	117.18	1
CG-CD-OE1	120.80	109.96	1
O-C-N	123.00	114.33	1
C-N-CA	121.70	131.46	1
C-N-CA	121.70	111.95	2
CB-CG-OD1	120.80	109.97	1
C-N-CA	121.70	111.96	1
CA-C-N	116.20	127.01	2
CA-CB-CG	112.60	107.20	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CA-C-N	116.20	127.00	1
CB-CG-CD1	120.80	112.70	1
O-C-N	123.00	131.64	1
O-C-N	123.00	114.36	1
CB-CG-CD	112.60	103.44	1
C-N-CA	121.70	112.00	1
O-C-N	123.00	114.38	2
NE-CZ-NH1	121.50	116.12	1
CA-N-CD	112.00	119.52	1
CA-C-N	116.20	126.94	1
CB-CG1-CD1	113.80	102.53	1
C-N-CA	121.70	112.04	1
CB-CG-OD2	118.40	130.74	1
OE1-CD-NE2	122.60	117.24	1
CA-C-O	120.80	111.69	1
N-CD-CG	103.20	111.23	1
CG-CD-CE	111.30	123.61	1
CA-C-N	116.20	126.90	1
CA-C-N	116.20	105.50	1
C-N-CA	121.70	112.07	1
C-N-CA	121.70	131.33	1
C-N-CA	121.70	112.08	1
O-C-N	123.00	114.46	1
CA-C-O	120.80	129.87	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CG-CD1-CE1	120.70	111.64	1
CA-C-N	116.20	126.85	1
CA-C-N	116.20	126.84	1
O-C-N	123.00	114.49	1
CD-CE-NZ	111.90	128.91	1
O-C-N	123.00	131.50	1
CB-CG-OD1	118.40	106.19	1
O-C-N	123.00	114.50	1
CA-C-CG-CD-OE1	120.80	131.41	1
O-C-N	123.00	114.51	1
C-N-CA	121.70	112.18	1
CA-CB-CG	112.60	107.31	1
CB-CG-CD	112.60	103.61	1
C-N-CA	121.70	112.19	1
C-N-CA	121.70	131.20	1
OE1-CD-NE2	122.60	117.33	1
O-C-N	123.00	131.43	1
CB-CG1-CD1	113.80	102.74	1
O-C-N	123.00	114.58	2
CG-CD2-CE3	133.90	128.64	1
C-N-CA	121.70	131.16	1
CA-CB-CG2	110.50	101.56	1
CG-CD2-CE2	121.20	129.08	1
CA-CB-CG	114.10	103.60	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
O-C-N	123.00	114.60	1
C-N-CA	121.70	112.26	1
O-C-N	123.00	131.39	1
C-N-CA	121.70	131.13	1
CG-CD-OE2	118.40	106.35	1
CA-C-N	116.20	126.67	1
CG-CD-OE1	118.40	130.44	1
O-C-N	123.00	114.63	1
O-C-N	123.00	114.64	1
C-N-CA	121.70	112.30	1
CB-CG-OD1	120.80	110.35	1
O-C-N	123.00	131.34	1
CA-C-N	116.20	126.62	1
C-N-CA	121.70	112.33	2
CA-C-N	116.20	126.61	1
C-N-CA	121.70	112.34	2
CA-C-N	116.20	126.60	1
O-C-CD1-CG-CD2	118.60	126.39	1
O-C-N	123.00	131.31	1
C-N-CA	121.70	131.05	1
CB-CG-CD1	120.70	111.88	1
CB-CG-CD1	120.80	128.58	1
CA-CB-CG	114.10	103.73	1
CA-C-N	116.20	126.57	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
NE-CZ-NH1	121.50	116.32	1
CA-C-N	116.20	126.55	1
C-N-CA	121.70	131.01	1
CB-CG-ND2	116.40	124.16	1
O-C-N	123.00	114.74	1
CA-C-N	116.20	105.90	1
CA-C-O	120.80	129.55	1
O-C-N	123.00	114.76	1
C-N-CA	121.70	112.44	1
CD-NE-CZ	124.40	117.20	1
CA-C-O	120.80	112.06	1
CA-C-N	116.20	105.92	1
O-C-N	123.00	131.21	1
C-N-CA	121.70	130.92	1
OE1-CD-OE2	122.90	110.62	1
C-N-CA	121.70	130.90	1
C-N-CD1-CG-CD2	110.80	99.56	1
C-N-CB-CG-CD1	120.80	128.46	1
OE1-CD-OE2	122.90	110.64	1
CG1-CB-CG2	110.80	99.57	1
ND1-CG-CD2	106.10	111.21	1
C-N-CA	121.70	130.89	1
CG-CD-OE1	118.40	130.14	1
CA-C-O	120.80	129.48	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
O-C-N	123.00	131.16	1
CA-CB-CG2	110.50	119.17	1
C-N-CA-CB-CG	112.60	107.50	1
O-C-N	123.00	114.85	2
CA-C-N	116.90	109.26	1
CB-CG-CD	111.30	99.60	1
C-N-CA	121.70	112.55	1
O-C-N	123.00	114.87	1
C-N-CA	121.70	130.85	1
CB-CG-CD	112.60	103.96	1
C-N-CA	121.70	112.56	1
CB-CG-CD2	120.80	113.18	1
CD1-CG-CD2	118.10	110.49	1
CA-C-N	116.20	106.06	1
C-N-CA	121.70	130.83	1
CB-CG-CD2	110.70	95.50	1
C-N-CA	121.70	112.58	1
O-C-N	123.00	114.90	1
CA-CB-CG	112.60	107.54	1
CG-CD1-CE1	121.20	113.61	1
CA-C-N	116.20	126.32	1
O-C-N	123.00	114.91	1
NE-CZ-NH1	121.50	116.45	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CB-CG-CD	112.60	104.01	1
CB-CG-CD1	110.70	125.86	1
C-N-CA	121.70	112.61	1
CA-CB-CG1	110.40	101.81	1
CA-C-N	116.20	126.29	1
CA-CB-OG	111.10	101.01	1
C-N-CA	121.70	112.63	1
CB-CG-CD2	131.20	137.75	1
O-C-N	123.00	114.94	1
O-C-N	123.00	131.06	1
CA-C-O	120.80	112.24	1
CA-C-N	116.20	126.26	1
CA-CB-CG	112.60	107.57	1
O-C-N	123.00	131.04	1
C-N-CA	121.70	130.74	2
CA-C-N	116.20	126.25	2
CA-C-O	120.80	129.34	1
C-N-CA	121.70	112.66	1
NE-CZ-NH1	121.50	126.52	1
O-C-N	123.00	114.98	2
CD-CE-NZ	111.90	127.95	1
O-C-N	123.00	131.02	1
CD-NE-CZ	124.40	117.38	1
C-N-CA-CB-CG	113.80	108.79	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
C-N-C-N-CA	121.70	112.69	1
CA-C-O	120.80	129.31	1
CG-CD-NE2	116.40	123.90	1
CA-C-N	116.20	106.20	1
CG-CD-OE2	118.40	129.89	1
CB-CG-CD	111.30	122.78	1
CA-CB-OG	111.10	101.12	1
O-C-N	123.00	130.98	2
C-N-CD	125.00	104.54	1
NE-CZ-NH1	121.50	126.48	1
CA-C-N	116.20	126.16	1
C-N-CA	121.70	112.74	1
O-C-N	123.00	115.04	2
CA-N-CD	112.00	118.97	1
CA-C-N	116.20	126.15	2
C-N-CA	121.70	130.66	1
CG-CD-CE	111.30	99.86	1
O-C-N	123.00	115.05	2
O-C-N	123.00	115.06	1
O-C-O-C-N	123.00	130.94	1
C-N-CA	121.70	112.77	1
CA-C-N	116.20	126.12	1
O-C-C-N-CA	121.70	112.78	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
O-C-N	123.00	115.07	1
O-C-N	123.00	130.93	1
CG-CD-OE1	118.40	129.80	1
CB-CG-CD	111.30	99.90	1
CG-CD-NE2	116.40	108.97	1
CA-C-N	116.20	126.10	1
CB-CG-CD	112.60	104.19	1
O-C-O-C-N	123.00	115.09	1
CA-C-O	120.80	129.21	1
CB-CG-CD1	120.70	112.29	1
CB-CG-CD	111.30	99.93	1
O-C-N	123.00	115.09	1
O-C-N	123.00	130.91	1
CD1-CG-CD2	110.80	99.93	1
CA-C-C-N-CA	121.70	112.81	1
CA-C-O	120.80	112.41	2
CA-C-O	120.80	112.42	1
CG1-CB-CG2	110.80	121.64	1
C-N-CA	121.70	130.57	1
CA-C-CA-C-N	116.20	126.04	1
C-N-CA	121.70	112.85	1
CA-CB-CG	112.60	107.68	1
C-N-CA	121.70	130.55	1
C-N-CA	121.70	112.86	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CG1-CB-CG2	110.70	125.43	1
C-N-CA	121.70	112.87	1
CA-C-N	116.20	126.01	1
CB-CG-ND2	116.40	109.04	1
CA-C-N	116.20	126.00	1
CA-CB-CG	112.60	107.70	1
OD1-CG-ND2	122.60	127.50	1
CA-C-O	120.80	129.13	1
CA-C-O	120.80	129.12	1
CA-C-N	116.20	125.99	2
CB-CG-OD1	120.80	130.58	1
C-N-CA	121.70	112.91	1
CA-C-N	116.20	106.43	1
C-N-CA	121.70	130.49	1
O-C-N	123.00	115.20	1
CD-NE-CZ	124.40	117.57	1
O-C-N	123.00	130.80	1
CG-CD-OE2	118.40	107.19	1
C-N-CA	121.70	112.93	1
CG-CD-OE1	120.80	111.06	1
CA-CB-CG	116.30	99.26	1
C-N-CA	121.70	112.94	1
CA-C-O	120.80	112.53	1
CA-C-N	116.20	106.48	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
C-N-CA	121.70	112.96	2
CA-C-C-N-CA	121.70	112.96	1
C-N-C-N-CA	121.70	112.97	1
CA-C-N	116.90	124.17	1
O-C-N	123.00	130.76	1
CA-C-N	116.20	125.89	1
CD1-CG-CD2	106.30	114.05	1
C-N-CA	121.70	112.98	1
CG-CD-OE1	120.80	111.11	1
CA-C-N	116.20	106.52	2
C-N-CA	121.70	130.41	1
OE1-CD-OE2	122.90	134.51	1
CA-C-N	116.20	125.88	1
O-C-N	123.00	115.26	1
O-C-N	123.00	130.74	1
CA-C-O	120.80	112.58	1
OD1-CG-ND2	122.60	117.77	1
CD-NE-CZ	124.40	117.64	1
OE1-CD-OE2	122.90	134.48	1
CA-C-N	116.20	125.85	1
CA-C-N	116.20	106.55	1
C-N-CA	121.70	130.38	1
O-C-N	123.00	115.29	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CG-CD-NE	112.00	101.40	1
O-C-N	123.00	130.70	1
CA-C-O	120.80	112.62	1
O-C-N	123.00	115.31	3
NE-CZ-NH2	119.20	114.87	1
C-N-CA	121.70	113.05	1
CA-C-C-N-CA	121.70	113.05	1
CA-C-N	116.20	106.59	1
CA-C-N	116.20	125.80	2
CD-NE-CZ	124.40	117.68	1
N-CD-CG	103.20	110.40	1
C-N-CA	121.70	113.06	1
O-C-N	123.00	115.32	2
CA-C-N	116.20	106.60	1
C-N-CA	121.70	130.33	1
C-N-CA	121.70	113.07	1
O-C-N	123.00	115.33	1
CA-C-N	116.20	125.78	1
CG-CD-OE2	118.40	107.38	1
C-N-CA	121.70	113.08	1
O-C-N	123.00	115.34	1
CB-CG-CD2	120.70	128.83	1
O-C-N	123.00	130.65	1
CA-C-N	116.20	106.64	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
C-N-CA	121.70	113.10	2
C-N-CA	121.70	130.30	2
CB-CG-CD2	120.80	113.64	1
CA-N-O-C-N	123.00	130.64	1
CA-C-O	120.80	112.69	1
CB-CG-CD2	110.70	96.41	1
O-C-N	123.00	115.38	1
C-N-CA	121.70	113.13	1
CA-C-O	120.80	112.70	1
CA-CB-CG	114.10	104.57	1
O-C-N	123.00	130.61	1
CA-CB-CG	112.60	107.85	1
CA-C-O	120.80	112.73	1
O-C-N	123.00	115.41	2
CB-CG-ND2	116.40	123.51	1
O-C-N	123.00	115.42	2
C-N-CA	121.70	130.23	1
CB-CG1-CD1	113.80	103.86	1
CA-CB-CG	112.60	107.87	1
CA-C-N	116.20	125.66	1
O-C-O-C-N	123.00	115.44	1
CD-CE-NZ	111.90	96.78	1
CA-C-N	116.20	125.64	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CG-CD2-CE2	120.70	112.68	1
CA-C-N	116.20	106.77	1
C-N-CA	121.70	113.22	1
O-C-CG-CD-OE1	118.40	129.23	1
O-C-N	123.00	130.53	1
CA-CB-CG	113.80	109.09	1
C-N-CA	121.70	113.23	2
CA-C-N	116.20	106.79	1
CA-CB-CG1	110.40	118.40	1
CA-C-N	116.20	106.80	1
C-N-CA	121.70	130.16	1
CA-C-N	116.20	125.60	1
CA-N-CD	112.00	118.57	1
O-C-N	123.00	130.51	1
CB-CG-CD1	110.70	96.62	1
CA-CB-CG	112.60	107.91	1
O-C-N	123.00	115.51	1
CA-C-N	116.20	106.83	1
C-N-CA	121.70	113.27	1
O-C-N	123.00	130.49	1
O-C-N	123.00	115.52	2
O-C-N	123.00	130.48	1
CB-CG-CD	112.60	104.65	1
C-N-CA	121.70	113.28	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CD-NE-CZ	124.40	117.86	1
C-N-CA	122.60	145.96	1
O-C-N	123.00	130.47	1
CG-CD-CE	111.30	100.57	1
CA-C-N	116.20	125.53	1
CD-CE-NZ	111.90	96.97	1
CA-C-N	116.20	106.87	1
OD1-CG-ND2	122.60	117.94	1
O-C-N	123.00	115.54	2
CB-CG-CD	111.30	122.01	1
CD-NE-CZ	124.40	117.88	1
O-C-N	123.00	115.55	1
CA-C-N	116.20	125.51	1
OE1-CD-OE2	122.90	111.73	1
OD1-CG-OD2	122.90	111.74	1
CA-C-O	120.80	128.71	1
C-N-CA	121.70	130.07	1
CA-C-N	116.20	106.91	1
CA-CB-CG1	110.40	102.51	1
CA-C-NE-CZ-NH1	121.50	116.86	1
CA-C-N	116.20	125.47	1
C-N-CA	121.70	113.36	1
CA-CB-CG	104.50	95.70	1
O-C-N	123.00	115.59	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
O-C-N	123.00	115.60	1
CA-C-N	116.20	125.45	1
CD-CE-NZ	111.90	97.12	1
O-C-N	123.00	130.39	1
CG-CD-NE	112.00	101.84	1
CA-C-O	120.80	112.95	1
C-N-CA	121.70	130.01	1
CA-CB-CG	113.80	109.18	1
CA-C-N	116.20	125.43	1
O-C-N	123.00	130.38	1
CA-N-CD	112.00	118.45	1
O-C-C-N-CA	121.70	113.41	1
CG-CD-CE	111.30	100.71	1
O-C-N	123.00	130.37	1
O-C-C-N-CA	121.70	113.42	1
CA-C-O	120.80	112.98	1
CA-C-N	116.20	107.00	1
CA-CB-OG	111.10	101.91	1
CA-CB-CG	112.60	108.00	1
C-N-CA	121.70	113.43	1
CA-C-C-N-CA	121.70	113.43	1
CA-C-N	116.20	107.01	1
OD1-CG-ND2	122.60	127.19	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CD1-CG-CD2	118.60	125.48	1
CA-C-N	116.20	125.37	1
C-N-CA	121.70	113.45	1
CG-CD2-NE2	107.20	102.62	1
O-C-N	123.00	115.67	1
CA-C-N	116.20	125.36	2
CB-CG-CD2	120.80	113.93	1
CA-C-N	116.20	125.35	2
CA-CB-CG1	110.40	102.62	1
O-C-N	123.00	130.31	1
CA-CB-CG	112.60	108.03	1
C-N-CA	121.70	113.49	2
CA-C-O	120.80	113.05	1
CB-CG-CD2	110.70	124.36	1
CA-C-O	120.80	113.06	1
O-C-N	123.00	115.72	1
CA-C-O	120.80	128.53	1
C-N-CA	121.70	129.88	1
CD-NE-CZ	124.40	118.04	1
CG1-CB-CG2	110.70	124.33	1
O-C-N	123.00	115.73	2
C-N-CA	121.70	113.52	1
CB-CG-CD1	126.90	120.09	1
O-C-N	123.00	115.74	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CA-CB-CG	113.80	109.26	1
C-N-CA	121.70	113.53	1
CB-CG1-CD1	113.80	104.27	1
CA-C-N	116.20	107.13	1
CB-CG-ND2	116.40	123.20	1
CA-C-N	116.20	125.26	1
CD-NE-CZ	124.40	130.74	1
C-N-CA	121.70	129.85	1
C-N-CA	121.70	113.55	1
C-N-CA	121.70	129.84	1
CA-C-O	120.80	113.12	1
CA-C-N	116.20	107.16	1
O-C-N	123.00	115.78	2
C-N-CA	121.70	113.58	1
OE1-CD-NE2	122.60	118.09	1
CA-CB-CG	112.60	108.09	1
CA-C-N	116.20	107.18	1
C-N-CA	121.70	129.81	1
CD1-CG-CD2	118.60	111.85	1
CA-C-N	116.20	125.19	1
C-N-CA	121.70	113.61	1
CB-CG-CD1	110.70	124.18	1
CA-C-O	120.80	128.44	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
O-C-N	123.00	130.18	2
O-C-O-C-N	123.00	115.83	1
O-C-N	123.00	130.17	1
CA-CB-CG	112.60	117.08	1
CB-CG-OD1	118.40	128.71	1
O-C-N	123.00	115.83	1
OE1-CD-NE2	122.60	127.08	1
C-N-CA	121.70	113.64	1
CA-C-N	116.20	125.15	1
OE1-CD-NE2	122.60	118.13	1
C-N-CA	121.70	129.75	1
CA-CB-CG	114.10	105.16	1
O-C-N	123.00	130.15	2
CB-CG-OD1	118.40	108.12	1
O-C-N	123.00	115.85	1
CG-CD1-CE1	121.20	114.50	1
C-N-CA	122.60	144.93	1
O-C-N	123.00	130.13	1
CD1-CG-CD2	110.80	100.99	1
C-N-CA-C-N	116.20	107.29	1
CB-CG-ND2	116.40	109.72	1
CA-C-O	120.80	113.23	1
CA-C-N	116.20	125.11	1
CA-C-N	116.20	125.10	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CA-C-N	116.20	107.30	1
CA-CB-CG	112.60	117.05	1
O-C-N	123.00	115.89	1
O-C-N	123.00	115.90	3
C-N-CA	121.70	129.69	1
CG-CD2-CE2	120.70	113.15	1
NE-CZ-NH2	119.20	115.21	1
CD-NE-CZ	124.40	118.19	1
C-N-CA	121.70	113.72	1
CA-C-N	116.20	125.07	1
C-N-CA	121.70	129.68	1
CD1-CG-CD2	118.10	124.75	1
O-C-N	123.00	115.92	1
CD-NE-CZ	124.40	118.21	1
C-N-CA	121.70	113.74	1
CA-C-N	116.20	125.04	1
CA-C-O	120.80	111.52	1
C-N-CA	121.70	129.65	1
O-C-N	123.00	115.93	1
CA-CB-CG	114.10	105.27	1
C-N-CA	121.70	113.75	1
O-C-N	123.00	130.06	1
NE-CZ-NH2	119.20	115.23	1
C-N-CA	121.70	113.76	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
OE1-CD-OE2	122.90	112.31	1
CA-C-N	116.20	107.38	2
O-C-N	123.00	115.95	1
CA-CB-OG	111.10	102.28	1
CA-C-N	116.20	107.40	1
C-N-CA	121.70	129.62	1
OD1-CG-OD2	122.90	112.35	1
O-C-CD-NE-CZ	124.40	118.25	1
CA-C-N	116.20	107.42	1
CA-C-N	116.20	124.98	1
CA-C-O	120.80	113.34	1
CA-CB-CG	114.10	105.33	2
OD1-CG-ND2	122.60	126.99	1
CA-CB-CG	112.60	108.22	1
CG-CD-OE2	118.40	108.34	1
CG-CD-OE1	118.40	108.34	1
CB-CG-CD	112.60	105.16	1
CA-C-N	116.20	124.95	1
CA-C-N	116.20	124.94	1
C-N-CA	121.70	113.83	1
CB-CG-CD	111.30	101.25	1
CB-CG-OD1	120.80	129.54	1
C-N-CA	121.70	113.84	1
CA-C-N	116.20	124.93	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
O-C-N	123.00	116.03	2
CA-C-N	116.20	124.91	1
O-C-N	123.00	129.96	1
CG-CD-OE1	120.80	129.50	1
CA-C-O	120.80	113.41	1
CB-CG-ND2	116.40	122.92	1
CD1-CG-CD2	110.80	101.23	1
CB-CG-CD	111.30	101.31	1
O-C-N	123.00	129.95	1
CA-C-N	116.20	107.51	1
O-C-N	123.00	116.05	1
CA-C-N	116.20	124.88	1
CG-CD-CE	111.30	101.32	1
OE1-CD-NE2	122.60	118.26	1
O-C-N	123.00	116.06	1
C-N-CA	121.70	113.90	1
CA-C-N	116.20	124.87	1
OE1-CD-OE2	122.90	112.51	1
CA-C-O	120.80	113.44	1
O-C-N	123.00	116.07	1
NE-CZ-NH1	121.50	125.83	1
C-N-CA	121.70	113.91	1
O-C-N	123.00	129.92	1
O-C-N	123.00	116.08	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CD1-CG-CD2	110.80	101.28	1
O-C-N	123.00	129.91	1
O-C-N	123.00	116.09	2
CB-CG-CD1	120.80	127.28	1
CB-CG-CD1	120.70	128.04	1
C-N-CA	121.70	129.47	1
O-C-N	123.00	116.10	1
CA-C-N	116.20	107.59	1
O-C-N	123.00	129.89	2
CD1-CG-CD2	110.80	120.27	1
CA-C-O	120.80	113.48	2
CA-C-N	116.20	124.81	1
CA-C-O	120.80	113.49	2
CG-CD-CE	111.30	101.41	1
O-C-N	123.00	116.12	1
OG1-CB-CG2	109.30	100.71	1
CA-CB-CG	114.10	105.52	2
OD1-CG-ND2	122.60	118.31	1
O-C-N	123.00	116.14	1
C-N-OD1-CG-OD2	122.90	112.61	1
C-N-CA	121.70	113.98	1
CA-C-N	116.20	124.78	1
O-C-N	123.00	129.86	1
CA-C-O	120.80	128.08	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
C-N-CA	121.70	129.40	1
O-C-CA-C-O	120.80	113.53	1
CG-CD-NE	112.00	102.59	1
O-C-C-N-CA	121.70	114.01	1
C-N-CA	121.70	129.39	1
CA-C-O	120.80	128.06	1
CA-C-N	116.20	107.66	1
C-N-CA	121.70	114.01	1
C-N-CA	121.70	129.38	1
C-N-CA-C-O	120.80	128.05	1
O-C-N	123.00	129.82	1
O-C-N	123.00	116.18	1
CD1-CG-CD2	110.80	101.43	1
CA-CB-CG	112.60	108.34	1
C-N-CA	121.70	114.04	3
CB-CG-OD2	118.40	108.61	1
CG-CD1-CE1	120.70	127.94	1
NE-CZ-NH2	119.20	123.03	1
CG-CD-NE2	116.40	110.03	1
O-C-N	123.00	116.21	3
CA-C-N	116.20	107.71	1
C-N-CA	121.70	114.06	1
CG1-CB-CG2	110.70	97.98	1
O-C-N	123.00	116.22	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CB-CG-C-N-CA	121.70	114.07	1
CB-CG-ND1	122.70	116.35	1
C-N-CA	121.70	114.08	1
CA-C-N	116.20	107.73	1
OD1-CG-ND2	122.60	126.83	1
CA-C-N	116.20	107.74	1
CG-CD-NE	112.00	102.70	1
O-C-N	123.00	116.23	1
O-C-CA-CB-CG	112.60	108.37	1
CA-C-CB-CG-ND2	116.40	110.06	1
CA-C-N	116.20	124.65	1
CB-CG-CD	106.10	119.61	1
O-C-N	123.00	116.24	1
CG-CD2-CE2	121.20	114.87	1
CA-C-N	116.20	124.64	1
CA-C-N	116.20	107.76	1
C-N-CA	121.70	129.29	1
CA-C-N	116.20	124.63	1
CD1-CG-CD2	110.80	120.07	1
CA-C-O	120.80	127.96	1
O-C-CA-C-N	116.20	107.78	1
OE1-CD-OE2	122.90	112.81	1
C-N-CA	121.70	129.26	1
CA-C-N	116.20	124.60	2

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CA-C-N	116.20	107.80	1
O-C-N	123.00	129.72	1
CB-CG1-CD1	113.80	104.99	1
O-C-N	123.00	116.29	1
OD1-CG-ND2	122.60	126.79	1
CA-CB-CG	112.60	108.41	1
O-C-N	123.00	129.70	1
C-N-CA	121.70	114.16	1
CD-NE-CA-N-CD	112.00	117.85	1
CA-C-N	116.20	107.85	1
CA-C-O	120.80	113.70	1
CG-CD-OE1	120.80	112.45	1
O-C-N	123.00	129.68	1
CB-CG-CD2	110.70	98.18	1
CB-CG-CD2	126.80	132.64	1
CA-CB-CG	112.60	108.43	2
CA-C-N	116.20	107.86	1
CA-CB-CG	114.10	105.78	1
C-N-CA	121.70	114.21	1
CA-C-O-C-CB-CG-CD1	110.70	123.18	1
CA-C-N	116.20	124.52	1
O-C-N	123.00	116.35	1
C-N-CA	121.70	114.22	3
NE-CZ-NH1	121.50	117.35	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
OE1-CD-OE2	122.90	132.86	1
C-N-CA	121.70	129.17	1
O-C-N	123.00	129.64	1
CD1-CG-CD2	106.30	99.66	1
CA-C-O	120.80	113.76	1
CG-CD-NE2	116.40	110.19	1
CD-NE-CZ	124.40	130.20	1
CA-C-N	116.20	124.48	1
CA-CB-CG	114.10	105.82	1
CB-CG-CD	106.10	119.34	1
O-C-N	123.00	116.38	1
CA-N-CD	112.00	117.79	1
CD-CE-NZ	111.90	98.67	1
C-N-CA-C-N	116.20	124.46	1
C-N-CA	121.70	129.13	1
CB-CG-SD	112.70	125.08	1
CA-C-N	116.20	107.95	1
CD-NE-CZ	124.40	118.63	1
C-N-CA	121.70	129.12	1
CA-C-N	116.20	124.45	1
O-C-N	123.00	129.60	1
CA-N-CD	112.00	117.77	1
C-N-CA	121.70	114.28	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
O-C-N	123.00	129.59	1
C-N-CA	121.70	114.29	1
CA-N-CD	112.00	117.76	1
C-N-C-N-CA	121.70	114.30	1
C-N-CA	121.70	114.30	2
CA-C-N	116.20	124.42	1
C-N-CA	121.70	129.09	1
CB-CG-CD	111.30	101.85	1
O-C-N	123.00	116.43	1
CA-CB-CG2	110.50	103.52	1
O-C-N	123.00	129.57	1
O-C-N	123.00	116.44	1
CG-CD-CE	111.30	101.86	1
CB-CG-CD2	126.80	121.06	1
CA-N-CD	112.00	117.74	1
CA-C-O	120.80	113.83	1
C-N-CA	121.70	129.07	1
O-C-N	123.00	116.46	1
CA-C-N	116.20	108.03	2
CA-C-O	120.80	127.75	1
C-N-CA	121.70	114.35	2
CB-CG-CD	111.30	101.92	1
CA-C-N	116.20	108.04	1
CG-CD2-CE2	121.20	115.08	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CA-CB-CG	112.60	108.53	1
CA-CB-CG	114.10	105.95	1
CA-C-N	116.20	108.06	1
CG-CD-OE2	118.40	109.04	1
O-C-N	123.00	129.51	1
C-N-CG-CD-CE	111.30	120.65	1
C-N-CA	121.70	129.02	1
C-N-CA	121.70	129.01	1
CA-CB-CG	113.80	109.74	1
CD1-CG-CD2	110.80	101.87	1
CA-C-N	116.20	108.09	1
CB-CG-OD1	120.80	112.69	1
CG-CD-NE	112.00	120.92	1
O-C-N	123.00	129.49	1
CA-C-O	120.80	113.91	1
CA-CB-CG1	110.40	117.29	1
O-C-N	123.00	129.48	1
CA-C-N	116.20	108.10	1
C-N-CA	121.70	114.41	1
CG-SD-CE	100.90	92.00	1
C-N-CA	121.70	114.42	2
CA-C-CG-SD-CE	100.90	92.00	1
O-C-N	123.00	129.47	2

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CD-CE-NZ	111.90	98.96	1
CG-CD1-CE1	120.70	113.83	1
C-N-CA-CB-CG	112.60	108.56	1
ND1-CG-CD2	106.10	102.07	1
CA-C-N	116.20	108.13	1
CG-CD-OE1	120.80	128.87	1
CG-CD2-CE3	133.90	129.87	1
CA-CB-CG	113.80	109.77	1
CB-CG-CD1	110.70	98.61	1
CA-C-N	116.20	124.26	1
O-C-N	123.00	116.56	1
C-N-CA	121.70	114.46	1
CG-CD-CE	111.30	102.05	1
O-C-N	123.00	116.57	1
C-N-CB-CG-CD2	110.70	98.65	1
CA-C-N	116.20	124.23	1
OE1-CD-NE2	122.60	118.58	1
O-C-N	123.00	129.42	2
CA-C-N	116.20	124.22	1
O-C-C-N-CA	121.70	128.91	1
CA-C-O	120.80	127.61	1
CA-C-N	116.20	124.21	1
CA-C-N	116.90	110.89	1
O-C-N	123.00	129.41	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
O-C-N	123.00	116.60	1
CG-CD-HD3	121.00	109.00	1
C-N-H	112.30	124.30	1
CB-CA-HA	121.00	109.00	1
HD21-CD2-HD22	122.00	110.00	1
CD-CG-HG3	120.00	108.00	1
HB2-CB-HB3	98.00	110.00	1
CD-CE-HE3	121.00	109.00	1
HE1-CE-HE3	98.00	110.00	1
HG21-CG2-HG23	122.01	110.00	1
C-N-H	112.29	124.30	1
N-CA-HA	122.01	110.00	1
N-CD-HD3	121.01	109.00	1
N-CA-HA	97.99	110.00	1
HG22-CG2-HG23	97.99	110.00	2
CG-CB-HB2	120.01	108.00	1
CG1-CD1-HD13	121.01	109.00	1
CB-CG2-HG23	121.01	109.00	1
N-CD-HD2	121.01	109.00	1
CA-CB-HB3	121.01	109.00	1
CE-NZ-HZ2	122.02	110.00	1
HG21-CG2-HG22	96.98	109.00	2
CB-CG2-HG23	122.02	110.00	1
CA-CB-HB2	96.98	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CG-CB-HB2	95.98	108.00	1
HG2-CG-HG3	122.02	110.00	1
HG21-CG2-HG23	122.02	110.00	1
CD-CG-HG3	120.03	108.00	1
CA-N-H	126.03	114.00	1
NZ-CE-HE3	95.97	108.00	1
CA-N-H	101.97	114.00	1
HD21-CD2-HD23	97.97	110.00	1
CD-CE-HE2	121.03	109.00	1
CE1-CD1-HD1	107.37	119.40	1
CB-CG2-HG22	121.03	109.00	1
C-N-H	112.27	124.30	1
HG21-CG2-HG23	97.97	110.00	1
HG12-CG1-HG13	97.97	110.00	1
CB-CG2-HG21	121.04	109.00	1
N-CA-HA	122.04	110.00	1
C-CA-HA	96.96	109.00	2
HZ1-NZ-HZ3	96.96	109.00	1
CB-CA-HA	121.04	109.00	1
HB2-CB-HB3	97.96	110.00	1
CE2-CD2-HD2	107.36	119.40	1
HB1-CB-HB2	97.96	110.00	1
CG-CB-HB2	95.96	108.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
C-N-H	112.26	124.30	1
CA-CB-HB3	121.04	109.00	1
CD1-CG1-HG13	95.96	108.00	1
N-CA-HA	122.05	110.00	1
CA-CB-HB3	121.05	109.00	1
CA-CB-HB2	121.05	109.00	1
CZ-NH2-HH21	132.05	120.00	1
CB-CG2-HG22	121.05	109.00	1
CD-CG-HG2	95.95	108.00	1
CB-CG-HG3	96.95	109.00	1
CB-CG2-HG23	122.06	110.00	1
CA-CB-HB	121.06	109.00	2
CB-CG2-HG23	96.94	109.00	1
HD11-CD1-HD12	97.94	110.00	1
HB2-CB-HB3	97.94	110.00	2
CA-CB-HB2	121.06	109.00	1
HD22-CD2-HD23	97.94	110.00	1
HG12-CG1-HG13	97.94	110.00	1
CB-CG2-HG23	121.06	109.00	1
N-CD-HD2	121.06	109.00	1
CB-CG-HG	96.94	109.00	1
CD-CG-HG2	95.94	108.00	1
CB-CG-HG2	121.06	109.00	1
CA-CB-HB3	121.06	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CB-CG-HG3	121.06	109.00	1
HD11-CD1-HD12	97.93	110.00	1
CA-N-H	126.07	114.00	1
CB-CG2-HG23	121.07	109.00	1
CG-CD1-HD13	121.07	109.00	1
CB-CA-HA	121.07	109.00	1
CB-CG-HG3	96.93	109.00	1
HB2-CB-HB3	122.07	110.00	1
HE1-CE-HE3	122.07	110.00	1
HD12-CD1-HD13	97.93	110.00	1
CG-CD1-HD13	121.08	109.00	1
HG21-CG2-HG22	97.92	110.00	1
C-CA-HA	96.92	109.00	1
C-N-H	112.22	124.30	1
CG1-CD1-HD12	121.08	109.00	1
HG2-CG-HG3	97.92	110.00	1
N-CA-HA	97.92	110.00	1
CG-CB-HB3	95.91	108.00	1
CB-CG2-HG21	121.09	109.00	1
CG-CD2-HD23	121.09	109.00	1
HB2-CB-HB3	97.91	110.00	1
CB-CG-HG3	96.91	109.00	1
HZ1-NZ-HZ3	96.91	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
HE21-NE2-HE22	107.91	120.00	1
CB-CG-HG3	121.10	109.00	1
CG-CB-HB3	120.10	108.00	1
HG21-CG2-HG22	97.90	110.00	1
HG12-CG1-HG13	97.90	110.00	1
CG1-CD1-HD12	121.10	109.00	1
HD21-ND2-HD22	107.90	120.00	1
CB-CG2-HG21	96.90	109.00	1
CA-CB-HB2	96.90	109.00	1
CA-CB-HB3	121.10	109.00	1
C-CA-HA	121.11	109.00	1
HG2-CG-HG3	97.89	110.00	1
CB-CG-HG3	96.89	109.00	1
CA-CB-HB1	121.11	109.00	1
HB2-CB-HB3	97.89	110.00	1
CG-CD2-HD23	96.89	109.00	1
CB-CG2-HG21	121.11	109.00	1
CB-CG2-HG23	122.11	110.00	1
HG21-CG2-HG22	97.89	110.00	1
CB-CA-HA	96.89	109.00	1
CG-CD2-HD22	121.12	109.00	1
CG1-CD1-HD12	121.12	109.00	1
CD-CG-HG3	95.88	108.00	1
HH11-NH1-HH12	107.88	120.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
N-CA-HA	97.88	110.00	1
HG11-CG1-HG13	122.12	110.00	1
CG-CB-HB2	95.88	108.00	1
CA-CB-HB2	121.13	109.00	1
HD22-CD2-HD23	97.87	110.00	1
CE-NZ-HZ2	122.13	110.00	1
HE1-CE-HE2	97.87	110.00	1
HG2-CG-HG3	97.87	110.00	1
CG1-CD1-HD11	121.13	109.00	1
HZ1-NZ-HZ3	96.86	109.00	1
C-N-H	136.44	124.30	1
CB-CG2-HG23	121.14	109.00	1
CG-CD1-HD13	121.14	109.00	1
HB2-CB-HB3	97.86	110.00	2
CA-CB-HB3	96.86	109.00	1
N-CA-HA	97.86	110.00	1
HG21-CG2-HG22	97.86	110.00	1
CA-N-H	126.14	114.00	1
CA-CB-HB3	121.14	109.00	1
HD2-CD-HD3	97.86	110.00	1
C-CA-HA	121.14	109.00	1
HG12-CG1-HG13	97.85	110.00	1
CG-CB-HB3	120.15	108.00	1
CD-NE-HE	130.05	117.90	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
HG11-CG1-HG13	97.85	110.00	1
CG-CD2-HD22	96.85	109.00	1
CB-CG2-HG23	121.15	109.00	1
CB-CG2-HG23	96.85	109.00	1
CA-CB-HB2	121.15	109.00	1
C-CA-HA	96.84	109.00	1
HG22-CG2-HG23	97.84	110.00	2
HG21-CG2-HG23	97.84	110.00	1
CG-CD-HD2	96.84	109.00	1
CA-CB-HB	121.16	109.00	1
HB1-CB-HB3	97.84	110.00	1
CA-N-H	101.84	114.00	1
CG-CD1-HD13	121.16	109.00	1
SD-CE-HE1	96.84	109.00	1
CG-CB-HB2	95.84	108.00	1
HB2-CB-HB3	97.84	110.00	1
HD2-CD-HD3	97.84	110.00	1
CA-CB-HB2	121.16	109.00	1
C-N-H	112.13	124.30	1
HB2-CB-HB3	122.17	110.00	1
CB-CA-HA	121.17	109.00	1
CD-NE-HE	130.07	117.90	1
HB2-CB-HB3	97.83	110.00	2
CG-CB-HB2	122.17	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CB-CG2-HG23	121.17	109.00	1
CB-CG2-HG22	121.17	109.00	1
C-CA-HA	96.83	109.00	1
CB-CG-HG3	96.82	109.00	1
CB-CG2-HG21	121.18	109.00	1
C-N-H	112.12	124.30	1
CA-CB-HB	121.18	109.00	1
HG21-CG2-HG22	97.82	110.00	1
C-CA-HA2	96.82	109.00	1
HB2-CB-HB3	97.81	110.00	3
HH21-NH2-HH22	107.81	120.00	1
CG1-CB-HB	95.81	108.00	1
CG-CB-HB2	95.81	108.00	1
CG-CD2-HD22	121.19	109.00	1
HD12-CD1-HD13	97.81	110.00	2
CA-CB-HB2	96.81	109.00	1
HD22-CD2-HD23	97.81	110.00	1
C-N-H	112.11	124.30	1
C-N-H	136.49	124.30	1
CB-CG1-HG11	121.19	109.00	1
CG-CB-HB3	95.80	108.00	1
NZ-CE-HE3	95.80	108.00	1
CB-CA-HA	121.20	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
C-N-H	112.10	124.30	2
N-CA-HA	122.20	110.00	1
CB-CG2-HG22	122.20	110.00	1
C-CA-HA2	121.20	109.00	1
CA-N-H	101.80	114.00	1
HD21-CD2-HD23	122.20	110.00	1
HH21-NH2-HH22	107.80	120.00	1
HZ1-NZ-HZ2	96.80	109.00	1
CA-N-H	126.20	114.00	1
HG11-CG1-HG13	97.79	110.00	1
HB2-CB-HB3	97.79	110.00	1
C-CA-HA	97.79	110.00	1
CG-CD1-HD11	121.21	109.00	1
CG-CB-HB3	95.78	108.00	1
NZ-CE-HE2	95.78	108.00	1
HH21-NH2-HH22	107.78	120.00	1
HE21-NE2-HE22	107.78	120.00	1
C-CA-HA	121.22	109.00	3
HD12-CD1-HD13	97.78	110.00	1
CB-CA-HA	121.22	109.00	1
HG21-CG2-HG22	97.78	110.00	1
HD21-CD2-HD22	97.78	110.00	1
CE2-CD2-HD2	107.43	119.65	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CZ-NH2-HH22	132.22	120.00	1
CB-CG-HG3	121.22	109.00	1
CB-CG2-HG21	121.23	109.00	1
CG1-CD1-HD11	121.23	109.00	1
CD1-CG1-HG12	95.77	108.00	1
CD-NE2-HE22	132.23	120.00	1
CG-CB-HB3	120.23	108.00	1
N-CA-HA	97.77	110.00	1
CG-CD1-HD1	131.88	119.65	1
CG-CD1-HD12	96.77	109.00	1
C-CA-HA	121.23	109.00	1
CA-N-H	101.77	114.00	1
CA-CB-HB2	96.77	109.00	1
CE1-CZ-HZ	107.76	120.00	1
CB-CG2-HG21	121.24	109.00	1
HE21-NE2-HE22	107.76	120.00	1
CB-CG2-HG21	122.25	110.00	1
HD21-ND2-HD22	107.75	120.00	1
SD-CG-HG2	95.75	108.00	1
CG-CD-HD2	96.75	109.00	1
HB1-CB-HB3	97.75	110.00	1
CB-CA-HA	96.75	109.00	1
HG21-CG2-HG22	97.75	110.00	1
CB-CA-HA	121.25	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
C-CA-HA	96.75	109.00	1
HD21-CD2-HD22	97.75	110.00	1
N-CA-HA	97.75	110.00	1
CZ-CE1-HE1	107.94	120.20	1
C-N-H	112.04	124.30	1
CG-CB-HB2	120.26	108.00	1
CD1-CG1-HG13	95.74	108.00	1
HB2-CB-HB3	122.26	110.00	1
HD12-CD1-HD13	97.74	110.00	1
CG-CB-HB3	95.74	108.00	1
ND1-CE1-HE1	138.06	125.80	1
CG-CB-HB3	95.73	108.00	2
CZ-NH2-HH22	132.27	120.00	1
CZ-NH1-HH11	132.27	120.00	1
HG21-CG2-HG23	97.73	110.00	1
HG2-CG-HG3	97.73	110.00	1
CG-CB-HB3	120.27	108.00	2
CA-CB-HB3	121.27	109.00	1
C-N-H	112.03	124.30	1
HB1-CB-HB3	97.73	110.00	1
CE-NZ-HZ3	122.27	110.00	1
HB2-CB-HB3	122.27	110.00	1
CD-CG-HG3	95.73	108.00	1
CG-CB-HB2	95.72	108.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CG-CB-HB3	95.72	108.00	1
CD1-CG1-HG12	120.28	108.00	1
CB-CA-HA	121.28	109.00	1
CZ-CE2-HE2	132.48	120.20	1
CD-NE-HE	105.62	117.90	1
CG1-CB-HB	95.72	108.00	1
HG11-CG1-HG13	97.72	110.00	1
HB2-CB-HB3	97.72	110.00	1
CG1-CD1-HD11	121.28	109.00	1
CG-CD2-HD22	121.28	109.00	1
CA-CB-HB3	121.28	109.00	1
CG-CB-HB3	95.71	108.00	1
CE-NZ-HZ2	122.29	110.00	1
CG-ND2-HD22	132.29	120.00	1
C-CA-HA	121.29	109.00	1
C-N-H	112.01	124.30	1
CB-CG2-HG22	121.29	109.00	1
CB-CA-HA	121.29	109.00	1
HD21-CD2-HD22	97.71	110.00	1
CA-CB-HB2	96.71	109.00	1
HD22-CD2-HD23	97.70	110.00	1
HB2-CB-HB3	97.70	110.00	1
C-CA-HA	96.70	109.00	1
CB-CG-HG3	121.30	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
HD11-CD1-HD13	97.70	110.00	1
CD-CG-HG3	120.31	108.00	1
C-N-H	111.99	124.30	1
CG-CD2-HD23	121.31	109.00	1
CE2-CD2-HD2	107.34	119.65	1
HG2-CG-HG3	97.69	110.00	1
HB2-CB-HB3	122.31	110.00	1
CG1-CD1-HD11	96.69	109.00	1
HZ1-NZ-HZ2	96.69	109.00	1
C-CA-HA	96.69	109.00	1
CZ-NH2-HH22	107.69	120.00	1
CD-CG-HG3	95.69	108.00	1
CZ-NH2-HH21	132.32	120.00	1
HD21-CD2-HD22	122.32	110.00	1
CB-CG-HG3	121.32	109.00	1
CG-CD-HD3	96.68	109.00	1
HE2-CE-HE3	97.68	110.00	1
C-CA-HA3	96.68	109.00	1
CA-CB-HB2	121.32	109.00	1
CD-CE-HE3	121.32	109.00	1
HB2-CB-HB3	97.67	110.00	1
HD12-CD1-HD13	97.67	110.00	1
CG2-CB-HB	96.67	109.00	1
C-CA-HA3	121.33	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CB-CG2-HG21	121.33	109.00	1
CB-CG1-HG13	121.33	109.00	1
CB-CG2-HG23	122.33	110.00	1
HG22-CG2-HG23	97.66	110.00	1
CG-CB-HB3	120.34	108.00	1
HD2-CD-HD3	97.66	110.00	1
HE1-CE-HE3	122.34	110.00	1
C-N-H	136.64	124.30	1
N-CA-HA	97.66	110.00	1
C-N-H	111.95	124.30	1
CD1-CG1-HG12	95.65	108.00	1
HD11-CD1-HD12	97.65	110.00	1
CG-CD-HD2	96.64	109.00	1
CG-CB-HB3	95.64	108.00	1
HG22-CG2-HG23	97.64	110.00	1
HB2-CB-HB3	97.64	110.00	1
HD11-CD1-HD12	97.64	110.00	2
HG12-CG1-HG13	97.64	110.00	1
CE-NZ-HZ3	97.64	110.00	1
CA-N-H	101.64	114.00	1
CA-CB-HB3	96.64	109.00	1
N-CA-HA	122.36	110.00	1
HB1-CB-HB3	97.64	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CB-CG-HG2	121.36	109.00	1
HD2-CD-HD3	122.36	110.00	1
C-CA-HA	96.63	109.00	1
CA-CB-HB3	96.63	109.00	1
HD11-CD1-HD13	97.63	110.00	3
CG-CB-HB2	120.37	108.00	1
C-N-H	111.93	124.30	1
HB2-CB-HB3	97.63	110.00	1
HB2-CB-HB3	97.62	110.00	2
HG22-CG2-HG23	97.62	110.00	1
SD-CG-HG2	120.38	108.00	1
C-N-H	111.92	124.30	1
C-CA-HA	96.62	109.00	1
CA-CB-HB	121.38	109.00	1
CE1-ND1-HD1	112.97	125.35	1
HZ1-NZ-HZ3	96.62	109.00	1
CD1-CG-HG	95.62	108.00	1
CG-CD-HD3	96.61	109.00	1
HZ1-NZ-HZ3	96.61	109.00	1
HD21-CD2-HD23	97.61	110.00	1
HG2-CG-HG3	97.61	110.00	1
CZ-NH2-HH22	107.61	120.00	1
CE2-CD2-HD2	107.01	119.40	1
CE-CD-HD3	95.61	108.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
HD11-CD1-HD12	97.61	110.00	1
C-N-H	111.91	124.30	1
CZ3-CE3-HE3	108.31	120.70	1
CB-CG-HG2	96.61	109.00	1
HB1-CB-HB3	97.61	110.00	1
CA-CB-HB	121.39	109.00	1
CG1-CB-HB	95.61	108.00	1
HE2-CE-HE3	97.61	110.00	1
CD-CG-HG2	120.39	108.00	1
HB2-CB-HB3	97.60	110.00	1
CB-CG-HG2	96.60	109.00	1
CB-CG-HG3	121.40	109.00	1
SD-CE-HE1	121.40	109.00	1
HG11-CG1-HG12	97.59	110.00	1
CE1-ND1-HD1	112.94	125.35	1
CD-CG-HG2	95.59	108.00	2
HD22-CD2-HD23	97.59	110.00	1
C-N-H	111.89	124.30	1
CA-CB-HB	121.41	109.00	1
CB-CG2-HG23	121.41	109.00	1
HB2-CB-HB3	97.59	110.00	1
HG21-CG2-HG23	97.59	110.00	1
CB-CG2-HG22	121.42	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
C-CA-HA	121.42	109.00	1
CG-CD2-HD2	132.07	119.65	1
CA-CB-HB3	121.42	109.00	1
HD2-CD-HD3	122.42	110.00	1
HG21-CG2-HG23	96.58	109.00	1
HD11-CD1-HD12	97.58	110.00	1
CG-CB-HB3	95.58	108.00	2
CG-ND2-HD21	107.58	120.00	1
CE1-ND1-HD1	112.92	125.35	1
CB-CG1-HG12	121.43	109.00	1
HB2-CB-HB3	97.57	110.00	1
CB-CG2-HG23	121.43	109.00	1
CG-CD2-HD2	131.83	119.40	1
CD-NE-HE	130.33	117.90	1
NZ-CE-HE3	95.57	108.00	1
OG-CB-HB3	96.57	109.00	1
HG21-CG2-HG23	96.57	109.00	1
C-CA-HA	96.57	109.00	1
N-CA-HA	122.43	110.00	1
HD21-CD2-HD23	122.43	110.00	1
CE-NZ-HZ3	97.57	110.00	1
HG2-CG-HG3	97.56	110.00	1
CG-CB-HB3	95.56	108.00	1
HG12-CG1-HG13	97.56	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CB-CG2-HG22	121.44	109.00	1
CB-CA-HA	121.44	109.00	1
CG-CD2-HD21	121.44	109.00	1
CA-N-H	126.44	114.00	1
HD11-CD1-HD12	97.56	110.00	1
CD1-CG1-HG12	95.55	108.00	1
CG1-CB-HB	95.55	108.00	1
CD-CG-HG2	97.55	110.00	1
CA-N-H	101.55	114.00	1
CA-CB-HB	121.45	109.00	1
C-CA-HA	96.55	109.00	1
CA-CB-HB3	96.54	109.00	1
CA-CB-HB	121.46	109.00	1
HG2-CG-HG3	97.54	110.00	1
CG-CB-HB3	95.54	108.00	1
HB2-CB-HB3	97.54	110.00	3
CB-CG1-HG13	121.46	109.00	1
CB-CG2-HG22	121.46	109.00	1
N-CA-HA	97.54	110.00	1
CB-CA-HA	96.54	109.00	1
SD-CE-HE1	96.54	109.00	1
C-N-H	111.84	124.30	1
CB-CG-HG3	121.46	109.00	1
HD11-CD1-HD12	122.46	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
HG21-CG2-HG23	97.54	110.00	1
HD22-CD2-HD23	97.54	110.00	1
CG-CB-HB3	95.53	108.00	1
CA-CB-HB2	121.47	109.00	1
CG-CB-HB3	122.47	110.00	1
CB-CG2-HG23	121.47	109.00	1
CG1-CB-HB	121.47	109.00	1
CB-CG-HG2	121.47	109.00	1
CG-CD1-HD12	121.47	109.00	1
CA-N-H	126.47	114.00	1
HG2-CG-HG3	97.53	110.00	1
CZ-NH1-HH12	132.47	120.00	1
HG21-CG2-HG23	96.53	109.00	1
HB2-CB-HB3	97.53	110.00	2
CZ-CE1-HE1	132.47	120.00	1
CG-ND2-HD21	107.53	120.00	1
HD21-CD2-HD22	97.53	110.00	1
C-N-H	111.82	124.30	1
HH21-NH2-HH22	107.52	120.00	1
HD12-CD1-HD13	97.52	110.00	1
CA-CB-HB3	121.48	109.00	1
HG21-CG2-HG23	97.52	110.00	1
CA-N-H	101.52	114.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CD1-CG1-HG12	95.52	108.00	1
CE-NZ-HZ2	122.48	110.00	1
C-N-H	111.81	124.30	1
CA-CB-HB2	96.51	109.00	1
N-CA-HA	97.51	110.00	1
CG-CD1-HD11	121.49	109.00	1
CB-CG-HG2	121.49	109.00	1
HD21-CD2-HD23	97.51	110.00	1
HB1-CB-HB3	122.49	110.00	1
HG22-CG2-HG23	96.51	109.00	1
CD2-CG-HG	95.51	108.00	1
C-CA-HA	96.51	109.00	1
CD-CG-HG3	122.50	110.00	1
CG-ND2-HD22	107.50	120.00	1
CG-CB-HB2	120.50	108.00	1
N-CA-HA	97.50	110.00	1
C-CA-HA	96.50	109.00	1
CD-CG-HG2	120.50	108.00	1
SD-CG-HG2	95.50	108.00	1
CD-CE-HE2	121.50	109.00	1
HB2-CB-HB3	97.49	110.00	1
C-CA-HA2	121.51	109.00	1
CA-CB-HB2	121.51	109.00	1
HD21-CD2-HD23	97.49	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CG-CD1-HD12	121.51	109.00	1
CA-CB-HB3	121.51	109.00	1
HG21-CG2-HG22	97.49	110.00	1
CA-N-H	126.51	114.00	1
CB-CG-HG2	96.49	109.00	1
CG2-CB-HB	96.49	109.00	1
CD-CG-HG3	95.48	108.00	1
HZ1-NZ-HZ2	96.48	109.00	1
HE2-CE-HE3	97.48	110.00	1
CA-CB-HB2	96.48	109.00	1
SD-CE-HE2	96.48	109.00	1
CD2-CE3-HE3	133.22	120.70	1
CG2-CB-HB	120.52	108.00	1
CZ-NH2-HH21	132.52	120.00	1
CG-CD2-HD22	121.52	109.00	1
CD-CG-HG2	95.47	108.00	2
HG2-CG-HG3	97.47	110.00	1
CA-CB-HB2	121.53	109.00	1
CG2-CB-HB	121.53	109.00	1
HZ1-NZ-HZ3	96.47	109.00	1
HB1-CB-HB3	97.47	110.00	1
CE-CD-HD3	95.47	108.00	1
HB2-CB-HB3	97.47	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CG-CB-HB2	120.53	108.00	1
CE2-CD2-HD2	106.86	119.40	1
CG-CB-HB3	95.47	108.00	1
C-CA-HA2	121.54	109.00	1
N-CD-HD3	121.54	109.00	1
CB-CG-HG2	121.54	109.00	1
CE1-CD1-HD1	107.11	119.65	1
CB-CA-HA	121.54	109.00	1
CD-CG-HG2	95.46	108.00	1
C-CA-HA	96.46	109.00	1
HD11-CD1-HD13	97.46	110.00	1
CG-CB-HB3	120.55	108.00	1
CE-NZ-HZ3	122.55	110.00	1
CD-CG-HG3	95.45	108.00	1
CZ3-CH2-HH2	106.70	119.25	1
HG12-CG1-HG13	97.44	110.00	1
CA-CB-HB2	121.56	109.00	1
HZ2-NZ-HZ3	96.44	109.00	1
CE1-CD1-HD1	107.09	119.65	1
CG-CD2-HD22	121.56	109.00	1
C-N-H	111.74	124.30	1
HG2-CG-HG3	122.56	110.00	1
HZ1-NZ-HZ2	96.43	109.00	1
CG-CB-HB3	95.43	108.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CA-CB-HB3	96.43	109.00	3
CA-N-H	101.43	114.00	1
CB-CG-HG2	121.57	109.00	2
CG-CB-HB2	95.43	108.00	1
CE2-CD2-HD2	107.08	119.65	1
CA-CB-HB3	121.57	109.00	1
HG12-CG1-HG13	97.43	110.00	1
HH21-NH2-HH22	107.43	120.00	1
HD22-CD2-HD23	97.42	110.00	1
CA-CB-HB3	96.42	109.00	1
HZ1-NZ-HZ2	121.58	109.00	1
OG-CB-HB2	121.58	109.00	1
HD2-CD-HD3	122.58	110.00	1
CG-CD1-HD12	121.58	109.00	1
CZ-NH1-HH11	132.58	120.00	1
HG22-CG2-HG23	97.42	110.00	1
CA-CB-HB2	96.42	109.00	1
HZ2-NZ-HZ3	96.42	109.00	1
CA-CB-HB2	121.59	109.00	1
N-CA-HA	122.59	110.00	1
C-N-H	111.71	124.30	1
CG-CB-HB3	120.59	108.00	1
CA-N-H	101.41	114.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CA-CB-HB2	96.41	109.00	1
CA-CB-HB3	96.41	109.00	2
NE2-CE1-HE1	113.21	125.80	1
CG2-CB-HB	95.41	108.00	1
CB-CG-HG	121.59	109.00	1
CG-CD1-HD13	121.59	109.00	1
CA-N-H	126.59	114.00	1
HB1-CB-HB2	97.41	110.00	1
CG-CB-HB3	95.40	108.00	1
CB-CA-HA	96.40	109.00	1
HB2-CB-HB3	97.40	110.00	3
CG-CB-HB2	95.40	108.00	1
CB-CG2-HG22	121.60	109.00	1
N-CA-HA	122.60	110.00	1
CA-CB-HB3	121.60	109.00	1
CG-ND1-HD1	137.95	125.35	1
HG12-CG1-HG13	97.39	110.00	1
HA2-CA-HA3	96.39	109.00	1
HB2-CB-HB3	97.39	110.00	1
CB-CG2-HG22	96.39	109.00	1
CD-NE2-HE21	132.61	120.00	1
CG-CD1-HD12	121.61	109.00	1
CG-CD1-HD11	121.61	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
C-N-H	111.69	124.30	1
CE2-CD2-HD2	106.79	119.40	1
CD-CG-HG3	95.38	108.00	2
CB-CG2-HG21	121.62	109.00	1
C-N-H	111.68	124.30	1
HB1-CB-HB3	97.38	110.00	1
HH21-NH2-HH22	107.38	120.00	1
N-CA-HA	122.62	110.00	1
CB-CG-HG2	96.38	109.00	1
HZ1-NZ-HZ3	96.37	109.00	1
CA-N-H	101.37	114.00	1
CG-CD2-HD21	121.63	109.00	1
CG-CD2-HD23	121.63	109.00	1
CA-CB-HB2	121.63	109.00	1
HD11-CD1-HD13	97.37	110.00	1
C-CA-HA	96.37	109.00	1
CG-CB-HB3	95.36	108.00	1
CA-CB-HB2	121.64	109.00	1
CB-CA-HA	121.64	109.00	1
CD-CG-HG3	120.64	108.00	1
CE-NZ-HZ2	122.64	110.00	1
HG12-CG1-HG13	97.36	110.00	1
CG-CB-HB2	120.64	108.00	2
CB-CG1-HG13	96.36	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CB-CG-HG3	121.64	109.00	1
CZ-CE2-HE2	132.64	120.00	1
CA-N-H	126.65	114.00	1
CB-CA-HA	121.65	109.00	1
HH11-NH1-HH12	107.35	120.00	1
HD21-CD2-HD23	97.35	110.00	1
N-CA-HA2	97.35	110.00	1
C-N-H	136.95	124.30	1
CB-CA-HA	96.35	109.00	1
CG-CB-HB3	95.35	108.00	1
CA-CB-HB2	121.65	109.00	1
C-N-H	111.65	124.30	1
CA-N-H	101.35	114.00	1
CA-CB-HB	121.66	109.00	1
HD22-CD2-HD23	97.34	110.00	1
CD-CG-HG3	95.34	108.00	1
C-CA-HA	96.34	109.00	1
HE2-CE-HE3	97.34	110.00	1
CG-CB-HB3	95.34	108.00	2
CA-N-H	126.66	114.00	1
CA-CB-HB2	121.66	109.00	1
CD-CE-HE3	121.66	109.00	1
HB2-CB-HB3	97.33	110.00	2

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CZ-NH2-HH21	132.67	120.00	1
CD-CG-HG2	95.33	108.00	1
CG-CB-HB2	95.33	108.00	1
CE-CD-HD3	120.67	108.00	1
NZ-CE-HE2	120.67	108.00	1
C-CA-HA	121.67	109.00	1
HD11-CD1-HD13	97.33	110.00	1
HG11-CG1-HG13	97.33	110.00	1
C-N-H	136.97	124.30	1
CG-CB-HB3	120.67	108.00	1
CG-CD-HD2	96.32	109.00	1
HD21-CD2-HD23	97.32	110.00	1
HG21-CG2-HG22	97.32	110.00	1
CD-CG-HG3	95.32	108.00	1
HB2-CB-HB3	97.32	110.00	1
N-CD-HD3	96.32	109.00	1
CE1-CD1-HD1	106.72	119.40	1
CG-CD2-HD23	121.68	109.00	1
CG-CB-HB2	95.31	108.00	1
HB2-CB-HB3	97.31	110.00	2
HZ1-NZ-HZ2	96.31	109.00	1
CA-CB-HB2	121.69	109.00	1
CG-CB-HB3	95.31	108.00	1
HG2-CG-HG3	97.31	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CG-CD1-HD13	96.31	109.00	1
CA-N-H	101.30	114.00	1
HB1-CB-HB2	97.30	110.00	1
CB-CA-HA	96.30	109.00	1
CB-CG-HG3	121.70	109.00	1
CA-CB-HB2	121.70	109.00	1
CA-CB-HB3	121.70	109.00	1
C-CA-HA	96.29	109.00	1
CG-CD2-HD23	121.71	109.00	1
CB-CA-HA	96.29	109.00	1
HD11-CD1-HD12	97.29	110.00	1
CD-NE-HE	130.61	117.90	1
CA-CB-HB	121.71	109.00	1
CE-NZ-HZ3	122.72	110.00	1
HG2-CG-HG3	97.28	110.00	1
CB-CG-HG2	121.72	109.00	1
CB-CG2-HG21	121.72	109.00	1
HB1-CB-HB3	97.28	110.00	1
HD11-CD1-HD12	97.28	110.00	1
CD-CG-HG3	95.28	108.00	1
CA-CB-HB	121.72	109.00	1
CE-CD-HD2	95.28	108.00	1
C-CA-HA	121.72	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
HG21-CG2-HG22	96.28	109.00	1
CB-CG1-HG13	121.72	109.00	1
HG21-CG2-HG23	97.28	110.00	2
HD11-CD1-HD13	97.28	110.00	1
CE-NZ-HZ1	97.28	110.00	1
CG-CB-HB3	95.28	108.00	1
CA-CB-HB3	121.73	109.00	1
CG-CD-HD2	121.73	109.00	1
HD11-CD1-HD12	97.27	110.00	1
HG21-CG2-HG23	122.73	110.00	1
HG11-CG1-HG13	97.27	110.00	1
C-N-H	111.57	124.30	1
CE1-CD1-HD1	106.67	119.40	1
CD-CG-HG2	95.27	108.00	1
CD-CG-HG2	95.26	108.00	1
CG-CB-HB2	95.26	108.00	3
CB-CA-HA	121.74	109.00	1
HD12-CD1-HD13	97.26	110.00	1
C-N-H	111.56	124.30	1
CE-CD-HD2	95.26	108.00	1
CA-CB-HB2	121.74	109.00	1
HZ1-NZ-HZ2	96.26	109.00	1
CE1-CD1-HD1	106.91	119.65	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
C-CA-HA	121.75	109.00	1
HG2-CG-HG3	97.25	110.00	2
C-N-H	111.55	124.30	1
CZ-NH2-HH22	107.25	120.00	1
HG22-CG2-HG23	97.25	110.00	1
CD-CG-HG3	95.25	108.00	1
C-CA-HA2	121.75	109.00	1
CG-CD-HD3	121.75	109.00	1
CB-CA-HA	96.25	109.00	1
HB2-CB-HB3	97.24	110.00	1
CA-CB-HB2	96.24	109.00	1
C-CA-HA3	96.24	109.00	1
CB-CA-HA	121.76	109.00	1
HA2-CA-HA3	96.24	109.00	1
NZ-CE-HE3	95.23	108.00	1
CG2-CB-HB	121.77	109.00	1
OG-CB-HB3	121.77	109.00	1
HD11-CD1-HD13	122.77	110.00	1
CG2-CB-HB	96.23	109.00	1
CG-ND2-HD21	107.23	120.00	1
CA-N-H	101.23	114.00	1
HG12-CG1-HG13	97.23	110.00	1
CG-ND2-HD21	132.78	120.00	1
HB2-CB-HB3	97.22	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
SD-CG-HG3	95.22	108.00	1
CG-CD2-HD22	121.78	109.00	1
CB-CG-HG2	96.22	109.00	1
HZ1-NZ-HZ2	96.22	109.00	1
CD-CE-HE2	121.78	109.00	1
CA-N-H	101.22	114.00	1
C-CA-HA	96.22	109.00	1
C-N-H	111.52	124.30	1
CB-CA-HA	121.79	109.00	1
N-CA-HA	97.21	110.00	1
CG-ND2-HD21	107.21	120.00	1
CG-CB-HB3	120.79	108.00	1
CE-NZ-HZ1	122.79	110.00	1
HD11-CD1-HD13	97.20	110.00	1
HB2-CB-HB3	97.20	110.00	1
CD2-CG-HG	95.20	108.00	1
CD-CG-HG2	95.20	108.00	1
HG21-CG2-HG23	122.80	110.00	1
HD2-CD-HD3	97.20	110.00	1
CB-CG2-HG23	121.80	109.00	1
CB-CA-HA	96.19	109.00	1
OG-CB-HB3	96.19	109.00	1
HB2-CB-HB3	97.19	110.00	1
CB-CG2-HG21	121.81	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
HD22-CD2-HD23	97.19	110.00	1
N-CA-HA	97.19	110.00	1
HG12-CG1-HG13	97.19	110.00	1
HD21-CD2-HD23	97.19	110.00	1
C-N-H	111.49	124.30	1
CE-CD-HD2	120.81	108.00	1
HG2-CG-HG3	97.19	110.00	1
CD-NE2-HE21	132.82	120.00	1
HB1-CB-HB2	122.82	110.00	1
HD2-CD-HD3	122.82	110.00	1
HB2-CB-HB3	97.18	110.00	1
HD12-CD1-HD13	97.17	110.00	1
CG-CD-HD2	96.17	109.00	1
CB-CG1-HG12	121.83	109.00	1
CG1-CD1-HD13	96.17	109.00	1
CA-CB-HB3	96.17	109.00	1
CD-CG-HG3	95.16	108.00	1
C-N-H	111.46	124.30	1
CG-CB-HB2	95.16	108.00	2
CZ-NH1-HH12	132.84	120.00	1
CG2-CB-HB	95.16	108.00	1
CG-CD2-HD2	132.49	119.65	1
CA-N-H	101.16	114.00	1
CB-CG-HG2	121.84	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CD-CE-HE3	121.85	109.00	1
CD-CG-HG3	95.15	108.00	1
CG-CB-HB2	97.15	110.00	1
C-N-H	137.15	124.30	1
HD11-CD1-HD12	97.15	110.00	1
HD11-CD1-HD13	97.15	110.00	1
HG21-CG2-HG22	97.15	110.00	1
CB-CA-HA	121.85	109.00	1
CD-CG-HG3	95.14	108.00	1
NE-CD-HD3	95.14	108.00	1
HD11-CD1-HD12	97.14	110.00	1
CB-CG1-HG12	121.86	109.00	2
HE1-CE-HE3	122.86	110.00	1
HG21-CG2-HG22	97.14	110.00	1
CA-CB-HB2	96.14	109.00	1
CG-CB-HB2	120.87	108.00	1
CG1-CD1-HD13	121.87	109.00	1
C-N-H	111.43	124.30	1
HD11-CD1-HD13	97.13	110.00	1
C-CA-HA	121.87	109.00	1
CD-CG-HG2	95.13	108.00	1
CB-CG2-HG23	121.87	109.00	1
CA-CB-HB2	96.13	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CA-CB-HB2	121.87	109.00	1
HD21-CD2-HD23	97.13	110.00	1
HE21-NE2-HE22	107.13	120.00	1
CB-CG2-HG21	121.87	109.00	1
CA-N-H	126.88	114.00	1
HE2-CE-HE3	97.12	110.00	1
HG2-CG-HG3	97.12	110.00	1
HG12-CG1-HG13	97.12	110.00	1
HZ1-NZ-HZ2	96.12	109.00	1
HB2-CB-HB3	97.12	110.00	1
HD22-CD2-HD23	97.12	110.00	2
CG-CD-HD2	96.12	109.00	1
HG12-CG1-HG13	97.11	110.00	2
HB2-CB-HB3	122.89	110.00	1
CD-CG-HG2	95.11	108.00	1
CA-CB-HB2	96.11	109.00	1
HG12-CG1-HG13	122.89	110.00	1
HD12-CD1-HD13	97.11	110.00	1
C-N-H	111.40	124.30	2
CB-CA-HA	121.90	109.00	1
NZ-CE-HE2	95.10	108.00	1
CA-CB-HB	96.10	109.00	1
HG2-CG-HG3	97.10	110.00	1
CG-CB-HB2	95.10	108.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CZ-NE-HE	105.00	117.90	1
CA-N-H	101.10	114.00	1
C-CA-HA	96.10	109.00	1
CE-CD-HD3	95.10	108.00	1
CG-CB-HB3	120.90	108.00	1
SD-CE-HE3	96.10	109.00	1
N-CA-HA	97.09	110.00	1
CB-CG-HG3	121.91	109.00	1
HB2-CB-HB3	97.09	110.00	2
CA-CB-HB3	121.91	109.00	1
CG1-CD1-HD13	121.91	109.00	1
HD21-CD2-HD23	122.91	110.00	1
CD-CG-HG2	120.91	108.00	1
CZ-CE1-HE1	107.09	120.00	1
CG-CD2-HD2	139.31	126.40	1
CA-N-H	126.91	114.00	1
CE1-CD1-HD1	106.74	119.65	1
HD11-CD1-HD13	97.09	110.00	1
CB-CG2-HG21	121.92	109.00	1
HG12-CG1-HG13	97.08	110.00	1
HG21-CG2-HG22	97.08	110.00	1
HH21-NH2-HH22	107.08	120.00	1
CG-CB-HB3	95.08	108.00	2
C-CA-HA	121.92	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
C-N-H	111.38	124.30	1
HD11-CD1-HD12	97.08	110.00	2
CD-CG-HG3	95.08	108.00	1
C-CA-HA	96.08	109.00	2
HB2-CB-HB3	97.08	110.00	1
CZ-CE2-HE2	107.28	120.20	1
CB-CG-HG2	96.08	109.00	1
CA-N-H	126.93	114.00	1
CA-CB-HB3	121.93	109.00	1
HB2-CB-HB3	97.07	110.00	1
CA-CB-HB	121.93	109.00	1
CG-CB-HB2	95.07	108.00	1
CA-CB-HB2	121.93	109.00	1
HE2-CE-HE3	97.07	110.00	2
CG-CD2-HD2	132.33	119.40	1
CA-CB-HB3	121.94	109.00	1
HG11-CG1-HG12	97.06	110.00	1
C-N-H	137.24	124.30	1
N-CA-HA	122.94	110.00	2
HG21-CG2-HG22	96.06	109.00	1
C-N-H	111.36	124.30	1
CG-CB-HB3	95.06	108.00	1
CA-CB-HB2	121.94	109.00	1
CG-CD1-HD11	121.94	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CG-ND2-HD21	132.94	120.00	1
CB-CG1-HG13	121.95	109.00	1
CB-CG-HG3	121.95	109.00	2
CG-CD2-HD22	121.95	109.00	1
CD-CG-HG3	120.95	108.00	1
CB-CA-HA	121.95	109.00	1
CG-CD1-HD12	121.95	109.00	1
CG-CD2-HD23	96.05	109.00	1
C-CA-HA3	121.95	109.00	1
CG-CD2-HD23	96.04	109.00	1
CB-CA-HA	121.96	109.00	1
CB-CG-HG3	121.96	109.00	2
N-CA-HA2	122.96	110.00	1
CA-N-H	126.96	114.00	1
HD22-CD2-HD23	97.04	110.00	1
HG2-CG-HG3	97.04	110.00	1
CD-NE-HE	130.86	117.90	1
CG-CD2-HD22	121.97	109.00	1
CA-CB-HB	121.97	109.00	1
CG-CB-HB2	120.97	108.00	2
CB-CG2-HG22	122.97	110.00	1
CG1-CD1-HD13	96.03	109.00	1
CG1-CD1-HD12	121.97	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CA-CB-HB2	96.03	109.00	1
HG11-CG1-HG13	97.03	110.00	1
HH11-NH1-HH12	132.97	120.00	1
CG-CB-HB3	120.97	108.00	1
CA-N-H	126.98	114.00	2
CE2-CD2-HD2	106.42	119.40	1
CD1-CG-HG	120.98	108.00	1
CB-CA-HA	121.98	109.00	1
CG-ND2-HD22	132.98	120.00	1
CB-CG-HG3	121.98	109.00	1
CD-CG-HG2	95.02	108.00	1
CA-N-H	101.02	114.00	1
HD11-CD1-HD12	97.02	110.00	1
HB2-CB-HB3	97.02	110.00	1
HA2-CA-HA3	96.02	109.00	1
HG2-CG-HG3	97.02	110.00	1
CA-CB-HB	121.98	109.00	1
HD22-CD2-HD23	97.02	110.00	1
HD2-CD-HD3	122.98	110.00	1
CD-CE-HE2	96.02	109.00	1
CZ-NH1-HH11	107.02	120.00	1
CG-CB-HB3	95.02	108.00	1
C-N-H	111.31	124.30	2
CA-CB-HB	121.99	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CA-CB-HB2	121.99	109.00	1
HA2-CA-HA3	96.01	109.00	1
CG-CB-HB3	120.99	108.00	1
CG-CB-HB2	121.00	108.00	1
CD1-CG1-HG13	95.00	108.00	1
HD11-CD1-HD13	97.00	110.00	1
CB-CA-HA	122.00	109.00	1
HD21-CD2-HD22	97.00	110.00	1
C-CA-HA	122.00	109.00	1
N-CD-HD3	122.00	109.00	1
CG-CB-HB3	121.00	108.00	1
HG22-CG2-HG23	95.99	109.00	1
CG-CB-HB2	94.99	108.00	1
CB-CA-HA	122.01	109.00	1
CD1-CE1-HE1	106.99	120.00	1
CB-CG2-HG21	122.01	109.00	1
HG22-CG2-HG23	96.99	110.00	1
CG-CB-HB2	121.01	108.00	1
HD11-CD1-HD13	96.98	110.00	1
CG-CB-HB3	94.98	108.00	1
CD-CG-HG2	121.02	108.00	1
CA-N-H	127.02	114.00	2
CG1-CD1-HD12	95.98	109.00	1
CD-CG-HG2	94.98	108.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CG-CB-HB2	94.98	108.00	1
NE-CD-HD3	94.98	108.00	1
NZ-CE-HE3	94.97	108.00	1
CA-N-H	100.97	114.00	1
HB2-CB-HB3	96.97	110.00	1
HE2-CE-HE3	123.03	110.00	1
CG-CB-HB2	121.03	108.00	1
CD-CE-HE2	122.04	109.00	1
C-N-H	111.26	124.30	1
CG1-CB-HB	94.96	108.00	1
CG-CB-HB3	121.04	108.00	1
CA-CB-HB3	122.04	109.00	1
HD12-CD1-HD13	96.96	110.00	1
CE1-CD1-HD1	106.61	119.65	1
CG-CB-HB3	94.96	108.00	1
HD11-CD1-HD13	96.96	110.00	1
C-CA-HA	122.05	109.00	1
CG-CB-HB2	94.95	108.00	1
HB1-CB-HB2	96.95	110.00	1
HB2-CB-HB3	96.95	110.00	1
CA-N-H	100.95	114.00	1
CG-CD-HD3	122.05	109.00	1
CB-CA-HA	122.05	109.00	1
C-N-H	137.35	124.30	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
HE21-NE2-HE22	106.94	120.00	1
CA-CB-HB	122.06	109.00	1
HB2-CB-HB3	96.94	110.00	1
CG-CB-HB3	96.94	110.00	1
CD-NE-HE	130.96	117.90	1
CG-CD1-HD13	122.06	109.00	1
C-CA-HA	122.06	109.00	1
CB-CG2-HG23	122.06	109.00	1
HB2-CB-HB3	123.07	110.00	1
CA-CB-HB2	122.07	109.00	1
C-N-H	111.23	124.30	1
NE2-CE1-HE1	112.73	125.80	1
CB-CG2-HG22	122.07	109.00	1
CG-CB-HB2	121.07	108.00	1
HG22-CG2-HG23	95.93	109.00	1
C-CA-HA	95.93	109.00	1
CA-CB-HB	122.08	109.00	1
CZ-NH1-HH11	106.92	120.00	1
HB2-CB-HB3	96.92	110.00	2
CB-CA-HA	122.08	109.00	1
CG-CD2-HD23	122.08	109.00	1
C-N-H	111.22	124.30	1
HG22-CG2-HG23	123.08	110.00	1
HA2-CA-HA3	95.92	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
HD11-CD1-HD12	96.92	110.00	1
CA-N-H	100.92	114.00	1
CA-CB-HB2	122.08	109.00	1
CE-NZ-HZ3	96.92	110.00	1
HB2-CB-HB3	96.91	110.00	1
CB-CG-HG3	122.09	109.00	1
C-CA-HA	95.91	109.00	1
HZ2-NZ-HZ3	95.91	109.00	1
CG-CB-HB3	121.09	108.00	1
HD12-CD1-HD13	96.91	110.00	1
N-CA-HA	96.91	110.00	1
CB-CG-HG2	95.90	109.00	1
CG-CB-HB2	94.90	108.00	2
C-CA-HA3	122.10	109.00	1
CG-CB-HB3	94.90	108.00	1
CA-N-H	127.10	114.00	1
HG21-CG2-HG22	95.90	109.00	1
CB-CG-HG2	122.10	109.00	1
CE2-CD2-HD2	106.30	119.40	1
C-N-H	111.20	124.30	1
HG21-CG2-HG23	96.90	110.00	1
CA-CB-HB3	95.90	109.00	1
HA2-CA-HA3	95.89	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CB-CA-HA	95.89	109.00	1
CG2-CB-HB	122.11	109.00	1
HG2-CG-HG3	96.89	110.00	1
HB2-CB-HB3	96.89	110.00	1
CB-CG2-HG21	123.11	110.00	1
CA-N-H	127.11	114.00	1
CG-CB-HB3	94.89	108.00	1
HG21-CG2-HG23	96.89	110.00	1
HH11-NH1-HH12	106.89	120.00	1
CD-CG-HG3	94.89	108.00	1
CB-CG1-HG13	122.11	109.00	1
CA-CB-HB	122.11	109.00	1
CB-CG2-HG23	122.11	109.00	1
CB-CG2-HG21	122.11	109.00	1
CA-CB-HB2	122.12	109.00	1
CG-CB-HB3	94.88	108.00	1
C-CA-HA	95.88	109.00	1
CG-CB-HB3	121.12	108.00	1
CA-CB-HB2	95.88	109.00	1
HZ1-NZ-HZ2	95.88	109.00	1
CD1-CG-HG	94.87	108.00	1
N-CA-HA	96.87	110.00	1
CD1-CG1-HG12	121.13	108.00	1
CE-NZ-HZ3	123.13	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CD-CG-HG2	94.87	108.00	1
CD-CG-HG2	94.86	108.00	1
CG1-CD1-HD11	122.14	109.00	1
CG-CB-HB3	94.86	108.00	1
NE-CD-HD3	94.86	108.00	1
CG-CD2-HD22	122.14	109.00	1
HE1-CE-HE3	123.14	110.00	1
HG22-CG2-HG23	123.14	110.00	1
C-CA-HA	122.14	109.00	1
CE-NZ-HZ1	123.15	110.00	1
CA-CB-HB3	95.85	109.00	1
CG-ND1-HD1	138.50	125.35	1
CE-NZ-HZ2	96.85	110.00	1
CA-CB-HB2	122.15	109.00	1
C-CA-HA	122.15	109.00	1
HD11-CD1-HD13	96.85	110.00	1
CG-CB-HB2	94.85	108.00	1
CG-CB-HB3	94.85	108.00	1
C-N-H	111.14	124.30	1
HB1-CB-HB2	96.84	110.00	1
C-CA-HA2	95.84	109.00	1
HE21-NE2-HE22	106.84	120.00	1
CB-CG2-HG22	122.16	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
HD12-CD1-HD13	96.84	110.00	1
CE-CD-HD2	121.16	108.00	1
CB-CG-HG	122.17	109.00	1
CG2-CB-HB	95.83	109.00	1
CA-CB-HB2	95.83	109.00	1
CB-CG-HG2	95.83	109.00	1
HD21-CD2-HD22	96.83	110.00	1
CB-CG-HG	95.83	109.00	1
HD22-CD2-HD23	96.83	110.00	1
HD11-CD1-HD13	96.83	110.00	1
CG-CD-HD3	95.83	109.00	1
HB2-CB-HB3	96.83	110.00	1
HB2-CB-HB3	96.82	110.00	2
HG21-CG2-HG22	95.82	109.00	1
CD-CG-HG3	94.82	108.00	1
CD2-CE2-HE2	107.02	120.20	1
C-N-H	111.12	124.30	1
C-CA-HA	122.18	109.00	1
CA-CB-HB2	95.82	109.00	1
C-N-H	137.49	124.30	1
CB-CA-HA	95.81	109.00	2
HA2-CA-HA3	95.81	109.00	2
HE1-CE-HE2	96.81	110.00	1
C-CA-HA	95.81	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
N-CD-HD3	122.19	109.00	1
CB-CG-HG2	122.19	109.00	1
CG1-CB-HB	94.80	108.00	1
HH21-NH2-HH22	106.80	120.00	1
CA-CB-HB2	122.20	109.00	1
HB2-CB-HB3	96.80	110.00	1
HD21-ND2-HD22	106.80	120.00	1
HD12-CD1-HD13	96.80	110.00	1
CA-CB-HB	122.20	109.00	1
CG1-CD1-HD11	122.20	109.00	1
C-N-H	137.50	124.30	1
HG2-CG-HG3	96.80	110.00	1
C-N-H	111.09	124.30	1
CG-CD1-HD1	132.86	119.65	1
CB-CG1-HG12	122.21	109.00	1
HZ1-NZ-HZ2	95.79	109.00	1
C-CA-HA	122.21	109.00	1
CA-CB-HB2	122.21	109.00	2
HD21-CD2-HD23	96.79	110.00	1
HG21-CG2-HG22	96.79	110.00	1
CB-CG-HG	122.21	109.00	1
CD-CG-HG2	94.79	108.00	1
HG2-CG-HG3	96.78	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CB-CG2-HG21	122.22	109.00	1
CG-CD-HD3	95.78	109.00	1
HG21-CG2-HG22	96.78	110.00	1
N-CA-HA	123.22	110.00	1
HD12-CD1-HD13	96.78	110.00	1
HG22-CG2-HG23	96.78	110.00	1
HD21-ND2-HD22	106.78	120.00	1
HZ2-NZ-HZ3	95.78	109.00	2
CB-CA-HA	122.22	109.00	1
CG-CB-HB2	121.23	108.00	1
CB-CG1-HG13	122.23	109.00	1
CE-NZ-HZ1	123.23	110.00	1
HG12-CG1-HG13	96.77	110.00	1
CA-CB-HB2	95.77	109.00	1
HD21-CD2-HD22	96.77	110.00	1
CA-N-H	127.23	114.00	1
CB-CG2-HG21	122.23	109.00	1
C-N-H	111.07	124.30	1
HB2-CB-HB3	96.77	110.00	1
CZ-NE-HE	104.67	117.90	1
CZ-NH1-HH12	133.24	120.00	1
CG1-CD1-HD12	122.24	109.00	1
CG-CD1-HD1	132.89	119.65	1
CZ3-CE3-HE3	107.46	120.70	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
C-N-H	111.06	124.30	1
C-CA-HA	95.75	109.00	1
CB-CA-HA	122.25	109.00	1
CB-CG2-HG23	122.25	109.00	1
CD2-CG-HG	121.25	108.00	1
CD-CE-HE3	122.25	109.00	1
HB2-CB-HB3	96.75	110.00	1
CG-CB-HB2	123.25	110.00	1
HH11-NH1-HH12	106.75	120.00	1
CG-CD2-HD22	122.25	109.00	1
CA-N-H	127.25	114.00	1
HB1-CB-HB2	96.75	110.00	1
HG21-CG2-HG22	123.26	110.00	1
N-CA-HA	96.74	110.00	2
CA-CB-HB2	95.74	109.00	1
HG21-CG2-HG23	96.74	110.00	1
CG-CB-HB3	94.74	108.00	1
CG-CD2-HD23	122.26	109.00	1
CD-CG-HG2	94.73	108.00	1
CB-CG2-HG21	123.27	110.00	1
HD21-CD2-HD22	96.73	110.00	1
CA-CB-HB2	122.27	109.00	1
C-CA-HA	95.73	109.00	1
HD12-CD1-HD13	96.73	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CZ-NH1-HH11	133.27	120.00	1
C-N-H	111.03	124.30	1
CB-CG1-HG11	122.28	109.00	1
CE1-CD1-HD1	106.12	119.40	1
CG-CB-HB2	94.72	108.00	1
HG2-CG-HG3	96.72	110.00	1
HD11-CD1-HD13	96.72	110.00	1
CB-CG2-HG21	96.72	110.00	1
CG-CD2-HD2	132.68	119.40	1
CD-CG-HG2	121.28	108.00	1
HG2-CG-HG3	123.29	110.00	1
CA-CB-HB3	122.29	109.00	1
HG22-CG2-HG23	96.71	110.00	1
SD-CE-HE2	95.71	109.00	1
CD-NE2-HE21	133.29	120.00	1
CA-N-H	127.29	114.00	1
CD-NE-HE	131.19	117.90	1
C-N-H	111.01	124.30	1
HD21-CD2-HD22	96.70	110.00	1
CA-CB-HB2	122.30	109.00	1
C-N-H	111.00	124.30	1
CG1-CB-HB	121.30	108.00	1
CA-CB-HB	122.30	109.00	1
CG-CD1-HD12	122.30	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CB-CG-HG3	122.30	109.00	1
C-CA-HA	122.30	109.00	1
CE1-NE2-HE2	112.20	125.50	1
C-CA-HA	95.70	109.00	1
CG-CD-HD3	122.30	109.00	1
HB1-CB-HB2	96.70	110.00	1
HB2-CB-HB3	96.69	110.00	1
CG-CD-HD3	95.69	109.00	1
CG-CD2-HD22	122.31	109.00	1
CB-CG-HG	122.31	109.00	1
OG-CB-HB3	122.31	109.00	1
HD2-CD-HD3	96.69	110.00	1
HH11-NH1-HH12	106.69	120.00	1
CD-NE2-HE21	133.31	120.00	1
HD11-CD1-HD12	96.69	110.00	1
HZ1-NZ-HZ3	95.69	109.00	1
C-CA-HA	122.32	109.00	1
CB-CA-HA	95.68	109.00	1
HB1-CB-HB3	123.32	110.00	1
C-CA-HA	95.68	109.00	1
CG-CD1-HD12	122.32	109.00	1
C-N-H	110.98	124.30	1
CG-CD2-HD21	95.68	109.00	1
CB-CG1-HG11	122.32	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CB-CG2-HG22	122.32	109.00	1
CB-CA-HA	122.32	109.00	1
CB-CG1-HG11	122.33	109.00	1
C-CA-HA	122.33	109.00	1
CB-CG2-HG22	122.33	109.00	1
CG-ND2-HD21	106.67	120.00	1
CA-CB-HB	122.33	109.00	1
CB-CG-HG3	122.33	109.00	1
HG21-CG2-HG22	123.33	110.00	1
HG21-CG2-HG22	96.67	110.00	1
CB-CA-HA	122.34	109.00	1
CE1-CD1-HD1	106.06	119.40	1
CB-CG-HG	122.34	109.00	1
CG1-CB-HB	94.66	108.00	1
HD22-CD2-HD23	96.66	110.00	1
HB1-CB-HB3	96.66	110.00	1
CA-N-H	127.35	114.00	1
CB-CG2-HG22	122.35	109.00	1
CA-CB-HB3	122.35	109.00	1
CA-CB-HB2	122.35	109.00	1
CD-CG-HG2	123.35	110.00	1
NE2-CD2-HD2	113.05	126.40	1
HE1-CE-HE2	96.65	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CE-NZ-HZ2	96.64	110.00	1
HD21-CD2-HD23	96.64	110.00	1
HD21-CD2-HD22	96.64	110.00	1
HB2-CB-HB3	96.64	110.00	2
CA-CB-HB3	122.36	109.00	1
SD-CE-HE3	95.64	109.00	1
C-CA-HA	122.36	109.00	1
CB-CG2-HG22	122.36	109.00	1
CB-CG1-HG11	122.36	109.00	1
C-N-H	110.93	124.30	1
C-CA-HA	95.63	109.00	1
HE2-CE-HE3	96.63	110.00	1
CA-N-H	127.37	114.00	1
HZ1-NZ-HZ2	95.63	109.00	1
HG2-CG-HG3	96.63	110.00	1
CA-CB-HB3	95.62	109.00	1
C-N-H	137.68	124.30	1
HD11-CD1-HD12	96.62	110.00	1
CA-CB-HB	122.38	109.00	1
C-CA-HA	95.62	109.00	1
CD-NE-HE	131.28	117.90	1
CD-CG-HG2	123.38	110.00	1
HE2-CE-HE3	96.62	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CE1-CD1-HD1	133.03	119.65	1
HB2-CB-HB3	123.38	110.00	1
HG21-CG2-HG22	96.62	110.00	1
C-N-H	110.92	124.30	1
HD11-CD1-HD13	96.61	110.00	1
N-CA-HA	123.39	110.00	1
CA-N-H1	122.86	109.47	1
HG21-CG2-HG23	95.61	109.00	1
HB2-CB-HB3	96.61	110.00	1
N-CD-HD2	122.39	109.00	1
CB-CG-HG	122.39	109.00	1
HG22-CG2-HG23	96.61	110.00	1
CA-CB-HB3	95.61	109.00	1
CG-CD-HD3	95.61	109.00	1
CD-CG-HG3	94.61	108.00	1
C-CA-HA3	95.61	109.00	1
HG2-CG-HG3	96.61	110.00	1
CD-NE-HE	131.30	117.90	1
HD2-CD-HD3	123.40	110.00	2
CD-NE2-HE21	106.60	120.00	1
CB-CA-HA	122.40	109.00	1
HZ2-NZ-HZ3	95.59	109.00	1
CG-CD1-HD12	95.59	109.00	1
CB-CA-HA	95.59	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
HG21-CG2-HG22	96.59	110.00	1
CA-CB-HB	122.41	109.00	1
HG2-CG-HG3	96.59	110.00	1
HD2-CD-HD3	96.59	110.00	1
CA-CB-HB2	122.41	109.00	1
CE1-CZ-HZ	133.41	120.00	1
HB2-CB-HB3	96.59	110.00	1
CB-CG1-HG13	95.59	109.00	1
CA-CB-HB2	122.42	109.00	1
HD11-CD1-HD13	96.58	110.00	1
CA-CB-HB1	122.42	109.00	2
CE-NZ-HZ2	123.42	110.00	1
HB2-CB-HB3	96.58	110.00	2
HD12-CD1-HD13	96.58	110.00	1
HG21-CG2-HG22	96.58	110.00	1
HB1-CB-HB2	96.58	110.00	1
C-CA-HA	96.58	110.00	1
CA-CB-HB2	122.43	109.00	1
SD-CE-HE1	122.43	109.00	1
C-CA-HA	122.43	109.00	1
HD12-CD1-HD13	123.43	110.00	1
CE-CD-HD2	121.43	108.00	1
CA-CB-HB3	95.57	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
HB2-CB-HB3	96.56	110.00	1
HD12-CD1-HD13	96.56	110.00	1
C-CA-HA	95.56	109.00	1
N-CA-HA3	123.44	110.00	1
CG-CB-HB2	123.44	110.00	1
HG21-CG2-HG23	96.56	110.00	1
CA-N-H	127.44	114.00	1
CZ-NH1-HH12	133.45	120.00	1
CB-CG-HG3	122.45	109.00	1
CA-CB-HB3	122.45	109.00	1
C-N-H	137.76	124.30	1
C-N-H	110.84	124.30	1
HE21-NE2-HE22	106.54	120.00	1
CB-CG2-HG22	122.46	109.00	1
CA-CB-HB3	95.54	109.00	1
CB-CG-HG	122.46	109.00	1
CA-N-H	127.46	114.00	2
HD21-CD2-HD22	96.54	110.00	1
CA-CB-HB3	122.46	109.00	1
CG-CD2-HD23	122.47	109.00	1
CA-CB-HB3	95.53	109.00	1
HA2-CA-HA3	95.53	109.00	1
HG21-CG2-HG23	95.53	109.00	1
HG12-CG1-HG13	96.53	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
HB2-CB-HB3	96.53	110.00	1
C-N-H	110.83	124.30	1
C-CA-HA	95.53	109.00	1
CG-CD1-HD1	133.13	119.65	1
HG22-CG2-HG23	96.52	110.00	1
C-CA-HA	95.52	109.00	1
CB-CA-HA	122.48	109.00	1
HB2-CB-HB3	123.48	110.00	1
CA-CB-HB	122.48	109.00	1
CA-CB-HB3	95.52	109.00	1
HG21-CG2-HG23	95.52	109.00	1
HD11-CD1-HD12	96.52	110.00	1
CG-CB-HB3	94.52	108.00	1
CE-CD-HD3	94.52	108.00	1
HB2-CB-HB3	123.49	110.00	1
NZ-CE-HE3	94.51	108.00	1
CD-CG-HG3	94.51	108.00	1
C-N-H	137.79	124.30	1
CB-CG-HG2	122.49	109.00	1
CG-CD2-HD23	122.49	109.00	1
CG-CD-HD2	122.49	109.00	1
CG-CD1-HD1	132.89	119.40	1
HD21-CD2-HD22	96.51	110.00	1
CB-CA-HA	122.50	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CG1-CD1-HD13	122.50	109.00	1
HD11-CD1-HD12	96.50	110.00	1
HD11-CD1-HD13	96.50	110.00	1
HZ1-NZ-HZ2	95.50	109.00	1
CD-CG-HG3	94.50	108.00	1
CA-CB-HB3	95.50	109.00	1
N-CA-HA	96.50	110.00	1
CB-CG-HG2	95.50	109.00	1
CA-N-H	127.50	114.00	2
HH11-NH1-HH12	106.50	120.00	1
HG11-CG1-HG13	96.50	110.00	1
CA-CB-HB2	95.49	109.00	1
HB2-CB-HB3	96.49	110.00	1
CA-N-H	100.49	114.00	1
CA-CB-HB3	122.51	109.00	1
CG-CD2-HD21	122.51	109.00	1
CG-CB-HB2	94.49	108.00	1
CD-NE2-HE22	133.51	120.00	1
CB-CA-HA	95.48	109.00	1
CA-CB-HB3	122.52	109.00	1
CA-CB-HB2	122.52	109.00	1
N-CA-HA	123.52	110.00	1
HG21-CG2-HG23	96.48	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
HB2-CB-HB3	96.48	110.00	1
CD1-CG1-HG12	121.52	108.00	1
HD11-CD1-HD13	96.48	110.00	1
C-CA-HA	122.53	109.00	1
HD11-CD1-HD13	96.47	110.00	1
C-N-H	110.78	124.30	1
HB2-CB-HB3	96.47	110.00	1
HD11-CD1-HD12	96.47	110.00	1
CB-CA-HA	122.53	109.00	2
CE1-CZ-HZ	133.53	120.00	1
CG-CD2-HD22	122.53	109.00	1
CA-CB-HB3	122.53	109.00	1
N-CA-HA	123.53	110.00	1
HZ2-NZ-HZ3	95.46	109.00	1
CD-CG-HG3	94.46	108.00	1
CG-CD2-HD21	122.54	109.00	1
CG-CB-HB3	94.46	108.00	1
CG-CB-HB2	94.46	108.00	1
C-N-H	110.75	124.30	1
CG-CD1-HD11	122.55	109.00	1
CG-CD2-HD2	132.95	119.40	1
C-CA-HA	96.45	110.00	1
CA-CB-HB3	122.55	109.00	1
CG-CB-HB3	94.45	108.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CA-N-H	127.55	114.00	1
CB-CG2-HG21	122.55	109.00	1
CB-CA-HA	122.55	109.00	1
N-CA-HA	123.56	110.00	1
CB-CG-HG2	122.56	109.00	1
CG-CB-HB3	121.56	108.00	2
CG-CB-HB2	121.56	108.00	1
HD11-CD1-HD12	96.44	110.00	1
C-CA-HA	95.44	109.00	1
HE2-CE-HE3	96.44	110.00	1
HD21-CD2-HD23	123.56	110.00	1
CG-CB-HB3	94.44	108.00	1
HG12-CG1-HG13	96.44	110.00	1
CA-CB-HB3	122.57	109.00	1
CE-CD-HD2	94.43	108.00	1
HD21-CD2-HD23	96.43	110.00	1
CG-CB-HB2	94.43	108.00	1
C-CA-HA2	95.43	109.00	1
C-CA-HA	95.43	109.00	1
HB2-CB-HB3	96.43	110.00	1
CB-CG2-HG22	122.57	109.00	1
CB-CA-HA	122.57	109.00	1
CB-CA-HA	122.58	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CB-CG2-HG23	122.58	109.00	1
HE1-CE-HE2	123.58	110.00	1
CD-CG-HG3	94.42	108.00	1
HB2-CB-HB3	96.42	110.00	1
CG-CB-HB2	121.58	108.00	1
C-N-H	137.88	124.30	1
HH11-NH1-HH12	106.42	120.00	1
CB-CG2-HG22	122.58	109.00	1
CG-CD1-HD12	122.58	109.00	1
CD1-CE1-HE1	133.59	120.00	1
CG-CD-HD3	122.59	109.00	1
HB2-CB-HB3	96.41	110.00	1
SD-CE-HE2	95.41	109.00	1
HG21-CG2-HG23	96.41	110.00	1
CE-NZ-HZ1	123.59	110.00	1
CB-CA-HA	95.41	109.00	1
HG12-CG1-HG13	96.41	110.00	1
CG-ND2-HD22	106.41	120.00	1
CB-CG2-HG21	122.59	109.00	1
CE2-CD2-HD2	105.81	119.40	1
N-CA-HA	96.40	110.00	1
CG-CD1-HD13	122.60	109.00	1
CA-CB-HB3	95.40	109.00	1
CB-CG2-HG21	122.60	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
HH21-NH2-HH22	106.40	120.00	1
CE2-CD2-HD2	106.05	119.65	1
C-CA-HA	95.40	109.00	1
CG-CD-HD2	122.60	109.00	1
HZ2-NZ-HZ3	95.40	109.00	1
CD-CG-HG2	94.40	108.00	1
CG-CB-HB2	121.60	108.00	1
HD22-CD2-HD23	96.39	110.00	1
HG21-CG2-HG22	96.39	110.00	2
CE1-CD1-HD1	105.79	119.40	1
C-CA-HA	95.39	109.00	1
CB-CA-HA	122.61	109.00	1
CG-ND2-HD21	133.61	120.00	1
CG-CB-HB3	123.61	110.00	1
C-N-H	137.92	124.30	1
CZ-NH1-HH11	133.62	120.00	1
HG21-CG2-HG22	96.38	110.00	1
CG-CB-HB2	94.38	108.00	1
CG-CD1-HD1	133.02	119.40	1
CG-CD1-HD13	122.62	109.00	1
HB1-CB-HB3	96.38	110.00	1
C-CA-HA	95.37	109.00	1
HB2-CB-HB3	96.37	110.00	2
CG-CB-HB2	94.37	108.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
HG22-CG2-HG23	96.37	110.00	1
CB-CG2-HG21	123.63	110.00	1
HG2-CG-HG3	96.37	110.00	1
CB-CG2-HG22	123.64	110.00	1
HG2-CG-HG3	123.64	110.00	1
CA-CB-HB3	95.36	109.00	1
CB-CA-HA	122.64	109.00	1
CD1-CG-HG	121.64	108.00	1
HD11-CD1-HD13	96.36	110.00	1
CA-CB-HB3	122.64	109.00	1
HB2-CB-HB3	96.35	110.00	3
HE1-CE-HE2	123.65	110.00	1
CB-CG-HG3	122.65	109.00	1
C-N-H	137.95	124.30	1
CB-CG1-HG12	122.65	109.00	1
CG-CB-HB3	121.65	108.00	1
CD-CG-HG3	121.65	108.00	1
CD-CG-HG3	94.35	108.00	1
CB-CG1-HG11	95.35	109.00	1
CA-CB-HB3	122.65	109.00	1
HD22-CD2-HD23	96.34	110.00	1
CZ-NH2-HH21	133.66	120.00	1
CB-CG1-HG12	95.34	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CG-CD1-HD12	122.66	109.00	1
CB-CA-HA	122.66	109.00	1
CD2-CG-HG	94.34	108.00	1
NE-CD-HD3	121.67	108.00	1
CA-CB-HB3	95.33	109.00	2
CB-CG2-HG23	123.67	110.00	1
HA2-CA-HA3	95.33	109.00	1
CD-CG-HG2	94.33	108.00	1
C-N-H	110.63	124.30	1
HD21-CD2-HD22	96.33	110.00	1
CG-ND2-HD22	106.33	120.00	1
CG-ND2-HD22	133.68	120.00	1
HD22-CD2-HD23	96.32	110.00	1
HA2-CA-HA3	95.32	109.00	1
CG-CD1-HD1	133.33	119.65	1
CA-CB-HB3	122.68	109.00	1
C-CA-HA	95.32	109.00	1
CG-CD-HD3	122.69	109.00	1
C-CA-HA	122.69	109.00	1
CG-CD2-HD23	122.69	109.00	1
HB2-CB-HB3	96.31	110.00	1
CD-NE-HE	131.60	117.90	1
CG-CD1-HD1	133.10	119.40	1
N-CA-HA	123.70	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CE-NZ-HZ3	123.70	110.00	1
CG-CB-HB3	94.29	108.00	1
CG-CB-HB2	94.29	108.00	1
CB-CG1-HG13	122.71	109.00	1
HG22-CG2-HG23	96.29	110.00	1
CB-CG2-HG22	123.71	110.00	1
C-N-H	110.59	124.30	1
CG1-CB-HB	94.29	108.00	1
HB2-CB-HB3	96.29	110.00	1
HB1-CB-HB3	96.29	110.00	1
CA-N-H	127.72	114.00	1
N-CA-HA	123.72	110.00	1
CD-CG-HG3	94.28	108.00	1
CG-CD-HD2	95.28	109.00	1
CG-CB-HB3	94.28	108.00	2
HD11-CD1-HD13	96.27	110.00	1
C-CA-HA2	122.73	109.00	1
HZ1-NZ-HZ2	95.27	109.00	1
HZ1-NZ-HZ3	95.27	109.00	1
OG-CB-HB3	95.27	109.00	1
CB-CG2-HG21	122.73	109.00	1
HG2-CG-HG3	96.27	110.00	1
CB-CG1-HG13	95.27	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
SD-CG-HG3	121.73	108.00	1
NZ-CE-HE2	94.26	108.00	1
CG-CB-HB2	94.26	108.00	1
CG-CD2-HD22	122.74	109.00	1
CA-CB-HB3	122.74	109.00	1
CA-N-H	127.74	114.00	1
H1-N-H2	95.73	109.47	1
C-N-H	110.56	124.30	1
HG22-CG2-HG23	123.74	110.00	1
HD21-CD2-HD22	96.25	110.00	1
HZ2-NZ-HZ3	95.25	109.00	1
ND1-CE1-HE1	139.55	125.80	1
HZ1-NZ-HZ3	95.25	109.00	1
C-N-H	110.55	124.30	1
HE2-CE-HE3	96.25	110.00	1
N-CA-HA	96.25	110.00	1
CB-CG2-HG22	122.76	109.00	1
HG22-CG2-HG23	96.24	110.00	1
CA-CB-HB2	95.24	109.00	1
HB2-CB-HB3	96.24	110.00	1
HB1-CB-HB3	123.77	110.00	1
CG-CD2-HD22	122.77	109.00	1
CG-CB-HB3	123.77	110.00	1
HG11-CG1-HG13	96.23	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CG2-CB-HB	94.23	108.00	1
N-CA-HA2	96.23	110.00	1
CA-CB-HB3	122.77	109.00	1
HD11-CD1-HD12	96.23	110.00	1
HG12-CG1-HG13	96.23	110.00	1
CB-CG1-HG13	122.77	109.00	1
HB2-CB-HB3	96.23	110.00	1
HG12-CG1-HG13	96.22	110.00	1
CD-CE-HE3	122.78	109.00	1
HZ1-NZ-HZ2	95.22	109.00	1
CG-CD1-HD1	133.43	119.65	1
CB-CA-HA	122.78	109.00	1
HD22-CD2-HD23	96.22	110.00	1
C-N-H	110.51	124.30	1
CG-CB-HB2	94.21	108.00	1
CB-CG-HG2	122.79	109.00	1
HD11-CD1-HD13	96.21	110.00	1
HD21-CD2-HD22	96.21	110.00	1
CB-CG1-HG13	122.79	109.00	1
HH11-NH1-HH12	106.21	120.00	1
CZ-NH2-HH21	133.79	120.00	1
HG21-CG2-HG22	96.20	110.00	1
CD-CG-HG3	94.20	108.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CA-CB-HB3	122.80	109.00	1
CB-CG-HG3	95.20	109.00	1
HD2-CD-HD3	123.80	110.00	1
HB2-CB-HB3	96.19	110.00	1
CG1-CD1-HD12	122.81	109.00	1
HA2-CA-HA3	95.19	109.00	1
CG-CD2-HD2	133.46	119.65	1
N-CD-HD2	122.81	109.00	1
CG-CD2-HD22	122.81	109.00	1
CA-CB-HB	122.81	109.00	1
CB-CG2-HG21	122.81	109.00	1
CB-CG1-HG11	122.81	109.00	1
HG21-CG2-HG22	96.18	110.00	1
HG22-CG2-HG23	96.18	110.00	1
HG12-CG1-HG13	96.18	110.00	1
CB-CG2-HG22	122.82	109.00	1
SD-CE-HE3	95.18	109.00	1
HD21-CD2-HD22	123.83	110.00	1
N-CA-HA	123.83	110.00	2
HG2-CG-HG3	96.17	110.00	1
CD-CG-HG2	94.17	108.00	1
CG-CB-HB2	94.17	108.00	1
CG-CB-HB2	121.83	108.00	1
CB-CG-HG	122.83	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CA-CB-HB2	122.83	109.00	1
C-CA-HA	122.84	109.00	1
HG21-CG2-HG23	95.16	109.00	1
CB-CG-HG3	95.16	109.00	1
HB1-CB-HB2	96.16	110.00	1
CG-ND2-HD22	133.84	120.00	1
CG1-CD1-HD11	122.84	109.00	1
CG1-CD1-HD13	122.84	109.00	1
HD12-CD1-HD13	96.16	110.00	1
C-N-H	138.15	124.30	1
HD12-CD1-HD13	96.15	110.00	2
CB-CG2-HG22	122.85	109.00	2
HB2-CB-HB3	96.15	110.00	2
CA-CB-HB3	122.85	109.00	1
CB-CG2-HG22	122.86	109.00	1
CG-CB-HB3	94.14	108.00	1
HG11-CG1-HG12	96.14	110.00	1
CA-CB-HB2	122.86	109.00	1
CE-NZ-HZ3	123.86	110.00	1
CB-CG-HG2	122.86	109.00	1
HG21-CG2-HG22	96.14	110.00	1
HB2-CB-HB3	96.14	110.00	1
HB2-CB-HB3	96.13	110.00	1
C-CA-HA	95.13	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CA-CB-HB3	122.87	109.00	1
CG-CB-HB2	94.13	108.00	1
C-CA-HA	95.12	109.00	1
CD-CE-HE3	122.88	109.00	1
C-N-H	110.42	124.30	1
CA-CB-HB3	122.88	109.00	1
HB2-CB-HB3	96.12	110.00	2
HB2-CB-HB3	123.88	110.00	1
CB-CA-HA	122.88	109.00	1
CD-NE-HE	104.02	117.90	1
CG-CB-HB2	121.88	108.00	1
HE2-CE-HE3	96.12	110.00	1
CA-N-H	127.89	114.00	1
HB2-CB-HB3	96.11	110.00	1
HB2-CB-HB3	123.89	110.00	1
HG21-CG2-HG22	96.11	110.00	1
CG-CD2-HD21	122.89	109.00	1
N-CA-HA	96.11	110.00	1
C-N-H	110.40	124.30	1
CE-NZ-HZ3	123.90	110.00	1
HD21-CD2-HD23	96.10	110.00	2
HG21-CG2-HG23	96.10	110.00	1
NE2-CE1-HE1	139.70	125.80	1
HG11-CG1-HG13	96.10	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
HG12-CG1-HG13	96.10	110.00	1
HZ1-NZ-HZ2	122.91	109.00	1
CG-CD-HD2	95.09	109.00	1
CG-ND2-HD22	133.91	120.00	1
CG-CB-HB3	121.91	108.00	1
HD11-CD1-HD13	96.09	110.00	1
CB-CA-HA	122.91	109.00	1
CE1-ND1-HD1	111.44	125.35	1
C-N-H	110.38	124.30	1
CB-CG-HG	122.92	109.00	1
HB1-CB-HB2	96.08	110.00	1
CG-CD2-HD23	122.92	109.00	1
CE2-CD2-HD2	105.48	119.40	1
HD11-CD1-HD12	96.08	110.00	1
NZ-CE-HE2	94.08	108.00	1
CB-CG1-HG13	95.08	109.00	1
CG1-CD1-HD11	122.93	109.00	1
HB2-CB-HB3	96.07	110.00	1
CZ-NH2-HH21	133.93	120.00	1
HG2-CG-HG3	96.07	110.00	1
HD2-CD-HD3	96.07	110.00	1
CG-CD2-HD2	133.33	119.40	1
CZ-NE-HE	103.97	117.90	1
CE2-CD2-HD2	105.46	119.40	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CA-N-H	100.06	114.00	1
C-N-H	110.36	124.30	1
HB2-CB-HB3	96.06	110.00	1
HD22-CD2-HD23	96.06	110.00	1
CG-CB-HB2	94.06	108.00	1
C-CA-HA2	122.94	109.00	1
HG11-CG1-HG13	96.05	110.00	1
HZ1-NZ-HZ3	95.05	109.00	1
CA-N-H	127.95	114.00	1
HB2-CB-HB3	96.05	110.00	1
C-CA-HA3	95.05	109.00	1
CE-NZ-HZ2	123.95	110.00	1
CA-N-H	127.96	114.00	1
NE-CD-HD2	94.04	108.00	1
HD11-CD1-HD12	96.04	110.00	1
SD-CE-HE2	95.04	109.00	1
CB-CG1-HG13	122.96	109.00	1
CA-CB-HB3	122.96	109.00	2
CG-CB-HB3	94.04	108.00	1
N-CA-HA	96.04	110.00	1
HG2-CG-HG3	96.04	110.00	1
CD-CG-HG2	96.04	110.00	1
HB2-CB-HB3	96.04	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CG-CB-HB2	94.04	108.00	1
HB1-CB-HB2	96.03	110.00	1
CA-CB-HB2	95.03	109.00	3
CB-CA-HA	122.97	109.00	1
HG21-CG2-HG22	96.03	110.00	1
CG-CD1-HD12	122.97	109.00	1
CB-CG2-HG23	96.03	110.00	1
C-CA-HA	95.03	109.00	1
HG22-CG2-HG23	96.03	110.00	1
CB-CG1-HG12	122.97	109.00	1
CD-CG-HG2	94.03	108.00	1
CD1-CG1-HG13	94.03	108.00	1
HG12-CG1-HG13	96.03	110.00	1
HD22-CD2-HD23	96.02	110.00	1
CB-CG2-HG23	123.98	110.00	1
HD21-ND2-HD22	106.02	120.00	1
HB2-CB-HB3	96.02	110.00	1
HG11-CG1-HG13	96.02	110.00	1
CA-N-H	100.02	114.00	1
CG-CD2-HD2	140.39	126.40	1
CB-CG-HG	122.99	109.00	1
CA-CB-HB3	122.99	109.00	1
HG11-CG1-HG13	123.99	110.00	1
HB2-CB-HB3	96.01	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
HG21-CG2-HG23	124.00	110.00	1
HH11-NH1-HH12	106.00	120.00	1
CG-CB-HB3	122.00	108.00	1
HB2-CB-HB3	96.00	110.00	2
HG22-CG2-HG23	95.00	109.00	1
CD-CG-HG3	93.99	108.00	1
CB-CA-HA	123.01	109.00	1
CG-CB-HB3	93.99	108.00	1
HB2-CB-HB3	124.01	110.00	1
C-N-H	110.29	124.30	1
CA-CB-HB2	94.98	109.00	1
CA-CB-HB3	123.02	109.00	2
HE2-CE-HE3	95.98	110.00	1
NZ-CE-HE2	93.98	108.00	1
CB-CG-HG3	94.98	109.00	1
CA-CB-HB2	123.02	109.00	1
CG-CD-HD3	123.02	109.00	1
CB-CG-HG3	123.02	109.00	1
HG2-CG-HG3	95.98	110.00	1
HB1-CB-HB2	95.97	110.00	1
CG-CD-HD3	123.03	109.00	2
HD12-CD1-HD13	95.97	110.00	1
CE-CD-HD2	93.97	108.00	1
CB-CA-HA	123.03	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
HB2-CB-HB3	95.97	110.00	1
C-N-H	138.34	124.30	1
HG22-CG2-HG23	95.96	110.00	2
CE-NZ-HZ2	124.04	110.00	1
C-N-H	110.26	124.30	1
HB2-CB-HB3	95.96	110.00	1
C-CA-HA	94.96	109.00	1
HZ2-NZ-HZ3	94.96	109.00	1
NE-CD-HD2	122.05	108.00	1
HD21-CD2-HD22	95.95	110.00	1
HB1-CB-HB3	124.05	110.00	1
HH21-NH2-HH22	105.95	120.00	1
HD22-CD2-HD23	95.95	110.00	1
CB-CG2-HG23	123.05	109.00	1
CG-CD1-HD11	123.05	109.00	1
C-N-H	138.35	124.30	1
HG22-CG2-HG23	95.94	110.00	1
HB2-CB-HB3	95.94	110.00	1
N-CA-HA	124.06	110.00	1
CG-CD-HD2	94.94	109.00	1
CD1-CE1-HE1	134.06	120.00	1
CG-CD1-HD11	123.06	109.00	1
C-N-H	138.37	124.30	1
C-N-H	110.23	124.30	3

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CE2-CD2-HD2	105.33	119.40	1
CG1-CD1-HD12	123.07	109.00	1
CA-CB-HB3	123.07	109.00	1
CB-CG2-HG23	123.07	109.00	1
CB-CG2-HG22	95.92	110.00	1
HG11-CG1-HG13	95.92	110.00	1
CZ-NE-HE	103.82	117.90	1
CA-N-H	99.92	114.00	1
CD-CG-HG3	93.92	108.00	1
CA-CB-HB3	123.08	109.00	1
CE-NZ-HZ1	124.09	110.00	1
CG-CD-HD3	94.91	109.00	1
CB-CG2-HG21	123.09	109.00	1
CB-CA-HA	123.09	109.00	1
CB-CG2-HG22	123.09	109.00	1
C-N-H	138.39	124.30	1
HD21-CD2-HD22	95.91	110.00	1
CZ-NH1-HH12	134.09	120.00	1
HG2-CG-HG3	95.91	110.00	1
HD22-CD2-HD23	95.91	110.00	1
HD21-CD2-HD23	95.90	110.00	1
CA-CB-HB2	123.10	109.00	1
HB2-CB-HB3	95.90	110.00	1
HA2-CA-HA3	94.90	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
HE21-NE2-HE22	105.90	120.00	1
CB-CG2-HG22	123.10	109.00	1
N-CA-HA	95.90	110.00	1
CB-CG2-HG23	124.10	110.00	1
CB-CA-HA	123.10	109.00	1
CA-CB-HB3	94.89	109.00	1
HB1-CB-HB2	95.89	110.00	1
CB-CG2-HG21	95.89	110.00	1
CB-CG2-HG21	123.11	109.00	1
HG22-CG2-HG23	95.89	110.00	1
CB-CG1-HG13	123.12	109.00	1
C-CA-HA	94.88	109.00	1
N-CA-HA3	124.12	110.00	1
CG-CB-HB2	93.88	108.00	1
CG-CD1-HD1	133.53	119.40	1
HB2-CB-HB3	95.87	110.00	1
HA2-CA-HA3	94.87	109.00	1
CD-CE-HE2	123.13	109.00	1
CE-NZ-HZ1	95.86	110.00	1
C-N-H	110.16	124.30	1
CB-CG-HG	123.14	109.00	1
CA-N-H	99.86	114.00	1
CG-CB-HB2	93.86	108.00	1
CG1-CB-HB	93.86	108.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CG-CB-HB2	122.14	108.00	1
HE2-CE-HE3	95.86	110.00	1
HD11-CD1-HD13	95.86	110.00	1
CA-N-H	128.15	114.00	1
CG-CB-HB3	93.86	108.00	1
CB-CA-HA	123.15	109.00	2
CG-CB-HB3	122.15	108.00	1
HD21-ND2-HD22	105.84	120.00	1
CA-CB-HB2	94.84	109.00	1
CE-CD-HD3	93.84	108.00	1
CG-CB-HB2	93.84	108.00	1
NZ-CE-HE2	93.84	108.00	1
HH21-NH2-HH22	105.84	120.00	1
HA2-CA-HA3	94.84	109.00	1
HG2-CG-HG3	95.84	110.00	1
NZ-CE-HE3	93.84	108.00	1
SD-CE-HE2	123.16	109.00	1
CB-CA-HA	123.16	109.00	1
CA-CB-HB2	123.17	109.00	1
CG-CD2-HD21	123.17	109.00	1
HG22-CG2-HG23	95.83	110.00	1
HB1-CB-HB2	95.82	110.00	1
HG21-CG2-HG23	95.82	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CB-CA-HA	123.18	109.00	2
CA-CB-HB3	123.18	109.00	1
CG-CD-HD3	123.18	109.00	1
HG21-CG2-HG23	95.81	110.00	1
CB-CG1-HG13	123.19	109.00	1
HD21-ND2-HD22	105.81	120.00	1
HD2-CD-HD3	124.19	110.00	1
C-CA-HA	95.81	110.00	1
CG-CB-HB2	124.19	110.00	1
HB2-CB-HB3	95.81	110.00	1
CE2-CD2-HD2	105.20	119.40	1
HG2-CG-HG3	95.80	110.00	1
HB2-CB-HB3	95.80	110.00	1
CE1-CZ-HZ	134.20	120.00	1
CA-CB-HB2	94.80	109.00	1
CB-CG1-HG12	94.80	109.00	1
CD-CG-HG3	124.20	110.00	1
CD-CG-HG3	93.80	108.00	1
NE2-CE1-HE1	111.59	125.80	1
HG21-CG2-HG22	95.79	110.00	3
CG1-CD1-HD13	94.79	109.00	1
CD1-CG1-HG13	93.79	108.00	1
N-CA-HA	124.21	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CA-N-H	128.22	114.00	3
CG-CB-HB2	122.22	108.00	1
C-CA-HA	123.22	109.00	2
CA-CB-HB	123.22	109.00	1
C-CA-HA	94.78	109.00	1
CZ-NH2-HH22	134.22	120.00	1
CD-CG-HG3	93.77	108.00	1
CD-CG-HG2	122.23	108.00	1
CB-CA-HA	123.23	109.00	1
CG-CB-HB3	122.23	108.00	1
CE-NZ-HZ2	124.23	110.00	1
CG-CD1-HD1	110.66	124.90	1
HD21-CD2-HD23	95.76	110.00	1
CH2-CZ3-HZ3	105.21	119.45	1
HD21-ND2-HD22	105.76	120.00	1
HG21-CG2-HG22	95.76	110.00	1
CB-CG2-HG22	123.24	109.00	1
CA-N-H	128.24	114.00	2
HD11-CD1-HD13	95.76	110.00	1
HB2-CB-HB3	95.76	110.00	1
CB-CG1-HG13	123.25	109.00	1
CG-CD1-HD13	123.25	109.00	1
CG-CD-HD2	123.25	109.00	1
CB-CG2-HG22	123.25	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CG-CB-HB2	122.25	108.00	1
HG11-CG1-HG13	95.75	110.00	1
HD12-CD1-HD13	95.75	110.00	1
HB2-CB-HB3	95.75	110.00	1
CG-CB-HB3	93.75	108.00	1
CD-NE2-HE21	134.26	120.00	1
HG11-CG1-HG13	95.74	110.00	1
HB2-CB-HB3	95.74	110.00	2
N-CA-HA	95.74	110.00	1
CA-CB-HB	94.74	109.00	1
N-CA-HA3	124.26	110.00	1
HE21-NE2-HE22	105.74	120.00	1
HE1-CE-HE2	95.74	110.00	1
CG-CB-HB2	93.73	108.00	1
C-N-H	110.03	124.30	1
HD22-CD2-HD23	95.73	110.00	1
CD-NE-HE	132.17	117.90	1
CG-CD-HD2	94.73	109.00	1
CD-NE2-HE22	134.27	120.00	1
CB-CG-HG3	94.73	109.00	1
CA-CB-HB2	123.28	109.00	2
CB-CG-HG2	123.28	109.00	1
CA-N-H	99.72	114.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CD-NE2-HE21	134.28	120.00	1
HG12-CG1-HG13	95.72	110.00	1
HG21-CG2-HG23	94.72	109.00	1
CB-CA-HA	123.28	109.00	1
HH21-NH2-HH22	134.28	120.00	1
HD21-CD2-HD22	95.71	110.00	1
HZ1-NZ-HZ3	94.71	109.00	1
CG-CB-HB3	93.71	108.00	1
CG-CD2-HD2	140.69	126.40	1
NZ-CE-HE2	93.71	108.00	1
C-CA-HA	95.71	110.00	1
HD11-CD1-HD12	124.30	110.00	1
HB2-CB-HB3	124.30	110.00	1
CA-CB-HB	123.30	109.00	1
CG1-CD1-HD13	123.30	109.00	1
CA-CB-HB2	123.30	109.00	1
CG-CB-HB2	122.30	108.00	1
HG2-CG-HG3	124.31	110.00	1
CB-CA-HA	123.31	109.00	1
CG1-CD1-HD11	123.31	109.00	1
N-CA-HA	95.69	110.00	1
CB-CG1-HG13	94.69	109.00	1
HG2-CG-HG3	95.69	110.00	1
CD-CE-HE2	94.69	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CG-CB-HB2	93.69	108.00	1
CE1-CD1-HD1	105.08	119.40	1
HD2-CD-HD3	95.68	110.00	1
CB-CG2-HG23	123.32	109.00	1
HD2-CD-HD3	124.32	110.00	1
CA-N-H	99.68	114.00	1
C-N-H	109.98	124.30	1
CE2-CZ-HZ	134.32	120.00	1
CZ-NH1-HH11	105.68	120.00	1
HD12-CD1-HD13	95.68	110.00	1
HG22-CG2-HG23	95.68	110.00	1
CD-CG-HG3	93.67	108.00	1
CA-CB-HB2	123.33	109.00	3
CD-NE2-HE22	134.33	120.00	1
CG-CD2-HD23	94.67	109.00	1
N-CA-HA	95.67	110.00	1
HB2-CB-HB3	95.67	110.00	2
CB-CA-HA	123.33	109.00	1
CD1-CG1-HG12	93.67	108.00	1
CG-CB-HB3	122.33	108.00	1
HB2-CB-HB3	95.66	110.00	1
CG-CD-HD3	94.66	109.00	1
HG2-CG-HG3	95.66	110.00	1
C-CA-HA	94.66	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
N-CA-HA	95.65	110.00	1
CE-NZ-HZ1	95.65	110.00	1
C-CA-HA	94.65	109.00	1
CG-CD1-HD12	123.35	109.00	1
HG2-CG-HG3	95.65	110.00	1
C-N-H	109.95	124.30	1
HB2-CB-HB3	95.65	110.00	1
CD-CG-HG3	93.65	108.00	1
CD-CE-HE3	94.65	109.00	1
HD11-CD1-HD13	95.65	110.00	1
C-N-H	109.94	124.30	1
CG-CB-HB2	93.64	108.00	1
HB2-CB-HB3	95.64	110.00	1
OG-CB-HB3	94.64	109.00	1
CD-CG-HG2	122.36	108.00	1
CB-CG2-HG23	123.36	109.00	1
N-CA-HA	124.36	110.00	1
CG-CB-HB3	93.64	108.00	1
HG12-CG1-HG13	95.64	110.00	1
HE2-CE-HE3	95.63	110.00	1
C-CA-HA	123.37	109.00	2
CA-CB-HB2	94.63	109.00	1
HB2-CB-HB3	95.63	110.00	1
CG-CD-HD3	123.37	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CB-CG1-HG13	94.62	109.00	1
C-N-H	109.92	124.30	2
C-CA-HA	123.38	109.00	1
HD2-CD-HD3	95.62	110.00	1
CD-NE2-HE21	134.38	120.00	1
HG21-CG2-HG22	94.61	109.00	1
CA-CB-HB2	123.39	109.00	1
CG-CB-HB3	122.39	108.00	1
CB-CG2-HG22	123.39	109.00	1
N-CA-HA	124.39	110.00	1
HZ1-NZ-HZ2	123.39	109.00	1
CB-CG-HG3	123.39	109.00	1
HG11-CG1-HG13	124.39	110.00	1
CA-CB-HB2	123.40	109.00	1
N-CA-HA	95.60	110.00	1
CG-CB-HB3	122.40	108.00	1
CA-CB-HB3	123.40	109.00	2
C-CA-HA2	94.59	109.00	1
HG21-CG2-HG22	95.59	110.00	1
CG-CB-HB2	95.59	110.00	1
CD-CG-HG2	93.59	108.00	1
CA-CB-HB3	123.41	109.00	1
HB1-CB-HB2	95.59	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CA-CB-HB2	123.41	109.00	1
CZ-NH1-HH12	134.41	120.00	1
CZ-NH2-HH22	105.58	120.00	1
HD11-CD1-HD13	95.58	110.00	1
CG-CB-HB3	93.58	108.00	1
CA-CB-HB2	123.42	109.00	1
HH21-NH2-HH22	105.58	120.00	1
SD-CE-HE2	94.58	109.00	1
CB-CG-HG3	94.58	109.00	1
N-CA-HA	95.58	110.00	1
HG2-CG-HG3	124.43	110.00	1
HG22-CG2-HG23	95.57	110.00	1
NE1-CD1-HD1	110.47	124.90	1
CG-CD2-HD21	123.43	109.00	1
CG-CD-HD3	94.57	109.00	1
CG-CD2-HD2	133.84	119.40	1
CA-CB-HB2	123.44	109.00	1
HB1-CB-HB2	95.56	110.00	1
HG2-CG-HG3	95.56	110.00	1
N-CA-HA	124.44	110.00	1
CG-CD1-HD11	123.44	109.00	1
CG-CB-HB3	93.56	108.00	1
CE-CD-HD3	93.56	108.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
C-N-H	109.86	124.30	2
CD-NE2-HE21	134.44	120.00	1
CD-CG-HG2	93.56	108.00	1
CG-CB-HB2	122.44	108.00	1
CE1-CD1-HD1	104.95	119.40	1
HG21-CG2-HG23	95.56	110.00	1
CB-CG1-HG11	94.56	109.00	1
HE2-CE-HE3	124.45	110.00	1
OG-CB-HB2	94.55	109.00	1
CB-CG2-HG21	124.45	110.00	1
CE-CD-HD3	93.55	108.00	1
CB-CG1-HG12	123.46	109.00	1
CG1-CD1-HD13	123.46	109.00	1
HD11-CD1-HD12	95.54	110.00	1
CG-CD2-HD22	123.46	109.00	1
N-CA-HA3	124.47	110.00	1
CB-CG-HG3	123.47	109.00	1
HZ2-NZ-HZ3	94.53	109.00	1
HB2-CB-HB3	95.53	110.00	1
OG-CB-HB3	94.53	109.00	1
HD2-CD-HD3	124.47	110.00	1
CG-CD1-HD12	123.47	109.00	1
CD2-CG-HG	122.47	108.00	1
CA-CB-HB2	123.47	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CA-CB-HB3	94.53	109.00	1
CB-CG-HG2	123.47	109.00	1
HG22-CG2-HG23	124.47	110.00	1
N-CD-HD2	123.48	109.00	1
CD-CG-HG2	93.52	108.00	1
C-CA-HA	94.52	109.00	1
CG-CD2-HD2	134.13	119.65	1
CA-CB-HB2	123.48	109.00	1
HE2-CE-HE3	95.52	110.00	1
CA-N-H	99.52	114.00	2
HD11-CD1-HD12	95.52	110.00	1
HD21-CD2-HD23	95.52	110.00	1
C-N-H	138.78	124.30	2
HA2-CA-HA3	94.52	109.00	1
HH11-NH1-HH12	105.51	120.00	1
CA-N-H	99.51	114.00	1
HD22-CD2-HD23	95.51	110.00	1
CZ-NH2-HH22	134.49	120.00	1
CB-CG-HG	123.49	109.00	1
OG-CB-HB2	94.51	109.00	1
HB2-CB-HB3	95.51	110.00	1
HG21-CG2-HG22	95.51	110.00	1
CG-CD1-HD1	104.91	119.40	1
CB-CG1-HG13	123.49	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CG-CB-HB2	122.50	108.00	1
C-CA-HA3	94.50	109.00	1
C-N-H	109.80	124.30	1
CB-CG2-HG23	123.50	109.00	1
HD11-CD1-HD13	95.50	110.00	1
CA-CB-HB	123.50	109.00	1
CD-NE-HE	132.41	117.90	1
CD1-CG1-HG13	122.51	108.00	1
C-N-H	109.79	124.30	1
CA-N-H	99.49	114.00	1
C-CA-HA	123.52	109.00	1
CG1-CD1-HD11	123.52	109.00	1
CB-CG2-HG21	123.52	109.00	1
N-CA-HA	124.52	110.00	1
C-N-H	109.78	124.30	2
CB-CG1-HG11	123.52	109.00	1
HG21-CG2-HG22	95.47	110.00	2
NE2-CE1-HE1	111.27	125.80	1
HD22-CD2-HD23	95.47	110.00	1
HG21-CG2-HG23	94.47	109.00	1
C-CA-HA	94.47	109.00	1
CB-CG2-HG22	123.53	109.00	1
HB2-CB-HB3	95.46	110.00	1
CG-CB-HB2	93.46	108.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
NE2-CD2-HD2	111.86	126.40	1
HG2-CG-HG3	95.46	110.00	1
CB-CG1-HG12	123.54	109.00	1
SD-CE-HE2	123.55	109.00	1
C-N-H	138.85	124.30	1
HH11-NH1-HH12	105.45	120.00	1
HD21-CD2-HD22	95.45	110.00	1
CA-CB-HB3	94.45	109.00	1
CB-CG-HG3	123.55	109.00	1
CG-ND2-HD21	134.55	120.00	1
CG1-CD1-HD13	123.56	109.00	1
HB2-CB-HB3	95.44	110.00	1
HG21-CG2-HG22	123.56	109.00	1
CD1-CG1-HG12	122.57	108.00	1
HG12-CG1-HG13	95.43	110.00	1
CA-CB-HB3	123.57	109.00	1
HB2-CB-HB3	95.43	110.00	1
HD12-CD1-HD13	95.43	110.00	1
CA-N-H	99.43	114.00	1
HZ1-NZ-HZ3	123.57	109.00	1
HG11-CG1-HG13	95.43	110.00	1
CG1-CD1-HD11	123.57	109.00	1
HD21-CD2-HD22	95.42	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
HG2-CG-HG3	95.42	110.00	1
HB2-CB-HB3	95.42	110.00	2
CB-CG1-HG13	123.58	109.00	1
N-CA-HA2	124.58	110.00	1
CD-CG-HG2	93.42	108.00	1
CA-CB-HB3	94.42	109.00	1
N-CD-HD3	123.58	109.00	1
CD2-CE2-HE2	134.78	120.20	1
CG1-CB-HB	94.42	109.00	1
CA-N-H	128.59	114.00	2
NZ-CE-HE3	122.58	108.00	1
HG21-CG2-HG23	95.41	110.00	1
CZ-NH1-HH12	105.41	120.00	1
HG22-CG2-HG23	94.41	109.00	1
C-N-H	109.71	124.30	1
CA-CB-HB	123.59	109.00	1
CB-CG1-HG12	123.59	109.00	1
CG-CD1-HD13	123.59	109.00	1
CA-CB-HB1	123.59	109.00	1
HG21-CG2-HG23	124.60	110.00	1
HB2-CB-HB3	95.40	110.00	1
CG-CD2-HD22	123.60	109.00	1
HD22-CD2-HD23	95.39	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CD-CG-HG3	122.61	108.00	1
C-CA-HA	94.39	109.00	1
CG-CB-HB3	122.61	108.00	1
CE1-ND1-HD1	110.74	125.35	1
HB2-CB-HB3	95.39	110.00	1
CG-CB-HB3	93.39	108.00	1
CD-CE-HE2	123.62	109.00	1
CE-NZ-HZ3	124.62	110.00	1
CB-CA-HA	123.62	109.00	1
HG11-CG1-HG12	95.38	110.00	1
HB2-CB-HB3	95.38	110.00	1
HG2-CG-HG3	95.38	110.00	1
CG-CD2-HD21	123.62	109.00	1
C-N-H	138.93	124.30	1
CB-CA-HA	123.63	109.00	1
HG22-CG2-HG23	95.37	110.00	1
CG-CD2-HD23	123.63	109.00	1
CG-CD2-HD2	134.03	119.40	1
CA-CB-HB2	123.64	109.00	1
CB-CG-HG2	123.64	109.00	1
C-N-H	109.66	124.30	1
CB-CG-HG3	123.64	109.00	1
CE-NZ-HZ3	124.65	110.00	1
C-CA-HA3	123.65	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
HB1-CB-HB3	95.35	110.00	1
CB-CG-HG2	94.35	109.00	1
CG-CB-HB3	93.35	108.00	1
HZ1-NZ-HZ2	94.35	109.00	1
ND1-CE1-HE1	140.45	125.80	1
HB2-CB-HB3	124.65	110.00	1
CG-CB-HB3	122.65	108.00	1
CA-N-H	128.65	114.00	1
CD1-CG1-HG12	93.34	108.00	1
CB-CG-HG2	123.66	109.00	1
C-CA-HA2	94.34	109.00	1
N-CA-HA2	95.34	110.00	1
CA-N-H	128.66	114.00	1
CD-CG-HG2	122.67	108.00	1
CA-N-H	99.33	114.00	1
NE-CD-HD3	122.67	108.00	1
HG21-CG2-HG22	123.67	109.00	1
CD-CE-HE3	123.67	109.00	1
HH11-NH1-HH12	105.33	120.00	1
HG12-CG1-HG13	95.33	110.00	1
HG2-CG-HG3	124.68	110.00	1
CA-CB-HB2	123.68	109.00	2
CB-CG2-HG22	123.68	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
C-CA-HA	94.32	109.00	1
CG-CB-HB3	122.69	108.00	1
HD11-CD1-HD13	95.31	110.00	1
C-N-H	109.61	124.30	2
CB-CG-HG3	94.31	109.00	1
HG22-CG2-HG23	123.69	109.00	1
CG-CD2-HD21	123.69	109.00	1
CG2-CB-HB	93.31	108.00	1
CG-CD1-HD13	123.70	109.00	1
CB-CG-HG2	123.70	109.00	1
NE-CD-HD3	93.30	108.00	1
CE-CD-HD2	93.30	108.00	1
CA-CB-HB2	123.70	109.00	1
C-CA-HA	94.30	109.00	1
HH21-NH2-HH22	105.30	120.00	1
N-CA-HA	124.71	110.00	1
CA-CB-HB	123.71	109.00	1
CZ-NH1-HH12	134.71	120.00	1
C-N-H	109.59	124.30	1
C-CA-HA	123.71	109.00	1
CG1-CD1-HD11	123.71	109.00	1
CA-N-H	128.71	114.00	1
C-CA-HA	94.28	109.00	1
HB2-CB-HB3	95.28	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CA-CB-HB2	123.72	109.00	1
CZ-CE1-HE1	105.28	120.00	1
CB-CA-HA	94.28	109.00	1
CG-CD1-HD13	123.72	109.00	1
CE2-CD2-HD2	104.68	119.40	1
CG-CD2-HD2	134.12	119.40	1
CG2-CB-HB	94.28	109.00	1
CG-CB-HB3	93.28	108.00	1
HE21-NE2-HE22	105.28	120.00	1
CG-CD1-HD11	123.72	109.00	1
HG12-CG1-HG13	95.28	110.00	1
CB-CG2-HG22	123.73	109.00	1
HG11-CG1-HG13	95.27	110.00	1
CA-CB-HB3	94.27	109.00	1
CG-CD-HD3	94.27	109.00	1
CE2-CD2-HD2	104.92	119.65	1
C-N-H	109.56	124.30	2
HG22-CG2-HG23	123.74	109.00	1
HB2-CB-HB3	95.26	110.00	2
HG12-CG1-HG13	95.26	110.00	1
CA-CB-HB2	94.26	109.00	1
HG2-CG-HG3	95.26	110.00	1
CG-ND1-HD1	140.09	125.35	1
HG22-CG2-HG23	94.25	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
N-CD-HD2	123.75	109.00	1
C-N-H	139.05	124.30	1
C-N-H	109.55	124.30	1
CB-CA-HA	123.75	109.00	1
C-CA-HA	123.75	109.00	1
CA-CB-HB2	123.75	109.00	1
N-CA-HA	124.75	110.00	1
HB2-CB-HB3	95.25	110.00	1
HE1-CE-HE3	124.75	110.00	1
CB-CG-HG2	123.75	109.00	1
HG2-CG-HG3	95.24	110.00	1
C-N-H	109.54	124.30	2
CA-CB-HB	123.76	109.00	1
C-N-H	139.06	124.30	1
HD22-CD2-HD23	95.24	110.00	1
CG-CD2-HD22	123.76	109.00	1
HD12-CD1-HD13	95.23	110.00	1
CA-N-H	128.76	114.00	1
CB-CG2-HG22	124.77	110.00	1
CD-CG-HG2	93.23	108.00	1
HB1-CB-HB2	95.23	110.00	1
HH21-NH2-HH22	105.23	120.00	1
C-CA-HA	123.77	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
C-N-H	109.53	124.30	1
HB2-CB-HB3	95.23	110.00	1
CD-CE-HE2	123.77	109.00	1
CD-CG-HG2	122.78	108.00	1
CA-CB-HB3	123.78	109.00	1
HG21-CG2-HG23	123.78	109.00	1
CE2-CD2-HD2	104.62	119.40	1
HH11-NH1-HH12	105.22	120.00	1
HD12-CD1-HD13	95.22	110.00	1
CA-N-H	128.78	114.00	1
C-N-H	109.51	124.30	1
N-CA-HA	95.21	110.00	1
CD-CG-HG2	122.79	108.00	1
CG-CD2-HD23	123.79	109.00	1
HD11-CD1-HD12	95.21	110.00	1
CA-CB-HB2	94.20	109.00	1
CE-CD-HD3	93.20	108.00	1
CA-CB-HB2	123.80	109.00	1
HE21-NE2-HE22	105.20	120.00	1
CD-CG-HG2	93.20	108.00	1
CZ-CE1-HE1	105.20	120.00	1
C-N-H	109.50	124.30	1
HD11-CD1-HD12	95.20	110.00	1
CB-CG2-HG23	124.80	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CZ-NE-HE	103.09	117.90	1
HD11-CD1-HD13	95.19	110.00	1
CB-CG-HG3	123.81	109.00	1
HG21-CG2-HG23	95.19	110.00	1
CA-N-H	128.81	114.00	1
HG2-CG-HG3	124.81	110.00	1
HH11-NH1-HH12	105.19	120.00	1
CG-CB-HB3	93.18	108.00	1
CD-CE-HE2	123.82	109.00	1
HD21-CD2-HD22	95.18	110.00	1
CG-CB-HB2	122.82	108.00	1
CA-CB-HB1	123.82	109.00	1
C-CA-HA	95.18	110.00	1
HG21-CG2-HG23	95.18	110.00	1
HZ2-NZ-HZ3	94.18	109.00	1
CB-CA-HA	123.83	109.00	1
CG-CD-HD2	94.17	109.00	1
NZ-CE-HE2	93.17	108.00	1
CA-CB-HB	123.83	109.00	1
CG-CB-HB3	93.17	108.00	1
CD-CG-HG3	122.83	108.00	1
CG-CD1-HD11	123.83	109.00	1
CG-CD2-HD23	123.83	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
HG11-CG1-HG13	124.83	110.00	1
CA-CB-HB2	94.16	109.00	2
HG2-CG-HG3	95.16	110.00	2
N-CA-HA	95.16	110.00	1
CD-NE2-HE22	105.16	120.00	1
HB2-CB-HB3	95.16	110.00	1
HB1-CB-HB3	95.16	110.00	1
CA-CB-HB2	123.84	109.00	1
HD11-CD1-HD12	95.16	110.00	1
C-N-H	109.46	124.30	1
CG-CB-HB2	93.16	108.00	1
C-CA-HA	94.15	109.00	1
HG2-CG-HG3	95.15	110.00	2
HD21-CD2-HD22	95.15	110.00	1
CA-CB-HB2	123.85	109.00	1
CA-CB-HB2	94.14	109.00	1
HG11-CG1-HG13	95.14	110.00	1
HD12-CD1-HD13	124.86	110.00	1
HG2-CG-HG3	95.14	110.00	1
CB-CG-HG2	123.86	109.00	1
NZ-CE-HE2	93.13	108.00	1
CE1-CD1-HD1	104.78	119.65	2
C-CA-HA	123.87	109.00	1
CD-NE-HE	132.77	117.90	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
HB2-CB-HB3	95.13	110.00	2
HB1-CB-HB2	95.13	110.00	1
HG22-CG2-HG23	95.13	110.00	1
CB-CG-HG	94.13	109.00	1
C-N-H	109.43	124.30	1
CA-N-H	128.87	114.00	1
CB-CA-HA	123.87	109.00	1
HG21-CG2-HG22	94.12	109.00	1
CA-CB-HB3	123.88	109.00	2
CB-CA-HA	123.88	109.00	1
CB-CG-HG2	123.88	109.00	1
HE2-CE-HE3	124.88	110.00	1
CB-CG2-HG23	124.88	110.00	1
CD-CG-HG2	122.89	108.00	1
CE1-CD1-HD1	104.51	119.40	1
N-CA-HA	95.11	110.00	1
CA-CB-HB	123.89	109.00	1
CG-CB-HB2	122.89	108.00	1
HG12-CG1-HG13	95.11	110.00	1
CG-CD1-HD13	123.89	109.00	1
CD-CG-HG3	93.11	108.00	1
HG21-CG2-HG23	95.11	110.00	1
CZ-NE-HE	103.00	117.90	1
CA-CB-HB3	123.90	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CA-N-H	99.10	114.00	1
C-N-H	109.40	124.30	1
CG-CD1-HD1	134.55	119.65	1
HG21-CG2-HG22	95.10	110.00	1
HD11-CD1-HD12	95.10	110.00	1
CA-CB-HB3	123.91	109.00	1
HG11-CG1-HG12	95.09	110.00	1
HG21-CG2-HG23	123.91	109.00	1
HB1-CB-HB3	95.09	110.00	1
HD12-CD1-HD13	95.09	110.00	1
CG-CB-HB2	124.91	110.00	1
N-CA-HA	124.91	110.00	1
HD11-CD1-HD13	95.09	110.00	1
HG21-CG2-HG23	95.09	110.00	1
CB-CG-HG3	94.08	109.00	1
CG-CD1-HD11	123.92	109.00	1
CA-N-H	128.92	114.00	1
CZ-CE1-HE1	105.28	120.20	1
C-N-H	109.38	124.30	1
C-N-H	139.22	124.30	1
CG-CB-HB3	124.93	110.00	1
HH11-NH1-HH12	105.07	120.00	1
HB2-CB-HB3	95.07	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CD-CG-HG2	122.93	108.00	1
C-CA-HA	94.07	109.00	1
CG-CB-HB3	93.07	108.00	1
CB-CG2-HG21	123.94	109.00	1
CB-CG1-HG12	123.94	109.00	1
HH21-NH2-HH22	105.06	120.00	1
HD11-CD1-HD12	124.94	110.00	1
CD-CG-HG3	93.06	108.00	1
CG-CD1-HD12	123.94	109.00	1
CB-CG-HG	123.94	109.00	1
CG-CB-HB3	93.06	108.00	1
C-N-H	109.35	124.30	1
N-CA-HA	95.05	110.00	1
HB2-CB-HB3	95.05	110.00	1
CE2-CD2-HD2	104.44	119.40	1
HD22-CD2-HD23	95.04	110.00	1
CZ-NH1-HH12	105.04	120.00	1
CD-CG-HG2	93.04	108.00	1
CG1-CD1-HD13	123.96	109.00	1
HG12-CG1-HG13	95.04	110.00	1
CA-CB-HB2	94.04	109.00	1
CG-CB-HB2	93.03	108.00	1
CA-N-H	128.97	114.00	1
CD-CG-HG3	93.03	108.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CE-NZ-HZ2	124.97	110.00	1
CA-CB-HB3	123.97	109.00	1
HD12-CD1-HD13	95.03	110.00	1
C-N-H	109.33	124.30	1
CG-CD1-HD1	134.38	119.40	1
CD2-CE2-HE2	105.02	120.00	1
HG21-CG2-HG22	95.02	110.00	2
C-N-H	109.32	124.30	3
CD1-CG1-HG12	93.02	108.00	1
HG12-CG1-HG13	95.01	110.00	1
C-N-H	109.31	124.30	1
CA-CB-HB3	123.99	109.00	1
CA-N-H	128.99	114.00	1
CZ-NH2-HH22	135.00	120.00	1
CB-CG-HG2	124.00	109.00	1
HB2-CB-HB3	125.00	110.00	1
C-N-H	139.30	124.30	1
CB-CG1-HG12	124.00	109.00	1
CD1-CG1-HG13	93.00	108.00	1
HG2-CG-HG3	125.00	110.00	1
HA2-CA-HA3	93.99	109.00	1
CB-CA-HA	93.99	109.00	1
CG-CD1-HD12	124.01	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
HE2-CE-HE3	125.01	110.00	1
CG-CB-HB3	94.99	110.00	1
CD1-CG1-HG13	92.99	108.00	1
HZ1-NZ-HZ2	93.98	109.00	1
C-N-H	139.31	124.30	1
CD-CE-HE2	124.02	109.00	1
HB2-CB-HB3	94.98	110.00	1
CB-CG-HG3	93.98	109.00	1
CB-CA-HA	124.02	109.00	1
HD12-CD1-HD13	94.98	110.00	1
CG-CB-HB2	123.02	108.00	1
HD2-CD-HD3	94.97	110.00	1
CB-CG2-HG22	124.03	109.00	2
HB2-CB-HB3	94.97	110.00	3
CG-CB-HB2	123.03	108.00	1
C-CA-HA2	124.03	109.00	1
HG21-CG2-HG22	93.97	109.00	1
CB-CA-HA	93.97	109.00	1
CE-NZ-HZ1	125.03	110.00	1
CB-CG1-HG12	93.96	109.00	1
CG-CB-HB3	92.96	108.00	1
HE21-NE2-HE22	104.96	120.00	1
N-CA-HA	94.96	110.00	1
CE-NZ-HZ2	125.04	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
HD11-CD1-HD12	94.96	110.00	1
CD-NE2-HE22	104.96	120.00	1
NE2-CD2-HD2	111.35	126.40	1
CG-CB-HB3	92.95	108.00	1
C-N-H	139.35	124.30	1
CB-CG1-HG12	124.05	109.00	1
CG-CD-HD2	93.95	109.00	1
HB2-CB-HB3	94.95	110.00	2
SD-CG-HG3	92.94	108.00	1
CG-CB-HB2	92.94	108.00	1
CA-CB-HB2	124.06	109.00	1
HB2-CB-HB3	94.94	110.00	2
CG-CD-HD2	93.94	109.00	1
HD11-CD1-HD12	94.94	110.00	1
HB1-CB-HB2	94.94	110.00	1
CB-CG1-HG11	93.94	109.00	1
CB-CA-HA	124.06	109.00	1
N-CA-HA3	94.93	110.00	1
CG-CB-HB3	92.93	108.00	1
OG-CB-HB2	124.07	109.00	1
CB-CG1-HG11	124.07	109.00	1
CZ-CE1-HE1	105.13	120.20	1
HG2-CG-HG3	94.93	110.00	1
CG1-CD1-HD12	124.08	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CG-ND2-HD21	135.08	120.00	1
HE1-CE-HE2	94.92	110.00	1
CA-CB-HB2	124.08	109.00	1
CA-CB-HB2	93.92	109.00	1
CG-ND2-HD21	104.92	120.00	1
CG1-CB-HB	92.91	108.00	1
CB-CG2-HG22	124.09	109.00	1
CA-CB-HB3	124.09	109.00	1
CE-NZ-HZ1	125.09	110.00	1
HB2-CB-HB3	94.90	110.00	1
N-CA-HA	94.90	110.00	1
HH11-NH1-HH12	104.90	120.00	1
HD21-ND2-HD22	104.90	120.00	1
HD21-CD2-HD23	94.90	110.00	1
CB-CA-HA	124.11	109.00	1
CB-CG-HG3	124.11	109.00	1
HD2-CD-HD3	94.89	110.00	1
HB2-CB-HB3	94.89	110.00	1
N-CA-HA	125.11	110.00	1
CG-CB-HB3	92.89	108.00	1
HB1-CB-HB3	94.88	110.00	1
HB2-CB-HB3	94.88	110.00	1
HG2-CG-HG3	94.88	110.00	1
CB-CG-HG2	124.12	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CB-CG-HG3	124.12	109.00	1
CB-CG1-HG13	124.12	109.00	1
C-CA-HA	124.12	109.00	1
CB-CG2-HG22	124.12	109.00	1
CB-CG1-HG12	124.12	109.00	1
CE-NZ-HZ2	125.13	110.00	1
CG-CD1-HD12	124.13	109.00	1
C-N-H	109.17	124.30	1
CA-N-H	129.13	114.00	1
C-N-H	109.16	124.30	1
CA-CB-HB2	124.14	109.00	1
HD12-CD1-HD13	94.86	110.00	1
HH11-NH1-HH12	104.86	120.00	1
C-CA-HA	93.86	109.00	1
C-CA-HA	124.15	109.00	1
HD11-CD1-HD12	94.85	110.00	1
CD1-CE1-HE1	135.35	120.20	1
HG11-CG1-HG13	94.85	110.00	1
HD21-CD2-HD22	94.85	110.00	1
CD1-CE1-HE1	104.85	120.00	1
CB-CA-HA	124.15	109.00	1
N-CA-HA	94.85	110.00	1
HB2-CB-HB3	94.84	110.00	2

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CA-CB-HB3	124.16	109.00	1
SD-CE-HE3	93.84	109.00	1
HD22-CD2-HD23	94.84	110.00	1
CD-CG-HG3	92.84	108.00	1
HD12-CD1-HD13	94.84	110.00	1
CA-N-H	98.84	114.00	1
CG-CB-HB2	123.16	108.00	1
HD21-CD2-HD22	94.84	110.00	1
CG-CD-HD2	93.84	109.00	1
C-N-H	109.14	124.30	1
CG-CB-HB3	92.83	108.00	1
CB-CG1-HG12	124.17	109.00	1
N-CA-HA	94.83	110.00	1
HH11-NH1-HH12	104.83	120.00	1
NE1-CD1-HD1	109.73	124.90	1
CB-CG-HG3	124.17	109.00	1
CB-CG1-HG13	124.17	109.00	1
CD-CG-HG2	92.83	108.00	1
CA-CB-HB3	124.17	109.00	1
HG22-CG2-HG23	94.83	110.00	1
HG21-CG2-HG22	94.83	110.00	1
C-CA-HA	93.83	109.00	1
CA-CB-HB3	93.83	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CG-CD-HD3	93.83	109.00	1
C-N-H	139.47	124.30	1
NE-CD-HD2	92.82	108.00	1
C-CA-HA	124.18	109.00	1
CB-CG2-HG23	124.18	109.00	1
CE-NZ-HZ2	125.18	110.00	1
CZ-NE-HE	102.72	117.90	1
CD-CG-HG2	92.82	108.00	1
CA-N-H	129.19	114.00	1
HG11-CG1-HG12	94.81	110.00	1
CA-N-H	98.81	114.00	1
HZ1-NZ-HZ2	93.81	109.00	1
C-CA-HA	93.81	109.00	1
C-N-H	109.11	124.30	1
CB-CG2-HG23	124.19	109.00	1
HE1-CE-HE3	94.81	110.00	1
C-N-H	109.10	124.30	2
CA-CB-HB1	124.20	109.00	1
CG-CD2-HD21	93.80	109.00	1
CD-NE2-HE21	135.20	120.00	1
HG22-CG2-HG23	94.80	110.00	1
N-CA-HA2	94.80	110.00	1
CA-N-H	129.21	114.00	2
CB-CG2-HG22	124.21	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
C-CA-HA	93.79	109.00	1
CG-CB-HB2	123.21	108.00	1
HD21-CD2-HD22	94.79	110.00	1
CE2-CZ-HZ	104.79	120.00	1
CB-CG1-HG12	124.21	109.00	1
HG21-CG2-HG23	93.79	109.00	1
HD11-CD1-HD12	94.78	110.00	1
CG-CD-HD3	93.78	109.00	1
CG-CB-HB2	123.22	108.00	2
HG2-CG-HG3	94.78	110.00	1
C-CA-HA2	93.78	109.00	1
CA-CB-HB2	93.78	109.00	1
HG22-CG2-HG23	94.78	110.00	1
HB2-CB-HB3	94.78	110.00	2
N-CD-HD2	93.78	109.00	1
C-N-H	109.08	124.30	1
CA-CB-HB3	124.22	109.00	1
CG-CB-HB3	92.78	108.00	1
HH21-NH2-HH22	104.78	120.00	1
CZ-NE-HE	102.68	117.90	1
CA-CB-HB2	124.23	109.00	1
HD11-CD1-HD12	94.77	110.00	1
C-N-H	139.53	124.30	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CG-CD1-HD13	124.23	109.00	1
CA-N-H	98.77	114.00	1
N-CA-HA	94.76	110.00	1
HD11-CD1-HD12	94.76	110.00	1
C-N-H	109.06	124.30	1
C-N-H	139.54	124.30	1
HD12-CD1-HD13	94.76	110.00	1
CG-CB-HB3	123.24	108.00	1
HG21-CG2-HG23	94.76	110.00	1
HG2-CG-HG3	94.76	110.00	1
HB2-CB-HB3	94.76	110.00	1
CE-CD-HD2	92.76	108.00	1
HB2-CB-HB3	94.75	110.00	2
CD1-CG1-HG12	92.75	108.00	1
CG-CB-HB3	92.75	108.00	2
CB-CG1-HG12	124.25	109.00	1
CG-CB-HB2	123.25	108.00	1
CD-CG-HG2	125.25	110.00	1
HE2-CE-HE3	94.75	110.00	1
CG-CB-HB2	92.75	108.00	2
CA-N-H	129.25	114.00	1
C-CA-HA	125.25	110.00	1
CB-CG-HG3	124.26	109.00	1
HD12-CD1-HD13	94.74	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CG-CD2-HD23	124.26	109.00	1
CA-N-H	129.26	114.00	1
HB2-CB-HB3	94.74	110.00	1
CD-CG-HG3	92.74	108.00	1
HZ1-NZ-HZ3	93.74	109.00	1
N-CA-HA	94.74	110.00	1
N-CA-HA	125.26	110.00	1
CA-CB-HB3	124.26	109.00	2
CG-CD1-HD11	124.26	109.00	1
CA-CB-HB	124.27	109.00	1
HZ1-NZ-HZ2	93.73	109.00	1
HG11-CG1-HG13	94.73	110.00	1
CG1-CD1-HD11	124.27	109.00	1
CB-CG-HG3	124.27	109.00	1
CE-CD-HD3	92.73	108.00	1
HH21-NH2-HH22	104.73	120.00	1
CB-CG1-HG13	93.72	109.00	1
C-N-H	109.02	124.30	1
C-CA-HA	93.72	109.00	1
CA-CB-HB2	124.28	109.00	1
HZ1-NZ-HZ3	93.72	109.00	1
SD-CE-HE1	93.72	109.00	1
HG2-CG-HG3	94.72	110.00	1
HG11-CG1-HG12	94.72	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CE1-CD1-HD1	104.37	119.65	1
HE2-CE-HE3	125.28	110.00	1
CG-CB-HB3	123.28	108.00	1
CA-CB-HB	124.28	109.00	1
CB-CG-HG2	124.29	109.00	1
C-CA-HA	124.29	109.00	1
HD11-CD1-HD12	94.71	110.00	1
CB-CG1-HG12	124.29	109.00	1
CB-CG-HG2	93.71	109.00	1
CG1-CD1-HD12	124.29	109.00	1
HA2-CA-HA3	93.70	109.00	1
N-CA-HA	125.30	110.00	1
CD1-CG-HG	123.30	108.00	1
CE-NZ-HZ2	125.30	110.00	1
HG2-CG-HG3	94.70	110.00	1
NE-CD-HD2	92.69	108.00	1
HB1-CB-HB3	125.31	110.00	1
C-N-H	108.99	124.30	1
CD-NE2-HE22	135.31	120.00	1
HD11-CD1-HD13	94.68	110.00	1
HB2-CB-HB3	94.68	110.00	1
HG22-CG2-HG23	125.32	110.00	1
CA-N-H	98.68	114.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
HB2-CB-HB3	94.67	110.00	1
CD-CG-HG3	92.67	108.00	1
HG21-CG2-HG22	94.67	110.00	2
HG11-CG1-HG12	94.67	110.00	1
CE-NZ-HZ2	125.33	110.00	1
HH21-NH2-HH22	104.67	120.00	1
HH11-NH1-HH12	104.67	120.00	1
CG-CD1-HD13	124.33	109.00	1
CG-CD-HD2	124.33	109.00	1
HG21-CG2-HG22	93.66	109.00	1
CG-CD2-HD2	134.74	119.40	1
CD-CG-HG2	123.34	108.00	1
HD21-ND2-HD22	104.66	120.00	1
CG-CB-HB3	92.66	108.00	1
CG-CB-HB2	123.34	108.00	1
CB-CG2-HG21	124.34	109.00	1
CA-N-H	98.66	114.00	1
CB-CG2-HG23	125.35	110.00	1
CZ-NH1-HH11	104.65	120.00	1
C-CA-HA	93.65	109.00	1
CB-CG-HG3	93.65	109.00	1
N-CA-HA	125.36	110.00	1
HD12-CD1-HD13	94.64	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
HD11-CD1-HD13	94.64	110.00	1
HB2-CB-HB3	94.64	110.00	2
CG-CB-HB3	92.64	108.00	1
N-CD-HD3	124.36	109.00	1
SD-CE-HE2	124.36	109.00	1
HG11-CG1-HG12	94.64	110.00	1
HG21-CG2-HG22	94.64	110.00	1
CG-CB-HB2	92.64	108.00	2
HE2-CE-HE3	94.64	110.00	1
C-CA-HA	94.64	110.00	1
CB-CG1-HG12	124.37	109.00	1
CD-CG-HG2	92.63	108.00	1
N-CA-HA	94.63	110.00	1
HB2-CB-HB3	94.63	110.00	3
CG1-CD1-HD11	124.37	109.00	1
HG11-CG1-HG13	125.37	110.00	1
NZ-CE-HE2	123.37	108.00	1
HG21-CG2-HG22	94.63	110.00	1
CA-N-H	129.37	114.00	1
CG-CD-HD3	124.37	109.00	1
CG-CB-HB2	92.62	108.00	1
N-CA-HA	94.62	110.00	1
HD12-CD1-HD13	125.38	110.00	1
OG-CB-HB2	124.38	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CD-CG-HG3	92.62	108.00	1
HD21-CD2-HD22	94.62	110.00	1
HE21-NE2-HE22	104.62	120.00	1
HD11-CD1-HD13	94.62	110.00	1
CG-CB-HB2	123.39	108.00	2
CD1-CE1-HE1	135.39	120.00	1
HE2-CE-HE3	94.61	110.00	1
C-CA-HA2	93.61	109.00	1
HG22-CG2-HG23	125.39	110.00	1
CB-CG2-HG23	93.61	109.00	1
CB-CA-HA	124.39	109.00	1
CA-N-H	129.39	114.00	1
CB-CG2-HG22	124.39	109.00	1
HG2-CG-HG3	94.61	110.00	1
HE2-CE-HE3	94.60	110.00	1
CB-CG1-HG13	124.40	109.00	1
CA-CB-HB2	93.60	109.00	1
C-CA-HA	93.60	109.00	1
CZ-CE1-HE1	104.80	120.20	1
CE2-CD2-HD2	104.00	119.40	1
HG21-CG2-HG23	94.60	110.00	1
C-CA-HA	93.59	109.00	1
HG11-CG1-HG12	94.59	110.00	1
CA-CB-HB	93.59	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CA-CB-HB2	124.41	109.00	1
HZ2-NZ-HZ3	124.41	109.00	1
CG-CB-HB2	92.59	108.00	1
CA-CB-HB3	124.41	109.00	1
CB-CA-HA	124.41	109.00	1
CD-CG-HG3	92.59	108.00	1
CE-CD-HD2	123.41	108.00	1
HD12-CD1-HD13	125.42	110.00	1
CG-CB-HB3	92.58	108.00	1
NZ-CE-HE3	92.58	108.00	1
HZ2-NZ-HZ3	93.58	109.00	1
CA-CB-HB3	124.42	109.00	1
CB-CG2-HG22	124.42	109.00	1
CB-CG2-HG23	124.43	109.00	1
CG-CB-HB3	92.57	108.00	1
CA-CB-HB	124.43	109.00	1
N-CA-HA	94.57	110.00	1
HD12-CD1-HD13	94.57	110.00	1
CA-CB-HB3	124.43	109.00	2
SD-CG-HG3	123.43	108.00	1
CG-CB-HB2	92.57	108.00	1
HG21-CG2-HG22	94.56	110.00	1
CB-CG1-HG12	124.44	109.00	1
HD21-CD2-HD22	94.56	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CA-N-H	98.56	114.00	1
CB-CA-HA	124.44	109.00	1
NE2-CE1-HE1	110.36	125.80	1
HD11-CD1-HD13	94.55	110.00	1
CB-CA-HA	124.45	109.00	1
HZ1-NZ-HZ2	93.55	109.00	1
N-CA-HA2	94.55	110.00	1
CA-CB-HB3	93.55	109.00	1
HD2-CD-HD3	94.55	110.00	1
CE-NZ-HZ3	94.55	110.00	1
CA-CB-HB2	124.46	109.00	1
CB-CG2-HG22	124.46	109.00	1
CG-ND2-HD22	104.54	120.00	1
HG21-CG2-HG22	94.54	110.00	1
CZ3-CE3-HE3	105.24	120.70	1
CE-NZ-HZ3	125.47	110.00	1
CG-CD1-HD12	124.47	109.00	1
CG-CB-HB3	125.47	110.00	1
CG1-CD1-HD12	124.47	109.00	1
CZ-NH2-HH22	135.47	120.00	1
HB2-CB-HB3	94.53	110.00	1
CG-CB-HB3	92.53	108.00	1
CG-CB-HB3	123.48	108.00	1
CA-CB-HB2	124.48	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CD-CG-HG2	92.52	108.00	1
C-CA-HA	93.52	109.00	1
CA-N-H	98.52	114.00	1
CG-CD-HD3	124.48	109.00	1
HD12-CD1-HD13	125.48	110.00	1
HD11-CD1-HD12	94.52	110.00	1
HG2-CG-HG3	94.52	110.00	1
N-CA-HA	94.52	110.00	1
HD21-ND2-HD22	104.52	120.00	1
CA-CB-HB	124.49	109.00	1
CG-ND2-HD22	104.51	120.00	1
CG-CD-HD2	93.51	109.00	1
HB2-CB-HB3	94.51	110.00	1
C-CA-HA	93.50	109.00	1
C-CA-HA	124.50	109.00	1
SD-CG-HG3	92.50	108.00	1
HB2-CB-HB3	94.50	110.00	2
SD-CE-HE2	93.50	109.00	1
CG-CB-HB3	92.50	108.00	1
HB2-CB-HB3	94.49	110.00	1
CG-CB-HB3	123.51	108.00	1
HB1-CB-HB3	125.51	110.00	1
CA-CB-HB2	124.51	109.00	1
CB-CG-HG3	93.49	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CB-CG2-HG23	125.51	110.00	1
C-N-H	108.78	124.30	1
HD11-CD1-HD13	94.48	110.00	1
HA2-CA-HA3	93.48	109.00	1
CG-CD-HD2	93.48	109.00	2
HG22-CG2-HG23	93.48	109.00	1
C-CA-HA	124.52	109.00	1
C-CA-HA	93.48	109.00	1
HG11-CG1-HG13	125.53	110.00	1
CG-CB-HB3	92.47	108.00	1
HE21-NE2-HE22	104.47	120.00	1
C-CA-HA	93.47	109.00	1
CB-CG1-HG11	124.53	109.00	1
CG1-CD1-HD13	124.53	109.00	1
C-CA-HA	124.53	109.00	1
CZ-NH2-HH21	135.53	120.00	1
CB-CG2-HG23	124.53	109.00	1
HB2-CB-HB3	94.46	110.00	1
CG-CD1-HD1	135.19	119.65	1
CB-CG-HG2	124.55	109.00	1
CG-CB-HB2	123.55	108.00	1
C-N-H	139.85	124.30	1
CA-CB-HB2	124.55	109.00	1
HG21-CG2-HG23	94.45	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
HZ2-NZ-HZ3	93.45	109.00	1
CA-CB-HB2	93.45	109.00	1
CB-CG2-HG21	124.55	109.00	1
HA2-CA-HA3	93.45	109.00	2
HB2-CB-HB3	125.55	110.00	1
CA-CB-HB3	124.56	109.00	2
HG21-CG2-HG23	94.44	110.00	1
CA-CB-HB2	93.44	109.00	1
CB-CG1-HG12	124.56	109.00	1
CB-CG2-HG21	125.56	110.00	1
CZ-NH2-HH21	135.56	120.00	1
HD21-CD2-HD22	125.56	110.00	1
C-N-H	108.74	124.30	1
CD1-CG1-HG13	92.44	108.00	1
C-CA-HA2	93.43	109.00	1
SD-CG-HG2	123.58	108.00	1
SD-CE-HE3	93.42	109.00	1
HG11-CG1-HG12	125.58	110.00	1
CD-NE2-HE21	135.58	120.00	1
CG-CB-HB2	123.58	108.00	1
HD21-CD2-HD23	94.42	110.00	1
CG1-CB-HB	93.42	109.00	1
N-CD-HD2	124.58	109.00	1
CB-CG2-HG23	124.58	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CG-ND2-HD21	135.59	120.00	1
CG-CB-HB2	92.41	108.00	1
CG-CD2-HD21	124.59	109.00	1
HH21-NH2-HH22	104.41	120.00	1
CD-CG-HG3	92.41	108.00	1
HD21-CD2-HD23	94.41	110.00	1
CB-CG-HG2	93.41	109.00	1
SG-CB-HB3	92.40	108.00	1
C-N-H	108.70	124.30	1
CB-CG-HG3	124.60	109.00	1
CD-CE-HE3	124.60	109.00	1
CB-CG2-HG22	125.60	110.00	1
HG22-CG2-HG23	125.60	110.00	1
CB-CA-HA	124.61	109.00	2
CA-N-H	98.39	114.00	1
C-N-H	108.69	124.30	2
HD12-CD1-HD13	94.39	110.00	1
CG-CD1-HD1	135.26	119.65	1
CD1-CG1-HG13	92.39	108.00	1
HG21-CG2-HG22	94.39	110.00	1
HD12-CD1-HD13	125.61	110.00	1
CA-CB-HB2	93.38	109.00	1
CA-CB-HB2	124.62	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
HB2-CB-HB3	94.38	110.00	1
CG-ND2-HD21	135.62	120.00	1
CB-CG1-HG12	93.38	109.00	1
HD2-CD-HD3	125.62	110.00	1
CG-CD-HD3	93.38	109.00	1
CA-N-H	98.38	114.00	1
HH11-NH1-HH12	104.38	120.00	2
HB2-CB-HB3	94.37	110.00	1
HD11-CD1-HD12	94.36	110.00	1
C-CA-HA	93.36	109.00	2
CE1-CD1-HD1	103.76	119.40	1
N-CA-HA	94.36	110.00	1
CD2-CG-HG	123.64	108.00	1
HG2-CG-HG3	94.36	110.00	1
NE-CD-HD3	92.35	108.00	1
CB-CG-HG3	124.65	109.00	1
N-CD-HD2	93.35	109.00	1
CG-CD2-HD22	124.65	109.00	1
CG-CB-HB3	92.35	108.00	1
CG1-CD1-HD13	124.65	109.00	1
CG-CD-HD3	93.35	109.00	1
C-N-H	108.65	124.30	1
CA-N-H	129.65	114.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
HB2-CB-HB3	94.35	110.00	1
HD11-CD1-HD12	94.34	110.00	1
N-CA-HA	125.66	110.00	1
CB-CA-HA	124.66	109.00	1
CD-CG-HG3	125.66	110.00	1
HG11-CG1-HG12	94.33	110.00	1
HG2-CG-HG3	94.33	110.00	1
CA-N-H	98.33	114.00	1
C-N-H	139.97	124.30	1
CD-CG-HG2	125.67	110.00	1
CA-N-H	129.67	114.00	1
CB-CG2-HG21	125.67	110.00	1
HD21-ND2-HD22	104.32	120.00	1
CA-CB-HB2	124.68	109.00	2
CB-CG1-HG12	124.68	109.00	1
N-CD-HD3	124.68	109.00	1
HG22-CG2-HG23	125.69	110.00	1
CG-CB-HB3	123.69	108.00	1
HB2-CB-HB3	94.31	110.00	1
CB-CG2-HG21	93.31	109.00	1
HG2-CG-HG3	94.31	110.00	1
CD-CG-HG2	123.69	108.00	1
HB1-CB-HB2	94.30	110.00	2
HD21-CD2-HD23	94.30	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CD1-CG1-HG12	92.30	108.00	1
CA-CB-HB2	124.70	109.00	2
CG-CD2-HD2	135.10	119.40	1
HB2-CB-HB3	94.30	110.00	1
C-CA-HA	93.30	109.00	1
HD2-CD-HD3	94.29	110.00	2
HD11-CD1-HD13	94.29	110.00	1
HD22-CD2-HD23	94.28	110.00	1
CD-CG-HG2	123.72	108.00	1
CG-CD-HD3	93.28	109.00	1
HB2-CB-HB3	94.28	110.00	2
CD-CG-HG2	123.73	108.00	1
HD22-CD2-HD23	94.27	110.00	1
CA-CB-HB2	124.73	109.00	1
HG12-CG1-HG13	94.27	110.00	1
CD-CG-HG3	92.27	108.00	1
C-CA-HA2	93.27	109.00	1
HG11-CG1-HG12	94.27	110.00	1
C-CA-HA	93.27	109.00	1
HD2-CD-HD3	94.26	110.00	1
HB2-CB-HB3	94.26	110.00	1
C-CA-HA	124.75	109.00	1
HB2-CB-HB3	94.25	110.00	1
CG-CD1-HD12	124.75	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CA-N-H	129.75	114.00	1
CG-CB-HB2	123.75	108.00	1
C-CA-HA	93.24	109.00	1
CB-CG-HG2	93.24	109.00	1
CB-CG2-HG23	124.76	109.00	1
CG-CD2-HD22	124.76	109.00	1
CG-CD2-HD21	124.76	109.00	1
CB-CA-HA	124.76	109.00	1
HG21-CG2-HG22	94.24	110.00	1
HG2-CG-HG3	94.23	110.00	1
HD21-CD2-HD23	94.23	110.00	1
CA-N-H	129.77	114.00	1
HB2-CB-HB3	94.23	110.00	1
SG-CB-HB3	92.23	108.00	1
HG2-CG-HG3	94.22	110.00	2
N-CA-HA	94.22	110.00	1
HB2-CB-HB3	94.22	110.00	2
C-CA-HA	124.78	109.00	1
C-CA-HA2	93.22	109.00	1
HG22-CG2-HG23	94.22	110.00	1
NZ-CE-HE3	92.22	108.00	1
HG22-CG2-HG23	94.21	110.00	1
CD1-CG1-HG13	92.21	108.00	1
CD1-CG1-HG13	123.79	108.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CZ-NH2-HH21	135.79	120.00	1
CA-N-H	129.79	114.00	1
CA-CB-HB3	124.79	109.00	1
HG11-CG1-HG12	94.21	110.00	1
C-N-H	140.09	124.30	1
HA2-CA-HA3	93.20	109.00	1
CG-CB-HB2	92.20	108.00	1
C-CA-HA3	93.20	109.00	1
HE2-CE-HE3	94.20	110.00	1
HB2-CB-HB3	94.20	110.00	1
HD12-CD1-HD13	94.20	110.00	1
CG-ND1-HD1	109.55	125.35	1
CG-CB-HB3	92.20	108.00	1
HZ1-NZ-HZ2	93.20	109.00	1
HB2-CB-HB3	94.19	110.00	1
HB1-CB-HB3	94.19	110.00	1
CB-CG2-HG22	124.81	109.00	1
HD21-CD2-HD22	94.18	110.00	1
CZ-NH1-HH11	104.18	120.00	1
CG-CB-HB3	92.18	108.00	1
CB-CG1-HG13	124.82	109.00	1
CB-CA-HA	124.82	109.00	1
CA-CB-HB3	93.18	109.00	1
HG21-CG2-HG23	94.18	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
HG21-CG2-HG23	94.17	110.00	1
HG21-CG2-HG23	93.17	109.00	1
HD21-CD2-HD22	94.17	110.00	1
N-CA-HA	94.17	110.00	1
HD2-CD-HD3	125.83	110.00	1
CG-CB-HB2	92.17	108.00	1
HB2-CB-HB3	94.17	110.00	1
CA-CB-HB3	93.16	109.00	1
CG-CB-HB2	123.84	108.00	1
C-CA-HA	93.16	109.00	1
HH21-NH2-HH22	104.16	120.00	1
HB2-CB-HB3	94.16	110.00	1
CA-CB-HB2	124.84	109.00	2
C-N-H	140.14	124.30	1
CD-CG-HG3	92.16	108.00	1
CG-CB-HB2	92.16	108.00	1
N-CA-HA2	125.85	110.00	1
N-CD-HD2	124.85	109.00	1
CD-CG-HG2	123.86	108.00	1
HB2-CB-HB3	94.14	110.00	1
C-CA-HA	93.14	109.00	1
HE1-CE-HE3	125.86	110.00	1
CA-N-H	98.14	114.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
HG2-CG-HG3	125.86	110.00	1
HD11-CD1-HD12	94.14	110.00	1
C-N-H	140.16	124.30	1
HB2-CB-HB3	94.13	110.00	1
CG-CD2-HD23	124.87	109.00	1
CG-CB-HB3	92.13	108.00	1
CB-CA-HA	124.87	109.00	1
N-CA-HA	94.13	110.00	1
HG11-CG1-HG13	94.13	110.00	1
C-N-H	108.42	124.30	1
N-CA-HA2	94.12	110.00	1
CG-CB-HB3	123.88	108.00	1
CG-CB-HB2	92.12	108.00	1
HD21-ND2-HD22	104.12	120.00	1
HD11-CD1-HD13	94.12	110.00	1
CE-CD-HD3	92.12	108.00	1
HG21-CG2-HG23	94.12	110.00	1
CG-CD2-HD2	110.51	126.40	1
HD2-CD-HD3	94.11	110.00	1
CB-CG-HG3	124.89	109.00	1
HZ1-NZ-HZ2	124.89	109.00	1
HG21-CG2-HG23	94.11	110.00	1
C-CA-HA3	124.89	109.00	1
CD-CG-HG3	123.89	108.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CG2-CB-HB	123.89	108.00	1
HG12-CG1-HG13	94.10	110.00	1
CG-CB-HB2	92.10	108.00	1
CG-CD1-HD11	124.90	109.00	1
HD11-CD1-HD12	94.09	110.00	1
CD2-CG-HG	123.91	108.00	1
CA-N-H	129.91	114.00	1
HD12-CD1-HD13	94.09	110.00	1
CA-CB-HB3	124.92	109.00	1
N-CA-HA	94.08	110.00	1
CA-CB-HB	124.92	109.00	1
CG-CD2-HD21	124.92	109.00	1
CD1-CG1-HG13	92.08	108.00	1
CG2-CB-HB	92.08	108.00	1
HD21-ND2-HD22	104.07	120.00	1
CG-CD-HD3	93.07	109.00	1
CA-CB-HB3	124.93	109.00	1
CG-CB-HB2	123.93	108.00	2
CB-CG-HG2	93.07	109.00	1
CD-CE-HE2	93.07	109.00	1
N-CD-HD2	124.93	109.00	1
HD11-CD1-HD13	125.93	110.00	1
CG-CB-HB2	123.94	108.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
HG11-CG1-HG12	94.06	110.00	1
CD-CE-HE3	124.94	109.00	1
CB-CA-HA	124.95	109.00	1
CA-CB-HB2	124.95	109.00	1
CB-CG-HG3	93.05	109.00	1
C-N-H	140.25	124.30	1
HG22-CG2-HG23	94.05	110.00	1
CB-CG2-HG23	124.95	109.00	1
HB2-CB-HB3	94.05	110.00	1
HB1-CB-HB2	94.04	110.00	1
CA-N-H	98.04	114.00	1
HD22-CD2-HD23	94.04	110.00	1
CE2-CZ-HZ	104.04	120.00	1
NE-CD-HD3	92.04	108.00	1
CG-CD2-HD23	124.96	109.00	1
C-N-H	108.33	124.30	2
CB-CG2-HG23	124.97	109.00	1
HD22-CD2-HD23	94.03	110.00	1
C-N-H	140.27	124.30	1
HZ1-NZ-HZ3	93.02	109.00	1
CA-CB-HB3	124.98	109.00	1
CG-CB-HB2	92.02	108.00	1
HG2-CG-HG3	94.02	110.00	1
HD22-CD2-HD23	94.01	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CG-CB-HB3	92.01	108.00	2
CE-NZ-HZ3	125.99	110.00	1
NZ-CE-HE3	92.01	108.00	1
HE21-NE2-HE22	104.01	120.00	1
C-CA-HA3	93.00	109.00	1
HZ1-NZ-HZ2	93.00	109.00	1
CG2-CB-HB	92.00	108.00	1
CA-N-H	98.00	114.00	1
HG12-CG1-HG13	94.00	110.00	1
HG2-CG-HG3	94.00	110.00	1
N-CA-HA	93.99	110.00	1
HE2-CE-HE3	126.01	110.00	1
C-CA-HA2	92.99	109.00	1
HH11-NH1-HH12	103.99	120.00	1
CG-CD1-HD12	125.01	109.00	1
HZ1-NZ-HZ3	125.01	109.00	1
HG2-CG-HG3	93.99	110.00	1
HG21-CG2-HG22	93.98	110.00	1
HD21-CD2-HD22	93.98	110.00	1
CA-CB-HB2	92.98	109.00	1
CG-CD-HD2	125.02	109.00	1
CB-CG-HG3	125.03	109.00	1
CG-CB-HB3	91.97	108.00	1
CG-CB-HB3	126.03	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
HG11-CG1-HG12	93.97	110.00	1
HB2-CB-HB3	93.97	110.00	1
CB-CG-HG2	125.03	109.00	1
C-N-H	108.27	124.30	1
CZ-NH1-HH11	136.04	120.00	1
CG-CB-HB2	124.04	108.00	1
CD-CG-HG3	91.95	108.00	1
CA-CB-HB3	92.95	109.00	1
CG-CB-HB3	124.05	108.00	1
HD21-CD2-HD22	93.95	110.00	1
HD2-CD-HD3	126.06	110.00	1
CZ-NH1-HH11	136.06	120.00	1
CG-CB-HB3	124.07	108.00	2
HG11-CG1-HG13	93.93	110.00	1
C-CA-HA	92.93	109.00	1
CE-NZ-HZ1	126.07	110.00	1
CB-CA-HA	125.07	109.00	1
HB2-CB-HB3	93.93	110.00	1
C-CA-HA	125.08	109.00	1
HB2-CB-HB3	93.92	110.00	2
CB-CA-HA	125.08	109.00	1
C-CA-HA3	92.92	109.00	1
NZ-CE-HE3	91.92	108.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
C-N-H	108.21	124.30	1
HB2-CB-HB3	93.91	110.00	1
CB-CG1-HG12	125.09	109.00	1
CA-CB-HB3	125.09	109.00	1
CG-CB-HB2	91.91	108.00	1
CA-N-H	130.09	114.00	1
CA-CB-HB	92.91	109.00	1
CD-CG-HG3	91.91	108.00	1
CB-CA-HA	125.09	109.00	1
HB2-CB-HB3	93.90	110.00	1
HD11-CD1-HD13	93.90	110.00	1
CB-CA-HA	125.10	109.00	1
CB-CA-HA	125.11	109.00	1
CG1-CD1-HD13	125.11	109.00	1
CB-CA-HA	92.89	109.00	1
HG21-CG2-HG23	93.89	110.00	1
C-N-H	108.19	124.30	1
CG-CD2-HD22	125.12	109.00	1
C-N-H	108.18	124.30	1
NE-CD-HD2	91.88	108.00	1
HB1-CB-HB3	93.88	110.00	1
CG-CB-HB2	124.12	108.00	1
HD21-CD2-HD22	93.87	110.00	1
CD2-CG-HG	124.13	108.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
HB2-CB-HB3	93.87	110.00	1
HE1-CE-HE2	93.86	110.00	1
HD12-CD1-HD13	93.86	110.00	1
CA-CB-HB3	125.14	109.00	1
C-N-H	140.44	124.30	1
HB2-CB-HB3	93.86	110.00	1
CD-CG-HG2	91.86	108.00	1
HD21-ND2-HD22	103.86	120.00	1
CA-N-H	130.15	114.00	1
CB-CG-HG2	92.86	109.00	1
OG-CB-HB3	92.85	109.00	1
CB-CG-HG2	125.15	109.00	1
CG-CB-HB2	124.15	108.00	1
HB2-CB-HB3	93.85	110.00	1
HZ1-NZ-HZ2	92.85	109.00	1
CG-CB-HB3	124.15	108.00	1
HB2-CB-HB3	93.84	110.00	1
HZ1-NZ-HZ2	92.84	109.00	1
HD11-CD1-HD12	93.84	110.00	1
ND1-CE1-HE1	109.64	125.80	1
CG-CD-HD2	125.16	109.00	1
C-CA-HA2	125.16	109.00	1
HA2-CA-HA3	92.84	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CA-CB-HB2	92.83	109.00	1
CD-CG-HG3	124.17	108.00	1
HG12-CG1-HG13	93.83	110.00	1
CD1-CG1-HG12	124.17	108.00	1
CB-CA-HA	125.17	109.00	1
CG-CB-HB3	91.83	108.00	1
HB1-CB-HB3	126.17	110.00	1
CA-N-H	97.83	114.00	1
OG-CB-HB3	125.18	109.00	1
CA-CB-HB2	125.19	109.00	1
HD2-CD-HD3	126.19	110.00	1
CG-CB-HB3	124.19	108.00	1
HD11-CD1-HD12	126.19	110.00	1
CD-CE-HE3	125.19	109.00	1
CD2-CG-HG	91.81	108.00	1
CE-NZ-HZ1	93.81	110.00	1
CA-N-H	130.19	114.00	1
CG-CD2-HD23	125.20	109.00	1
CG-CD2-HD21	92.80	109.00	1
HG21-CG2-HG22	92.80	109.00	1
CG-CD2-HD21	125.20	109.00	1
CB-CA-HA	125.20	109.00	1
C-N-H	108.09	124.30	1
CA-CB-HB2	92.79	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
HG21-CG2-HG23	93.79	110.00	1
HG2-CG-HG3	93.79	110.00	1
CB-CG2-HG23	125.21	109.00	1
CB-CG2-HG22	125.21	109.00	1
OG-CB-HB2	92.79	109.00	1
HD11-CD1-HD13	93.79	110.00	1
CA-N-H	97.79	114.00	1
CG-CB-HB2	124.21	108.00	1
HB2-CB-HB3	93.78	110.00	1
CB-CG-HG3	92.78	109.00	1
HD11-CD1-HD12	93.78	110.00	1
CZ-NE-HE	101.68	117.90	1
HZ1-NZ-HZ2	92.78	109.00	1
CA-CB-HB3	92.77	109.00	1
CB-CG-HG2	125.23	109.00	1
N-CA-HA2	93.77	110.00	1
HB2-CB-HB3	93.77	110.00	1
HG22-CG2-HG23	92.77	109.00	1
CD-CG-HG3	91.77	108.00	1
CA-N-H	130.23	114.00	1
CZ-NH1-HH11	136.24	120.00	1
HG21-CG2-HG22	93.76	110.00	1
CA-N-H	97.76	114.00	1
CD-CG-HG2	124.24	108.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CE-CD-HD2	124.24	108.00	1
C-CA-HA	92.76	109.00	1
HD12-CD1-HD13	93.76	110.00	1
CB-CG1-HG13	125.24	109.00	1
CG-CD2-HD23	92.76	109.00	1
CB-CG-HG2	125.25	109.00	1
CG-CD-HD3	92.75	109.00	1
CA-CB-HB3	125.25	109.00	1
CD1-CG1-HG13	91.75	108.00	1
CB-CA-HA	125.25	109.00	1
CB-CG1-HG12	125.25	109.00	1
CG-CB-HB3	91.74	108.00	1
HB2-CB-HB3	93.74	110.00	3
CA-N-H	130.26	114.00	1
C-N-H	108.04	124.30	1
CG-CD1-HD12	125.27	109.00	1
CZ-NE-HE	101.63	117.90	1
CD-CG-HG3	91.73	108.00	1
CA-CB-HB1	125.27	109.00	1
CG1-CD1-HD11	125.27	109.00	1
HG11-CG1-HG13	93.73	110.00	1
CA-N-H	130.28	114.00	1
C-N-H	108.03	124.30	1
CE1-ND1-HD1	109.07	125.35	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
HG12-CG1-HG13	93.72	110.00	1
HE21-NE2-HE22	103.71	120.00	1
HD2-CD-HD3	126.29	110.00	1
CA-CB-HB3	92.71	109.00	1
CG-CD2-HD2	142.69	126.40	1
CG-CD1-HD11	125.30	109.00	1
HD12-CD1-HD13	93.70	110.00	1
CG-ND2-HD22	136.30	120.00	1
N-CA-HA2	93.70	110.00	1
CB-CG2-HG21	125.30	109.00	1
HG11-CG1-HG13	126.30	110.00	1
CB-CG2-HG22	125.30	109.00	1
HD11-CD1-HD12	126.31	110.00	1
C-N-H	140.61	124.30	1
HD21-CD2-HD23	93.69	110.00	1
CB-CA-HA	92.69	109.00	1
CB-CG2-HG22	125.32	109.00	1
CG-CD-HD2	92.68	109.00	1
CZ-NE-HE	101.58	117.90	1
CA-CB-HB2	92.68	109.00	1
CG-CB-HB3	91.68	108.00	1
CZ-CE1-HE1	103.68	120.00	1
HB2-CB-HB3	93.67	110.00	1
CG1-CD1-HD13	125.33	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
HD11-CD1-HD12	93.67	110.00	1
CA-N-H	97.67	114.00	1
N-CA-HA2	93.67	110.00	1
CB-CA-HA	125.33	109.00	2
CG-CB-HB2	124.34	108.00	1
CA-CB-HB2	125.34	109.00	1
CD-CG-HG2	91.66	108.00	1
CG-CB-HB3	91.66	108.00	1
N-CD-HD2	125.34	109.00	1
HG21-CG2-HG22	93.65	110.00	1
CD-CG-HG3	91.65	108.00	1
HD22-CD2-HD23	93.65	110.00	1
CA-CB-HB3	92.64	109.00	1
CA-CB-HB	125.36	109.00	1
CG-ND2-HD21	136.37	120.00	1
CG-CB-HB3	124.37	108.00	1
CD-NE2-HE22	136.38	120.00	1
CZ-CE2-HE2	103.82	120.20	1
CB-CA-HA	125.38	109.00	1
CB-CG2-HG23	125.38	109.00	1
CG-CB-HB2	124.38	108.00	1
CG-CD-HD3	125.39	109.00	1
N-CA-HA	93.61	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CD-CG-HG3	91.60	108.00	1
CG-CD2-HD21	92.60	109.00	1
CD-NE2-HE21	136.40	120.00	1
HD11-CD1-HD13	93.59	110.00	1
HB2-CB-HB3	93.59	110.00	1
C-CA-HA	92.59	109.00	1
OG-CB-HB3	92.58	109.00	1
HZ1-NZ-HZ2	92.58	109.00	1
HG11-CG1-HG12	93.58	110.00	2
HB2-CB-HB3	93.58	110.00	1
CD1-CG1-HG13	124.43	108.00	1
HD11-CD1-HD13	93.57	110.00	1
CG-CD-HD2	125.43	109.00	1
CE-NZ-HZ2	126.43	110.00	1
CD1-CG1-HG13	124.44	108.00	1
CB-CG1-HG11	92.56	109.00	1
HB2-CB-HB3	93.56	110.00	1
C-N-H	140.74	124.30	1
C-N-H	107.86	124.30	1
HB2-CB-HB3	93.55	110.00	1
N-CD-HD3	125.45	109.00	1
CG-CD1-HD13	125.45	109.00	1
CA-CB-HB3	125.45	109.00	1
CB-CG1-HG13	125.45	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
HG12-CG1-HG13	93.54	110.00	1
CB-CG-HG2	125.46	109.00	1
SD-CE-HE1	125.46	109.00	1
HH11-NH1-HH12	103.54	120.00	1
CA-CB-HB3	125.46	109.00	1
CG-CB-HB3	91.54	108.00	1
HH21-NH2-HH22	103.54	120.00	1
HB2-CB-HB3	93.54	110.00	1
CB-CG2-HG22	125.47	109.00	1
CG-CB-HB2	124.47	108.00	1
CA-CB-HB3	125.47	109.00	1
CA-N-H	130.47	114.00	1
CG-CB-HB2	91.53	108.00	1
CZ-NH2-HH22	103.53	120.00	1
CA-N-H	130.48	114.00	1
CG-CB-HB3	91.51	108.00	1
HB2-CB-HB3	93.51	110.00	1
NE2-CD2-HD2	142.89	126.40	1
CD-CG-HG2	124.49	108.00	1
CZ-NH1-HH12	103.51	120.00	1
HG22-CG2-HG23	92.51	109.00	1
HB2-CB-HB3	93.50	110.00	1
HB2-CB-HB3	126.50	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
C-N-H	140.80	124.30	1
HG2-CG-HG3	126.50	110.00	1
CG-CB-HB2	91.49	108.00	1
CE-NZ-HZ1	126.51	110.00	1
N-CA-HA2	93.49	110.00	1
CG-CD-HD2	92.49	109.00	1
SD-CE-HE3	92.48	109.00	1
HG11-CG1-HG13	93.48	110.00	1
CG1-CD1-HD12	125.52	109.00	2
CE3-CZ3-HZ3	102.93	119.45	1
HB1-CB-HB3	93.48	110.00	1
OG-CB-HB2	92.48	109.00	1
CG-CD-HD3	125.53	109.00	1
CA-N-H	130.53	114.00	1
N-CD-HD3	92.47	109.00	1
CB-CG2-HG21	125.53	109.00	1
CB-CG1-HG13	125.53	109.00	1
HG12-CG1-HG13	93.46	110.00	1
HG21-CG2-HG23	93.46	110.00	1
CB-CG-HG3	125.55	109.00	1
CB-CG-HG2	125.55	109.00	1
HG2-CG-HG3	93.45	110.00	1
HB2-CB-HB3	93.45	110.00	1
C-CA-HA	125.55	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CG-CB-HB3	91.45	108.00	1
CB-CG2-HG22	126.55	110.00	1
C-N-H	107.75	124.30	1
HG21-CG2-HG22	92.44	109.00	1
CG-CB-HB3	124.56	108.00	1
CA-CB-HB2	125.56	109.00	1
HD2-CD-HD3	93.44	110.00	1
CG-CB-HB2	91.44	108.00	1
HG21-CG2-HG22	93.44	110.00	1
CD-CG-HG3	91.44	108.00	1
CA-N-H	130.56	114.00	1
HB1-CB-HB3	93.43	110.00	1
HB2-CB-HB3	93.43	110.00	1
CB-CG-HG	125.57	109.00	1
CG-ND2-HD21	103.43	120.00	1
N-CA-HA	126.57	110.00	1
CE-NZ-HZ1	93.43	110.00	1
CG-CD-HD3	125.57	109.00	1
CA-CB-HB3	125.58	109.00	2
CB-CA-HA	125.58	109.00	1
CB-CA-HA	92.42	109.00	1
HB2-CB-HB3	93.42	110.00	1
CA-CB-HB2	125.58	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
HG2-CG-HG3	93.42	110.00	2
HB1-CB-HB2	126.58	110.00	1
CA-N-H	97.42	114.00	1
CA-CB-HB1	125.58	109.00	1
CG-CB-HB3	124.59	108.00	1
HD11-CD1-HD13	93.41	110.00	1
SD-CG-HG3	91.41	108.00	1
HG21-CG2-HG22	93.41	110.00	1
CG-CD2-HD21	92.41	109.00	1
HB2-CB-HB3	93.41	110.00	1
CA-CB-HB2	125.59	109.00	1
CD-CG-HG3	93.40	110.00	1
CA-N-H	130.60	114.00	2
HG11-CG1-HG13	93.40	110.00	1
HA2-CA-HA3	92.40	109.00	1
CD1-CG1-HG13	91.40	108.00	1
C-CA-HA2	125.60	109.00	1
C-CA-HA3	92.40	109.00	1
C-N-H	107.70	124.30	1
HE2-CE-HE3	93.39	110.00	1
HB2-CB-HB3	93.39	110.00	1
HD22-CD2-HD23	93.39	110.00	1
HB1-CB-HB3	93.39	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CG1-CD1-HD13	125.61	109.00	1
CG-CB-HB2	91.39	108.00	1
C-CA-HA	125.61	109.00	1
CG-CD-HD2	125.62	109.00	1
CD1-CG-HG	91.38	108.00	1
HG12-CG1-HG13	93.37	110.00	1
C-N-H	107.67	124.30	1
CE1-CZ-HZ	103.37	120.00	1
C-N-H	140.93	124.30	1
CA-CB-HB3	125.63	109.00	1
CG-CD1-HD11	125.63	109.00	1
CB-CG-HG3	125.64	109.00	2
CG-CB-HB3	124.64	108.00	1
HB2-CB-HB3	93.36	110.00	1
NE2-CD2-HD2	109.76	126.40	1
CG-CB-HB3	91.35	108.00	1
CG-CD1-HD11	125.65	109.00	1
NZ-CE-HE3	124.65	108.00	1
CG-CB-HB3	126.65	110.00	1
CB-CG-HG2	92.34	109.00	1
HZ2-NZ-HZ3	92.34	109.00	1
CG-CB-HB2	124.66	108.00	1
CD-CG-HG2	91.34	108.00	1
CB-CG-HG3	125.67	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CA-CB-HB2	125.67	109.00	2
CG-CB-HB2	124.67	108.00	1
C-CA-HA	92.33	109.00	1
HZ2-NZ-HZ3	92.33	109.00	1
HG22-CG2-HG23	126.67	110.00	1
HG22-CG2-HG23	92.32	109.00	1
HG21-CG2-HG23	93.32	110.00	1
HD21-CD2-HD23	93.32	110.00	1
CG-CB-HB3	124.68	108.00	1
HB2-CB-HB3	93.32	110.00	1
CA-CB-HB3	125.68	109.00	1
CA-N-H	130.69	114.00	1
HB1-CB-HB3	126.69	110.00	1
CA-CB-HB3	125.69	109.00	1
CB-CG-HG3	125.70	109.00	1
CB-CG2-HG22	125.70	109.00	1
HB2-CB-HB3	93.30	110.00	1
HD11-CD1-HD12	93.30	110.00	1
HG12-CG1-HG13	93.30	110.00	1
CA-N-H	130.70	114.00	1
CA-CB-HB2	125.70	109.00	1
HB2-CB-HB3	93.29	110.00	1
CG-CD1-HD13	92.29	109.00	1
HD21-ND2-HD22	103.29	120.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CB-CG2-HG21	126.71	110.00	1
C-N-H	107.59	124.30	1
C-N-H	107.58	124.30	1
CA-CB-HB3	92.28	109.00	1
CD-NE2-HE21	103.28	120.00	1
HB2-CB-HB3	93.28	110.00	1
C-CA-HA3	92.28	109.00	1
NZ-CE-HE3	91.28	108.00	1
CA-N-H	130.72	114.00	1
HG11-CG1-HG12	93.27	110.00	1
HB2-CB-HB3	93.27	110.00	2
CB-CA-HA	125.73	109.00	1
CA-N-H	97.27	114.00	1
ND1-CE1-HE1	109.06	125.80	1
HE2-CE-HE3	93.26	110.00	1
CG1-CD1-HD11	125.74	109.00	1
CG-ND2-HD22	136.74	120.00	1
CG-CD-HD2	92.26	109.00	1
CZ-CE2-HE2	103.46	120.20	1
CB-CG2-HG22	125.75	109.00	1
CG-CB-HB2	124.75	108.00	1
HD2-CD-HD3	93.25	110.00	1
HE2-CE-HE3	93.25	110.00	1
CA-CB-HB3	92.25	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CA-CB-HB3	125.75	109.00	1
HB2-CB-HB3	93.25	110.00	1
CG-CB-HB3	124.75	108.00	1
HG21-CG2-HG22	93.24	110.00	1
CD-CG-HG2	91.24	108.00	1
HG21-CG2-HG23	93.24	110.00	1
CG-CB-HB3	91.24	108.00	1
CD-CE-HE2	92.24	109.00	1
HG2-CG-HG3	93.24	110.00	1
N-CA-HA	126.76	110.00	1
CB-CG-HG3	92.23	109.00	1
HG22-CG2-HG23	93.23	110.00	1
CG1-CD1-HD11	125.77	109.00	1
HB2-CB-HB3	93.23	110.00	1
HD11-CD1-HD13	93.23	110.00	1
CA-CB-HB2	125.78	109.00	1
C-N-H	107.52	124.30	1
HB2-CB-HB3	93.22	110.00	1
N-CA-HA	126.79	110.00	1
CB-CG2-HG23	125.79	109.00	1
C-CA-HA	92.21	109.00	1
HG11-CG1-HG12	93.21	110.00	1
CB-CG2-HG23	93.21	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CA-CB-HB3	125.79	109.00	1
CA-N-H	130.79	114.00	1
CA-CB-HB2	125.79	109.00	1
N-CA-HA	93.20	110.00	1
HB1-CB-HB3	93.20	110.00	1
CZ3-CE3-HE3	103.90	120.70	1
CB-CG2-HG23	125.80	109.00	1
HG21-CG2-HG22	93.20	110.00	1
CG-CD1-HD11	125.80	109.00	1
CZ-NH1-HH12	103.20	120.00	1
CA-N-H	97.19	114.00	1
CZ3-CE3-HE3	103.89	120.70	1
CG-CB-HB2	93.19	110.00	1
HB2-CB-HB3	93.19	110.00	1
C-N-H	107.49	124.30	1
CD-CG-HG2	91.18	108.00	1
C-CA-HA	125.82	109.00	1
CA-CB-HB3	125.82	109.00	1
CZ-NH2-HH22	136.83	120.00	1
C-N-H	107.47	124.30	3
HZ1-NZ-HZ3	125.83	109.00	1
CB-CG-HG3	125.83	109.00	1
CA-CB-HB2	92.17	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
HG11-CG1-HG12	93.16	110.00	1
C-N-H	107.46	124.30	2
HB2-CB-HB3	93.16	110.00	1
SD-CE-HE3	92.16	109.00	1
HG2-CG-HG3	93.16	110.00	1
HG2-CG-HG3	93.15	110.00	1
HG11-CG1-HG13	93.15	110.00	1
N-CA-HA	126.85	110.00	1
HB2-CB-HB3	93.15	110.00	2
CB-CG1-HG13	125.86	109.00	1
CA-N-H	130.85	114.00	1
CA-CB-HB2	125.86	109.00	1
CB-CG-HG3	125.86	109.00	1
N-CA-HA2	93.14	110.00	1
HE1-CE-HE2	126.86	110.00	1
HD2-CD-HD3	126.86	110.00	1
C-N-H	107.43	124.30	2
HD11-CD1-HD12	93.13	110.00	1
CG-CD2-HD22	92.13	109.00	1
CZ-NH1-HH12	136.87	120.00	1
CG-CD2-HD2	136.52	119.65	1
C-N-H	141.18	124.30	1
CB-CG1-HG13	125.88	109.00	1
CG-CB-HB3	124.88	108.00	2

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CD-CG-HG2	124.88	108.00	1
HD12-CD1-HD13	126.88	110.00	1
HG2-CG-HG3	93.12	110.00	1
C-N-H	141.19	124.30	1
C-CA-HA	92.11	109.00	1
HG21-CG2-HG22	93.11	110.00	1
CB-CG-HG2	125.89	109.00	1
HZ1-NZ-HZ3	125.89	109.00	1
CG-CB-HB3	124.89	108.00	1
CA-CB-HB	125.90	109.00	1
N-CA-HA2	93.10	110.00	1
HB2-CB-HB3	93.10	110.00	1
CD1-CE1-HE1	103.10	120.00	1
CG-CD1-HD11	125.90	109.00	1
CB-CG1-HG12	125.90	109.00	1
CA-N-H	130.90	114.00	1
CG-CD1-HD1	136.31	119.40	1
CG-CD1-HD13	125.91	109.00	1
HB1-CB-HB2	93.09	110.00	1
N-CD-HD2	92.09	109.00	1
N-CA-HA3	126.91	110.00	1
HD21-ND2-HD22	103.09	120.00	1
HG2-CG-HG3	93.08	110.00	1
CA-CB-HB3	125.92	109.00	2

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CG-CD-HD2	92.08	109.00	1
CD-CE-HE2	125.93	109.00	1
HB2-CB-HB3	93.07	110.00	2
HG2-CG-HG3	93.07	110.00	1
CE1-ND1-HD1	108.42	125.35	1
CE-NZ-HZ1	126.93	110.00	1
CG-CB-HB3	124.93	108.00	1
HD2-CD-HD3	126.93	110.00	1
HB2-CB-HB3	93.06	110.00	1
HG12-CG1-HG13	93.06	110.00	1
CB-CG-HG3	92.06	109.00	1
HG21-CG2-HG23	93.06	110.00	1
CB-CG1-HG12	125.94	109.00	1
CD1-CE1-HE1	137.14	120.20	1
CG-CB-HB3	91.05	108.00	2
HB2-CB-HB3	93.05	110.00	1
NZ-CE-HE3	91.05	108.00	1
HG21-CG2-HG22	93.05	110.00	1
OG-CB-HB2	125.95	109.00	1
HG21-CG2-HG22	126.95	110.00	1
CB-CG1-HG12	125.96	109.00	1
CB-CG-HG3	125.96	109.00	1
HG21-CG2-HG23	93.04	110.00	1
HD2-CD-HD3	126.96	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
C-N-H	107.34	124.30	1
CD-CE-HE3	125.96	109.00	1
CB-CG2-HG21	92.04	109.00	1
SD-CG-HG3	91.04	108.00	1
HG21-CG2-HG22	93.03	110.00	1
HG21-CG2-HG23	93.03	110.00	1
CD-NE2-HE22	136.97	120.00	1
CB-CG1-HG12	92.03	109.00	1
HG22-CG2-HG23	93.03	110.00	1
CG-CD1-HD11	125.97	109.00	1
HB2-CB-HB3	93.03	110.00	1
HG12-CG1-HG13	93.02	110.00	1
CE-NZ-HZ2	126.98	110.00	1
CA-CB-HB3	92.02	109.00	1
CA-CB-HB2	125.98	109.00	1
HD21-CD2-HD22	93.01	110.00	1
CD-CE-HE2	125.99	109.00	1
HE2-CE-HE3	93.00	110.00	1
HH11-NH1-HH12	103.00	120.00	1
CG-CB-HB3	125.00	108.00	1
CA-N-H	97.00	114.00	1
CG-CD1-HD12	126.01	109.00	1
CB-CG-HG2	126.01	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CG-CB-HB3	125.01	108.00	1
HG2-CG-HG3	92.99	110.00	1
HD2-CD-HD3	127.01	110.00	1
CG-CB-HB2	90.99	108.00	1
C-N-H	107.28	124.30	1
N-CA-HA	92.98	110.00	1
CA-CB-HB2	126.02	109.00	1
HB2-CB-HB3	92.98	110.00	1
CG-CB-HB3	90.98	108.00	1
CB-CG2-HG23	127.02	110.00	1
HG11-CG1-HG13	92.98	110.00	1
CD-CG-HG2	90.98	108.00	1
CA-CB-HB2	126.03	109.00	2
HD21-ND2-HD22	102.97	120.00	1
CB-CA-HA	126.03	109.00	1
HH21-NH2-HH22	102.97	120.00	1
HD12-CD1-HD13	92.97	110.00	1
CB-CG1-HG12	126.04	109.00	1
HG22-CG2-HG23	92.96	110.00	1
HD21-CD2-HD23	92.96	110.00	1
OG-CB-HB2	91.96	109.00	1
HD21-CD2-HD22	92.96	110.00	1
NE2-CD2-HD2	109.35	126.40	1
HB1-CB-HB2	127.05	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
HB2-CB-HB3	92.95	110.00	1
HD11-CD1-HD13	92.95	110.00	1
HG22-CG2-HG23	127.05	110.00	1
HD11-CD1-HD12	92.94	110.00	1
CA-CB-HB1	126.06	109.00	1
CE2-CD2-HD2	102.34	119.40	1
CG-CD2-HD23	126.06	109.00	1
CA-CB-HB3	126.06	109.00	1
N-CD-HD3	126.06	109.00	1
CB-CA-HA	126.06	109.00	1
CD-NE2-HE21	137.07	120.00	1
CA-CB-HB2	126.07	109.00	1
CA-CB-HB3	126.07	109.00	1
CG-CB-HB3	125.07	108.00	1
HB2-CB-HB3	92.93	110.00	1
CB-CA-HA	126.07	109.00	1
HD11-CD1-HD13	92.92	110.00	1
CB-CG-HG2	126.08	109.00	1
HB2-CB-HB3	92.92	110.00	1
CZ-NE-HE	100.81	117.90	1
CG-CB-HB3	125.09	108.00	1
HD12-CD1-HD13	92.91	110.00	1
CA-N-H	131.09	114.00	1
CG2-CB-HB	90.91	108.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CG-CD-HD3	91.91	109.00	1
HG22-CG2-HG23	91.91	109.00	1
HB2-CB-HB3	92.91	110.00	1
CA-CB-HB3	91.90	109.00	1
CZ-NH1-HH12	137.10	120.00	1
CG1-CD1-HD13	126.10	109.00	1
HB2-CB-HB3	92.89	110.00	1
CG-CB-HB2	125.11	108.00	1
HD12-CD1-HD13	92.89	110.00	1
CG-CB-HB3	125.11	108.00	1
HG21-CG2-HG23	92.89	110.00	1
CG-CD2-HD22	126.11	109.00	1
C-CA-HA2	91.89	109.00	1
CB-CG-HG3	126.11	109.00	1
C-N-H	107.17	124.30	1
HD11-CD1-HD12	92.88	110.00	1
HG2-CG-HG3	92.87	110.00	1
CG-CD1-HD11	126.13	109.00	1
CA-N-H	96.87	114.00	1
CD-CE-HE3	126.14	109.00	1
C-N-H	107.16	124.30	1
N-CA-HA3	127.14	110.00	1
HE21-NE2-HE22	102.86	120.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
NZ-CE-HE3	90.86	108.00	1
CA-N-H	131.14	114.00	1
HZ1-NZ-HZ3	91.86	109.00	1
CB-CG-HG2	91.86	109.00	1
CG-CB-HB2	125.14	108.00	1
CA-CB-HB2	126.15	109.00	1
C-N-H	141.45	124.30	1
CG-CD-HD2	91.85	109.00	1
C-CA-HA	126.15	109.00	1
CA-N-H	131.16	114.00	2
CA-CB-HB	126.16	109.00	1
CB-CG-HG2	126.17	109.00	1
CB-CA-HA	126.17	109.00	1
HG11-CG1-HG13	127.17	110.00	1
HG21-CG2-HG22	92.83	110.00	2
CA-CB-HB2	126.17	109.00	1
HB2-CB-HB3	92.83	110.00	1
N-CD-HD2	126.18	109.00	2
HZ2-NZ-HZ3	91.82	109.00	1
HZ1-NZ-HZ2	91.82	109.00	1
NZ-CE-HE3	90.82	108.00	1
CG1-CD1-HD12	126.18	109.00	1
CE2-CD2-HD2	102.47	119.65	1
CG-CB-HB3	90.82	108.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
C-N-H	107.12	124.30	1
HG2-CG-HG3	92.82	110.00	1
CA-CB-HB3	126.18	109.00	1
HA2-CA-HA3	91.81	109.00	1
C-CA-HA	91.81	109.00	1
CA-CB-HB3	91.81	109.00	1
C-N-H	107.10	124.30	1
CG-CB-HB2	127.21	110.00	1
HG12-CG1-HG13	92.78	110.00	1
HG22-CG2-HG23	92.78	110.00	1
CA-CB-HB3	126.22	109.00	1
CA-CB-HB2	91.78	109.00	1
HG21-CG2-HG22	92.78	110.00	1
HB1-CB-HB3	127.23	110.00	1
HB2-CB-HB3	127.23	110.00	1
HD11-CD1-HD12	127.23	110.00	1
CB-CG-HG3	126.23	109.00	1
HZ2-NZ-HZ3	91.76	109.00	1
CB-CG-HG3	126.24	109.00	1
CA-CB-HB2	91.76	109.00	1
CB-CG2-HG22	127.24	110.00	1
CA-N-H	131.25	114.00	1
CE-NZ-HZ2	127.25	110.00	1
CD-NE2-HE22	102.75	120.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CD-CG-HG2	90.75	108.00	1
HG12-CG1-HG13	92.75	110.00	1
CB-CG2-HG23	127.25	110.00	1
CG-CB-HB3	90.75	108.00	1
CB-CG1-HG11	126.26	109.00	1
CB-CG2-HG21	127.26	110.00	1
N-CD-HD3	126.26	109.00	1
C-CA-HA2	91.74	109.00	1
HH11-NH1-HH12	102.73	120.00	2
CA-CB-HB2	126.27	109.00	1
CG-CB-HB3	90.73	108.00	1
CD-CG-HG2	90.73	108.00	1
CG-CD2-HD23	91.73	109.00	1
C-CA-HA	91.73	109.00	1
HD11-CD1-HD12	92.73	110.00	1
HA2-CA-HA3	91.73	109.00	1
CA-CB-HB2	91.72	109.00	1
HG22-CG2-HG23	92.72	110.00	1
CD2-CE2-HE2	137.48	120.20	1
HZ1-NZ-HZ3	91.72	109.00	1
CD-NE2-HE22	137.28	120.00	1
HB2-CB-HB3	92.72	110.00	1
C-N-H	107.02	124.30	1
HB2-CB-HB3	92.71	110.00	2

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
HG21-CG2-HG22	127.29	110.00	1
CB-CG-HG2	91.71	109.00	1
CD-CG-HG3	127.29	110.00	1
CG-CD-HD2	126.30	109.00	2
CD2-CE2-HE2	102.70	120.00	1
CA-CB-HB3	91.70	109.00	1
CA-CB-HB2	126.31	109.00	1
CB-CG-HG2	126.31	109.00	1
CB-CG-HG2	91.69	109.00	1
CB-CG2-HG21	126.31	109.00	1
HG22-CG2-HG23	127.31	110.00	1
HG12-CG1-HG13	92.69	110.00	1
HD22-CD2-HD23	92.69	110.00	1
HG2-CG-HG3	92.69	110.00	1
HH11-NH1-HH12	102.68	120.00	1
HB2-CB-HB3	92.68	110.00	1
CG-CD1-HD11	126.32	109.00	1
CA-CB-HB3	126.32	109.00	1
HG2-CG-HG3	92.67	110.00	1
CD-NE2-HE21	137.33	120.00	1
CG-CD2-HD23	126.33	109.00	1
CA-N-H	131.33	114.00	1
N-CA-HA	92.67	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CD-CG-HG3	90.67	108.00	1
CG-CB-HB3	125.34	108.00	1
HD22-CD2-HD23	92.66	110.00	1
CE-CD-HD2	90.66	108.00	1
CA-CB-HB2	91.66	109.00	1
CD-CG-HG3	127.34	110.00	1
CA-CB-HB3	126.35	109.00	1
HB2-CB-HB3	127.35	110.00	1
HD21-CD2-HD22	92.65	110.00	1
HG21-CG2-HG23	92.65	110.00	1
HG2-CG-HG3	92.65	110.00	1
HD22-CD2-HD23	92.65	110.00	1
HD21-ND2-HD22	102.64	120.00	1
HZ1-NZ-HZ3	91.64	109.00	1
HG22-CG2-HG23	92.64	110.00	1
CA-N-H	96.64	114.00	1
HE1-CE-HE3	127.36	110.00	1
OG1-CB-HB	91.64	109.00	1
HE21-NE2-HE22	137.37	120.00	1
HD11-CD1-HD12	127.37	110.00	1
CB-CG-HG3	91.63	109.00	1
CB-CG1-HG13	126.37	109.00	1
CD-CG-HG3	90.63	108.00	1
N-CA-HA3	127.37	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
HB2-CB-HB3	92.63	110.00	1
HB1-CB-HB2	92.63	110.00	1
HZ1-NZ-HZ3	126.38	109.00	1
C-CA-HA	91.62	109.00	1
HG21-CG2-HG23	92.62	110.00	1
HG12-CG1-HG13	92.62	110.00	1
C-N-H	106.92	124.30	1
HD11-CD1-HD12	127.39	110.00	1
HG2-CG-HG3	92.61	110.00	1
HD12-CD1-HD13	92.61	110.00	1
HD11-CD1-HD13	92.61	110.00	1
HG21-CG2-HG22	92.60	110.00	1
C-CA-HA	91.60	109.00	1
CG-CB-HB3	90.60	108.00	2
CD-NE2-HE21	137.40	120.00	1
CA-CB-HB2	91.59	109.00	1
HG21-CG2-HG22	92.59	110.00	1
C-N-H	106.89	124.30	1
OG-CB-HB3	91.59	109.00	1
CA-N-H	96.59	114.00	1
CB-CG-HG2	91.59	109.00	1
N-CA-HA	92.59	110.00	1
CG-CB-HB2	90.58	108.00	1
CA-CB-HB3	126.42	109.00	2

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CB-CG-HG3	91.58	109.00	1
HD2-CD-HD3	92.58	110.00	1
HG12-CG1-HG13	127.42	110.00	1
HG22-CG2-HG23	92.58	110.00	1
CB-CG2-HG21	126.43	109.00	1
CA-CB-HB3	91.57	109.00	1
HH11-NH1-HH12	102.57	120.00	1
HG11-CG1-HG12	92.57	110.00	1
HD21-CD2-HD22	92.57	110.00	1
HG12-CG1-HG13	92.57	110.00	1
SD-CE-HE2	91.57	109.00	1
C-N-H	106.87	124.30	1
CA-N-H	131.43	114.00	1
CB-CA-HA	126.43	109.00	1
HG11-CG1-HG13	92.56	110.00	1
HD22-CD2-HD23	92.56	110.00	1
HG22-CG2-HG23	92.56	110.00	1
C-N-H	106.86	124.30	1
HB2-CB-HB3	92.56	110.00	1
CG-CB-HB3	90.56	108.00	1
CA-CB-HB2	126.44	109.00	1
CA-CB-HB3	126.44	109.00	1
CB-CG-HG3	91.56	109.00	1
C-CA-HA	91.55	109.00	2

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
SD-CE-HE2	91.55	109.00	1
N-CA-HA	92.55	110.00	1
HA2-CA-HA3	91.55	109.00	1
HG21-CG2-HG23	92.55	110.00	1
HG12-CG1-HG13	92.54	110.00	1
CB-CG-HG2	91.54	109.00	1
CG-ND2-HD22	137.46	120.00	1
HG2-CG-HG3	92.54	110.00	1
CB-CG1-HG12	126.46	109.00	1
N-CA-HA	92.53	110.00	1
SD-CE-HE1	126.47	109.00	1
CE-NZ-HZ2	127.47	110.00	1
CD1-CG1-HG13	90.53	108.00	1
C-N-H	106.83	124.30	1
CD-CG-HG3	127.47	110.00	1
HG2-CG-HG3	92.52	110.00	1
CG-CD2-HD23	126.48	109.00	1
C-CA-HA	126.48	109.00	1
HB2-CB-HB3	92.52	110.00	1
HG21-CG2-HG23	91.51	109.00	1
CA-CB-HB3	126.49	109.00	1
N-CD-HD2	126.49	109.00	1
CA-CB-HB3	126.50	109.00	2
CB-CG-HG	126.50	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
HG21-CG2-HG22	92.50	110.00	2
HG2-CG-HG3	92.49	110.00	1
SD-CE-HE2	91.49	109.00	1
CG1-CD1-HD13	126.51	109.00	1
HG12-CG1-HG13	92.48	110.00	1
HD22-CD2-HD23	92.48	110.00	1
CB-CG-HG2	126.52	109.00	1
HG22-CG2-HG23	92.47	110.00	1
HD11-CD1-HD12	92.47	110.00	1
HG2-CG-HG3	92.47	110.00	1
HB2-CB-HB3	92.47	110.00	1
CA-N-H	131.53	114.00	1
CB-CG1-HG11	126.53	109.00	1
CB-CG2-HG22	126.54	109.00	1
CD1-CG1-HG12	90.46	108.00	1
HB2-CB-HB3	127.54	110.00	1
CB-CG-HG3	126.54	109.00	1
C-CA-HA3	126.55	109.00	1
CD1-CG1-HG13	90.45	108.00	1
CD-CG-HG2	125.55	108.00	1
HB2-CB-HB3	92.45	110.00	1
CG-CD-HD2	126.55	109.00	1
HZ1-NZ-HZ3	91.45	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CA-CB-HB3	91.45	109.00	1
CB-CG-HG3	91.45	109.00	1
CB-CG-HG2	126.55	109.00	1
CE-NZ-HZ1	127.56	110.00	1
NE2-CE1-HE1	143.36	125.80	1
CA-CB-HB2	126.56	109.00	1
CG-CB-HB3	90.44	108.00	1
CA-CB-HB3	126.57	109.00	2
CE2-CD2-HD2	102.08	119.65	1
C-CA-HA	126.58	109.00	1
CG1-CD1-HD11	126.58	109.00	1
C-CA-HA	91.41	109.00	1
CE-NZ-HZ2	127.59	110.00	1
CA-N-H	96.41	114.00	1
CG-CD2-HD22	126.59	109.00	1
C-CA-HA	126.59	109.00	1
HG2-CG-HG3	92.41	110.00	1
HB2-CB-HB3	92.40	110.00	1
HE2-CE-HE3	92.40	110.00	1
CB-CG1-HG12	126.60	109.00	1
HD21-CD2-HD23	92.39	110.00	1
CG-ND2-HD21	137.61	120.00	1
CE-NZ-HZ3	127.61	110.00	1
CB-CA-HA	126.61	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CG-CD1-HD11	126.61	109.00	1
HG2-CG-HG3	92.39	110.00	2
HD12-CD1-HD13	92.39	110.00	1
HH21-NH2-HH22	137.62	120.00	1
CG-CB-HB2	90.38	108.00	1
CG-CB-HB3	90.38	108.00	1
CB-CG-HG2	126.62	109.00	1
HH21-NH2-HH22	102.38	120.00	1
CD-CE-HE3	126.63	109.00	1
CA-CB-HB2	91.37	109.00	1
CA-CB-HB2	126.63	109.00	2
CA-CB-HB3	126.63	109.00	1
HB2-CB-HB3	92.36	110.00	3
HA2-CA-HA3	91.36	109.00	1
C-N-H	106.66	124.30	1
HG2-CG-HG3	92.36	110.00	1
CB-CA-HA	126.64	109.00	1
HG21-CG2-HG23	92.36	110.00	1
NZ-CE-HE2	90.35	108.00	1
HB2-CB-HB3	92.35	110.00	2
HD21-CD2-HD23	92.35	110.00	1
HG22-CG2-HG23	92.35	110.00	1
HE21-NE2-HE22	102.35	120.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
HG11-CG1-HG13	92.35	110.00	1
CD-NE2-HE21	137.66	120.00	1
CB-CG2-HG22	127.66	110.00	1
C-N-H	106.64	124.30	1
HA2-CA-HA3	91.34	109.00	1
CD-CG-HG3	90.34	108.00	1
HD12-CD1-HD13	92.33	110.00	1
HD21-CD2-HD22	92.33	110.00	1
N-CA-HA	127.67	110.00	1
CB-SG-HG	138.46	109.00	1
HE1-CE-HE3	127.67	110.00	1
HD21-ND2-HD22	102.32	120.00	1
CD-CG-HG3	90.32	108.00	1
CD-CE-HE3	126.68	109.00	1
HG2-CG-HG3	92.32	110.00	1
HG21-CG2-HG22	92.32	110.00	1
C-N-H	106.62	124.30	1
CD-CG-HG2	90.32	108.00	1
HD2-CD-HD3	92.31	110.00	1
HZ1-NZ-HZ2	91.31	109.00	1
CG-CD1-HD1	137.34	119.65	1
N-CA-HA3	92.31	110.00	1
C-N-H	106.61	124.30	1
HB2-CB-HB3	92.31	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
HG21-CG2-HG23	92.31	110.00	1
CB-CG-HG2	126.69	109.00	1
HG22-CG2-HG23	127.69	110.00	1
CE-CD-HD2	90.31	108.00	1
CA-N-H	131.69	114.00	1
HG2-CG-HG3	92.30	110.00	1
CA-N-H	131.70	114.00	1
HB2-CB-HB3	92.30	110.00	1
CB-CG-HG3	126.70	109.00	1
N-CA-HA	92.30	110.00	1
CG1-CD1-HD11	126.70	109.00	1
C-N-H	106.59	124.30	1
N-CD-HD3	126.71	109.00	1
NZ-CE-HE3	90.29	108.00	1
HD12-CD1-HD13	92.29	110.00	1
CB-CG-HG2	126.71	109.00	1
CB-CG-HG2	126.72	109.00	1
HE2-CE-HE3	92.28	110.00	1
CA-CB-HB	126.72	109.00	1
CD-CG-HG3	90.28	108.00	1
CA-N-H	131.72	114.00	1
CG-CD-HD2	91.28	109.00	1
NZ-CE-HE3	90.28	108.00	1
HB2-CB-HB3	92.28	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
HH11-NH1-HH12	102.27	120.00	1
C-N-H	106.57	124.30	1
HG2-CG-HG3	127.74	110.00	1
HB2-CB-HB3	92.26	110.00	2
CB-CG-HG2	91.26	109.00	1
CD-CG-HG3	125.74	108.00	1
C-N-H	106.56	124.30	1
CG-CB-HB2	90.26	108.00	1
ND1-CE1-HE1	143.54	125.80	1
HA2-CA-HA3	91.26	109.00	1
HE21-NE2-HE22	102.25	120.00	1
CA-CB-HB2	126.75	109.00	1
HB2-CB-HB3	92.25	110.00	1
CA-N-H	131.75	114.00	1
CA-N-H	96.25	114.00	1
C-CA-HA	126.76	109.00	1
CB-CG-HG2	91.23	109.00	1
CA-N-H	131.77	114.00	1
CB-CG2-HG22	127.77	110.00	1
C-N-H	106.53	124.30	1
CD-CG-HG3	90.22	108.00	1
C-N-H	106.52	124.30	1
CD-NE-HE	100.12	117.90	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CA-CB-HB	126.78	109.00	1
HD21-CD2-HD22	92.22	110.00	1
CG1-CD1-HD13	126.79	109.00	1
HG21-CG2-HG23	91.21	109.00	1
CA-N-H	96.21	114.00	1
HG11-CG1-HG13	92.21	110.00	1
CA-CB-HB3	91.20	109.00	1
CA-CB-HB3	126.80	109.00	1
CZ-NH2-HH22	102.20	120.00	1
N-CA-HA	127.80	110.00	1
HG12-CG1-HG13	127.80	110.00	1
C-N-H	106.50	124.30	1
HG21-CG2-HG22	126.81	109.00	1
HG11-CG1-HG12	92.19	110.00	1
CB-CA-HA	126.81	109.00	1
HB2-CB-HB3	92.19	110.00	1
CG-CB-HB3	90.19	108.00	1
N-CA-HA3	92.19	110.00	1
CD-CE-HE2	126.82	109.00	1
CE2-CD2-HD2	101.83	119.65	1
HB2-CB-HB3	92.18	110.00	1
C-CA-HA	126.83	109.00	1
CG-CD2-HD23	126.83	109.00	1
CE-CD-HD2	90.17	108.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CB-CG-HG3	91.17	109.00	1
HG22-CG2-HG23	92.17	110.00	1
HD2-CD-HD3	92.17	110.00	1
CG-CD1-HD11	91.16	109.00	1
HG11-CG1-HG12	92.16	110.00	1
CB-CG1-HG12	126.84	109.00	1
C-N-H	106.46	124.30	1
CD1-CG1-HG13	90.16	108.00	1
C-N-H	106.45	124.30	1
HG11-CG1-HG13	92.15	110.00	1
CD-NE-HE	135.75	117.90	1
CG-CB-HB2	90.15	108.00	1
CG-CB-HB2	90.14	108.00	1
CB-CG1-HG11	126.86	109.00	1
N-CD-HD2	126.87	109.00	1
CG-CD2-HD22	126.87	109.00	1
HG2-CG-HG3	127.87	110.00	1
CE-CD-HD2	90.13	108.00	1
HH21-NH2-HH22	102.13	120.00	1
CA-CB-HB2	91.13	109.00	1
C-CA-HA	91.12	109.00	1
CB-CA-HA	126.88	109.00	1
HG21-CG2-HG23	92.12	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CA-CB-HB2	91.12	109.00	1
CB-CG2-HG21	126.88	109.00	1
CB-CA-HA	126.89	109.00	1
CZ-NH2-HH21	102.11	120.00	1
N-CA-HA	127.89	110.00	1
NE-CD-HD2	90.11	108.00	1
HG2-CG-HG3	92.11	110.00	1
HB2-CB-HB3	92.11	110.00	1
CG-CD-HD3	126.90	109.00	1
CD-CE-HE2	126.90	109.00	1
N-CA-HA	92.10	110.00	1
C-CA-HA	126.90	109.00	1
N-CA-HA2	92.09	110.00	1
CB-CG-HG2	126.91	109.00	1
C-N-H	106.39	124.30	1
CA-N-H	131.91	114.00	1
CA-CB-HB2	126.91	109.00	1
HG2-CG-HG3	92.08	110.00	1
CG-CB-HB2	125.92	108.00	1
CB-CA-HA	126.92	109.00	1
HH21-NH2-HH22	102.08	120.00	1
CA-CB-HB3	91.07	109.00	1
HB2-CB-HB3	92.07	110.00	1
CG-CD2-HD21	126.93	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CB-CG-HG3	126.93	109.00	1
CG-CB-HB2	125.94	108.00	1
CB-CG-HG2	91.06	109.00	1
CG-CB-HB2	90.06	108.00	1
HB2-CB-HB3	127.94	110.00	1
CB-CA-HA	126.94	109.00	1
CD-CG-HG3	127.94	110.00	1
CE-NZ-HZ3	127.95	110.00	1
HD11-CD1-HD12	92.05	110.00	1
HE1-CE-HE2	127.95	110.00	1
HD12-CD1-HD13	92.05	110.00	1
HB2-CB-HB3	92.05	110.00	1
CD-CG-HG3	90.04	108.00	1
CG1-CD1-HD12	126.96	109.00	1
HB2-CB-HB3	92.04	110.00	1
HG21-CG2-HG23	92.03	110.00	1
CB-CG-HG2	126.97	109.00	1
C-N-H	106.33	124.30	1
C-CA-HA3	91.03	109.00	1
CA-N-H	131.97	114.00	1
CG-CB-HB2	125.97	108.00	1
CG1-CD1-HD13	126.97	109.00	1
CB-CG2-HG21	127.97	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CD-CG-HG2	90.03	108.00	1
CD-CE-HE3	126.98	109.00	1
CG-CB-HB3	90.02	108.00	1
NZ-CE-HE3	90.02	108.00	1
CD-NE2-HE22	102.02	120.00	1
CG-ND2-HD22	137.98	120.00	1
CD-CG-HG3	127.98	110.00	1
CA-N-H	131.99	114.00	1
CA-CB-HB2	91.01	109.00	1
C-N-H	106.31	124.30	1
CB-CG2-HG21	126.99	109.00	1
CG-CD-HD2	126.99	109.00	1
CG-ND2-HD21	138.00	120.00	1
HG21-CG2-HG23	91.00	109.00	1
C-N-H	106.30	124.30	1
CD-CE-HE3	91.00	109.00	1
HG2-CG-HG3	128.00	110.00	1
HB2-CB-HB3	92.00	110.00	1
HG21-CG2-HG22	91.99	110.00	1
ND1-CE1-HE1	107.79	125.80	1
CD-CG-HG3	89.99	108.00	1
HD11-CD1-HD12	91.98	110.00	1
HD11-CD1-HD13	91.98	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
HB2-CB-HB3	91.98	110.00	1
CG1-CD1-HD12	127.02	109.00	1
C-N-H	106.28	124.30	1
HH11-NH1-HH12	101.97	120.00	2
HE1-CE-HE2	91.97	110.00	1
CB-CA-HA	127.03	109.00	1
CG-CB-HB2	126.03	108.00	1
C-CA-HA	127.03	109.00	1
HE2-CE-HE3	91.97	110.00	1
CD-CG-HG3	126.04	108.00	1
CB-CG2-HG23	128.04	110.00	1
CA-CB-HB2	127.04	109.00	1
HZ1-NZ-HZ2	90.96	109.00	1
HG12-CG1-HG13	91.96	110.00	1
HZ1-NZ-HZ2	90.95	109.00	1
HB2-CB-HB3	91.95	110.00	1
CG-CB-HB2	126.05	108.00	1
NZ-CE-HE2	89.95	108.00	1
CB-CA-HA	127.05	109.00	1
NE-CD-HD2	89.95	108.00	1
CA-N-H	132.05	114.00	1
C-N-H	106.24	124.30	1
CG-CD1-HD1	137.71	119.65	1
C-CA-HA	90.94	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CB-CA-HA	127.06	109.00	1
CA-CB-HB	90.94	109.00	1
CZ-NH1-HH12	138.06	120.00	1
CA-CB-HB2	90.94	109.00	1
HB2-CB-HB3	91.93	110.00	1
N-CD-HD3	127.07	109.00	1
NE-CD-HD3	126.07	108.00	1
CG-CD-HD3	127.07	109.00	1
CG-CD1-HD12	127.08	109.00	1
HD12-CD1-HD13	91.92	110.00	1
OG-CB-HB3	90.92	109.00	1
CB-CG-HG3	127.08	109.00	1
HD11-CD1-HD13	91.92	110.00	1
HG21-CG2-HG22	91.92	110.00	1
CB-CG-HG3	127.09	109.00	1
HD12-CD1-HD13	128.09	110.00	1
HG2-CG-HG3	91.91	110.00	1
CB-CG-HG2	90.90	109.00	1
CA-CB-HB3	127.10	109.00	1
CD1-CG1-HG13	126.10	108.00	1
HH21-NH2-HH22	101.90	120.00	1
HB2-CB-HB3	91.90	110.00	1
HD11-CD1-HD13	91.89	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
HE1-CE-HE2	91.89	110.00	1
HZ1-NZ-HZ3	90.89	109.00	1
HG22-CG2-HG23	91.89	110.00	1
CA-N-H	95.88	114.00	1
C-N-H	106.18	124.30	1
C-CA-HA3	127.12	109.00	1
CG-CB-HB3	89.88	108.00	1
HD21-CD2-HD22	128.13	110.00	1
HG21-CG2-HG23	91.87	110.00	1
CB-CG1-HG13	90.86	109.00	1
CB-CG1-HG13	127.14	109.00	1
HE1-CE-HE2	91.86	110.00	1
HG2-CG-HG3	91.86	110.00	1
CB-CA-HA	127.15	109.00	1
HB2-CB-HB3	91.85	110.00	1
CE-NZ-HZ2	128.15	110.00	1
HB1-CB-HB2	91.85	110.00	1
CG-CB-HB2	89.85	108.00	1
HZ1-NZ-HZ2	90.85	109.00	1
HD11-CD1-HD12	91.84	110.00	1
CA-CB-HB2	90.84	109.00	1
NE-CD-HD3	126.16	108.00	1
HD12-CD1-HD13	91.83	110.00	1
CB-CG1-HG13	127.17	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CG-CB-HB3	89.83	108.00	1
CG-CD-HD3	90.82	109.00	1
C-CA-HA	127.18	109.00	1
HE21-NE2-HE22	101.82	120.00	1
CD-NE2-HE21	138.19	120.00	1
N-CA-HA	91.81	110.00	1
C-N-H	106.11	124.30	1
HB2-CB-HB3	91.81	110.00	1
CE-NZ-HZ3	128.20	110.00	1
CA-CB-HB3	127.20	109.00	1
CB-CA-HA	90.79	109.00	1
HD21-ND2-HD22	101.79	120.00	1
CZ-NH1-HH11	138.21	120.00	1
CB-CA-HA	127.21	109.00	1
CD-NE2-HE21	138.21	120.00	1
N-CA-HA2	91.79	110.00	1
CA-CB-HB2	90.79	109.00	1
HG22-CG2-HG23	91.78	110.00	1
CA-CB-HB2	127.23	109.00	1
CA-CB-HB	127.23	109.00	1
HA2-CA-HA3	90.77	109.00	1
HD11-CD1-HD12	128.23	110.00	1
CA-CB-HB2	127.24	109.00	1
CA-CB-HB3	90.76	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
HA2-CA-HA3	90.76	109.00	1
CA-N-H	132.24	114.00	1
CA-CB-HB	127.24	109.00	1
CZ-NE-HE	99.65	117.90	1
CB-CG-HG3	127.26	109.00	1
CA-N-H	132.26	114.00	1
HH11-NH1-HH12	101.74	120.00	1
HG22-CG2-HG23	91.74	110.00	1
CG-CD1-HD12	127.26	109.00	1
HG11-CG1-HG13	91.74	110.00	1
HB2-CB-HB3	91.74	110.00	2
HH21-NH2-HH22	101.73	120.00	1
NE2-CD2-HD2	108.13	126.40	1
CG-CB-HB2	126.28	108.00	1
HG2-CG-HG3	128.28	110.00	1
CA-CB-HB3	90.70	109.00	1
CZ-NH1-HH12	138.30	120.00	1
N-CA-HA	91.69	110.00	1
CD-CG-HG3	89.69	108.00	1
HD12-CD1-HD13	91.69	110.00	1
CG-CB-HB3	89.69	108.00	1
SD-CE-HE3	127.31	109.00	1
HG11-CG1-HG13	91.69	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
HB2-CB-HB3	91.68	110.00	1
HH21-NH2-HH22	101.68	120.00	1
CA-CB-HB2	127.32	109.00	1
CD-CG-HG2	91.67	110.00	1
HD2-CD-HD3	91.67	110.00	1
CG-CB-HB3	89.67	108.00	1
HB2-CB-HB3	91.67	110.00	1
CB-CG1-HG13	127.33	109.00	1
CE1-CZ-HZ	138.34	120.00	1
CA-N-H	95.66	114.00	1
CG-CD2-HD23	127.34	109.00	1
CA-CB-HB2	127.34	109.00	1
CD-CG-HG2	89.66	108.00	1
N-CD-HD2	90.66	109.00	1
HG2-CG-HG3	91.66	110.00	1
CG-CB-HB3	126.35	108.00	1
N-CA-HA3	91.65	110.00	1
CA-CB-HB	127.36	109.00	1
OG1-CB-HB	90.64	109.00	1
C-N-H	105.93	124.30	1
CA-CB-HB3	127.37	109.00	1
HG21-CG2-HG22	91.63	110.00	1
CG-CB-HB3	89.63	108.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
HD12-CD1-HD13	91.63	110.00	1
CG-CD-HD3	127.37	109.00	1
CG-CD-HD2	127.37	109.00	1
NE1-CD1-HD1	106.52	124.90	1
CD-CG-HG3	89.62	108.00	1
CG-CD-HD3	127.39	109.00	1
CZ-NH2-HH21	138.39	120.00	1
HG12-CG1-HG13	91.61	110.00	1
CG-CB-HB3	89.61	108.00	1
CA-CB-HB3	90.61	109.00	1
CG-CB-HB2	89.60	108.00	1
HG21-CG2-HG23	91.60	110.00	1
CA-CB-HB3	127.40	109.00	1
C-CA-HA3	127.40	109.00	1
SD-CG-HG2	89.60	108.00	1
CB-CG2-HG22	128.40	110.00	1
CG-CD2-HD21	127.40	109.00	1
CB-CA-HA	127.40	109.00	1
CG-CB-HB3	89.60	108.00	1
CD1-CG-HG	89.60	108.00	1
HG2-CG-HG3	128.41	110.00	1
HG12-CG1-HG13	91.58	110.00	1
CA-CB-HB3	90.58	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CB-CG-HG2	127.42	109.00	1
CA-CB-HB3	90.57	109.00	1
CD-CG-HG3	89.57	108.00	1
HD21-CD2-HD22	91.57	110.00	1
CB-CG1-HG12	90.57	109.00	1
CB-CA-HA	127.43	109.00	1
CA-CB-HB3	127.44	109.00	2
HZ1-NZ-HZ3	90.56	109.00	1
HD11-CD1-HD13	91.56	110.00	1
NE-CD-HD2	89.56	108.00	1
HB2-CB-HB3	91.55	110.00	2
HD11-CD1-HD13	91.55	110.00	1
C-N-H	142.75	124.30	1
N-CA-HA2	91.55	110.00	1
CA-CB-HB2	127.45	109.00	1
CD-CG-HG3	126.45	108.00	1
CG-CB-HB3	126.45	108.00	1
HD21-CD2-HD22	91.55	110.00	1
C-CA-HA	90.55	109.00	1
CG-CD-HD2	90.54	109.00	1
CG-CB-HB3	126.47	108.00	1
CG-CD1-HD12	127.47	109.00	1
CA-CB-HB3	127.47	109.00	1
HB2-CB-HB3	91.52	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
C-CA-HA	90.52	109.00	1
HD11-CD1-HD13	91.51	110.00	1
C-CA-HA	90.51	109.00	1
HB2-CB-HB3	91.51	110.00	1
CB-CA-HA	127.49	109.00	1
SD-CE-HE3	90.51	109.00	1
CA-CB-HB2	127.49	109.00	1
CZ-NH1-HH12	101.51	120.00	1
CB-CG1-HG12	90.50	109.00	1
HG2-CG-HG3	91.50	110.00	1
CA-CB-HB3	127.50	109.00	1
C-CA-HA2	127.51	109.00	1
HG11-CG1-HG13	91.49	110.00	1
HD11-CD1-HD13	91.49	110.00	1
CG-CD2-HD23	127.51	109.00	1
HG21-CG2-HG22	91.48	110.00	1
C-CA-HA	127.52	109.00	1
HB2-CB-HB3	91.48	110.00	1
NE-CD-HD2	89.48	108.00	1
HG22-CG2-HG23	91.48	110.00	1
HD21-CD2-HD22	91.47	110.00	1
CA-CB-HB3	127.53	109.00	1
HZ2-NZ-HZ3	90.47	109.00	1
CG-CB-HB2	126.53	108.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
N-CD-HD3	90.46	109.00	1
N-CD-HD2	127.54	109.00	1
HD11-CD1-HD13	91.46	110.00	1
HG21-CG2-HG22	91.45	110.00	1
CA-CB-HB2	90.45	109.00	1
HG11-CG1-HG13	91.45	110.00	1
CD-CE-HE2	90.45	109.00	1
HG22-CG2-HG23	91.44	110.00	1
HD21-CD2-HD23	91.44	110.00	1
CZ-NH1-HH12	138.56	120.00	1
C-N-H	105.74	124.30	1
CG-CB-HB2	126.56	108.00	1
HG21-CG2-HG22	91.43	110.00	1
HG12-CG1-HG13	91.43	110.00	1
HH11-NH1-HH12	101.43	120.00	1
CG-CB-HB2	89.43	108.00	1
C-N-H	105.73	124.30	1
CA-CB-HB3	127.57	109.00	1
SD-CE-HE2	90.42	109.00	1
OG1-CB-HB	90.42	109.00	1
HB1-CB-HB3	91.42	110.00	1
SD-CG-HG2	89.42	108.00	1
CA-N-H	132.59	114.00	1
HB2-CB-HB3	91.41	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CB-CG-HG	127.59	109.00	1
CD-CG-HG3	126.59	108.00	1
HG21-CG2-HG23	91.41	110.00	1
HG21-CG2-HG22	91.41	110.00	1
HB2-CB-HB3	91.40	110.00	1
CA-CB-HB2	90.40	109.00	1
HD21-CD2-HD22	91.40	110.00	1
CD-CG-HG3	89.39	108.00	1
CD-CE-HE2	90.39	109.00	1
N-CA-HA	128.61	110.00	1
HG11-CG1-HG12	91.39	110.00	1
NE2-CE1-HE1	107.18	125.80	1
HB2-CB-HB3	91.38	110.00	1
CA-CB-HB3	90.38	109.00	1
CB-CG2-HG22	127.62	109.00	1
CD-CE-HE3	90.38	109.00	1
HA2-CA-HA3	90.38	109.00	1
CG-CD1-HD1	138.28	119.65	1
CB-CG2-HG21	127.63	109.00	1
HB2-CB-HB3	91.37	110.00	2
CG-CD1-HD12	127.63	109.00	1
CG-CB-HB2	126.63	108.00	1
CA-CB-HB3	127.64	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CG-CB-HB3	89.36	108.00	1
CG-CD2-HD22	90.36	109.00	1
CB-CA-HA	127.64	109.00	1
C-CA-HA	127.64	109.00	1
CB-CG-HG2	127.64	109.00	1
HG12-CG1-HG13	91.36	110.00	1
HG22-CG2-HG23	91.36	110.00	1
CD-CG-HG3	89.35	108.00	1
CA-CB-HB2	127.65	109.00	1
CB-CG2-HG21	127.65	109.00	1
CA-CB-HB3	90.35	109.00	1
CG1-CD1-HD13	127.65	109.00	1
CD-CG-HG2	89.34	108.00	1
CA-CB-HB1	90.34	109.00	1
C-N-H	105.64	124.30	1
CD-CG-HG3	128.66	110.00	1
CB-CG2-HG21	127.66	109.00	1
C-CA-HA	90.33	109.00	1
CA-CB-HB3	127.67	109.00	1
CB-CG-HG2	127.68	109.00	1
CG-CB-HB2	89.32	108.00	1
CG-CB-HB3	89.32	108.00	1
HD2-CD-HD3	91.32	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CB-CA-HA	127.69	109.00	1
HG2-CG-HG3	91.31	110.00	2
HG22-CG2-HG23	91.31	110.00	1
CZ-NH1-HH11	138.69	120.00	1
HH11-NH1-HH12	101.31	120.00	1
CA-CB-HB2	90.31	109.00	1
CG-CB-HB3	126.69	108.00	1
HB2-CB-HB3	91.31	110.00	1
C-CA-HA	90.30	109.00	1
CB-CA-HA	127.70	109.00	1
HG22-CG2-HG23	127.71	109.00	1
CB-CA-HA	127.71	109.00	1
CB-CG-HG3	90.29	109.00	1
HD12-CD1-HD13	91.29	110.00	1
C-N-H	105.58	124.30	1
CG-CB-HB2	89.27	108.00	1
CG1-CD1-HD12	127.73	109.00	1
C-N-H	143.03	124.30	1
HG12-CG1-HG13	91.26	110.00	1
HG22-CG2-HG23	91.25	110.00	1
HG21-CG2-HG23	91.25	110.00	2
SD-CG-HG3	126.75	108.00	1
CA-CB-HB3	90.25	109.00	1
CG1-CD1-HD13	127.76	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CG-CD1-HD1	138.16	119.40	1
CB-CG2-HG22	127.77	109.00	1
HE1-CE-HE3	128.77	110.00	1
C-CA-HA2	90.22	109.00	1
CA-N-H	132.78	114.00	1
CD2-CG-HG	89.22	108.00	1
HH21-NH2-HH22	101.22	120.00	1
C-CA-HA3	127.78	109.00	1
N-CA-HA	128.78	110.00	1
SD-CE-HE3	90.22	109.00	1
HG11-CG1-HG12	91.21	110.00	1
HB2-CB-HB3	91.21	110.00	1
CG-CB-HB2	89.21	108.00	1
CA-CB-HB3	127.79	109.00	1
CA-N-H	95.21	114.00	1
HD2-CD-HD3	91.20	110.00	1
CA-N-H	132.81	114.00	1
CZ-NH1-HH12	101.19	120.00	1
CG1-CD1-HD11	127.81	109.00	1
SG-CB-HB3	89.19	108.00	1
HD2-CD-HD3	91.19	110.00	1
CG-CD1-HD1	143.71	124.90	1
CA-CB-HB3	127.81	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CG-CD1-HD11	127.82	109.00	1
CG-CD-HD3	127.82	109.00	1
CG-CB-HB3	126.83	108.00	1
HG21-CG2-HG23	91.17	110.00	1
C-N-H	105.47	124.30	1
CA-CB-HB3	90.17	109.00	1
HD21-CD2-HD22	91.17	110.00	1
HG2-CG-HG3	128.84	110.00	1
CA-CB-HB3	127.84	109.00	1
CD-NE2-HE22	138.84	120.00	1
HB2-CB-HB3	91.16	110.00	1
CG-CD2-HD23	127.84	109.00	1
CA-CB-HB2	127.85	109.00	1
HB2-CB-HB3	128.85	110.00	1
CB-CG2-HG22	127.85	109.00	1
HD11-CD1-HD13	91.14	110.00	1
HD22-CD2-HD23	91.14	110.00	1
CA-N-H	132.87	114.00	1
CD-CE-HE2	127.87	109.00	1
CA-CB-HB3	127.87	109.00	1
N-CA-HA	91.12	110.00	1
CG-CB-HB3	126.88	108.00	1
CB-CG-HG3	127.88	109.00	1
CZ-NH1-HH11	138.88	120.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CA-CB-HB2	127.88	109.00	1
HG21-CG2-HG22	91.11	110.00	1
HG21-CG2-HG23	90.11	109.00	1
CD-CG-HG3	89.11	108.00	1
HB2-CB-HB3	91.11	110.00	1
HG12-CG1-HG13	91.11	110.00	1
CA-N-H	132.89	114.00	1
SD-CE-HE2	90.11	109.00	1
CD-CG-HG3	89.10	108.00	1
HB2-CB-HB3	128.90	110.00	1
CA-CB-HB3	90.10	109.00	1
CZ-NH1-HH11	101.10	120.00	1
HD21-CD2-HD23	128.91	110.00	1
HZ2-NZ-HZ3	90.09	109.00	1
HD21-CD2-HD23	91.09	110.00	1
CG1-CD1-HD13	127.92	109.00	1
CG-CB-HB3	89.08	108.00	1
HB2-CB-HB3	91.08	110.00	2
HZ1-NZ-HZ3	90.08	109.00	1
HE1-CE-HE2	91.08	110.00	1
CD-NE-HE	136.83	117.90	1
HB1-CB-HB2	91.07	110.00	1
CG-CD-HD2	127.93	109.00	1
HG12-CG1-HG13	91.07	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CA-CB-HB2	127.93	109.00	1
HZ1-NZ-HZ2	90.06	109.00	1
C-N-H	105.36	124.30	1
C-CA-HA	91.05	110.00	1
C-CA-HA2	90.05	109.00	1
CB-CG2-HG23	127.96	109.00	1
CA-CB-HB3	90.04	109.00	1
CB-CA-HA	90.04	109.00	1
HD22-CD2-HD23	91.04	110.00	1
CG-CB-HB2	89.04	108.00	1
HG21-CG2-HG22	90.04	109.00	1
CG2-CB-HB	89.04	108.00	1
CA-CB-HB3	127.96	109.00	1
CG-CB-HB2	89.03	108.00	1
CG-CB-HB3	126.97	108.00	1
N-CA-HA2	91.03	110.00	1
C-CA-HA3	127.98	109.00	1
CB-CG-HG3	127.98	109.00	1
CA-CB-HB2	127.98	109.00	1
CB-CG1-HG12	127.98	109.00	1
C-N-H	105.31	124.30	1
HG11-CG1-HG13	128.99	110.00	1
CA-CB-HB3	127.99	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CD-CG-HG2	89.01	108.00	1
SD-CG-HG2	126.99	108.00	1
HB2-CB-HB3	91.00	110.00	1
CB-CA-HA	128.01	109.00	1
CZ-NH1-HH12	100.99	120.00	1
N-CA-HA	129.01	110.00	1
CA-CB-HB3	128.02	109.00	1
HB2-CB-HB3	90.98	110.00	1
SD-CE-HE3	89.98	109.00	1
CA-N-H	133.02	114.00	1
HZ1-NZ-HZ2	89.97	109.00	1
C-CA-HA	89.97	109.00	1
HB2-CB-HB3	90.97	110.00	1
CG-CB-HB2	127.03	108.00	1
CG-CB-HB2	88.97	108.00	1
CB-CG2-HG22	128.04	109.00	1
CD-CE-HE3	89.96	109.00	1
C-CA-HA	128.04	109.00	1
CA-CB-HB2	128.04	109.00	1
CG-CB-HB3	90.96	110.00	1
HG22-CG2-HG23	90.96	110.00	2
C-N-H	105.25	124.30	1
SG-CB-HB3	88.95	108.00	1
HB2-CB-HB3	90.95	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CB-CG1-HG12	89.95	109.00	1
HG21-CG2-HG22	90.94	110.00	2
HB2-CB-HB3	90.94	110.00	2
HZ2-NZ-HZ3	89.94	109.00	1
HD11-CD1-HD13	90.94	110.00	1
CB-CG-HG3	128.06	109.00	1
HG21-CG2-HG23	90.93	110.00	1
C-N-H	105.23	124.30	1
HB1-CB-HB2	129.07	110.00	1
CZ-NH1-HH12	100.93	120.00	1
CA-CB-HB3	89.92	109.00	1
HD21-CD2-HD23	90.92	110.00	1
HD21-CD2-HD22	90.91	110.00	1
CZ-NH2-HH21	139.09	120.00	1
HB2-CB-HB3	90.90	110.00	1
CB-CA-HA	128.10	109.00	1
CG-CB-HB3	127.11	108.00	1
HB2-CB-HB3	90.89	110.00	1
CA-CB-HB3	128.11	109.00	1
CB-CG-HG2	128.11	109.00	1
HG21-CG2-HG22	90.89	110.00	1
HD2-CD-HD3	90.88	110.00	1
CD-CE-HE3	128.12	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CG-CD2-HD23	128.13	109.00	1
HD2-CD-HD3	90.87	110.00	1
HG22-CG2-HG23	90.86	110.00	1
CB-CA-HA	128.14	109.00	1
CA-N-H	133.14	114.00	1
CA-CB-HB2	128.14	109.00	1
CA-CB-HB3	89.86	109.00	1
CD-NE2-HE21	100.86	120.00	1
HH21-NH2-HH22	100.86	120.00	1
CD-CE-HE3	89.85	109.00	1
CD-CG-HG2	88.85	108.00	1
CA-N-H	133.15	114.00	1
CZ-NH1-HH11	139.15	120.00	1
NE-CD-HD3	88.84	108.00	1
N-CA-HA3	129.16	110.00	1
CA-CB-HB2	128.16	109.00	1
HG2-CG-HG3	90.83	110.00	1
C-CA-HA	89.83	109.00	1
HB1-CB-HB2	90.83	110.00	1
CB-CG-HG2	128.17	109.00	1
CZ-NH2-HH21	100.83	120.00	1
CB-CG-HG	128.18	109.00	1
C-CA-HA3	89.82	109.00	1
HD21-ND2-HD22	100.81	120.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CA-CB-HB3	89.80	109.00	1
HH11-NH1-HH12	100.80	120.00	1
CE-NZ-HZ1	129.20	110.00	1
CB-CA-HA	128.20	109.00	1
HZ2-NZ-HZ3	89.79	109.00	1
HG22-CG2-HG23	90.79	110.00	1
CG-CD2-HD22	128.21	109.00	1
CA-CB-HB1	128.21	109.00	1
CB-CG-HG3	128.21	109.00	1
CA-CB-HB3	128.22	109.00	1
HG2-CG-HG3	90.78	110.00	1
CD-CG-HG2	88.78	108.00	1
HG12-CG1-HG13	90.78	110.00	1
CA-CB-HB3	89.78	109.00	1
C-N-H	105.07	124.30	1
CB-CA-HA	89.77	109.00	1
CA-CB-HB3	128.23	109.00	1
HG21-CG2-HG22	90.77	110.00	1
HG22-CG2-HG23	90.77	110.00	1
HB2-CB-HB3	90.76	110.00	1
CD-CG-HG3	127.24	108.00	1
CA-N-H	133.24	114.00	1
C-N-H	105.06	124.30	1
HE2-CE-HE3	129.25	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
HD22-CD2-HD23	90.75	110.00	1
CG-CB-HB2	127.25	108.00	1
CE2-CD2-HD2	100.40	119.65	1
HG21-CG2-HG22	90.75	110.00	1
CB-CG2-HG22	128.26	109.00	1
HZ1-NZ-HZ2	89.74	109.00	1
C-N-H	105.04	124.30	1
HB2-CB-HB3	90.73	110.00	1
HG2-CG-HG3	90.73	110.00	1
CA-CB-HB2	128.28	109.00	1
CB-CA-HA	89.72	109.00	1
CB-CG-HG3	89.71	109.00	1
HG2-CG-HG3	90.71	110.00	1
CA-CB-HB3	128.29	109.00	1
CG-CD1-HD12	128.29	109.00	1
CB-CG1-HG12	128.29	109.00	1
HG21-CG2-HG22	129.30	110.00	1
HH11-NH1-HH12	100.70	120.00	1
CG-CB-HB3	88.70	108.00	1
CA-CB-HB	128.30	109.00	1
CA-CB-HB2	128.30	109.00	1
NZ-CE-HE2	88.69	108.00	1
CG-CB-HB2	129.31	110.00	1
HD2-CD-HD3	90.68	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
HE2-CE-HE3	90.68	110.00	1
CG-CD-HD3	128.32	109.00	1
CB-CG2-HG23	128.32	109.00	1
HG2-CG-HG3	90.68	110.00	1
C-CA-HA	128.32	109.00	1
HG22-CG2-HG23	129.32	110.00	1
HB2-CB-HB3	90.67	110.00	1
HG21-CG2-HG23	90.67	110.00	1
HE1-CE-HE2	129.34	110.00	1
CG-CB-HB2	88.66	108.00	1
SD-CE-HE2	89.66	109.00	1
HH21-NH2-HH22	100.65	120.00	1
CE-NZ-HZ3	129.35	110.00	1
C-N-H	104.94	124.30	1
CB-CG-HG3	128.36	109.00	1
HG21-CG2-HG23	90.63	110.00	1
C-N-H	104.92	124.30	1
CG-CB-HB3	88.62	108.00	1
HD11-CD1-HD13	90.62	110.00	1
CA-CB-HB	128.38	109.00	1
C-CA-HA2	89.61	109.00	1
CA-CB-HB3	128.39	109.00	1
C-N-H	104.91	124.30	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CG1-CD1-HD13	128.39	109.00	1
CB-CG2-HG23	129.39	110.00	1
CB-CG2-HG23	128.39	109.00	1
CZ-NH2-HH21	139.40	120.00	1
CA-CB-HB2	89.60	109.00	1
CZ-NH1-HH11	139.40	120.00	1
CB-CG-HG	128.40	109.00	1
CG-CB-HB2	127.40	108.00	1
HG2-CG-HG3	90.60	110.00	1
HA2-CA-HA3	89.60	109.00	1
CA-N-H	94.59	114.00	1
CA-CB-HB3	89.59	109.00	1
C-N-H	104.89	124.30	1
CG-CB-HB3	88.59	108.00	1
C-CA-HA3	128.41	109.00	1
HG12-CG1-HG13	129.42	110.00	1
C-CA-HA2	128.42	109.00	1
CB-CG-HG3	89.58	109.00	1
CB-CG-HG3	128.43	109.00	1
C-CA-HA	128.43	109.00	1
CG-CD1-HD12	128.43	109.00	1
CD-NE-HE	137.33	117.90	1
C-CA-HA2	89.55	109.00	1
HD11-CD1-HD12	90.55	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
HB2-CB-HB3	90.54	110.00	2
HD22-CD2-HD23	90.54	110.00	1
OG-CB-HB3	89.54	109.00	1
HB2-CB-HB3	90.53	110.00	2
CZ-NH2-HH21	139.47	120.00	1
CG-CD-HD3	89.53	109.00	1
CG-CB-HB2	88.53	108.00	1
HB2-CB-HB3	90.52	110.00	1
CA-N-H	94.52	114.00	1
CB-CA-HA	128.48	109.00	1
C-N-H	104.81	124.30	1
CA-CB-HB2	128.49	109.00	1
CB-CG-HG2	128.50	109.00	1
CB-CG1-HG13	128.50	109.00	1
HG11-CG1-HG13	90.50	110.00	1
CB-CA-HA	128.50	109.00	1
C-N-H	143.80	124.30	1
C-CA-HA2	89.50	109.00	1
CB-CA-HA	128.51	109.00	1
CD1-CG1-HG13	88.49	108.00	1
HB2-CB-HB3	90.48	110.00	1
SG-CB-HB2	88.48	108.00	1
C-CA-HA2	128.53	109.00	1
HD11-CD1-HD13	90.47	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
NE1-CD1-HD1	105.37	124.90	1
HE2-CE-HE3	90.47	110.00	1
HB1-CB-HB2	90.47	110.00	1
CA-CB-HB2	128.54	109.00	1
HB1-CB-HB2	90.45	110.00	1
OG-CB-HB3	89.45	109.00	1
CG1-CD1-HD12	128.55	109.00	1
CG-CB-HB3	88.45	108.00	1
NZ-CE-HE3	127.56	108.00	1
C-CA-HA	128.56	109.00	1
CG-CD2-HD22	128.56	109.00	1
HB2-CB-HB3	90.44	110.00	1
CA-N-H	94.44	114.00	1
CG-CD1-HD13	128.56	109.00	1
HG12-CG1-HG13	90.44	110.00	1
HD21-ND2-HD22	100.43	120.00	1
CA-N-H	133.57	114.00	1
CG-ND2-HD22	139.58	120.00	1
HB2-CB-HB3	90.42	110.00	1
CG-CB-HB2	127.59	108.00	1
C-CA-HA	89.41	109.00	1
HG21-CG2-HG22	89.41	109.00	1
CG-CB-HB2	88.41	108.00	1
HD2-CD-HD3	90.40	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
HG21-CG2-HG22	90.40	110.00	1
HD11-CD1-HD13	90.40	110.00	1
HA2-CA-HA3	89.39	109.00	1
HB2-CB-HB3	90.39	110.00	1
HG2-CG-HG3	90.39	110.00	1
HG22-CG2-HG23	90.38	110.00	1
HG11-CG1-HG13	90.38	110.00	1
HG12-CG1-HG13	90.37	110.00	1
CA-CB-HB3	89.37	109.00	1
HB2-CB-HB3	90.37	110.00	1
CB-CG-HG3	128.63	109.00	1
CA-N-H	133.63	114.00	1
HB2-CB-HB3	90.36	110.00	2
CA-CB-HB3	128.64	109.00	1
CG-CD1-HD1	99.76	119.40	1
C-N-H	104.66	124.30	1
CD-CG-HG3	127.64	108.00	1
CB-CG2-HG23	129.65	110.00	1
CB-CA-HA	128.65	109.00	1
CB-CG1-HG13	89.35	109.00	1
C-N-H	104.63	124.30	1
C-CA-HA	128.67	109.00	1
HD11-CD1-HD12	90.33	110.00	1
CA-CB-HB3	128.67	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CA-N-H	133.67	114.00	1
CZ-NH1-HH12	139.68	120.00	1
CG-CD1-HD1	99.72	119.40	1
HG2-CG-HG3	90.32	110.00	1
NZ-CE-HE2	127.69	108.00	1
HB2-CB-HB3	90.31	110.00	1
HB1-CB-HB2	90.31	110.00	1
HG2-CG-HG3	90.31	110.00	1
CA-CB-HB3	89.31	109.00	1
CG-CD1-HD12	128.69	109.00	1
CG-CD-HD2	89.31	109.00	1
C-CA-HA	90.31	110.00	1
HG21-CG2-HG22	90.30	110.00	1
CG-CD2-HD23	128.70	109.00	1
HG2-CG-HG3	90.30	110.00	1
HG2-CG-HG3	90.29	110.00	1
HB2-CB-HB3	90.29	110.00	2
C-CA-HA	89.29	109.00	1
CB-CG-HG2	128.72	109.00	1
CA-CB-HB2	128.72	109.00	1
HG12-CG1-HG13	90.27	110.00	1
CD1-CG1-HG12	88.27	108.00	1
CA-CB-HB3	128.73	109.00	1
CD-CG-HG2	88.27	108.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
HD21-ND2-HD22	100.26	120.00	1
HG22-CG2-HG23	90.26	110.00	1
CG-ND2-HD21	139.74	120.00	1
C-CA-HA	128.74	109.00	1
C-CA-HA3	89.26	109.00	1
CD-NE2-HE21	139.75	120.00	1
HG21-CG2-HG23	90.25	110.00	1
C-CA-HA2	128.75	109.00	1
HG21-CG2-HG22	90.24	110.00	2
CA-CB-HB3	128.76	109.00	1
HG12-CG1-HG13	90.24	110.00	1
CB-CG2-HG23	128.76	109.00	1
CE2-CD2-HD2	99.88	119.65	1
C-N-H	104.53	124.30	1
CG-CB-HB2	127.77	108.00	1
CA-CB-HB3	128.78	109.00	1
HD12-CD1-HD13	90.22	110.00	1
HG22-CG2-HG23	90.22	110.00	1
C-CA-HA2	128.78	109.00	1
CD-CG-HG3	127.78	108.00	1
HD21-CD2-HD23	90.22	110.00	1
CD-CE-HE2	128.79	109.00	1
HB2-CB-HB3	90.21	110.00	1
HD21-CD2-HD22	129.79	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
OG1-CB-HB	128.79	109.00	1
HG21-CG2-HG23	90.20	110.00	1
C-CA-HA	89.20	109.00	1
SD-CE-HE2	89.20	109.00	1
CA-CB-HB2	89.20	109.00	1
HB2-CB-HB3	90.19	110.00	1
C-N-H	104.50	124.30	1
CG-CB-HB2	88.19	108.00	1
CG-ND2-HD21	139.81	120.00	1
N-CD-HD3	128.81	109.00	1
HH21-NH2-HH22	100.19	120.00	1
CA-CB-HB3	128.81	109.00	1
N-CA-HA	90.18	110.00	1
CG-CD1-HD12	128.82	109.00	1
CG1-CD1-HD12	128.82	109.00	1
HB2-CB-HB3	90.17	110.00	1
CA-CB-HB2	128.83	109.00	1
HA2-CA-HA3	89.16	109.00	1
C-N-H	104.46	124.30	1
CE2-CZ-HZ	100.16	120.00	1
HG21-CG2-HG23	90.15	110.00	1
HG21-CG2-HG23	129.85	110.00	1
CG-CD-HD3	89.15	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CG-CB-HB3	127.85	108.00	1
CG-CB-HB3	88.14	108.00	1
HB2-CB-HB3	90.14	110.00	1
SD-CG-HG2	88.14	108.00	1
CA-N-H	133.87	114.00	1
CB-CG2-HG21	129.87	110.00	1
HG21-CG2-HG22	90.13	110.00	1
HB2-CB-HB3	90.13	110.00	1
CB-CG2-HG21	128.88	109.00	1
HE2-CE-HE3	129.89	110.00	1
HB2-CB-HB3	90.11	110.00	2
HG21-CG2-HG23	89.11	109.00	1
CG-CB-HB2	88.11	108.00	1
CG-CB-HB2	88.10	108.00	1
CG-CD2-HD21	128.90	109.00	1
HG21-CG2-HG22	90.10	110.00	1
CA-CB-HB3	128.90	109.00	1
HD21-CD2-HD23	90.09	110.00	1
CD2-CE2-HE2	100.29	120.20	1
HG11-CG1-HG12	90.09	110.00	1
HD11-CD1-HD13	90.08	110.00	1
HB2-CB-HB3	90.08	110.00	1
CB-CG-HG3	128.93	109.00	1
CB-CA-HA	89.07	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CB-CA-HA	128.93	109.00	1
HD11-CD1-HD13	90.07	110.00	1
CA-CB-HB2	128.94	109.00	1
C-CA-HA2	89.06	109.00	1
HG11-CG1-HG12	90.06	110.00	1
CB-CA-HA	128.94	109.00	1
CG-CD1-HD13	128.94	109.00	1
C-CA-HA	89.06	109.00	1
HB2-CB-HB3	129.95	110.00	1
C-N-H	104.35	124.30	1
CB-CG1-HG12	128.95	109.00	1
CG-CD1-HD11	128.95	109.00	1
CB-CA-HA	128.95	109.00	1
CA-CB-HB3	128.96	109.00	1
CB-CG1-HG13	128.96	109.00	1
CD-CG-HG3	88.03	108.00	1
CG-CB-HB3	88.03	108.00	1
HZ2-NZ-HZ3	89.03	109.00	1
HD11-CD1-HD12	90.03	110.00	1
C-N-H	104.33	124.30	1
CB-CG2-HG23	129.98	110.00	1
C-N-H	144.28	124.30	1
CE-CD-HD3	127.98	108.00	1
C-N-H	104.31	124.30	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CA-N-H	94.01	114.00	1
HG21-CG2-HG22	90.01	110.00	1
CD-CG-HG3	88.01	108.00	1
CA-CB-HB1	128.99	109.00	1
CB-CG2-HG22	130.00	110.00	1
HG2-CG-HG3	90.00	110.00	1
CG-CD-HD2	129.00	109.00	1
HE2-CE-HE3	90.00	110.00	1
HG21-CG2-HG22	89.99	110.00	2
HB2-CB-HB3	89.99	110.00	1
CA-CB-HB3	129.01	109.00	1
C-N-H	104.29	124.30	1
CD-CG-HG3	128.01	108.00	1
CG-CB-HB2	87.98	108.00	1
C-N-H	104.28	124.30	1
CB-CG1-HG12	88.97	109.00	1
CG-CD1-HD13	129.03	109.00	1
HG21-CG2-HG22	89.96	110.00	1
C-CA-HA	88.96	109.00	1
HD11-CD1-HD13	89.96	110.00	1
HD11-CD1-HD13	89.95	110.00	2
HG21-CG2-HG23	89.95	110.00	1
CG-CB-HB2	128.05	108.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
HZ1-NZ-HZ3	88.95	109.00	1
HH21-NH2-HH22	99.94	120.00	1
CA-CB-HB2	88.94	109.00	1
HG12-CG1-HG13	130.06	110.00	1
C-CA-HA3	88.93	109.00	1
CD-CG-HG2	128.07	108.00	1
CB-CG-HG2	129.07	109.00	1
CA-CB-HB2	88.93	109.00	1
CE-CD-HD3	87.92	108.00	1
N-CA-HA3	89.92	110.00	1
CG-CB-HB3	128.08	108.00	1
HD11-CD1-HD12	89.91	110.00	1
C-CA-HA	88.90	109.00	1
HB2-CB-HB3	89.90	110.00	1
HG2-CG-HG3	130.10	110.00	1
CG-CB-HB3	87.89	108.00	1
CA-CB-HB2	88.88	109.00	1
CG-CD-HD3	88.88	109.00	1
CB-CG-HG2	129.12	109.00	1
CA-CB-HB2	88.87	109.00	2
HD11-CD1-HD12	89.86	110.00	1
CG-CB-HB3	128.14	108.00	1
C-N-H	104.16	124.30	1
CB-CG1-HG12	129.15	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
C-N-H	144.45	124.30	1
HD21-ND2-HD22	99.85	120.00	1
CG-CD2-HD2	139.80	119.65	1
CD1-CG1-HG12	87.84	108.00	1
CG-ND2-HD21	140.16	120.00	1
HD21-CD2-HD22	89.84	110.00	1
HG11-CG1-HG12	89.84	110.00	1
C-N-H	104.14	124.30	1
CG-CB-HB3	87.83	108.00	1
HG2-CG-HG3	89.83	110.00	1
CH2-CZ3-HZ3	99.28	119.45	1
HZ1-NZ-HZ3	88.81	109.00	1
CA-CB-HB2	88.80	109.00	1
CB-CG-HG3	88.80	109.00	1
HB2-CB-HB3	89.79	110.00	1
CZ-NH1-HH12	140.21	120.00	1
HG12-CG1-HG13	89.78	110.00	1
CE1-CD1-HD1	99.43	119.65	1
CA-N-H	93.78	114.00	1
CG-CB-HB3	128.22	108.00	1
CG-CB-HB3	87.77	108.00	1
NE-CD-HD2	87.77	108.00	1
HD11-CD1-HD12	89.76	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CG-CB-HB2	87.76	108.00	1
CA-CB-HB2	88.75	109.00	1
CG-CB-HB3	89.75	110.00	1
HG12-CG1-HG13	89.74	110.00	1
CG-CB-HB3	128.26	108.00	1
HB2-CB-HB3	89.74	110.00	1
CA-CB-HB	129.27	109.00	1
HZ2-NZ-HZ3	88.73	109.00	1
CZ-CE1-HE1	99.73	120.00	1
CA-CB-HB3	88.73	109.00	1
HD21-ND2-HD22	99.73	120.00	1
HG22-CG2-HG23	89.72	110.00	1
CD1-CG1-HG12	87.72	108.00	1
HB2-CB-HB3	89.72	110.00	1
HG2-CG-HG3	89.71	110.00	1
C-N-H	104.01	124.30	1
CB-CG-HG3	129.30	109.00	1
HE2-CE-HE3	89.70	110.00	1
OG-CB-HB3	88.70	109.00	1
HD12-CD1-HD13	89.70	110.00	1
CA-CB-HB2	88.70	109.00	1
C-N-H	104.00	124.30	1
HB2-CB-HB3	89.69	110.00	1
SD-CE-HE1	129.31	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CD-CG-HG3	87.69	108.00	1
HE21-NE2-HE22	99.69	120.00	1
CB-CG1-HG13	129.31	109.00	1
CB-CG1-HG13	129.32	109.00	1
C-N-H	103.98	124.30	1
C-N-H	103.97	124.30	1
CG-CD2-HD23	129.33	109.00	1
HE2-CE-HE3	89.66	110.00	1
CA-CB-HB2	88.65	109.00	1
HG11-CG1-HG12	89.65	110.00	1
HD11-CD1-HD13	89.65	110.00	1
CD-CE-HE2	129.35	109.00	1
C-CA-HA	129.35	109.00	1
N-CA-HA3	130.36	110.00	1
HG21-CG2-HG22	89.64	110.00	1
HG22-CG2-HG23	89.64	110.00	1
CD-CG-HG2	128.36	108.00	1
C-CA-HA	129.36	109.00	1
HB2-CB-HB3	89.64	110.00	1
HG11-CG1-HG13	89.62	110.00	1
CB-CG-HG3	129.39	109.00	1
C-N-H	103.91	124.30	1
SD-CG-HG2	87.60	108.00	1
CB-CG2-HG23	129.40	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CA-CB-HB3	129.40	109.00	1
CB-CG-HG3	129.41	109.00	1
C-N-H	103.89	124.30	1
SD-CE-HE2	88.59	109.00	1
N-CA-HA3	130.41	110.00	1
CZ-NH1-HH11	140.41	120.00	1
NE2-CD2-HD2	105.98	126.40	1
HE21-NE2-HE22	99.58	120.00	1
CD-CG-HG3	130.43	110.00	1
HH11-NH1-HH12	99.57	120.00	1
C-N-H	144.74	124.30	1
CA-CB-HB2	129.45	109.00	1
HB2-CB-HB3	89.55	110.00	1
HB1-CB-HB3	130.46	110.00	1
HB2-CB-HB3	89.54	110.00	1
OG-CB-HB2	88.54	109.00	1
CB-CA-HA	129.46	109.00	1
HA2-CA-HA3	88.54	109.00	1
C-CA-HA	88.53	109.00	1
CA-CB-HB3	129.47	109.00	1
HG12-CG1-HG13	89.53	110.00	1
CA-CB-HB3	129.48	109.00	1
HH21-NH2-HH22	99.52	120.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CG-CB-HB3	87.52	108.00	1
HB2-CB-HB3	89.52	110.00	1
HD11-CD1-HD12	89.51	110.00	1
CD-NE2-HE22	140.49	120.00	1
CG-CD-HD2	88.51	109.00	1
HG2-CG-HG3	89.51	110.00	1
CG-CD1-HD12	129.49	109.00	1
CE-CD-HD3	87.51	108.00	1
HB2-CB-HB3	89.51	110.00	1
HD21-CD2-HD23	130.50	110.00	1
CD-CG-HG2	89.50	110.00	1
CB-CG2-HG23	129.51	109.00	1
HG12-CG1-HG13	130.51	110.00	1
CB-CA-HA	129.52	109.00	1
CB-CG2-HG21	129.52	109.00	1
NE-CD-HD2	87.48	108.00	1
N-CA-HA	130.52	110.00	1
HZ1-NZ-HZ3	88.47	109.00	1
CA-CB-HB2	88.47	109.00	1
HG21-CG2-HG23	89.47	110.00	1
CB-CG1-HG13	88.47	109.00	1
N-CA-HA3	130.54	110.00	1
CG-CB-HB3	87.46	108.00	1
CG-CB-HB2	87.46	108.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
C-CA-HA	88.45	109.00	1
HG22-CG2-HG23	89.45	110.00	1
CG-CD-HD3	88.45	109.00	1
CG-CB-HB3	87.44	108.00	1
HB2-CB-HB3	89.44	110.00	1
CD1-CG1-HG13	128.56	108.00	1
N-CA-HA2	130.56	110.00	1
CB-CA-HA	88.43	109.00	1
HB2-CB-HB3	89.43	110.00	1
CB-CG2-HG21	129.58	109.00	1
HB2-CB-HB3	89.42	110.00	1
C-N-H	103.71	124.30	1
CA-N-H	134.59	114.00	1
CB-CG-HG3	129.61	109.00	1
C-N-H	103.69	124.30	1
HD11-CD1-HD13	89.39	110.00	1
CB-CG2-HG21	130.61	110.00	1
CG-CB-HB2	87.37	108.00	1
HG2-CG-HG3	89.37	110.00	1
HD12-CD1-HD13	89.37	110.00	1
CG-CB-HB3	87.37	108.00	1
CB-CG-HG3	129.63	109.00	1
N-CA-HA3	89.36	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
HD12-CD1-HD13	89.36	110.00	1
CB-CG2-HG23	129.64	109.00	1
HH11-NH1-HH12	99.36	120.00	1
C-CA-HA	129.65	109.00	1
CG-CB-HB2	87.35	108.00	1
HD21-CD2-HD23	89.35	110.00	1
HH11-NH1-HH12	99.34	120.00	1
C-N-H	144.96	124.30	1
HB2-CB-HB3	89.33	110.00	1
CG-CB-HB2	128.67	108.00	1
HG2-CG-HG3	89.33	110.00	1
CG-CD1-HD11	88.33	109.00	1
CG-CD2-HD21	88.33	109.00	1
CB-CG-HG2	129.68	109.00	1
CD-CG-HG3	128.68	108.00	1
C-CA-HA3	88.32	109.00	1
C-N-H	144.98	124.30	1
HZ1-NZ-HZ2	88.32	109.00	1
HA2-CA-HA3	88.32	109.00	1
HB2-CB-HB3	130.69	110.00	1
HB2-CB-HB3	89.31	110.00	1
CG-CB-HB2	87.31	108.00	1
OG-CB-HB3	129.70	109.00	1
SD-CE-HE2	129.70	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
N-CA-HA3	89.30	110.00	1
CB-CA-HA	88.29	109.00	1
CD1-CG1-HG13	128.71	108.00	1
CA-CB-HB2	129.71	109.00	1
C-N-H	103.59	124.30	1
CD-CG-HG3	130.72	110.00	1
CB-CG-HG3	88.28	109.00	1
HA2-CA-HA3	88.28	109.00	1
CZ-CE1-HE1	140.72	120.00	1
CB-CA-HA	129.72	109.00	1
C-N-H	145.03	124.30	1
CD-CG-HG2	130.73	110.00	1
CG-CB-HB3	87.27	108.00	1
CB-CA-HA	129.73	109.00	1
HG22-CG2-HG23	89.27	110.00	1
CB-CG-HG2	129.74	109.00	1
HB2-CB-HB3	89.26	110.00	1
HG21-CG2-HG23	89.26	110.00	1
CG-CD-HD2	129.74	109.00	1
CG-CB-HB2	89.26	110.00	1
CB-CG2-HG23	129.75	109.00	1
HB2-CB-HB3	89.25	110.00	1
CB-CG-HG2	129.75	109.00	1
CA-CB-HB3	88.25	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CZ-NH1-HH12	140.75	120.00	1
CA-N-H	134.76	114.00	1
CD1-CG1-HG13	87.24	108.00	1
HA2-CA-HA3	88.24	109.00	1
HD12-CD1-HD13	89.24	110.00	1
HZ1-NZ-HZ3	88.23	109.00	1
CD-CG-HG2	89.23	110.00	1
HG2-CG-HG3	89.22	110.00	1
CG2-CB-HB	129.78	109.00	1
CB-CA-HA	88.22	109.00	1
HB2-CB-HB3	89.22	110.00	1
CD-CG-HG3	87.21	108.00	1
CA-CB-HB2	129.79	109.00	1
HE21-NE2-HE22	99.20	120.00	1
HB2-CB-HB3	89.20	110.00	2
HZ1-NZ-HZ3	88.20	109.00	1
CD-NE-HE	138.70	117.90	1
HG2-CG-HG3	130.80	110.00	1
CD-CG-HG3	87.20	108.00	1
HB2-CB-HB3	89.19	110.00	1
CG-CB-HB2	87.19	108.00	1
CZ-NH1-HH12	140.81	120.00	1
SD-CE-HE1	129.82	109.00	1
CA-N-H	134.82	114.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
HB2-CB-HB3	89.17	110.00	1
CA-N-H	134.84	114.00	1
HA2-CA-HA3	88.16	109.00	1
CA-CB-HB2	88.16	109.00	1
HG12-CG1-HG13	89.16	110.00	1
N-CD-HD3	129.85	109.00	1
HB2-CB-HB3	89.15	110.00	2
HH21-NH2-HH22	99.15	120.00	1
CG-CB-HB2	87.15	108.00	1
HG11-CG1-HG12	130.86	110.00	1
CA-CB-HB3	129.86	109.00	1
CG-CB-HB3	87.14	108.00	1
HB2-CB-HB3	89.13	110.00	1
CD-CG-HG3	89.13	110.00	1
OG-CB-HB2	88.13	109.00	1
N-CA-HA3	130.88	110.00	1
C-N-H	103.42	124.30	1
CA-N-H	134.88	114.00	1
OG-CB-HB2	129.88	109.00	1
C-CA-HA3	129.89	109.00	1
CA-CB-HB3	129.89	109.00	1
CD-CG-HG2	87.10	108.00	1
CB-CG-HG2	88.10	109.00	1
CB-CG-HG2	129.91	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
HD2-CD-HD3	89.09	110.00	2
CG-CD1-HD13	129.91	109.00	1
HB2-CB-HB3	89.09	110.00	1
CB-CG-HG2	88.09	109.00	1
HG11-CG1-HG12	130.92	110.00	1
C-CA-HA	129.92	109.00	1
NE-CD-HD2	87.08	108.00	1
CD1-CG1-HG13	128.92	108.00	1
CA-CB-HB2	88.08	109.00	1
CA-CB-HB2	129.92	109.00	1
CG-CD2-HD21	129.93	109.00	1
CG-CB-HB2	128.94	108.00	2
HB2-CB-HB3	89.06	110.00	2
CB-CA-HA	129.94	109.00	1
HE2-CE-HE3	89.06	110.00	1
CD-CG-HG2	128.94	108.00	1
CG-CB-HB3	130.94	110.00	1
C-CA-HA3	129.94	109.00	1
CD-CG-HG2	128.95	108.00	1
CG-CB-HB2	128.96	108.00	1
CA-CB-HB3	129.96	109.00	2
CA-CB-HB2	88.04	109.00	1
CG-ND1-HD1	104.39	125.35	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
HG2-CG-HG3	89.03	110.00	1
CG-CB-HB2	128.97	108.00	1
CG-CB-HB2	87.03	108.00	1
HD11-CD1-HD13	89.02	110.00	1
HB2-CB-HB3	89.00	110.00	1
HG21-CG2-HG22	89.00	110.00	1
CG-CB-HB3	129.00	108.00	1
HD11-CD1-HD13	88.99	110.00	1
CB-CA-HA	130.01	109.00	1
CA-CB-HB2	87.99	109.00	1
HB2-CB-HB3	88.98	110.00	1
HD11-CD1-HD13	131.02	110.00	1
CA-CB-HB2	130.03	109.00	1
CB-CA-HA	130.03	109.00	1
HB2-CB-HB3	88.97	110.00	1
CB-CG1-HG12	130.03	109.00	1
HG22-CG2-HG23	88.97	110.00	1
N-CA-HA3	88.97	110.00	1
CZ-NH2-HH21	141.04	120.00	1
CB-SG-HG	144.06	109.00	1
CG-CD1-HD12	130.04	109.00	1
NE-CD-HD3	86.96	108.00	1
CG-CD2-HD2	147.45	126.40	1
CA-CB-HB2	130.05	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
C-N-H	103.25	124.30	2
CD-NE2-HE22	141.05	120.00	1
CA-N-H	135.06	114.00	1
C-CA-HA	87.94	109.00	1
CB-CG1-HG12	130.07	109.00	1
CA-CB-HB3	87.93	109.00	1
CB-CG2-HG23	130.07	109.00	1
CG-CB-HB3	86.93	108.00	1
CB-CG2-HG22	130.07	109.00	1
SD-CE-HE3	87.93	109.00	1
HB2-CB-HB3	88.92	110.00	1
N-CA-HA3	88.92	110.00	1
HE2-CE-HE3	88.92	110.00	1
CA-CB-HB3	87.92	109.00	1
HD21-CD2-HD22	88.92	110.00	1
NE-CD-HD3	86.91	108.00	1
CG-CD2-HD23	130.09	109.00	1
HB2-CB-HB3	88.91	110.00	1
C-CA-HA	87.90	109.00	1
HH11-NH1-HH12	98.90	120.00	1
CG-CD1-HD11	130.11	109.00	1
CA-CB-HB3	87.89	109.00	1
HG21-CG2-HG22	88.89	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CG-CB-HB2	86.88	108.00	1
CE-CD-HD3	86.88	108.00	1
C-N-H	103.18	124.30	1
HG12-CG1-HG13	131.12	110.00	1
HH11-NH1-HH12	98.88	120.00	1
CA-CB-HB2	130.12	109.00	1
HE21-NE2-HE22	98.87	120.00	1
CG-CB-HB2	129.13	108.00	1
HG21-CG2-HG22	88.86	110.00	1
SD-CG-HG3	86.86	108.00	1
HA2-CA-HA3	87.86	109.00	1
C-N-H	103.16	124.30	1
HG11-CG1-HG12	88.86	110.00	1
CA-CB-HB2	130.15	109.00	1
HG21-CG2-HG22	88.84	110.00	1
N-CD-HD2	130.16	109.00	1
CA-CB-HB2	130.16	109.00	1
C-CA-HA	130.16	109.00	1
CG1-CD1-HD11	130.16	109.00	1
CB-CG-HG3	87.83	109.00	1
CG1-CB-HB	87.83	109.00	1
CB-CG2-HG22	87.83	109.00	1
CD-NE2-HE21	98.83	120.00	1
CG-CB-HB3	129.17	108.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
HG2-CG-HG3	88.83	110.00	1
CA-CB-HB3	130.17	109.00	1
CB-CG-HG3	130.18	109.00	1
CD-CG-HG2	129.18	108.00	1
HG2-CG-HG3	88.81	110.00	1
SD-CE-HE2	87.81	109.00	1
C-N-H	103.10	124.30	1
HG2-CG-HG3	88.80	110.00	1
CA-CB-HB2	130.21	109.00	1
OG-CB-HB2	130.21	109.00	1
C-N-H	145.51	124.30	1
CA-CB-HB2	87.79	109.00	1
CG-CB-HB2	129.21	108.00	1
HB2-CB-HB3	88.78	110.00	1
CB-CG-HG3	130.23	109.00	1
CB-CG2-HG22	131.23	110.00	1
CA-N-H	135.23	114.00	1
CG-CD-HD3	87.77	109.00	1
HG22-CG2-HG23	87.76	109.00	1
CB-CG-HG2	130.24	109.00	1
CA-CB-HB3	130.24	109.00	1
HG11-CG1-HG12	88.75	110.00	1
HD12-CD1-HD13	131.26	110.00	1
HG21-CG2-HG22	88.74	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
SD-CG-HG3	86.74	108.00	1
HB2-CB-HB3	88.74	110.00	1
C-N-H	103.03	124.30	1
CA-CB-HB2	130.27	109.00	1
HB2-CB-HB3	88.73	110.00	1
HH21-NH2-HH22	98.73	120.00	1
CG-CB-HB2	86.72	108.00	1
CA-CB-HB3	87.72	109.00	1
CA-CB-HB3	130.28	109.00	1
HB2-CB-HB3	88.72	110.00	1
CA-CB-HB3	87.71	109.00	1
CG-CB-HB2	129.29	108.00	1
HG22-CG2-HG23	88.70	110.00	1
C-CA-HA	130.30	109.00	1
CB-CA-HA	130.30	109.00	1
CB-CG-HG2	130.31	109.00	1
HB2-CB-HB3	88.69	110.00	1
CZ-NH2-HH21	98.68	120.00	1
N-CA-HA3	131.32	110.00	1
N-CA-HA2	88.68	110.00	1
CE1-ND1-HD1	104.02	125.35	1
CB-CG-HG2	130.33	109.00	1
CG-CB-HB3	86.67	108.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
HG21-CG2-HG22	88.66	110.00	1
HB2-CB-HB3	88.66	110.00	2
CA-CB-HB3	130.34	109.00	1
SD-CG-HG3	86.66	108.00	1
CD-CG-HG2	86.66	108.00	1
CA-N-H	135.35	114.00	2
CB-CG-HG3	130.35	109.00	1
HB2-CB-HB3	88.65	110.00	1
CG-CD1-HD11	130.35	109.00	1
C-CA-HA3	87.64	109.00	1
N-CD-HD3	130.36	109.00	1
HD11-CD1-HD12	88.64	110.00	1
HD11-CD1-HD13	88.64	110.00	1
CD1-CE1-HE1	141.57	120.20	1
C-N-H	102.92	124.30	1
C-CA-HA3	87.62	109.00	1
HD11-CD1-HD13	88.61	110.00	1
HG12-CG1-HG13	88.61	110.00	1
CB-CG2-HG21	131.39	110.00	1
HG21-CG2-HG23	88.61	110.00	1
HD12-CD1-HD13	88.61	110.00	1
CG-CD2-HD22	130.41	109.00	1
HG2-CG-HG3	88.59	110.00	1
CE-NZ-HZ3	131.41	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
SD-CG-HG3	129.41	108.00	1
CG-CB-HB2	86.59	108.00	1
CG-CD2-HD21	130.41	109.00	1
C-CA-HA	87.59	109.00	1
HB2-CB-HB3	88.58	110.00	1
CE-NZ-HZ1	88.58	110.00	1
C-N-H	102.88	124.30	1
C-N-H	102.87	124.30	1
CE1-CD1-HD1	97.96	119.40	1
NZ-CE-HE2	129.45	108.00	1
CB-CA-HA	130.46	109.00	1
CA-CB-HB2	87.54	109.00	1
N-CD-HD3	130.46	109.00	1
C-N-H	102.83	124.30	1
HB2-CB-HB3	88.53	110.00	1
CA-CB-HB3	130.47	109.00	1
HG12-CG1-HG13	131.48	110.00	1
OG-CB-HB3	87.52	109.00	1
HB2-CB-HB3	88.51	110.00	2
CB-CG2-HG23	130.49	109.00	1
HE1-CE-HE2	131.49	110.00	1
CG-CB-HB2	86.51	108.00	1
HD22-CD2-HD23	88.51	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CB-CG-HG2	130.50	109.00	1
CB-CG-HG3	130.50	109.00	1
CD-NE-HE	139.40	117.90	1
HD21-CD2-HD23	88.48	110.00	1
CG-CD1-HD13	130.52	109.00	1
CG-CB-HB3	86.48	108.00	1
CG-CB-HB2	86.48	108.00	1
OG-CB-HB2	130.52	109.00	1
HG22-CG2-HG23	131.53	110.00	1
HG2-CG-HG3	88.47	110.00	1
C-N-H	145.83	124.30	1
CA-CB-HB3	130.53	109.00	1
CG-CD-HD2	87.47	109.00	1
C-CA-HA2	130.54	109.00	1
OG-CB-HB3	87.46	109.00	1
HB2-CB-HB3	88.45	110.00	1
CA-N-H	92.45	114.00	1
HH21-NH2-HH22	98.45	120.00	1
C-CA-HA	130.56	109.00	1
HG2-CG-HG3	88.44	110.00	1
NZ-CE-HE2	86.43	108.00	1
C-N-H	102.73	124.30	1
CZ-NH2-HH21	98.43	120.00	1
HG21-CG2-HG23	88.43	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
C-N-H	102.72	124.30	1
OG-CB-HB2	87.41	109.00	1
HB2-CB-HB3	88.41	110.00	1
HG2-CG-HG3	88.41	110.00	1
HE1-CE-HE2	88.41	110.00	1
CG-CB-HB3	86.40	108.00	1
CG-CD-HD3	87.40	109.00	1
HE2-CE-HE3	88.40	110.00	1
CG-CB-HB3	129.60	108.00	1
CD-CG-HG3	129.61	108.00	1
C-N-H	145.91	124.30	1
N-CD-HD2	130.62	109.00	1
CG-CB-HB3	86.38	108.00	1
CA-CB-HB2	130.62	109.00	1
HG22-CG2-HG23	88.38	110.00	1
CG-CB-HB2	131.62	110.00	1
CD1-CG1-HG12	129.63	108.00	1
CG-CB-HB3	86.37	108.00	1
NE-CD-HD2	129.63	108.00	1
C-CA-HA3	130.63	109.00	1
HD2-CD-HD3	88.36	110.00	1
NE2-CD2-HD2	104.76	126.40	1
N-CA-HA2	88.36	110.00	1
HG12-CG1-HG13	88.36	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
C-N-H	102.65	124.30	1
HG21-CG2-HG23	88.34	110.00	1
C-CA-HA	130.66	109.00	1
HG2-CG-HG3	88.34	110.00	1
CD1-CG1-HG13	86.33	108.00	1
HD2-CD-HD3	131.67	110.00	1
HB2-CB-HB3	88.33	110.00	1
HD11-CD1-HD13	88.33	110.00	1
CG-CD-HD3	130.68	109.00	1
OG-CB-HB2	130.69	109.00	1
HB2-CB-HB3	88.31	110.00	2
HG2-CG-HG3	88.31	110.00	2
CD2-NE2-HE2	147.19	125.50	1
NZ-CE-HE2	129.69	108.00	1
CG-CB-HB2	86.30	108.00	2
C-CA-HA	87.30	109.00	1
CB-CG-HG2	87.29	109.00	2
HB2-CB-HB3	88.29	110.00	1
CE2-NE1-HE1	103.84	125.55	1
HG12-CG1-HG13	88.29	110.00	1
CB-CG-HG3	130.72	109.00	1
HG2-CG-HG3	88.28	110.00	1
HG21-CG2-HG22	88.27	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CZ-NH2-HH22	141.73	120.00	1
CZ-NH1-HH12	141.73	120.00	1
HD11-CD1-HD13	88.27	110.00	1
HB2-CB-HB3	88.27	110.00	1
HB2-CB-HB3	88.26	110.00	2
HB2-CB-HB3	88.25	110.00	1
NE2-CD2-HD2	104.63	126.40	1
HD12-CD1-HD13	88.23	110.00	1
CB-CG-HG2	87.23	109.00	1
CB-CG-HG2	130.78	109.00	1
CD-CE-HE2	130.80	109.00	1
CB-CG2-HG21	130.80	109.00	1
C-N-H	102.50	124.30	1
OG-CB-HB3	87.19	109.00	1
CA-CB-HB3	87.19	109.00	1
HD21-CD2-HD22	88.18	110.00	1
C-N-H	102.48	124.30	1
HG2-CG-HG3	88.18	110.00	1
CG-CB-HB2	86.18	108.00	1
CG-CB-HB3	86.17	108.00	1
C-CA-HA3	130.83	109.00	1
CB-CA-HA	130.83	109.00	1
HZ2-NZ-HZ3	130.83	109.00	1
HA2-CA-HA3	87.16	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
HH11-NH1-HH12	98.16	120.00	1
SD-CG-HG2	86.15	108.00	1
N-CD-HD3	130.85	109.00	1
C-N-H	102.45	124.30	1
HH11-NH1-HH12	98.14	120.00	1
CD-CG-HG2	86.14	108.00	1
HB1-CB-HB2	88.13	110.00	1
CD1-CE1-HE1	141.89	120.00	1
CD-NE2-HE22	141.89	120.00	1
CB-CG2-HG23	130.89	109.00	1
CG-CD1-HD12	130.90	109.00	1
HA2-CA-HA3	87.10	109.00	1
SD-CG-HG2	86.10	108.00	1
HG2-CG-HG3	88.10	110.00	1
N-CD-HD2	130.90	109.00	1
HG2-CG-HG3	131.90	110.00	1
CG-CB-HB2	86.09	108.00	1
CG-CB-HB2	129.91	108.00	1
SD-CG-HG3	129.91	108.00	1
CG-CD2-HD22	130.91	109.00	1
HD2-CD-HD3	88.09	110.00	1
CZ-NH2-HH22	141.91	120.00	1
CD-CG-HG2	131.92	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
HB2-CB-HB3	88.08	110.00	1
CB-CG2-HG23	130.93	109.00	1
HG21-CG2-HG23	88.07	110.00	1
C-N-H	146.23	124.30	1
CB-CG-HG2	87.06	109.00	1
HB2-CB-HB3	88.06	110.00	1
CD-CG-HG3	86.06	108.00	1
CA-CB-HB	130.94	109.00	1
HB2-CB-HB3	88.05	110.00	1
OG-CB-HB3	130.95	109.00	1
CG-CB-HB2	86.04	108.00	1
C-N-H	102.34	124.30	1
C-N-H	102.33	124.30	1
CB-CG2-HG21	130.97	109.00	1
CD-CG-HG3	129.99	108.00	1
HD11-CD1-HD13	88.01	110.00	1
HB2-CB-HB3	88.00	110.00	1
CA-CB-HB2	131.00	109.00	1
CA-CB-HB3	131.00	109.00	1
C-N-H	102.29	124.30	1
CG-CB-HB2	85.99	108.00	1
CG-CB-HB2	130.02	108.00	1
HD12-CD1-HD13	87.98	110.00	1
CA-CB-HB2	131.02	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
HB2-CB-HB3	87.98	110.00	1
C-CA-HA	87.98	110.00	1
CA-CB-HB2	86.97	109.00	1
CB-CG2-HG23	131.03	109.00	1
C-CA-HA	86.97	109.00	1
OG1-CB-HB	86.97	109.00	1
SD-CG-HG3	130.04	108.00	1
CA-CB-HB1	131.05	109.00	1
CB-CG2-HG22	131.05	109.00	1
CG-CB-HB2	87.95	110.00	1
C-CA-HA	86.93	109.00	1
CD-CE-HE3	86.93	109.00	1
CE-NZ-HZ1	132.08	110.00	1
HA2-CA-HA3	86.92	109.00	1
HH21-NH2-HH22	97.92	120.00	1
C-CA-HA	131.09	109.00	1
CG-CB-HB2	130.09	108.00	1
CB-CG1-HG12	131.09	109.00	1
CD1-CE1-HE1	97.90	120.00	1
CB-CG-HG3	131.10	109.00	1
HG21-CG2-HG22	87.89	110.00	1
CD-CG-HG2	85.88	108.00	1
HG2-CG-HG3	87.88	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CD-CG-HG3	130.13	108.00	2
CD1-CE1-HE1	97.87	120.00	1
HD12-CD1-HD13	87.86	110.00	1
CB-CA-HA	131.14	109.00	1
CB-CG-HG2	86.86	109.00	1
CA-CB-HB3	131.15	109.00	1
CD-CG-HG2	85.85	108.00	1
CD-CG-HG2	85.84	108.00	1
HG22-CG2-HG23	132.16	110.00	1
CA-CB-HB2	131.16	109.00	1
HB2-CB-HB3	87.84	110.00	1
CA-CB-HB3	131.16	109.00	1
CG-CB-HB3	130.16	108.00	1
HB2-CB-HB3	87.83	110.00	1
HD21-ND2-HD22	142.18	120.00	1
CG-CB-HB3	85.82	108.00	1
CA-CB-HB2	131.18	109.00	1
CG-CB-HB3	130.18	108.00	1
HG2-CG-HG3	87.81	110.00	1
CG-CB-HB2	85.81	108.00	1
CA-CB-HB2	131.19	109.00	1
HG22-CG2-HG23	87.81	110.00	1
CG-CD1-HD11	131.19	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CA-CB-HB3	131.20	109.00	1
CB-CG-HG3	86.80	109.00	1
C-CA-HA2	86.80	109.00	1
C-CA-HA	131.20	109.00	1
CB-CA-HA	131.21	109.00	1
CA-CB-HB2	86.78	109.00	1
HG2-CG-HG3	87.78	110.00	1
HH21-NH2-HH22	97.78	120.00	1
CG-CB-HB3	85.77	108.00	1
N-CA-HA2	87.77	110.00	1
HG12-CG1-HG13	87.77	110.00	1
HG2-CG-HG3	87.76	110.00	1
C-N-H	102.06	124.30	1
HG22-CG2-HG23	86.76	109.00	1
CA-CB-HB2	131.24	109.00	1
CG-CB-HB3	130.25	108.00	1
C-CA-HA2	131.25	109.00	1
CG-CB-HB3	85.75	108.00	1
CA-CB-HB2	131.25	109.00	1
CA-CB-HB3	86.74	109.00	1
HB2-CB-HB3	87.74	110.00	1
HG22-CG2-HG23	132.27	110.00	1
CE2-CZ2-HZ2	143.53	121.25	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CA-CB-HB2	86.72	109.00	1
N-CA-HA2	132.28	110.00	1
HA2-CA-HA3	86.72	109.00	1
CB-CG-HG3	131.29	109.00	1
CG1-CD1-HD11	86.71	109.00	1
HG2-CG-HG3	87.70	110.00	1
CB-CG2-HG22	131.31	109.00	1
HB2-CB-HB3	87.69	110.00	3
CG-CB-HB2	85.68	108.00	1
HB2-CB-HB3	87.68	110.00	2
HG21-CG2-HG22	87.68	110.00	1
CA-CB-HB3	131.32	109.00	1
CB-CG2-HG23	131.33	109.00	1
CG-CB-HB2	130.33	108.00	1
N-CD-HD2	131.34	109.00	1
HB2-CB-HB3	87.65	110.00	1
CD-CE-HE2	131.35	109.00	1
C-CA-HA	131.35	109.00	1
CG-CD2-HD2	142.01	119.65	1
CA-CB-HB2	86.63	109.00	1
CE-NZ-HZ3	87.62	110.00	1
HB2-CB-HB3	87.62	110.00	1
CB-CG2-HG23	131.39	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CD-CG-HG2	87.60	110.00	1
CG-CB-HB2	130.40	108.00	1
HD12-CD1-HD13	132.40	110.00	1
C-CA-HA	131.42	109.00	1
HG2-CG-HG3	87.58	110.00	1
OG-CB-HB2	131.42	109.00	1
CB-CA-HA	131.42	109.00	1
HB2-CB-HB3	87.57	110.00	1
CG-CD1-HD1	147.34	124.90	1
CD-CG-HG2	130.44	108.00	1
C-CA-HA	86.55	109.00	1
HD21-ND2-HD22	97.55	120.00	1
C-N-H	101.84	124.30	1
CZ-NH1-HH11	142.47	120.00	1
CD-CG-HG2	130.47	108.00	1
C-CA-HA	86.52	109.00	1
HB2-CB-HB3	87.52	110.00	1
HA2-CA-HA3	86.52	109.00	1
CZ-NH2-HH21	142.49	120.00	1
HB2-CB-HB3	87.50	110.00	1
HD11-CD1-HD12	87.49	110.00	1
CB-CG1-HG13	131.51	109.00	1
CG-CB-HB3	130.51	108.00	1
CZ-CE1-HE1	142.51	120.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
HG11-CG1-HG13	87.48	110.00	1
CG-CB-HB2	130.52	108.00	1
CG-CB-HB3	130.52	108.00	1
HA2-CA-HA3	86.47	109.00	1
CG1-CD1-HD13	131.53	109.00	1
CA-CB-HB2	86.46	109.00	1
CG-CB-HB2	85.45	108.00	1
HD21-CD2-HD23	132.56	110.00	1
CB-CG-HG	131.56	109.00	1
HB2-CB-HB3	87.44	110.00	1
CB-CG-HG2	131.57	109.00	1
HB2-CB-HB3	87.42	110.00	1
CB-CG-HG2	131.58	109.00	1
CA-CB-HB2	131.59	109.00	2
CB-CG-HG2	131.59	109.00	1
HB2-CB-HB3	87.41	110.00	1
CG-CB-HB2	132.60	110.00	1
CG-CB-HB3	130.60	108.00	1
HB2-CB-HB3	87.40	110.00	1
CA-CB-HB2	131.61	109.00	1
HB2-CB-HB3	87.39	110.00	1
CD-CG-HG2	85.39	108.00	1
CA-CB-HB3	131.62	109.00	2
HG21-CG2-HG23	87.38	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
C-N-H	101.67	124.30	2
CG-CB-HB3	132.63	110.00	1
CG-CD2-HD21	131.65	109.00	1
NE-CD-HD3	130.65	108.00	1
CA-N-H	136.66	114.00	1
CA-CB-HB2	86.33	109.00	1
NZ-CE-HE3	85.33	108.00	1
OG-CB-HB3	86.32	109.00	1
HB2-CB-HB3	87.32	110.00	1
CG-CB-HB2	130.68	108.00	1
CA-CB-HB2	86.31	109.00	1
HD11-CD1-HD12	87.31	110.00	1
CG1-CD1-HD12	131.70	109.00	1
CB-CG-HG3	131.70	109.00	1
HH11-NH1-HH12	97.30	120.00	1
SD-CE-HE2	131.71	109.00	1
CA-CB-HB2	131.71	109.00	1
CB-CG-HG2	86.29	109.00	1
CG-CB-HB2	85.28	108.00	1
CA-CB-HB2	86.28	109.00	1
C-N-H	101.58	124.30	1
CG-CD1-HD1	102.17	124.90	1
C-N-H	101.57	124.30	1
HG12-CG1-HG13	87.26	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
HB2-CB-HB3	87.26	110.00	1
CG-CB-HB2	130.74	108.00	1
CA-CB-HB2	131.74	109.00	1
C-N-H	147.05	124.30	1
C-N-H	101.55	124.30	1
CG-CB-HB2	130.75	108.00	1
C-CA-HA	131.75	109.00	1
HG21-CG2-HG23	87.24	110.00	1
CA-N-H	91.23	114.00	1
CG-CB-HB3	85.23	108.00	1
CA-CB-HB2	131.77	109.00	1
CG1-CD1-HD12	131.77	109.00	1
N-CD-HD2	131.77	109.00	1
CD-CG-HG3	85.22	108.00	1
C-CA-HA3	131.79	109.00	1
CZ-NH1-HH11	97.21	120.00	1
CG-CD1-HD13	131.79	109.00	1
HD21-CD2-HD22	132.80	110.00	1
SG-CB-HB2	85.19	108.00	1
CG-CD-HD2	131.81	109.00	1
CB-CG2-HG22	131.81	109.00	1
CG-CB-HB2	130.83	108.00	1
CB-CG-HG3	86.16	109.00	1
HE2-CE-HE3	87.16	110.00	2

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CA-CB-HB2	86.16	109.00	1
C-CA-HA	86.16	109.00	1
CG-CB-HB3	85.16	108.00	1
HG21-CG2-HG22	87.15	110.00	1
HB2-CB-HB3	87.15	110.00	1
CE2-CZ-HZ	97.15	120.00	1
CA-CB-HB3	131.85	109.00	1
C-N-H	101.45	124.30	1
CH2-CZ2-HZ2	98.39	121.25	1
CB-CG-HG3	86.14	109.00	1
OG-CB-HB2	86.13	109.00	1
CG-CB-HB2	130.88	108.00	1
CB-CG2-HG23	132.88	110.00	1
CA-CB-HB3	86.10	109.00	1
CA-CB-HB2	131.91	109.00	1
CA-CB-HB2	86.08	109.00	1
HB2-CB-HB3	87.08	110.00	1
CG1-CD1-HD13	131.92	109.00	1
CZ-NH1-HH11	142.92	120.00	1
HG22-CG2-HG23	132.93	110.00	1
CG-CB-HB3	130.94	108.00	1
CB-CA-HA	131.94	109.00	1
HB2-CB-HB3	87.05	110.00	1
HG22-CG2-HG23	87.05	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
HD2-CD-HD3	87.05	110.00	1
HD12-CD1-HD13	87.05	110.00	1
CG-ND1-HD1	102.38	125.35	1
HB2-CB-HB3	87.03	110.00	1
CD-CG-HG2	85.03	108.00	1
CA-CB-HB3	131.97	109.00	1
CB-CG1-HG12	131.98	109.00	1
CA-CB-HB2	131.99	109.00	1
CG-ND2-HD21	97.00	120.00	1
HB2-CB-HB3	86.99	110.00	1
CD-NE2-HE22	143.01	120.00	1
C-CA-HA3	85.99	109.00	1
CD-CG-HG2	84.99	108.00	1
CZ-NH1-HH11	96.98	120.00	1
CB-CG-HG3	132.02	109.00	1
CA-CB-HB2	132.03	109.00	1
CA-CB-HB3	85.97	109.00	1
HB2-CB-HB3	86.96	110.00	1
CG-CD2-HD23	132.04	109.00	1
HG12-CG1-HG13	86.96	110.00	1
C-N-H	101.26	124.30	1
CG-CB-HB2	84.95	108.00	1
CG-ND2-HD21	143.05	120.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
NZ-CE-HE2	131.05	108.00	1
CG-CB-HB2	84.93	108.00	1
HG12-CG1-HG13	86.93	110.00	1
CE-CD-HD2	131.07	108.00	1
HG12-CG1-HG13	86.92	110.00	1
CD-CE-HE2	85.92	109.00	1
CB-CG-HG2	132.08	109.00	1
CG-CB-HB2	131.09	108.00	1
SD-CE-HE3	85.90	109.00	1
CG-CB-HB2	131.10	108.00	1
N-CA-HA3	86.90	110.00	1
SD-CE-HE1	85.90	109.00	1
HG12-CG1-HG13	86.90	110.00	1
CG-CB-HB3	131.11	108.00	1
SD-CG-HG3	84.89	108.00	1
CA-CB-HB3	85.88	109.00	1
CA-N-H	137.12	114.00	1
CB-CG-HG	132.13	109.00	1
CZ-NH1-HH12	143.13	120.00	1
CA-CB-HB2	132.13	109.00	1
CD-CG-HG3	84.87	108.00	1
SD-CE-HE1	85.86	109.00	1
CG-CB-HB2	84.86	108.00	1
CE-NZ-HZ3	133.15	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CG2-CB-HB	131.16	108.00	1
CD-CG-HG2	131.16	108.00	1
CZ-NH1-HH12	143.17	120.00	1
CB-CA-HA	132.19	109.00	1
HG21-CG2-HG22	86.81	110.00	1
HB2-CB-HB3	86.81	110.00	1
HG2-CG-HG3	86.80	110.00	1
CA-CB-HB3	85.80	109.00	1
HB2-CB-HB3	86.80	110.00	1
HB2-CB-HB3	86.79	110.00	1
CD1-CE1-HE1	96.99	120.20	1
HA2-CA-HA3	85.79	109.00	1
CA-CB-HB2	85.79	109.00	1
HB2-CB-HB3	86.78	110.00	1
CB-CG-HG3	85.78	109.00	1
C-N-H	101.08	124.30	1
CD-CE-HE2	132.22	109.00	1
HD21-ND2-HD22	96.78	120.00	1
CA-CB-HB3	85.78	109.00	1
CG-CB-HB2	84.78	108.00	1
CA-CB-HB2	132.23	109.00	1
CZ-NH1-HH11	96.77	120.00	1
CG-CD-HD3	85.76	109.00	1
HB2-CB-HB3	86.76	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
HG21-CG2-HG23	86.76	110.00	1
HG22-CG2-HG23	86.76	110.00	1
CG-CB-HB2	84.75	108.00	1
HG21-CG2-HG22	86.75	110.00	1
CA-CB-HB2	85.75	109.00	1
CZ-NH1-HH11	96.74	120.00	1
HG2-CG-HG3	86.73	110.00	1
CA-CB-HB3	132.27	109.00	1
CB-CG1-HG13	132.28	109.00	1
HG12-CG1-HG13	86.72	110.00	1
HB2-CB-HB3	86.72	110.00	1
CG-CB-HB2	84.71	108.00	2
HD11-CD1-HD13	133.31	110.00	1
CA-N-H	137.31	114.00	1
HG2-CG-HG3	86.69	110.00	1
N-CD-HD3	132.32	109.00	1
HG12-CG1-HG13	86.67	110.00	1
CB-CG2-HG23	132.33	109.00	1
CA-CB-HB3	132.34	109.00	1
C-CA-HA2	85.66	109.00	1
HG22-CG2-HG23	86.66	110.00	1
SD-CE-HE3	85.66	109.00	1
CB-CG1-HG12	132.35	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
HD12-CD1-HD13	86.65	110.00	1
CG-ND2-HD22	96.64	120.00	1
CD1-CG1-HG13	84.64	108.00	1
CA-N-H	137.36	114.00	1
HB2-CB-HB3	86.64	110.00	1
HA2-CA-HA3	85.64	109.00	1
CG-CB-HB3	131.37	108.00	1
HG2-CG-HG3	86.63	110.00	1
CG-CB-HB3	84.63	108.00	1
CB-CG2-HG22	132.37	109.00	1
CG-CB-HB2	131.38	108.00	1
CA-CB-HB2	85.62	109.00	1
HB2-CB-HB3	86.61	110.00	1
CB-CG-HG2	132.39	109.00	1
HG2-CG-HG3	86.61	110.00	1
CA-CB-HB3	132.40	109.00	1
NE-CD-HD3	131.41	108.00	1
CB-CG-HG2	132.42	109.00	1
HG2-CG-HG3	86.58	110.00	1
CG-CD2-HD23	132.42	109.00	1
CB-CG-HG3	85.58	109.00	1
HB2-CB-HB3	86.58	110.00	1
HD21-CD2-HD22	133.43	110.00	1
C-N-H	100.87	124.30	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CA-CB-HB3	85.57	109.00	1
CA-N-H	137.44	114.00	1
C-N-H	100.86	124.30	1
CB-CG-HG2	132.44	109.00	1
CB-CG-HG3	132.44	109.00	1
CG-CD1-HD1	95.95	119.40	1
N-CA-HA	86.55	110.00	1
NZ-CE-HE2	131.45	108.00	1
CG-CB-HB2	131.46	108.00	1
CA-CB-HB1	132.47	109.00	1
HD2-CD-HD3	133.48	110.00	1
HB2-CB-HB3	86.52	110.00	1
HG2-CG-HG3	86.52	110.00	1
HG11-CG1-HG13	86.52	110.00	1
CG-CD-HD3	85.52	109.00	1
HG21-CG2-HG22	86.51	110.00	1
HH11-NH1-HH12	96.51	120.00	1
CA-CB-HB3	132.50	109.00	1
CD-CG-HG2	131.50	108.00	1
CG-CD-HD3	85.49	109.00	1
CB-SG-HG	148.19	109.00	1
C-CA-HA	85.48	109.00	1
CA-CB-HB2	132.52	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
C-N-H	100.78	124.30	1
CA-CB-HB3	85.48	109.00	1
CG-CB-HB3	84.48	108.00	1
CG-CD-HD3	132.53	109.00	1
CG-CD-HD2	85.47	109.00	1
HG12-CG1-HG13	86.46	110.00	1
CB-CA-HA	132.54	109.00	1
CG-CB-HB2	131.54	108.00	1
CD-CG-HG2	84.46	108.00	1
HB2-CB-HB3	133.55	110.00	1
HB2-CB-HB3	86.45	110.00	1
CG1-CD1-HD13	132.56	109.00	1
CA-CB-HB2	85.43	109.00	1
HB2-CB-HB3	86.43	110.00	1
OG-CB-HB3	85.43	109.00	1
NE-CD-HD3	84.43	108.00	1
CG-CB-HB3	131.58	108.00	2
HG22-CG2-HG23	86.42	110.00	1
CZ-CE2-HE2	96.61	120.20	1
NZ-CE-HE2	84.41	108.00	1
HG2-CG-HG3	86.41	110.00	1
N-CA-HA2	86.40	110.00	1
CG1-CD1-HD11	132.60	109.00	1
HD11-CD1-HD12	86.40	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CG1-CD1-HD12	85.40	109.00	1
CZ-NH1-HH11	96.39	120.00	1
HB2-CB-HB3	86.39	110.00	1
C-CA-HA	132.62	109.00	1
CG-CB-HB3	131.62	108.00	1
HB2-CB-HB3	86.38	110.00	1
CD-CG-HG3	84.38	108.00	1
N-CD-HD2	85.38	109.00	1
CA-CB-HB2	132.62	109.00	1
HE2-CE-HE3	86.37	110.00	1
CG-CD2-HD21	132.63	109.00	1
SD-CG-HG2	84.37	108.00	1
CB-CA-HA	132.63	109.00	1
HB2-CB-HB3	86.36	110.00	1
CG-CB-HB2	84.36	108.00	1
CE-NZ-HZ1	133.66	110.00	1
HB2-CB-HB3	86.34	110.00	1
CB-CG-HG3	132.67	109.00	1
SD-CE-HE2	85.33	109.00	1
HA2-CA-HA3	85.33	109.00	1
CA-CB-HB2	132.68	109.00	1
CB-CG2-HG22	132.68	109.00	1
CG-CB-HB3	84.31	108.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CZ-NH2-HH21	96.31	120.00	1
SD-CE-HE3	85.31	109.00	1
C-N-H	100.61	124.30	1
CD-CE-HE2	132.69	109.00	1
CA-CB-HB3	132.69	109.00	1
HD11-CD1-HD12	86.30	110.00	1
SD-CE-HE2	85.30	109.00	1
HB2-CB-HB3	86.29	110.00	1
HG2-CG-HG3	86.29	110.00	1
CG-CB-HB2	131.71	108.00	1
CG-CD-HD2	132.73	109.00	1
C-N-H	148.03	124.30	1
CZ-NH2-HH22	143.74	120.00	1
HG21-CG2-HG22	86.25	110.00	1
HB2-CB-HB3	86.25	110.00	1
CG-CB-HB3	84.24	108.00	1
HH21-NH2-HH22	96.24	120.00	1
NZ-CE-HE3	84.24	108.00	1
CG-CB-HB2	131.76	108.00	1
CG-CB-HB3	131.76	108.00	1
CD-CE-HE2	132.76	109.00	1
HE1-CE-HE2	133.77	110.00	1
HB2-CB-HB3	86.23	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
HG22-CG2-HG23	86.22	110.00	1
CA-CB-HB3	85.21	109.00	1
CD-CG-HG3	131.79	108.00	1
SD-CE-HE1	85.20	109.00	1
CA-CB-HB3	85.20	109.00	1
HG12-CG1-HG13	86.19	110.00	1
OG-CB-HB3	132.81	109.00	1
CZ-NH1-HH11	143.81	120.00	1
CE-NZ-HZ2	133.81	110.00	1
C-CA-HA2	85.18	109.00	1
CA-CB-HB2	85.17	109.00	1
HG2-CG-HG3	86.17	110.00	1
HD11-CD1-HD13	86.16	110.00	1
CG-CB-HB2	84.16	108.00	1
SD-CG-HG3	84.16	108.00	1
CG-CD2-HD21	132.85	109.00	1
HD2-CD-HD3	86.14	110.00	1
OG-CB-HB3	85.12	109.00	1
CD-CG-HG2	131.88	108.00	1
CD-CG-HG2	84.11	108.00	1
CA-CB-HB2	85.11	109.00	1
CG-CD-HD3	85.11	109.00	1
C-N-H	100.41	124.30	1
CG1-CD1-HD12	132.90	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CA-N-H	137.91	114.00	1
CD-CE-HE3	85.09	109.00	1
C-N-H	100.39	124.30	1
HG2-CG-HG3	86.08	110.00	1
CA-CB-HB3	132.92	109.00	2
CG-CB-HB3	84.08	108.00	1
HB2-CB-HB3	86.08	110.00	1
CZ-NH2-HH21	143.93	120.00	1
CB-CG1-HG13	85.07	109.00	1
CA-N-H	137.94	114.00	1
CA-CB-HB2	132.94	109.00	1
HG22-CG2-HG23	86.05	110.00	1
HD2-CD-HD3	86.05	110.00	1
CD-CG-HG2	86.05	110.00	1
CG-CB-HB3	84.05	108.00	1
CG-CD1-HD13	132.96	109.00	1
C-N-H	100.34	124.30	2
HB2-CB-HB3	86.04	110.00	1
HB2-CB-HB3	86.03	110.00	1
HD2-CD-HD3	86.03	110.00	1
NE2-CD2-HD2	102.43	126.40	1
CA-CB-HB3	132.97	109.00	1
CD-CG-HG3	84.03	108.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CG-CB-HB3	84.03	108.00	1
HG21-CG2-HG22	86.03	110.00	1
CB-CG-HG2	132.98	109.00	1
C-N-H	100.31	124.30	1
CA-CB-HB2	132.99	109.00	1
HG2-CG-HG3	133.99	110.00	1
HD2-CD-HD3	86.01	110.00	1
HD2-CD-HD3	85.98	110.00	1
C-N-H	148.32	124.30	1
HD21-CD2-HD23	85.97	110.00	1
C-N-H	100.27	124.30	1
CB-CG1-HG12	133.03	109.00	1
HG2-CG-HG3	85.97	110.00	1
HB2-CB-HB3	85.96	110.00	1
CA-CB-HB3	133.04	109.00	1
CG-CB-HB2	132.05	108.00	1
N-CD-HD2	133.05	109.00	1
HD2-CD-HD3	134.05	110.00	1
CB-CG2-HG21	133.05	109.00	1
CG-CB-HB3	132.05	108.00	1
OG-CB-HB3	84.95	109.00	1
HG21-CG2-HG23	85.94	110.00	1
HB2-CB-HB3	85.94	110.00	1
CB-CA-HA	133.06	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
OG-CB-HB3	84.94	109.00	1
CA-CB-HB1	133.06	109.00	1
NZ-CE-HE3	83.92	108.00	1
HG2-CG-HG3	85.92	110.00	1
C-N-H	100.22	124.30	1
CA-CB-HB2	84.92	109.00	1
CD1-CG1-HG12	83.91	108.00	1
HD2-CD-HD3	134.09	110.00	1
CA-CB-HB2	133.10	109.00	1
CG-CB-HB3	83.90	108.00	1
C-CA-HA3	84.90	109.00	1
HD12-CD1-HD13	85.88	110.00	1
CB-CG2-HG22	133.12	109.00	1
CA-CB-HB2	84.88	109.00	1
CA-CB-HB2	133.12	109.00	1
CG-CB-HB3	134.13	110.00	1
CA-CB-HB3	133.13	109.00	1
C-N-H	100.17	124.30	1
N-CA-HA3	134.14	110.00	1
HB2-CB-HB3	85.86	110.00	1
CG-CD1-HD13	133.15	109.00	1
HD11-CD1-HD12	134.16	110.00	1
HB2-CB-HB3	85.84	110.00	1
CA-CB-HB2	133.16	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CA-CB-HB3	133.16	109.00	1
HE21-NE2-HE22	95.83	120.00	1
CA-CB-HB2	133.17	109.00	1
CE-NZ-HZ1	134.17	110.00	1
CG2-CB-HB	133.18	109.00	1
CB-CA-HA	133.18	109.00	1
HE2-CE-HE3	134.19	110.00	1
CG-CB-HB2	132.19	108.00	1
CA-CB-HB2	133.20	109.00	1
CD-CG-HG3	85.79	110.00	1
N-CA-HA	134.21	110.00	1
HG12-CG1-HG13	85.79	110.00	1
CG-CD-HD2	133.23	109.00	1
CG-CB-HB3	132.24	108.00	1
SD-CG-HG3	132.24	108.00	1
CG-CB-HB2	132.25	108.00	1
CG-CB-HB3	132.26	108.00	1
CG-CB-HB3	83.73	108.00	1
HD2-CD-HD3	85.73	110.00	1
CE1-ND1-HD1	101.08	125.35	1
CD-CE-HE3	133.28	109.00	1
HB2-CB-HB3	85.72	110.00	2
C-CA-HA3	84.71	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CA-CB-HB3	84.71	109.00	1
HB2-CB-HB3	85.70	110.00	1
CD2-CE2-HE2	144.50	120.20	1
C-N-H	100.00	124.30	1
CZ-CE2-HE2	95.90	120.20	1
CA-CB-HB2	133.30	109.00	1
HB2-CB-HB3	85.69	110.00	1
SD-CE-HE3	84.69	109.00	1
CG-CB-HB3	83.69	108.00	1
CB-CG2-HG21	133.32	109.00	1
C-N-H	99.98	124.30	1
C-N-H	99.97	124.30	1
CB-CG-HG	133.33	109.00	1
CA-N-H	138.34	114.00	1
N-CA-HA2	85.66	110.00	1
HD22-CD2-HD23	85.65	110.00	1
C-N-H	99.94	124.30	1
HD2-CD-HD3	85.64	110.00	1
CG1-CD1-HD13	133.36	109.00	1
CD-CG-HG3	83.64	108.00	1
CB-CG-HG2	133.36	109.00	1
C-CA-HA2	84.63	109.00	1
C-CA-HA3	133.37	109.00	1
CB-CG-HG2	84.62	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
HG2-CG-HG3	85.62	110.00	1
CG-CB-HB2	83.62	108.00	1
CD-CG-HG2	85.61	110.00	1
CA-CB-HB2	133.39	109.00	1
CA-CB-HB3	84.61	109.00	1
NE-CD-HD2	83.61	108.00	1
OG-CB-HB3	84.60	109.00	1
CG-CB-HB3	132.41	108.00	1
CD-CG-HG3	83.58	108.00	2
HD11-CD1-HD12	85.57	110.00	1
HH11-NH1-HH12	144.44	120.00	1
CA-N-H	89.56	114.00	1
HB2-CB-HB3	85.56	110.00	1
CA-CB-HB3	133.45	109.00	1
CD-CG-HG2	83.54	108.00	1
CA-CB-HB3	133.46	109.00	1
CD-CG-HG3	132.46	108.00	1
HD11-CD1-HD12	85.52	110.00	1
CB-CG-HG3	133.49	109.00	1
HB2-CB-HB3	85.50	110.00	2
CB-CG-HG2	84.50	109.00	1
HD11-CD1-HD13	85.50	110.00	1
CG-CD1-HD13	133.52	109.00	1
N-CA-HA2	134.52	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
N-CA-HA3	134.53	110.00	1
CD2-CE2-HE2	144.74	120.20	1
CA-CB-HB3	133.56	109.00	2
HA2-CA-HA3	84.44	109.00	1
CA-CB-HB2	133.56	109.00	1
CG-CB-HB3	83.44	108.00	1
CG-CD2-HD23	133.56	109.00	1
HG11-CG1-HG13	85.43	110.00	1
N-CA-HA3	134.58	110.00	1
HB2-CB-HB3	85.41	110.00	1
HG11-CG1-HG12	85.41	110.00	1
CB-CG-HG3	133.60	109.00	1
N-CD-HD2	133.60	109.00	1
CD-CG-HG3	83.39	108.00	1
CD-CG-HG3	132.61	108.00	1
CB-CG1-HG13	133.62	109.00	1
OG-CB-HB2	84.37	109.00	1
CG-CB-HB2	83.36	108.00	1
CD2-CG-HG	132.64	108.00	1
HZ1-NZ-HZ2	133.64	109.00	1
HA2-CA-HA3	84.35	109.00	1
CB-CG-HG3	133.66	109.00	1
CG-CB-HB2	83.34	108.00	1
HG21-CG2-HG23	134.68	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CA-N-H	138.69	114.00	1
CG-CD-HD2	84.30	109.00	1
HG2-CG-HG3	85.30	110.00	1
HD22-CD2-HD23	85.30	110.00	1
C-CA-HA3	84.30	109.00	1
CA-CB-HB3	133.71	109.00	1
CG-CB-HB2	132.72	108.00	1
CG-ND2-HD21	144.72	120.00	1
HB2-CB-HB3	85.28	110.00	1
CD-NE2-HE21	95.28	120.00	1
CZ-CE1-HE1	95.48	120.20	1
CG-CB-HB3	132.73	108.00	1
CD-CG-HG3	83.27	108.00	1
C-N-H	99.56	124.30	1
CG-CB-HB2	83.26	108.00	1
CG-CB-HB2	132.74	108.00	1
SD-CE-HE3	84.26	109.00	1
C-N-H	99.55	124.30	1
HB2-CB-HB3	85.25	110.00	1
CB-CG-HG2	133.75	109.00	1
CG-ND2-HD21	144.75	120.00	1
CG-CB-HB3	83.24	108.00	1
CG-CB-HB3	132.77	108.00	1
HG12-CG1-HG13	85.22	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CB-CG-HG3	84.22	109.00	1
HG2-CG-HG3	85.22	110.00	1
CB-CG2-HG22	84.21	109.00	1
CG-ND2-HD21	144.79	120.00	1
CA-CB-HB3	84.20	109.00	1
CG-CB-HB3	83.20	108.00	1
HB2-CB-HB3	85.20	110.00	1
CB-CG1-HG13	133.80	109.00	1
CA-N-H	138.81	114.00	1
CG-CD1-HD12	133.82	109.00	1
CA-N-H	138.83	114.00	1
CG-ND1-HD1	150.18	125.35	1
CG-CD1-HD11	133.84	109.00	1
CG-CB-HB2	83.16	108.00	1
HB2-CB-HB3	85.15	110.00	1
CD1-CG1-HG12	83.14	108.00	1
CB-CG2-HG23	133.87	109.00	1
HB2-CB-HB3	85.13	110.00	1
CA-CB-HB2	133.88	109.00	1
HD21-CD2-HD22	85.12	110.00	1
OG-CB-HB3	133.88	109.00	1
HG2-CG-HG3	85.11	110.00	1
CG-CB-HB2	83.10	108.00	1
SD-CG-HG2	83.09	108.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
C-CA-HA	84.09	109.00	1
N-CA-HA	134.91	110.00	1
C-N-H	99.38	124.30	1
CG-CB-HB3	83.06	108.00	1
CZ-NH1-HH12	95.06	120.00	1
HD11-CD1-HD12	85.06	110.00	1
CA-CB-HB2	133.95	109.00	2
CB-CG-HG2	133.96	109.00	1
CG-CD-HD3	133.96	109.00	1
HD22-CD2-HD23	85.04	110.00	1
HD2-CD-HD3	85.04	110.00	1
CG-CD-HD2	133.96	109.00	1
CZ-CE1-HE1	95.02	120.00	1
HG2-CG-HG3	85.01	110.00	1
HE21-NE2-HE22	95.01	120.00	1
SD-CE-HE1	133.99	109.00	1
HB2-CB-HB3	85.01	110.00	1
HG11-CG1-HG12	135.00	110.00	1
CD-CG-HG2	133.00	108.00	1
CA-CB-HB3	134.00	109.00	1
CE-CD-HD3	133.01	108.00	1
CA-N-H	139.01	114.00	1
C-N-H	99.29	124.30	1
CE2-CZ-HZ	94.99	120.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CG-CB-HB2	133.01	108.00	1
CA-CB-HB3	83.97	109.00	1
OG-CB-HB2	83.97	109.00	1
OG-CB-HB3	134.03	109.00	1
SD-CE-HE3	83.96	109.00	1
CA-CB-HB3	134.06	109.00	1
CB-CG1-HG13	134.07	109.00	1
CA-CB-HB2	134.07	109.00	1
CA-CB-HB2	83.93	109.00	1
HB2-CB-HB3	84.92	110.00	1
CA-CB-HB3	134.09	109.00	1
CG-CB-HB3	82.90	108.00	1
SG-CB-HB2	133.11	108.00	1
HA2-CA-HA3	83.89	109.00	1
CG-CD2-HD21	134.12	109.00	1
HG22-CG2-HG23	84.87	110.00	1
HD11-CD1-HD12	84.87	110.00	1
CG-CB-HB2	133.13	108.00	1
CD-CG-HG2	82.87	108.00	1
C-N-H	99.16	124.30	1
CD1-CG1-HG12	82.86	108.00	1
N-CD-HD3	134.15	109.00	1
C-N-H	99.15	124.30	2

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CG-CB-HB3	84.85	110.00	1
HD11-CD1-HD13	84.85	110.00	1
CA-CB-HB2	134.16	109.00	1
CG-CB-HB3	133.17	108.00	1
CD1-CG1-HG12	82.83	108.00	1
CD-CE-HE2	134.17	109.00	1
CG-CB-HB2	82.82	108.00	1
CA-CB-HB2	134.19	109.00	1
C-N-H	99.11	124.30	1
N-CA-HA3	135.19	110.00	1
CA-CB-HB3	134.19	109.00	1
HG2-CG-HG3	84.80	110.00	1
CB-CG1-HG12	134.20	109.00	1
NZ-CE-HE2	82.79	108.00	1
C-N-H	99.08	124.30	1
CB-CG-HG2	134.23	109.00	1
C-CA-HA	83.77	109.00	1
CA-CB-HB3	134.24	109.00	1
C-N-H	99.06	124.30	1
CG-CB-HB2	82.75	108.00	1
HD21-CD2-HD23	84.75	110.00	1
CG-CB-HB3	133.25	108.00	1
CA-CB-HB3	134.25	109.00	1
CD-CG-HG2	82.75	108.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
NE-CD-HD3	82.75	108.00	1
OG-CB-HB3	134.26	109.00	1
HD2-CD-HD3	84.74	110.00	1
CD1-CG1-HG12	82.74	108.00	1
HB2-CB-HB3	84.73	110.00	1
CE1-NE2-HE2	100.22	125.50	1
CB-CG-HG2	134.29	109.00	1
OG-CB-HB3	83.71	109.00	1
SD-CE-HE3	83.69	109.00	1
CA-CB-HB2	83.69	109.00	1
N-CA-HA2	84.69	110.00	1
CA-CB-HB3	134.32	109.00	1
CE-CD-HD2	133.32	108.00	1
HE1-CE-HE2	135.32	110.00	1
CD1-CG1-HG13	133.33	108.00	1
HE2-CE-HE3	135.33	110.00	1
CZ-NH1-HH12	145.34	120.00	1
C-N-H	149.65	124.30	1
CG-CB-HB3	133.37	108.00	1
OG-CB-HB2	134.37	109.00	1
HG21-CG2-HG23	135.37	110.00	1
CD-CE-HE3	134.38	109.00	1
CE-NZ-HZ1	135.38	110.00	1
CG-CB-HB2	84.61	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CA-CB-HB2	134.39	109.00	1
CB-CG-HG3	134.40	109.00	1
CB-CG-HG2	83.59	109.00	1
CE2-CZ-HZ	145.41	120.00	1
HG21-CG2-HG23	134.43	109.00	1
CD-CG-HG2	133.46	108.00	1
CG-CB-HB3	82.54	108.00	2
HG12-CG1-HG13	84.54	110.00	1
CA-CB-HB2	83.52	109.00	1
CD-CG-HG3	82.52	108.00	1
CG-CD-HD3	83.52	109.00	1
CG-CB-HB3	82.51	108.00	1
CA-CB-HB2	134.51	109.00	1
HG2-CG-HG3	84.49	110.00	2
CE-NZ-HZ2	135.51	110.00	1
HB2-CB-HB3	84.48	110.00	1
CD-CG-HG3	133.52	108.00	1
CA-CB-HB3	134.53	109.00	1
CG-ND1-HD1	150.88	125.35	1
CD-CG-HG2	84.47	110.00	1
CB-CG-HG3	134.53	109.00	1
C-N-H	98.76	124.30	1
SD-CE-HE3	83.46	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
HG2-CG-HG3	84.43	110.00	1
C-N-H	149.89	124.30	1
HG12-CG1-HG13	84.40	110.00	1
CA-CB-HB3	83.40	109.00	1
SD-CG-HG3	82.40	108.00	1
CG-CD2-HD22	134.60	109.00	1
C-N-H	98.70	124.30	1
CD-CG-HG3	135.61	110.00	1
C-N-H	98.69	124.30	1
HD11-CD1-HD13	84.39	110.00	1
HH11-NH1-HH12	94.39	120.00	1
SD-CG-HG2	133.62	108.00	1
CA-CB-HB2	134.62	109.00	1
CA-CB-HB2	83.38	109.00	1
C-CA-HA	134.63	109.00	1
HD21-CD2-HD23	84.35	110.00	1
CG1-CD1-HD12	134.65	109.00	1
CB-CA-HA	134.65	109.00	1
CA-CB-HB2	134.66	109.00	1
CG-CD-HD3	134.66	109.00	1
NE2-CD2-HD2	100.73	126.40	1
CA-CB-HB2	134.68	109.00	1
SD-CG-HG2	82.32	108.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CD-CG-HG2	82.31	108.00	1
N-CA-HA	84.30	110.00	1
CA-CB-HB2	134.70	109.00	1
CA-CB-HB2	134.71	109.00	1
HA2-CA-HA3	83.28	109.00	1
CA-CB-HB2	134.72	109.00	1
CB-SG-HG	151.88	109.00	1
CD-CG-HG2	135.73	110.00	1
C-N-H	98.56	124.30	2
SD-CG-HG2	82.25	108.00	1
CG-CD-HD3	83.24	109.00	1
CA-CB-HB3	83.23	109.00	1
CG2-CB-HB	83.22	109.00	1
C-N-H	98.52	124.30	1
HG21-CG2-HG22	84.22	110.00	1
CB-SG-HG	151.97	109.00	1
HH11-NH1-HH12	94.22	120.00	1
CB-CG-HG2	134.79	109.00	1
OG1-CB-HB	83.21	109.00	1
CB-CA-HA	134.79	109.00	1
CA-CB-HB2	134.80	109.00	1
C-CA-HA	83.19	109.00	1
HB2-CB-HB3	84.19	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CA-CB-HB3	134.81	109.00	1
CA-CB-HB3	134.82	109.00	1
CB-CG-HG3	134.82	109.00	1
CD-CG-HG3	82.18	108.00	1
C-N-H	98.48	124.30	1
CA-CB-HB2	83.17	109.00	1
CB-CG-HG2	134.83	109.00	1
HD22-CD2-HD23	84.17	110.00	1
C-CA-HA3	134.83	109.00	1
CA-CB-HB3	83.16	109.00	1
CA-CB-HB2	134.84	109.00	1
C-CA-HA	83.16	109.00	1
CD-CG-HG2	135.84	110.00	1
C-N-H	98.44	124.30	1
CA-CB-HB2	83.13	109.00	1
CB-CG-HG2	83.13	109.00	1
CG-CB-HB2	133.88	108.00	1
CA-CB-HB3	134.88	109.00	1
OG-CB-HB2	83.12	109.00	1
HH11-NH1-HH12	94.12	120.00	1
SD-CE-HE1	83.12	109.00	1
C-N-H	98.42	124.30	1
CB-CG-HG3	134.89	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CA-CB-HB2	134.89	109.00	1
HE2-CE-HE3	84.10	110.00	1
CA-CB-HB2	134.90	109.00	1
CB-CG2-HG21	134.90	109.00	1
CB-CG-HG3	134.90	109.00	1
CD-CE-HE3	134.91	109.00	1
HG2-CG-HG3	84.09	110.00	1
CB-CG2-HG22	134.91	109.00	1
CA-CB-HB2	83.09	109.00	1
CD-CG-HG3	82.08	108.00	1
HG2-CG-HG3	84.08	110.00	1
CG-CB-HB2	133.93	108.00	1
HA2-CA-HA3	83.07	109.00	1
CG-CB-HB3	82.07	108.00	1
HG21-CG2-HG22	84.07	110.00	1
CD1-CG1-HG12	82.06	108.00	1
NE-CD-HD2	82.06	108.00	1
HA2-CA-HA3	83.05	109.00	1
CA-CB-HB2	134.95	109.00	1
SD-CG-HG2	82.04	108.00	1
CA-CB-HB2	83.04	109.00	1
CA-CB-HB3	134.96	109.00	1
HB2-CB-HB3	84.04	110.00	1
HD2-CD-HD3	135.98	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CD-CG-HG3	82.01	108.00	1
CD1-CG1-HG13	82.01	108.00	1
CD-CG-HG2	82.01	108.00	1
HB2-CB-HB3	84.00	110.00	1
CA-CB-HB1	135.00	109.00	1
HB2-CB-HB3	83.99	110.00	1
CG-CD1-HD11	135.01	109.00	1
CB-CA-HA	135.01	109.00	1
CZ-NH2-HH21	146.02	120.00	1
NZ-CE-HE2	81.97	108.00	1
CD-CG-HG3	81.97	108.00	1
HD2-CD-HD3	83.95	110.00	1
CB-CG2-HG22	135.06	109.00	1
CB-CG-HG3	82.94	109.00	1
HG12-CG1-HG13	83.93	110.00	1
CA-CB-HB3	135.07	109.00	2
CG-CB-HB2	134.07	108.00	1
CD-CG-HG3	81.93	108.00	1
SD-CE-HE1	82.92	109.00	1
CE1-CZ-HZ	93.92	120.00	1
CA-CB-HB2	135.08	109.00	1
HB2-CB-HB3	83.90	110.00	1
CB-CG-HG3	82.90	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CA-CB-HB3	135.11	109.00	1
HB2-CB-HB3	83.89	110.00	2
SD-CE-HE2	82.88	109.00	1
HZ1-NZ-HZ2	82.87	109.00	1
HD2-CD-HD3	136.13	110.00	1
HG12-CG1-HG13	83.86	110.00	1
HD21-CD2-HD22	136.15	110.00	1
NE-CD-HD3	81.85	108.00	1
HB2-CB-HB3	83.85	110.00	1
HB2-CB-HB3	83.84	110.00	1
CB-CG1-HG13	135.16	109.00	1
CG-CB-HB3	81.83	108.00	1
CG-CD-HD2	82.82	109.00	1
CA-CB-HB2	82.82	109.00	1
CA-CB-HB3	135.18	109.00	1
C-N-H	98.12	124.30	1
N-CA-HA2	136.19	110.00	1
CE-CD-HD3	134.19	108.00	1
HB2-CB-HB3	83.79	110.00	1
CG-CD-HD3	82.79	109.00	1
OG-CB-HB3	135.21	109.00	1
HG2-CG-HG3	83.78	110.00	1
CA-CB-HB3	135.22	109.00	1
HB2-CB-HB3	83.77	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CA-CB-HB2	135.23	109.00	1
CB-CG-HG3	82.76	109.00	1
CA-CB-HB2	82.76	109.00	1
HB2-CB-HB3	83.76	110.00	1
CA-CB-HB3	135.25	109.00	1
CE-NZ-HZ1	136.25	110.00	1
C-N-H	98.05	124.30	1
CZ-NH1-HH12	93.74	120.00	1
CG-CB-HB3	81.73	108.00	1
CD-CG-HG2	134.27	108.00	1
CD-CG-HG3	81.72	108.00	1
HB2-CB-HB3	83.72	110.00	1
CD-CG-HG2	134.28	108.00	1
CD-NE2-HE21	146.28	120.00	1
HE2-CE-HE3	83.71	110.00	1
CG-CB-HB3	134.29	108.00	1
CA-CB-HB3	135.31	109.00	1
HG21-CG2-HG22	83.68	110.00	1
CD-CG-HG3	81.68	108.00	1
HB2-CB-HB3	83.67	110.00	3
CD-CE-HE3	82.67	109.00	1
CG-CB-HB2	83.66	110.00	1
HD21-CD2-HD22	83.66	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CG-CD-HD3	82.66	109.00	1
CG-CB-HB3	81.66	108.00	2
CA-CB-HB2	135.34	109.00	1
CD-CG-HG3	134.34	108.00	1
CG-CB-HB3	81.65	108.00	1
C-CA-HA3	135.37	109.00	1
CG-CB-HB3	83.63	110.00	1
HE1-CE-HE3	136.38	110.00	1
CA-CB-HB	135.38	109.00	1
HA2-CA-HA3	82.62	109.00	1
HB2-CB-HB3	83.62	110.00	1
HB2-CB-HB3	136.38	110.00	1
CD1-CG1-HG12	81.60	108.00	1
C-CA-HA	82.59	109.00	1
HD22-CD2-HD23	83.59	110.00	1
CB-CG2-HG21	135.41	109.00	1
CG-CB-HB3	134.41	108.00	1
HG2-CG-HG3	83.58	110.00	1
HD2-CD-HD3	83.57	110.00	1
SD-CE-HE3	82.57	109.00	1
HB2-CB-HB3	83.57	110.00	1
HE21-NE2-HE22	93.57	120.00	1
C-N-H	97.87	124.30	1
HB2-CB-HB3	83.56	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
N-CA-HA	83.55	110.00	2
CB-CG2-HG22	136.45	110.00	1
CD-CG-HG2	81.54	108.00	1
HH11-NH1-HH12	93.53	120.00	1
CA-CB-HB2	135.48	109.00	1
CB-CG-HG2	82.51	109.00	1
HB2-CB-HB3	83.51	110.00	1
CB-CG1-HG13	135.49	109.00	1
N-CA-HA3	83.50	110.00	1
CA-CB-HB3	82.50	109.00	1
CD-CG-HG3	81.49	108.00	1
HE2-CE-HE3	83.48	110.00	1
CG-CB-HB3	81.47	108.00	1
CB-CG1-HG12	135.53	109.00	1
HH21-NH2-HH22	93.47	120.00	1
SD-CE-HE2	82.46	109.00	1
CG-CB-HB2	81.45	108.00	1
CB-CG1-HG13	135.57	109.00	1
CG-CB-HB2	134.58	108.00	1
N-CA-HA3	136.58	110.00	1
HB2-CB-HB3	83.42	110.00	1
HB2-CB-HB3	83.41	110.00	1
C-N-H	97.71	124.30	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
HG21-CG2-HG23	83.41	110.00	1
CG-CB-HB2	134.64	108.00	1
CA-CB-HB1	135.64	109.00	1
CB-CG-HG3	135.64	109.00	1
CG-ND2-HD22	93.35	120.00	1
HD11-CD1-HD13	136.65	110.00	1
CD-CE-HE3	135.65	109.00	1
HB2-CB-HB3	83.35	110.00	1
CG-ND2-HD21	146.66	120.00	1
N-CA-HA2	83.34	110.00	1
OG-CB-HB2	135.66	109.00	1
OG-CB-HB2	82.33	109.00	1
CA-CB-HB2	135.67	109.00	1
C-N-H	97.63	124.30	1
CD-CG-HG2	134.67	108.00	1
CD-CG-HG2	134.68	108.00	1
CB-CG-HG3	135.68	109.00	1
C-CA-HA2	135.68	109.00	1
CA-CB-HB3	135.69	109.00	1
N-CD-HD2	135.69	109.00	1
SD-CG-HG3	81.31	108.00	1
HG22-CG2-HG23	83.28	110.00	1
CG-CB-HB2	81.28	108.00	1
CA-CB-HB3	135.73	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CA-CB-HB2	82.27	109.00	1
HG21-CG2-HG23	82.27	109.00	1
HD21-CD2-HD23	83.26	110.00	1
CD-CG-HG2	81.26	108.00	1
HB1-CB-HB3	83.25	110.00	1
HG2-CG-HG3	83.25	110.00	1
CG-CB-HB3	81.25	108.00	1
CG-CB-HB3	81.24	108.00	1
CA-CB-HB2	135.77	109.00	1
C-N-H	97.53	124.30	1
HG2-CG-HG3	83.23	110.00	1
C-CA-HA3	82.21	109.00	1
C-N-H	97.50	124.30	1
CA-CB-HB2	82.20	109.00	1
CA-CB-HB2	135.80	109.00	1
CD-CG-HG2	81.20	108.00	1
CD-CE-HE2	82.19	109.00	1
CD-CG-HG3	134.82	108.00	1
CB-CG-HG3	135.82	109.00	1
CD-CG-HG2	134.84	108.00	1
CG-CB-HB2	134.86	108.00	1
C-N-H	97.44	124.30	1
SD-CG-HG3	81.13	108.00	1
HE1-CE-HE3	136.87	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
HE2-CE-HE3	83.12	110.00	1
HB2-CB-HB3	83.11	110.00	1
HG2-CG-HG3	83.11	110.00	1
HD2-CD-HD3	83.11	110.00	1
CZ-NH1-HH12	146.90	120.00	1
CD-CG-HG3	81.08	108.00	1
NE2-CE1-HE1	98.88	125.80	1
C-N-H	97.37	124.30	1
HA2-CA-HA3	82.06	109.00	1
CG-CB-HB3	81.04	108.00	1
C-N-H	97.34	124.30	1
CG-CB-HB2	81.03	108.00	1
CZ-NH1-HH12	146.97	120.00	1
CG-CB-HB3	134.98	108.00	1
C-N-H	97.32	124.30	1
CZ-NH1-HH12	146.98	120.00	1
HA2-CA-HA3	82.00	109.00	1
HB1-CB-HB3	82.99	110.00	1
HB2-CB-HB3	82.99	110.00	1
CG-CB-HB3	135.01	108.00	1
HG12-CG1-HG13	137.01	110.00	1
CB-CG-HG2	81.98	109.00	1
CA-CB-HB2	81.98	109.00	1
OG-CB-HB3	81.96	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CA-N-H	141.04	114.00	1
N-CA-HA2	137.04	110.00	1
CZ-NH1-HH11	147.04	120.00	1
OG-CB-HB2	136.06	109.00	1
HB2-CB-HB3	82.94	110.00	1
HG2-CG-HG3	82.93	110.00	1
CD1-CG1-HG13	80.92	108.00	1
HA2-CA-HA3	81.92	109.00	1
C-N-H	97.22	124.30	1
HB2-CB-HB3	82.92	110.00	1
CD-CG-HG2	80.92	108.00	1
CG-CB-HB2	80.92	108.00	1
CG-CB-HB3	135.09	108.00	1
CA-CB-HB2	81.91	109.00	1
CD-CG-HG2	135.09	108.00	1
CA-CB-HB3	136.10	109.00	1
CA-CB-HB2	136.10	109.00	1
HG2-CG-HG3	82.89	110.00	1
C-N-H	97.18	124.30	1
CA-CB-HB3	136.13	109.00	1
CG-ND2-HD22	92.87	120.00	1
CG-CD1-HD13	81.86	109.00	1
OG-CB-HB3	136.14	109.00	1
C-N-H	97.16	124.30	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CD1-CG1-HG12	80.86	108.00	1
CE-CD-HD2	135.15	108.00	1
HB2-CB-HB3	82.84	110.00	1
CG-CD-HD3	81.83	109.00	1
CG-CB-HB3	80.83	108.00	1
CA-N-H	141.19	114.00	1
CG-CD-HD2	136.20	109.00	1
CA-CB-HB2	81.79	109.00	1
HG2-CG-HG3	82.77	110.00	1
CD1-CG1-HG12	135.24	108.00	1
SD-CE-HE3	81.75	109.00	1
CD-CG-HG3	135.26	108.00	1
CB-CG-HG2	136.26	109.00	1
CD-CE-HE3	136.27	109.00	1
HB2-CB-HB3	82.72	110.00	1
HG2-CG-HG3	82.72	110.00	1
CA-CB-HB2	136.29	109.00	1
HB2-CB-HB3	82.71	110.00	1
CG-CB-HB3	80.70	108.00	1
CG-CB-HB2	135.30	108.00	1
CA-CB-HB2	81.69	109.00	1
NE1-CD1-HD1	97.59	124.90	1
HB2-CB-HB3	82.67	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
C-CA-HA3	81.67	109.00	1
CB-CG1-HG13	81.66	109.00	1
CA-CB-HB3	136.34	109.00	1
CD1-CG1-HG13	80.65	108.00	1
HB2-CB-HB3	82.65	110.00	1
CD-CG-HG3	82.64	110.00	1
HG11-CG1-HG12	82.64	110.00	1
HG12-CG1-HG13	137.37	110.00	1
CG-CB-HB2	137.37	110.00	1
C-N-H	96.92	124.30	2
ND1-CE1-HE1	153.18	125.80	1
CG-CB-HB3	80.62	108.00	1
HG2-CG-HG3	82.62	110.00	1
CD-CG-HG2	80.60	108.00	1
SD-CE-HE3	81.60	109.00	1
NZ-CE-HE2	135.41	108.00	1
CG-CB-HB3	80.59	108.00	1
CG-CB-HB2	135.43	108.00	1
CG-CB-HB3	80.56	108.00	1
CG-CB-HB2	135.44	108.00	1
CA-CB-HB2	136.44	109.00	1
SD-CE-HE2	136.45	109.00	1
HB2-CB-HB3	82.55	110.00	1
SD-CE-HE2	81.55	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CA-CB-HB3	81.54	109.00	1
HB2-CB-HB3	82.54	110.00	1
CD-CG-HG3	80.53	108.00	1
CD-CG-HG2	135.48	108.00	1
CG1-CB-HB	80.52	108.00	1
SD-CE-HE3	81.50	109.00	1
N-CA-HA2	137.50	110.00	1
C-N-H	96.80	124.30	1
CG-CB-HB2	80.50	108.00	1
CE1-CD1-HD1	92.15	119.65	1
CG-CD1-HD11	136.51	109.00	1
CB-CG2-HG22	137.51	110.00	1
CZ-CE2-HE2	92.68	120.20	1
HB2-CB-HB3	137.52	110.00	1
N-CA-HA3	137.52	110.00	1
CD-CG-HG2	135.52	108.00	1
CA-N-H	141.54	114.00	1
CG-CB-HB2	80.46	108.00	1
CZ-NH2-HH21	147.54	120.00	1
CD-CE-HE3	136.54	109.00	1
CB-CG-HG2	136.55	109.00	1
HD2-CD-HD3	82.45	110.00	1
CB-CG2-HG21	136.56	109.00	1
C-N-H	96.73	124.30	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
HG2-CG-HG3	82.42	110.00	1
CG-CB-HB2	135.59	108.00	1
CG-CB-HB2	80.41	108.00	1
CA-CB-HB2	136.59	109.00	1
HD2-CD-HD3	82.40	110.00	1
CG1-CD1-HD13	136.61	109.00	1
HE1-CE-HE3	137.61	110.00	1
CA-N-H	141.62	114.00	1
HB2-CB-HB3	82.38	110.00	1
C-N-H	96.68	124.30	1
NE-CD-HD2	80.36	108.00	1
CA-CB-HB2	136.64	109.00	1
C-CA-HA	136.66	109.00	1
HE1-CE-HE3	137.66	110.00	1
CG-CD-HD3	136.66	109.00	1
C-CA-HA3	136.67	109.00	1
ND1-CE1-HE1	153.47	125.80	1
HG21-CG2-HG23	82.33	110.00	1
CB-CG-HG2	136.68	109.00	1
HD2-CD-HD3	82.32	110.00	1
HB2-CB-HB3	82.32	110.00	1
SD-CE-HE1	81.31	109.00	1
HB2-CB-HB3	82.30	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
N-CA-HA3	137.70	110.00	1
HG2-CG-HG3	82.29	110.00	1
SD-CE-HE2	81.28	109.00	1
C-CA-HA2	81.28	109.00	1
CA-CB-HB2	136.73	109.00	1
HG2-CG-HG3	82.25	110.00	1
HB2-CB-HB3	82.25	110.00	1
CA-CB-HB3	136.76	109.00	1
SD-CG-HG2	80.23	108.00	1
HB2-CB-HB3	82.23	110.00	1
CA-CB-HB1	136.77	109.00	1
C-CA-HA	136.77	109.00	1
NE-CD-HD3	80.23	108.00	1
CD-CG-HG3	80.22	108.00	1
HB2-CB-HB3	82.22	110.00	1
HB2-CB-HB3	82.20	110.00	1
OG-CB-HB3	81.19	109.00	1
HG2-CG-HG3	82.19	110.00	1
NE-CD-HD3	80.18	108.00	1
CA-CB-HB2	81.18	109.00	1
SD-CE-HE3	136.83	109.00	1
CB-CG-HG2	136.83	109.00	1
SD-CG-HG2	80.15	108.00	1
CD-CG-HG2	135.86	108.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
N-CA-HA2	137.86	110.00	1
CD-CG-HG3	137.90	110.00	1
NZ-CE-HE3	80.09	108.00	1
SD-CG-HG2	135.92	108.00	1
HB2-CB-HB3	82.08	110.00	1
CA-CB-HB3	136.93	109.00	1
HB2-CB-HB3	82.06	110.00	1
CG-CB-HB3	80.06	108.00	1
CB-CG-HG3	136.95	109.00	1
N-CD-HD2	136.95	109.00	1
CA-N-H	141.96	114.00	1
OG-CB-HB2	81.02	109.00	1
HB2-CB-HB3	82.01	110.00	1
CE1-CD1-HD1	91.41	119.40	1
OG-CB-HB2	137.00	109.00	1
N-CA-HA2	138.00	110.00	1
HB2-CB-HB3	81.96	110.00	1
HE2-CE-HE3	81.95	110.00	1
CG-CB-HB3	136.05	108.00	1
HD21-CD2-HD23	81.95	110.00	1
HB2-CB-HB3	81.94	110.00	1
C-N-H	96.23	124.30	1
CB-CG2-HG23	137.07	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CG-CB-HB3	79.91	108.00	1
CG-CB-HB2	136.09	108.00	1
CA-CB-HB2	137.11	109.00	1
HE2-CE-HE3	81.89	110.00	1
HB2-CB-HB3	81.88	110.00	1
CD-CE-HE2	137.13	109.00	1
CG-CB-HB3	136.13	108.00	1
CD-CE-HE3	137.15	109.00	1
CG-CB-HB2	79.84	108.00	1
HG2-CG-HG3	81.84	110.00	1
HG22-CG2-HG23	81.83	110.00	1
HB2-CB-HB3	81.83	110.00	1
CE-CD-HD3	79.83	108.00	1
CG-CB-HB2	136.17	108.00	1
N-CA-HA2	138.17	110.00	1
C-N-H	96.13	124.30	1
CG-CD-HD3	80.83	109.00	1
CB-CG1-HG12	137.18	109.00	1
HA2-CA-HA3	80.83	109.00	1
SD-CG-HG3	79.82	108.00	1
C-CA-HA	137.18	109.00	1
CG-CB-HB3	79.81	108.00	1
C-N-H	96.10	124.30	1
CD-CG-HG3	81.77	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CB-CG-HG2	137.23	109.00	1
NZ-CE-HE3	79.76	108.00	1
HB1-CB-HB2	81.73	110.00	1
HD2-CD-HD3	81.73	110.00	1
CB-CG-HG3	137.29	109.00	1
HD2-CD-HD3	81.70	110.00	1
HB2-CB-HB3	81.70	110.00	1
HG2-CG-HG3	81.69	110.00	1
HB2-CB-HB3	81.67	110.00	1
OG-CB-HB3	80.67	109.00	1
CA-CB-HB2	137.33	109.00	1
C-N-H	95.96	124.30	1
HB2-CB-HB3	81.65	110.00	1
CA-N-H	142.36	114.00	1
HG2-CG-HG3	81.64	110.00	1
HD21-CD2-HD22	81.60	110.00	1
CD-CG-HG3	81.58	110.00	1
HG2-CG-HG3	81.58	110.00	1
NZ-CE-HE2	79.58	108.00	1
OG-CB-HB3	137.42	109.00	1
CA-CB-HB3	137.42	109.00	1
HB2-CB-HB3	81.56	110.00	1
CG-CB-HB3	79.56	108.00	1
CD-CG-HG3	79.55	108.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CG1-CD1-HD12	137.46	109.00	1
HE2-CE-HE3	81.54	110.00	1
C-N-H	95.82	124.30	1
CZ-CE2-HE2	91.52	120.00	1
C-CA-HA3	80.52	109.00	1
C-N-H	95.81	124.30	1
CD1-CG1-HG12	79.51	108.00	1
CG-CB-HB3	138.49	110.00	1
CD-NE2-HE21	148.50	120.00	1
NZ-CE-HE2	79.44	108.00	1
HB2-CB-HB3	81.44	110.00	2
HB2-CB-HB3	81.42	110.00	1
HG2-CG-HG3	81.41	110.00	1
CA-CB-HB2	137.59	109.00	1
CA-CB-HB3	137.59	109.00	1
N-CD-HD3	137.60	109.00	1
SD-CE-HE1	80.40	109.00	1
CA-CB-HB3	137.61	109.00	1
CG-CB-HB2	79.39	108.00	1
N-CA-HA2	81.38	110.00	1
N-CD-HD3	137.63	109.00	1
CG-CB-HB2	136.64	108.00	1
CA-CB-HB3	137.67	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CG-CB-HB2	79.32	108.00	1
CD-CE-HE2	137.69	109.00	1
HZ1-NZ-HZ3	137.71	109.00	1
CG-CB-HB3	79.29	108.00	1
N-CA-HA3	81.29	110.00	1
HA2-CA-HA3	80.28	109.00	1
HB2-CB-HB3	81.28	110.00	1
CG-CB-HB2	79.27	108.00	1
CD-CE-HE3	137.73	109.00	1
OG-CB-HB2	80.27	109.00	1
CD-CG-HG2	79.25	108.00	1
CB-CG-HG3	137.76	109.00	1
C-CA-HA2	137.76	109.00	1
CD-CG-HG2	79.24	108.00	1
HB2-CB-HB3	81.23	110.00	1
CG-CB-HB2	79.23	108.00	1
CG-CB-HB2	79.22	108.00	1
C-CA-HA2	80.22	109.00	1
HB2-CB-HB3	81.21	110.00	1
CA-CB-HB3	80.20	109.00	1
CG-CB-HB2	136.80	108.00	1
CA-CB-HB2	137.80	109.00	1
CZ-NH2-HH22	91.19	120.00	1
C-N-H	153.11	124.30	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
HB2-CB-HB3	81.19	110.00	1
CB-CG-HG3	137.81	109.00	1
OG-CB-HB3	80.18	109.00	1
CA-CB-HB3	137.83	109.00	1
C-N-H	95.47	124.30	1
CG-CB-HB3	79.15	108.00	1
HG2-CG-HG3	81.14	110.00	1
HB2-CB-HB3	81.13	110.00	1
HH21-NH2-HH22	91.13	120.00	1
HE2-CE-HE3	81.12	110.00	1
HD11-CD1-HD13	81.10	110.00	1
CD1-CG1-HG12	79.10	108.00	1
C-N-H	95.40	124.30	1
CA-CB-HB2	80.09	109.00	1
CG-CB-HB2	79.07	108.00	1
HB2-CB-HB3	81.06	110.00	1
HB2-CB-HB3	81.05	110.00	1
HB2-CB-HB3	81.03	110.00	1
CA-CB-HB3	137.97	109.00	1
C-N-H	95.32	124.30	1
HB2-CB-HB3	81.01	110.00	1
HD21-CD2-HD23	81.00	110.00	1
C-N-H	95.29	124.30	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
HG2-CG-HG3	80.98	110.00	1
CB-CG-HG2	79.97	109.00	2
CD-CG-HG2	137.03	108.00	1
HB2-CB-HB3	80.96	110.00	1
HB2-CB-HB3	80.95	110.00	2
CG-CB-HB2	139.05	110.00	1
CB-CG-HG2	138.05	109.00	1
N-CD-HD3	79.95	109.00	1
CD1-CG1-HG12	78.94	108.00	1
CD1-CG1-HG12	78.93	108.00	1
HG2-CG-HG3	80.89	110.00	1
HB2-CB-HB3	80.88	110.00	1
N-CD-HD2	138.12	109.00	1
C-CA-HA3	79.86	109.00	1
CG-CB-HB3	78.85	108.00	1
CA-CB-HB2	138.16	109.00	1
C-N-H	95.14	124.30	1
HD12-CD1-HD13	80.83	110.00	1
HG12-CG1-HG13	80.82	110.00	1
CB-CG-HG2	138.19	109.00	1
CA-CB-HB2	138.21	109.00	1
CB-CG1-HG12	138.27	109.00	1
CG-CB-HB2	137.27	108.00	1
CG-ND2-HD22	149.28	120.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
HE2-CE-HE3	80.71	110.00	1
C-N-H	95.00	124.30	1
CA-CB-HB2	138.30	109.00	1
CA-N-H	143.31	114.00	1
N-CD-HD3	138.33	109.00	1
CG-CB-HB2	137.33	108.00	1
N-CA-HA	80.67	110.00	1
CA-CB-HB2	79.64	109.00	1
HB2-CB-HB3	80.64	110.00	1
CG-CB-HB2	139.36	110.00	1
HD2-CD-HD3	80.63	110.00	1
HG21-CG2-HG22	80.62	110.00	1
CB-CG-HG2	138.38	109.00	1
CA-CB-HB3	138.39	109.00	1
CG-CB-HB3	137.43	108.00	1
CA-CB-HB3	138.43	109.00	1
OG-CB-HB2	138.45	109.00	1
CB-CG-HG2	138.45	109.00	1
CA-CB-HB3	79.55	109.00	1
HH21-NH2-HH22	90.55	120.00	1
CE1-ND1-HD1	95.88	125.35	1
C-N-H	94.81	124.30	1
HD11-CD1-HD13	139.51	110.00	1
HG2-CG-HG3	80.48	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CZ-CE1-HE1	90.46	120.00	1
C-N-H	94.76	124.30	1
CB-CG1-HG11	138.55	109.00	1
HG2-CG-HG3	80.43	110.00	1
HZ1-NZ-HZ2	79.43	109.00	1
CB-CG1-HG13	138.57	109.00	1
CG-CD-HD2	138.58	109.00	1
CG-CB-HB2	137.59	108.00	1
CB-CG1-HG11	138.60	109.00	1
CZ-CE2-HE2	90.59	120.20	1
CD-CG-HG3	78.39	108.00	1
HD12-CD1-HD13	139.61	110.00	1
CD-CG-HG3	78.38	108.00	1
CG-CB-HB3	78.37	108.00	1
CA-N-H	143.63	114.00	1
CB-CG-HG3	138.63	109.00	1
HB2-CB-HB3	80.35	110.00	1
HB2-CB-HB3	139.66	110.00	1
CG-CD-HD3	138.66	109.00	1
CB-CG1-HG11	138.66	109.00	1
HB2-CB-HB3	80.33	110.00	1
HG12-CG1-HG13	80.32	110.00	1
CG-CB-HB3	137.68	108.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
HB2-CB-HB3	80.30	110.00	1
NE-CD-HD2	78.28	108.00	1
N-CA-HA3	80.27	110.00	1
CG-ND1-HD1	155.08	125.35	1
HH21-NH2-HH22	90.25	120.00	1
HH11-NH1-HH12	90.25	120.00	1
OG-CB-HB2	138.77	109.00	1
CZ-CE1-HE1	90.42	120.20	1
C-N-H	94.52	124.30	1
CB-CG-HG2	138.80	109.00	1
CD-CG-HG2	78.19	108.00	1
CA-CB-HB2	138.81	109.00	1
HE1-CE-HE2	139.86	110.00	1
HD2-CD-HD3	80.13	110.00	1
CG-CB-HB3	137.88	108.00	1
CG-CD1-HD12	138.88	109.00	1
HG12-CG1-HG13	80.12	110.00	1
NZ-CE-HE2	137.88	108.00	1
C-CA-HA2	138.89	109.00	1
CG-CB-HB3	78.07	108.00	1
CG-CD-HD3	138.94	109.00	1
CG-CB-HB3	78.06	108.00	1
HG12-CG1-HG13	80.06	110.00	1
CG-CD-HD3	138.95	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
HH11-NH1-HH12	90.03	120.00	1
HE1-CE-HE2	139.98	110.00	1
HG12-CG1-HG13	80.02	110.00	1
CZ-NH1-HH12	149.99	120.00	1
SD-CE-HE2	79.00	109.00	1
CD-CG-HG2	77.98	108.00	1
C-CA-HA3	139.02	109.00	1
HG12-CG1-HG13	79.97	110.00	1
CB-CG-HG2	139.04	109.00	1
CA-CB-HB2	139.05	109.00	1
CB-CG-HG3	139.06	109.00	1
HH11-NH1-HH12	150.08	120.00	1
CD-CG-HG3	138.09	108.00	1
HB2-CB-HB3	79.88	110.00	1
CA-CB-HB1	139.12	109.00	1
SD-CG-HG3	77.87	108.00	1
C-N-H	154.46	124.30	1
CD-CG-HG2	77.84	108.00	1
CD-CE-HE3	139.16	109.00	1
CZ-NH1-HH12	150.17	120.00	1
CG-CB-HB2	140.17	110.00	1
CA-CB-HB2	139.18	109.00	1
C-N-H	94.11	124.30	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
HG2-CG-HG3	79.80	110.00	1
C-CA-HA3	139.21	109.00	1
CD-CG-HG2	77.78	108.00	1
HB2-CB-HB3	79.78	110.00	1
CD-CG-HG2	138.25	108.00	1
HB2-CB-HB3	79.75	110.00	1
CB-CG1-HG13	139.28	109.00	1
HB2-CB-HB3	140.28	110.00	1
HB2-CB-HB3	79.72	110.00	1
C-CA-HA2	139.29	109.00	1
HB2-CB-HB3	79.70	110.00	1
CB-CG-HG3	139.31	109.00	1
C-N-H	93.97	124.30	1
C-CA-HA	78.66	109.00	1
SD-CE-HE1	78.64	109.00	1
N-CA-HA3	140.36	110.00	1
CA-CB-HB3	139.38	109.00	1
HH21-NH2-HH22	89.62	120.00	1
SD-CG-HG2	77.61	108.00	1
CB-CG-HG3	78.61	109.00	1
CB-CG-HG3	139.40	109.00	1
CD-CG-HG2	77.56	108.00	1
CB-CA-HA	139.45	109.00	1
CA-CB-HB2	139.46	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
SD-CG-HG3	138.48	108.00	1
SD-CG-HG3	77.52	108.00	1
CG-CD-HD3	139.48	109.00	1
CA-CB-HB3	139.49	109.00	1
CG-CB-HB3	138.49	108.00	1
HD2-CD-HD3	79.51	110.00	1
HB2-CB-HB3	79.50	110.00	1
CB-CG-HG2	139.52	109.00	1
CA-N-H	144.53	114.00	1
HG11-CG1-HG12	140.56	110.00	1
N-CA-HA3	79.42	110.00	1
HB2-CB-HB3	79.41	110.00	1
C-N-H	93.68	124.30	1
CG-CD-HD3	139.65	109.00	1
CZ-NH2-HH21	150.66	120.00	1
CD-CG-HG2	138.66	108.00	1
CA-CB-HB2	139.66	109.00	1
CG-CB-HB2	138.67	108.00	1
CB-CG1-HG11	78.31	109.00	1
CA-CB-HB2	78.31	109.00	1
HB2-CB-HB3	79.30	110.00	1
CB-CG1-HG12	139.71	109.00	1
CG-CB-HB3	138.73	108.00	1
C-N-H	93.57	124.30	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
SD-CE-HE3	78.25	109.00	1
CA-CB-HB2	139.75	109.00	1
CG-CD-HD2	139.75	109.00	1
CB-CG1-HG13	139.76	109.00	1
CG-CB-HB3	138.77	108.00	1
HE1-CE-HE3	140.77	110.00	1
CB-CG2-HG21	139.79	109.00	1
CE-CD-HD3	138.79	108.00	1
CA-CB-HB3	139.80	109.00	1
HB2-CB-HB3	79.18	110.00	1
HZ2-NZ-HZ3	139.84	109.00	1
HG2-CG-HG3	79.15	110.00	1
CG-CB-HB2	77.14	108.00	1
HD2-CD-HD3	79.13	110.00	1
HG2-CG-HG3	79.12	110.00	1
CG-CB-HB3	138.89	108.00	1
CA-CB-HB3	139.93	109.00	1
HG2-CG-HG3	79.07	110.00	1
N-CA-HA2	140.93	110.00	1
SD-CE-HE2	78.05	109.00	1
HG2-CG-HG3	79.01	110.00	1
CG-CB-HB2	77.01	108.00	1
CA-CB-HB3	140.00	109.00	2
CG-CB-HB3	139.00	108.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
C-N-H	93.30	124.30	1
NZ-CE-HE3	76.98	108.00	1
CA-CB-HB2	140.02	109.00	1
HB2-CB-HB3	78.98	110.00	1
CA-CB-HB2	140.03	109.00	1
CB-CG2-HG22	77.94	109.00	1
CB-CG-HG3	77.93	109.00	1
CZ-NH1-HH12	88.93	120.00	1
HD11-CD1-HD12	141.09	110.00	1
C-N-H	93.20	124.30	1
CA-CB-HB3	140.11	109.00	1
CA-CB-HB2	140.12	109.00	1
HB2-CB-HB3	78.87	110.00	1
CG-CB-HB2	139.13	108.00	1
CG-CB-HB3	139.13	108.00	1
HB2-CB-HB3	78.85	110.00	1
CG-CB-HB3	139.17	108.00	1
HG21-CG2-HG22	78.81	110.00	1
CG-CB-HB2	76.80	108.00	1
CB-CG-HG3	140.21	109.00	1
CD-CE-HE3	140.21	109.00	1
CA-CB-HB2	77.79	109.00	1
CG-CB-HB2	76.78	108.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CG-CD1-HD11	140.22	109.00	1
CA-CB-HB3	77.77	109.00	1
C-N-H	93.06	124.30	1
SD-CG-HG3	139.25	108.00	1
CA-CB-HB3	140.26	109.00	1
HG12-CG1-HG13	78.70	110.00	1
CB-CG-HG2	140.31	109.00	1
HG2-CG-HG3	141.31	110.00	1
CG-CB-HB2	139.33	108.00	1
CB-CG-HG2	140.34	109.00	1
C-N-H	92.96	124.30	1
CA-CB-HB3	140.35	109.00	1
CG-CB-HB2	139.35	108.00	1
CD-CG-HG3	139.35	108.00	1
HH11-NH1-HH12	88.64	120.00	1
CD-CG-HG3	139.37	108.00	1
CD-CG-HG3	76.62	108.00	1
CG-CD-HD3	77.61	109.00	1
CA-CB-HB3	140.43	109.00	1
CD1-CG1-HG13	76.52	108.00	1
OG-CB-HB2	140.55	109.00	1
C-N-H	92.75	124.30	1
HG2-CG-HG3	78.44	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
SD-CG-HG3	76.42	108.00	1
HE2-CE-HE3	78.41	110.00	1
CA-CB-HB3	77.40	109.00	1
CB-CG-HG3	140.60	109.00	1
CB-CG2-HG21	140.60	109.00	1
CB-SG-HG	161.68	109.00	1
HG22-CG2-HG23	78.38	110.00	1
CG-CB-HB3	139.62	108.00	1
SD-CE-HE3	140.63	109.00	1
CB-CG1-HG12	140.64	109.00	1
CA-CB-HB3	140.65	109.00	1
CB-CG-HG3	140.65	109.00	1
N-CA-HA3	78.33	110.00	1
CB-SG-HG	161.83	109.00	1
CG-CB-HB2	139.71	108.00	1
C-CA-HA2	140.72	109.00	1
CG1-CB-HB	140.72	109.00	1
CG-CD-HD2	77.25	109.00	1
HG11-CG1-HG12	78.25	110.00	1
CA-CB-HB3	140.78	109.00	1
CA-CB-HB2	140.78	109.00	1
CG-CB-HB3	139.79	108.00	1
CG-CB-HB2	139.80	108.00	1
CB-CG1-HG11	140.80	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
HG21-CG2-HG22	140.80	109.00	1
CG-CB-HB3	76.19	108.00	1
HB2-CB-HB3	78.17	110.00	1
HH21-NH2-HH22	88.17	120.00	1
CB-SG-HG	162.08	109.00	1
CG-CB-HB3	139.86	108.00	1
SD-CE-HE1	77.13	109.00	1
N-CA-HA2	78.11	110.00	1
CZ-NH1-HH12	151.90	120.00	1
CB-CG2-HG21	141.91	110.00	1
NE-CD-HD2	139.92	108.00	1
CD1-CG1-HG13	76.07	108.00	1
CB-CG-HG2	140.94	109.00	1
CA-CB-HB3	140.96	109.00	1
OG-CB-HB3	140.96	109.00	1
OG-CB-HB2	77.03	109.00	1
CB-CG-HG3	140.99	109.00	1
CG-CB-HB3	140.03	108.00	1
CB-CG2-HG23	141.05	109.00	1
N-CD-HD3	141.08	109.00	1
CD-CG-HG2	140.09	108.00	1
HG2-CG-HG3	77.89	110.00	1
CG-CB-HB3	140.12	108.00	1
CD-CE-HE3	76.88	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CB-CG-HG3	141.13	109.00	1
CD1-CG1-HG13	140.13	108.00	1
NE2-CE1-HE1	93.67	125.80	1
C-N-H	92.15	124.30	1
CB-CG-HG3	141.15	109.00	1
CD-CG-HG3	142.15	110.00	1
CD-CG-HG3	140.17	108.00	1
CE-NZ-HZ2	142.18	110.00	1
HG12-CG1-HG13	77.82	110.00	1
CZ-NH1-HH11	87.77	120.00	1
HZ2-NZ-HZ3	76.76	109.00	1
CG-CB-HB3	140.24	108.00	1
C-N-H	92.02	124.30	1
CG-CD-HD2	141.32	109.00	1
CG-CB-HB2	140.32	108.00	1
HG2-CG-HG3	77.68	110.00	1
HG12-CG1-HG13	77.66	110.00	1
CG-CB-HB3	140.35	108.00	1
C-N-H	91.95	124.30	1
NE2-CD2-HD2	94.04	126.40	1
CG1-CD1-HD12	141.38	109.00	1
HG22-CG2-HG23	142.39	110.00	1
HG21-CG2-HG22	77.58	110.00	1
C-N-H	91.88	124.30	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CA-CB-HB3	141.47	109.00	1
CD1-CG1-HG12	140.48	108.00	1
NE-CD-HD3	140.49	108.00	1
CA-CB-HB2	76.48	109.00	1
CD-CG-HG3	140.53	108.00	1
HG2-CG-HG3	142.57	110.00	1
OG-CB-HB3	141.60	109.00	1
C-CA-HA	76.39	109.00	1
CB-CG2-HG23	142.61	110.00	1
CG-ND2-HD22	152.62	120.00	1
CG-CD-HD3	76.38	109.00	1
CG-CB-HB2	140.63	108.00	1
N-CA-HA3	142.69	110.00	1
HG21-CG2-HG23	142.70	110.00	1
HG12-CG1-HG13	77.30	110.00	1
N-CA-HA2	142.70	110.00	1
HD2-CD-HD3	142.72	110.00	1
C-N-H	91.55	124.30	1
CB-CG-HG2	141.76	109.00	1
CG-CB-HB3	75.21	108.00	1
CB-CG1-HG13	141.80	109.00	1
HB2-CB-HB3	77.20	110.00	1
SD-CG-HG2	140.81	108.00	1
CG-CD-HD2	76.16	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CA-CB-HB3	76.11	109.00	1
CA-CB-HB2	76.10	109.00	1
CE-CD-HD2	140.93	108.00	1
C-CA-HA3	141.93	109.00	1
CB-CG-HG2	141.94	109.00	1
CD-NE2-HE22	153.00	120.00	1
N-CA-HA	143.02	110.00	1
CG-CB-HB2	141.02	108.00	1
CG1-CD1-HD13	142.03	109.00	1
C-N-H	91.27	124.30	1
C-N-H	91.26	124.30	1
C-CA-HA	142.05	109.00	1
CB-CG-HG3	142.06	109.00	1
CD1-CG1-HG12	141.06	108.00	1
HE2-CE-HE3	143.07	110.00	1
HD11-CD1-HD12	143.08	110.00	1
SD-CG-HG2	74.86	108.00	1
HZ1-NZ-HZ2	75.85	109.00	1
C-CA-HA2	142.16	109.00	1
CB-CG1-HG12	142.24	109.00	1
CD-CG-HG3	143.25	110.00	1
HB1-CB-HB3	76.74	110.00	1
C-N-H	91.03	124.30	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CE-NZ-HZ2	143.28	110.00	1
CB-CG2-HG22	75.72	109.00	1
CG-CB-HB3	141.30	108.00	1
CA-CB-HB2	142.31	109.00	1
C-CA-HA2	142.32	109.00	1
CB-CG-HG2	75.66	109.00	1
CG-CD2-HD23	142.35	109.00	1
CG-CB-HB3	141.35	108.00	1
CB-CG-HG2	142.35	109.00	1
CA-CB-HB2	142.35	109.00	1
N-CD-HD2	142.36	109.00	1
CE-CD-HD3	141.37	108.00	1
CA-CB-HB2	142.38	109.00	1
CD-CG-HG3	74.57	108.00	1
C-CA-HA3	142.44	109.00	1
CA-CB-HB2	142.46	109.00	1
CB-CG-HG2	142.49	109.00	1
CG-CB-HB3	141.49	108.00	1
CB-CG2-HG22	142.53	109.00	1
CA-CB-HB2	142.54	109.00	1
CG-CB-HB2	141.55	108.00	1
CA-CB-HB2	142.56	109.00	1
CE-NZ-HZ3	143.59	110.00	1
HG2-CG-HG3	143.62	110.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CA-CB-HB3	142.62	109.00	1
HG2-CG-HG3	76.38	110.00	1
OG-CB-HB3	75.36	109.00	1
CA-CB-HB3	142.67	109.00	1
N-CA-HA3	76.26	110.00	1
C-N-H	90.55	124.30	1
HD11-CD1-HD12	76.24	110.00	1
CG-CB-HB3	141.80	108.00	1
CG-CB-HB3	141.81	108.00	1
CG-CB-HB3	74.16	108.00	1
CD1-CG1-HG13	74.15	108.00	1
CA-CB-HB3	142.86	109.00	1
CD-CG-HG2	143.87	110.00	1
NE-CD-HD2	141.89	108.00	1
CA-CB-HB2	142.93	109.00	1
CD-CG-HG2	141.94	108.00	1
N-CA-HA3	143.94	110.00	1
CA-CB-HB2	142.97	109.00	1
NE-CD-HD3	141.99	108.00	1
CG1-CD1-HD11	143.00	109.00	1
CB-CG1-HG11	143.01	109.00	1
OG-CB-HB3	143.10	109.00	1
CG-CB-HB2	142.11	108.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CG-CB-HB3	142.11	108.00	1
CB-CG-HG3	143.12	109.00	1
CD1-CG1-HG12	142.14	108.00	1
CD-CG-HG3	142.15	108.00	1
C-N-H	90.14	124.30	1
CA-CB-HB3	143.19	109.00	1
CE-NZ-HZ3	144.19	110.00	1
CG-ND1-HD1	91.15	125.35	1
CG-CB-HB2	73.80	108.00	1
HD2-CD-HD3	144.23	110.00	1
CA-CB-HB3	143.26	109.00	1
CD-CG-HG2	142.29	108.00	1
CG-CD-HD3	143.32	109.00	1
CD-CG-HG3	73.50	108.00	1
CG-CB-HB2	73.49	108.00	1
HG21-CG2-HG23	75.49	110.00	1
CD-NE2-HE22	154.52	120.00	1
C-N-H	89.76	124.30	1
C-N-H	89.71	124.30	1
C-N-H	89.69	124.30	1
CG-CD2-HD2	85.04	119.65	1
NE-CD-HD2	142.62	108.00	1
SG-CB-HB2	73.35	108.00	1
CA-CB-HB3	143.66	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CD-CG-HG2	73.32	108.00	1
SD-CG-HG2	73.32	108.00	1
CA-CB-HB3	143.70	109.00	1
CG-CB-HB3	142.73	108.00	1
NE-CD-HD3	142.75	108.00	1
CB-CG1-HG12	143.78	109.00	1
CD-CE-HE3	143.84	109.00	1
CB-CG1-HG13	143.85	109.00	1
C-CA-HA3	143.87	109.00	1
SD-CE-HE1	143.89	109.00	1
HE2-CE-HE3	144.93	110.00	1
CB-CG2-HG23	144.94	110.00	1
N-CD-HD2	143.94	109.00	1
CB-CG-HG2	143.95	109.00	1
CG-CB-HB3	142.96	108.00	1
NZ-CE-HE2	142.96	108.00	1
CD-CG-HG2	142.96	108.00	1
CA-CB-HB2	143.97	109.00	1
CG-CB-HB3	142.98	108.00	2
CG-CD-HD3	143.98	109.00	1
CA-CB-HB3	144.00	109.00	1
CB-CG-HG2	144.05	109.00	1
CG-CB-HB3	72.95	108.00	1
CA-CB-HB2	144.06	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CB-CG-HG3	144.09	109.00	1
CA-CB-HB3	144.13	109.00	1
SD-CG-HG2	72.85	108.00	1
CA-CB-HB3	144.15	109.00	1
N-CA-HA3	145.17	110.00	1
N-CD-HD2	144.17	109.00	1
CB-CG2-HG22	144.21	109.00	1
CA-CB-HB2	144.22	109.00	1
CD-CG-HG2	143.26	108.00	1
CG-CB-HB3	143.26	108.00	1
CA-CB-HB2	144.32	109.00	1
OG-CB-HB2	144.39	109.00	1
NE-CD-HD3	143.40	108.00	1
CG-CB-HB3	143.41	108.00	1
CA-CB-HB3	144.44	109.00	1
SD-CE-HE2	73.55	109.00	1
NE2-CE1-HE1	90.32	125.80	1
SG-CB-HB3	143.53	108.00	1
CG-CB-HB3	143.54	108.00	1
CG-CB-HB2	143.55	108.00	1
HE1-CE-HE2	145.56	110.00	1
SD-CE-HE2	73.39	109.00	1
CG-CB-HB2	143.61	108.00	1
CB-CG2-HG22	144.62	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CA-CB-HB2	144.67	109.00	1
SD-CG-HG2	143.70	108.00	1
CE-NZ-HZ2	145.71	110.00	1
HE2-CE-HE3	145.72	110.00	1
CA-CB-HB2	144.72	109.00	1
CD-NE2-HE21	155.72	120.00	1
CA-CB-HB2	144.73	109.00	1
CD-CG-HG2	143.73	108.00	1
CB-CG-HG3	144.73	109.00	1
CB-CG1-HG13	144.76	109.00	1
CB-CG2-HG23	144.77	109.00	1
CG-CB-HB2	143.79	108.00	1
C-CA-HA	144.80	109.00	1
SD-CG-HG3	143.82	108.00	1
CB-CG1-HG13	144.82	109.00	1
SD-CG-HG2	72.12	108.00	1
NZ-CE-HE2	143.90	108.00	1
CG-CB-HB2	145.93	110.00	1
SD-CG-HG3	72.06	108.00	1
CB-CG-HG3	144.94	109.00	1
CG-CB-HB3	143.95	108.00	1
CB-CG-HG3	144.99	109.00	1
CA-CB-HB3	145.00	109.00	1
CB-CG-HG3	145.02	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
C-CA-HA2	145.06	109.00	1
CZ-NH2-HH22	156.08	120.00	1
C-CA-HA3	145.10	109.00	1
CA-CB-HB3	145.12	109.00	1
N-CA-HA2	146.18	110.00	1
CD-CE-HE2	145.21	109.00	1
CG-CB-HB2	144.25	108.00	1
CG-CD2-HD21	145.26	109.00	1
CG-CB-HB2	144.26	108.00	1
CE-NZ-HZ1	146.29	110.00	1
CB-CG1-HG13	145.33	109.00	1
CB-CA-HA	145.34	109.00	1
CA-CB-HB3	145.38	109.00	1
CG-CD-HD2	145.38	109.00	1
HZ2-NZ-HZ3	145.43	109.00	1
CD-CG-HG2	144.43	108.00	1
CA-CB-HB3	145.45	109.00	1
SD-CG-HG3	144.47	108.00	1
CG-CB-HB3	144.48	108.00	1
CD-CG-HG3	144.50	108.00	1
CB-CG1-HG12	145.51	109.00	1
CG-CD-HD2	145.54	109.00	1
CA-CB-HB2	145.54	109.00	2

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
C-CA-HA2	145.56	109.00	1
CB-CG-HG3	145.59	109.00	1
CG-CB-HB3	144.61	108.00	1
CB-CG1-HG13	145.62	109.00	1
C-N-H	87.68	124.30	1
ND1-CE1-HE1	162.44	125.80	1
SD-CG-HG2	71.34	108.00	1
C-N-H	87.64	124.30	1
HG22-CG2-HG23	145.72	109.00	1
OG-CB-HB2	72.26	109.00	1
CB-CG2-HG22	146.75	110.00	1
CG-CB-HB2	146.75	110.00	1
CA-CB-HB3	145.78	109.00	1
CB-CG-HG2	145.92	109.00	1
HD21-CD2-HD22	73.04	110.00	1
CG-CB-HB3	144.96	108.00	1
SD-CG-HG3	71.03	108.00	1
C-N-H	87.32	124.30	1
C-CA-HA2	145.99	109.00	1
CB-CG-HG3	72.00	109.00	1
SD-CE-HE3	71.97	109.00	1
CA-CB-HB3	146.05	109.00	1
CB-CG1-HG12	146.05	109.00	1
CA-CB-HB3	146.08	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
C-N-H	87.20	124.30	1
CD-CG-HG2	147.19	110.00	1
SG-CB-HB2	145.19	108.00	1
CA-CB-HB2	146.21	109.00	1
CD-CG-HG3	145.22	108.00	1
CG-CB-HB2	145.24	108.00	1
C-N-H	161.60	124.30	1
CB-CA-HA	146.32	109.00	1
CA-CB-HB3	146.40	109.00	1
CD-CG-HG2	145.44	108.00	1
CD1-CG1-HG13	145.48	108.00	1
CB-CG-HG3	146.53	109.00	1
HG22-CG2-HG23	72.29	110.00	1
CB-CG-HG3	146.85	109.00	1
HB1-CB-HB3	147.85	110.00	1
CD-NE2-HE22	157.87	120.00	1
CD-CG-HG3	145.88	108.00	1
CD-CE-HE2	146.92	109.00	1
OG-CB-HB3	71.08	109.00	1
CA-CB-HB3	146.95	109.00	1
CG-CB-HB3	145.97	108.00	1
HE2-CE-HE3	148.01	110.00	1
CB-CG-HG3	147.01	109.00	1
C-CA-HA3	147.08	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CG-CB-HB3	146.10	108.00	2
CD-CE-HE2	70.86	109.00	1
CE2-CD2-HD2	157.80	119.65	1
CB-CG-HG2	147.17	109.00	1
CG-CB-HB2	146.17	108.00	1
CA-CB-HB3	147.19	109.00	1
CB-CG-HG3	147.20	109.00	1
CD1-CG1-HG13	146.20	108.00	1
CD-CG-HG3	146.21	108.00	1
CD-CG-HG2	146.22	108.00	1
CB-CG-HG3	147.23	109.00	1
HB1-CB-HB3	148.25	110.00	1
CG-CB-HB2	146.32	108.00	1
CB-CG-HG3	147.33	109.00	1
CD-CG-HG2	146.38	108.00	1
CA-CB-HB3	147.38	109.00	1
CA-CB-HB3	147.51	109.00	1
CD-CE-HE3	147.51	109.00	1
C-N-H	85.78	124.30	1
C-N-H	85.73	124.30	1
CG-CB-HB2	146.57	108.00	1
CG-CB-HB3	146.62	108.00	1
CA-CB-HB3	147.64	109.00	1
NE-CD-HD2	146.67	108.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
N-CA-HA3	148.70	110.00	1
SD-CG-HG2	69.29	108.00	1
CG-CB-HB2	146.72	108.00	1
CA-CB-HB2	147.73	109.00	1
N-CA-HA3	148.75	110.00	1
CG-CB-HB3	146.75	108.00	1
CE-CD-HD2	146.76	108.00	1
CG-CD-HD3	147.78	109.00	1
CG-CD2-HD21	147.78	109.00	1
CG-CB-HB2	146.81	108.00	1
CA-CB-HB3	147.83	109.00	1
CB-CG-HG3	147.83	109.00	1
HH11-NH1-HH12	81.11	120.00	1
CG-CB-HB3	146.91	108.00	1
CA-CB-HB2	147.92	109.00	1
CD-CG-HG3	146.94	108.00	1
HG22-CG2-HG23	148.95	110.00	1
CG-CB-HB2	147.00	108.00	1
CG-CB-HB3	147.03	108.00	1
HD21-CD2-HD22	149.05	110.00	1
CA-CB-HB2	148.07	109.00	1
NE2-CE1-HE1	86.72	125.80	1
CA-CB-HB3	148.09	109.00	1
CE-CD-HD3	147.09	108.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CB-CG2-HG21	148.11	109.00	1
SG-CB-HB3	68.87	108.00	1
CA-CB-HB3	148.18	109.00	1
CA-CB-HB2	148.24	109.00	1
CA-CB-HB3	148.27	109.00	1
CG-CB-HB3	147.38	108.00	1
CD-CG-HG2	147.39	108.00	1
CA-CB-HB3	148.44	109.00	1
CG1-CD1-HD13	148.46	109.00	1
CG-CB-HB3	147.61	108.00	1
C-CA-HA2	148.64	109.00	1
CG-CB-HB2	147.67	108.00	1
CB-CG-HG3	148.71	109.00	1
CB-CG-HG2	148.76	109.00	1
CD-CG-HG2	147.80	108.00	1
CG-CD-HD2	148.80	109.00	1
HE2-CE-HE3	149.81	110.00	1
CG-CD-HD3	148.88	109.00	1
SD-CG-HG2	68.09	108.00	1
HB2-CB-HB3	149.96	110.00	1
CG-CB-HB2	147.96	108.00	1
HZ1-NZ-HZ3	149.00	109.00	1
C-CA-HA2	149.00	109.00	1
OG-CB-HB2	149.05	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
C-N-H	84.23	124.30	1
CA-CB-HB3	149.07	109.00	1
C-CA-HA	149.15	109.00	1
C-CA-HA3	149.19	109.00	1
CB-CG-HG2	149.32	109.00	1
CD-CG-HG3	148.37	108.00	1
CG-CB-HB3	148.38	108.00	1
CD-CG-HG2	148.40	108.00	1
CG-CB-HB2	148.44	108.00	1
CG-CB-HB3	148.45	108.00	1
CG-CB-HB2	148.47	108.00	1
HG21-CG2-HG23	150.48	110.00	1
C-CA-HA3	149.49	109.00	1
C-CA-HA2	149.60	109.00	1
CG-CD2-HD22	149.66	109.00	1
CG-CD-HD2	149.73	109.00	1
C-CA-HA	149.73	109.00	1
CA-CB-HB2	149.74	109.00	1
NZ-CE-HE3	148.79	108.00	1
CG-ND2-HD21	160.81	120.00	1
CD-CE-HE3	149.84	109.00	1
N-CA-HA2	150.90	110.00	1
CB-CG1-HG13	149.99	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
N-CA-HA3	151.02	110.00	1
CD-CG-HG2	149.03	108.00	1
SD-CG-HG3	66.95	108.00	1
CA-CB-HB3	150.11	109.00	2
HE1-CE-HE3	151.20	110.00	1
CG-CB-HB3	149.21	108.00	1
CZ-NH2-HH22	161.25	120.00	1
CG-CB-HB3	149.26	108.00	1
CA-CB-HB	150.39	109.00	1
CA-CB-HB3	150.43	109.00	1
CG-CD-HD2	150.46	109.00	1
CB-CG1-HG13	150.49	109.00	1
CB-CA-HA	150.53	109.00	1
CA-CB-HB2	150.54	109.00	1
CA-CB-HB3	150.54	109.00	1
CB-CG-HG2	150.56	109.00	1
CG-CB-HB2	149.60	108.00	1
CG-CB-HB2	149.63	108.00	1
CB-CG-HG2	150.74	109.00	1
CD1-CG1-HG13	149.74	108.00	1
CG-CB-HB3	66.24	108.00	1
NE-CD-HD2	149.84	108.00	1
CG-CB-HB2	149.86	108.00	1
CB-CG2-HG21	67.08	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CG-CB-HB3	151.96	110.00	1
CZ-NH1-HH11	78.04	120.00	1
N-CA-HA	67.95	110.00	1
N-CA-HA2	152.07	110.00	1
CA-CB-HB3	151.11	109.00	1
CD-CG-HG3	150.23	108.00	1
C-CA-HA2	151.24	109.00	1
CD-CE-HE2	151.25	109.00	1
CB-CG-HG3	151.25	109.00	1
CG-CB-HB3	152.27	110.00	1
CB-CG-HG3	151.29	109.00	1
HZ1-NZ-HZ2	151.32	109.00	1
SD-CG-HG3	65.63	108.00	1
CB-CG-HG2	151.37	109.00	1
HG21-CG2-HG22	67.60	110.00	1
CD-CE-HE2	151.40	109.00	1
HG11-CG1-HG13	152.44	110.00	1
CG-CB-HB2	150.61	108.00	1
CA-CB-HB3	151.73	109.00	1
HE1-CE-HE3	152.78	110.00	1
C-N-H	81.51	124.30	1
CA-CB-HB3	151.87	109.00	1
HZ2-NZ-HZ3	151.90	109.00	1
CG-CB-HB2	150.90	108.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
C-N-H	81.40	124.30	1
CB-CG-HG3	151.91	109.00	1
CB-CG-HG3	151.93	109.00	1
CB-CG-HG2	151.94	109.00	1
CA-CB-HB2	152.04	109.00	1
HB1-CB-HB2	153.09	110.00	1
CG-CB-HB2	151.10	108.00	1
CB-CG-HG2	152.15	109.00	1
CB-CG-HG2	152.17	109.00	2
CD-CG-HG3	151.18	108.00	1
N-CA-HA3	153.20	110.00	1
CG-CB-HB2	151.20	108.00	1
CA-CB-HB2	152.26	109.00	2
SD-CG-HG2	64.73	108.00	1
CD-CE-HE3	152.29	109.00	1
CD-CG-HG3	153.30	110.00	1
C-N-H	80.83	124.30	1
CA-CB-HB3	152.47	109.00	1
CB-CG-HG2	152.52	109.00	1
CD-CG-HG2	151.53	108.00	1
HD22-CD2-HD23	153.57	110.00	1
CG-CD-HD3	152.58	109.00	1
NZ-CE-HE3	151.65	108.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CA-CB-HB2	152.68	109.00	1
CA-CB-HB3	152.79	109.00	1
CD1-CG1-HG13	151.82	108.00	1
CA-CB-HB3	152.88	109.00	1
CG-CB-HB2	151.89	108.00	1
CG-CD2-HD21	152.91	109.00	1
OG-CB-HB2	153.01	109.00	1
CG-CB-HB3	152.05	108.00	1
SD-CG-HG3	152.06	108.00	1
CA-CB-HB3	153.09	109.00	1
CB-CG-HG3	153.11	109.00	1
CG-CB-HB2	152.15	108.00	1
CG-CB-HB2	152.16	108.00	1
CB-CG-HG2	153.19	109.00	1
CA-CB-HB3	153.27	109.00	1
CD-CE-HE2	153.29	109.00	1
CB-CG1-HG12	153.30	109.00	1
CG-CB-HB3	152.31	108.00	1
CG-CB-HB2	152.32	108.00	1
CG-CB-HB3	63.63	108.00	1
CB-CG-HG2	153.45	109.00	1
NZ-CE-HE2	152.46	108.00	1
CD1-CG1-HG12	152.46	108.00	1
CG-CD-HD3	153.47	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CA-CB-HB2	153.47	109.00	1
CA-CB-HB3	153.57	109.00	1
SD-CG-HG2	63.38	108.00	1
CA-CB-HB2	153.63	109.00	1
CD-CG-HG3	154.65	110.00	1
C-N-H	79.63	124.30	1
CA-CB-HB3	153.69	109.00	1
CD-CG-HG2	152.71	108.00	1
CG-CB-HB2	152.74	108.00	1
CG-CB-HB3	152.81	108.00	1
CA-CB-HB3	153.88	109.00	1
CG-CB-HB2	152.90	108.00	1
CB-CG-HG3	153.91	109.00	1
CD-CG-HG2	152.92	108.00	1
SG-CB-HB3	63.08	108.00	1
CA-CB-HB3	153.96	109.00	1
N-CD-HD2	153.98	109.00	1
CD-CE-HE2	154.00	109.00	1
N-CA-HA3	155.02	110.00	1
CG-CB-HB2	153.03	108.00	1
C-N-H	79.24	124.30	1
CB-CG2-HG23	154.06	109.00	1
CG-CB-HB3	153.13	108.00	1
CD1-CG1-HG13	153.15	108.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CD1-CG1-HG12	153.21	108.00	1
CA-CB-HB2	154.25	109.00	1
CG-CB-HB2	153.28	108.00	1
CB-CG-HG2	154.31	109.00	1
CG-CB-HB2	153.31	108.00	1
CA-CB-HB3	154.46	109.00	1
N-CD-HD3	154.46	109.00	1
CA-CB-HB3	154.50	109.00	1
CG-CB-HB3	153.50	108.00	1
CA-CB-HB3	154.52	109.00	1
CD-CG-HG3	153.57	108.00	1
CD1-CG1-HG13	62.31	108.00	1
CG-CB-HB2	153.71	108.00	1
CA-CB-HB1	154.72	109.00	1
OG-CB-HB2	154.75	109.00	1
CG-CD-HD2	154.78	109.00	1
CD-CG-HG2	153.84	108.00	1
CD-CE-HE3	154.92	109.00	1
CB-CG2-HG22	154.93	109.00	1
CG-CB-HB2	153.98	108.00	1
HE1-CE-HE3	156.02	110.00	1
N-CA-HA2	156.05	110.00	1
OG-CB-HB3	155.10	109.00	1
CG-CD-HD3	155.14	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
C-N-H	78.14	124.30	1
CA-CB-HB3	155.20	109.00	2
CG-CB-HB2	154.21	108.00	1
CG-CD-HD2	155.26	109.00	1
NE-CD-HD3	154.28	108.00	1
C-N-H	77.96	124.30	1
CA-CB-HB2	155.35	109.00	1
CB-CG-HG2	155.36	109.00	1
CG-CB-HB2	156.42	110.00	1
N-CA-HA3	156.46	110.00	1
HG22-CG2-HG23	63.54	110.00	1
CD-CG-HG2	154.58	108.00	1
CG-CD2-HD21	155.62	109.00	1
CA-CB-HB3	155.62	109.00	1
CD-CG-HG3	154.63	108.00	1
CG-CB-HB2	154.69	108.00	1
CA-CB-HB3	155.71	109.00	1
CG-CD2-HD21	155.74	109.00	1
CG-CD-HD3	155.80	109.00	1
CD-CG-HG3	154.85	108.00	1
NE-CD-HD3	154.86	108.00	1
CD-CG-HG2	154.87	108.00	1
CG-CD-HD2	155.91	109.00	1
CD-CG-HG3	154.97	108.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CG-CB-HB2	155.05	108.00	1
CA-CB-HB3	156.05	109.00	1
C-CA-HA3	156.09	109.00	1
CD-CG-HG3	155.12	108.00	1
CB-CG2-HG22	61.86	109.00	1
CB-CG1-HG12	156.25	109.00	1
CG-CB-HB2	155.31	108.00	1
CB-CG1-HG13	156.35	109.00	1
CB-CG-HG2	156.36	109.00	1
CB-CG1-HG12	156.39	109.00	1
CG-CB-HB3	155.43	108.00	1
CB-CG-HG3	156.49	109.00	1
CG-CB-HB2	155.52	108.00	1
CD-CG-HG3	155.56	108.00	1
CA-CB-HB2	156.60	109.00	1
CB-CG-HG2	156.61	109.00	1
CG1-CD1-HD11	156.63	109.00	1
CB-CG-HG2	156.71	109.00	1
CA-CB-HB3	156.71	109.00	1
CG-CB-HB2	155.72	108.00	1
CD-CG-HG3	157.72	110.00	1
CG1-CD1-HD11	156.78	109.00	1
CA-CB-HB3	156.88	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CB-CG1-HG13	157.04	109.00	1
CD-CG-HG2	158.05	110.00	1
CB-CG1-HG13	157.10	109.00	1
CA-CB-HB2	157.17	109.00	1
OG-CB-HB2	157.18	109.00	1
CB-CG-HG2	157.21	109.00	1
HE2-CE-HE3	61.66	110.00	1
CA-CB-HB2	157.43	109.00	1
CD-CG-HG2	156.44	108.00	1
N-CA-HA3	158.45	110.00	1
OG-CB-HB2	157.46	109.00	1
CG-CB-HB2	156.57	108.00	1
CB-CG1-HG13	157.58	109.00	1
CA-CB-HB3	157.62	109.00	1
C-CA-HA3	157.63	109.00	1
CA-CB-HB2	157.67	109.00	1
CG-CB-HB3	156.72	108.00	1
CA-CB-HB3	157.72	109.00	1
CB-CG-HG3	157.78	109.00	1
CA-N-H	65.19	114.00	1
CD1-CG1-HG13	156.84	108.00	1
NZ-CE-HE3	156.88	108.00	1
NZ-CE-HE3	59.08	108.00	1
CG-CB-HB2	156.92	108.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
HG11-CG1-HG12	158.98	110.00	1
OG-CB-HB3	158.02	109.00	1
CB-CG-HG3	158.11	109.00	1
NE-CD-HD3	157.17	108.00	1
NE-CD-HD3	157.25	108.00	1
N-CA-HA3	159.28	110.00	1
CB-CG1-HG12	158.28	109.00	1
CD-CG-HG3	157.39	108.00	1
CA-CB-HB2	158.40	109.00	1
C-N-H	74.90	124.30	1
CA-CB-HB3	158.41	109.00	1
NZ-CE-HE2	157.52	108.00	1
OG-CB-HB3	158.59	109.00	1
CD-CG-HG2	157.59	108.00	1
C-CA-HA2	158.60	109.00	1
NZ-CE-HE3	157.63	108.00	1
CA-CB-HB3	158.74	109.00	1
CG-CB-HB3	157.82	108.00	1
CG-CB-HB2	157.94	108.00	1
N-CA-HA2	159.96	110.00	1
N-CA-HA2	160.01	110.00	1
CD1-CG1-HG12	158.07	108.00	1
CD1-CG1-HG13	158.07	108.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CG-CB-HB3	158.09	108.00	1
HG22-CG2-HG23	160.15	110.00	1
CA-CB-HB3	159.16	109.00	1
CG-CB-HB3	158.16	108.00	1
N-CA-HA3	160.17	110.00	1
OG-CB-HB2	159.18	109.00	1
CD1-CG1-HG12	158.25	108.00	1
CD1-CG1-HG13	158.26	108.00	1
CA-CB-HB2	159.26	109.00	1
CD1-CG1-HG13	158.34	108.00	1
CA-CB-HB3	159.40	109.00	1
CD-CG-HG3	158.52	108.00	1
C-CA-HA3	159.69	109.00	1
CB-CG-HG2	159.71	109.00	1
CG-CB-HB2	158.72	108.00	1
NE-CD-HD2	158.78	108.00	1
C-CA-HA2	159.78	109.00	1
CB-CG-HG3	159.82	109.00	1
CB-CG-HG3	159.90	109.00	1
CE-NZ-HZ1	160.97	110.00	1
CA-CB-HB3	159.99	109.00	1
CA-CB-HB2	160.05	109.00	1
CG-CB-HB2	159.06	108.00	1
CA-CB-HB3	160.09	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CG-CB-HB2	159.09	108.00	1
CD-CG-HG3	159.11	108.00	1
CD-CG-HG3	161.18	110.00	1
CG-CD2-HD21	160.18	109.00	1
CD1-CG1-HG13	159.20	108.00	1
SG-CB-HB2	159.35	108.00	1
CG-CB-HB2	159.43	108.00	1
HD21-CD2-HD22	161.46	110.00	1
CB-CG-HG3	160.60	109.00	1
CA-CB-HB3	160.60	109.00	1
CG-CB-HB3	159.62	108.00	1
CA-CB-HB3	160.79	109.00	1
CD-CE-HE3	160.83	109.00	1
CA-CB-HB3	160.84	109.00	1
CD-CG-HG3	161.92	110.00	1
CG-CB-HB3	159.95	108.00	1
CA-CB-HB2	160.99	109.00	1
CB-CG2-HG21	56.99	109.00	1
CG-CB-HB2	160.02	108.00	1
N-CA-HA2	162.10	110.00	1
CA-CB-HB3	161.13	109.00	1
CA-CB-HB3	161.15	109.00	1
CB-CG-HG3	161.15	109.00	1
CG-CB-HB3	160.20	108.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CG-CB-HB2	160.21	108.00	1
C-CA-HA3	161.21	109.00	1
CA-CB-HB3	161.23	109.00	1
CG-CD-HD2	161.26	109.00	1
CB-CG-HG3	161.35	109.00	1
CA-CB-HB2	161.39	109.00	1
N-CA-HA3	162.45	110.00	1
CB-CG-HG2	161.45	109.00	1
CG-CB-HB3	160.47	108.00	1
CA-CB-HB3	161.48	109.00	1
CD1-CG1-HG12	160.51	108.00	1
CA-CB-HB3	161.53	109.00	1
CG-CB-HB3	160.55	108.00	1
CB-CG-HG3	161.59	109.00	1
NZ-CE-HE2	160.61	108.00	1
CB-CG-HG3	161.63	109.00	1
CB-CG1-HG13	161.67	109.00	1
CA-CB-HB3	161.74	109.00	1
CG-CB-HB2	160.77	108.00	1
NZ-CE-HE3	160.80	108.00	1
CG-CB-HB2	160.83	108.00	1
CB-CG-HG3	161.89	109.00	1
CD-CG-HG3	160.89	108.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CB-CG-HG3	161.91	109.00	1
CA-CB-HB2	161.96	109.00	1
CG-CB-HB2	161.03	108.00	1
CA-CB-HB3	162.09	109.00	1
CG-CB-HB2	161.15	108.00	1
CA-CB-HB2	162.19	109.00	1
CB-CG2-HG23	162.26	109.00	1
CA-CB-HB2	162.31	109.00	1
NZ-CE-HE3	161.46	108.00	1
N-CA-HA2	163.48	110.00	1
CD-CG-HG3	161.51	108.00	1
CG-CB-HB2	161.65	108.00	1
CG-CB-HB3	163.65	110.00	1
CG-CB-HB3	161.67	108.00	1
CA-CB-HB2	162.69	109.00	1
NE-CD-HD2	161.70	108.00	1
CA-CB-HB3	162.74	109.00	1
CG-CB-HB2	161.76	108.00	1
CB-CG-HG2	162.84	109.00	1
CD-CG-HG2	162.02	108.00	1
CA-CB-HB3	163.05	109.00	1
CA-CB-HB3	163.10	109.00	1
CB-CG-HG3	163.12	109.00	1
CA-CB-HB3	163.18	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CB-CG-HG2	163.27	109.00	1
CA-CB-HB3	163.34	109.00	1
CA-CB-HB2	163.37	109.00	1
N-CD-HD2	163.50	109.00	1
CB-CG-HG3	163.54	109.00	1
CA-CB-HB2	163.56	109.00	1
CB-CG-HG3	163.64	109.00	1
CA-CB-HB3	163.76	109.00	1
CA-CB-HB2	163.79	109.00	1
CG-CB-HB3	162.87	108.00	1
HH11-NH1-HH12	174.88	120.00	1
HD22-CD2-HD23	164.94	110.00	1
CD-CG-HG2	162.96	108.00	1
CG-CD-HD3	163.96	109.00	1
CA-CB-HB2	163.98	109.00	1
CA-CB-HB2	164.08	109.00	1
CD-CG-HG2	163.10	108.00	1
CG-CB-HB2	163.11	108.00	1
CG-CB-HB2	163.13	108.00	1
NE-CD-HD2	163.15	108.00	1
CB-CG-HG3	164.15	109.00	1
C-CA-HA2	164.16	109.00	1
CB-CG-HG2	164.19	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
HE1-CE-HE2	165.23	110.00	1
OG-CB-HB3	164.35	109.00	1
N-CA-HA2	165.37	110.00	1
CG-CD-HD2	164.38	109.00	1
CB-CG1-HG13	164.41	109.00	1
CB-CG-HG2	164.43	109.00	1
CD-CE-HE2	164.58	109.00	1
CB-CG1-HG12	164.66	109.00	1
CD-CE-HE2	164.93	109.00	1
CG-CB-HB2	163.93	108.00	1
CB-CG-HG2	165.14	109.00	1
CD-CE-HE2	165.17	109.00	1
CD-CE-HE3	165.18	109.00	1
CG-CB-HB2	164.29	108.00	1
CA-CB-HB3	165.29	109.00	1
CD-CE-HE2	165.30	109.00	1
CA-CB-HB3	165.31	109.00	1
CA-CB-HB2	165.33	109.00	1
CG-CB-HB2	164.44	108.00	1
CG-CD-HD2	165.48	109.00	1
CA-CB-HB3	165.49	109.00	1
HE1-CE-HE3	166.54	110.00	1
CD-CG-HG2	166.54	110.00	1
CG-CB-HB2	164.56	108.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CG-CB-HB3	164.59	108.00	1
CE-CD-HD2	164.60	108.00	1
HZ1-NZ-HZ3	165.68	109.00	1
CG-CB-HB2	164.70	108.00	1
N-CD-HD3	165.74	109.00	1
CD-CE-HE2	165.77	109.00	1
CG-CB-HB3	164.77	108.00	1
CG-CB-HB3	164.78	108.00	1
CG-CB-HB3	164.84	108.00	1
N-CD-HD3	165.86	109.00	1
CB-CG-HG2	166.04	109.00	1
CA-CB-HB3	166.17	109.00	1
CA-CB-HB2	166.18	109.00	1
CA-CB-HB3	166.19	109.00	1
CB-CG1-HG12	166.25	109.00	1
CA-CB-HB3	166.34	109.00	1
CB-CG-HG2	166.34	109.00	1
CA-CB-HB2	166.37	109.00	1
CG-CD1-HD12	166.45	109.00	1
OG-CB-HB2	166.51	109.00	1
CA-CB-HB3	166.59	109.00	1
CG-CB-HB3	167.62	110.00	1
NE-CD-HD3	165.64	108.00	1
CG1-CD1-HD12	166.79	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CB-CG-HG3	166.93	109.00	1
CD-CG-HG2	165.99	108.00	1
CG-CB-HB2	166.02	108.00	1
CB-CG-HG3	167.05	109.00	1
CA-CB-HB2	167.07	109.00	1
HZ2-NZ-HZ3	167.10	109.00	1
CA-CB-HB2	167.12	109.00	1
CD-CG-HG2	168.15	110.00	1
CD-CE-HE2	167.21	109.00	1
CD-CG-HG3	168.26	110.00	1
CB-CG-HG2	167.27	109.00	1
CD-CG-HG2	168.30	110.00	1
CA-CB-HB3	167.34	109.00	1
CA-CB-HB3	167.37	109.00	1
CA-CB-HB1	167.42	109.00	1
CB-CG-HG3	167.43	109.00	1
C-CA-HA3	167.56	109.00	1
CD-CG-HG2	166.75	108.00	1
N-CD-HD3	167.80	109.00	1
CA-CB-HB3	168.27	109.00	1
CA-CB-HB3	168.32	109.00	1
CG-CB-HB3	167.32	108.00	1
CA-CB-HB2	168.42	109.00	1
CB-CG-HG2	168.54	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CA-CB-HB2	168.62	109.00	1
CG-CD-HD2	168.69	109.00	1
CE-CD-HD3	167.74	108.00	1
CG-CB-HB2	169.96	110.00	1
CG-CB-HB2	167.98	108.00	1
CB-CG1-HG12	169.08	109.00	1
CA-CB-HB2	169.16	109.00	1
CB-CG2-HG21	169.34	109.00	1
CG-CB-HB2	168.44	108.00	1
CA-CB-HB2	169.44	109.00	1
CB-CG-HG3	169.45	109.00	1
CB-CG-HG3	169.63	109.00	1
CB-CG1-HG12	169.74	109.00	1
NZ-CE-HE3	168.74	108.00	1
CB-CG-HG3	169.74	109.00	1
CB-CG1-HG12	169.90	109.00	1
CG-CB-HB2	170.91	110.00	1
CD-CG-HG2	169.07	108.00	1
NZ-CE-HE3	169.11	108.00	1
CB-CG-HG2	170.21	109.00	1
CG-CD2-HD23	170.24	109.00	1
CG-ND2-HD22	58.55	120.00	1
CB-CG-HG3	170.47	109.00	1
CG-CD-HD3	170.54	109.00	1

Angle type	Observed angle (°)	Ideal angle (°)	Number of outliers
CB-CG-HG2	170.74	109.00	1
CA-CB-HB2	170.85	109.00	1
CB-CG-HG2	170.98	109.00	1
CE-CD-HD3	170.12	108.00	1
CG-CB-HB2	170.13	108.00	1
CB-CG-HG2	171.30	109.00	1
C-CA-HA2	171.41	109.00	1
CB-CG-HG3	171.75	109.00	1
CB-CG-HG3	171.85	109.00	1
CG-CB-HB2	171.89	108.00	1
CB-CG-HG3	172.94	109.00	1
CA-CB-HB2	173.34	109.00	1
CA-CB-HB2	173.87	109.00	1
HD21-ND2-HD22	54.59	120.00	1
CA-CB-HB2	174.43	109.00	1
CE-NZ-HZ1	176.34	110.00	1

Too-close contacts

The following all-atom clashscore is based on a MolProbity analysis. All-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The table below contains clashscores for all the models in this entry.

Model ID	Clash score	Number of clashes
1	59.37	1616

All 1616 close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Model ID	Atom-1	Atom-2	Clash overlap (Å)
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Model ID	Atom-1	Atom-2	Clash overlap (Å)
1	B:220:TYR:CD1	B:220:TYR:CG	1.687
1	B:525:PHE:CD2	B:525:PHE:CG	1.665
1	B:251:LYS:CD	B:251:LYS:CG	1.639
1	B:469:MET:CB	B:469:MET:CG	1.633
1	B:391:GLN:CB	B:391:GLN:CG	1.632
1	B:329:TYR:CD1	B:329:TYR:CG	1.624
1	B:455:VAL:CB	B:455:VAL:CG1	1.620
1	B:198:LEU:CD1	B:198:LEU:CG	1.618
1	B:216:GLN:CB	B:216:GLN:CG	1.618
1	B:529:LEU:CD2	B:529:LEU:CG	1.613
1	B:11:LYS:CB	B:11:LYS:CG	1.612
1	B:336:THR:CB	B:336:THR:CG2	1.610
1	B:488:VAL:CB	B:488:VAL:CG1	1.608
1	B:241:ILE:CB	B:241:ILE:CG1	1.607
1	B:83:THR:CB	B:83:THR:CG2	1.603
1	B:11:LYS:CD	B:11:LYS:CE	1.601
1	B:471:ILE:CG2	B:472:ARG:HG3	1.601
1	B:61:GLU:CB	B:61:GLU:CG	1.600
1	B:516:LYS:CD	B:516:LYS:CE	1.594
1	B:179:LEU:CD2	B:179:LEU:CG	1.593
1	B:454:ILE:CB	B:454:ILE:CG2	1.593
1	B:463:ILE:CD1	B:463:ILE:CG1	1.590
1	B:450:LEU:CD2	B:450:LEU:CG	1.588
1	B:390:ARG:CD	B:390:ARG:CG	1.584

Model ID	Atom-1	Atom-2	Clash overlap (Å)
1	B:394:ILE:CD1	B:394:ILE:CG1	1.583
1	B:201:LYS:CD	B:201:LYS:CG	1.581
1	B:404:THR:CB	B:404:THR:CG2	1.578
1	B:28:VAL:CB	B:28:VAL:CG2	1.575
1	B:521:LYS:CD	B:521:LYS:CG	1.573
1	B:279:GLU:CD	B:279:GLU:CG	1.570
1	B:493:ILE:CD1	B:493:ILE:CG1	1.569
1	B:274:ILE:CD1	B:274:ILE:CG1	1.568
1	B:10:ASN:CB	B:10:ASN:CG	1.566
1	A:726:ILE:CG2	A:741:PHE:CE2	1.565
1	A:328:ARG:NH2	B:181:ILE:CG1	1.562
1	B:181:ILE:CD1	B:2:ASN:CG	1.561
1	B:2:ASN:CB	B:34:ILE:CG2	1.561
1	B:34:ILE:CB	B:460:ILE:CG1	1.561
1	B:460:ILE:CD1	B:12:THR:CG2	1.555
1	B:12:THR:CB	B:21:LYS:CG	1.555
1	B:21:LYS:CD	B:76:ASN:CG	1.553
1	B:76:ASN:CB	B:204:PRO:CD	1.552
1	B:203:VAL:C	B:49:LYS:CG	1.551
1	B:49:LYS:CD	B:488:VAL:CG2	1.550
1	B:488:VAL:CB	B:309:GLN:CG	1.549
1	B:309:GLN:CD	A:596:LEU:CG	1.548
1	A:596:LEU:CD2	B:198:LEU:CG	1.547

Model ID	Atom-1	Atom-2	Clash overlap (Å)
1	B:198:LEU:CD2	A:43:LYS:NZ	1.546
1	A:43:LYS:CE	A:285:LYS:NZ	1.543
1	A:285:LYS:CE	A:649:LYS:NZ	1.543
1	A:649:LYS:CE	B:459:LEU:CG	1.543
1	B:459:LEU:CB	B:468:ILE:CG1	1.540
1	B:468:ILE:CD1	B:516:LYS:CG	1.539
1	B:516:LYS:CD	B:35:ILE:CG1	1.533
1	B:35:ILE:CD1	A:558:LEU:CG	1.530
1	A:558:LEU:CD1	B:61:GLU:CG	1.530
1	B:61:GLU:CD	B:93:ASP:CG	1.526
1	B:93:ASP:CB	B:519:LYS:CE	1.525
1	B:519:LYS:CD	B:484:TYR:CE2	1.523
1	B:21:LYS:N	B:303:LYS:NZ	1.522
1	B:303:LYS:CE	B:251:LYS:NZ	1.520
1	B:251:LYS:CE	A:447:ASN:C	1.519
1	A:414:ARG:HH12	A:589:LYS:NZ	1.517
1	A:589:LYS:CE	B:77:GLU:CG	1.517
1	B:77:GLU:CD	B:465:VAL:HG23	1.517
1	B:464:ILE:CG2	B:52:PRO:CG	1.516
1	B:52:PRO:CB	B:533:LEU:CG	1.516
1	B:533:LEU:CD1	B:25:ILE:CG1	1.514
1	B:25:ILE:CD1	B:89:GLU:CG	1.511
1	B:89:GLU:CB	B:293:ASN:CG	1.511
1	B:293:ASN:CB	B:343:LYS:CG	1.511

Model ID	Atom-1	Atom-2	Clash overlap (Å)
1	B:343:LYS:CD	B:472:ARG:CB	1.511
1	B:471:ILE:HG22	B:459:LEU:CB	1.506
1	B:458:VAL:HG12	B:306:GLU:CG	1.504
1	B:306:GLU:CD	B:533:LEU:CG	1.504
1	B:533:LEU:CB	B:31:LEU:CG	1.503
1	B:31:LEU:CB	B:309:GLN:N	1.503
1	B:308:TYR:C	B:291:LYS:NZ	1.501
1	B:291:LYS:CE	B:117:GLN:CG	1.496
1	B:117:GLN:CD	B:477:GLN:CG	1.496
1	B:477:GLN:CB	B:528:LEU:CG	1.496
1	B:528:LEU:CD1	B:484:TYR:CZ	1.495
1	B:20:SER:N	B:502:GLU:CG	1.495
1	B:502:GLU:CD	B:512:LYS:CG	1.494
1	B:512:LYS:CB	A:741:PHE:CE2	1.493
1	A:726:ILE:HG21	B:468:ILE:CG2	1.493
1	B:468:ILE:CB	B:128:PHE:N	1.492
1	B:127:GLU:C	B:465:VAL:CG1	1.491
1	B:465:VAL:CB	B:347:LYS:NZ	1.489
1	B:347:LYS:CE	B:391:GLN:CG	1.489
1	B:391:GLN:CD	B:448:ILE:N	1.489
1	B:447:GLY:C	B:181:ILE:N	1.486
1	B:180:GLN:C	B:472:ARG:CG	1.484
1	B:471:ILE:CG2	B:459:LEU:HB2	1.482

Model ID	Atom-1	Atom-2	Clash overlap (Å)
1	B:458:VAL:CG1	B:465:VAL:CG2	1.482
1	B:464:ILE:HG23	B:239:GLN:N	1.481
1	B:238:GLN:C	B:374:MET:SD	1.481
1	B:374:MET:CE	B:391:GLN:NE2	1.477
1	B:391:GLN:CD	B:142:ASN:N	1.475
1	B:141:SER:C	B:340:ASN:CG	1.474
1	B:340:ASN:CB	A:383:ILE:HG23	1.473
1	A:371:MET:CE	B:438:LEU:CG	1.473
1	B:438:LEU:CD2	B:85:ILE:N	1.472
1	B:84:VAL:C	B:521:LYS:CG	1.472
1	B:521:LYS:CB	B:125:ASP:N	1.470
1	B:124:THR:C	B:535:GLU:CG	1.470
1	B:535:GLU:CB	B:389:GLU:N	1.467
1	B:388:THR:C	A:29:LYS:NZ	1.465
1	A:29:LYS:CE	B:488:VAL:N	1.464
1	B:487:GLU:C	B:474:LYS:NZ	1.462
1	B:474:LYS:CE	B:106:LYS:NZ	1.461
1	B:106:LYS:CE	B:484:TYR:CE1	1.460
1	B:19:ARG:HB3	B:535:GLU:N	1.460
1	B:534:ALA:C	B:334:GLU:N	1.459
1	B:333:GLY:C	B:10:ASN:ND2	1.458
1	B:10:ASN:CG	B:24:LYS:CG	1.457
1	B:24:LYS:CD	B:330:LYS:CE	1.457
1	B:330:LYS:CD	B:358:GLU:N	1.457

Model ID	Atom-1	Atom-2	Clash overlap (Å)
1	B:357:LYS:C	B:25:ILE:N	1.456
1	B:24:LYS:C	B:339:GLY:N	1.456
1	B:338:SER:C	B:493:ILE:CG1	1.456
1	B:493:ILE:CB	B:527:LYS:CE	1.455
1	B:527:LYS:CD	B:341:TYR:CG	1.453
1	B:341:TYR:CD2	B:449:PRO:CG	1.452
1	B:449:PRO:CD	B:354:ARG:N	1.451
1	B:353:ASN:C	B:466:LEU:CG	1.451
1	B:466:LEU:CD1	B:482:GLU:N	1.450
1	B:481:PHE:C	B:223:LYS:NZ	1.449
1	B:223:LYS:CE	B:465:VAL:CB	1.449
1	B:464:ILE:HG23	B:482:GLU:CG	1.449
1	B:482:GLU:CD	B:462:ALA:N	1.448
1	B:461:ALA:C	B:313:ALA:N	1.445
1	B:312:GLY:C	B:195:LEU:CG	1.443
1	B:195:LEU:CD1	A:73:VAL:N	1.442
1	A:72:GLY:C	B:225:ASP:N	1.442
1	B:224:SER:C	B:480:GLU:N	1.442
1	B:479:ASP:C	B:73:LYS:N	1.439
1	B:72:LYS:C	B:480:GLU:CG	1.439
1	B:480:GLU:CB	B:503:ASN:N	1.439
1	B:502:GLU:C	B:374:MET:N	1.438
1	B:373:VAL:C	B:477:GLN:NE2	1.438
1	B:477:GLN:CD	B:508:SER:OG	1.437

Model ID	Atom-1	Atom-2	Clash overlap (Å)
1	B:508:SER:CB	B:309:GLN:NE2	1.435
1	B:309:GLN:CD	B:531:SER:N	1.435
1	B:530:ARG:C	B:477:GLN:CG	1.433
1	B:477:GLN:CD	B:502:GLU:N	1.433
1	B:501:GLU:C	B:204:PRO:CA	1.432
1	B:203:VAL:C	B:510:ARG:N	1.432
1	B:509:VAL:C	B:344:ASN:N	1.430
1	B:343:LYS:C	B:105:PRO:N	1.428
1	B:104:LEU:C	B:343:LYS:NZ	1.427
1	B:343:LYS:CE	B:409:ASP:N	1.425
1	B:408:LYS:C	B:417:SER:OG	1.425
1	B:417:SER:CB	A:153:LYS:NZ	1.423
1	A:153:LYS:CE	A:723:LEU:CD1	1.423
1	A:506:ARG:HH21	B:408:LYS:N	1.423
1	B:407:ASP:C	B:511:ARG:NE	1.422
1	B:511:ARG:CD	B:447:GLY:N	1.420
1	B:446:SER:C	B:257:LEU:CG	1.418
1	B:257:LEU:CD2	B:214:MET:SD	1.414
1	B:214:MET:CE	B:459:LEU:N	1.413
1	B:458:VAL:CA	B:445:SER:OG	1.411
1	B:445:SER:CB	B:136:THR:N	1.410
1	B:135:ALA:C	B:280:ASN:N	1.405
1	B:279:GLU:C	B:425:ILE:N	1.405

Model ID	Atom-1	Atom-2	Clash overlap (Å)
1	B:424:LYS:C	B:23:GLN:N	1.404
1	B:22:LEU:C	B:175:ALA:N	1.403
1	B:174:SER:C	B:292:GLU:N	1.402
1	B:291:LYS:C	B:396:LYS:CE	1.402
1	B:396:LYS:CD	B:18:ASN:N	1.400
1	B:17:LYS:C	B:422:ASN:N	1.399
1	B:421:ILE:C	B:383:THR:N	1.398
1	B:382:ASN:C	B:467:ILE:CG2	1.398
1	B:467:ILE:CB	B:91:GLN:CG	1.395
1	B:91:GLN:CD	B:308:TYR:N	1.392
1	B:307:THR:C	B:485:GLU:HA	1.392
1	B:19:ARG:NH1	B:12:THR:OG1	1.389
1	B:12:THR:CB	B:16:TRP:CG	1.389
1	B:16:TRP:CD2	B:459:LEU:CB	1.389
1	B:458:VAL:CG1	B:508:SER:N	1.387
1	B:507:GLU:C	B:517:MET:SD	1.387
1	B:517:MET:CG	B:336:THR:O	1.386
1	B:336:THR:C	B:72:LYS:NZ	1.384
1	B:72:LYS:CE	B:260:MET:SD	1.384
1	B:260:MET:CG	B:74:VAL:N	1.383
1	B:73:LYS:C	B:484:TYR:HE2	1.380
1	B:21:LYS:N	B:2:ASN:N	1.379
1	B:1:MET:C	B:365:LYS:N	1.379
1	B:364:TYR:C	B:272:ALA:N	1.377

Model ID	Atom-1	Atom-2	Clash overlap (Å)
1	B:271:THR:C	B:394:ILE:O	1.377
1	B:394:ILE:C	B:288:PRO:N	1.376
1	B:287:GLU:C	B:480:GLU:OE1	1.371
1	B:480:GLU:CD	B:329:TYR:CG	1.369
1	A:328:ARG:NH2	B:387:SER:O	1.369
1	B:329:TYR:CE2	B:8:MET:SD	1.367
1	B:387:SER:C	B:278:LYS:NZ	1.365
1	B:8:MET:CG	B:489:PRO:N	1.365
1	B:278:LYS:CE	A:723:LEU:CD1	1.364
1	B:489:PRO:CD	A:849:ARG:NH2	1.359
1	A:506:ARG:NH2	A:723:LEU:HD13	1.358
1	A:821:ASP:HA	B:342:GLU:N	1.355
1	A:506:ARG:NH2	B:371:ILE:N	1.355
1	B:341:TYR:C	B:393:ASP:CG	1.355
1	B:370:GLY:C	B:519:LYS:N	1.352
1	B:393:ASP:CB	B:524:ASP:OD1	1.349
1	B:518:ALA:C	B:444:GLU:N	1.343
1	B:524:ASP:CG	B:471:ILE:N	1.343
1	B:443:GLU:C	B:520:ASP:OD2	1.343
1	B:470:LEU:C	B:343:LYS:N	1.342
1	B:520:ASP:CG	B:33:ALA:N	1.336
1	B:342:GLU:C	B:177:ILE:N	1.336
1	B:32:ALA:C	B:332:ASP:N	1.336

Model ID	Atom-1	Atom-2	Clash overlap (Å)
1	B:176:SER:C	B:435:LYS:NZ	1.336
1	B:331:ALA:C	B:535:GLU:OE1	1.334
1	B:435:LYS:CE	B:30:ALA:N	1.332
1	A:808:ALA:CB	B:147:MET:SD	1.329
1	B:535:GLU:CD	A:741:PHE:HE2	1.326
1	B:29:SER:C	B:490:GLN:N	1.322
1	A:806:ASP:OD1	B:467:ILE:CG1	1.318
1	B:147:MET:CE	B:7:GLN:CG	1.313
1	A:726:ILE:CG2	B:494:ASN:N	1.312
1	B:489:PRO:C	B:373:VAL:N	1.310
1	B:467:ILE:CD1	B:338:SER:OG	1.306
1	B:7:GLN:CD	B:357:LYS:N	1.304
1	B:493:ILE:C	B:415:ASN:CA	1.302
1	B:372:GLN:C	B:453:TYR:N	1.300
1	B:338:SER:CB	B:479:ASP:N	1.296
1	B:356:HIS:C	B:4:THR:OG1	1.290
1	B:414:GLN:C	B:204:PRO:N	1.288
1	B:452:ALA:C	B:415:ASN:N	1.288
1	B:478:GLU:C	B:459:LEU:CA	1.287
1	B:4:THR:CB	A:785:LYS:NZ	1.285
1	B:203:VAL:CA	B:472:ARG:CA	1.285
1	B:414:GLN:CA	B:527:LYS:NZ	1.282
1	B:458:VAL:C	A:870:GLU:OE2	1.281
1	A:756:GLY:HA2	B:469:MET:CA	1.280

Model ID	Atom-1	Atom-2	Clash overlap (Å)
1	B:471:ILE:HG22	B:485:GLU:CG	1.280
1	B:527:LYS:CE	A:301:ARG:HB2	1.279
1	A:629:LYS:HE3	B:418:ASP:N	1.275
1	B:468:ILE:HG22	B:469:MET:CG	1.275
1	B:485:GLU:CD	B:474:LYS:N	1.275
1	A:108:LYS:NZ	B:204:PRO:N	1.275
1	B:417:SER:C	B:379:ASP:N	1.271
1	B:468:ILE:HG21	B:466:LEU:CB	1.270
1	B:473:LYS:C	B:459:LEU:N	1.269
1	B:203:VAL:O	B:327:THR:N	1.268
1	B:378:PRO:C	B:330:LYS:N	1.264
1	B:465:VAL:HG12	B:385:SER:OG	1.263
1	B:458:VAL:O	B:484:TYR:O	1.261
1	B:326:VAL:C	A:447:ASN:C	1.260
1	B:329:TYR:C	A:301:ARG:NH1	1.259
1	B:385:SER:CB	B:392:ASP:OD2	1.254
1	B:19:ARG:NH1	A:170:MET:SD	1.249
1	A:414:ARG:NH1	B:21:LYS:N	1.249
1	A:130:TYR:CE1	B:486:TYR:CE2	1.239
1	B:392:ASP:CG	B:466:LEU:CA	1.234
1	A:134:TYR:CZ	B:484:TYR:CE2	1.228
1	B:20:SER:C	B:356:HIS:N	1.227
1	A:978:VAL:CG2	B:204:PRO:CD	1.226
1	B:485:GLU:OE1	B:355:ILE:N	1.223

Model ID	Atom-1	Atom-2	Clash overlap (Å)
1	B:465:VAL:HG12	A:741:PHE:CD2	1.221
1	B:20:SER:C	B:17:LYS:N	1.221
1	B:355:ILE:C	B:487:GLU:CG	1.221
1	B:203:VAL:CA	B:492:PRO:N	1.221
1	B:354:ARG:C	B:522:PRO:N	1.221
1	A:726:ILE:HG21	B:335:ASN:OD1	1.220
1	B:16:TRP:C	B:379:ASP:OD2	1.218
1	B:487:GLU:CD	B:450:LEU:N	1.216
1	B:492:PRO:CD	B:527:LYS:N	1.216
1	B:521:LYS:C	B:516:LYS:N	1.202
1	B:335:ASN:CG	A:849:ARG:HH21	1.201
1	B:379:ASP:CG	B:464:ILE:CA	1.197
1	B:449:PRO:C	B:530:ARG:N	1.197
1	B:526:ALA:C	A:170:MET:HE3	1.196
1	A:973:GLU:OE2	B:384:ALA:N	1.192
1	B:515:GLU:C	B:456:GLY:CA	1.190
1	A:821:ASP:CA	B:336:THR:N	1.189
1	B:463:ILE:HG22	B:486:TYR:N	1.187
1	B:529:LEU:C	B:465:VAL:N	1.185
1	A:134:TYR:CD2	B:529:LEU:N	1.177
1	B:383:THR:C	B:9:LYS:CG	1.176
1	B:455:VAL:HG12	B:223:LYS:NZ	1.176
1	A:892:CYS:HB3	A:639:MET:HE3	1.174

Model ID	Atom-1	Atom-2	Clash overlap (Å)
1	B:335:ASN:C	B:464:ILE:HA	1.171
1	A:808:ALA:HB2	B:521:LYS:HG3	1.167
1	B:485:GLU:C	B:463:ILE:HG13	1.166
1	B:464:ILE:CG2	B:5:LEU:CG	1.161
1	B:528:LEU:C	B:484:TYR:OH	1.161
1	B:9:LYS:CD	B:466:LEU:HB2	1.160
1	B:208:GLU:OE2	A:965:PRO:HA	1.150
1	A:627:ILE:CD1	B:521:LYS:CG	1.148
1	B:463:ILE:HG22	B:482:GLU:HG3	1.147
1	B:520:ASP:CG	B:465:VAL:N	1.144
1	B:462:ALA:CB	A:383:ILE:CG2	1.143
1	B:5:LEU:CD1	A:450:PHE:CZ	1.142
1	B:20:SER:N	B:326:VAL:HG22	1.138
1	B:465:VAL:HG12	B:486:TYR:HD2	1.138
1	A:958:GLU:OE1	B:472:ARG:HG3	1.136
1	B:521:LYS:CE	B:204:PRO:HD3	1.134
1	B:481:PHE:HD1	B:382:ASN:ND2	1.134
1	B:464:ILE:HG22	B:492:PRO:N	1.134
1	A:371:MET:HE1	B:484:TYR:HE1	1.134
1	A:346:VAL:HG22	A:723:LEU:HD11	1.133
1	B:325:ASP:HB3	B:454:ILE:CD1	1.133
1	B:485:GLU:CD	A:209:ARG:CZ	1.129
1	B:471:ILE:HG21	B:486:TYR:CD2	1.129
1	B:203:VAL:HA	B:526:ALA:CA	1.128

Model ID	Atom-1	Atom-2	Clash overlap (Å)
1	B:382:ASN:CG	A:716:LEU:HD12	1.127
1	B:491:GLU:C	A:741:PHE:CD2	1.127
1	B:19:ARG:CB	B:465:VAL:H	1.124
1	A:506:ARG:NE	B:472:ARG:CG	1.121
1	B:453:TYR:CD1	B:472:ARG:CB	1.119
1	A:119:ASP:HB2	B:454:ILE:CG1	1.115
1	B:485:GLU:CD	B:466:LEU:HB2	1.114
1	B:525:PHE:HD1	B:526:ALA:CB	1.114
1	A:666:LEU:HD12	A:364:GLU:OE2	1.112
1	A:726:ILE:CG2	B:526:ALA:CB	1.111
1	B:464:ILE:CG2	B:46:SER:H	1.110
1	B:471:ILE:HG22	A:448:ALA:N	1.109
1	B:471:ILE:CG2	B:330:LYS:NZ	1.108
1	B:453:TYR:HD1	B:522:PRO:HD3	1.107
1	B:465:VAL:CG1	A:289:GLN:OE1	1.105
1	B:525:PHE:CD1	B:418:ASP:OD2	1.105
1	A:364:GLU:HA	B:515:GLU:HG3	1.104
1	B:525:PHE:HD1	B:454:ILE:HG13	1.100
1	B:44:PHE:C	A:870:GLU:OE2	1.097
1	A:414:ARG:HH12	B:466:LEU:N	1.097
1	B:330:LYS:CD	B:424:LYS:NZ	1.097
1	B:521:LYS:HB3	B:469:MET:HA	1.094
1	A:101:VAL:HG13	B:517:MET:HE3	1.092

Model ID	Atom-1	Atom-2	Clash overlap (Å)
1	B:418:ASP:CG	B:204:PRO:CA	1.091
1	B:514:LEU:HD22	B:46:SER:N	1.087
1	B:453:TYR:HD1	B:469:MET:CG	1.087
1	A:629:LYS:CE	B:504:GLU:HG3	1.086
1	B:465:VAL:HG12	B:341:TYR:N	1.084
1	B:368:ASP:OD1	B:472:ARG:HG3	1.084
1	A:328:ARG:NH2	B:455:VAL:N	1.082
1	A:214:GLU:OE2	A:321:LYS:CE	1.080
1	B:468:ILE:HG22	B:281:ARG:N	1.078
1	B:516:LYS:HE2	B:497:ASP:N	1.078
1	B:203:VAL:O	B:10:ASN:OD1	1.075
1	B:44:PHE:C	A:656:ILE:HD12	1.073
1	B:468:ILE:CG2	A:887:ARG:HH21	1.073
1	A:978:VAL:HG23	B:463:ILE:HG13	1.073
1	B:503:ASN:HB3	B:495:LEU:N	1.071
1	B:340:ASN:C	B:469:MET:HG3	1.070
1	B:471:ILE:HG23	A:448:ALA:N	1.068
1	B:454:ILE:C	B:310:GLY:N	1.065
1	A:317:SER:HB3	A:723:LEU:CG	1.064
1	B:280:ASN:C	A:321:LYS:HE2	1.063
1	B:496:PRO:C	B:415:ASN:N	1.062
1	B:10:ASN:CG	A:917:GLU:OE1	1.061
1	A:497:LEU:HD23	A:212:VAL:HG22	1.059
1	A:820:THR:HG22	A:301:ARG:CB	1.057

Model ID	Atom-1	Atom-2	Clash overlap (Å)
1	B:462:ALA:HB1	B:468:ILE:CD1	1.056
1	B:494:ASN:C	B:482:GLU:N	1.055
1	B:468:ILE:CG2	B:329:TYR:CD2	1.053
1	A:414:ARG:NH1	B:483:GLU:CB	1.049
1	A:915:VAL:HG12	A:723:LEU:CD1	1.047
1	A:915:VAL:CG1	B:526:ALA:HA	1.045
1	A:895:PRO:HA	B:459:LEU:HB2	1.040
1	B:309:GLN:C	B:529:LEU:HG	1.040
1	A:506:ARG:HH21	A:910:GLY:O	1.038
1	A:317:SER:HB3	B:526:ALA:HA	1.037
1	B:414:GLN:O	B:461:ALA:CA	1.033
1	A:906:ASN:ND2	B:334:GLU:CA	1.032
1	A:113:ARG:HH11	A:448:ALA:CA	1.031
1	A:108:LYS:HZ2	A:170:MET:HG2	1.030
1	B:467:ILE:HG21	B:479:ASP:O	1.029
1	B:481:PHE:O	B:480:GLU:N	1.028
1	B:329:TYR:CB	B:466:LEU:HD12	1.027
1	A:955:ARG:HH22	B:456:GLY:HA2	1.025
1	B:21:LYS:HG3	B:522:PRO:HD3	1.023
1	A:506:ARG:CZ	A:785:LYS:HZ1	1.021
1	A:915:VAL:HG12	B:329:TYR:CD2	1.021
1	B:525:PHE:HD1	B:466:LEU:CD1	1.019
1	B:458:VAL:HG13	A:383:ILE:HG23	1.017
1	B:528:LEU:HD22	A:383:ILE:HG23	1.017

Model ID	Atom-1	Atom-2	Clash overlap (Å)
1	A:905:ARG:NE	B:379:ASP:OD1	1.015
1	B:525:PHE:CD1	B:449:PRO:HD2	1.011
1	B:460:ILE:HG22	B:470:LEU:HD12	1.011
1	B:333:GLY:C	B:469:MET:HG3	1.009
1	A:414:ARG:NH1	A:383:ILE:CG2	1.008
1	A:134:TYR:CD1	B:536:ASP:OD2	1.008
1	B:479:ASP:CA	B:449:PRO:HD2	1.006
1	B:479:ASP:O	B:465:VAL:HG23	1.005
1	B:465:VAL:HG11	B:86:SER:HA	1.004
1	B:455:VAL:HG12	B:485:GLU:CA	1.004
1	B:521:LYS:CB	B:529:LEU:CD2	1.003
1	A:756:GLY:HA2	B:479:ASP:O	1.000
1	B:329:TYR:CD1	B:220:TYR:CD2	0.998
1	B:465:VAL:HG11	A:209:ARG:NH2	0.994
1	A:371:MET:HE1	B:204:PRO:CD	0.991
1	A:371:MET:HE3	A:741:PHE:CE1	0.990
1	B:379:ASP:CG	B:517:MET:CE	0.990
1	B:448:ILE:CG2	B:466:LEU:CB	0.988
1	B:469:MET:HE2	A:716:LEU:HD12	0.987
1	B:468:ILE:HG21	B:483:GLU:HB2	0.987
1	A:371:MET:CE	B:536:ASP:OD1	0.987
1	B:536:ASP:CG	B:465:VAL:CB	0.985
1	A:892:CYS:CB	B:522:PRO:CD	0.985

Model ID	Atom-1	Atom-2	Clash overlap (Å)
1	B:448:ILE:HG22	B:454:ILE:CD1	0.985
1	B:464:ILE:HG21	A:170:MET:SD	0.984
1	B:52:PRO:HA	B:6:MET:CG	0.984
1	B:19:ARG:NH1	B:6:MET:HG3	0.982
1	B:529:LEU:CB	B:526:ALA:HB2	0.981
1	B:479:ASP:C	A:321:LYS:HG3	0.980
1	B:220:TYR:CD1	B:84:VAL:N	0.976
1	A:119:ASP:HB2	B:525:PHE:CD2	0.974
1	B:203:VAL:HA	B:526:ALA:CA	0.972
1	A:720:LEU:HD11	B:6:MET:HG3	0.971
1	B:516:LYS:HE2	A:910:GLY:O	0.971
1	B:465:VAL:CG1	B:7:GLN:N	0.969
1	A:666:LEU:CD1	B:471:ILE:HG12	0.968
1	B:21:LYS:CG	B:486:TYR:CD2	0.968
1	B:536:ASP:CG	B:486:TYR:CD2	0.968
1	A:328:ARG:CZ	A:723:LEU:HD13	0.967
1	B:464:ILE:CG2	A:591:PRO:HD3	0.966
1	B:521:LYS:HB3	B:484:TYR:CZ	0.963
1	B:453:TYR:HD1	A:768:ARG:NH1	0.958
1	A:134:TYR:CE1	B:415:ASN:N	0.958
1	B:5:LEU:HD23	A:466:GLN:NE2	0.954
1	B:5:LEU:HD23	B:14:GLU:OE2	0.953
1	B:525:PHE:CD1	B:484:TYR:CE1	0.953
1	A:317:SER:O	B:484:TYR:HE2	0.952

Model ID	Atom-1	Atom-2	Clash overlap (Å)
1	B:83:THR:C	B:293:ASN:ND2	0.952
1	B:525:PHE:CB	A:446:TYR:O	0.952
1	B:525:PHE:CD1	B:484:TYR:CZ	0.951
1	B:5:LEU:CD2	B:513:GLN:HG3	0.951
1	A:905:ARG:NH2	B:14:GLU:OE1	0.949
1	B:6:MET:C	B:535:GLU:N	0.949
1	B:470:LEU:HD22	A:255:ASN:OD1	0.946
1	B:485:GLU:CG	B:327:THR:N	0.946
1	B:485:GLU:OE1	B:388:THR:N	0.946
1	A:506:ARG:CZ	B:48:SER:N	0.945
1	A:585:ASN:HD22	B:329:TYR:CD1	0.944
1	B:20:SER:C	A:447:ASN:O	0.944
1	A:663:ILE:HB	A:173:GLU:HG3	0.943
1	A:974:ILE:HD11	B:454:ILE:HG13	0.943
1	B:414:GLN:C	B:484:TYR:CE1	0.943
1	A:408:HIS:NE2	B:483:GLU:HB2	0.942
1	B:14:GLU:CD	B:526:ALA:HB2	0.942
1	B:19:ARG:CB	A:723:LEU:HD11	0.937
1	B:20:SER:C	A:849:ARG:NH2	0.936
1	B:293:ASN:CB	B:466:LEU:HD12	0.935
1	A:414:ARG:NH1	B:515:GLU:HB2	0.932
1	B:20:SER:CA	A:741:PHE:CE2	0.930
1	B:512:LYS:HD3	B:482:GLU:HG3	0.929

Model ID	Atom-1	Atom-2	Clash overlap (Å)
1	B:14:GLU:CD	B:525:PHE:CD2	0.929
1	B:534:ALA:O	B:465:VAL:H	0.928
1	A:239:ARG:NH1	A:301:ARG:HB2	0.927
1	B:326:VAL:O	B:448:ILE:N	0.927
1	B:387:SER:O	B:516:LYS:CD	0.926
1	B:46:SER:O	A:768:ARG:HH11	0.924
1	B:329:TYR:CB	A:716:LEU:CD1	0.917
1	A:414:ARG:NH1	B:486:TYR:HE2	0.916
1	A:100:PRO:HG2	A:87:VAL:HG22	0.914
1	B:453:TYR:CD1	A:321:LYS:CE	0.914
1	B:20:SER:N	A:768:ARG:HH11	0.913
1	B:21:LYS:HG3	B:340:ASN:ND2	0.912
1	B:525:PHE:CG	A:259:ARG:HG2	0.910
1	A:506:ARG:HE	B:204:PRO:HD2	0.910
1	A:821:ASP:CA	B:467:ILE:HB	0.910
1	B:465:VAL:CG1	A:212:VAL:HG22	0.908
1	B:514:LEU:HB3	B:329:TYR:CG	0.908
1	A:726:ILE:HG22	B:353:ASN:HB2	0.908
1	B:481:PHE:CD1	A:450:PHE:CZ	0.907
1	B:525:PHE:CD1	B:471:ILE:CG1	0.907
1	B:464:ILE:HG22	B:465:VAL:HB	0.906
1	A:108:LYS:H22	B:204:PRO:HD3	0.905
1	B:447:GLY:O	A:762:PRO:HG3	0.904
1	B:516:LYS:CB	B:137:GLN:HG3	0.904

Model ID	Atom-1	Atom-2	Clash overlap (Å)
1	A:663:ILE:CB	B:463:ILE:HG13	0.902
1	A:666:LEU:HD12	A:913:VAL:O	0.901
1	B:485:GLU:OE1	B:515:GLU:CB	0.901
1	A:84:ARG:O	B:216:GLN:CD	0.900
1	A:317:SER:CB	A:301:ARG:CB	0.899
1	A:663:ILE:HB	A:887:ARG:NH2	0.898
1	B:340:ASN:CB	B:516:LYS:CG	0.898
1	A:31:PRO:HB2	B:435:LYS:N	0.898
1	B:203:VAL:CG1	A:723:LEU:CD1	0.895
1	B:466:LEU:HD23	A:170:MET:CE	0.894
1	A:113:ARG:NH1	B:465:VAL:CA	0.893
1	B:329:TYR:CD2	A:170:MET:CE	0.892
1	B:287:GLU:O	B:471:ILE:HG13	0.891
1	A:346:VAL:CG2	B:484:TYR:CE2	0.891
1	B:470:LEU:HD22	A:999:THR:HG23	0.890
1	B:464:ILE:CG2	B:517:MET:HG3	0.890
1	B:203:VAL:CA	B:390:ARG:CD	0.887
1	A:705:TRP:CD2	B:356:HIS:CE1	0.884
1	B:133:VAL:O	A:908:ALA:CB	0.882
1	A:892:CYS:HB3	A:477:GLN:OE1	0.882
1	B:462:ALA:HB3	B:472:ARG:CG	0.881
1	A:900:LYS:HE3	B:459:LEU:CB	0.880
1	B:514:LEU:HB3	B:480:GLU:OE1	0.880
1	B:216:GLN:CB	B:512:LYS:CD	0.880

Model ID	Atom-1	Atom-2	Clash overlap (Å)
1	A:108:LYS:NZ	B:391:GLN:CD	0.879
1	A:820:THR:HG22	A:910:GLY:O	0.877
1	B:516:LYS:CE	B:465:VAL:CA	0.877
1	B:433:ASP:O	B:519:LYS:CG	0.876
1	A:506:ARG:NE	A:450:PHE:CE2	0.872
1	A:134:TYR:CE2	A:450:PHE:CE2	0.871
1	B:464:ILE:CG2	B:466:LEU:CD1	0.871
1	A:134:TYR:CD2	B:89:GLU:CD	0.870
1	B:470:LEU:HB3	B:486:TYR:CD2	0.870
1	B:483:GLU:OE2	A:88:ARG:NH1	0.867
1	A:994:GLN:HG3	B:341:TYR:CD2	0.867
1	B:516:LYS:HG2	B:511:ARG:CZ	0.865
1	B:390:ARG:CB	B:480:GLU:CD	0.864
1	B:284:ASP:OD1	B:454:ILE:HD11	0.860
1	A:420:ARG:NH1	B:356:HIS:HE1	0.860
1	A:471:ILE:O	B:454:ILE:HD11	0.859
1	B:471:ILE:HG21	B:464:ILE:HA	0.859
1	B:458:VAL:HG13	B:274:ILE:CD1	0.858
1	B:480:GLU:CG	A:656:ILE:HD12	0.857
1	B:512:LYS:CB	A:949:ILE:HG13	0.857
1	B:391:GLN:CB	A:170:MET:CG	0.855
1	A:905:ARG:CZ	A:466:GLN:HE22	0.855
1	A:955:ARG:HH22	B:326:VAL:CG2	0.855

Model ID	Atom-1	Atom-2	Clash overlap (Å)
1	B:464:ILE:HG23	B:459:LEU:CA	0.855
1	B:519:LYS:CE	B:535:GLU:CD	0.854
1	A:346:VAL:HG22	A:745:ALA:HB3	0.853
1	A:346:VAL:CG2	B:309:GLN:CD	0.853
1	B:466:LEU:CB	B:329:TYR:CG	0.852
1	B:89:GLU:CB	A:785:LYS:HZ1	0.852
1	B:485:GLU:HG2	B:251:LYS:CD	0.851
1	A:55:THR:HG23	B:464:ILE:N	0.851
1	B:341:TYR:CD1	B:257:LEU:CD2	0.849
1	A:210:LEU:HD23	B:333:GLY:N	0.849
1	B:511:ARG:CD	A:537:VAL:HG11	0.848
1	B:480:GLU:CB	B:424:LYS:NZ	0.848
1	B:453:TYR:CD1	B:477:GLN:CD	0.848
1	B:284:ASP:OD1	B:503:ASN:N	0.847
1	A:808:ALA:CB	A:702:ILE:HD11	0.846
1	B:453:TYR:CE1	B:5:LEU:CD2	0.846
1	B:463:ILE:CG2	B:329:TYR:HD2	0.845
1	B:274:ILE:CB	B:454:ILE:HD12	0.843
1	A:497:LEU:CD2	B:463:ILE:CD1	0.841
1	A:947:ASP:O	B:467:ILE:CG2	0.840
1	A:808:ALA:HB2	B:515:GLU:CA	0.840
1	A:134:TYR:CE1	B:477:GLN:N	0.840
1	A:408:HIS:CE1	B:24:LYS:CD	0.837
1	A:955:ARG:NH2	B:454:ILE:CG2	0.837

Model ID	Atom-1	Atom-2	Clash overlap (Å)
1	B:325:ASP:HB3	B:61:GLU:OE1	0.836
1	B:458:VAL:HG12	B:195:LEU:CD2	0.836
1	B:535:GLU:CB	B:504:GLU:CG	0.836
1	A:716:LEU:HD21	B:33:ALA:N	0.834
1	B:309:GLN:CB	A:596:LEU:CD2	0.833
1	B:329:TYR:CE1	B:198:LEU:CD2	0.833
1	A:756:GLY:CA	B:450:LEU:CD2	0.833
1	B:251:LYS:CB	B:529:LEU:N	0.833
1	B:463:ILE:HG22	B:87:VAL:HG21	0.832
1	B:257:LEU:CD1	A:212:VAL:CG2	0.832
1	B:332:ASP:C	A:855:PRO:HD2	0.830
1	A:516:PHE:HE2	B:11:LYS:CD	0.830
1	B:368:ASP:CG	A:821:ASP:OD1	0.830
1	B:477:GLN:CB	B:438:LEU:CD2	0.829
1	B:502:GLU:O	B:463:ILE:CG1	0.828
1	A:698:TYR:CZ	A:558:LEU:CD2	0.827
1	B:5:LEU:CD1	B:468:ILE:CG2	0.827
1	B:329:TYR:CG	B:198:LEU:CD1	0.826
1	B:453:TYR:CD1	B:487:GLU:HG3	0.826
1	B:463:ILE:CB	A:615:PHE:CD2	0.824
1	B:467:ILE:CG1	A:639:MET:CE	0.824
1	B:514:LEU:HB3	B:179:LEU:CD2	0.824
1	B:476:ALA:O	B:455:VAL:CG2	0.824

Model ID	Atom-1	Atom-2	Clash overlap (Å)
1	B:24:LYS:CB	B:521:LYS:HG3	0.824
1	B:454:ILE:CG1	B:530:ARG:HG3	0.824
1	A:829:LEU:HD22	B:489:PRO:HA	0.823
1	B:61:GLU:CG	A:159:LEU:CD1	0.822
1	B:195:LEU:CD1	A:466:GLN:NE2	0.822
1	B:503:ASN:HB3	B:293:ASN:OD1	0.822
1	B:32:ALA:CA	B:198:LEU:CD2	0.821
1	A:596:LEU:CD1	B:486:TYR:HD2	0.820
1	B:198:LEU:CD1	B:533:LEU:CD2	0.820
1	B:450:LEU:CD1	B:2:ASN:ND2	0.819
1	B:528:LEU:HB3	B:108:GLY:N	0.819
1	B:53:LEU:HD13	B:34:ILE:CG2	0.818
1	A:113:ARG:HH11	A:827:LYS:HE3	0.817
1	A:854:HIS:ND1	B:201:LYS:CD	0.817
1	B:11:LYS:CB	B:488:VAL:CG2	0.817
1	A:821:ASP:N	B:484:TYR:OH	0.816
1	B:438:LEU:CD1	A:114:MET:HE2	0.815
1	B:462:ALA:HB1	B:353:ASN:O	0.814
1	A:558:LEU:CD1	A:482:PRO:HD2	0.813
1	B:468:ILE:CG1	B:469:MET:CB	0.812
1	B:198:LEU:CB	B:529:LEU:CD2	0.812
1	B:486:TYR:HB3	B:493:ILE:CG2	0.811
1	A:503:THR:HG21	B:465:VAL:CG2	0.810
1	A:627:ILE:CD1	B:23:GLN:N	0.809

Model ID	Atom-1	Atom-2	Clash overlap (Å)
1	B:179:LEU:CD1	B:279:GLU:CD	0.808
1	B:455:VAL:CG1	A:321:LYS:HE3	0.807
1	B:520:ASP:CB	B:11:LYS:CG	0.807
1	B:529:LEU:HD22	B:28:VAL:CG2	0.807
1	B:488:VAL:HG12	B:516:LYS:N	0.806
1	A:155:TYR:CZ	B:241:ILE:CD1	0.805
1	A:408:HIS:CE1	B:466:LEU:N	0.805
1	B:293:ASN:CB	A:301:ARG:NH1	0.804
1	B:198:LEU:CB	B:482:GLU:OE2	0.804
1	B:485:GLU:CG	A:639:MET:HE3	0.803
1	B:533:LEU:CD1	B:204:PRO:N	0.803
1	B:2:ASN:CB	B:343:LYS:CD	0.803
1	B:106:LYS:O	A:489:VAL:HG12	0.802
1	B:34:ILE:CG1	B:241:ILE:CG2	0.802
1	A:825:LEU:HD23	B:461:ALA:HA	0.802
1	B:201:LYS:CB	A:448:ALA:HA	0.800
1	B:488:VAL:CG1	B:484:TYR:CD2	0.800
1	B:20:SER:C	B:10:ASN:OD1	0.799
1	A:107:PHE:CB	B:405:SER:OG	0.799
1	B:287:GLU:O	A:558:LEU:CD1	0.798
1	A:481:ASN:OD1	B:462:ALA:N	0.797
1	B:468:ILE:HG22	B:504:GLU:HG3	0.797
1	B:529:LEU:CD1	B:251:LYS:CG	0.796
1	B:493:ILE:CG1	B:456:GLY:HA3	0.796

Model ID	Atom-1	Atom-2	Clash overlap (Å)
1	B:465:VAL:CG1	B:528:LEU:CD2	0.794
1	B:22:LEU:O	B:466:LEU:CD2	0.791
1	B:279:GLU:CB	A:650:TYR:CD2	0.790
1	A:317:SER:CB	A:582:THR:HG21	0.790
1	B:11:LYS:CE	A:149:LEU:HD11	0.789
1	B:28:VAL:CG1	A:723:LEU:HD22	0.789
1	B:515:GLU:HB3	B:477:GLN:N	0.789
1	A:973:GLU:HA	A:565:LEU:HB3	0.788
1	B:241:ILE:CB	A:894:THR:HG23	0.788
1	B:465:VAL:CG1	B:26:LEU:N	0.787
1	A:130:TYR:CZ	B:528:LEU:CD1	0.787
1	A:949:ILE:CG2	A:321:LYS:CG	0.786
1	B:21:LYS:HA	B:329:TYR:CZ	0.786
1	A:627:ILE:HD12	B:239:GLN:CA	0.785
1	B:203:VAL:C	A:170:MET:SD	0.783
1	B:343:LYS:CB	B:10:ASN:ND2	0.783
1	A:441:LEU:HB3	A:87:VAL:CG2	0.781
1	B:241:ILE:CG1	B:340:ASN:OD1	0.781
1	B:460:ILE:HG22	B:468:ILE:HG13	0.779
1	A:414:ARG:NH1	A:827:LYS:CE	0.777
1	B:21:LYS:N	B:31:LEU:CD1	0.777
1	B:10:ASN:CB	B:117:GLN:CD	0.775
1	B:401:VAL:O	B:511:ARG:NE	0.775
1	A:558:LEU:CB	B:530:ARG:CA	0.774

Model ID	Atom-1	Atom-2	Clash overlap (Å)
1	B:461:ALA:CA	A:639:MET:CE	0.773
1	B:503:ASN:CB	A:768:ARG:NH1	0.773
1	B:251:LYS:CE	B:28:VAL:CG2	0.773
1	B:455:VAL:HG12	B:484:TYR:OH	0.772
1	A:978:VAL:HG23	B:339:GLY:N	0.772
1	B:528:LEU:CD1	B:343:LYS:CG	0.770
1	B:466:LEU:CD1	A:209:ARG:CZ	0.769
1	A:502:LEU:HD13	A:890:PHE:HB2	0.768
1	A:580:GLU:OE1	A:864:GLU:HG3	0.768
1	A:124:ALA:HB1	B:477:GLN:NE2	0.768
1	A:506:ARG:NH2	B:2:ASN:N	0.767
1	A:214:GLU:OE2	A:650:TYR:CG	0.766
1	B:476:ALA:C	B:484:TYR:CD1	0.766
1	A:113:ARG:HG3	B:530:ARG:HG3	0.765
1	A:519:THR:HG23	B:330:LYS:N	0.765
1	A:815:GLU:OE1	B:459:LEU:HB2	0.764
1	B:25:ILE:HG22	A:849:ARG:HH21	0.763
1	B:528:LEU:CB	B:391:GLN:CG	0.763
1	A:317:SER:O	A:742:THR:OG1	0.762
1	B:329:TYR:CG	B:472:ARG:N	0.762
1	B:238:GLN:C	B:25:ILE:N	0.762
1	A:210:LEU:HD23	A:591:PRO:HD3	0.761
1	A:134:TYR:CE2	A:723:LEU:CD2	0.761
1	B:10:ASN:CB	B:308:TYR:N	0.761

Model ID	Atom-1	Atom-2	Clash overlap (Å)
1	A:84:ARG:O	A:364:GLU:OE2	0.761
1	B:340:ASN:CB	B:469:MET:CA	0.760
1	B:467:ILE:CB	B:484:TYR:OH	0.756
1	A:825:LEU:HD23	B:485:GLU:CD	0.755
1	B:31:LEU:CB	B:488:VAL:CG1	0.755
1	B:117:GLN:CB	A:741:PHE:HE2	0.755
1	B:511:ARG:CG	B:49:LYS:CG	0.754
1	A:991:ILE:HD11	B:472:ARG:HB2	0.754
1	B:529:LEU:C	A:300:ARG:HD2	0.753
1	A:627:ILE:HD12	B:533:LEU:CD1	0.753
1	A:663:ILE:CB	B:485:GLU:HA	0.752
1	B:28:VAL:CA	A:810:ASP:OD1	0.752
1	B:19:ARG:C	A:908:ALA:CB	0.750
1	B:338:SER:O	B:204:PRO:HD2	0.750
1	A:328:ARG:NH2	B:73:LYS:N	0.750
1	B:343:LYS:CE	A:448:ALA:HA	0.749
1	A:119:ASP:CB	B:24:LYS:CG	0.749
1	A:824:ILE:HD11	B:83:THR:CG2	0.749
1	A:849:ARG:O	A:842:ARG:NH1	0.748
1	B:477:GLN:CG	B:521:LYS:CD	0.747
1	B:1:MET:O	B:523:GLU:HG3	0.747
1	A:502:LEU:HD13	A:495:MET:HE2	0.746
1	A:973:GLU:HA	B:454:ILE:CG1	0.746

Model ID	Atom-1	Atom-2	Clash overlap (Å)
1	B:19:ARG:HB3	A:88:ARG:HH12	0.745
1	B:529:LEU:HB3	A:170:MET:HG2	0.745
1	B:329:TYR:O	B:10:ASN:CG	0.744
1	B:458:VAL:HG12	A:316:LEU:HD21	0.743
1	A:821:ASP:HA	A:428:PRO:HG2	0.743
1	B:391:GLN:CA	B:33:ALA:CA	0.742
1	A:713:GLN:HG3	B:334:GLU:HA	0.741
1	B:471:ILE:HG22	B:391:GLN:NE2	0.740
1	B:24:LYS:O	B:472:ARG:CA	0.740
1	A:585:ASN:ND2	A:644:LYS:HA	0.738
1	A:506:ARG:NH2	B:472:ARG:HB2	0.738
1	B:307:THR:O	B:466:LEU:CA	0.737
1	A:364:GLU:CA	B:74:VAL:CA	0.736
1	B:468:ILE:CG2	B:220:TYR:CD1	0.735
1	B:20:SER:CA	A:872:LYS:NZ	0.735
1	B:485:GLU:CB	B:33:ALA:N	0.734
1	B:488:VAL:CA	B:521:LYS:HG3	0.731
1	A:726:ILE:CB	B:216:GLN:CG	0.730
1	B:49:LYS:CE	A:198:SER:OG	0.730
1	B:471:ILE:HG22	B:85:ILE:CA	0.729
1	A:297:ASP:OD2	A:170:MET:HE3	0.727
1	B:533:LEU:CB	A:596:LEU:CD2	0.727
1	B:19:ARG:HH11	A:43:LYS:NZ	0.726
1	A:810:ASP:N	A:173:GLU:HG3	0.726

Model ID	Atom-1	Atom-2	Clash overlap (Å)
1	A:420:ARG:HH11	B:455:VAL:CG1	0.726
1	B:203:VAL:HG12	B:379:ASP:OD2	0.725
1	B:72:LYS:O	B:493:ILE:CG1	0.725
1	A:414:ARG:CZ	B:11:LYS:CG	0.723
1	B:24:LYS:CE	B:513:GLN:HG3	0.723
1	B:83:THR:CA	B:484:TYR:CD1	0.722
1	A:827:LYS:O	B:529:LEU:HB3	0.722
1	B:521:LYS:CB	B:459:LEU:N	0.722
1	B:522:PRO:HG2	A:537:VAL:HG11	0.721
1	A:491:PRO:HB3	B:459:LEU:N	0.720
1	B:453:TYR:CD1	B:536:ASP:OXT	0.719
1	A:55:THR:HG23	B:14:GLU:N	0.719
1	A:134:TYR:CE1	B:533:LEU:CG	0.718
1	B:10:ASN:CA	B:485:GLU:OE2	0.717
1	A:234:ILE:HD11	B:536:ASP:OXT	0.716
1	A:405:ILE:HG23	A:159:LEU:CD1	0.715
1	A:328:ARG:CZ	B:460:ILE:CD1	0.715
1	B:32:ALA:C	A:114:MET:HE2	0.714
1	B:333:GLY:C	B:466:LEU:HB2	0.714
1	B:391:GLN:CG	B:474:LYS:NZ	0.714
1	B:471:ILE:CG2	A:582:THR:OG1	0.713
1	A:495:MET:HE3	B:117:GLN:NE2	0.713
1	B:471:ILE:CG2	B:241:ILE:CG1	0.713
1	B:465:VAL:CG1	A:723:LEU:HD21	0.712

Model ID	Atom-1	Atom-2	Clash overlap (Å)
1	B:73:LYS:C	B:88:PRO:HD2	0.712
1	B:220:TYR:CB	B:336:THR:CG2	0.712
1	A:866:GLU:OE1	B:394:ILE:CD1	0.712
1	B:32:ALA:HB3	B:461:ALA:N	0.712
1	B:520:ASP:OD1	B:519:LYS:NZ	0.711
1	B:216:GLN:CA	B:179:LEU:CD2	0.710
1	A:194:GLU:O	B:181:ILE:CD1	0.709
1	A:214:GLU:OE2	B:469:MET:HG2	0.709
1	B:84:VAL:C	B:469:MET:CG	0.709
1	A:134:TYR:CG	A:785:LYS:HZ2	0.708
1	A:596:LEU:CB	B:390:ARG:NE	0.708
1	A:43:LYS:CD	B:454:ILE:CG2	0.708
1	A:100:PRO:CG	A:803:ARG:NH2	0.708
1	B:455:VAL:CA	B:499:ASN:HA	0.707
1	B:379:ASP:CB	A:723:LEU:HD11	0.706
1	B:493:ILE:CA	B:484:TYR:CE1	0.706
1	A:7:PHE:O	B:140:LEU:HB2	0.705
1	A:978:VAL:CG2	A:188:VAL:HG23	0.704
1	B:11:LYS:CA	A:723:LEU:CD1	0.704
1	B:512:LYS:CD	B:201:LYS:CG	0.704
1	B:19:ARG:HD2	B:195:LEU:CD1	0.702
1	B:529:LEU:CD2	B:424:LYS:HZ3	0.702
1	B:458:VAL:CB	A:235:PRO:HD2	0.701
1	A:516:PHE:CE2	B:16:TRP:CD2	0.701

Model ID	Atom-1	Atom-2	Clash overlap (Å)
1	B:458:VAL:C	A:910:GLY:C	0.699
1	B:535:GLU:C	B:496:PRO:HA	0.698
1	B:13:SER:OG	B:518:ALA:CB	0.698
1	A:955:ARG:NH2	A:301:ARG:NH1	0.698
1	B:533:LEU:CA	B:464:ILE:N	0.696
1	B:485:GLU:CB	A:639:MET:HE3	0.695
1	A:113:ARG:HG3	A:785:LYS:NZ	0.695
1	B:535:GLU:O	B:9:LYS:HG3	0.694
1	A:155:TYR:CE1	B:109:SER:H	0.694
1	B:460:ILE:CB	A:125:LEU:CD2	0.693
1	A:107:PHE:HB3	B:61:GLU:CG	0.693
1	B:465:VAL:HG11	A:728:MET:CE	0.692
1	B:474:LYS:CD	B:33:ALA:N	0.692
1	A:580:GLU:HG2	B:485:GLU:CA	0.692
1	B:117:GLN:CG	B:519:LYS:N	0.692
1	B:241:ILE:CA	B:484:TYR:N	0.691
1	A:506:ARG:NE	A:582:THR:CG2	0.690
1	B:87:VAL:HG12	A:849:ARG:CZ	0.690
1	B:336:THR:CA	B:466:LEU:HB2	0.690
1	B:394:ILE:CB	A:605:VAL:HG11	0.689
1	B:460:ILE:HG22	B:2:ASN:OD1	0.689
1	B:519:LYS:CD	A:282:GLN:NE2	0.689
1	B:179:LEU:CB	B:199:VAL:HG22	0.688
1	B:181:ILE:CB	B:465:VAL:CG1	0.688

Model ID	Atom-1	Atom-2	Clash overlap (Å)
1	B:468:ILE:HG21	B:482:GLU:CD	0.688
1	B:468:ILE:HG22	A:316:LEU:CD2	0.687
1	A:756:GLY:HA2	B:488:VAL:CG2	0.687
1	B:390:ARG:CG	B:87:VAL:CG2	0.686
1	B:454:ILE:CA	B:204:PRO:C	0.686
1	A:799:TYR:OH	B:109:SER:N	0.684
1	B:498:ILE:HG22	B:17:LYS:N	0.683
1	A:506:ARG:CZ	B:199:VAL:HG22	0.683
1	B:19:ARG:C	B:288:PRO:CD	0.683
1	B:136:THR:O	B:389:GLU:CA	0.682
1	A:184:LEU:O	B:468:ILE:N	0.682
1	A:506:ARG:HE	B:484:TYR:HD1	0.681
1	B:201:LYS:CE	A:170:MET:CG	0.680
1	A:808:ALA:HB1	A:749:GLY:HA2	0.680
1	B:195:LEU:CB	B:234:SER:H	0.680
1	B:368:ASP:CG	B:522:PRO:HD3	0.680
1	A:234:ILE:CG2	A:285:LYS:NZ	0.678
1	B:16:TRP:CB	A:561:THR:HG21	0.677
1	A:905:ARG:HE	B:279:GLU:OE1	0.677
1	B:495:LEU:HB3	B:487:GLU:OE2	0.676
1	B:517:MET:HB3	B:459:LEU:CD2	0.675
1	A:130:TYR:CD1	B:484:TYR:CZ	0.675
1	B:463:ILE:CG2	B:527:LYS:CG	0.675

Model ID	Atom-1	Atom-2	Clash overlap (Å)
1	A:627:ILE:HD13	A:114:MET:CE	0.674
1	A:756:GLY:CA	A:913:VAL:HG11	0.674
1	B:8:MET:HE2	A:289:GLN:CD	0.673
1	B:107:THR:C	B:379:ASP:CA	0.673
1	A:114:MET:HE3	B:309:GLN:N	0.673
1	B:61:GLU:CA	A:447:ASN:O	0.671
1	A:656:ILE:HD13	A:642:ARG:HB3	0.671
1	B:32:ALA:CB	A:762:PRO:HG3	0.671
1	B:19:ARG:HH12	B:49:LYS:CD	0.671
1	B:518:ALA:O	B:404:THR:CG2	0.671
1	B:483:GLU:C	B:86:SER:HA	0.670
1	A:580:GLU:OE1	B:306:GLU:CD	0.670
1	A:821:ASP:HA	B:526:ALA:HB2	0.670
1	B:466:LEU:CD1	A:241:MET:HE3	0.669
1	A:596:LEU:HD11	B:469:MET:N	0.669
1	B:2:ASN:CB	B:374:MET:CA	0.668
1	A:170:MET:SD	B:530:ARG:CG	0.668
1	B:140:LEU:HD21	A:908:ALA:HB3	0.667
1	B:465:VAL:CA	B:5:LEU:HD22	0.667
1	B:482:GLU:CB	B:142:ASN:CA	0.667
1	A:234:ILE:HD11	A:728:MET:HE3	0.666
1	B:488:VAL:CA	A:590:THR:HA	0.665
1	B:53:LEU:HD13	A:723:LEU:CD2	0.665
1	B:203:VAL:O	B:469:MET:CB	0.664

Model ID	Atom-1	Atom-2	Clash overlap (Å)
1	B:107:THR:C	B:525:PHE:CA	0.664
1	B:16:TRP:HB3	B:526:ALA:HB2	0.664
1	B:140:LEU:CD2	B:239:GLN:N	0.664
1	B:287:GLU:C	A:908:ALA:HB3	0.663
1	A:841:GLU:OE2	B:455:VAL:HA	0.663
1	B:388:THR:C	A:331:LEU:HD12	0.661
1	B:467:ILE:CG2	B:513:GLN:CG	0.661
1	B:19:ARG:HD2	B:482:GLU:CG	0.661
1	A:134:TYR:CD1	A:913:VAL:HG12	0.660
1	A:747:MET:HE2	B:393:ASP:OD2	0.659
1	B:232:ALA:C	A:317:SER:OG	0.659
1	B:521:LYS:HB2	A:453:ASP:OD2	0.659
1	A:285:LYS:CD	B:461:ALA:CB	0.658
1	A:505:GLU:HG2	B:465:VAL:CG2	0.658
1	B:279:GLU:CG	B:382:ASN:OD1	0.658
1	B:487:GLU:CB	B:535:GLU:CG	0.656
1	B:459:LEU:CB	B:12:THR:OG1	0.655
1	B:19:ARG:C	B:513:GLN:HG3	0.655
1	B:527:LYS:CE	B:471:ILE:N	0.655
1	A:107:PHE:HB3	B:467:ILE:HG12	0.653
1	A:813:ILE:HD12	A:593:ARG:NH2	0.653
1	A:829:LEU:HD22	B:335:ASN:OD1	0.653
1	A:101:VAL:HG13	A:908:ALA:HB1	0.652

Model ID	Atom-1	Atom-2	Clash overlap (Å)
1	B:378:PRO:C	B:415:ASN:C	0.652
1	B:308:TYR:O	A:639:MET:HE3	0.651
1	A:414:ARG:CZ	B:17:LYS:N	0.651
1	A:570:ILE:HG22	A:159:LEU:HD12	0.650
1	A:705:TRP:CE2	B:4:THR:OG1	0.650
1	B:49:LYS:CB	B:533:LEU:CD2	0.650
1	B:404:THR:CA	B:499:ASN:OD1	0.649
1	B:52:PRO:CA	A:209:ARG:NH1	0.647
1	B:306:GLU:CB	B:392:ASP:OD2	0.647
1	B:525:PHE:HB3	A:489:VAL:CG1	0.645
1	A:34:ILE:HD12	A:596:LEU:CD1	0.645
1	B:468:ILE:HG22	B:482:GLU:HB3	0.645
1	B:373:VAL:C	B:521:LYS:CB	0.645
1	B:529:LEU:HD22	A:389:LYS:NZ	0.644
1	A:420:ARG:NH1	A:282:GLN:HG2	0.642
1	B:5:LEU:CD1	B:291:LYS:NZ	0.642
1	B:141:SER:C	B:469:MET:HA	0.641
1	A:656:ILE:HD13	B:493:ILE:CD1	0.641
1	A:585:ASN:ND2	B:471:ILE:HG12	0.640
1	A:506:ARG:HH21	A:623:ILE:HD11	0.639
1	B:468:ILE:CG2	A:930:PRO:HD3	0.639
1	B:524:ASP:HB3	B:204:PRO:HD2	0.639
1	B:525:PHE:CB	B:339:GLY:N	0.639
1	B:238:GLN:CA	B:490:GLN:N	0.639

Model ID	Atom-1	Atom-2	Clash overlap (Å)
1	A:420:ARG:HH12	B:343:LYS:NZ	0.638
1	B:454:ILE:HG22	B:435:LYS:N	0.638
1	A:327:PHE:HA	A:321:LYS:HE3	0.637
1	B:512:LYS:HD3	B:9:LYS:CD	0.636
1	B:481:PHE:HD1	B:472:ARG:CD	0.636
1	A:900:LYS:HG3	B:482:GLU:HB3	0.635
1	A:809:GLN:O	B:330:LYS:HG3	0.635
1	B:393:ASP:CB	B:341:TYR:CD2	0.635
1	A:296:ILE:O	B:404:THR:OG1	0.635
1	A:449:ASP:OD1	B:477:GLN:CG	0.635
1	B:460:ILE:HG22	B:251:LYS:NZ	0.635
1	B:464:ILE:CG2	B:128:PHE:CA	0.634
1	B:382:ASN:ND2	B:503:ASN:CA	0.634
1	B:535:GLU:CA	B:502:GLU:OE2	0.634
1	B:12:THR:CG2	A:78:CYS:SG	0.634
1	B:512:LYS:HB3	B:336:THR:OG1	0.633
1	B:470:LEU:O	B:517:MET:SD	0.633
1	A:949:ILE:HG21	A:745:ALA:CB	0.632
1	B:467:ILE:CG2	B:86:SER:CA	0.632
1	A:580:GLU:OE2	B:455:VAL:CA	0.632
1	B:335:ASN:ND2	B:521:LYS:CG	0.632
1	A:420:ARG:NH1	B:521:LYS:HG3	0.632
1	B:414:GLN:C	B:330:LYS:HZ3	0.631
1	A:627:ILE:HD11	B:510:ARG:N	0.631

Model ID	Atom-1	Atom-2	Clash overlap (Å)
1	B:16:TRP:CB	A:639:MET:HE2	0.630
1	A:155:TYR:CZ	A:570:ILE:CG1	0.629
1	B:4:THR:CG2	A:605:VAL:HG21	0.629
1	B:533:LEU:CB	B:508:SER:HG	0.629
1	B:498:ILE:CG2	A:159:LEU:HD11	0.628
1	A:119:ASP:CG	B:77:GLU:CD	0.628
1	B:392:ASP:CB	B:175:ALA:CA	0.628
1	A:441:LEU:HB3	B:495:LEU:N	0.628
1	A:559:ILE:HD11	A:644:LYS:CA	0.625
1	B:21:LYS:CG	A:849:ARG:HH21	0.625
1	B:520:ASP:HB3	B:487:GLU:CD	0.624
1	A:379:LEU:O	A:728:MET:HE1	0.623
1	A:131:PHE:CD1	B:530:ARG:HA	0.623
1	B:291:LYS:CD	B:449:PRO:CD	0.622
1	B:468:ILE:CG2	B:474:LYS:N	0.622
1	B:493:ILE:CB	A:241:MET:HE3	0.621
1	B:470:LEU:CD2	A:269:LYS:HG3	0.621
1	A:578:MET:HE2	A:737:ASN:OD1	0.621
1	A:929:GLU:HB3	A:485:GLY:O	0.620
1	B:203:VAL:HG13	A:321:LYS:HE3	0.619
1	B:338:SER:HG	B:11:LYS:NZ	0.619
1	B:489:PRO:O	B:204:PRO:C	0.619
1	B:343:LYS:CD	B:219:THR:OG1	0.619
1	B:433:ASP:C	B:415:ASN:CA	0.619

Model ID	Atom-1	Atom-2	Clash overlap (Å)
1	A:317:SER:HB2	B:461:ALA:HA	0.619
1	B:9:LYS:CB	A:447:ASN:O	0.619
1	B:471:ILE:HG21	B:459:LEU:N	0.619
1	B:21:LYS:HG2	B:260:MET:SD	0.619
1	B:329:TYR:HB3	B:26:LEU:CA	0.615
1	B:341:TYR:CB	B:329:TYR:HB3	0.614
1	B:404:THR:CG2	B:528:LEU:HD12	0.614
1	B:477:GLN:CA	A:531:VAL:CG2	0.613
1	B:251:LYS:CD	A:649:LYS:NZ	0.613
1	A:829:LEU:CD2	B:527:LYS:N	0.613
1	B:127:GLU:C	B:435:LYS:NZ	0.612
1	B:502:GLU:C	A:126:GLU:HG3	0.611
1	B:502:GLU:CG	B:7:GLN:OE1	0.611
1	A:75:CYS:SG	B:21:LYS:CG	0.611
1	B:336:THR:CG2	A:887:ARG:HH21	0.611
1	B:517:MET:CB	B:512:LYS:CG	0.610
1	A:716:LEU:HD21	A:741:PHE:CD2	0.609
1	B:52:PRO:HA	A:785:LYS:HD2	0.609
1	B:454:ILE:HG22	B:473:LYS:HB2	0.608
1	B:520:ASP:HB3	A:67:ARG:HB2	0.607
1	B:520:ASP:HB3	B:484:TYR:CE2	0.607
1	B:330:LYS:CD	A:114:MET:CE	0.606
1	B:509:VAL:O	A:305:VAL:HG13	0.606
1	A:571:LEU:HD23	B:354:ARG:N	0.606

Model ID	Atom-1	Atom-2	Clash overlap (Å)
1	A:567:PHE:O	A:235:PRO:HD2	0.605
1	A:596:LEU:HD21	A:570:ILE:HG12	0.605
1	A:814:ARG:HH22	A:723:LEU:CG	0.605
1	B:508:SER:CB	B:517:MET:CG	0.605
1	A:155:TYR:CZ	B:517:MET:HE3	0.605
1	B:77:GLU:CB	A:114:MET:HE2	0.604
1	B:174:SER:C	B:465:VAL:HG23	0.604
1	B:494:ASN:O	A:495:MET:HE1	0.603
1	A:495:MET:HE3	B:469:MET:HG2	0.603
1	A:821:ASP:CB	A:421:LEU:HB2	0.602
1	B:487:GLU:CB	B:521:LYS:HE3	0.602
1	A:656:ILE:CD1	A:42:GLU:HG2	0.600
1	B:529:LEU:C	B:495:LEU:HD12	0.600
1	B:448:ILE:CG2	A:753:ASN:OD1	0.599
1	B:473:LYS:O	B:518:ALA:HB2	0.599
1	A:34:ILE:CD1	B:536:ASP:OD2	0.599
1	A:98:ALA:HB2	B:330:LYS:HZZ	0.596
1	A:737:ASN:N	B:107:THR:C	0.594
1	A:480:LEU:HD22	A:723:LEU:HD21	0.593
1	A:317:SER:C	B:136:THR:CA	0.593
1	B:11:LYS:CD	A:628:PHE:CE1	0.592
1	B:203:VAL:C	A:595:PHE:CE1	0.591
1	B:215:ASP:CG	B:17:LYS:CA	0.591

Model ID	Atom-1	Atom-2	Clash overlap (Å)
1	B:414:GLN:O	B:90:ASP:OD1	0.591
1	B:460:ILE:CG2	A:723:LEU:CD2	0.590
1	A:414:ARG:NH2	A:289:GLN:OE1	0.590
1	B:458:VAL:CG1	B:14:GLU:OE2	0.590
1	B:260:MET:CB	B:34:ILE:CG2	0.589
1	B:25:ILE:HG22	B:89:GLU:CG	0.589
1	B:329:TYR:CD1	B:76:ASN:OD1	0.589
1	B:527:LYS:HD3	A:305:VAL:CG1	0.588
1	A:525:ALA:HB1	B:31:LEU:CD2	0.588
1	A:649:LYS:CD	B:417:SER:HG	0.588
1	B:526:ALA:O	B:487:GLU:OE1	0.588
1	B:435:LYS:CD	B:518:ALA:HB2	0.588
1	A:107:PHE:CE2	B:9:LYS:CG	0.587
1	B:7:GLN:CG	B:459:LEU:N	0.586
1	B:21:LYS:CE	B:454:ILE:CD1	0.584
1	A:820:THR:CG2	A:723:LEU:CD2	0.583
1	B:512:LYS:CA	B:409:ASP:CA	0.583
1	A:726:ILE:HG22	B:509:VAL:HA	0.583
1	A:753:ASN:O	B:484:TYR:HD2	0.582
1	B:472:ARG:HB3	B:106:LYS:NZ	0.582
1	A:66:LYS:O	B:303:LYS:NZ	0.582
1	B:20:SER:CA	B:502:GLU:CD	0.581
1	A:107:PHE:CB	A:489:VAL:HG11	0.580
1	A:260:ARG:NH1	B:455:VAL:N	0.580

Model ID	Atom-1	Atom-2	Clash overlap (Å)
1	B:353:ASN:O	B:438:LEU:CD2	0.579
1	A:234:ILE:HG23	A:592:ASP:OD1	0.579
1	A:567:PHE:O	B:225:ASP:N	0.579
1	A:506:ARG:NH2	B:535:GLU:OE2	0.579
1	B:517:MET:CE	A:424:GLN:HE21	0.578
1	B:516:LYS:CE	A:888:SER:CB	0.578
1	A:107:PHE:HB2	B:74:VAL:N	0.578
1	B:464:ILE:CB	A:159:LEU:HD13	0.577
1	A:441:LEU:HD21	A:728:MET:CE	0.576
1	B:468:ILE:CG2	B:450:LEU:CD2	0.576
1	A:419:HIS:NE2	B:12:THR:HG1	0.575
1	B:521:LYS:CG	B:293:ASN:HD22	0.575
1	A:32:GLU:OE2	A:448:ALA:CA	0.575
1	B:494:ASN:HB3	B:330:LYS:NZ	0.575
1	A:753:ASN:C	B:379:ASP:OD2	0.574
1	B:517:MET:SD	B:390:ARG:HB3	0.572
1	B:536:ASP:OD1	B:445:SER:HB3	0.572
1	B:330:LYS:CD	B:483:GLU:OE2	0.572
1	B:106:LYS:O	B:219:THR:OG1	0.572
1	A:506:ARG:HE	B:467:ILE:CG2	0.571
1	B:135:ALA:C	B:482:GLU:OE1	0.571
1	A:480:LEU:HD11	B:8:MET:CG	0.570
1	A:558:LEU:HD13	B:415:ASN:N	0.570

Model ID	Atom-1	Atom-2	Clash overlap (Å)
1	B:16:TRP:C	A:259:ARG:HG2	0.568
1	B:90:ASP:N	B:374:MET:CG	0.568
1	A:506:ARG:CZ	A:741:PHE:HE1	0.567
1	A:101:VAL:CG1	A:741:PHE:CE2	0.567
1	B:14:GLU:OE1	B:213:ILE:HG12	0.567
1	B:34:ILE:CA	A:596:LEU:HD12	0.566
1	B:89:GLU:CA	B:257:LEU:CD2	0.566
1	B:76:ASN:N	A:29:LYS:NZ	0.566
1	A:260:ARG:NH1	B:353:ASN:CB	0.566
1	B:31:LEU:CB	B:466:LEU:CD1	0.565
1	B:417:SER:CB	A:319:MET:HE2	0.564
1	B:487:GLU:CG	A:644:LYS:HD2	0.564
1	B:517:MET:HB3	A:382:ASN:OD1	0.564
1	B:9:LYS:CE	B:61:GLU:CD	0.563
1	B:458:VAL:HG12	B:177:ILE:CA	0.562
1	B:453:TYR:CE1	A:474:LEU:HD12	0.561
1	A:506:ARG:NE	B:306:GLU:OE1	0.561
1	B:408:LYS:C	B:485:GLU:OE1	0.561
1	B:508:SER:OG	A:182:ILE:HD11	0.560
1	B:21:LYS:HB2	B:456:GLY:N	0.559
1	B:106:LYS:CD	B:503:ASN:N	0.559
1	B:303:LYS:CD	A:736:GLY:O	0.559
1	B:502:GLU:CB	A:46:LEU:HB2	0.558

Model ID	Atom-1	Atom-2	Clash overlap (Å)
1	A:352:MET:HE3	B:499:ASN:OD1	0.557
1	B:454:ILE:HG22	A:125:LEU:HD22	0.556
1	A:975:ASP:OD1	A:768:ARG:HD2	0.555
1	B:438:LEU:CB	A:961:GLU:OE1	0.555
1	A:553:GLN:NE2	B:484:TYR:C	0.555
1	B:224:SER:O	B:204:PRO:HA	0.554
1	B:535:GLU:OE1	A:448:ALA:CB	0.553
1	A:421:LEU:HB3	B:21:LYS:CD	0.553
1	A:824:ILE:HD12	B:461:ALA:HB2	0.553
1	B:73:LYS:CA	B:488:VAL:N	0.553
1	A:155:TYR:CE1	A:702:ILE:CD1	0.552
1	A:991:ILE:HD11	A:917:GLU:OE2	0.551
1	A:656:ILE:CD1	A:944:VAL:HG11	0.551
1	B:450:LEU:CB	A:650:TYR:CD1	0.550
1	B:12:THR:CB	A:913:VAL:CG1	0.550
1	B:293:ASN:CB	A:994:GLN:HB2	0.550
1	A:414:ARG:HH12	B:465:VAL:HB	0.549
1	B:330:LYS:HD2	B:474:LYS:N	0.549
1	B:379:ASP:OD1	B:522:PRO:CD	0.549
1	B:390:ARG:CD	B:85:ILE:N	0.549
1	B:444:GLU:HB3	B:337:GLU:N	0.549
1	B:21:LYS:N	A:762:PRO:HG3	0.548
1	B:215:ASP:OD2	B:330:LYS:CA	0.548
1	B:467:ILE:CA	B:10:ASN:OD1	0.548

Model ID	Atom-1	Atom-2	Clash overlap (Å)
1	B:482:GLU:CG	A:401:LEU:HD22	0.547
1	B:8:MET:CE	A:913:VAL:CG1	0.547
1	B:414:GLN:HA	B:260:MET:CG	0.547
1	A:31:PRO:CB	A:644:LYS:CB	0.546
1	B:374:MET:CE	B:528:LEU:HD12	0.546
1	A:720:LEU:HD11	A:755:ALA:N	0.546
1	A:726:ILE:CB	B:46:SER:N	0.546
1	A:895:PRO:HA	B:505:THR:HG23	0.545
1	B:177:ILE:HD12	A:644:LYS:HG3	0.544
1	A:559:ILE:HD11	B:204:PRO:CD	0.544
1	B:257:LEU:CB	B:302:GLU:C	0.544
1	A:29:LYS:CD	B:83:THR:HG22	0.543
1	B:287:GLU:O	A:589:LYS:NZ	0.543
1	B:465:VAL:CG1	A:55:THR:OG1	0.543
1	A:254:LEU:HD11	B:445:SER:HG	0.542
1	A:440:PRO:HG2	B:469:MET:CG	0.542
1	A:382:ASN:N	B:495:LEU:HD12	0.542
1	A:889:ALA:O	B:215:ASP:OD1	0.540
1	B:61:GLU:CB	A:867:LEU:HD12	0.539
1	B:176:SER:C	B:83:THR:OG1	0.539
1	A:470:ARG:HA	A:84:ARG:N	0.539
1	B:306:GLU:CG	B:258:GLY:N	0.538
1	B:485:GLU:CG	B:418:ASP:OD2	0.538

Model ID	Atom-1	Atom-2	Clash overlap (Å)
1	A:118:LEU:HD23	A:235:PRO:HD2	0.536
1	A:978:VAL:HG22	A:658:VAL:N	0.536
1	A:846:ARG:HH21	B:93:ASP:CG	0.536
1	B:455:VAL:HG12	B:241:ILE:HG21	0.536
1	B:502:GLU:HB3	B:468:ILE:N	0.536
1	A:735:ARG:O	A:446:TYR:C	0.536
1	A:33:THR:HG22	A:512:GLU:OE2	0.535
1	A:890:PHE:CE1	A:930:PRO:CD	0.534
1	B:498:ILE:HG21	A:650:TYR:CZ	0.533
1	A:114:MET:HE3	A:702:ILE:HD11	0.532
1	A:663:ILE:CG2	B:465:VAL:CG1	0.532
1	A:803:ARG:NH1	B:485:GLU:HG3	0.532
1	B:19:ARG:NH1	B:520:ASP:OD2	0.532
1	B:203:VAL:O	B:460:ILE:CG1	0.531
1	A:414:ARG:NH1	B:502:GLU:OE1	0.531
1	B:21:LYS:CB	B:417:SER:OG	0.531
1	B:460:ILE:HG22	B:330:LYS:HZZ	0.530
1	B:487:GLU:CA	B:459:LEU:CD1	0.530
1	A:698:TYR:CZ	B:508:SER:N	0.530
1	A:913:VAL:CG2	A:173:GLU:CG	0.529
1	A:709:LYS:NZ	A:106:TYR:CD2	0.529
1	A:502:LEU:CD1	B:117:GLN:OE1	0.529
1	A:813:ILE:HD12	A:442:VAL:HG11	0.528
1	A:979:VAL:HG21	A:473:MET:HB2	0.528

Model ID	Atom-1	Atom-2	Clash overlap (Å)
1	A:890:PHE:CZ	A:565:LEU:HD11	0.528
1	B:464:ILE:HG22	B:472:ARG:HA	0.527
1	B:473:LYS:HB3	B:478:GLU:HG3	0.527
1	B:521:LYS:CB	B:142:ASN:N	0.527
1	B:84:VAL:CA	A:126:GLU:HG3	0.525
1	B:336:THR:O	A:716:LEU:CA	0.525
1	A:705:TRP:CG	B:105:PRO:CD	0.525
1	B:329:TYR:C	B:389:GLU:N	0.525
1	B:10:ASN:ND2	B:374:MET:N	0.523
1	A:363:LEU:HD12	B:354:ARG:CG	0.522
1	A:900:LYS:HG3	B:8:MET:SD	0.522
1	B:260:MET:CE	A:762:PRO:HD3	0.521
1	A:495:MET:HE3	B:272:ALA:CA	0.520
1	B:527:LYS:CD	A:438:LEU:HD11	0.519
1	A:753:ASN:OD1	A:828:PRO:HD2	0.519
1	B:44:PHE:O	B:519:LYS:N	0.518
1	B:504:GLU:HB3	A:209:ARG:HG3	0.516
1	A:495:MET:SD	A:778:ILE:HG13	0.516
1	B:203:VAL:CG1	B:199:VAL:HG21	0.516
1	B:301:ALA:O	B:489:PRO:CA	0.516
1	B:57:LEU:O	A:917:GLU:CD	0.515
1	A:589:LYS:CD	A:277:PRO:HD2	0.514
1	A:49:GLU:OE1	A:454:GLN:HB2	0.514
1	B:445:SER:CB	B:279:GLU:OE2	0.514

Model ID	Atom-1	Atom-2	Clash overlap (Å)
1	B:469:MET:CA	B:483:GLU:CB	0.514
1	B:494:ASN:CG	A:650:TYR:OH	0.511
1	B:215:ASP:C	A:764:LYS:HE2	0.511
1	A:847:PHE:CE2	B:519:LYS:HG2	0.511
1	B:83:THR:CG2	B:379:ASP:N	0.511
1	A:83:THR:OG1	A:595:PHE:CZ	0.510
1	B:254:GLN:O	A:301:ARG:CZ	0.509
1	B:418:ASP:CB	A:867:LEU:CD1	0.509
1	A:234:ILE:HG22	B:22:LEU:CB	0.509
1	A:657:THR:CG2	B:513:GLN:HG3	0.509
1	B:93:ASP:CA	A:259:ARG:CG	0.508
1	B:241:ILE:HD13	B:354:ARG:HG2	0.508
1	B:467:ILE:HG22	B:17:LYS:N	0.508
1	A:414:ARG:HH11	B:498:ILE:HG13	0.507
1	A:508:GLY:HA2	B:526:ALA:HB1	0.507
1	A:929:GLU:N	B:435:LYS:H	0.507
1	A:502:LEU:HD11	B:525:PHE:HB2	0.506
1	A:698:TYR:CE2	A:448:ALA:HB2	0.505
1	B:465:VAL:C	A:692:ILE:HD11	0.505
1	B:484:TYR:HB3	B:35:ILE:CD1	0.505
1	B:520:ASP:OD1	B:418:ASP:OD2	0.505
1	B:459:LEU:HB3	A:844:ILE:HG13	0.503
1	B:502:GLU:CG	A:908:ALA:CB	0.503
1	B:417:SER:CA	B:293:ASN:OD1	0.502

Model ID	Atom-1	Atom-2	Clash overlap (Å)
1	B:330:LYS:HD2	B:492:PRO:N	0.502
1	B:459:LEU:CB	A:576:PRO:HD2	0.501
1	B:507:GLU:CA	B:486:TYR:N	0.501
1	A:100:PRO:HG2	B:529:LEU:N	0.501
1	A:103:HIS:HB3	A:448:ALA:CA	0.500
1	A:214:GLU:OE2	B:272:ALA:O	0.500
1	B:117:GLN:CB	B:343:LYS:CA	0.500
1	A:426:PHE:HZ	A:723:LEU:CB	0.500
1	A:469:ALA:HA	A:321:LYS:CE	0.499
1	A:539:VAL:HG21	B:198:LEU:HB2	0.498
1	B:471:ILE:HG22	A:105:TRP:CG	0.497
1	B:477:GLN:HB3	A:512:GLU:OE2	0.497
1	B:141:SER:CA	B:340:ASN:OD1	0.497
1	A:107:PHE:HE2	B:393:ASP:OD1	0.497
1	A:666:LEU:HD11	B:462:ALA:N	0.497
1	B:104:LEU:C	B:482:GLU:CA	0.497
1	B:388:THR:CA	A:390:ILE:HG23	0.496
1	B:373:VAL:CA	A:650:TYR:CG	0.496
1	B:286:VAL:HG13	A:768:ARG:HD2	0.496
1	B:8:MET:CB	B:468:ILE:CG2	0.496
1	A:760:GLU:O	B:529:LEU:N	0.496
1	B:271:THR:C	A:561:THR:CG2	0.495
1	A:412:LEU:HD22	B:175:ALA:N	0.495

Model ID	Atom-1	Atom-2	Clash overlap (Å)
1	A:827:LYS:HB3	B:516:LYS:N	0.493
1	B:518:ALA:CB	B:309:GLN:NE2	0.492
1	A:116:LEU:O	B:503:ASN:N	0.492
1	A:774:LEU:O	B:293:ASN:CG	0.491
1	A:328:ARG:NE	B:468:ILE:HG12	0.491
1	B:177:ILE:HD11	B:525:PHE:HA	0.491
1	B:488:VAL:HG12	A:775:GLU:OE2	0.491
1	A:906:ASN:ND2	B:329:TYR:HD2	0.490
1	A:276:ALA:HB1	A:723:LEU:HD22	0.488
1	A:341:ARG:HE	A:565:LEU:HB3	0.488
1	B:279:GLU:CB	B:491:GLU:HA	0.488
1	B:21:LYS:CG	B:522:PRO:N	0.488
1	A:566:VAL:HG11	A:321:LYS:HE2	0.487
1	A:705:TRP:CH2	B:241:ILE:CG2	0.487
1	B:519:LYS:CE	B:469:MET:SD	0.487
1	B:378:PRO:CA	A:445:ALA:O	0.486
1	A:558:LEU:HD13	B:377:PRO:HD2	0.486
1	A:130:TYR:CZ	B:521:LYS:CG	0.486
1	A:847:PHE:CE2	A:917:GLU:OE2	0.485
1	B:21:LYS:HB3	B:198:LEU:HB3	0.485
1	B:512:LYS:CB	B:469:MET:N	0.485
1	A:31:PRO:HB2	B:502:GLU:OE2	0.484
1	B:286:VAL:HG13	A:957:GLN:HG2	0.483
1	B:16:TRP:CA	A:910:GLY:C	0.483

Model ID	Atom-1	Atom-2	Clash overlap (Å)
1	B:497:ASP:OD1	B:336:THR:N	0.483
1	B:525:PHE:CD1	A:716:LEU:HA	0.482
1	B:433:ASP:C	A:913:VAL:HG11	0.482
1	B:525:PHE:CD2	B:459:LEU:CA	0.482
1	A:414:ARG:NH1	B:459:LEU:CG	0.482
1	A:686:GLN:HB2	B:513:GLN:C	0.482
1	B:35:ILE:CB	A:639:MET:HE2	0.481
1	B:418:ASP:OD1	B:5:LEU:CD1	0.481
1	A:840:GLU:O	A:454:GLN:CB	0.480
1	A:420:ARG:HH12	A:650:TYR:CE1	0.480
1	A:916:GLY:CA	B:21:LYS:HG3	0.480
1	B:293:ASN:CA	B:408:LYS:N	0.480
1	B:491:GLU:O	A:631:PHE:CZ	0.479
1	A:575:PHE:CG	A:932:THR:HG23	0.479
1	A:974:ILE:HD11	B:195:LEU:HD22	0.479
1	B:485:GLU:HB3	B:465:VAL:CA	0.479
1	B:528:LEU:CB	B:2:ASN:CG	0.478
1	A:414:ARG:CZ	B:485:GLU:OE2	0.478
1	B:242:LYS:HE3	B:516:LYS:NZ	0.478
1	B:342:GLU:C	A:446:TYR:C	0.478
1	A:506:ARG:HH21	A:917:GLU:OE2	0.477
1	A:317:SER:HB2	B:533:LEU:HB2	0.477
1	A:907:LEU:HD11	A:106:TYR:OH	0.476
1	B:198:LEU:CD1	A:435:ALA:HB1	0.476

Model ID	Atom-1	Atom-2	Clash overlap (Å)
1	A:103:HIS:HE1	B:516:LYS:HE3	0.476
1	A:508:GLY:CA	B:521:LYS:CG	0.476
1	A:949:ILE:HG23	A:460:PRO:HG3	0.475
1	B:340:ASN:CA	A:450:PHE:CE2	0.475
1	B:393:ASP:CB	B:171:SER:O	0.475
1	B:461:ALA:HA	B:471:ILE:CG1	0.475
1	B:481:PHE:O	A:159:LEU:HD11	0.474
1	A:363:LEU:HD21	A:768:ARG:HH11	0.474
1	A:502:LEU:CD1	A:484:ASP:OD1	0.474
1	A:663:ILE:HG21	B:439:ASP:N	0.474
1	B:468:ILE:CA	B:234:SER:N	0.473
1	B:528:LEU:O	B:484:TYR:HE1	0.472
1	A:505:GLU:HG2	B:509:VAL:HG22	0.472
1	A:949:ILE:HG22	A:105:TRP:CG	0.471
1	B:174:SER:CA	A:149:LEU:HD11	0.471
1	B:515:GLU:CB	A:639:MET:CE	0.471
1	B:309:GLN:CG	B:515:GLU:HB2	0.471
1	B:502:GLU:CB	A:756:GLY:N	0.471
1	B:293:ASN:CA	A:827:LYS:HE2	0.470
1	B:468:ILE:CD1	B:530:ARG:HG3	0.470
1	B:524:ASP:HB3	A:460:PRO:HG3	0.469
1	A:765:SER:OG	B:456:GLY:CA	0.469
1	B:328:ASN:OD1	A:488:VAL:HG23	0.468
1	A:506:ARG:CZ	A:741:PHE:CZ	0.468

Model ID	Atom-1	Atom-2	Clash overlap (Å)
1	A:519:THR:CG2	B:195:LEU:HB2	0.467
1	B:490:GLN:HB3	B:304:VAL:C	0.467
1	B:521:LYS:HB3	B:128:PHE:N	0.467
1	A:317:SER:CB	A:767:PHE:CZ	0.466
1	B:241:ILE:CD1	B:388:THR:CA	0.466
1	B:469:MET:CB	A:723:LEU:CD2	0.465
1	A:419:HIS:CE1	B:484:TYR:CD2	0.465
1	A:973:GLU:HA	A:114:MET:CE	0.464
1	B:376:GLU:HG2	A:869:ASP:OD1	0.464
1	B:521:LYS:CA	A:441:LEU:HD12	0.463
1	A:913:VAL:HG23	A:778:ILE:HG23	0.463
1	B:198:LEU:CD2	B:530:ARG:CG	0.463
1	B:468:ILE:CG2	A:849:ARG:NH2	0.463
1	B:502:GLU:CB	A:750:LEU:HD13	0.462
1	A:800:LEU:HD13	A:884:VAL:HB	0.462
1	A:905:ARG:NE	B:77:GLU:OE1	0.462
1	B:335:ASN:O	A:277:PRO:CD	0.460
1	A:666:LEU:HD11	B:329:TYR:CD2	0.460
1	A:813:ILE:CD1	B:487:GLU:CG	0.460
1	B:458:VAL:CG1	B:526:ALA:CB	0.460
1	B:458:VAL:HG13	A:4:VAL:N	0.460
1	B:512:LYS:O	A:316:LEU:HD21	0.459
1	A:571:LEU:CD2	B:495:LEU:HD12	0.459
1	B:5:LEU:CB	A:370:VAL:HG23	0.458

Model ID	Atom-1	Atom-2	Clash overlap (Å)
1	A:341:ARG:HE	B:33:ALA:C	0.458
1	A:502:LEU:CD1	B:490:GLN:N	0.458
1	A:949:ILE:CG2	B:460:ILE:HG13	0.457
1	A:809:GLN:NE2	A:457:VAL:HG22	0.456
1	B:20:SER:OG	A:565:LEU:CD2	0.456
1	B:407:ASP:O	A:631:PHE:CE1	0.456
1	A:574:SER:OG	A:716:LEU:N	0.456
1	A:794:THR:HA	B:288:PRO:HD3	0.456
1	B:195:LEU:CD1	A:301:ARG:CA	0.456
1	B:464:ILE:HG22	A:442:VAL:HG23	0.455
1	B:2:ASN:CA	A:658:VAL:N	0.455
1	B:485:GLU:HB2	A:122:PRO:HD3	0.454
1	B:516:LYS:CD	A:888:SER:CB	0.454
1	A:414:ARG:NH1	B:496:PRO:CA	0.453
1	A:896:HIS:CD2	B:211:ILE:HB	0.452
1	A:913:VAL:HG22	B:91:GLN:CD	0.451
1	B:533:LEU:CD1	A:466:GLN:CD	0.450
1	A:14:LEU:CD2	B:339:GLY:CA	0.450
1	A:345:VAL:HG22	A:642:ARG:HB3	0.449
1	B:516:LYS:CG	B:108:GLY:C	0.449
1	B:520:ASP:CB	B:530:ARG:HG3	0.449
1	A:411:LEU:HD11	B:34:ILE:HG12	0.448
1	A:346:VAL:HG23	B:340:ASN:OD1	0.448

Model ID	Atom-1	Atom-2	Clash overlap (Å)
1	B:160:PRO:HG3	A:235:PRO:CD	0.447
1	B:470:LEU:CD2	A:605:VAL:HG21	0.447
1	A:155:TYR:OH	B:91:GLN:OE1	0.447
1	A:989:GLN:OE1	B:326:VAL:HG22	0.447
1	A:663:ILE:CG2	B:391:GLN:HB2	0.447
1	A:484:ASP:N	A:331:LEU:HB2	0.446
1	B:437:ASN:O	A:656:ILE:CD1	0.446
1	B:232:ALA:C	B:24:LYS:HE2	0.446
1	B:19:ARG:HB3	B:31:LEU:CG	0.446
1	B:508:SER:OG	B:454:ILE:HD11	0.446
1	A:328:ARG:NH2	B:439:ASP:N	0.445
1	A:103:HIS:CE1	A:450:PHE:CZ	0.444
1	A:124:ALA:CB	B:483:GLU:N	0.444
1	A:571:LEU:HD23	B:496:PRO:C	0.444
1	B:514:LEU:CB	B:202:SER:HB2	0.443
1	A:753:ASN:OD1	B:288:PRO:CD	0.443
1	A:825:LEU:HD23	A:368:PRO:CD	0.442
1	B:529:LEU:CD2	A:614:PRO:HG2	0.442
1	A:411:LEU:CD1	B:476:ALA:HB2	0.442
1	B:455:VAL:CG1	A:53:GLY:O	0.441
1	A:105:TRP:CZ2	A:210:LEU:CD1	0.441
1	A:481:ASN:ND2	A:448:ALA:HA	0.441
1	A:720:LEU:HD11	A:570:ILE:HG13	0.441
1	A:949:ILE:CG2	A:876:ILE:HG13	0.441

Model ID	Atom-1	Atom-2	Clash overlap (Å)
1	B:195:LEU:CD1	B:477:GLN:HB2	0.441
1	B:303:LYS:O	A:849:ARG:HH21	0.441
1	B:127:GLU:CA	A:761:LEU:H	0.440
1	A:748:ARG:NH1	B:334:GLU:HA	0.440
1	B:387:SER:O	A:440:PRO:HD2	0.439
1	A:506:ARG:HE	B:104:LEU:HD13	0.439
1	B:21:LYS:HB2	B:521:LYS:HB2	0.439
1	A:107:PHE:HB2	A:67:ARG:CB	0.439
1	A:869:ASP:N	B:392:ASP:OD2	0.438
1	A:439:HIS:HE1	A:105:TRP:HB2	0.437
1	A:759:ILE:HD12	B:291:LYS:C	0.436
1	B:529:LEU:HB3	B:177:ILE:N	0.436
1	A:821:ASP:CB	A:10:MET:HE2	0.435
1	A:327:PHE:CE1	A:696:GLU:OE2	0.435
1	A:702:ILE:HG23	B:10:ASN:HA	0.435
1	A:843:LEU:HD21	B:533:LEU:HD22	0.435
1	B:77:GLU:CG	A:512:GLU:OE2	0.435
1	A:276:ALA:HB1	A:312:PRO:HD2	0.433
1	B:328:ASN:OD1	A:754:PRO:CD	0.433
1	B:486:TYR:HB3	B:467:ILE:HB	0.433
1	B:525:PHE:CG	A:289:GLN:CD	0.432
1	A:2:LEU:O	A:745:ALA:HB3	0.432
1	A:234:ILE:CD1	A:965:PRO:HD3	0.432

Model ID	Atom-1	Atom-2	Clash overlap (Å)
1	B:494:ASN:CB	B:288:PRO:HD3	0.432
1	A:366:PHE:O	B:459:LEU:CG	0.432
1	B:32:ALA:C	A:702:ILE:HG13	0.431
1	B:489:PRO:HB2	B:533:LEU:HA	0.431
1	A:814:ARG:HH12	A:898:VAL:HG23	0.429
1	B:459:LEU:HB3	B:24:LYS:HB2	0.429
1	A:806:ASP:CG	B:338:SER:HG	0.429
1	A:412:LEU:HG	B:416:LEU:N	0.429
1	A:544:LEU:HD21	A:263:ASN:OD1	0.428
1	A:574:SER:OG	A:350:LEU:HD12	0.428
1	A:666:LEU:HD11	A:430:LEU:HD12	0.428
1	A:809:GLN:HE22	B:329:TYR:HD2	0.428
1	B:287:GLU:HA	A:449:ASP:OD1	0.428
1	A:108:LYS:NZ	A:305:VAL:CG2	0.427
1	A:439:HIS:HB3	A:538:ALA:O	0.427
1	A:657:THR:HG23	A:692:ILE:HD11	0.427
1	A:949:ILE:HG22	A:741:PHE:HD2	0.427
1	A:121:SER:HA	A:994:GLN:HB2	0.427
1	A:824:ILE:CD1	B:313:ALA:CA	0.427
1	A:210:LEU:CD2	B:281:ARG:N	0.426
1	B:495:LEU:HB3	A:213:LEU:CD2	0.425
1	B:196:TYR:CE1	B:406:LEU:HD23	0.425
1	B:91:GLN:CB	B:292:GLU:N	0.425
1	A:408:HIS:CE1	B:484:TYR:OH	0.425

Model ID	Atom-1	Atom-2	Clash overlap (Å)
1	B:338:SER:C	A:236:PRO:HD3	0.424
1	A:570:ILE:CG2	A:312:PRO:HD2	0.424
1	B:107:THR:O	A:354:GLN:HG3	0.424
1	B:529:LEU:CB	B:377:PRO:HD3	0.424
1	A:327:PHE:HE1	A:353:TYR:CE1	0.423
1	B:34:ILE:CG2	A:729:MET:HE1	0.423
1	B:340:ASN:HA	A:990:GLU:HB2	0.423
1	A:234:ILE:CG2	A:650:TYR:CZ	0.422
1	A:596:LEU:CD2	A:872:LYS:NZ	0.422
1	B:91:GLN:CG	B:338:SER:OG	0.422
1	B:325:ASP:CB	A:680:VAL:HG23	0.421
1	B:391:GLN:CD	B:442:THR:C	0.421
1	A:327:PHE:O	B:528:LEU:HB2	0.421
1	A:497:LEU:CD2	B:535:GLU:H	0.421
1	B:24:LYS:CG	B:447:GLY:N	0.421
1	B:31:LEU:CA	A:441:LEU:HB2	0.420
1	B:453:TYR:HE1	B:325:ASP:HA	0.420
1	B:437:ASN:C	B:88:PRO:HD2	0.419
1	A:346:VAL:HG23	B:467:ILE:CG2	0.419
1	B:21:LYS:CG	B:505:THR:OG1	0.419
1	B:495:LEU:O	A:170:MET:HE1	0.418
1	B:140:LEU:HD11	B:513:GLN:CB	0.418
1	B:287:GLU:CA	A:182:ILE:HG13	0.417
1	A:367:LYS:N	A:284:GLU:HG2	0.417

Model ID	Atom-1	Atom-2	Clash overlap (Å)
1	A:500:TYR:CE2	B:530:ARG:CA	0.417
1	B:475:ARG:HB3	B:74:VAL:N	0.417
1	A:49:GLU:HA	B:220:TYR:HE1	0.416
1	A:191:LEU:HB3	A:954:PRO:HD3	0.415
1	A:414:ARG:NH2	B:524:ASP:OD1	0.415
1	A:567:PHE:O	A:125:LEU:HD21	0.414
1	A:872:LYS:O	B:340:ASN:HD22	0.414
1	B:477:GLN:CD	B:513:GLN:CG	0.414
1	A:821:ASP:C	B:412:GLN:N	0.414
1	A:759:ILE:HG22	B:380:ALA:C	0.413
1	A:846:ARG:NH2	A:438:LEU:CD1	0.412
1	B:333:GLY:O	B:486:TYR:CE2	0.412
1	A:439:HIS:CG	A:209:ARG:CG	0.412
1	B:68:GLU:OE2	A:333:GLY:O	0.412
1	B:520:ASP:HB3	A:535:THR:HG21	0.411
1	A:66:LYS:O	A:750:LEU:CD1	0.411
1	A:955:ARG:NH2	B:22:LEU:CA	0.411
1	B:392:ASP:OD1	A:170:MET:SD	0.411
1	A:103:HIS:CE1	A:111:PRO:C	0.410
1	B:290:ASP:O	B:534:ALA:HB2	0.410
1	B:176:SER:CA	B:136:THR:N	0.410
1	A:10:MET:HB3	A:474:LEU:CD1	0.409
1	A:692:ILE:HG22	B:482:GLU:CB	0.409

Model ID	Atom-1	Atom-2	Clash overlap (Å)
1	B:10:ASN:CG	B:485:GLU:HG3	0.409
1	B:533:LEU:CD1	A:212:VAL:CG2	0.409
1	A:508:GLY:N	B:338:SER:OG	0.409
1	A:809:GLN:OE1	A:455:MET:HE1	0.408
1	A:311:ARG:CG	A:704:ILE:HG13	0.408
1	A:753:ASN:CB	A:636:THR:OG1	0.408
1	A:930:PRO:HB3	A:78:CYS:SG	0.408
1	B:466:LEU:CD2	A:237:GLU:CB	0.407
1	A:101:VAL:CG1	A:446:TYR:O	0.407
1	A:716:LEU:CD2	A:697:ARG:HD3	0.407
1	A:964:ASN:HA	B:456:GLY:HA2	0.407
1	B:287:GLU:CA	B:109:SER:N	0.407
1	B:459:LEU:CA	B:526:ALA:CA	0.406
1	A:698:TYR:O	A:75:CYS:HA	0.406
1	B:533:LEU:CG	B:14:GLU:OE1	0.406
1	A:949:ILE:CG2	B:239:GLN:N	0.405
1	A:811:VAL:HG13	A:482:PRO:CD	0.405
1	B:24:LYS:CD	A:383:ILE:CG2	0.404
1	B:338:SER:C	A:855:PRO:HD3	0.404
1	B:414:GLN:O	B:201:LYS:HB3	0.404
1	A:31:PRO:HG3	B:448:ILE:CA	0.404
1	A:347:GLY:HA3	B:488:VAL:N	0.404
1	A:402:GLU:HG3	A:460:PRO:HD3	0.403
1	B:328:ASN:CG	B:118:ASN:ND2	0.403

Model ID	Atom-1	Atom-2	Clash overlap (Å)
1	A:449:ASP:N	B:118:ASN:ND2	0.403
1	A:260:ARG:NH1	B:491:GLU:CA	0.403
1	A:515:VAL:HA	B:451:TRP:H	0.403
1	A:686:GLN:CB	A:213:LEU:HD23	0.402
1	A:726:ILE:CG2	B:460:ILE:HG12	0.402
1	A:979:VAL:CG2	B:305:SER:H	0.402
1	B:312:GLY:C	A:762:PRO:CG	0.401
1	B:280:ASN:O	B:484:TYR:CD2	0.401
1	A:184:LEU:HD23	A:241:MET:CE	0.400
1	B:366:VAL:O	A:650:TYR:CE2	0.400

Torsion angles: Protein backbone ?

In the following table, Ramachandran outliers are listed. The Analysed column shows the number of residues for which the backbone conformation was analysed.

Model ID	Analysed	Favored	Allowed	Outliers
1	1699	1504	144	51

Detailed list of outliers are tabulated below.

Torsion angles: Protein sidechains ?

In the following table, sidechain outliers are listed. The Analysed column shows the number of residues for which the sidechain conformation was analysed.

Model ID	Analysed	Favored	Allowed	Outliers
1	1495	1076	207	212

Detailed list of outliers are tabulated below.

Model ID	Chain	Residue ID	Residue type
1	A	1	MET
1	A	2	LEU
1	A	55	THR

Model ID	Chain	Residue ID	Residue type
1	A	76	ASP
1	A	78	CYS
1	A	83	THR
1	A	87	VAL
1	A	88	ARG
1	A	102	SER
1	A	107	PHE
1	A	125	LEU
1	A	126	GLU
1	A	133	SER
1	A	135	VAL
1	A	137	THR
1	A	149	LEU
1	A	159	LEU
1	A	169	SER
1	A	170	MET
1	A	187	GLU
1	A	190	MET
1	A	193	GLU
1	A	195	LEU
1	A	197	THR
1	A	198	SER
1	A	204	THR

Model ID	Chain	Residue ID	Residue type
1	A	210	LEU
1	A	214	GLU
1	A	231	LEU
1	A	251	THR
1	A	252	SER
1	A	287	MET
1	A	319	MET
1	A	327	PHE
1	A	345	VAL
1	A	352	MET
1	A	357	LEU
1	A	363	LEU
1	A	364	GLU
1	A	373	GLU
1	A	381	HIS
1	A	382	ASN
1	A	385	SER
1	A	408	HIS
1	A	412	LEU
1	A	427	GLU
1	A	429	THR
1	A	431	VAL
1	A	438	LEU

Model ID	Chain	Residue ID	Residue type
1	A	444	THR
1	A	449	ASP
1	A	474	LEU
1	A	488	VAL
1	A	489	VAL
1	A	490	THR
1	A	497	LEU
1	A	504	LEU
1	A	519	THR
1	A	523	LEU
1	A	524	LEU
1	A	531	VAL
1	A	537	VAL
1	A	547	VAL
1	A	548	THR
1	A	551	GLU
1	A	580	GLU
1	A	582	THR
1	A	584	SER
1	A	634	THR
1	A	639	MET
1	A	646	LEU
1	A	651	SER
1	A	657	THR

Model ID	Chain	Residue ID	Residue type
1	A	666	LEU
1	A	692	ILE
1	A	706	SER
1	A	716	LEU
1	A	737	ASN
1	A	761	LEU
1	A	765	SER
1	A	774	LEU
1	A	780	THR
1	A	781	HIS
1	A	787	LEU
1	A	810	ASP
1	A	813	ILE
1	A	815	GLU
1	A	816	THR
1	A	821	ASP
1	A	833	THR
1	A	834	GLU
1	A	869	ASP
1	A	874	LEU
1	A	883	GLU
1	A	899	CYS
1	A	932	THR
1	A	936	MET

Model ID	Chain	Residue ID	Residue type
1	A	938	THR
1	A	959	LEU
1	A	971	ILE
1	A	974	ILE
1	A	977	THR
1	A	980	GLU
1	A	999	THR
1	A	1003	THR
1	A	1018	ILE
1	A	1033	GLU
1	A	1039	ASP
1	A	1040	LEU
1	A	1041	THR
1	A	1070	MET
1	A	1073	GLN
1	A	1088	VAL
1	A	1092	THR
1	A	1100	THR
1	A	1101	GLU
1	A	1107	LEU
1	A	1115	THR
1	A	1135	SER
1	A	1163	GLU
1	A	1171	VAL

Model ID	Chain	Residue ID	Residue type
1	A	1177	MET
1	A	1178	MET
1	A	1192	THR
1	B	1	MET
1	B	4	THR
1	B	5	LEU
1	B	8	MET
1	B	12	THR
1	B	13	SER
1	B	14	GLU
1	B	16	TRP
1	B	19	ARG
1	B	22	LEU
1	B	26	LEU
1	B	27	MET
1	B	31	LEU
1	B	42	SER
1	B	44	PHE
1	B	53	LEU
1	B	57	LEU
1	B	68	GLU
1	B	76	ASN
1	B	78	LEU
1	B	83	THR

Model ID	Chain	Residue ID	Residue type
1	B	86	SER
1	B	87	VAL
1	B	90	ASP
1	B	99	MET
1	B	107	THR
1	B	121	PHE
1	B	123	LEU
1	B	136	THR
1	B	140	LEU
1	B	156	MET
1	B	159	LEU
1	B	195	LEU
1	B	197	HIS
1	B	219	THR
1	B	227	ASP
1	B	233	ASP
1	B	239	GLN
1	B	255	SER
1	B	256	LEU
1	B	259	THR
1	B	261	MET
1	B	271	THR
1	B	277	THR

Model ID	Chain	Residue ID	Residue type
1	B	279	GLU
1	B	282	THR
1	B	305	SER
1	B	307	THR
1	B	318	THR
1	B	325	ASP
1	B	326	VAL
1	B	327	THR
1	B	332	ASP
1	B	334	GLU
1	B	336	THR
1	B	345	SER
1	B	351	GLU
1	B	352	VAL
1	B	362	SER
1	B	369	LEU
1	B	383	THR
1	B	386	LEU
1	B	388	THR
1	B	404	THR
1	B	405	SER
1	B	411	THR
1	B	416	LEU

Model ID	Chain	Residue ID	Residue type
1	B	440	THR
1	B	442	THR
1	B	450	LEU
1	B	459	LEU
1	B	466	LEU
1	B	467	ILE
1	B	469	MET
1	B	470	LEU
1	B	477	GLN
1	B	480	GLU
1	B	481	PHE
1	B	483	GLU
1	B	485	GLU
1	B	495	LEU
1	B	497	ASP
1	B	505	THR
1	B	514	LEU
1	B	528	LEU
1	B	532	TRP
1	B	533	LEU
1	B	535	GLU

[Fit of model to data used for modeling](#) 

Crosslinking-MS

Validation for this section is under development.

Fit of model to data used for validation

Validation for this section is under development.

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