



Full wwPDB EM Validation Report ⓘ

Sep 28, 2026 – 12:30 PM JST

PDB ID : 9XK6 / pdb_00009xk6
EMDB ID : EMD-66949
Title : In situ C2S2M2L4-type PSII-LHCII supercomplex, strongly bound (S-) LHCII trimer with CP26, protomer 1
Authors : Li, J.; Elias, E.; Zhang, K.; Croce, R.; Zhu, J.
Deposited on : 2025-11-05
Resolution : 3.27 Å(reported)

This is a Full wwPDB EM Validation Report for a publicly released PDB entry.

We welcome your comments at validation@mail.wwpdb.org

A user guide is available at

<https://www.wwpdb.org/validation/2017/EMValidationReportHelp>
with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

<http://www.wwpdb.org/validation/2017/FAQs#types>.

The following versions of software and data (see [references ⓘ](#)) were used in the production of this report:

EMDB validation analysis : 0.0.1.dev133
Mogul : 1.8.5 (274361), CSD as541be (2020)
MolProbity : 4-5-2 with Phenix2.2
Buster-report : wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics : 20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics : 202505.v01 (Using data in the EMDB archive up until May 2025)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.51

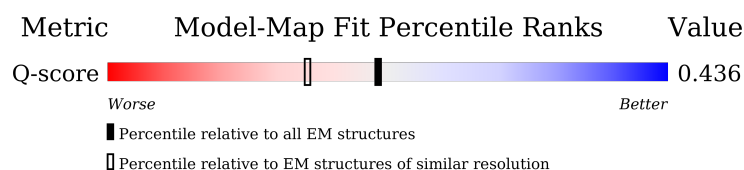
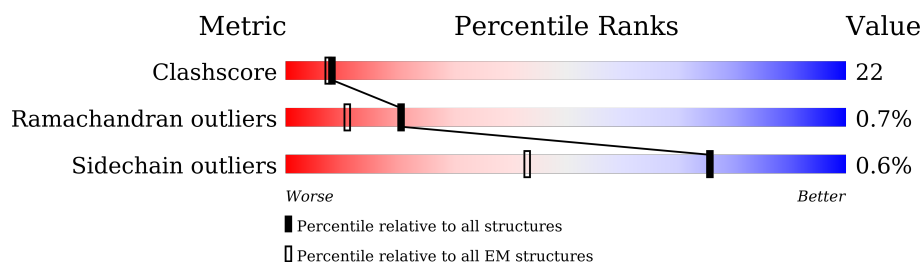
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 3.27 Å.

Percentile scores (ranging between 0-100) for global validation metrics of the entry are shown in the following graphic. The table shows the number of entries on which the scores are based.



Metric	Whole archive (#Entries)	EM structures (#Entries)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	229148	23984	-
Ramachandran outliers	224038	23583	-
Sidechain outliers	223484	23102	-
Q-score	-	25397	14508 (2.77 - 3.77)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions $\leq 5\%$. The upper red bar (where present) indicates the fraction of residues that have poor fit to the EM map (all-atom inclusion $< 40\%$). The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	00	219	76% 23% .
1	1G	219	77% 23%
1	1N	219	82% 17%
2	1S	218	83% 17%

The following table lists non-polymeric compounds, carbohydrate monomers and non-standard residues in protein, DNA, RNA chains that are outliers for geometric or electron-density-fit criteria:

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
3	CLA	00	301	X	-	-	-
3	CLA	00	302	X	-	-	-
3	CLA	00	309	X	-	-	-
3	CLA	00	310	X	-	-	-
3	CLA	00	311	X	-	-	-
3	CLA	00	319	X	-	-	-
3	CLA	1G	602	X	-	-	-
3	CLA	1G	603	X	-	-	-
3	CLA	1G	610	X	-	-	-
3	CLA	1G	612	X	-	-	-
3	CLA	1N	602	X	-	-	-
3	CLA	1N	603	X	-	-	-
3	CLA	1N	613	X	-	-	-
3	CLA	1S	308	X	-	-	-
3	CLA	1S	309	X	-	-	-
3	CLA	1S	311	X	-	-	-
4	CHL	00	306	X	-	-	-
4	CHL	00	307	X	-	-	-
4	CHL	00	308	X	-	-	-
4	CHL	1G	601	X	-	X	-
4	CHL	1G	607	X	-	X	-
4	CHL	1G	609	X	-	-	-
4	CHL	1N	601	X	-	X	-
4	CHL	1N	607	X	-	-	-
4	CHL	1N	609	X	-	-	-
5	LUT	1G	616	-	-	X	-

2 Entry composition [i](#)

There are 9 unique types of molecules in this entry. The entry contains 10406 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, the AltConf column contains the number of residues with at least one atom in alternate conformation and the Trace column contains the number of residues modelled with at most 2 atoms.

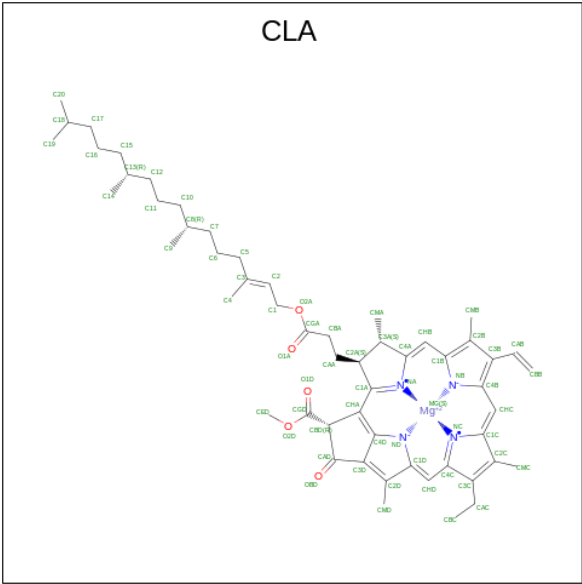
- Molecule 1 is a protein called Chlorophyll a-b binding protein 2, chloroplastic.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	00	219	Total	C	N	O	S	0	0
			1659	1079	269	306	5		
1	1G	219	Total	C	N	O	S	0	0
			1659	1079	269	306	5		
1	1N	219	Total	C	N	O	S	0	0
			1652	1073	269	305	5		

- Molecule 2 is a protein called Chlorophyll a-b binding protein, chloroplastic.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	1S	218	Total	C	N	O	S	0	0
			1661	1079	269	308	5		

- Molecule 3 is CHLOROPHYLL A (CCD ID: CLA) (formula: C₅₅H₇₂MgN₄O₅) (labeled as "Ligand of Interest" by depositor).



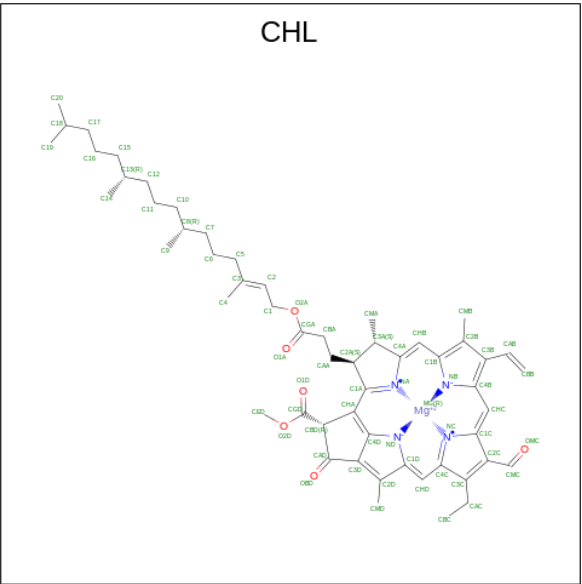
Mol	Chain	Residues	Atoms					AltConf
3	00	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
3	00	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
3	00	1	Total	C	Mg	N	O	0
			50	40	1	4	5	
3	00	1	Total	C	Mg	N	O	0
			60	50	1	4	5	
3	00	1	Total	C	Mg	N	O	0
			60	50	1	4	5	
3	00	1	Total	C	Mg	N	O	0
			60	50	1	4	5	
3	00	1	Total	C	Mg	N	O	0
			47	37	1	4	5	
3	00	1	Total	C	Mg	N	O	0
			64	54	1	4	5	
3	1G	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
3	1G	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
3	1G	1	Total	C	Mg	N	O	0
			41	33	1	4	3	
3	1G	1	Total	C	Mg	N	O	0
			62	52	1	4	5	
3	1G	1	Total	C	Mg	N	O	0
			44	34	1	4	5	
3	1G	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
3	1G	1	Total	C	Mg	N	O	0
			48	38	1	4	5	
3	1G	1	Total	C	Mg	N	O	0
			42	34	1	4	3	
3	1N	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
3	1N	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
3	1N	1	Total	C	Mg	N	O	0
			50	40	1	4	5	
3	1N	1	Total	C	Mg	N	O	0
			41	33	1	4	3	
3	1N	1	Total	C	Mg	N	O	0
			41	33	1	4	3	
3	1N	1	Total	C	Mg	N	O	0
			42	34	1	4	3	

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Mol	Chain	Residues	Atoms					AltConf
3	1N	1	Total	C	Mg	N	O	0
			60	50	1	4	5	
3	1N	1	Total	C	Mg	N	O	0
			41	33	1	4	3	
3	1S	1	Total	C	Mg	N	O	0
			41	33	1	4	3	
3	1S	1	Total	C	Mg	N	O	0
			50	40	1	4	5	
3	1S	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
3	1S	1	Total	C	Mg	N	O	0
			56	46	1	4	5	
3	1S	1	Total	C	Mg	N	O	0
			49	39	1	4	5	
3	1S	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
3	1S	1	Total	C	Mg	N	O	0
			49	39	1	4	5	
3	1S	1	Total	C	Mg	N	O	0
			46	36	1	4	5	
3	1S	1	Total	C	Mg	N	O	0
			46	36	1	4	5	

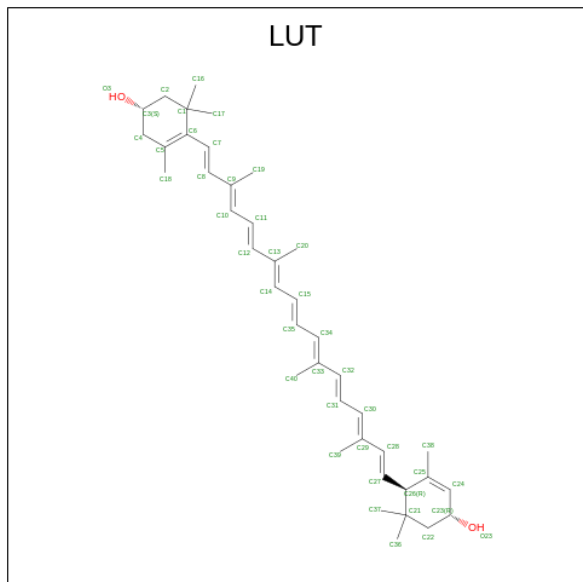
- Molecule 4 is CHLOROPHYLL B (CCD ID: CHL) (formula: $C_{55}H_{70}MgN_4O_6$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms					AltConf
4	00	1	Total	C	Mg	N	O	0
			48	37	1	4	6	
4	00	1	Total	C	Mg	N	O	0
			50	39	1	4	6	
4	00	1	Total	C	Mg	N	O	0
			66	55	1	4	6	
4	00	1	Total	C	Mg	N	O	0
			66	55	1	4	6	
4	00	1	Total	C	Mg	N	O	0
			66	55	1	4	6	
4	1G	1	Total	C	Mg	N	O	0
			66	55	1	4	6	
4	1G	1	Total	C	Mg	N	O	0
			42	33	1	4	4	
4	1G	1	Total	C	Mg	N	O	0
			46	35	1	4	6	
4	1G	1	Total	C	Mg	N	O	0
			66	55	1	4	6	
4	1G	1	Total	C	Mg	N	O	0
			43	34	1	4	4	
4	1G	1	Total	C	Mg	N	O	0
			61	50	1	4	6	
4	1N	1	Total	C	Mg	N	O	0
			66	55	1	4	6	
4	1N	1	Total	C	Mg	N	O	0
			42	33	1	4	4	
4	1N	1	Total	C	Mg	N	O	0
			46	35	1	4	6	
4	1N	1	Total	C	Mg	N	O	0
			66	55	1	4	6	
4	1N	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
4	1N	1	Total	C	Mg	N	O	0
			66	55	1	4	6	
4	1S	1	Total	C	Mg	N	O	0
			46	35	1	4	6	
4	1S	1	Total	C	Mg	N	O	0
			46	35	1	4	6	
4	1S	1	Total	C	Mg	N	O	0
			42	33	1	4	4	
4	1S	1	Total	C	Mg	N	O	0
			46	35	1	4	6	

- Molecule 5 is (3R,3'R,6S)-4,5-DIDEHYDRO-5,6-DIHYDRO-BETA,BETA-CAROTE

NE-3,3'-DIOL (CCD ID: LUT) (formula: $C_{40}H_{56}O_2$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms			AltConf
5	00	1	Total	C	O	0
			42	40	2	
5	00	1	Total	C	O	0
			42	40	2	
5	1G	1	Total	C	O	0
			42	40	2	
5	1G	1	Total	C	O	0
			42	40	2	
5	1N	1	Total	C	O	0
			42	40	2	
5	1S	1	Total	C	O	0
			42	40	2	
5	1S	1	Total	C	O	0
			42	40	2	

- Molecule 6 is (2R)-2,5,7,8-TETRAMETHYL-2-[(4R,8R)-4,8,12-TRIMETHYLTRIDECYL]CHROMAN-6-OL (CCD ID: VIV) (formula: $C_{29}H_{50}O_2$).



Mol	Chain	Residues	Atoms			AltConf
6	00	1	Total	C	O	0
			27	25	2	

- Molecule 7 is 1,2-DIPALMITOYL-PHOSPHATIDYL-GLYCEROLE (CCD ID: LHG) (formula: $C_{38}H_{75}O_{10}P$) (labeled as "Ligand of Interest" by depositor).



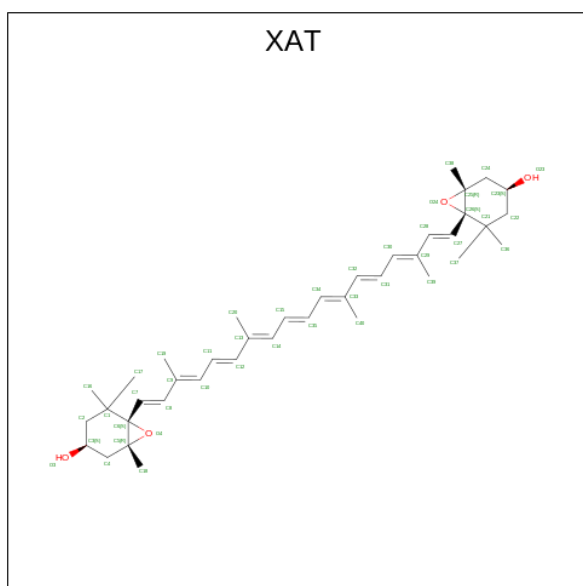
Mol	Chain	Residues	Atoms				AltConf
7	00	1	Total 33	C 24	O 8	P 1	0
7	00	1	Total 49	C 38	O 10	P 1	0

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Mol	Chain	Residues	Atoms				AltConf
7	00	1	Total	C	O	P	0
			49	38	10	1	
7	00	1	Total	C	O	P	0
			49	38	10	1	
7	1G	1	Total	C	O	P	0
			41	30	10	1	
7	1N	1	Total	C	O	P	0
			43	32	10	1	
7	1N	1	Total	C	O	P	0
			48	37	10	1	
7	1S	1	Total	C	O		0
			29	24	5		
7	1S	1	Total	C	O	P	0
			31	20	10	1	
7	1S	1	Total	C	O	P	0
			40	31	8	1	
7	1S	1	Total	C	O	P	0
			32	23	8	1	

- Molecule 8 is (3S,5R,6S,3'S,5'R,6'S)-5,6,5',6'-DIEPOXY-5,6,5',6'-TETRAHYDRO-BETA, BETA-CAROTENE-3,3'-DIOL (CCD ID: XAT) (formula: C₄₀H₅₆O₄) (labeled as "Ligand of Interest" by depositor).



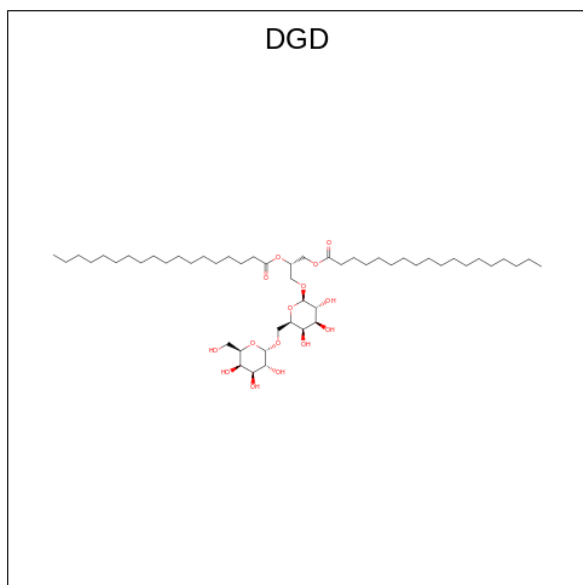
Mol	Chain	Residues	Atoms				AltConf
8	1G	1	Total	C	O		0
			44	40	4		

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Mol	Chain	Residues	Atoms			AltConf
8	1G	1	Total	C	O	0
			44	40	4	

- Molecule 9 is DIGALACTOSYL DIACYL GLYCEROL (DGDG) (CCD ID: DGD) (formula: $C_{51}H_{96}O_{15}$) (labeled as "Ligand of Interest" by depositor).

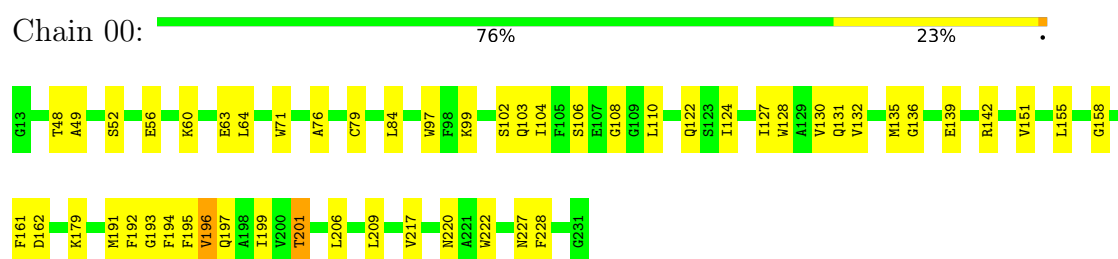


Mol	Chain	Residues	Atoms			AltConf
9	1S	1	Total	C	O	0
			46	31	15	

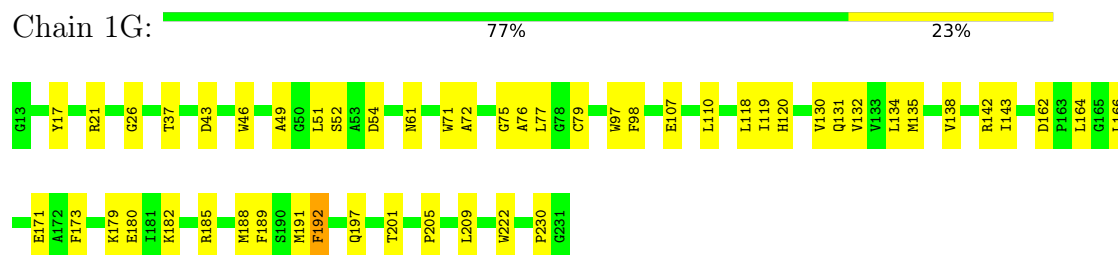
3 Residue-property plots

These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion in map density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red diamond above a residue indicates a poor fit to the EM map for this residue (all-atom inclusion < 40%). Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

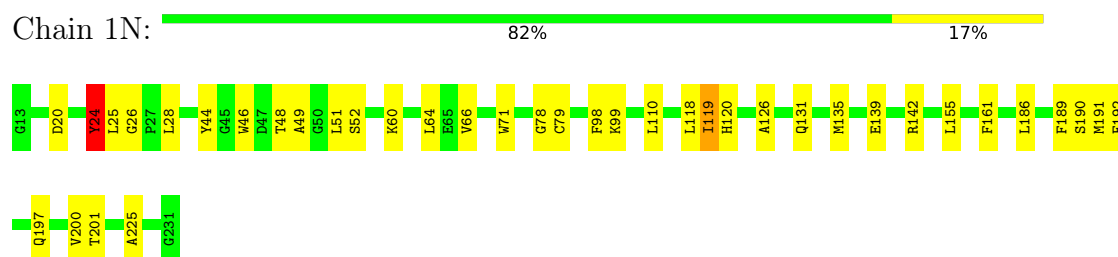
- Molecule 1: Chlorophyll a-b binding protein 2, chloroplastic



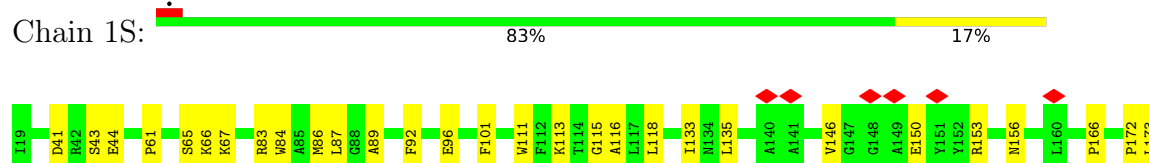
- Molecule 1: Chlorophyll a-b binding protein 2, chloroplastic



- Molecule 1: Chlorophyll a-b binding protein 2, chloroplastic



- Molecule 2: Chlorophyll a-b binding protein, chloroplastic





4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	172752	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	TFS KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	1.375	Depositor
Minimum defocus (nm)	1400	Depositor
Maximum defocus (nm)	2200	Depositor
Magnification	Not provided	
Image detector	GATAN K3 (6k x 4k)	Depositor
Maximum map value	0.794	Depositor
Minimum map value	-0.533	Depositor
Average map value	0.000	Depositor
Map value standard deviation	0.007	Depositor
Recommended contour level	0.012	Depositor
Map size ($\text{\AA}$)	419.84, 419.84, 419.84	wwPDB
Map dimensions	512, 512, 512	wwPDB
Map angles ($^\circ$)	90.0, 90.0, 90.0	wwPDB
Pixel spacing ($\text{\AA}$)	0.82, 0.82, 0.82	Depositor

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: VIV, CLA, DGD, CHL, LHG, XAT, LUT

The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 5$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\# Z > 5$	RMSZ	$\# Z > 5$
1	00	0.24	0/1710	0.46	0/2332
1	1G	0.22	0/1710	0.45	0/2332
1	1N	0.25	0/1702	0.52	2/2321 (0.1%)
2	1S	0.22	0/1706	0.47	0/2322
All	All	0.23	0/6828	0.48	2/9307 (0.0%)

Chiral center outliers are detected by calculating the chiral volume of a chiral center and verifying if the center is modelled as a planar moiety or with the opposite hand. A planarity outlier is detected by checking planarity of atoms in a peptide group, atoms in a mainchain group or atoms of a sidechain that are expected to be planar.

Mol	Chain	#Chirality outliers	#Planarity outliers
1	1G	0	1
1	1N	0	2
All	All	0	3

There are no bond length outliers.

All (2) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	1N	24	TYR	CA-C-N	-5.48	111.08	121.54
1	1N	24	TYR	C-N-CA	-5.48	111.08	121.54

There are no chirality outliers.

All (3) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	1G	192	PHE	Peptide
1	1N	192	PHE	Peptide

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Mol	Chain	Res	Type	Group
1	1N	24	TYR	Peptide

5.2 Too-close contacts ⓘ

In the following table, the Non-H and H(model) columns list the number of non-hydrogen atoms and hydrogen atoms in the chain respectively. The H(added) column lists the number of hydrogen atoms added and optimized by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit, whereas Symm-Clashes lists symmetry-related clashes.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	00	1659	0	1598	57	0
1	1G	1659	0	1598	71	0
1	1N	1652	0	1589	49	0
2	1S	1661	0	1612	44	0
3	00	471	0	459	26	0
3	1G	422	0	382	23	0
3	1N	405	0	360	19	0
3	1S	447	0	361	12	0
4	00	296	0	280	69	0
4	1G	324	0	284	79	0
4	1N	331	0	299	85	0
4	1S	180	0	120	25	0
5	00	84	0	112	33	0
5	1G	84	0	112	42	0
5	1N	42	0	56	20	0
5	1S	84	0	112	33	0
6	00	27	0	38	5	0
7	00	180	0	259	5	0
7	1G	41	0	55	8	0
7	1N	91	0	128	7	0
7	1S	132	0	162	2	0
8	1G	88	0	112	36	0
9	1S	46	0	50	1	0
All	All	10406	0	10138	447	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 22.

All (447) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:1S:305:CHL:HBB1	5:1S:316:LUT:H161	1.39	1.03
4:00:305:CHL:HBB1	5:00:314:LUT:H161	1.36	1.02
4:1N:606:CHL:HBB1	5:1N:615:LUT:H161	1.43	0.97
4:1G:609:CHL:HBB1	4:1N:601:CHL:H51	1.47	0.95
2:1S:218:LEU:HD13	5:1S:315:LUT:H163	1.47	0.95
4:00:304:CHL:HBA1	4:00:304:CHL:HBD	1.50	0.92
4:00:305:CHL:HMC	5:00:314:LUT:H163	1.53	0.90
4:00:306:CHL:H142	4:00:308:CHL:H122	1.58	0.84
1:00:197:GLN:O	1:00:201:THR:OG1	1.97	0.83
2:1S:218:LEU:HD22	5:1S:315:LUT:H172	1.64	0.78
1:1N:197:GLN:O	1:1N:201:THR:OG1	2.02	0.77
4:1G:608:CHL:HHC	4:1G:608:CHL:HBB1	1.65	0.77
4:1G:601:CHL:H141	8:1G:617:XAT:H361	1.65	0.77
8:1G:619:XAT:H12	4:1N:601:CHL:HMA2	1.68	0.76
3:1S:303:CLA:HAB	5:1S:316:LUT:H32	1.67	0.75
1:1G:192:PHE:HE2	5:1G:616:LUT:H35	1.50	0.75
1:00:60:LYS:O	1:00:64:LEU:HD12	1.87	0.74
1:1G:197:GLN:O	1:1G:201:THR:OG1	2.02	0.74
1:00:103:GLN:O	1:00:106:SER:OG	2.04	0.74
1:00:179:LYS:NZ	3:00:311:CLA:O2D	2.22	0.73
1:00:162:ASP:OD1	5:00:313:LUT:O23	2.06	0.73
1:00:191:MET:HG3	5:00:314:LUT:H12	1.70	0.72
1:1G:77:LEU:HD13	5:1G:615:LUT:H401	1.71	0.71
4:00:306:CHL:H152	4:1G:601:CHL:H172	1.73	0.71
1:1G:21:ARG:NE	1:1G:43:ASP:O	2.23	0.71
5:1G:616:LUT:H171	5:1G:616:LUT:H8	1.73	0.70
8:1G:619:XAT:H403	4:1N:601:CHL:H92	1.72	0.70
1:00:52:SER:OG	3:00:301:CLA:O1A	2.04	0.70
4:1G:607:CHL:H193	4:1N:601:CHL:H101	1.73	0.69
1:1N:186:LEU:O	1:1N:190:SER:OG	2.11	0.68
1:00:217:VAL:HG13	6:00:315:VIV:H143	1.77	0.67
1:00:128:TRP:O	1:00:132:VAL:HG23	1.94	0.67
2:1S:200:MET:HG2	5:1S:316:LUT:H14	1.76	0.66
1:00:158:GLY:O	1:00:162:ASP:N	2.29	0.66
8:1G:619:XAT:H393	4:1N:601:CHL:H13	1.76	0.66
4:1S:305:CHL:HMC	4:1S:305:CHL:HBC2	1.78	0.66
1:1G:209:LEU:HD13	5:1G:615:LUT:H163	1.77	0.65
4:1G:609:CHL:H43	4:1N:601:CHL:H11	1.77	0.65
1:1N:99:LYS:HA	4:1N:607:CHL:HED3	1.78	0.65
1:00:135:MET:HE2	4:00:305:CHL:HMA1	1.78	0.65
1:1G:197:GLN:HE22	5:1G:615:LUT:H42	1.61	0.65
1:00:209:LEU:HG	5:00:313:LUT:H22	1.79	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:1G:607:CHL:H2	4:1N:601:CHL:H191	1.77	0.65
4:1G:607:CHL:H122	4:1N:601:CHL:H18	1.78	0.64
1:1G:192:PHE:CE2	5:1G:616:LUT:H35	2.31	0.64
2:1S:116:ALA:HB2	4:1S:306:CHL:HED1	1.79	0.64
1:00:199:ILE:HG12	4:00:306:CHL:H41	1.80	0.63
4:1G:607:CHL:HBD	1:1N:225:ALA:HB1	1.80	0.63
4:1N:605:CHL:HBC3	4:1N:605:CHL:HMC	1.81	0.62
4:00:308:CHL:HMB3	4:1G:601:CHL:HHB	1.81	0.62
6:00:315:VIV:H193	6:00:315:VIV:H221	1.82	0.62
1:1G:79:CYS:HG	5:1G:616:LUT:HO3	1.42	0.62
3:00:302:CLA:C1B	4:00:308:CHL:H111	2.29	0.62
1:1N:110:LEU:HD13	4:1N:606:CHL:HHD	1.80	0.62
4:00:306:CHL:H102	4:00:308:CHL:H171	1.82	0.61
1:1G:132:VAL:HG13	8:1G:619:XAT:H202	1.82	0.61
1:00:135:MET:HE2	4:00:305:CHL:HHB	1.82	0.61
1:00:130:VAL:HG11	4:00:305:CHL:HED2	1.82	0.61
1:1G:98:PHE:O	4:1G:607:CHL:HED2	2.00	0.61
1:00:110:LEU:HD13	4:00:305:CHL:HHD	1.82	0.61
1:1N:110:LEU:HD21	4:1N:606:CHL:HAC1	1.83	0.61
1:1G:192:PHE:CE2	5:1G:616:LUT:H14	2.35	0.61
1:1N:131:GLN:HE22	4:1N:607:CHL:HMC	1.65	0.61
1:00:64:LEU:HD11	1:1G:49:ALA:HA	1.82	0.61
1:1N:24:TYR:O	1:1N:26:GLY:N	2.34	0.60
4:1N:606:CHL:CBB	5:1N:615:LUT:H7	2.31	0.60
1:1G:222:TRP:CZ2	8:1G:617:XAT:H30	2.36	0.60
3:1G:603:CLA:HED3	5:1N:615:LUT:H372	1.82	0.60
4:1N:606:CHL:HMB2	4:1N:609:CHL:HMC	1.83	0.60
2:1S:87:LEU:HD23	5:1S:315:LUT:H402	1.82	0.60
1:1G:209:LEU:HD22	5:1G:615:LUT:H172	1.84	0.60
5:1N:615:LUT:H8	5:1N:615:LUT:H181	1.83	0.60
4:00:307:CHL:H121	4:00:307:CHL:H43	1.84	0.60
4:1G:609:CHL:HAA2	1:1N:48:THR:HG21	1.83	0.60
1:1G:182:LYS:NZ	3:1G:614:CLA:O1D	2.22	0.59
1:1G:192:PHE:CZ	5:1G:616:LUT:H14	2.37	0.59
5:1N:615:LUT:H181	5:1N:615:LUT:C8	2.32	0.59
1:1N:78:GLY:HA3	5:1N:615:LUT:H183	1.84	0.59
2:1S:206:GLN:HE22	5:1S:315:LUT:H42	1.66	0.59
4:1G:606:CHL:HMB2	4:1G:609:CHL:HMC	1.83	0.59
2:1S:201:LEU:HD21	5:1S:316:LUT:H403	1.84	0.59
2:1S:44:GLU:N	2:1S:44:GLU:OE1	2.35	0.59
1:1G:76:ALA:HB1	5:1G:615:LUT:H12	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1N:200:VAL:HG23	1:1N:201:THR:HG23	1.83	0.59
2:1S:218:LEU:CD1	5:1S:315:LUT:H163	2.27	0.59
2:1S:83:ARG:NH1	4:1S:307:CHL:OBD	2.36	0.59
1:1G:110:LEU:HD21	4:1G:606:CHL:HAC1	1.84	0.58
4:00:305:CHL:HMB2	4:00:308:CHL:HMC	1.85	0.58
4:1G:601:CHL:H142	8:1G:617:XAT:H403	1.85	0.58
7:00:320:LHG:H131	4:1N:607:CHL:H203	1.86	0.58
3:1G:602:CLA:HAB	5:1G:616:LUT:H32	1.86	0.58
8:1G:619:XAT:H362	4:1N:601:CHL:H151	1.86	0.58
4:00:306:CHL:HBC2	1:1G:222:TRP:CH2	2.39	0.58
4:1N:606:CHL:HMB3	4:1N:609:CHL:HAC1	1.84	0.58
1:00:131:GLN:OE1	4:00:306:CHL:HMC	2.04	0.58
4:1G:606:CHL:HAA2	4:1G:606:CHL:HBD	1.86	0.57
8:1G:619:XAT:O23	4:1N:601:CHL:H172	2.04	0.57
1:1G:110:LEU:CD2	4:1G:606:CHL:HHD	2.34	0.57
1:1G:110:LEU:HD23	4:1G:606:CHL:HHD	1.87	0.57
4:1S:302:CHL:H3A	9:1S:318:DGD:HG12	1.85	0.57
2:1S:89:ALA:HB1	5:1S:315:LUT:H12	1.87	0.57
1:00:142:ARG:NH1	4:00:308:CHL:O1D	2.36	0.57
4:1N:606:CHL:CMB	4:1N:609:CHL:HAC1	2.34	0.57
1:00:79:CYS:SG	5:00:314:LUT:H41	2.45	0.57
4:00:307:CHL:H51	4:00:307:CHL:H101	1.87	0.57
1:1G:46:TRP:CE3	5:1G:616:LUT:H383	2.41	0.56
4:1G:601:CHL:H203	8:1G:617:XAT:H362	1.86	0.56
8:1G:619:XAT:H42	3:1N:611:CLA:CBB	2.36	0.56
4:1N:601:CHL:H42	7:1N:616:LHG:H171	1.87	0.56
4:1G:607:CHL:H122	4:1N:601:CHL:C20	2.36	0.56
4:00:305:CHL:HBD	4:00:305:CHL:HAA2	1.86	0.56
1:1G:98:PHE:HA	4:1G:607:CHL:HMA2	1.86	0.56
1:00:191:MET:HE2	5:00:314:LUT:H10	1.88	0.56
1:1G:209:LEU:HB2	5:1G:615:LUT:H22	1.88	0.56
4:1G:601:CHL:H51	4:1G:601:CHL:H102	1.87	0.56
3:1G:612:CLA:HMA2	5:1G:615:LUT:H3	1.88	0.56
1:1G:72:ALA:HA	1:1G:191:MET:HE1	1.87	0.56
1:1N:46:TRP:CE3	5:1N:615:LUT:H383	2.41	0.56
2:1S:89:ALA:CB	5:1S:315:LUT:H12	2.36	0.56
1:00:104:ILE:HD11	1:00:127:ILE:HD11	1.88	0.55
4:00:306:CHL:HBC2	1:1G:222:TRP:HH2	1.71	0.55
3:00:309:CLA:HBB1	5:00:313:LUT:H32	1.87	0.55
1:1G:134:LEU:O	1:1G:138:VAL:HG13	2.06	0.55
2:1S:200:MET:HE2	5:1S:316:LUT:H10	1.89	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:00:99:LYS:HA	4:00:306:CHL:HED2	1.88	0.55
4:00:307:CHL:O1A	4:00:307:CHL:H151	2.06	0.55
1:1G:110:LEU:CD2	4:1G:606:CHL:HAC1	2.37	0.55
1:00:135:MET:CE	4:00:305:CHL:HHB	2.36	0.55
1:1N:49:ALA:HB2	5:1N:615:LUT:H222	1.89	0.55
1:1G:130:VAL:HG21	4:1G:605:CHL:HBC1	1.88	0.55
4:1S:307:CHL:HAA1	4:1S:307:CHL:HBD	1.89	0.55
3:00:301:CLA:H142	5:00:314:LUT:H371	1.90	0.54
1:1N:28:LEU:HD12	1:1N:28:LEU:O	2.07	0.54
4:1N:607:CHL:HAA2	4:1N:607:CHL:HBD	1.89	0.54
3:1S:304:CLA:HHB	5:1S:316:LUT:H162	1.90	0.54
3:00:312:CLA:O1A	6:00:315:VIV:H222	2.07	0.54
4:1S:302:CHL:HED3	7:1S:317:LHG:H282	1.88	0.54
1:1G:135:MET:SD	4:1G:606:CHL:HMB2	2.48	0.54
1:00:193:GLY:O	1:00:197:GLN:HG3	2.05	0.54
3:1N:603:CLA:C16	4:1N:609:CHL:H101	2.38	0.54
4:00:305:CHL:CBB	5:00:314:LUT:H161	2.23	0.54
4:1G:607:CHL:C19	4:1N:601:CHL:H101	2.38	0.54
1:00:124:ILE:HD11	4:00:306:CHL:HAC2	1.89	0.54
4:1N:605:CHL:H3A	2:1S:101:PHE:CD2	2.43	0.54
4:00:304:CHL:HBA1	4:00:304:CHL:CBD	2.31	0.53
4:1G:607:CHL:C19	4:1N:601:CHL:H61	2.38	0.53
1:1N:135:MET:HE2	4:1N:606:CHL:HMA1	1.90	0.53
4:1G:601:CHL:H102	4:1G:601:CHL:C5	2.39	0.53
4:1G:606:CHL:HAB	4:1G:609:CHL:HBC3	1.90	0.53
1:1N:44:TYR:OH	7:1N:616:LHG:O5	2.26	0.53
1:00:71:TRP:CE2	4:00:307:CHL:HED2	2.43	0.53
3:00:312:CLA:CGA	6:00:315:VIV:H222	2.38	0.53
4:1G:607:CHL:H122	4:1N:601:CHL:C18	2.39	0.53
3:1S:310:CLA:HMC2	5:1S:315:LUT:H11	1.91	0.53
4:1G:601:CHL:H111	7:1G:618:LHG:H201	1.91	0.53
4:1N:606:CHL:HAA2	4:1N:606:CHL:HBD	1.90	0.53
5:1S:316:LUT:H181	5:1S:316:LUT:C8	2.38	0.53
3:1G:603:CLA:HAC2	4:1G:607:CHL:H151	1.90	0.53
8:1G:619:XAT:H12	4:1N:601:CHL:CMA	2.38	0.52
1:00:76:ALA:HB1	5:00:313:LUT:H12	1.90	0.52
2:1S:118:LEU:HD12	4:1S:305:CHL:HAC1	1.91	0.52
8:1G:619:XAT:H182	7:1N:616:LHG:O9	2.09	0.52
1:1G:131:GLN:OE1	4:1G:607:CHL:HMC	2.08	0.52
1:1N:26:GLY:HA2	4:1N:601:CHL:HBB1	1.90	0.52
2:1S:65:SER:O	2:1S:67:LYS:N	2.42	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:1S:135:LEU:HD22	4:1S:306:CHL:HAC2	1.92	0.52
1:1N:142:ARG:NH1	4:1N:609:CHL:O1D	2.43	0.52
3:1G:610:CLA:CBB	5:1G:615:LUT:H32	2.40	0.51
1:00:195:PHE:HE2	3:00:302:CLA:HBB1	1.75	0.51
2:1S:111:TRP:HE1	5:1S:316:LUT:H173	1.75	0.51
1:1N:71:TRP:CE2	4:1N:608:CHL:HED2	2.45	0.51
3:1N:603:CLA:HBC1	4:1N:609:CHL:HAC2	1.92	0.51
4:1G:609:CHL:H121	4:1G:609:CHL:H91	1.93	0.51
1:1N:135:MET:HE2	4:1N:606:CHL:HBB	1.91	0.51
1:1G:131:GLN:NE2	4:1G:607:CHL:HAC1	2.26	0.51
3:1N:602:CLA:H101	5:1N:615:LUT:H371	1.92	0.51
1:1G:131:GLN:HE22	4:1G:607:CHL:HAC1	1.76	0.51
1:00:209:LEU:HD11	5:00:313:LUT:H172	1.92	0.51
4:1N:607:CHL:H142	4:1N:609:CHL:H102	1.92	0.51
1:1G:26:GLY:HA3	4:1G:601:CHL:HBB1	1.93	0.50
1:1N:79:CYS:SG	5:1N:615:LUT:H182	2.51	0.50
4:1S:305:CHL:HAA2	4:1S:305:CHL:HBD	1.93	0.50
5:00:313:LUT:H393	7:00:318:LHG:H191	1.92	0.50
1:1G:192:PHE:CE2	5:1G:616:LUT:H401	2.45	0.50
4:1G:609:CHL:HAA2	1:1N:48:THR:CG2	2.40	0.50
2:1S:133:ILE:HD11	4:1S:305:CHL:OBD	2.10	0.50
1:00:136:GLY:CA	4:00:308:CHL:HAB	2.40	0.50
4:00:306:CHL:HAB	5:00:314:LUT:H193	1.93	0.50
5:00:314:LUT:C8	5:00:314:LUT:H181	2.41	0.50
1:1N:24:TYR:HA	4:1N:601:CHL:C1D	2.42	0.50
2:1S:86:MET:HE1	2:1S:189:GLU:OE2	2.12	0.50
2:1S:115:GLY:HA2	4:1S:305:CHL:HBC1	1.93	0.50
1:1G:182:LYS:HZ1	7:1G:618:LHG:P	2.34	0.50
3:1N:602:CLA:CBB	5:1N:615:LUT:H32	2.42	0.50
1:1G:179:LYS:NZ	3:1G:611:CLA:O1D	2.43	0.50
1:1N:52:SER:OG	3:1N:602:CLA:O1A	2.20	0.50
4:1S:302:CHL:HED1	7:1S:317:LHG:C11	2.42	0.50
1:00:63:GLU:OE2	1:00:155:LEU:HD22	2.12	0.50
4:1G:601:CHL:H162	8:1G:617:XAT:H362	1.94	0.50
4:00:305:CHL:CBB	5:00:314:LUT:H7	2.42	0.50
1:1G:52:SER:OG	1:1G:61:ASN:ND2	2.45	0.50
1:1N:60:LYS:O	1:1N:64:LEU:HD12	2.12	0.49
2:1S:150:GLU:HG3	3:1S:314:CLA:HMA2	1.94	0.49
1:1G:72:ALA:CA	1:1G:191:MET:HE1	2.43	0.49
2:1S:41:ASP:OD2	2:1S:43:SER:OG	2.29	0.49
5:1S:315:LUT:C8	5:1S:315:LUT:H181	2.42	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:00:227:ASN:OD1	1:00:228:PHE:N	2.44	0.49
5:00:314:LUT:H372	3:1N:603:CLA:O1D	2.12	0.49
1:1N:118:LEU:O	1:1N:120:HIS:N	2.45	0.49
2:1S:200:MET:HE2	5:1S:316:LUT:H12	1.94	0.49
3:1G:602:CLA:HBA1	5:1G:616:LUT:H382	1.95	0.49
3:1S:308:CLA:CBB	5:1S:315:LUT:H34	2.42	0.49
1:00:222:TRP:CH2	4:1N:607:CHL:HBC2	2.47	0.49
4:00:304:CHL:HBC3	4:00:305:CHL:OBD	2.12	0.49
5:00:313:LUT:C8	5:00:313:LUT:H181	2.41	0.49
1:1G:118:LEU:O	1:1G:120:HIS:N	2.46	0.49
4:1N:605:CHL:HBC2	7:1N:617:LHG:H171	1.93	0.49
1:1G:51:LEU:HD13	3:1G:602:CLA:H42	1.94	0.49
1:1G:72:ALA:CB	1:1G:191:MET:HE1	2.43	0.49
1:1N:25:LEU:HA	4:1N:601:CHL:C1B	2.43	0.49
2:1S:150:GLU:OE1	2:1S:150:GLU:N	2.41	0.49
1:00:108:GLY:O	1:00:122:GLN:NE2	2.43	0.49
3:00:302:CLA:O1D	5:1G:616:LUT:H372	2.13	0.49
4:1S:306:CHL:O1D	4:1S:306:CHL:H2A	2.13	0.49
5:1S:316:LUT:H181	5:1S:316:LUT:H8	1.93	0.49
1:1G:171:GLU:N	1:1G:171:GLU:OE1	2.46	0.49
3:00:302:CLA:HBC1	4:00:308:CHL:HAC2	1.95	0.49
1:1N:161:PHE:CG	3:1N:610:CLA:HMD2	2.47	0.49
2:1S:135:LEU:HD21	4:1S:305:CHL:HBC3	1.95	0.49
1:00:155:LEU:HD23	1:00:155:LEU:H	1.78	0.48
1:1G:189:PHE:HE1	4:1G:601:CHL:HED2	1.77	0.48
1:00:191:MET:O	1:00:192:PHE:C	2.56	0.48
1:1G:180:GLU:OE1	3:1G:610:CLA:NB	2.47	0.48
8:1G:619:XAT:H361	4:1N:601:CHL:H141	1.95	0.48
3:1N:602:CLA:HBB1	5:1N:615:LUT:H32	1.95	0.48
1:1G:197:GLN:NE2	5:1G:615:LUT:H42	2.27	0.48
2:1S:153:ARG:HA	4:1S:307:CHL:HAC1	1.95	0.48
1:1N:119:ILE:HG21	4:1N:606:CHL:HMD2	1.95	0.48
1:00:48:THR:HG21	4:1N:609:CHL:HAA2	1.95	0.48
8:1G:619:XAT:H173	4:1N:601:CHL:OMC	2.14	0.48
2:1S:173:LEU:HD12	5:1S:315:LUT:H222	1.96	0.48
1:1G:222:TRP:CE2	8:1G:617:XAT:H30	2.49	0.48
4:1N:601:CHL:H121	4:1N:601:CHL:H162	1.48	0.48
6:00:315:VIV:H18	6:00:315:VIV:H152	1.76	0.48
4:1N:606:CHL:OMC	5:1N:615:LUT:H172	2.14	0.48
1:00:110:LEU:CD1	4:00:305:CHL:HHD	2.44	0.47
1:00:135:MET:HE3	4:00:305:CHL:CMB	2.43	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:1G:609:CHL:HMB1	4:1N:601:CHL:H3A	1.95	0.47
4:1S:305:CHL:HMB1	3:1S:314:CLA:HBC2	1.95	0.47
3:00:301:CLA:CBB	5:00:314:LUT:H32	2.45	0.47
3:00:302:CLA:H191	4:00:306:CHL:H13	1.96	0.47
1:1G:166:LEU:HD21	5:1G:615:LUT:H221	1.95	0.47
2:1S:61:PRO:HD2	5:1S:316:LUT:H23	1.95	0.47
2:1S:92:PHE:CE1	5:1S:316:LUT:H182	2.49	0.47
1:00:193:GLY:O	1:00:194:PHE:C	2.58	0.47
4:00:306:CHL:H201	4:1G:601:CHL:C10	2.44	0.47
1:1G:77:LEU:CD1	5:1G:615:LUT:H401	2.42	0.47
3:1G:612:CLA:HMB2	5:1G:615:LUT:H161	1.96	0.47
4:00:306:CHL:HBB2	4:00:308:CHL:CBC	2.44	0.47
4:1G:607:CHL:H61	4:1G:607:CHL:H101	1.56	0.47
3:1G:612:CLA:H41	8:1G:617:XAT:H391	1.95	0.47
2:1S:135:LEU:HD13	4:1S:306:CHL:HHD	1.96	0.47
2:1S:166:PRO:HB3	4:1S:307:CHL:HBC2	1.96	0.47
1:00:56:GLU:OE1	1:00:56:GLU:N	2.48	0.47
1:00:222:TRP:HH2	4:1N:607:CHL:HBC2	1.78	0.47
4:1N:607:CHL:H62	4:1N:607:CHL:H2	1.53	0.47
3:00:303:CLA:CMA	5:00:314:LUT:H3	2.44	0.47
3:1G:602:CLA:C14	5:1G:616:LUT:H393	2.45	0.47
1:1N:49:ALA:HB3	1:1N:51:LEU:HD12	1.97	0.47
1:1G:205:PRO:O	5:1G:615:LUT:O3	2.23	0.46
4:00:307:CHL:H112	4:00:307:CHL:H41	1.97	0.46
1:1G:37:THR:O	1:1G:37:THR:OG1	2.33	0.46
4:1G:607:CHL:H191	4:1N:601:CHL:H61	1.97	0.46
1:1N:110:LEU:HD11	4:1N:606:CHL:HAC1	1.96	0.46
1:1N:135:MET:CE	4:1N:606:CHL:HHB	2.46	0.46
2:1S:172:PRO:HD2	5:1S:315:LUT:H23	1.96	0.46
4:00:306:CHL:H201	4:1G:601:CHL:H102	1.97	0.46
4:1G:601:CHL:H151	8:1G:617:XAT:H363	1.97	0.46
4:1G:606:CHL:HAB	4:1G:609:CHL:CBC	2.46	0.46
5:1G:616:LUT:H35	5:1G:616:LUT:H401	1.79	0.46
8:1G:619:XAT:H31	8:1G:619:XAT:H391	1.59	0.46
2:1S:146:VAL:HG12	2:1S:146:VAL:O	2.16	0.46
1:00:102:SER:OG	4:00:306:CHL:O2D	2.34	0.46
3:00:302:CLA:C4D	4:00:308:CHL:H102	2.46	0.46
3:00:303:CLA:HMB1	3:00:303:CLA:HBB1	1.97	0.46
1:1G:192:PHE:CD2	5:1G:616:LUT:H401	2.51	0.46
5:1G:616:LUT:C8	5:1G:616:LUT:H161	2.45	0.46
1:00:161:PHE:O	5:00:313:LUT:H24	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:97:TRP:CZ3	4:1G:607:CHL:HMA1	2.51	0.46
1:1G:107:GLU:N	1:1G:107:GLU:OE1	2.49	0.46
3:1G:602:CLA:HAB	5:1G:616:LUT:H34	1.98	0.46
8:1G:617:XAT:H191	8:1G:617:XAT:H11	1.62	0.46
1:1G:72:ALA:HB1	1:1G:191:MET:HE1	1.98	0.46
4:1G:607:CHL:H142	4:1G:607:CHL:H111	1.70	0.46
1:00:127:ILE:HG23	4:00:304:CHL:HBC1	1.98	0.45
4:00:305:CHL:HMB3	4:00:308:CHL:HAC1	1.98	0.45
4:00:307:CHL:O1A	4:00:307:CHL:H171	2.16	0.45
4:00:308:CHL:CMB	4:1G:601:CHL:HHB	2.44	0.45
1:1G:166:LEU:HD11	3:1G:610:CLA:H11	1.97	0.45
4:1G:606:CHL:HHC	4:1G:606:CHL:HBB1	1.98	0.45
1:1G:142:ARG:NH2	4:1G:609:CHL:O1D	2.48	0.45
8:1G:617:XAT:H201	8:1G:617:XAT:H15	1.52	0.45
8:1G:619:XAT:H203	4:1N:601:CHL:H41	1.98	0.45
8:1G:619:XAT:C36	4:1N:601:CHL:H141	2.46	0.45
4:1S:305:CHL:HMB1	3:1S:314:CLA:HMC2	1.97	0.45
1:00:220:ASN:ND2	3:00:312:CLA:O1D	2.47	0.45
4:1G:601:CHL:HBA1	4:1G:601:CHL:H3A	1.65	0.45
4:1N:607:CHL:H193	4:1N:607:CHL:H162	1.68	0.45
3:1S:308:CLA:HMB3	3:1S:310:CLA:HAA1	1.99	0.45
1:00:49:ALA:HA	1:1N:64:LEU:HD11	1.97	0.45
4:00:305:CHL:HBB2	4:00:306:CHL:CAB	2.47	0.45
4:00:307:CHL:HAA2	4:00:307:CHL:HBD	1.98	0.45
1:1G:77:LEU:CD1	5:1G:615:LUT:H35	2.47	0.45
4:1G:601:CHL:H141	8:1G:617:XAT:C36	2.42	0.45
4:1N:601:CHL:H101	4:1N:601:CHL:H61	1.64	0.45
4:1N:605:CHL:O1D	4:1N:605:CHL:H2A	2.17	0.45
4:00:307:CHL:HBA1	4:00:307:CHL:HED3	1.99	0.45
1:1G:135:MET:HA	1:1G:138:VAL:HG22	1.98	0.45
1:1G:143:ILE:HD11	4:1G:609:CHL:HMA2	1.99	0.45
1:00:139:GLU:OE2	1:00:142:ARG:NH2	2.50	0.44
1:1N:24:TYR:CE2	1:1N:25:LEU:HD13	2.53	0.44
3:00:301:CLA:HMC2	5:00:314:LUT:C31	2.47	0.44
4:00:307:CHL:H172	7:00:318:LHG:H223	1.99	0.44
1:1G:97:TRP:CE3	4:1G:607:CHL:HMA1	2.52	0.44
1:1G:75:GLY:CA	5:1G:616:LUT:H192	2.47	0.44
8:1G:619:XAT:H402	7:1N:616:LHG:H182	2.00	0.44
4:1N:606:CHL:HBB1	5:1N:615:LUT:H7	2.00	0.44
3:00:302:CLA:CAD	4:00:308:CHL:H2	2.48	0.44
3:00:309:CLA:CBB	5:00:313:LUT:H32	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:1G:612:CLA:C4	8:1G:617:XAT:H391	2.48	0.44
3:1N:603:CLA:C2D	4:1N:609:CHL:H61	2.47	0.44
4:1S:306:CHL:HHC	4:1S:306:CHL:HBB1	1.99	0.44
4:00:306:CHL:H43	1:1G:230:PRO:HG3	1.99	0.44
4:1N:606:CHL:OMC	5:1N:615:LUT:H163	2.17	0.44
3:1G:604:CLA:C3B	5:1G:616:LUT:H183	2.48	0.44
1:00:84:LEU:HD12	1:00:206:LEU:HD13	2.00	0.43
1:1G:197:GLN:HG2	3:1G:612:CLA:C1D	2.47	0.43
4:1G:607:CHL:H122	4:1N:601:CHL:H202	1.99	0.43
1:00:110:LEU:CD1	4:00:305:CHL:HAC1	2.48	0.43
1:00:151:VAL:O	1:00:151:VAL:HG13	2.19	0.43
1:00:209:LEU:CD1	5:00:313:LUT:H172	2.48	0.43
4:00:307:CHL:HBB1	4:00:307:CHL:HHC	1.99	0.43
1:1G:164:LEU:HD12	5:1G:615:LUT:H222	2.00	0.43
8:1G:617:XAT:H193	7:1G:618:LHG:H102	2.00	0.43
1:1N:189:PHE:HB2	3:1N:602:CLA:HMC1	2.00	0.43
3:00:309:CLA:ND	5:00:313:LUT:H382	2.34	0.43
4:1G:601:CHL:H111	7:1G:618:LHG:C20	2.47	0.43
4:1G:609:CHL:H122	4:1G:609:CHL:H8	1.89	0.43
2:1S:232:THR:O	2:1S:235:SER:OG	2.36	0.43
4:00:306:CHL:H202	4:00:306:CHL:H161	1.63	0.43
3:1G:602:CLA:CAB	5:1G:616:LUT:H32	2.49	0.43
4:1G:607:CHL:H101	4:1N:601:CHL:H201	1.99	0.43
2:1S:84:TRP:CB	5:1S:316:LUT:H202	2.49	0.43
2:1S:111:TRP:CD1	5:1S:316:LUT:H41	2.53	0.43
3:1S:311:CLA:HMB2	5:1S:315:LUT:H161	2.01	0.43
4:1G:601:CHL:H162	8:1G:617:XAT:C36	2.49	0.43
4:1G:601:CHL:H52	8:1G:617:XAT:H201	2.00	0.43
4:1N:605:CHL:HBB2	7:1N:617:LHG:HC91	2.00	0.43
4:00:305:CHL:HAA2	4:00:305:CHL:CBD	2.49	0.43
4:00:307:CHL:H193	4:00:307:CHL:H162	1.72	0.43
1:1N:51:LEU:HD22	3:1N:602:CLA:H42	2.01	0.43
1:1N:71:TRP:NE1	4:1N:608:CHL:HED2	2.33	0.43
4:1N:608:CHL:HBA1	4:1N:608:CHL:C4A	2.48	0.43
2:1S:111:TRP:HD1	5:1S:316:LUT:H21	1.83	0.43
3:1S:308:CLA:HBB1	5:1S:315:LUT:H32	2.01	0.43
3:00:303:CLA:C1C	4:00:307:CHL:H102	2.49	0.43
4:1G:601:CHL:NC	8:1G:617:XAT:H182	2.34	0.43
4:1G:605:CHL:O1D	4:1G:605:CHL:H2A	2.19	0.43
4:1S:306:CHL:HAB	5:1S:316:LUT:H193	2.01	0.43
4:00:306:CHL:H2	4:00:306:CHL:H71	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:164:LEU:HG	5:1G:615:LUT:H222	2.01	0.43
4:1G:607:CHL:HBB2	4:1G:609:CHL:HBC2	2.00	0.43
1:1N:66:VAL:HG21	1:1N:155:LEU:HD13	2.00	0.43
4:00:308:CHL:HBB1	4:1G:601:CHL:H72	2.01	0.43
4:00:308:CHL:H11	5:1G:616:LUT:C36	2.49	0.43
1:1N:190:SER:OG	1:1N:191:MET:N	2.50	0.43
3:1N:604:CLA:HBB	5:1N:615:LUT:H162	2.00	0.43
5:00:314:LUT:H363	4:1N:609:CHL:H11	1.99	0.42
3:1N:603:CLA:HAC1	4:1N:607:CHL:HBB2	2.00	0.42
2:1S:96:GLU:OE1	2:1S:96:GLU:N	2.47	0.42
4:1G:601:CHL:H91	4:1G:601:CHL:H112	1.65	0.42
4:1G:601:CHL:HED3	7:1G:618:LHG:C15	2.50	0.42
2:1S:113:LYS:HA	4:1S:306:CHL:HED2	2.00	0.42
5:00:313:LUT:H3	3:00:319:CLA:HMA1	1.99	0.42
4:1G:601:CHL:C4C	8:1G:617:XAT:H182	2.49	0.42
4:1G:607:CHL:H193	4:1G:607:CHL:H161	1.60	0.42
3:1G:612:CLA:H8	7:1G:618:LHG:H131	2.01	0.42
1:1G:71:TRP:HA	4:1G:608:CHL:HED1	2.01	0.42
8:1G:617:XAT:H35	8:1G:617:XAT:H401	1.83	0.42
7:1N:617:LHG:O4	7:1N:617:LHG:O2	2.29	0.42
1:00:196:VAL:HG11	3:00:319:CLA:HAC2	2.01	0.42
5:00:314:LUT:C36	4:1N:609:CHL:H11	2.49	0.42
2:1S:135:LEU:CD1	4:1S:306:CHL:HHD	2.50	0.42
4:00:307:CHL:H152	7:00:318:LHG:H221	2.01	0.42
4:00:308:CHL:HBB1	4:1G:601:CHL:C7	2.50	0.42
5:1G:616:LUT:HO3	5:1G:616:LUT:H173	1.83	0.42
3:1N:603:CLA:H161	4:1N:609:CHL:H101	2.01	0.42
3:00:303:CLA:HMA3	5:00:314:LUT:H3	2.02	0.42
1:00:110:LEU:HD22	4:00:305:CHL:HMD2	2.02	0.42
4:1G:606:CHL:CBB	5:1G:616:LUT:H162	2.50	0.42
1:1N:46:TRP:CZ3	5:1N:615:LUT:H383	2.55	0.42
1:1N:49:ALA:CB	5:1N:615:LUT:H222	2.49	0.42
4:1N:605:CHL:HMA3	2:1S:101:PHE:HB3	2.01	0.42
3:1S:308:CLA:CBB	5:1S:315:LUT:H32	2.50	0.42
5:1S:315:LUT:H11	5:1S:315:LUT:H191	1.94	0.42
1:1N:189:PHE:HE2	4:1N:601:CHL:HED2	1.85	0.41
3:1N:603:CLA:HBC3	5:1N:615:LUT:H203	2.02	0.41
1:00:209:LEU:HD11	5:00:313:LUT:H163	2.02	0.41
8:1G:619:XAT:H203	4:1N:601:CHL:C4	2.49	0.41
3:1N:603:CLA:C3D	4:1N:609:CHL:H61	2.50	0.41
4:1G:609:CHL:H61	3:1N:602:CLA:H143	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:1N:608:CHL:HBB1	4:1N:608:CHL:HHC	2.03	0.41
4:00:305:CHL:HBB2	5:00:314:LUT:H7	2.03	0.41
3:00:312:CLA:HHD	3:00:319:CLA:HMB1	2.03	0.41
5:1G:615:LUT:C8	5:1G:615:LUT:H181	2.48	0.41
4:00:307:CHL:H121	4:00:307:CHL:C4	2.50	0.41
1:1G:72:ALA:N	5:1G:616:LUT:H202	2.35	0.41
4:1G:601:CHL:HBB1	4:1G:601:CHL:HHC	2.03	0.41
3:00:302:CLA:H2	1:1G:51:LEU:HD11	2.02	0.41
3:1G:612:CLA:H43	8:1G:617:XAT:C31	2.51	0.41
1:1N:189:PHE:CE2	4:1N:601:CHL:HED2	2.56	0.41
4:1S:305:CHL:HBB2	4:1S:306:CHL:CAB	2.51	0.41
4:00:308:CHL:HBB1	4:1G:601:CHL:H61	2.03	0.41
1:1G:162:ASP:HA	5:1G:615:LUT:H24	2.03	0.41
4:1G:601:CHL:H203	4:1G:601:CHL:H162	1.63	0.41
4:1N:607:CHL:H142	4:1N:607:CHL:H111	1.91	0.41
4:1G:608:CHL:HAA1	3:1G:610:CLA:HBC1	2.02	0.41
8:1G:617:XAT:H203	7:1G:618:LHG:H141	2.03	0.41
1:1N:126:ALA:HB3	4:1N:605:CHL:HMC	2.03	0.41
1:1N:139:GLU:OE1	4:1N:609:CHL:C4A	2.64	0.41
2:1S:230:LEU:HD12	2:1S:230:LEU:H	1.86	0.41
4:00:307:CHL:H172	7:00:318:LHG:C22	2.52	0.40
1:1N:110:LEU:CD1	4:1N:606:CHL:HHD	2.47	0.40
3:1S:308:CLA:HBB2	5:1S:315:LUT:H34	2.03	0.40
1:00:151:VAL:HA	4:00:307:CHL:HBC1	2.04	0.40
5:00:314:LUT:H181	5:00:314:LUT:H8	2.02	0.40
1:1G:185:ARG:HA	1:1G:188:MET:HE3	2.03	0.40
5:00:314:LUT:H35	5:00:314:LUT:H401	1.95	0.40
1:1N:20:ASP:OD1	1:1N:20:ASP:N	2.40	0.40
1:1N:98:PHE:HA	4:1N:607:CHL:HMA3	2.04	0.40
1:1N:131:GLN:NE2	4:1N:607:CHL:HMC	2.34	0.40
4:1N:607:CHL:H102	4:1N:609:CHL:C12	2.52	0.40
4:1G:601:CHL:H41	7:1G:618:LHG:H162	2.02	0.40
3:1G:604:CLA:C4B	5:1G:616:LUT:H183	2.52	0.40
4:1N:601:CHL:H143	4:1N:601:CHL:H111	1.76	0.40
3:1N:602:CLA:HMC2	5:1N:615:LUT:C31	2.52	0.40
2:1S:146:VAL:O	2:1S:146:VAL:CG1	2.70	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all EM entries.

The Analysed column shows the number of residues for which the backbone conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	00	217/219 (99%)	195 (90%)	22 (10%)	0	100	100
1	1G	217/219 (99%)	196 (90%)	18 (8%)	3 (1%)	9	34
1	1N	217/219 (99%)	189 (87%)	27 (12%)	1 (0%)	24	55
2	1S	216/218 (99%)	185 (86%)	29 (13%)	2 (1%)	14	43
All	All	867/875 (99%)	765 (88%)	96 (11%)	6 (1%)	20	48

All (6) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	1S	66	LYS
1	1G	17	TYR
2	1S	156	ASN
1	1G	54	ASP
1	1N	119	ILE
1	1G	119	ILE

5.3.2 Protein sidechains [i](#)

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all EM entries.

The Analysed column shows the number of residues for which the sidechain conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	00	166/166 (100%)	163 (98%)	3 (2%)	51	70
1	1G	166/166 (100%)	165 (99%)	1 (1%)	78	82
1	1N	165/166 (99%)	165 (100%)	0	100	100
2	1S	169/173 (98%)	169 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
All	All	666/671 (99%)	662 (99%)	4 (1%)	76	82

All (4) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	00	97	TRP
1	00	196	VAL
1	00	201	THR
1	1G	173	PHE

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (2) such sidechains are listed below:

Mol	Chain	Res	Type
1	00	103	GLN
1	1G	122	GLN

5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

5.4 Non-standard residues in protein, DNA, RNA chains [i](#)

There are no non-standard protein/DNA/RNA residues in this entry.

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

76 ligands are modelled in this entry.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
9	DGD	1S	318	-	47,47,67	1.02	3 (6%)	61,61,81	0.98	3 (4%)
3	CLA	00	309	1	64,68,73	2.24	19 (29%)	77,107,113	2.97	28 (36%)
4	CHL	1N	607	-	70,74,74	1.91	18 (25%)	80,114,114	2.73	25 (31%)
4	CHL	1S	307	-	50,54,74	2.24	15 (30%)	56,90,114	3.17	21 (37%)
3	CLA	1G	604	-	45,49,73	2.64	19 (42%)	54,84,113	3.34	26 (48%)
7	LHG	1G	618	3	40,40,48	0.29	0	43,46,54	0.40	0
4	CHL	00	304	1	52,56,74	2.20	17 (32%)	58,92,114	3.15	24 (41%)
4	CHL	00	305	-	54,58,74	2.15	16 (29%)	59,94,114	3.12	24 (40%)
4	CHL	00	308	1	70,74,74	1.88	17 (24%)	80,114,114	2.73	26 (32%)
3	CLA	1S	309	7	60,64,73	2.26	20 (33%)	72,102,113	3.10	32 (44%)
4	CHL	1G	607	-	70,74,74	1.92	18 (25%)	80,114,114	2.73	26 (32%)
4	CHL	1N	605	1	46,50,74	2.37	19 (41%)	51,85,114	3.35	25 (49%)
4	CHL	1G	608	-	47,51,74	2.23	17 (36%)	52,86,114	3.28	25 (48%)
3	CLA	1N	612	-	46,50,73	2.54	19 (41%)	55,85,113	3.42	28 (50%)
7	LHG	1N	616	3	42,42,48	0.28	0	45,48,54	0.37	0
3	CLA	00	310	7	64,68,73	2.23	19 (29%)	77,107,113	2.98	28 (36%)
4	CHL	1G	601	-	70,74,74	1.89	16 (22%)	80,114,114	2.77	25 (31%)
3	CLA	00	311	-	64,68,73	2.21	19 (29%)	77,107,113	2.98	28 (36%)
4	CHL	1N	601	1	70,74,74	1.91	15 (21%)	80,114,114	2.72	26 (32%)
4	CHL	1S	305	-	50,54,74	2.26	16 (32%)	56,90,114	3.16	23 (41%)
3	CLA	1G	614	7	46,50,73	2.52	19 (41%)	55,85,113	3.39	26 (47%)
8	XAT	1G	619	-	39,47,47	0.89	0	54,74,74	3.13	23 (42%)
3	CLA	1N	604	-	54,58,73	2.42	20 (37%)	65,95,113	3.11	28 (43%)
3	CLA	1G	611	-	47,52,73	2.56	20 (42%)	56,88,113	3.37	25 (44%)
3	CLA	1S	314	-	50,54,73	2.51	20 (40%)	60,90,113	3.29	26 (43%)
7	LHG	1S	317	3	30,30,48	0.34	0	33,36,54	0.54	0
8	XAT	1G	617	-	39,47,47	0.79	0	54,74,74	3.13	25 (46%)
3	CLA	1G	602	1	69,73,73	2.14	21 (30%)	83,113,113	2.83	29 (34%)
4	CHL	1G	606	-	50,54,74	2.24	19 (38%)	56,90,114	3.17	22 (39%)
4	CHL	1G	609	1	65,69,74	1.97	17 (26%)	74,108,114	2.84	25 (33%)
5	LUT	00	313	-	42,43,43	1.67	8 (19%)	51,60,60	1.50	12 (23%)
5	LUT	1S	316	-	42,43,43	1.66	8 (19%)	51,60,60	1.56	10 (19%)
7	LHG	1S	301	-	28,28,48	0.32	0	30,30,54	1.11	2 (6%)
3	CLA	00	319	1	67,71,73	2.14	19 (28%)	80,110,113	2.89	26 (32%)
4	CHL	1S	302	2	50,54,74	2.27	17 (34%)	56,90,114	3.18	23 (41%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
3	CLA	1N	613	1	64,68,73	2.20	20 (31%)	77,107,113	2.84	29 (37%)
7	LHG	1S	319	-	39,39,48	0.35	0	42,44,54	1.01	2 (4%)
3	CLA	1G	613	1	52,56,73	2.46	19 (36%)	62,92,113	3.33	29 (46%)
3	CLA	1S	304	-	54,58,73	2.42	20 (37%)	65,95,113	3.11	29 (44%)
4	CHL	1N	608	-	49,53,74	2.18	17 (34%)	53,88,114	3.25	23 (43%)
4	CHL	1S	306	-	46,50,74	2.32	17 (36%)	51,85,114	3.28	22 (43%)
3	CLA	1G	610	1	66,70,73	2.23	20 (30%)	79,109,113	2.91	29 (36%)
3	CLA	00	301	1	69,73,73	2.13	19 (27%)	83,113,113	2.92	28 (33%)
4	CHL	1G	605	1	46,50,74	2.33	16 (34%)	51,85,114	3.30	22 (43%)
5	LUT	1G	616	-	42,43,43	1.66	8 (19%)	51,60,60	1.95	10 (19%)
7	LHG	00	318	-	48,48,48	0.28	0	51,54,54	0.32	0
5	LUT	00	314	-	42,43,43	1.64	8 (19%)	51,60,60	1.53	11 (21%)
7	LHG	1S	320	-	31,31,48	0.42	0	35,36,54	0.71	2 (5%)
3	CLA	1N	611	7	45,49,73	2.64	20 (44%)	54,84,113	3.45	26 (48%)
3	CLA	1N	614	1	45,49,73	2.62	20 (44%)	54,84,113	3.44	26 (48%)
5	LUT	1S	315	-	42,43,43	1.63	8 (19%)	51,60,60	1.48	11 (21%)
3	CLA	1G	612	1	59,63,73	2.32	20 (33%)	71,101,113	3.03	30 (42%)
3	CLA	1N	602	-	69,73,73	2.13	19 (27%)	83,113,113	2.87	29 (34%)
4	CHL	1N	606	-	50,54,74	2.23	18 (36%)	56,90,114	3.11	24 (42%)
3	CLA	1S	311	2	59,63,73	2.30	19 (32%)	71,101,113	3.03	29 (40%)
4	CHL	1N	609	1	70,74,74	1.90	19 (27%)	80,114,114	2.67	26 (32%)
4	CHL	00	307	-	70,74,74	1.88	18 (25%)	80,114,114	2.73	26 (32%)
3	CLA	1N	603	-	69,73,73	2.13	21 (30%)	83,113,113	2.88	30 (36%)
7	LHG	00	316	3	32,32,48	0.32	0	35,37,54	0.40	0
3	CLA	1S	303	2	45,49,73	2.63	20 (44%)	54,84,113	3.44	27 (50%)
6	VIV	00	315	-	28,28,32	0.55	1 (3%)	36,40,45	0.87	2 (5%)
7	LHG	00	317	-	48,48,48	0.27	0	51,54,54	1.04	3 (5%)
7	LHG	00	320	-	48,48,48	0.27	0	51,54,54	0.39	0
3	CLA	00	303	-	54,58,73	2.40	20 (37%)	65,95,113	3.08	28 (43%)
3	CLA	1S	312	2	53,57,73	2.46	20 (37%)	62,93,113	3.25	28 (45%)
3	CLA	00	302	-	69,73,73	2.15	20 (28%)	83,113,113	2.91	28 (33%)
3	CLA	1G	603	-	69,73,73	2.15	20 (28%)	83,113,113	2.83	29 (34%)
3	CLA	00	312	1	50,54,73	2.48	19 (38%)	60,90,113	3.28	27 (45%)
3	CLA	1S	308	2	59,63,73	2.34	19 (32%)	71,101,113	3.00	29 (40%)
4	CHL	00	306	-	70,74,74	1.89	19 (27%)	80,114,114	2.79	24 (30%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
5	LUT	1G	615	-	42,43,43	1.71	8 (19%)	51,60,60	1.56	9 (17%)
5	LUT	1N	615	-	42,43,43	1.60	8 (19%)	51,60,60	1.46	9 (17%)
7	LHG	1N	617	-	47,47,48	0.28	0	50,53,54	0.48	1 (2%)
3	CLA	1N	610	1	45,49,73	2.60	19 (42%)	54,84,113	3.35	25 (46%)
3	CLA	1S	313	2	50,54,73	2.60	21 (42%)	60,90,113	3.40	25 (41%)
3	CLA	1S	310	2	53,57,73	2.46	20 (37%)	62,93,113	3.30	26 (41%)

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
9	DGD	1S	318	-	-	11/35/75/95	0/2/2/2
3	CLA	00	309	1	1/1/14/20	10/33/109/115	-
4	CHL	1S	307	-	-	9/17/93/117	-
3	CLA	1G	604	-	-	4/10/86/115	-
7	LHG	1G	618	3	-	6/45/45/53	-
4	CHL	00	304	1	-	12/20/96/117	-
4	CHL	00	308	1	1/1/15/21	17/41/117/117	-
4	CHL	00	305	-	-	8/22/98/117	-
3	CLA	1S	309	7	1/1/13/20	12/29/105/115	-
4	CHL	1N	605	1	-	8/12/88/117	-
4	CHL	1G	608	-	-	6/14/90/117	-
3	CLA	1N	612	-	-	3/12/88/115	-
7	LHG	1N	616	3	-	2/47/47/53	-
3	CLA	00	310	7	1/1/14/20	9/33/109/115	-
4	CHL	1G	601	-	1/1/15/21	22/41/117/117	-
3	CLA	00	311	-	1/1/14/20	9/33/109/115	-
4	CHL	1N	601	1	1/1/15/21	20/41/117/117	-
4	CHL	1S	305	-	-	9/17/93/117	-
3	CLA	1G	614	7	-	2/12/88/115	-
8	XAT	1G	619	-	-	7/31/93/93	0/4/4/4
3	CLA	1N	604	-	-	4/21/97/115	-
3	CLA	1G	611	-	-	2/13/89/115	-
3	CLA	1S	314	-	-	2/17/93/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
7	LHG	1S	317	3	-	8/35/35/53	-
8	XAT	1G	617	-	-	7/31/93/93	0/4/4/4
3	CLA	1G	602	1	1/1/15/20	15/39/115/115	-
4	CHL	1G	606	-	-	5/17/93/117	-
4	CHL	1G	609	1	1/1/14/21	19/35/111/117	-
5	LUT	00	313	-	-	2/29/67/67	0/2/2/2
5	LUT	1S	316	-	-	2/29/67/67	0/2/2/2
7	LHG	1S	301	-	-	5/30/30/53	-
3	CLA	00	319	1	1/1/15/20	13/33/109/115	-
4	CHL	1S	302	2	-	11/17/93/117	-
3	CLA	1N	613	1	1/1/14/20	9/33/109/115	-
7	LHG	1S	319	-	-	6/43/43/53	-
3	CLA	1G	613	1	-	7/19/95/115	-
3	CLA	1S	304	-	-	8/21/97/115	-
4	CHL	1N	608	-	-	4/15/92/117	-
4	CHL	1S	306	-	-	6/12/88/117	-
3	CLA	1G	610	1	1/1/14/20	9/36/112/115	-
3	CLA	00	301	1	1/1/15/20	8/39/115/115	-
4	CHL	1G	605	1	-	6/12/88/117	-
5	LUT	1G	616	-	-	0/29/67/67	0/2/2/2
7	LHG	00	318	-	-	21/53/53/53	-
5	LUT	00	314	-	-	2/29/67/67	0/2/2/2
7	LHG	1S	320	-	-	10/33/33/53	-
3	CLA	1N	611	7	-	3/10/86/115	-
3	CLA	1N	614	1	-	3/10/86/115	-
5	LUT	1S	315	-	-	3/29/67/67	0/2/2/2
3	CLA	1S	313	2	-	0/17/93/115	-
3	CLA	1G	612	1	1/1/13/20	12/27/103/115	-
3	CLA	1N	602	-	1/1/15/20	7/39/115/115	-
4	CHL	1N	609	1	1/1/15/21	18/41/117/117	-
3	CLA	1S	311	2	1/1/13/20	10/27/103/115	-
4	CHL	1N	606	-	-	6/17/93/117	-
4	CHL	00	307	-	1/1/15/21	20/41/117/117	-
3	CLA	1N	603	-	1/1/15/20	20/39/115/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
7	LHG	00	316	3	-	2/36/36/53	-
3	CLA	1S	303	2	-	2/10/86/115	-
6	VIV	00	315	-	-	9/15/26/30	0/2/2/2
7	LHG	00	317	-	-	9/53/53/53	-
7	LHG	00	320	-	-	11/53/53/53	-
3	CLA	00	303	-	-	4/21/97/115	-
3	CLA	1S	312	2	-	6/20/96/115	-
3	CLA	00	302	-	1/1/15/20	13/39/115/115	-
3	CLA	1G	603	-	1/1/15/20	8/39/115/115	-
3	CLA	1S	308	2	1/1/13/20	4/27/103/115	-
4	CHL	00	306	-	1/1/15/21	27/41/117/117	-
3	CLA	00	312	1	-	5/17/93/115	-
5	LUT	1G	615	-	-	2/29/67/67	0/2/2/2
5	LUT	1N	615	-	-	2/29/67/67	0/2/2/2
3	CLA	1S	310	2	-	5/20/96/115	-
7	LHG	1N	617	-	-	15/52/52/53	-
3	CLA	1N	610	1	-	3/10/86/115	-
4	CHL	1N	607	-	1/1/15/21	21/41/117/117	-
4	CHL	1G	607	-	1/1/15/21	22/41/117/117	-

All (1070) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	1G	612	CLA	C1D-ND	8.66	1.48	1.37
3	1S	313	CLA	C1D-ND	8.65	1.48	1.37
3	1S	310	CLA	C1D-ND	8.60	1.48	1.37
3	1N	611	CLA	C1D-ND	8.54	1.48	1.37
3	1N	612	CLA	C1D-ND	8.48	1.48	1.37
3	1G	603	CLA	C1D-ND	8.47	1.48	1.37
3	1N	614	CLA	C1D-ND	8.45	1.48	1.37
3	00	302	CLA	C1D-ND	8.44	1.48	1.37
3	1S	314	CLA	C1D-ND	8.43	1.48	1.37
3	1G	613	CLA	C1D-ND	8.43	1.48	1.37
3	1G	611	CLA	C1D-ND	8.42	1.48	1.37
3	1G	610	CLA	C1D-ND	8.40	1.48	1.37
3	1S	308	CLA	C1D-ND	8.40	1.48	1.37
3	00	311	CLA	C1D-ND	8.39	1.48	1.37
3	1G	604	CLA	C1D-ND	8.36	1.48	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	00	310	CLA	C1D-ND	8.36	1.48	1.37
3	1S	312	CLA	C1D-ND	8.34	1.48	1.37
3	00	312	CLA	C1D-ND	8.33	1.48	1.37
3	1N	603	CLA	C1D-ND	8.33	1.48	1.37
3	1G	614	CLA	C1D-ND	8.33	1.48	1.37
3	1S	304	CLA	C1D-ND	8.31	1.48	1.37
3	1N	604	CLA	C1D-ND	8.27	1.48	1.37
3	00	303	CLA	C1D-ND	8.26	1.47	1.37
3	1S	309	CLA	C1D-ND	8.25	1.47	1.37
3	1S	311	CLA	C1D-ND	8.25	1.47	1.37
3	1S	303	CLA	C1D-ND	8.24	1.47	1.37
3	00	301	CLA	C1D-ND	8.22	1.47	1.37
3	00	319	CLA	C1D-ND	8.19	1.47	1.37
3	1G	602	CLA	C1D-ND	8.18	1.47	1.37
3	00	309	CLA	C1D-ND	8.17	1.47	1.37
3	1N	610	CLA	C1D-ND	8.17	1.47	1.37
3	1N	602	CLA	C1D-ND	8.16	1.47	1.37
3	1N	613	CLA	C1D-ND	8.12	1.47	1.37
4	1S	305	CHL	O2D-CGD	5.22	1.45	1.33
3	1N	603	CLA	O2D-CGD	5.21	1.45	1.33
3	1G	610	CLA	O2D-CGD	5.21	1.45	1.33
4	1N	601	CHL	O2D-CGD	5.21	1.45	1.33
4	1N	605	CHL	O2D-CGD	5.21	1.45	1.33
3	1S	310	CLA	O2D-CGD	5.20	1.45	1.33
3	1N	610	CLA	O2D-CGD	5.19	1.45	1.33
3	1N	614	CLA	O2D-CGD	5.19	1.45	1.33
4	1G	605	CHL	O2D-CGD	5.18	1.45	1.33
4	1N	607	CHL	O2D-CGD	5.18	1.45	1.33
3	1N	602	CLA	O2D-CGD	5.18	1.45	1.33
3	1S	308	CLA	O2D-CGD	5.18	1.45	1.33
3	1S	313	CLA	O2D-CGD	5.17	1.45	1.33
4	1N	606	CHL	O2D-CGD	5.17	1.45	1.33
4	1G	607	CHL	O2D-CGD	5.17	1.45	1.33
3	1S	311	CLA	O2D-CGD	5.17	1.45	1.33
4	1S	307	CHL	O2D-CGD	5.16	1.45	1.33
3	1G	604	CLA	O2D-CGD	5.16	1.45	1.33
4	1G	606	CHL	O2D-CGD	5.15	1.45	1.33
3	1N	612	CLA	O2D-CGD	5.15	1.45	1.33
4	00	304	CHL	O2D-CGD	5.15	1.45	1.33
3	1N	613	CLA	O2D-CGD	5.14	1.45	1.33
3	1S	304	CLA	O2D-CGD	5.14	1.45	1.33
4	00	305	CHL	O2D-CGD	5.13	1.45	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	1N	609	CHL	O2D-CGD	5.13	1.45	1.33
4	00	306	CHL	O2D-CGD	5.12	1.45	1.33
3	00	319	CLA	O2D-CGD	5.12	1.45	1.33
4	1G	609	CHL	O2D-CGD	5.11	1.45	1.33
3	1S	314	CLA	O2D-CGD	5.11	1.45	1.33
3	00	309	CLA	O2D-CGD	5.11	1.45	1.33
3	1S	303	CLA	O2D-CGD	5.11	1.45	1.33
4	00	308	CHL	O2D-CGD	5.10	1.45	1.33
4	1S	302	CHL	O2D-CGD	5.10	1.45	1.33
4	1S	306	CHL	O2D-CGD	5.10	1.45	1.33
4	1N	608	CHL	O2D-CGD	5.09	1.45	1.33
3	1S	312	CLA	O2D-CGD	5.08	1.45	1.33
3	1G	602	CLA	O2D-CGD	5.07	1.45	1.33
3	00	301	CLA	O2D-CGD	5.07	1.45	1.33
3	1G	614	CLA	O2D-CGD	5.06	1.45	1.33
3	1N	604	CLA	O2D-CGD	5.06	1.45	1.33
3	00	312	CLA	O2D-CGD	5.06	1.45	1.33
3	1G	603	CLA	O2D-CGD	5.06	1.45	1.33
4	1G	601	CHL	O2D-CGD	5.05	1.45	1.33
3	00	310	CLA	O2D-CGD	5.04	1.45	1.33
4	00	307	CHL	O2D-CGD	5.04	1.45	1.33
3	00	303	CLA	O2D-CGD	5.03	1.45	1.33
3	1G	612	CLA	O2D-CGD	5.03	1.45	1.33
3	00	311	CLA	O2D-CGD	5.03	1.45	1.33
3	1S	303	CLA	CHC-C1C	5.02	1.48	1.38
3	1N	611	CLA	O2D-CGD	5.01	1.45	1.33
3	00	302	CLA	O2D-CGD	5.01	1.45	1.33
4	1G	608	CHL	O2D-CGD	5.01	1.45	1.33
3	1S	313	CLA	CHC-C1C	4.97	1.48	1.38
3	1G	613	CLA	O2D-CGD	4.95	1.45	1.33
3	1G	603	CLA	CHC-C1C	4.88	1.48	1.38
3	1S	309	CLA	O2D-CGD	4.85	1.45	1.33
3	1S	310	CLA	CHC-C1C	4.84	1.48	1.38
3	00	301	CLA	CHC-C1C	4.83	1.48	1.38
3	1N	602	CLA	CHC-C1C	4.81	1.48	1.38
3	00	319	CLA	CHC-C1C	4.79	1.48	1.38
4	1N	607	CHL	C3D-C4D	-4.77	1.33	1.44
3	1S	312	CLA	CHC-C1C	4.77	1.48	1.38
4	00	307	CHL	C3D-C4D	-4.75	1.33	1.44
4	1G	609	CHL	C3D-C4D	-4.74	1.33	1.44
3	1G	610	CLA	CHC-C1C	4.73	1.48	1.38
3	00	311	CLA	CHC-C1C	4.73	1.48	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	1S	305	CHL	C3D-C4D	-4.73	1.33	1.44
4	1N	608	CHL	C3D-C4D	-4.73	1.33	1.44
3	1S	308	CLA	CHC-C1C	4.73	1.48	1.38
4	1N	606	CHL	C3D-C4D	-4.72	1.33	1.44
4	1N	609	CHL	C3D-C4D	-4.72	1.33	1.44
3	00	309	CLA	CHC-C1C	4.72	1.48	1.38
4	1G	601	CHL	C3D-C4D	-4.72	1.33	1.44
4	1G	605	CHL	C3D-C4D	-4.71	1.33	1.44
4	1N	605	CHL	C3D-C4D	-4.71	1.33	1.44
4	00	306	CHL	C3D-C4D	-4.70	1.33	1.44
4	00	305	CHL	C3D-C4D	-4.70	1.33	1.44
4	1S	307	CHL	C3D-C4D	-4.70	1.33	1.44
4	1G	606	CHL	C3D-C4D	-4.70	1.33	1.44
3	1G	613	CLA	CHC-C1C	4.70	1.48	1.38
4	1N	601	CHL	C3D-C4D	-4.69	1.33	1.44
4	00	304	CHL	C3D-C4D	-4.69	1.33	1.44
4	1S	306	CHL	C3D-C4D	-4.69	1.33	1.44
3	00	302	CLA	CHC-C1C	4.68	1.48	1.38
4	1G	607	CHL	C3D-C4D	-4.67	1.33	1.44
4	00	308	CHL	C3D-C4D	-4.67	1.33	1.44
4	1S	302	CHL	C3D-C4D	-4.66	1.33	1.44
3	1N	610	CLA	CHC-C1C	4.66	1.48	1.38
4	1N	605	CHL	C2C-C3C	4.66	1.46	1.36
3	1G	602	CLA	CHC-C1C	4.66	1.48	1.38
3	1N	614	CLA	CHC-C1C	4.65	1.48	1.38
4	1G	608	CHL	C3D-C4D	-4.65	1.33	1.44
3	1G	611	CLA	CHC-C1C	4.65	1.48	1.38
3	1G	611	CLA	O2A-CGA	4.62	1.46	1.30
3	00	309	CLA	C3D-C4D	-4.62	1.33	1.44
3	1N	611	CLA	CHC-C1C	4.62	1.47	1.38
3	1S	311	CLA	CHC-C1C	4.60	1.47	1.38
3	1G	611	CLA	O2D-CGD	4.60	1.45	1.30
3	1S	304	CLA	CHC-C1C	4.60	1.47	1.38
3	1S	311	CLA	C3D-C4D	-4.60	1.33	1.44
3	1G	604	CLA	CHC-C1C	4.59	1.47	1.38
3	00	310	CLA	C3D-C4D	-4.58	1.33	1.44
3	1N	610	CLA	C3D-C4D	-4.57	1.33	1.44
3	1G	604	CLA	C3D-C4D	-4.57	1.33	1.44
4	1N	607	CHL	C2C-C3C	4.57	1.46	1.36
3	1S	314	CLA	CHC-C1C	4.56	1.47	1.38
3	1S	312	CLA	C3D-C4D	-4.56	1.33	1.44
4	1S	302	CHL	CHC-C1C	4.56	1.47	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	1N	601	CHL	CHD-C1D	4.55	1.47	1.38
4	1N	606	CHL	O2A-CGA	4.55	1.46	1.30
3	1G	610	CLA	C3D-C4D	-4.55	1.33	1.44
3	1N	604	CLA	C3C-C2C	4.55	1.46	1.36
3	1S	314	CLA	C3D-C4D	-4.54	1.33	1.44
3	1G	614	CLA	CHC-C1C	4.54	1.47	1.38
3	00	302	CLA	C3D-C4D	-4.54	1.33	1.44
3	1N	604	CLA	C3D-C4D	-4.53	1.34	1.44
3	1N	602	CLA	C3D-C4D	-4.52	1.34	1.44
3	1S	308	CLA	C3D-C4D	-4.52	1.34	1.44
4	1N	601	CHL	C2C-C3C	4.52	1.46	1.36
4	1S	305	CHL	C2C-C3C	4.52	1.46	1.36
4	1N	605	CHL	C3A-C2A	-4.52	1.50	1.54
4	1G	606	CHL	O2A-CGA	4.52	1.45	1.30
4	1G	605	CHL	C2C-C3C	4.51	1.46	1.36
3	00	303	CLA	C3D-C4D	-4.51	1.34	1.44
3	1G	610	CLA	O2A-CGA	4.51	1.46	1.33
4	1G	608	CHL	C2C-C3C	4.50	1.46	1.36
3	1S	304	CLA	C3D-C4D	-4.50	1.34	1.44
5	1G	616	LUT	C34-C33	4.50	1.41	1.35
4	1S	302	CHL	O2A-CGA	4.49	1.45	1.30
4	1G	601	CHL	C2C-C3C	4.49	1.46	1.36
4	1S	305	CHL	O2A-CGA	4.49	1.45	1.30
4	1G	607	CHL	C2C-C3C	4.49	1.46	1.36
4	00	307	CHL	C2C-C3C	4.49	1.46	1.36
3	1N	614	CLA	C3C-C2C	4.49	1.46	1.36
3	1N	604	CLA	CHC-C1C	4.49	1.47	1.38
4	1S	307	CHL	O2A-CGA	4.48	1.45	1.30
3	00	312	CLA	CHC-C1C	4.46	1.47	1.38
3	1G	602	CLA	C3D-C4D	-4.46	1.34	1.44
4	1N	605	CHL	CHC-C1C	4.45	1.47	1.38
3	00	312	CLA	C3D-C4D	-4.45	1.34	1.44
4	1S	302	CHL	C2C-C3C	4.45	1.46	1.36
3	1N	613	CLA	C3D-C4D	-4.45	1.34	1.44
5	1G	615	LUT	C34-C33	4.45	1.41	1.35
3	1N	603	CLA	CHC-C1C	4.45	1.47	1.38
3	1S	303	CLA	C3D-C4D	-4.44	1.34	1.44
3	00	301	CLA	C3D-C4D	-4.44	1.34	1.44
4	1N	608	CHL	C2C-C3C	4.44	1.46	1.36
3	1N	614	CLA	C3D-C4D	-4.44	1.34	1.44
3	1N	612	CLA	CHC-C1C	4.43	1.47	1.38
3	1N	613	CLA	CHC-C1C	4.43	1.47	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	1G	607	CHL	CHC-C1C	4.43	1.47	1.38
3	1G	614	CLA	C3D-C4D	-4.43	1.34	1.44
3	1G	603	CLA	C3D-C4D	-4.43	1.34	1.44
3	00	310	CLA	CHC-C1C	4.43	1.47	1.38
3	1G	612	CLA	C3D-C4D	-4.43	1.34	1.44
3	00	311	CLA	C3D-C4D	-4.43	1.34	1.44
3	00	310	CLA	O2A-CGA	4.43	1.46	1.33
4	1S	305	CHL	CHD-C1D	4.42	1.47	1.38
3	1G	604	CLA	C3C-C2C	4.42	1.46	1.36
3	1G	612	CLA	CHC-C1C	4.42	1.47	1.38
4	1N	609	CHL	C2C-C3C	4.42	1.46	1.36
3	1S	304	CLA	C3C-C2C	4.42	1.46	1.36
4	1N	601	CHL	CHC-C1C	4.41	1.47	1.38
3	1S	310	CLA	O2A-CGA	4.41	1.46	1.33
3	1N	611	CLA	C3D-C4D	-4.40	1.34	1.44
3	1S	308	CLA	C3C-C2C	4.40	1.46	1.36
4	1G	609	CHL	CHC-C1C	4.40	1.47	1.38
3	1G	613	CLA	C3D-C4D	-4.40	1.34	1.44
4	00	305	CHL	C2C-C3C	4.40	1.46	1.36
3	1G	613	CLA	C3C-C2C	4.40	1.46	1.36
4	1N	608	CHL	CHC-C1C	4.40	1.47	1.38
3	1S	313	CLA	C3D-C4D	-4.39	1.34	1.44
3	1N	603	CLA	C3D-C4D	-4.39	1.34	1.44
3	00	302	CLA	C3C-C2C	4.39	1.46	1.36
3	1N	611	CLA	C3C-C2C	4.39	1.46	1.36
3	00	309	CLA	O2A-CGA	4.38	1.46	1.33
3	1S	308	CLA	O2A-CGA	4.38	1.46	1.33
4	1S	307	CHL	C2C-C3C	4.38	1.46	1.36
3	00	319	CLA	C3D-C4D	-4.38	1.34	1.44
4	1S	306	CHL	C2C-C3C	4.37	1.46	1.36
3	1S	309	CLA	CHC-C1C	4.37	1.47	1.38
4	1G	608	CHL	CHC-C1C	4.37	1.47	1.38
3	1S	312	CLA	C3C-C2C	4.37	1.46	1.36
4	1S	305	CHL	CHC-C1C	4.37	1.47	1.38
3	1N	604	CLA	O2A-CGA	4.37	1.46	1.33
3	1S	309	CLA	C3D-C4D	-4.37	1.34	1.44
3	1N	613	CLA	C3C-C2C	4.36	1.46	1.36
4	1G	609	CHL	C2C-C3C	4.36	1.46	1.36
4	00	304	CHL	C2C-C3C	4.36	1.46	1.36
4	1N	605	CHL	CHD-C1D	4.35	1.46	1.38
4	00	308	CHL	C2C-C3C	4.35	1.46	1.36
4	1S	306	CHL	C3A-C2A	-4.35	1.50	1.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	00	303	CLA	CHC-C1C	4.35	1.47	1.38
3	1N	612	CLA	C3C-C2C	4.35	1.46	1.36
3	00	309	CLA	C3C-C2C	4.35	1.46	1.36
4	1G	605	CHL	CHC-C1C	4.34	1.47	1.38
4	00	306	CHL	C2C-C3C	4.34	1.46	1.36
4	1S	302	CHL	CHD-C1D	4.34	1.46	1.38
3	1G	612	CLA	C3C-C2C	4.34	1.45	1.36
3	1G	603	CLA	O2A-CGA	4.33	1.46	1.33
4	1G	605	CHL	CHD-C1D	4.33	1.46	1.38
3	00	311	CLA	C3C-C2C	4.33	1.45	1.36
3	1G	611	CLA	C3C-C2C	4.33	1.45	1.36
4	1N	609	CHL	CHD-C1D	4.32	1.46	1.38
4	1N	609	CHL	O2A-CGA	4.32	1.46	1.33
3	1S	311	CLA	O2A-CGA	4.32	1.46	1.33
3	1S	310	CLA	C3D-C4D	-4.32	1.34	1.44
4	1G	609	CHL	O2A-CGA	4.32	1.46	1.33
4	1N	607	CHL	CHC-C1C	4.31	1.47	1.38
4	00	305	CHL	CHC-C1C	4.31	1.47	1.38
4	1G	601	CHL	CHD-C1D	4.31	1.46	1.38
4	1G	606	CHL	C2C-C3C	4.31	1.46	1.36
4	00	307	CHL	O2A-CGA	4.31	1.45	1.33
3	1S	304	CLA	O2A-CGA	4.31	1.45	1.33
3	1G	603	CLA	C3C-C2C	4.31	1.45	1.36
4	1N	607	CHL	O2A-CGA	4.31	1.45	1.33
4	00	307	CHL	CHD-C1D	4.31	1.46	1.38
5	1G	615	LUT	C14-C13	4.30	1.41	1.35
3	00	302	CLA	O2A-CGA	4.30	1.45	1.33
4	1G	601	CHL	CHC-C1C	4.30	1.47	1.38
4	00	304	CHL	CHC-C1C	4.30	1.47	1.38
3	00	310	CLA	C3C-C2C	4.30	1.45	1.36
4	1G	607	CHL	O2A-CGA	4.30	1.45	1.33
4	00	307	CHL	CHC-C1C	4.29	1.47	1.38
4	1S	307	CHL	CHD-C1D	4.29	1.46	1.38
4	00	308	CHL	O2A-CGA	4.29	1.45	1.33
3	1N	613	CLA	O2A-CGA	4.29	1.45	1.33
4	1N	606	CHL	CHD-C1D	4.29	1.46	1.38
3	1G	602	CLA	C3C-C2C	4.29	1.45	1.36
4	00	306	CHL	CHC-C1C	4.29	1.47	1.38
3	1S	312	CLA	O2A-CGA	4.29	1.45	1.33
4	1N	601	CHL	O2A-CGA	4.28	1.45	1.33
4	1S	306	CHL	CHC-C1C	4.28	1.47	1.38
3	1G	611	CLA	C3D-C4D	-4.28	1.34	1.44

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
5	1G	615	LUT	C10-C9	4.28	1.41	1.35
3	1N	612	CLA	C3D-C4D	-4.27	1.34	1.44
4	00	305	CHL	O2A-CGA	4.27	1.45	1.33
4	1G	607	CHL	CHD-C1D	4.27	1.46	1.38
3	00	303	CLA	C3C-C2C	4.27	1.45	1.36
4	1G	606	CHL	CHD-C1D	4.26	1.46	1.38
4	1N	606	CHL	C2C-C3C	4.26	1.45	1.36
3	1G	612	CLA	O2A-CGA	4.26	1.45	1.33
9	1S	318	DGD	O1G-C1A	4.25	1.45	1.33
4	1G	609	CHL	CHD-C1D	4.25	1.46	1.38
3	1G	613	CLA	O2A-CGA	4.25	1.45	1.33
4	00	305	CHL	CHD-C1D	4.25	1.46	1.38
3	1S	311	CLA	C3C-C2C	4.24	1.45	1.36
4	1S	307	CHL	CHC-C1C	4.23	1.47	1.38
3	1S	309	CLA	O2A-CGA	4.23	1.45	1.33
3	00	303	CLA	O2A-CGA	4.23	1.45	1.33
3	1N	610	CLA	C3A-C2A	-4.23	1.50	1.54
3	1N	603	CLA	C3C-C2C	4.23	1.45	1.36
4	1N	608	CHL	CHD-C1D	4.23	1.46	1.38
4	00	308	CHL	CHC-C1C	4.22	1.47	1.38
3	1G	614	CLA	C3C-C2C	4.22	1.45	1.36
4	1N	607	CHL	CHD-C1D	4.22	1.46	1.38
3	1N	602	CLA	O2A-CGA	4.22	1.45	1.33
4	1N	609	CHL	CHC-C1C	4.22	1.47	1.38
4	1S	306	CHL	CHD-C1D	4.22	1.46	1.38
4	00	304	CHL	O2A-CGA	4.21	1.45	1.33
3	1G	610	CLA	C3C-C2C	4.21	1.45	1.36
4	1G	608	CHL	CHD-C1D	4.20	1.46	1.38
4	1G	605	CHL	C3A-C2A	-4.20	1.50	1.54
3	1S	309	CLA	C3C-C2C	4.19	1.45	1.36
4	00	308	CHL	CHD-C1D	4.18	1.46	1.38
4	00	306	CHL	O2A-CGA	4.18	1.45	1.33
3	1S	313	CLA	CHB-C1B	4.18	1.48	1.39
4	00	304	CHL	CHD-C1D	4.18	1.46	1.38
3	1S	314	CLA	C3C-C2C	4.18	1.45	1.36
4	00	306	CHL	CHD-C1D	4.18	1.46	1.38
3	1G	602	CLA	O2A-CGA	4.17	1.45	1.33
3	1N	602	CLA	C3C-C2C	4.16	1.45	1.36
3	00	311	CLA	O2A-CGA	4.15	1.45	1.33
3	00	312	CLA	C3C-C2C	4.15	1.45	1.36
3	1G	604	CLA	C3A-C2A	-4.14	1.50	1.54
5	1G	616	LUT	C10-C9	4.14	1.41	1.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
5	00	314	LUT	C34-C33	4.14	1.41	1.35
4	1G	601	CHL	O2A-CGA	4.13	1.45	1.33
3	00	319	CLA	O2A-CGA	4.13	1.45	1.33
5	00	313	LUT	C34-C33	4.13	1.41	1.35
3	1S	310	CLA	C3C-C2C	4.12	1.45	1.36
5	1S	316	LUT	C34-C33	4.12	1.41	1.35
4	1G	606	CHL	CHC-C1C	4.11	1.46	1.38
3	1S	310	CLA	CHB-C1B	4.10	1.48	1.39
3	00	301	CLA	O2A-CGA	4.07	1.45	1.33
5	00	313	LUT	C14-C13	4.07	1.41	1.35
3	00	319	CLA	C3C-C2C	4.07	1.45	1.36
4	1S	305	CHL	CHD-C4C	4.07	1.48	1.39
3	1N	603	CLA	O2A-CGA	4.06	1.45	1.33
3	1S	313	CLA	C3C-C2C	4.06	1.45	1.36
3	1S	314	CLA	O2A-CGA	4.05	1.45	1.33
3	1S	313	CLA	O2A-CGA	4.05	1.45	1.33
5	1S	316	LUT	C10-C9	4.04	1.41	1.35
3	1S	303	CLA	C3C-C2C	4.04	1.45	1.36
3	00	312	CLA	O2A-CGA	4.04	1.45	1.33
4	1N	606	CHL	CHC-C1C	4.04	1.46	1.38
3	1N	610	CLA	C3C-C2C	4.03	1.45	1.36
4	1N	601	CHL	CHD-C4C	4.03	1.48	1.39
5	00	313	LUT	C10-C9	4.02	1.41	1.35
3	00	301	CLA	C3C-C2C	4.02	1.45	1.36
4	1S	302	CHL	CHD-C4C	4.00	1.48	1.39
3	00	311	CLA	CHB-C1B	3.99	1.48	1.39
5	00	314	LUT	C14-C13	3.97	1.41	1.35
4	1N	605	CHL	CHD-C4C	3.97	1.48	1.39
4	1G	605	CHL	CHD-C4C	3.97	1.48	1.39
4	1G	601	CHL	CHD-C4C	3.96	1.48	1.39
5	1S	316	LUT	C14-C13	3.95	1.41	1.35
3	00	319	CLA	CHB-C1B	3.93	1.48	1.39
4	1G	609	CHL	CHD-C4C	3.93	1.48	1.39
3	00	303	CLA	CHB-C1B	3.93	1.48	1.39
4	1G	607	CHL	CHD-C4C	3.92	1.48	1.39
4	1S	307	CHL	CHD-C4C	3.92	1.48	1.39
5	1S	316	LUT	C30-C29	3.91	1.41	1.35
4	00	304	CHL	CHD-C4C	3.90	1.48	1.39
4	1N	609	CHL	CHD-C4C	3.89	1.48	1.39
3	00	310	CLA	CHB-C1B	3.88	1.48	1.39
3	1S	303	CLA	C3A-C2A	-3.88	1.50	1.54
4	00	305	CHL	CHD-C4C	3.88	1.48	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	00	307	CHL	CHD-C4C	3.87	1.48	1.39
9	1S	318	DGD	O2G-C1B	3.86	1.45	1.34
4	1N	606	CHL	CHD-C4C	3.86	1.48	1.39
5	00	314	LUT	C10-C9	3.86	1.40	1.35
5	1G	616	LUT	C14-C13	3.86	1.40	1.35
4	1S	306	CHL	CHD-C4C	3.85	1.48	1.39
3	1N	611	CLA	CHB-C1B	3.85	1.48	1.39
3	00	301	CLA	CHB-C1B	3.85	1.48	1.39
3	00	301	CLA	CHC-C4B	3.84	1.48	1.39
3	1N	604	CLA	CHB-C1B	3.83	1.48	1.39
4	1G	608	CHL	CHD-C4C	3.83	1.48	1.39
4	1N	608	CHL	CHD-C4C	3.82	1.48	1.39
4	00	306	CHL	CHD-C4C	3.82	1.48	1.39
4	00	308	CHL	CHD-C4C	3.81	1.47	1.39
5	00	313	LUT	C30-C29	3.81	1.40	1.35
3	1N	611	CLA	OBD-CAD	3.80	1.29	1.22
3	00	309	CLA	CHC-C4B	3.80	1.47	1.39
4	1N	605	CHL	OBD-CAD	3.80	1.29	1.22
3	1G	602	CLA	CHB-C1B	3.79	1.47	1.39
3	1N	603	CLA	CHB-C1B	3.79	1.47	1.39
4	1N	601	CHL	CHB-C1B	3.79	1.47	1.39
5	1S	315	LUT	C34-C33	3.78	1.40	1.35
4	1N	607	CHL	CHD-C4C	3.78	1.47	1.39
3	00	312	CLA	OBD-CAD	3.78	1.29	1.22
4	1G	606	CHL	CHD-C4C	3.78	1.47	1.39
3	1G	614	CLA	OBD-CAD	3.78	1.29	1.22
3	1N	614	CLA	CHB-C1B	3.76	1.47	1.39
3	1N	610	CLA	CHC-C4B	3.76	1.47	1.39
3	1N	612	CLA	OBD-CAD	3.76	1.29	1.22
3	1S	314	CLA	OBD-CAD	3.75	1.28	1.22
3	1S	312	CLA	CHC-C4B	3.75	1.47	1.39
3	1S	303	CLA	CHC-C4B	3.75	1.47	1.39
3	1N	602	CLA	CHB-C1B	3.75	1.47	1.39
3	00	319	CLA	CHC-C4B	3.75	1.47	1.39
3	1S	311	CLA	CHB-C1B	3.74	1.47	1.39
3	1G	612	CLA	OBD-CAD	3.74	1.28	1.22
3	1S	303	CLA	CHB-C1B	3.74	1.47	1.39
5	1G	615	LUT	C30-C29	3.73	1.40	1.35
3	1G	611	CLA	CHB-C1B	3.73	1.47	1.39
3	1N	614	CLA	OBD-CAD	3.73	1.28	1.22
3	1N	613	CLA	OBD-CAD	3.73	1.28	1.22
4	00	305	CHL	OBD-CAD	3.73	1.28	1.22

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	1G	613	CLA	CHB-C1B	3.73	1.47	1.39
3	1S	314	CLA	CHB-C1B	3.72	1.47	1.39
5	1N	615	LUT	C34-C33	3.72	1.40	1.35
3	1S	311	CLA	OBD-CAD	3.72	1.28	1.22
4	1G	605	CHL	OBD-CAD	3.72	1.28	1.22
3	1G	614	CLA	CHB-C1B	3.72	1.47	1.39
4	1S	302	CHL	OBD-CAD	3.71	1.28	1.22
3	1N	613	CLA	CHB-C1B	3.71	1.47	1.39
4	1S	305	CHL	OBD-CAD	3.70	1.28	1.22
4	00	304	CHL	OBD-CAD	3.70	1.28	1.22
3	1G	604	CLA	CHB-C1B	3.70	1.47	1.39
4	1N	606	CHL	OBD-CAD	3.70	1.28	1.22
3	1N	612	CLA	CHB-C1B	3.69	1.47	1.39
3	1S	313	CLA	OBD-CAD	3.69	1.28	1.22
3	1S	309	CLA	OBD-CAD	3.69	1.28	1.22
3	1S	308	CLA	CHB-C1B	3.69	1.47	1.39
3	1N	602	CLA	OBD-CAD	3.69	1.28	1.22
3	1S	304	CLA	CHB-C1B	3.68	1.47	1.39
3	00	302	CLA	CHB-C1B	3.68	1.47	1.39
4	1S	306	CHL	OBD-CAD	3.68	1.28	1.22
3	00	302	CLA	CHC-C4B	3.67	1.47	1.39
4	00	306	CHL	OBD-CAD	3.67	1.28	1.22
4	1G	606	CHL	OBD-CAD	3.67	1.28	1.22
3	1N	614	CLA	CHC-C4B	3.67	1.47	1.39
3	1S	304	CLA	CHC-C4B	3.66	1.47	1.39
3	1S	312	CLA	OBD-CAD	3.66	1.28	1.22
3	1G	612	CLA	CHB-C1B	3.66	1.47	1.39
3	1G	611	CLA	OBD-CAD	3.65	1.28	1.22
5	00	314	LUT	C30-C29	3.65	1.40	1.35
4	1S	302	CHL	CHC-C4B	3.65	1.47	1.39
3	1N	611	CLA	C3A-C2A	-3.64	1.51	1.54
4	1G	609	CHL	OBD-CAD	3.64	1.28	1.22
4	1N	608	CHL	OBD-CAD	3.64	1.28	1.22
3	00	311	CLA	OBD-CAD	3.64	1.28	1.22
4	00	308	CHL	OBD-CAD	3.63	1.28	1.22
3	00	312	CLA	CHB-C1B	3.63	1.47	1.39
4	1N	607	CHL	OBD-CAD	3.63	1.28	1.22
3	1S	308	CLA	CHC-C4B	3.63	1.47	1.39
4	1N	609	CHL	OBD-CAD	3.63	1.28	1.22
3	1N	610	CLA	OBD-CAD	3.63	1.28	1.22
3	1N	610	CLA	CHB-C1B	3.63	1.47	1.39
3	00	309	CLA	OBD-CAD	3.63	1.28	1.22

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	00	310	CLA	CHC-C4B	3.61	1.47	1.39
3	1G	603	CLA	OBD-CAD	3.60	1.28	1.22
3	1G	603	CLA	CHC-C4B	3.60	1.47	1.39
5	1S	315	LUT	C10-C9	3.60	1.40	1.35
3	00	319	CLA	OBD-CAD	3.59	1.28	1.22
4	1G	608	CHL	OBD-CAD	3.59	1.28	1.22
3	1G	604	CLA	CHC-C4B	3.59	1.47	1.39
5	1S	315	LUT	C14-C13	3.59	1.40	1.35
5	1S	315	LUT	C30-C29	3.59	1.40	1.35
3	1G	610	CLA	OBD-CAD	3.59	1.28	1.22
3	1G	613	CLA	CHC-C4B	3.59	1.47	1.39
4	1N	601	CHL	CHC-C4B	3.59	1.47	1.39
3	1G	613	CLA	OBD-CAD	3.58	1.28	1.22
4	1G	607	CHL	OBD-CAD	3.58	1.28	1.22
4	1G	609	CHL	CHC-C4B	3.58	1.47	1.39
4	1N	608	CHL	CHC-C4B	3.58	1.47	1.39
3	1S	308	CLA	OBD-CAD	3.57	1.28	1.22
3	1S	303	CLA	OBD-CAD	3.57	1.28	1.22
3	1N	602	CLA	CHC-C4B	3.57	1.47	1.39
3	1S	314	CLA	CHC-C4B	3.56	1.47	1.39
3	1S	309	CLA	CHB-C1B	3.56	1.47	1.39
4	1G	607	CHL	CHC-C4B	3.56	1.47	1.39
4	1N	605	CHL	CHC-C4B	3.55	1.47	1.39
3	1N	611	CLA	CHC-C4B	3.54	1.47	1.39
3	1N	613	CLA	CHC-C4B	3.54	1.47	1.39
4	1G	608	CHL	CHC-C4B	3.54	1.47	1.39
3	1S	311	CLA	CHC-C4B	3.53	1.47	1.39
3	1N	604	CLA	OBD-CAD	3.53	1.28	1.22
3	1G	604	CLA	OBD-CAD	3.53	1.28	1.22
3	1G	603	CLA	CHB-C1B	3.53	1.47	1.39
3	1N	610	CLA	C3B-C4B	3.52	1.51	1.42
3	1S	312	CLA	C3B-C4B	3.52	1.51	1.42
4	1G	601	CHL	CHC-C4B	3.52	1.47	1.39
3	00	301	CLA	OBD-CAD	3.52	1.28	1.22
4	1N	601	CHL	OBD-CAD	3.51	1.28	1.22
3	00	311	CLA	CHC-C4B	3.51	1.47	1.39
3	1G	610	CLA	CHB-C1B	3.51	1.47	1.39
3	1N	603	CLA	OBD-CAD	3.50	1.28	1.22
3	1G	610	CLA	C3B-C4B	3.50	1.50	1.42
4	1S	307	CHL	OBD-CAD	3.50	1.28	1.22
4	00	306	CHL	CHC-C4B	3.50	1.47	1.39
3	1S	312	CLA	CHB-C1B	3.50	1.47	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	1G	610	CLA	CHC-C4B	3.49	1.47	1.39
4	1N	607	CHL	CHC-C4B	3.49	1.47	1.39
4	1G	601	CHL	OBD-CAD	3.48	1.28	1.22
4	00	304	CHL	CHC-C4B	3.48	1.47	1.39
4	1S	306	CHL	CHC-C4B	3.48	1.47	1.39
3	1G	611	CLA	CHC-C4B	3.48	1.47	1.39
3	1S	313	CLA	CHC-C4B	3.48	1.47	1.39
3	00	310	CLA	OBD-CAD	3.47	1.28	1.22
4	1G	606	CHL	CHC-C4B	3.47	1.47	1.39
4	00	308	CHL	CHC-C4B	3.47	1.47	1.39
5	1G	616	LUT	C30-C29	3.47	1.40	1.35
3	1S	310	CLA	CHC-C4B	3.47	1.47	1.39
3	1G	614	CLA	CHC-C4B	3.46	1.47	1.39
4	1N	609	CHL	CHC-C4B	3.46	1.47	1.39
4	1G	605	CHL	CHC-C4B	3.46	1.47	1.39
3	00	312	CLA	CHC-C4B	3.46	1.47	1.39
3	1G	602	CLA	CHC-C4B	3.45	1.47	1.39
3	1G	612	CLA	CHD-C4C	3.45	1.47	1.39
3	00	309	CLA	CHB-C1B	3.45	1.47	1.39
3	00	302	CLA	OBD-CAD	3.45	1.28	1.22
3	1N	612	CLA	CHC-C4B	3.44	1.47	1.39
3	1S	304	CLA	OBD-CAD	3.44	1.28	1.22
3	00	309	CLA	C3B-C4B	3.43	1.50	1.42
5	1N	615	LUT	C14-C13	3.43	1.40	1.35
3	1G	602	CLA	OBD-CAD	3.43	1.28	1.22
4	00	307	CHL	CHC-C4B	3.42	1.47	1.39
4	1S	305	CHL	CHC-C4B	3.42	1.47	1.39
3	00	301	CLA	C3B-C4B	3.42	1.50	1.42
4	1N	606	CHL	CHB-C1B	3.42	1.47	1.39
3	1N	614	CLA	C3B-C4B	3.41	1.50	1.42
4	1S	307	CHL	CHC-C4B	3.41	1.47	1.39
3	1N	611	CLA	C3B-C4B	3.40	1.50	1.42
3	1N	614	CLA	C3A-C2A	-3.39	1.51	1.54
3	00	303	CLA	OBD-CAD	3.39	1.28	1.22
3	1G	613	CLA	C3B-C4B	3.39	1.50	1.42
3	1G	604	CLA	C3B-C4B	3.39	1.50	1.42
3	1N	602	CLA	C3B-C4B	3.38	1.50	1.42
5	1N	615	LUT	C10-C9	3.38	1.40	1.35
3	1N	604	CLA	CHD-C4C	3.36	1.46	1.39
3	00	302	CLA	C3B-C4B	3.36	1.50	1.42
3	00	310	CLA	C3B-C4B	3.36	1.50	1.42
5	1S	315	LUT	C8-C9	-3.36	1.38	1.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	1S	314	CLA	C3B-C4B	3.36	1.50	1.42
5	1N	615	LUT	C30-C29	3.36	1.40	1.35
3	1S	313	CLA	C3B-C4B	3.36	1.50	1.42
3	1S	308	CLA	C3B-C4B	3.35	1.50	1.42
4	00	305	CHL	CHB-C1B	3.35	1.46	1.39
3	00	312	CLA	C3B-C4B	3.32	1.50	1.42
3	1G	614	CLA	C3B-C4B	3.32	1.50	1.42
3	00	319	CLA	C3B-C4B	3.32	1.50	1.42
4	1G	601	CHL	CHB-C1B	3.31	1.46	1.39
4	00	305	CHL	CHC-C4B	3.31	1.46	1.39
4	1S	307	CHL	CHB-C1B	3.30	1.46	1.39
3	1S	304	CLA	C3B-C4B	3.30	1.50	1.42
3	1G	603	CLA	C3B-C4B	3.30	1.50	1.42
3	1S	310	CLA	C3B-C4B	3.30	1.50	1.42
3	00	303	CLA	CHD-C4C	3.30	1.46	1.39
3	1N	603	CLA	CHC-C4B	3.30	1.46	1.39
3	1S	309	CLA	CHC-C4B	3.30	1.46	1.39
3	1S	310	CLA	OBD-CAD	3.29	1.28	1.22
3	1S	312	CLA	CHD-C4C	3.27	1.46	1.39
4	00	308	CHL	CHB-C1B	3.27	1.46	1.39
4	1N	606	CHL	CHC-C4B	3.27	1.46	1.39
3	1G	610	CLA	CHD-C4C	3.26	1.46	1.39
3	00	311	CLA	C3B-C4B	3.26	1.50	1.42
3	1S	312	CLA	CHD-C1D	3.26	1.44	1.38
3	1G	604	CLA	CHD-C4C	3.26	1.46	1.39
3	1N	603	CLA	CHD-C4C	3.26	1.46	1.39
3	1G	612	CLA	CHD-C1D	3.25	1.44	1.38
3	1N	604	CLA	CHC-C4B	3.25	1.46	1.39
4	1G	605	CHL	CHB-C1B	3.25	1.46	1.39
4	00	307	CHL	OBD-CAD	3.24	1.28	1.22
3	1G	611	CLA	C3B-C4B	3.24	1.50	1.42
3	00	303	CLA	CHD-C1D	3.24	1.44	1.38
3	1G	604	CLA	CHD-C1D	3.23	1.44	1.38
3	1S	304	CLA	CHD-C4C	3.23	1.46	1.39
3	1S	311	CLA	C3B-C4B	3.23	1.50	1.42
4	1N	608	CHL	CHB-C1B	3.22	1.46	1.39
3	1S	308	CLA	CHD-C4C	3.22	1.46	1.39
3	1G	610	CLA	CHD-C1D	3.22	1.44	1.38
3	1S	309	CLA	C3B-C4B	3.21	1.50	1.42
3	1N	604	CLA	CHD-C1D	3.21	1.44	1.38
3	1N	612	CLA	C3B-C4B	3.21	1.50	1.42
3	1G	603	CLA	CHD-C4C	3.20	1.46	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	00	303	CLA	CHC-C4B	3.20	1.46	1.39
3	1S	314	CLA	CHD-C4C	3.19	1.46	1.39
4	1S	305	CHL	CHB-C1B	3.18	1.46	1.39
3	00	312	CLA	CHD-C4C	3.18	1.46	1.39
4	1G	607	CHL	CHB-C1B	3.18	1.46	1.39
4	1N	609	CHL	CHB-C1B	3.18	1.46	1.39
3	00	302	CLA	CHD-C4C	3.18	1.46	1.39
4	00	304	CHL	CHB-C1B	3.18	1.46	1.39
4	1G	608	CHL	CHB-C1B	3.17	1.46	1.39
4	1S	306	CHL	CHB-C1B	3.17	1.46	1.39
4	1N	607	CHL	CHB-C1B	3.17	1.46	1.39
3	00	309	CLA	CHD-C4C	3.16	1.46	1.39
3	1G	612	CLA	CHC-C4B	3.16	1.46	1.39
3	1S	313	CLA	C4B-NB	-3.16	1.33	1.37
3	1S	308	CLA	CHD-C1D	3.15	1.44	1.38
4	1G	609	CHL	CHB-C1B	3.15	1.46	1.39
4	1G	606	CHL	CHB-C1B	3.14	1.46	1.39
3	1N	611	CLA	CHD-C1D	3.14	1.44	1.38
3	1G	602	CLA	C4B-NB	-3.14	1.33	1.37
3	1N	613	CLA	C3B-C4B	3.13	1.50	1.42
5	1N	615	LUT	C8-C9	-3.13	1.39	1.45
3	1S	303	CLA	CHD-C4C	3.12	1.46	1.39
4	1S	302	CHL	CHB-C1B	3.12	1.46	1.39
3	1N	614	CLA	CHD-C4C	3.11	1.46	1.39
3	00	302	CLA	CHD-C1D	3.11	1.44	1.38
3	1S	311	CLA	CHD-C4C	3.11	1.46	1.39
4	00	305	CHL	C1D-C2D	3.11	1.51	1.45
3	1N	603	CLA	CHD-C1D	3.10	1.44	1.38
3	00	309	CLA	CHD-C1D	3.09	1.44	1.38
3	1N	611	CLA	CHD-C4C	3.08	1.46	1.39
3	1N	610	CLA	CHD-C4C	3.08	1.46	1.39
3	1N	614	CLA	CHD-C1D	3.08	1.44	1.38
4	00	307	CHL	CHB-C1B	3.07	1.46	1.39
3	1N	610	CLA	CHD-C1D	3.07	1.44	1.38
3	1G	602	CLA	C3D-C2D	3.07	1.47	1.39
3	1S	309	CLA	CHD-C4C	3.06	1.46	1.39
3	1N	613	CLA	CHD-C1D	3.06	1.44	1.38
3	00	312	CLA	CHD-C1D	3.05	1.44	1.38
4	1S	302	CHL	C3D-C2D	3.05	1.47	1.39
3	1G	614	CLA	CHD-C4C	3.05	1.46	1.39
3	00	310	CLA	CHD-C4C	3.05	1.46	1.39
3	1G	603	CLA	CHD-C1D	3.04	1.44	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	1N	609	CHL	C1D-C2D	3.04	1.51	1.45
3	1N	612	CLA	CHD-C4C	3.03	1.46	1.39
4	00	306	CHL	CHB-C1B	3.03	1.46	1.39
4	1N	605	CHL	C1D-C2D	3.03	1.51	1.45
3	1G	602	CLA	CHD-C4C	3.03	1.46	1.39
5	00	313	LUT	C8-C9	-3.03	1.39	1.45
3	1S	304	CLA	CHD-C1D	3.02	1.44	1.38
3	1S	313	CLA	MG-NA	-3.02	1.99	2.06
3	1S	314	CLA	CHD-C1D	3.02	1.44	1.38
3	1S	303	CLA	C3D-C2D	3.01	1.47	1.39
3	1S	311	CLA	CHD-C1D	3.01	1.44	1.38
4	1G	607	CHL	C1D-C2D	3.01	1.51	1.45
3	1N	603	CLA	C4B-NB	-3.01	1.34	1.37
4	1G	605	CHL	C1D-C2D	3.01	1.51	1.45
3	00	303	CLA	C3D-C2D	3.00	1.47	1.39
4	1S	302	CHL	C1D-C2D	3.00	1.51	1.45
4	1G	609	CHL	C3D-C2D	3.00	1.47	1.39
4	1S	305	CHL	C1D-C2D	3.00	1.51	1.45
3	1N	613	CLA	CHD-C4C	3.00	1.46	1.39
4	1G	601	CHL	C1D-C2D	3.00	1.51	1.45
3	1S	304	CLA	C3D-C2D	3.00	1.47	1.39
3	1G	613	CLA	CHD-C4C	2.99	1.46	1.39
3	1G	614	CLA	CHD-C1D	2.99	1.44	1.38
4	1N	605	CHL	CHB-C1B	2.99	1.46	1.39
3	1S	303	CLA	C4B-NB	-2.99	1.34	1.37
3	1N	612	CLA	CHD-C1D	2.99	1.44	1.38
4	1N	605	CHL	C3D-C2D	2.98	1.47	1.39
4	1N	609	CHL	C3D-C2D	2.98	1.47	1.39
3	1G	612	CLA	C3D-C2D	2.98	1.47	1.39
3	00	301	CLA	C3D-C2D	2.97	1.47	1.39
3	1S	303	CLA	CHD-C1D	2.97	1.44	1.38
3	1G	602	CLA	CHD-C1D	2.97	1.44	1.38
3	00	310	CLA	CHD-C1D	2.97	1.44	1.38
3	1G	604	CLA	C3D-C2D	2.96	1.47	1.39
4	1G	607	CHL	C3D-C2D	2.96	1.47	1.39
3	1N	604	CLA	C4B-NB	-2.95	1.34	1.37
3	1N	613	CLA	C3D-C2D	2.95	1.47	1.39
4	1S	306	CHL	C1D-C2D	2.95	1.51	1.45
3	1S	308	CLA	C3D-C2D	2.94	1.47	1.39
4	1G	606	CHL	C1D-C2D	2.94	1.51	1.45
4	00	304	CHL	C1D-C2D	2.94	1.51	1.45
3	1N	612	CLA	C3D-C2D	2.94	1.47	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	1S	309	CLA	C3D-C2D	2.94	1.47	1.39
3	1N	603	CLA	C3D-C2D	2.93	1.47	1.39
4	1N	606	CHL	C1D-C2D	2.92	1.51	1.45
3	00	301	CLA	CHD-C4C	2.92	1.45	1.39
3	1G	610	CLA	C3D-C2D	2.92	1.47	1.39
3	1S	312	CLA	C3D-C2D	2.92	1.47	1.39
4	1G	605	CHL	C3D-C2D	2.92	1.47	1.39
3	1G	611	CLA	CHD-C4C	2.92	1.45	1.39
4	1N	606	CHL	C3D-C2D	2.92	1.47	1.39
4	1G	609	CHL	C1D-C2D	2.92	1.51	1.45
3	1N	604	CLA	C3D-C2D	2.92	1.47	1.39
3	1S	309	CLA	CHD-C1D	2.92	1.44	1.38
3	1G	604	CLA	C1D-C2D	2.91	1.51	1.45
3	00	311	CLA	CHD-C4C	2.91	1.45	1.39
4	00	306	CHL	C3D-C2D	2.91	1.47	1.39
4	1N	607	CHL	C1D-C2D	2.91	1.51	1.45
3	1N	604	CLA	C1D-C2D	2.91	1.51	1.45
4	1N	608	CHL	C1D-C2D	2.91	1.51	1.45
4	1S	307	CHL	C1D-C2D	2.91	1.51	1.45
3	1G	613	CLA	CHD-C1D	2.91	1.44	1.38
4	1S	306	CHL	C3D-C2D	2.91	1.47	1.39
3	1S	314	CLA	C3D-C2D	2.90	1.47	1.39
3	1N	602	CLA	MG-NA	-2.90	1.99	2.06
3	00	302	CLA	C1D-C2D	2.89	1.51	1.45
3	00	310	CLA	C3D-C2D	2.89	1.47	1.39
3	00	301	CLA	CHD-C1D	2.89	1.44	1.38
4	1N	601	CHL	C1D-C2D	2.89	1.51	1.45
3	1S	313	CLA	CHD-C4C	2.88	1.45	1.39
4	00	308	CHL	C3D-C2D	2.88	1.47	1.39
4	1G	608	CHL	C1D-C2D	2.88	1.51	1.45
3	1S	313	CLA	C3D-C2D	2.88	1.47	1.39
3	1N	611	CLA	C3D-C2D	2.88	1.47	1.39
4	1S	307	CHL	C3D-C2D	2.88	1.47	1.39
4	00	304	CHL	C3D-C2D	2.87	1.47	1.39
3	1G	614	CLA	C3D-C2D	2.87	1.47	1.39
3	1S	303	CLA	C3B-C4B	2.86	1.49	1.42
3	00	303	CLA	C4B-NB	-2.86	1.34	1.37
4	00	306	CHL	C1D-C2D	2.86	1.51	1.45
3	1S	310	CLA	C4B-NB	-2.86	1.34	1.37
4	00	308	CHL	C1D-C2D	2.85	1.51	1.45
4	1S	305	CHL	C3D-C2D	2.85	1.46	1.39
3	00	303	CLA	C1D-C2D	2.85	1.50	1.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	00	312	CLA	C3D-C2D	2.84	1.46	1.39
3	1N	610	CLA	C3D-C2D	2.84	1.46	1.39
3	1N	602	CLA	CHD-C4C	2.84	1.45	1.39
3	1S	313	CLA	C1D-C2D	2.84	1.50	1.45
4	1G	601	CHL	C3D-C2D	2.84	1.46	1.39
3	1S	308	CLA	C1D-C2D	2.84	1.50	1.45
4	00	307	CHL	C1D-C2D	2.83	1.50	1.45
3	1S	312	CLA	C1D-C2D	2.83	1.50	1.45
4	1N	601	CHL	C3D-C2D	2.83	1.46	1.39
3	1G	603	CLA	C3D-C2D	2.83	1.46	1.39
3	1G	611	CLA	C3D-C2D	2.83	1.46	1.39
4	1G	606	CHL	C3D-C2D	2.83	1.46	1.39
3	1S	308	CLA	MG-NA	-2.82	1.99	2.06
3	1S	311	CLA	C3D-C2D	2.82	1.46	1.39
4	1N	607	CHL	C3D-C2D	2.82	1.46	1.39
4	1G	608	CHL	C3D-C2D	2.82	1.46	1.39
3	1G	610	CLA	C1D-C2D	2.82	1.50	1.45
5	1S	316	LUT	C8-C9	-2.82	1.39	1.45
3	00	319	CLA	C3D-C2D	2.82	1.46	1.39
4	1G	608	CHL	C3B-C4B	2.81	1.49	1.42
3	1G	612	CLA	MG-NA	-2.81	1.99	2.06
3	00	309	CLA	C3D-C2D	2.81	1.46	1.39
3	00	319	CLA	CHD-C4C	2.81	1.45	1.39
3	1N	602	CLA	C1B-NB	-2.81	1.34	1.37
3	1S	310	CLA	MG-NA	-2.80	1.99	2.06
3	00	312	CLA	C1D-C2D	2.80	1.50	1.45
5	00	314	LUT	C8-C9	-2.80	1.39	1.45
3	1S	304	CLA	C1D-C2D	2.80	1.50	1.45
3	00	311	CLA	MG-NA	-2.79	1.99	2.06
4	00	305	CHL	C3D-C2D	2.79	1.46	1.39
3	1G	610	CLA	C1B-NB	-2.79	1.34	1.37
4	1N	608	CHL	C3D-C2D	2.79	1.46	1.39
3	1G	613	CLA	C3D-C2D	2.78	1.46	1.39
4	00	307	CHL	C3D-C2D	2.78	1.46	1.39
3	1S	311	CLA	MG-NA	-2.77	1.99	2.06
3	1N	614	CLA	C1D-C2D	2.77	1.50	1.45
3	1N	602	CLA	CHD-C1D	2.77	1.43	1.38
3	1N	614	CLA	C3D-C2D	2.77	1.46	1.39
3	1G	602	CLA	C1D-C2D	2.77	1.50	1.45
3	00	302	CLA	C3D-C2D	2.77	1.46	1.39
3	00	309	CLA	C1D-C2D	2.77	1.50	1.45
3	1N	611	CLA	C1D-C2D	2.76	1.50	1.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
5	1G	615	LUT	C8-C9	-2.76	1.40	1.45
3	1N	602	CLA	C3D-C2D	2.75	1.46	1.39
3	1S	313	CLA	C1B-NB	-2.75	1.34	1.37
3	1S	313	CLA	CHD-C1D	2.75	1.43	1.38
3	1S	310	CLA	CHD-C4C	2.75	1.45	1.39
3	1G	612	CLA	C4B-NB	-2.74	1.34	1.37
3	1G	611	CLA	C4B-NB	-2.74	1.34	1.37
3	1G	610	CLA	MG-NA	-2.73	1.99	2.06
3	00	310	CLA	MG-NA	-2.73	1.99	2.06
3	00	302	CLA	MG-NA	-2.72	1.99	2.06
4	1N	606	CHL	C1B-C2B	2.71	1.49	1.43
3	1S	308	CLA	C1B-NB	-2.71	1.34	1.37
5	1N	615	LUT	C32-C33	-2.71	1.40	1.45
3	00	309	CLA	MG-NA	-2.71	1.99	2.06
3	1N	604	CLA	MG-NA	-2.71	1.99	2.06
3	1S	310	CLA	C3D-C2D	2.70	1.46	1.39
3	1G	602	CLA	MG-NA	-2.70	1.99	2.06
3	00	312	CLA	MG-NA	-2.69	1.99	2.06
3	1G	604	CLA	C1B-NB	-2.69	1.34	1.37
3	1N	603	CLA	C1D-C2D	2.69	1.50	1.45
3	1S	310	CLA	C1B-NB	-2.69	1.34	1.37
3	1G	603	CLA	C1D-C2D	2.69	1.50	1.45
5	1G	616	LUT	C32-C33	-2.68	1.40	1.45
3	1G	611	CLA	C1B-NB	-2.68	1.34	1.37
5	1S	315	LUT	C12-C13	-2.68	1.40	1.45
3	1N	603	CLA	MG-NA	-2.68	1.99	2.06
5	1N	615	LUT	C12-C13	-2.68	1.40	1.45
3	1G	612	CLA	C1D-C2D	2.68	1.50	1.45
3	1G	612	CLA	C1B-C2B	2.67	1.49	1.43
3	1G	611	CLA	MG-NA	-2.67	1.99	2.06
3	1S	303	CLA	MG-NA	-2.67	1.99	2.06
3	1G	613	CLA	C1B-NB	-2.67	1.34	1.37
3	1S	314	CLA	C1D-C2D	2.67	1.50	1.45
3	1G	614	CLA	C1B-NB	-2.67	1.34	1.37
3	1G	603	CLA	C1B-NB	-2.65	1.34	1.37
4	1S	305	CHL	C3B-C4B	2.65	1.49	1.42
3	1N	603	CLA	C1B-C2B	2.65	1.49	1.43
3	00	301	CLA	C1B-NB	-2.65	1.34	1.37
3	1S	309	CLA	C1B-NB	-2.65	1.34	1.37
3	00	319	CLA	MG-NA	-2.65	2.00	2.06
4	1N	608	CHL	C3B-C4B	2.65	1.49	1.42
5	1N	615	LUT	C28-C29	-2.64	1.40	1.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	00	311	CLA	C4B-NB	-2.64	1.34	1.37
3	1G	604	CLA	MG-NA	-2.63	2.00	2.06
3	1G	611	CLA	CHD-C1D	2.63	1.43	1.38
4	1G	609	CHL	C3B-C4B	2.63	1.48	1.42
4	1N	605	CHL	C3B-C4B	2.63	1.48	1.42
3	1G	613	CLA	C1D-C2D	2.63	1.50	1.45
3	1N	612	CLA	C1B-NB	-2.63	1.34	1.37
3	00	311	CLA	C1B-NB	-2.62	1.34	1.37
4	00	307	CHL	C3B-C4B	2.61	1.48	1.42
3	1G	614	CLA	C1D-C2D	2.61	1.50	1.45
3	00	311	CLA	C3D-C2D	2.61	1.46	1.39
3	1N	603	CLA	C3B-C4B	2.61	1.48	1.42
3	1N	613	CLA	MG-NA	-2.61	2.00	2.06
4	1N	601	CHL	C3B-C4B	2.60	1.48	1.42
3	00	303	CLA	MG-NA	-2.60	2.00	2.06
3	1G	602	CLA	C3B-C4B	2.59	1.48	1.42
3	00	310	CLA	C1D-C2D	2.59	1.50	1.45
5	1G	616	LUT	C28-C29	-2.59	1.40	1.45
3	1S	304	CLA	MG-NA	-2.58	2.00	2.06
3	00	301	CLA	C1C-C2C	2.58	1.49	1.44
4	1S	306	CHL	C3B-C4B	2.58	1.48	1.42
3	1S	303	CLA	C1B-NB	-2.58	1.34	1.37
3	1G	602	CLA	C1B-C2B	2.58	1.49	1.43
5	1S	315	LUT	C32-C33	-2.58	1.40	1.45
3	1S	310	CLA	CHD-C1D	2.57	1.43	1.38
3	00	301	CLA	MG-NA	-2.57	2.00	2.06
3	1N	611	CLA	MG-NA	-2.57	2.00	2.06
3	00	319	CLA	CHD-C1D	2.57	1.43	1.38
5	1G	615	LUT	C32-C33	-2.57	1.40	1.45
3	00	319	CLA	C1B-NB	-2.57	1.34	1.37
3	00	319	CLA	C1C-C2C	2.57	1.49	1.44
3	00	301	CLA	C1D-C2D	2.57	1.50	1.45
3	1S	312	CLA	MG-NA	-2.57	2.00	2.06
4	1S	307	CHL	C1B-C2B	2.56	1.49	1.43
3	1N	612	CLA	C4B-NB	-2.56	1.34	1.37
3	1N	610	CLA	MG-NA	-2.56	2.00	2.06
3	1N	612	CLA	C1D-C2D	2.56	1.50	1.45
3	1G	614	CLA	MG-NA	-2.56	2.00	2.06
3	1S	313	CLA	C4D-ND	2.56	1.41	1.37
5	1G	616	LUT	C8-C9	-2.55	1.40	1.45
3	1S	310	CLA	C1D-C2D	2.55	1.50	1.45
3	00	309	CLA	C1B-NB	-2.55	1.34	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	1S	309	CLA	C1D-C2D	2.55	1.50	1.45
3	1G	602	CLA	C1C-C2C	2.55	1.49	1.44
3	1G	602	CLA	C1B-NB	-2.55	1.34	1.37
3	1N	602	CLA	C4B-NB	-2.55	1.34	1.37
4	1G	607	CHL	C3B-C4B	2.54	1.48	1.42
4	1S	307	CHL	C4C-C3C	2.54	1.49	1.45
3	1N	613	CLA	C4B-NB	-2.54	1.34	1.37
4	00	308	CHL	C1B-C2B	2.54	1.49	1.43
4	1N	607	CHL	C3B-C4B	2.54	1.48	1.42
3	1S	309	CLA	MG-NA	-2.53	2.00	2.06
4	1S	302	CHL	C3B-C4B	2.53	1.48	1.42
3	1S	314	CLA	C1B-NB	-2.53	1.34	1.37
4	1S	307	CHL	C3B-C4B	2.53	1.48	1.42
4	00	306	CHL	C3B-C4B	2.52	1.48	1.42
3	00	303	CLA	C1B-NB	-2.51	1.34	1.37
4	1G	605	CHL	C3B-C4B	2.51	1.48	1.42
3	1S	303	CLA	C1D-C2D	2.51	1.50	1.45
3	1N	604	CLA	C3B-C4B	2.51	1.48	1.42
5	1S	316	LUT	C32-C33	-2.51	1.40	1.45
4	1G	601	CHL	C3B-C4B	2.51	1.48	1.42
3	1G	603	CLA	MG-NA	-2.51	2.00	2.06
3	1N	613	CLA	C1B-NB	-2.51	1.34	1.37
3	1S	314	CLA	MG-NA	-2.51	2.00	2.06
3	1S	303	CLA	C1C-C2C	2.50	1.49	1.44
4	1G	605	CHL	C1B-C2B	2.50	1.49	1.43
3	1S	311	CLA	C1B-NB	-2.50	1.34	1.37
3	1N	614	CLA	MG-NA	-2.49	2.00	2.06
3	1N	611	CLA	C1C-C2C	2.49	1.49	1.44
3	1G	603	CLA	C1C-C2C	2.49	1.49	1.44
3	1G	613	CLA	MG-NA	-2.49	2.00	2.06
3	00	311	CLA	CHD-C1D	2.48	1.43	1.38
3	00	312	CLA	C1B-NB	-2.48	1.34	1.37
4	1N	601	CHL	C1B-C2B	2.48	1.49	1.43
4	00	304	CHL	C3B-C4B	2.48	1.48	1.42
3	1S	303	CLA	C1B-C2B	2.48	1.49	1.43
3	1G	612	CLA	C3B-C4B	2.48	1.48	1.42
3	1S	312	CLA	C1B-NB	-2.48	1.34	1.37
4	00	305	CHL	C3B-C4B	2.47	1.48	1.42
3	1N	613	CLA	C1D-C2D	2.47	1.50	1.45
4	00	305	CHL	C1B-C2B	2.47	1.49	1.43
3	1N	612	CLA	MG-NA	-2.47	2.00	2.06
4	00	306	CHL	C1B-C2B	2.47	1.49	1.43

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	1N	614	CLA	C1C-C2C	2.47	1.49	1.44
3	00	309	CLA	C1C-C2C	2.46	1.49	1.44
3	1S	311	CLA	C1D-C2D	2.46	1.50	1.45
3	1N	602	CLA	C1D-C2D	2.46	1.50	1.45
4	00	304	CHL	C1B-C2B	2.46	1.49	1.43
3	1N	612	CLA	C1C-C2C	2.46	1.49	1.44
3	1N	610	CLA	C1B-NB	-2.46	1.34	1.37
4	1N	609	CHL	C3B-C4B	2.46	1.48	1.42
3	1G	613	CLA	C1C-C2C	2.45	1.49	1.44
3	1S	304	CLA	C1B-NB	-2.45	1.34	1.37
3	00	310	CLA	C1B-NB	-2.45	1.34	1.37
3	00	303	CLA	C1B-C2B	2.45	1.49	1.43
4	1G	601	CHL	C1B-C2B	2.44	1.49	1.43
3	1N	610	CLA	C1D-C2D	2.44	1.50	1.45
3	00	309	CLA	C4B-NB	-2.44	1.34	1.37
3	00	310	CLA	C4B-NB	-2.44	1.34	1.37
5	00	314	LUT	C28-C29	-2.43	1.40	1.45
4	00	308	CHL	C3B-C4B	2.43	1.48	1.42
4	1S	306	CHL	C1B-C2B	2.43	1.49	1.43
3	1N	604	CLA	C1B-C2B	2.43	1.49	1.43
5	1G	615	LUT	C28-C29	-2.43	1.40	1.45
4	1N	609	CHL	C4C-C3C	2.43	1.49	1.45
5	00	313	LUT	C28-C29	-2.43	1.40	1.45
3	1N	613	CLA	C1C-C2C	2.43	1.49	1.44
4	1G	606	CHL	C3B-C4B	2.42	1.48	1.42
4	1G	606	CHL	C4C-C3C	2.42	1.49	1.45
3	1S	309	CLA	C4B-NB	-2.42	1.34	1.37
4	1G	606	CHL	C1B-C2B	2.42	1.49	1.43
4	1G	609	CHL	C1B-C2B	2.42	1.48	1.43
3	00	303	CLA	C3B-C4B	2.41	1.48	1.42
4	1N	606	CHL	C4C-C3C	2.40	1.49	1.45
4	1S	305	CHL	C4C-C3C	2.40	1.49	1.45
3	1N	602	CLA	C1C-C2C	2.40	1.49	1.44
3	1N	614	CLA	C1B-NB	-2.40	1.34	1.37
4	1S	306	CHL	C4C-C3C	2.40	1.49	1.45
3	1S	311	CLA	C4B-NB	-2.39	1.34	1.37
4	1G	607	CHL	C1B-C2B	2.39	1.48	1.43
4	1G	608	CHL	C4C-C3C	2.39	1.49	1.45
5	1S	315	LUT	C28-C29	-2.39	1.40	1.45
4	1G	607	CHL	MG-NA	-2.39	2.00	2.06
3	1N	604	CLA	C1B-NB	-2.39	1.34	1.37
3	1N	610	CLA	C1C-C2C	2.39	1.49	1.44

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
6	00	315	VIV	O1-C9	-2.39	1.43	1.46
5	00	314	LUT	C32-C33	-2.38	1.40	1.45
3	1G	611	CLA	C1D-C2D	2.38	1.50	1.45
4	1N	605	CHL	C4C-C3C	2.38	1.49	1.45
3	1G	611	CLA	C1C-C2C	2.38	1.49	1.44
3	1G	604	CLA	C1C-C2C	2.38	1.49	1.44
3	1N	611	CLA	C1B-NB	-2.38	1.34	1.37
3	1G	610	CLA	C1C-C2C	2.38	1.49	1.44
5	00	313	LUT	C32-C33	-2.38	1.40	1.45
3	1S	311	CLA	C1C-C2C	2.38	1.49	1.44
4	1N	608	CHL	C1B-C2B	2.37	1.48	1.43
3	00	302	CLA	C1C-C2C	2.37	1.49	1.44
3	00	302	CLA	C1B-NB	-2.37	1.34	1.37
3	00	319	CLA	C1D-C2D	2.37	1.50	1.45
4	1N	607	CHL	C1B-C2B	2.37	1.48	1.43
3	1S	312	CLA	C1C-C2C	2.36	1.49	1.44
3	1S	313	CLA	C1C-C2C	2.35	1.49	1.44
4	1G	605	CHL	C4C-C3C	2.35	1.49	1.45
3	1N	603	CLA	C1B-NB	-2.35	1.34	1.37
4	1N	605	CHL	C1B-C2B	2.35	1.48	1.43
3	1G	614	CLA	C1C-C2C	2.34	1.49	1.44
3	1S	304	CLA	C1C-C2C	2.34	1.49	1.44
3	1G	610	CLA	C4B-NB	-2.34	1.34	1.37
3	1S	304	CLA	C4B-NB	-2.34	1.34	1.37
4	00	307	CHL	C1B-C2B	2.34	1.48	1.43
4	1N	607	CHL	C4C-C3C	2.33	1.49	1.45
4	1G	609	CHL	C4C-C3C	2.33	1.49	1.45
4	1S	305	CHL	C1B-C2B	2.33	1.48	1.43
3	1S	314	CLA	C1C-C2C	2.32	1.49	1.44
3	00	301	CLA	C4B-NB	-2.32	1.34	1.37
3	1N	612	CLA	C4C-C3C	2.31	1.49	1.45
4	1G	608	CHL	C1B-C2B	2.31	1.48	1.43
3	00	310	CLA	C1C-C2C	2.31	1.49	1.44
3	1G	614	CLA	C4B-NB	-2.31	1.34	1.37
3	1S	304	CLA	C4C-C3C	2.30	1.49	1.45
3	1S	309	CLA	C4C-C3C	2.30	1.49	1.45
3	00	311	CLA	C1D-C2D	2.30	1.49	1.45
3	00	312	CLA	C1C-C2C	2.30	1.49	1.44
5	00	314	LUT	C12-C13	-2.30	1.41	1.45
3	1N	611	CLA	C4B-NB	-2.29	1.35	1.37
3	1S	309	CLA	C1C-C2C	2.29	1.49	1.44
3	00	311	CLA	C1C-C2C	2.29	1.49	1.44

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	1N	614	CLA	C1B-C2B	2.29	1.48	1.43
4	1S	302	CHL	C1B-C2B	2.28	1.48	1.43
3	1G	612	CLA	C4C-C3C	2.28	1.49	1.45
4	1S	302	CHL	C4C-C3C	2.28	1.49	1.45
3	1S	314	CLA	C4C-C3C	2.28	1.49	1.45
3	00	312	CLA	C1B-C2B	2.27	1.48	1.43
4	1G	601	CHL	C4C-C3C	2.27	1.49	1.45
5	1S	316	LUT	C28-C29	-2.27	1.41	1.45
4	1N	606	CHL	C3B-C4B	2.26	1.48	1.42
3	00	310	CLA	C1B-C2B	2.26	1.48	1.43
3	00	303	CLA	C4C-C3C	2.25	1.48	1.45
3	1G	612	CLA	C1C-C2C	2.25	1.48	1.44
3	1N	604	CLA	C1C-C2C	2.25	1.48	1.44
3	1S	314	CLA	C4B-NB	-2.24	1.35	1.37
4	00	306	CHL	C4C-C3C	2.24	1.48	1.45
3	1S	310	CLA	C1B-C2B	2.24	1.48	1.43
3	00	303	CLA	C1C-C2C	2.24	1.48	1.44
3	00	311	CLA	C1B-C2B	2.24	1.48	1.43
3	1N	613	CLA	C1B-C2B	2.23	1.48	1.43
3	1N	610	CLA	C4B-NB	-2.23	1.35	1.37
3	1N	611	CLA	C1B-C2B	2.22	1.48	1.43
3	1N	612	CLA	C1B-C2B	2.21	1.48	1.43
4	1N	605	CHL	CHB-C4A	-2.21	1.32	1.37
4	00	305	CHL	MG-NA	-2.21	2.01	2.06
4	1N	601	CHL	C4C-C3C	2.20	1.48	1.45
3	1S	314	CLA	C1B-C2B	2.20	1.48	1.43
3	1G	604	CLA	C4C-C3C	2.20	1.48	1.45
5	00	313	LUT	C12-C13	-2.20	1.41	1.45
4	00	304	CHL	C4C-C3C	2.20	1.48	1.45
4	1N	609	CHL	C1B-C2B	2.20	1.48	1.43
3	1G	614	CLA	C1B-C2B	2.20	1.48	1.43
5	1S	316	LUT	C12-C13	-2.20	1.41	1.45
3	00	319	CLA	C1B-C2B	2.20	1.48	1.43
3	1S	310	CLA	C1C-C2C	2.20	1.48	1.44
4	00	305	CHL	C4C-C3C	2.19	1.48	1.45
4	1G	607	CHL	C4C-C3C	2.19	1.48	1.45
3	00	319	CLA	C4B-NB	-2.19	1.35	1.37
4	00	306	CHL	C1B-NB	-2.18	1.35	1.37
4	00	307	CHL	C1B-NB	-2.18	1.35	1.37
4	1G	607	CHL	CHB-C4A	-2.18	1.32	1.37
4	00	306	CHL	MG-NA	-2.18	2.01	2.06
3	1G	613	CLA	C1B-C2B	2.18	1.48	1.43

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	00	301	CLA	C1B-C2B	2.17	1.48	1.43
3	1N	602	CLA	C1B-C2B	2.17	1.48	1.43
4	1N	608	CHL	C4C-C3C	2.17	1.48	1.45
3	1S	312	CLA	C4B-NB	-2.17	1.35	1.37
3	1S	311	CLA	C1B-C2B	2.17	1.48	1.43
5	1G	615	LUT	C12-C13	-2.16	1.41	1.45
4	00	308	CHL	C4C-C3C	2.16	1.48	1.45
4	1N	607	CHL	C1B-NB	-2.16	1.35	1.37
3	1S	313	CLA	C1B-C2B	2.15	1.48	1.43
3	1N	603	CLA	C1C-C2C	2.15	1.48	1.44
4	1G	609	CHL	MG-NA	-2.15	2.01	2.06
3	00	312	CLA	C4B-NB	-2.15	1.35	1.37
3	1G	613	CLA	C4B-NB	-2.15	1.35	1.37
4	00	306	CHL	CHB-C4A	-2.14	1.32	1.37
4	1S	302	CHL	CHB-C4A	-2.14	1.32	1.37
3	1S	308	CLA	C4B-NB	-2.14	1.35	1.37
4	00	304	CHL	MG-NA	-2.13	2.01	2.06
3	1G	611	CLA	C4C-C3C	2.13	1.48	1.45
3	1N	611	CLA	C4C-C3C	2.13	1.48	1.45
4	1G	606	CHL	MG-NA	-2.13	2.01	2.06
3	1G	614	CLA	C4C-C3C	2.13	1.48	1.45
4	1G	606	CHL	C1B-NB	-2.13	1.35	1.37
3	1G	603	CLA	C4B-NB	-2.12	1.35	1.37
3	1G	610	CLA	C1B-C2B	2.12	1.48	1.43
4	1G	608	CHL	MG-NA	-2.12	2.01	2.06
4	1G	608	CHL	C1B-NB	-2.12	1.35	1.37
3	1N	603	CLA	C4C-C3C	2.12	1.48	1.45
4	00	307	CHL	C4C-C3C	2.12	1.48	1.45
3	00	302	CLA	C1B-C2B	2.12	1.48	1.43
4	00	308	CHL	MG-NA	-2.11	2.01	2.06
3	1S	313	CLA	C4C-C3C	2.11	1.48	1.45
3	00	302	CLA	C4B-NB	-2.11	1.35	1.37
4	1S	302	CHL	MG-NA	-2.10	2.01	2.06
3	1G	611	CLA	C1B-C2B	2.10	1.48	1.43
3	00	309	CLA	C4C-C3C	2.10	1.48	1.45
4	1N	607	CHL	MG-NA	-2.10	2.01	2.06
3	1N	603	CLA	C3B-C2B	2.10	1.48	1.41
4	1G	605	CHL	MG-NA	-2.09	2.01	2.06
3	1S	308	CLA	C1C-C2C	2.09	1.48	1.44
4	1N	609	CHL	MG-NA	-2.08	2.01	2.06
4	1S	306	CHL	C1B-NB	-2.08	1.35	1.37
3	1G	603	CLA	C4C-C3C	2.08	1.48	1.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	1N	605	CHL	MG-NA	-2.08	2.01	2.06
4	1N	605	CHL	C4B-NB	-2.08	1.35	1.37
3	1N	614	CLA	C4B-NB	-2.08	1.35	1.37
4	1N	607	CHL	CHB-C4A	-2.07	1.32	1.37
3	1G	610	CLA	C4C-C3C	2.07	1.48	1.45
3	1N	613	CLA	C4C-C3C	2.07	1.48	1.45
3	1S	312	CLA	C1B-C2B	2.07	1.48	1.43
3	1N	610	CLA	C1B-C2B	2.07	1.48	1.43
3	1N	604	CLA	C4C-C3C	2.07	1.48	1.45
4	1N	608	CHL	MG-NA	-2.07	2.01	2.06
4	00	307	CHL	CHB-C4A	-2.06	1.32	1.37
4	1N	609	CHL	C4B-NB	-2.06	1.35	1.37
4	1G	608	CHL	C1D-ND	-2.06	1.35	1.37
4	1N	609	CHL	C1B-NB	-2.06	1.35	1.37
3	1N	614	CLA	C4C-C3C	2.05	1.48	1.45
4	1S	306	CHL	MG-NA	-2.05	2.01	2.06
4	1N	608	CHL	C1B-NB	-2.05	1.35	1.37
4	1S	305	CHL	CHB-C4A	-2.05	1.32	1.37
3	1G	612	CLA	C1B-NB	-2.05	1.35	1.37
3	1G	602	CLA	C3B-C2B	2.05	1.48	1.41
3	1G	604	CLA	C4B-NB	-2.05	1.35	1.37
4	1N	608	CHL	CHB-C4A	-2.04	1.32	1.37
4	00	306	CHL	C1D-ND	-2.04	1.35	1.37
3	1G	602	CLA	C4C-C3C	2.04	1.48	1.45
4	1N	606	CHL	MG-NA	-2.04	2.01	2.06
5	1G	616	LUT	C12-C13	-2.04	1.41	1.45
4	00	307	CHL	MG-NA	-2.03	2.01	2.06
4	00	308	CHL	C1D-ND	-2.03	1.35	1.37
3	1S	312	CLA	C4C-C3C	2.03	1.48	1.45
9	1S	318	DGD	O3G-C1D	2.02	1.43	1.40
4	1N	609	CHL	CHB-C4A	-2.02	1.32	1.37
4	1G	606	CHL	CHB-C4A	-2.02	1.32	1.37
3	1S	303	CLA	C3B-C2B	2.02	1.48	1.41
3	1S	308	CLA	C4C-C3C	2.02	1.48	1.45
4	1G	601	CHL	MG-NA	-2.02	2.01	2.06
3	1G	603	CLA	C1B-C2B	2.02	1.48	1.43
4	1N	605	CHL	C1B-NB	-2.02	1.35	1.37
3	1S	309	CLA	C1B-C2B	2.02	1.48	1.43
3	00	302	CLA	C4C-C3C	2.01	1.48	1.45
4	00	304	CHL	CHB-C4A	-2.01	1.32	1.37
4	1G	609	CHL	CHB-C4A	-2.01	1.32	1.37
4	1N	606	CHL	C4B-NB	-2.01	1.35	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	1G	606	CHL	C1D-ND	-2.01	1.35	1.37
3	1S	304	CLA	C1B-C2B	2.01	1.48	1.43
4	1G	607	CHL	C1D-ND	-2.00	1.35	1.37
3	1S	310	CLA	C4C-C3C	2.00	1.48	1.45
4	1N	606	CHL	C1B-NB	-2.00	1.35	1.37

All (1558) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
4	1N	605	CHL	C2B-C1B-NB	10.65	117.37	110.23
3	1S	313	CLA	C1D-ND-C4D	-10.63	98.78	106.33
4	00	307	CHL	C2B-C1B-NB	10.55	117.30	110.23
3	1N	602	CLA	C1D-ND-C4D	-10.50	98.88	106.33
4	1S	302	CHL	C2B-C1B-NB	10.48	117.26	110.23
4	1N	608	CHL	C2B-C1B-NB	10.45	117.23	110.23
3	00	319	CLA	C1D-ND-C4D	-10.43	98.93	106.33
3	00	311	CLA	C1D-ND-C4D	-10.36	98.97	106.33
4	1S	305	CHL	C2B-C1B-NB	10.30	117.14	110.23
4	1N	607	CHL	C2B-C1B-NB	10.25	117.10	110.23
4	00	306	CHL	C2B-C1B-NB	10.13	117.03	110.23
4	1G	608	CHL	C2B-C1B-NB	10.10	117.00	110.23
3	00	301	CLA	C1D-ND-C4D	-10.09	99.16	106.33
4	1G	607	CHL	C2B-C1B-NB	10.09	116.99	110.23
3	1S	310	CLA	C1D-ND-C4D	-10.09	99.17	106.33
4	1S	306	CHL	C2B-C1B-NB	10.09	116.99	110.23
3	00	310	CLA	C1D-ND-C4D	-10.07	99.18	106.33
4	1N	609	CHL	C2B-C1B-NB	10.04	116.96	110.23
3	1S	311	CLA	C1D-ND-C4D	-10.04	99.20	106.33
4	1G	605	CHL	C2B-C1B-NB	10.02	116.95	110.23
4	1G	609	CHL	C2B-C1B-NB	10.01	116.94	110.23
4	00	304	CHL	C2B-C1B-NB	10.01	116.94	110.23
4	1S	307	CHL	C2B-C1B-NB	9.99	116.93	110.23
3	00	302	CLA	C1D-ND-C4D	-9.94	99.27	106.33
3	1G	610	CLA	C1D-ND-C4D	-9.87	99.32	106.33
4	00	308	CHL	C2B-C1B-NB	9.86	116.84	110.23
4	1G	601	CHL	C2B-C1B-NB	9.85	116.84	110.23
4	1N	601	CHL	C2B-C1B-NB	9.85	116.84	110.23
3	1G	611	CLA	C1D-ND-C4D	-9.83	99.35	106.33
4	1G	606	CHL	C2B-C1B-NB	9.81	116.81	110.23
3	1S	308	CLA	C1D-ND-C4D	-9.78	99.39	106.33
3	1S	303	CLA	C1D-ND-C4D	-9.77	99.40	106.33
3	1N	614	CLA	C1D-ND-C4D	-9.74	99.41	106.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	1N	611	CLA	C1D-ND-C4D	-9.73	99.43	106.33
3	1S	314	CLA	C1D-ND-C4D	-9.67	99.46	106.33
3	1G	613	CLA	C1D-ND-C4D	-9.59	99.52	106.33
3	1N	610	CLA	C1D-ND-C4D	-9.59	99.52	106.33
3	1G	604	CLA	C1D-ND-C4D	-9.56	99.54	106.33
3	00	312	CLA	C1D-ND-C4D	-9.54	99.56	106.33
4	00	305	CHL	C2B-C1B-NB	9.53	116.62	110.23
3	1S	304	CLA	C1D-ND-C4D	-9.52	99.57	106.33
3	1G	603	CLA	C1D-ND-C4D	-9.47	99.61	106.33
3	1G	614	CLA	C1D-ND-C4D	-9.41	99.65	106.33
3	00	309	CLA	C1D-ND-C4D	-9.41	99.65	106.33
3	1S	312	CLA	C1D-ND-C4D	-9.34	99.70	106.33
3	1S	312	CLA	C2B-C1B-NB	9.30	116.47	110.23
3	1N	612	CLA	C1D-ND-C4D	-9.30	99.73	106.33
3	1G	602	CLA	C1D-ND-C4D	-9.28	99.74	106.33
3	1S	303	CLA	C2B-C1B-NB	9.25	116.43	110.23
3	1N	604	CLA	C1D-ND-C4D	-9.21	99.79	106.33
3	1N	613	CLA	C1D-ND-C4D	-9.21	99.79	106.33
3	00	309	CLA	C2B-C1B-NB	9.12	116.34	110.23
3	1N	603	CLA	C1D-ND-C4D	-9.02	99.93	106.33
3	00	303	CLA	C1D-ND-C4D	-8.98	99.95	106.33
3	1S	309	CLA	C1D-ND-C4D	-8.92	100.00	106.33
3	1G	602	CLA	C2B-C1B-NB	8.92	116.22	110.23
5	1G	616	LUT	C15-C35-C34	8.92	141.75	123.47
3	1G	612	CLA	C2B-C1B-NB	8.82	116.14	110.23
3	00	302	CLA	C2B-C1B-NB	8.81	116.14	110.23
8	1G	619	XAT	O24-C25-C24	8.79	119.98	113.38
3	1N	610	CLA	C2B-C1B-NB	8.76	116.11	110.23
3	1G	612	CLA	C1D-ND-C4D	-8.75	100.12	106.33
4	1N	606	CHL	C2B-C1B-NB	8.72	116.08	110.23
3	1G	603	CLA	C2B-C1B-NB	8.70	116.06	110.23
3	1N	603	CLA	C2B-C1B-NB	8.64	116.03	110.23
3	1N	614	CLA	CMD-C2D-C1D	8.64	139.94	124.71
3	00	302	CLA	CMD-C2D-C1D	8.57	139.82	124.71
4	1S	305	CHL	CMD-C2D-C1D	8.57	139.81	124.71
3	1G	610	CLA	C2B-C1B-NB	8.55	115.96	110.23
4	00	305	CHL	CMD-C2D-C1D	8.54	139.76	124.71
3	1N	612	CLA	C2B-C1B-NB	8.47	115.91	110.23
4	1N	601	CHL	CMD-C2D-C1D	8.45	139.61	124.71
3	00	312	CLA	CMD-C2D-C1D	8.43	139.56	124.71
8	1G	617	XAT	C18-C5-C6	-8.41	108.17	122.26
4	00	307	CHL	CMD-C2D-C1D	8.38	139.48	124.71

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
4	1G	601	CHL	CMD-C2D-C1D	8.36	139.45	124.71
3	1G	614	CLA	C2B-C1B-NB	8.36	115.83	110.23
3	1G	613	CLA	C2B-C1B-NB	8.35	115.83	110.23
3	1S	314	CLA	C2B-C1B-NB	8.35	115.83	110.23
4	1N	607	CHL	CMD-C2D-C1D	8.33	139.39	124.71
4	00	304	CHL	CMD-C2D-C1D	8.31	139.36	124.71
3	1N	614	CLA	C2B-C1B-NB	8.29	115.79	110.23
4	1N	608	CHL	CMD-C2D-C1D	8.29	139.33	124.71
4	1S	306	CHL	CMD-C2D-C1D	8.27	139.29	124.71
4	1G	606	CHL	CMD-C2D-C1D	8.25	139.26	124.71
3	1S	309	CLA	C2B-C1B-NB	8.25	115.76	110.23
3	1N	611	CLA	C2B-C1B-NB	8.23	115.75	110.23
3	00	312	CLA	C2B-C1B-NB	8.23	115.75	110.23
4	00	306	CHL	CMD-C2D-C1D	8.22	139.19	124.71
3	1N	602	CLA	C2B-C1B-NB	8.21	115.73	110.23
4	1S	307	CHL	CMD-C2D-C1D	8.21	139.17	124.71
3	1S	312	CLA	CMD-C2D-C1D	8.20	139.17	124.71
4	1G	605	CHL	CMD-C2D-C1D	8.20	139.16	124.71
4	1G	608	CHL	CMD-C2D-C1D	8.19	139.15	124.71
3	1N	612	CLA	C2C-C1C-NC	8.17	117.63	109.97
4	1N	605	CHL	CMD-C2D-C1D	8.16	139.10	124.71
4	1G	607	CHL	CMD-C2D-C1D	8.15	139.07	124.71
3	1N	604	CLA	CMD-C2D-C1D	8.14	139.06	124.71
3	1G	603	CLA	CMD-C2D-C1D	8.13	139.05	124.71
8	1G	619	XAT	C18-C5-C6	-8.13	108.63	122.26
3	00	309	CLA	CMD-C2D-C1D	8.12	139.02	124.71
4	00	308	CHL	CMD-C2D-C1D	8.11	139.01	124.71
3	1G	611	CLA	C2C-C1C-NC	8.10	117.56	109.97
3	00	310	CLA	C2B-C1B-NB	8.08	115.65	110.23
4	1G	609	CHL	CMD-C2D-C1D	8.08	138.95	124.71
3	1G	613	CLA	CMD-C2D-C1D	8.08	138.95	124.71
4	00	306	CHL	C2C-C3C-C4C	-8.07	100.73	106.49
3	1N	611	CLA	CMD-C2D-C1D	8.07	138.93	124.71
3	1S	308	CLA	C2B-C1B-NB	8.07	115.64	110.23
3	1S	309	CLA	C2C-C1C-NC	8.06	117.53	109.97
3	00	301	CLA	C2B-C1B-NB	8.06	115.64	110.23
4	1N	606	CHL	CMD-C2D-C1D	8.05	138.90	124.71
3	1S	310	CLA	CMD-C2D-C1D	8.05	138.90	124.71
4	1S	302	CHL	CMD-C2D-C1D	8.05	138.90	124.71
3	1G	604	CLA	CMD-C2D-C1D	8.04	138.89	124.71
3	1S	314	CLA	CMD-C2D-C1D	8.03	138.87	124.71
4	1N	605	CHL	C2C-C3C-C4C	-8.02	100.77	106.49

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	1S	313	CLA	CMD-C2D-C1D	8.01	138.83	124.71
3	00	311	CLA	CMD-C2D-C1D	8.00	138.82	124.71
3	00	303	CLA	CMD-C2D-C1D	8.00	138.81	124.71
4	1S	307	CHL	C2C-C3C-C4C	-7.99	100.79	106.49
4	1N	609	CHL	CMD-C2D-C1D	7.98	138.78	124.71
3	1S	308	CLA	CMD-C2D-C1D	7.98	138.78	124.71
3	1G	610	CLA	CMD-C2D-C1D	7.97	138.75	124.71
3	1S	313	CLA	C2C-C1C-NC	7.96	117.43	109.97
4	1G	608	CHL	C2C-C3C-C4C	-7.96	100.82	106.49
3	1G	612	CLA	C2C-C1C-NC	7.95	117.42	109.97
3	1S	304	CLA	CMD-C2D-C1D	7.95	138.73	124.71
3	1N	603	CLA	CMD-C2D-C1D	7.93	138.69	124.71
3	1G	611	CLA	C2B-C1B-NB	7.93	115.55	110.23
3	00	310	CLA	CMD-C2D-C1D	7.93	138.68	124.71
3	00	303	CLA	C2C-C1C-NC	7.91	117.38	109.97
3	1N	613	CLA	C2B-C1B-NB	7.91	115.53	110.23
3	1N	613	CLA	C2C-C1C-NC	7.90	117.38	109.97
3	1G	612	CLA	CMD-C2D-C1D	7.83	138.51	124.71
3	1G	614	CLA	CMD-C2D-C1D	7.83	138.50	124.71
4	1N	607	CHL	C2C-C3C-C4C	-7.83	100.91	106.49
3	1N	603	CLA	C2C-C1C-NC	7.77	117.25	109.97
3	1S	309	CLA	CMD-C2D-C1D	7.76	138.39	124.71
4	1S	302	CHL	C2C-C3C-C4C	-7.75	100.96	106.49
4	1G	609	CHL	C2C-C3C-C4C	-7.74	100.97	106.49
4	00	305	CHL	C2C-C3C-C4C	-7.74	100.97	106.49
8	1G	619	XAT	C31-C30-C29	-7.72	116.29	127.31
4	1N	608	CHL	C2C-C3C-C4C	-7.72	100.98	106.49
3	1N	612	CLA	CMD-C2D-C1D	7.70	138.29	124.71
3	1G	611	CLA	CMD-C2D-C1D	7.70	138.28	124.71
3	1G	614	CLA	C2C-C1C-NC	7.69	117.18	109.97
4	1G	606	CHL	C2C-C3C-C4C	-7.68	101.02	106.49
3	00	311	CLA	C2C-C1C-NC	7.66	117.15	109.97
4	1S	306	CHL	C2C-C3C-C4C	-7.64	101.04	106.49
3	1S	310	CLA	C2C-C1C-NC	7.64	117.13	109.97
4	1N	606	CHL	C2C-C3C-C4C	-7.61	101.06	106.49
3	1S	304	CLA	C2B-C1B-NB	7.61	115.33	110.23
3	1G	602	CLA	CMD-C2D-C1D	7.61	138.12	124.71
8	1G	617	XAT	C38-C25-C26	-7.60	109.52	122.26
3	00	310	CLA	C2C-C1C-NC	7.59	117.08	109.97
3	00	312	CLA	C2C-C1C-NC	7.58	117.07	109.97
3	1N	602	CLA	CMD-C2D-C1D	7.58	138.07	124.71
8	1G	617	XAT	O24-C25-C24	7.58	119.07	113.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	1N	604	CLA	C2B-C1B-NB	7.57	115.31	110.23
3	1S	314	CLA	C2C-C1C-NC	7.57	117.06	109.97
3	1G	613	CLA	C2C-C1C-NC	7.56	117.05	109.97
3	1S	311	CLA	CMD-C2D-C1D	7.55	138.03	124.71
4	00	304	CHL	C2C-C3C-C4C	-7.53	101.12	106.49
3	00	319	CLA	CMD-C2D-C1D	7.53	137.99	124.71
3	1G	604	CLA	C2C-C1C-NC	7.52	117.02	109.97
3	1N	611	CLA	C2C-C1C-NC	7.52	117.01	109.97
4	00	307	CHL	C2C-C3C-C4C	-7.52	101.13	106.49
3	1S	311	CLA	C2B-C1B-NB	7.52	115.27	110.23
3	00	303	CLA	C2B-C1B-NB	7.51	115.27	110.23
3	1S	304	CLA	C2C-C1C-NC	7.51	117.00	109.97
4	00	308	CHL	C2C-C3C-C4C	-7.50	101.14	106.49
4	1G	607	CHL	C2C-C3C-C4C	-7.48	101.16	106.49
4	1S	305	CHL	C2C-C3C-C4C	-7.47	101.16	106.49
3	1N	604	CLA	C2C-C1C-NC	7.47	116.97	109.97
3	00	311	CLA	C2B-C1B-NB	7.45	115.23	110.23
3	1N	610	CLA	CMD-C2D-C1D	7.45	137.84	124.71
4	1G	605	CHL	C2C-C3C-C4C	-7.44	101.18	106.49
3	00	302	CLA	C2C-C1C-NC	7.43	116.93	109.97
8	1G	617	XAT	C15-C14-C13	-7.42	116.72	127.31
4	1G	601	CHL	C2C-C3C-C4C	-7.38	101.22	106.49
3	1G	604	CLA	C2B-C1B-NB	7.37	115.17	110.23
3	1S	311	CLA	C2C-C1C-NC	7.36	116.87	109.97
8	1G	619	XAT	C38-C25-C26	-7.35	109.95	122.26
3	1S	310	CLA	C2B-C1B-NB	7.34	115.15	110.23
3	1G	602	CLA	C2C-C1C-NC	7.34	116.85	109.97
3	00	319	CLA	C2B-C1B-NB	7.33	115.15	110.23
3	1N	614	CLA	C2C-C1C-NC	7.32	116.83	109.97
4	1N	609	CHL	C2C-C3C-C4C	-7.30	101.28	106.49
3	1S	303	CLA	CMD-C2D-C1D	7.29	137.56	124.71
3	00	301	CLA	CMD-C2D-C1D	7.28	137.54	124.71
3	1N	613	CLA	CMD-C2D-C1D	7.27	137.52	124.71
3	1G	603	CLA	C2C-C1C-NC	7.14	116.66	109.97
4	1N	601	CHL	C2C-C3C-C4C	-7.12	101.41	106.49
3	1S	313	CLA	C2B-C1B-NB	7.11	115.00	110.23
3	1G	610	CLA	C2C-C1C-NC	7.04	116.57	109.97
3	00	309	CLA	C2C-C1C-NC	6.99	116.52	109.97
3	1G	613	CLA	O2D-CGD-CBD	6.97	123.65	111.27
3	00	319	CLA	C2C-C1C-NC	6.95	116.48	109.97
3	00	301	CLA	C2C-C1C-NC	6.93	116.47	109.97
3	1S	312	CLA	C2C-C1C-NC	6.91	116.45	109.97

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	1S	308	CLA	C2C-C1C-NC	6.90	116.44	109.97
4	00	305	CHL	CHD-C1D-ND	-6.72	118.28	124.45
4	1S	305	CHL	CHD-C1D-ND	-6.65	118.35	124.45
3	1N	602	CLA	C2C-C1C-NC	6.60	116.16	109.97
4	1N	601	CHL	CHD-C1D-ND	-6.56	118.43	124.45
8	1G	617	XAT	O4-C5-C18	6.50	122.85	115.06
4	1S	302	CHL	CHD-C1D-ND	-6.50	118.48	124.45
3	1G	611	CLA	C3C-C4C-NC	6.50	117.86	110.57
3	1N	610	CLA	C2C-C1C-NC	6.49	116.05	109.97
3	1S	310	CLA	C3C-C4C-NC	6.48	117.84	110.57
4	1G	609	CHL	CHD-C1D-ND	-6.44	118.54	124.45
4	00	308	CHL	CHD-C1D-ND	-6.41	118.56	124.45
4	1G	605	CHL	CHD-C1D-ND	-6.35	118.62	124.45
4	1G	607	CHL	CHD-C1D-ND	-6.34	118.63	124.45
4	1G	601	CHL	CHD-C1D-ND	-6.34	118.63	124.45
3	00	311	CLA	C3C-C4C-NC	6.34	117.68	110.57
4	1G	606	CHL	CHD-C1D-ND	-6.33	118.64	124.45
3	00	319	CLA	C3C-C4C-NC	6.32	117.66	110.57
8	1G	617	XAT	C11-C10-C9	-6.31	118.30	127.31
4	1N	605	CHL	CHD-C1D-ND	-6.31	118.66	124.45
4	00	306	CHL	CHD-C1D-ND	-6.30	118.66	124.45
4	1N	608	CHL	CHD-C1D-ND	-6.30	118.66	124.45
4	00	304	CHL	CHD-C1D-ND	-6.30	118.66	124.45
3	1S	303	CLA	C2C-C1C-NC	6.26	115.84	109.97
4	1N	609	CHL	CHD-C1D-ND	-6.25	118.71	124.45
4	1G	608	CHL	CHD-C1D-ND	-6.23	118.73	124.45
3	1N	613	CLA	C3C-C4C-NC	6.19	117.51	110.57
3	1G	613	CLA	C3C-C4C-NC	6.17	117.49	110.57
4	00	307	CHL	CHD-C1D-ND	-6.16	118.79	124.45
4	1N	606	CHL	CHD-C1D-ND	-6.14	118.81	124.45
4	1N	607	CHL	CHD-C1D-ND	-6.14	118.81	124.45
3	1S	313	CLA	C3C-C4C-NC	6.12	117.44	110.57
4	1S	306	CHL	CHD-C1D-ND	-6.10	118.85	124.45
3	00	301	CLA	C3C-C4C-NC	6.07	117.38	110.57
4	1S	307	CHL	CHD-C1D-ND	-6.03	118.91	124.45
3	1G	614	CLA	C3C-C4C-NC	6.02	117.33	110.57
3	1S	309	CLA	C3C-C4C-NC	6.02	117.32	110.57
3	1N	602	CLA	C3C-C4C-NC	6.01	117.31	110.57
3	1N	611	CLA	C3C-C4C-NC	6.01	117.31	110.57
3	1N	612	CLA	C3C-C4C-NC	5.97	117.27	110.57
3	1G	602	CLA	C3C-C4C-NC	5.97	117.27	110.57
3	1N	614	CLA	C3C-C4C-NC	5.96	117.25	110.57

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	00	301	CLA	C4-C3-C5	5.93	125.24	115.27
3	1G	603	CLA	C3C-C4C-NC	5.91	117.20	110.57
7	00	317	LHG	O7-C7-C8	5.85	124.12	111.50
3	1S	303	CLA	C3C-C4C-NC	5.84	117.12	110.57
8	1G	619	XAT	O4-C5-C4	5.84	117.77	113.38
3	1S	303	CLA	C3B-C2B-C1B	-5.83	100.12	107.16
3	00	311	CLA	CHD-C4C-C3C	-5.82	116.28	124.84
4	1S	302	CHL	C3B-C2B-C1B	-5.82	100.14	107.16
3	1G	602	CLA	C3B-C2B-C1B	-5.78	100.19	107.16
3	1N	602	CLA	CHD-C4C-C3C	-5.77	116.36	124.84
3	1S	311	CLA	C3C-C4C-NC	5.77	117.04	110.57
3	1S	313	CLA	CHC-C4B-NB	-5.77	118.15	124.26
4	1N	605	CHL	C3B-C2B-C1B	-5.75	100.22	107.16
3	1S	314	CLA	C3C-C4C-NC	5.72	116.99	110.57
3	00	302	CLA	C3C-C4C-NC	5.72	116.98	110.57
3	00	310	CLA	C3C-C4C-NC	5.71	116.98	110.57
3	1G	612	CLA	C3C-C4C-NC	5.69	116.95	110.57
3	1N	610	CLA	C3C-C4C-NC	5.67	116.94	110.57
3	1S	310	CLA	CHD-C4C-C3C	-5.65	116.53	124.84
4	1N	608	CHL	C3B-C2B-C1B	-5.64	100.35	107.16
3	1G	611	CLA	CHD-C4C-C3C	-5.62	116.58	124.84
3	1S	308	CLA	C3C-C4C-NC	5.61	116.86	110.57
3	00	301	CLA	CHD-C4C-C3C	-5.58	116.64	124.84
3	1S	304	CLA	C3C-C4C-NC	5.57	116.81	110.57
3	00	312	CLA	C3C-C4C-NC	5.56	116.81	110.57
3	1S	309	CLA	O2D-CGD-CBD	5.56	121.14	111.27
3	1N	603	CLA	C3C-C4C-NC	5.55	116.80	110.57
4	00	307	CHL	C3B-C2B-C1B	-5.55	100.46	107.16
4	1G	607	CHL	C3B-C2B-C1B	-5.55	100.46	107.16
3	00	309	CLA	C3C-C4C-NC	5.53	116.77	110.57
4	1N	607	CHL	C3B-C2B-C1B	-5.52	100.50	107.16
3	1G	604	CLA	C3C-C4C-NC	5.51	116.75	110.57
3	1G	613	CLA	CHD-C4C-C3C	-5.50	116.75	124.84
3	00	319	CLA	CHD-C4C-C3C	-5.50	116.76	124.84
3	1S	312	CLA	C3C-C4C-NC	5.50	116.74	110.57
4	1G	605	CHL	C3B-C2B-C1B	-5.49	100.53	107.16
3	1N	604	CLA	C3C-C4C-NC	5.49	116.73	110.57
3	00	309	CLA	C4-C3-C5	5.49	124.51	115.27
4	1S	305	CHL	C3B-C2B-C1B	-5.49	100.54	107.16
4	00	304	CHL	C3B-C2B-C1B	-5.49	100.54	107.16
3	1N	613	CLA	CHD-C4C-C3C	-5.48	116.79	124.84
4	00	308	CHL	C3B-C2B-C1B	-5.47	100.55	107.16

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
4	00	306	CHL	C3B-C2B-C1B	-5.45	100.59	107.16
4	1S	307	CHL	C3B-C2B-C1B	-5.44	100.59	107.16
3	1G	603	CLA	CHD-C4C-C3C	-5.44	116.85	124.84
3	1G	610	CLA	C3C-C4C-NC	5.43	116.66	110.57
3	1N	603	CLA	C3B-C2B-C1B	-5.42	100.62	107.16
4	1N	601	CHL	C3B-C2B-C1B	-5.42	100.62	107.16
3	1G	612	CLA	C3B-C2B-C1B	-5.40	100.64	107.16
3	00	303	CLA	C3C-C4C-NC	5.40	116.63	110.57
3	1G	612	CLA	CHD-C1D-ND	-5.39	119.50	124.45
4	1G	609	CHL	C3B-C2B-C1B	-5.38	100.66	107.16
3	1S	311	CLA	CHD-C4C-C3C	-5.38	116.94	124.84
4	1S	306	CHL	C3B-C2B-C1B	-5.37	100.67	107.16
3	1S	312	CLA	O2D-CGD-CBD	5.36	120.80	111.27
3	1S	303	CLA	CHD-C4C-C3C	-5.36	116.96	124.84
4	1N	609	CHL	C3B-C2B-C1B	-5.36	100.69	107.16
3	00	311	CLA	O2D-CGD-CBD	5.35	120.78	111.27
3	1N	611	CLA	CHD-C4C-C3C	-5.34	116.98	124.84
3	1N	614	CLA	CHD-C4C-C3C	-5.34	116.98	124.84
4	1G	606	CHL	C3B-C2B-C1B	-5.34	100.72	107.16
3	1G	602	CLA	CHD-C4C-C3C	-5.34	117.00	124.84
4	1G	601	CHL	C3B-C2B-C1B	-5.33	100.72	107.16
3	00	302	CLA	CHD-C4C-C3C	-5.33	117.00	124.84
3	1G	612	CLA	CHD-C4C-C3C	-5.31	117.03	124.84
3	1S	313	CLA	CHD-C4C-C3C	-5.31	117.03	124.84
8	1G	619	XAT	O4-C5-C18	5.31	121.42	115.06
8	1G	619	XAT	C11-C10-C9	-5.31	119.73	127.31
3	1S	309	CLA	C4-C3-C5	5.30	124.19	115.27
3	00	312	CLA	CHD-C4C-C3C	-5.30	117.05	124.84
3	1N	611	CLA	O2D-CGD-CBD	5.30	120.68	111.27
3	1N	610	CLA	CHD-C4C-C3C	-5.29	117.06	124.84
3	1G	614	CLA	CHD-C4C-C3C	-5.28	117.08	124.84
3	1S	309	CLA	CHD-C4C-C3C	-5.28	117.08	124.84
4	00	305	CHL	C3B-C2B-C1B	-5.27	100.79	107.16
3	1S	310	CLA	CHC-C4B-NB	-5.26	118.69	124.26
3	1N	604	CLA	O2D-CGD-CBD	5.22	120.55	111.27
4	1N	607	CHL	C3C-C4C-NC	5.22	116.43	110.57
4	1G	608	CHL	C3B-C2B-C1B	-5.22	100.86	107.16
3	00	310	CLA	CHD-C4C-C3C	-5.22	117.17	124.84
4	1G	608	CHL	C3C-C4C-NC	5.21	116.41	110.57
3	1N	604	CLA	CHD-C4C-C3C	-5.19	117.20	124.84
3	1S	308	CLA	CHD-C4C-C3C	-5.19	117.20	124.84
4	1N	608	CHL	C3C-C4C-NC	5.19	116.39	110.57

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
4	1N	606	CHL	O2D-CGD-CBD	5.17	120.46	111.27
4	00	304	CHL	C3C-C4C-NC	5.17	116.37	110.57
4	1G	606	CHL	C3C-C4C-NC	5.17	116.37	110.57
4	1N	606	CHL	C3C-C4C-NC	5.17	116.37	110.57
4	1N	605	CHL	C3C-C4C-NC	5.17	116.37	110.57
4	1S	305	CHL	O2D-CGD-CBD	5.16	120.45	111.27
4	00	306	CHL	C3C-C4C-NC	5.15	116.35	110.57
4	00	305	CHL	C3C-C4C-NC	5.11	116.31	110.57
3	1N	612	CLA	O2D-CGD-CBD	5.11	120.35	111.27
3	00	309	CLA	C3B-C2B-C1B	-5.10	101.00	107.16
4	00	308	CHL	C3C-C4C-NC	5.09	116.28	110.57
3	1G	603	CLA	O2D-CGD-CBD	5.09	120.32	111.27
4	1G	605	CHL	C3C-C4C-NC	5.09	116.28	110.57
4	1S	306	CHL	C3C-C4C-NC	5.09	116.28	110.57
4	1G	601	CHL	C3C-C4C-NC	5.09	116.27	110.57
4	00	307	CHL	C3C-C4C-NC	5.08	116.27	110.57
3	1N	612	CLA	CHD-C4C-C3C	-5.07	117.39	124.84
4	1S	307	CHL	C3C-C4C-NC	5.06	116.24	110.57
3	1S	314	CLA	CAC-C3C-C4C	5.06	131.37	124.81
3	00	302	CLA	O2D-CGD-CBD	5.05	120.24	111.27
3	1N	603	CLA	CHD-C4C-C3C	-5.05	117.42	124.84
4	1G	609	CHL	C3C-C4C-NC	5.03	116.22	110.57
3	00	319	CLA	CAC-C3C-C4C	5.03	131.33	124.81
4	1S	302	CHL	C3C-C4C-NC	5.02	116.20	110.57
3	1S	312	CLA	CHD-C4C-C3C	-5.02	117.46	124.84
4	1N	606	CHL	C3B-C2B-C1B	-5.02	101.10	107.16
4	1G	608	CHL	O2D-CGD-CBD	5.01	120.17	111.27
3	1S	311	CLA	C3D-C4D-ND	5.01	118.34	110.24
3	1S	312	CLA	C3B-C2B-C1B	-5.00	101.13	107.16
3	00	309	CLA	CHD-C4C-C3C	-4.99	117.50	124.84
3	00	303	CLA	CHD-C4C-C3C	-4.99	117.51	124.84
3	00	301	CLA	O2D-CGD-CBD	4.99	120.13	111.27
3	1G	604	CLA	CHD-C4C-C3C	-4.98	117.52	124.84
4	1G	601	CHL	C1-C2-C3	-4.97	117.44	126.04
4	00	304	CHL	O2D-CGD-CBD	4.97	120.09	111.27
3	1N	602	CLA	C3D-C4D-ND	4.95	118.25	110.24
3	1S	313	CLA	O2D-CGD-CBD	4.95	120.06	111.27
3	1S	303	CLA	C3D-C4D-ND	4.93	118.22	110.24
7	1S	301	LHG	O7-C7-C8	4.93	122.12	111.50
4	1S	305	CHL	C3C-C4C-NC	4.93	116.10	110.57
7	1S	319	LHG	O7-C7-C8	4.92	122.10	111.50
4	1G	605	CHL	O2D-CGD-CBD	4.91	120.00	111.27

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
8	1G	619	XAT	C27-C28-C29	-4.91	117.91	125.53
4	1G	607	CHL	C3C-C4C-NC	4.90	116.06	110.57
3	00	301	CLA	C3D-C4D-ND	4.89	118.16	110.24
3	1N	602	CLA	O2D-CGD-CBD	4.88	119.95	111.27
3	1G	610	CLA	C3D-C4D-ND	4.88	118.14	110.24
3	1S	314	CLA	CHD-C4C-C3C	-4.88	117.67	124.84
3	00	301	CLA	CMC-C2C-C1C	4.87	132.45	125.04
3	1G	604	CLA	C3D-C4D-ND	4.87	118.11	110.24
3	1G	610	CLA	CHD-C4C-C3C	-4.86	117.69	124.84
4	1N	609	CHL	C3C-C4C-NC	4.86	116.03	110.57
3	00	302	CLA	CHD-C1D-ND	-4.86	119.99	124.45
3	1S	308	CLA	C3D-C4D-ND	4.86	118.10	110.24
3	1N	602	CLA	CHC-C4B-NB	-4.86	119.11	124.26
3	1S	304	CLA	CHD-C4C-C3C	-4.86	117.70	124.84
3	1N	604	CLA	CHD-C1D-ND	-4.85	119.99	124.45
3	1S	312	CLA	C3D-C4D-ND	4.85	118.08	110.24
4	1N	609	CHL	O2D-CGD-CBD	4.85	119.88	111.27
3	1S	314	CLA	O2D-CGD-CBD	4.84	119.87	111.27
3	1S	304	CLA	C3D-C4D-ND	4.84	118.06	110.24
3	1N	610	CLA	C3B-C2B-C1B	-4.83	101.33	107.16
4	1N	605	CHL	O2D-CGD-CBD	4.83	119.86	111.27
4	1N	601	CHL	C3C-C4C-NC	4.83	115.98	110.57
3	1S	310	CLA	O2D-CGD-CBD	4.83	119.85	111.27
4	1G	601	CHL	O2D-CGD-CBD	4.82	119.84	111.27
3	1S	304	CLA	O2D-CGD-CBD	4.82	119.83	111.27
3	00	310	CLA	O2D-CGD-CBD	4.82	119.83	111.27
3	1N	612	CLA	C3B-C2B-C1B	-4.81	101.36	107.16
3	1S	313	CLA	C3D-C4D-ND	4.80	118.01	110.24
3	00	310	CLA	C3D-C4D-ND	4.80	118.00	110.24
3	1N	613	CLA	C3B-C2B-C1B	-4.80	101.37	107.16
3	1G	614	CLA	O2D-CGD-CBD	4.79	119.78	111.27
4	1G	606	CHL	O2D-CGD-CBD	4.78	119.76	111.27
3	1S	308	CLA	O2D-CGD-CBD	4.78	119.76	111.27
3	1N	604	CLA	C3D-C4D-ND	4.77	117.95	110.24
3	1S	303	CLA	CAC-C3C-C4C	4.76	130.98	124.81
3	00	311	CLA	CHC-C4B-NB	-4.76	119.22	124.26
3	1G	602	CLA	C3D-C4D-ND	4.75	117.92	110.24
4	1S	307	CHL	O2D-CGD-CBD	4.75	119.71	111.27
3	1N	603	CLA	O2D-CGD-CBD	4.75	119.70	111.27
3	1G	603	CLA	C3B-C2B-C1B	-4.73	101.45	107.16
3	00	302	CLA	C3D-C4D-ND	4.73	117.89	110.24
4	00	305	CHL	O2D-CGD-CBD	4.73	119.67	111.27

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	1G	604	CLA	O2D-CGD-CBD	4.73	119.67	111.27
3	00	319	CLA	C3D-C4D-ND	4.73	117.89	110.24
4	1N	601	CHL	C3D-C2D-C1D	-4.73	99.38	105.83
3	1G	602	CLA	O2D-CGD-CBD	4.72	119.66	111.27
4	00	307	CHL	C3D-C2D-C1D	-4.72	99.39	105.83
8	1G	617	XAT	O24-C25-C38	4.71	120.70	115.06
4	1N	608	CHL	C3D-C2D-C1D	-4.71	99.40	105.83
3	1S	308	CLA	CHD-C1D-ND	-4.71	120.12	124.45
3	1S	303	CLA	O2D-CGD-CBD	4.71	119.64	111.27
4	00	308	CHL	O2D-CGD-CBD	4.71	119.63	111.27
4	00	304	CHL	C3D-C2D-C1D	-4.70	99.41	105.83
3	00	319	CLA	CHC-C4B-NB	-4.70	119.28	124.26
3	00	302	CLA	C3B-C2B-C1B	-4.70	101.49	107.16
3	00	302	CLA	CHC-C4B-NB	-4.70	119.29	124.26
3	00	311	CLA	C3D-C4D-ND	4.69	117.83	110.24
3	1N	604	CLA	C3B-C2B-C1B	-4.69	101.50	107.16
4	1S	302	CHL	O2D-CGD-CBD	4.69	119.60	111.27
3	00	309	CLA	C3D-C4D-ND	4.68	117.81	110.24
3	1N	610	CLA	C3D-C4D-ND	4.68	117.80	110.24
3	00	301	CLA	CHC-C4B-NB	-4.68	119.31	124.26
3	00	303	CLA	CHD-C1D-ND	-4.67	120.16	124.45
4	1N	607	CHL	C3D-C2D-C1D	-4.67	99.46	105.83
4	1G	609	CHL	O2D-CGD-CBD	4.67	119.56	111.27
3	1S	314	CLA	C3B-C2B-C1B	-4.66	101.53	107.16
3	00	301	CLA	C3B-C2B-C1B	-4.66	101.54	107.16
3	1G	604	CLA	CHD-C1D-ND	-4.66	120.18	124.45
4	00	305	CHL	C3D-C2D-C1D	-4.65	99.48	105.83
3	1N	602	CLA	C3B-C2B-C1B	-4.65	101.55	107.16
4	1G	601	CHL	C3D-C2D-C1D	-4.65	99.48	105.83
3	1G	603	CLA	CHC-C4B-NB	-4.65	119.34	124.26
3	1G	604	CLA	CHC-C4B-NB	-4.63	119.35	124.26
3	00	310	CLA	C3B-C2B-C1B	-4.63	101.58	107.16
4	1S	307	CHL	C3D-C2D-C1D	-4.63	99.52	105.83
4	00	306	CHL	O2D-CGD-CBD	4.63	119.49	111.27
4	00	306	CHL	C3D-C2D-C1D	-4.63	99.52	105.83
3	1G	614	CLA	C3B-C2B-C1B	-4.62	101.58	107.16
3	1N	614	CLA	C3D-C4D-ND	4.62	117.71	110.24
3	1G	610	CLA	C3B-C2B-C1B	-4.61	101.59	107.16
3	1G	613	CLA	C3B-C2B-C1B	-4.61	101.59	107.16
4	1G	609	CHL	C3D-C2D-C1D	-4.61	99.54	105.83
3	1N	614	CLA	C3B-C2B-C1B	-4.61	101.60	107.16
4	1G	606	CHL	C3D-C2D-C1D	-4.61	99.54	105.83

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	1N	611	CLA	C3B-C2B-C1B	-4.61	101.60	107.16
3	00	303	CLA	C3D-C4D-ND	4.61	117.69	110.24
3	1G	611	CLA	C3B-C2B-C1B	-4.60	101.60	107.16
3	1S	312	CLA	CHC-C4B-NB	-4.60	119.38	124.26
3	00	312	CLA	CHD-C1D-ND	-4.60	120.23	124.45
5	1S	316	LUT	C15-C35-C34	4.60	132.89	123.47
4	1S	306	CHL	C3D-C2D-C1D	-4.59	99.56	105.83
3	1G	611	CLA	CHC-C4B-NB	-4.58	119.40	124.26
3	1N	611	CLA	C3D-C4D-ND	4.58	117.65	110.24
3	1S	314	CLA	C3D-C4D-ND	4.57	117.63	110.24
4	1G	605	CHL	C3D-C2D-C1D	-4.57	99.60	105.83
3	1G	610	CLA	CHC-C4B-NB	-4.57	119.42	124.26
3	1G	602	CLA	CHD-C1D-ND	-4.56	120.26	124.45
3	00	303	CLA	C3B-C2B-C1B	-4.56	101.65	107.16
3	00	309	CLA	CHD-C1D-ND	-4.56	120.26	124.45
3	1G	612	CLA	C3D-C4D-ND	4.56	117.61	110.24
3	00	303	CLA	C1C-C2C-C3C	-4.55	102.17	106.96
4	00	308	CHL	C3D-C2D-C1D	-4.55	99.62	105.83
4	00	306	CHL	C1-C2-C3	-4.55	118.18	126.04
4	1N	601	CHL	O2D-CGD-CBD	4.55	119.35	111.27
3	00	310	CLA	CHC-C4B-NB	-4.54	119.45	124.26
3	1S	308	CLA	CHC-C4B-NB	-4.54	119.45	124.26
3	1G	614	CLA	CHC-C4B-NB	-4.53	119.46	124.26
3	1S	314	CLA	CHC-C4B-NB	-4.53	119.46	124.26
3	1S	309	CLA	CAC-C3C-C4C	4.53	130.68	124.81
3	00	312	CLA	C3B-C2B-C1B	-4.53	101.70	107.16
3	1N	614	CLA	CHC-C4B-NB	-4.52	119.47	124.26
4	1G	607	CHL	C3D-C2D-C1D	-4.51	99.67	105.83
3	1N	611	CLA	CHC-C4B-NB	-4.51	119.48	124.26
4	1N	606	CHL	C3D-C2D-C1D	-4.51	99.68	105.83
3	1G	610	CLA	CAC-C3C-C4C	4.51	130.66	124.81
3	1N	614	CLA	CHD-C1D-ND	-4.50	120.31	124.45
3	00	312	CLA	C3D-C4D-ND	4.50	117.52	110.24
4	1N	605	CHL	C3D-C2D-C1D	-4.50	99.69	105.83
4	1S	302	CHL	C3D-C2D-C1D	-4.50	99.69	105.83
3	1G	603	CLA	C3D-C4D-ND	4.50	117.51	110.24
3	00	312	CLA	C1C-C2C-C3C	-4.49	102.23	106.96
3	1S	303	CLA	CMC-C2C-C1C	4.49	131.88	125.04
3	00	311	CLA	C3B-C2B-C1B	-4.49	101.74	107.16
3	1G	603	CLA	CHD-C1D-ND	-4.49	120.33	124.45
3	00	319	CLA	CMC-C2C-C1C	4.48	131.87	125.04
3	00	303	CLA	O2D-CGD-CBD	4.47	119.22	111.27

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	1G	613	CLA	CHC-C4B-NB	-4.47	119.52	124.26
3	1N	612	CLA	CHC-C4B-NB	-4.46	119.53	124.26
3	1N	612	CLA	C1C-C2C-C3C	-4.45	102.27	106.96
4	1N	609	CHL	C3D-C2D-C1D	-4.45	99.75	105.83
3	1S	310	CLA	CAC-C3C-C4C	4.45	130.59	124.81
3	00	312	CLA	O2D-CGD-CBD	4.45	119.18	111.27
3	1N	613	CLA	C3D-C4D-ND	4.45	117.43	110.24
3	1S	312	CLA	CHD-C1D-ND	-4.45	120.37	124.45
3	1S	313	CLA	C3B-C2B-C1B	-4.44	101.80	107.16
4	1S	305	CHL	C3D-C2D-C1D	-4.44	99.78	105.83
3	1G	610	CLA	C4D-CHA-C1A	-4.44	115.85	121.25
4	1N	608	CHL	O2D-CGD-CBD	4.44	119.15	111.27
4	1S	307	CHL	CAC-C3C-C4C	4.43	130.56	124.81
3	1G	614	CLA	C3D-C4D-ND	4.43	117.40	110.24
3	1N	603	CLA	C3D-C4D-ND	4.43	117.40	110.24
4	1G	608	CHL	C3D-C2D-C1D	-4.43	99.79	105.83
3	1S	304	CLA	CHD-C1D-ND	-4.42	120.39	124.45
4	1N	608	CHL	CHD-C4C-C3C	-4.41	118.35	124.84
3	1N	610	CLA	CMC-C2C-C1C	4.41	131.76	125.04
3	00	309	CLA	CHC-C4B-NB	-4.41	119.59	124.26
3	1S	310	CLA	C3B-C2B-C1B	-4.41	101.84	107.16
3	1S	310	CLA	C3D-C4D-ND	4.41	117.37	110.24
3	1S	313	CLA	C4A-NA-C1A	4.40	108.69	106.71
3	1S	309	CLA	C3B-C2B-C1B	-4.40	101.85	107.16
3	1N	603	CLA	CHD-C1D-ND	-4.39	120.42	124.45
3	1S	309	CLA	CHC-C4B-NB	-4.39	119.61	124.26
3	1N	612	CLA	C3D-C4D-ND	4.38	117.33	110.24
3	1G	610	CLA	CHD-C1D-ND	-4.38	120.43	124.45
4	1N	606	CHL	CMB-C2B-C1B	4.38	132.04	125.37
3	1N	610	CLA	CHC-C4B-NB	-4.38	119.62	124.26
3	1N	602	CLA	CMC-C2C-C1C	4.38	131.70	125.04
4	00	307	CHL	CHD-C4C-C3C	-4.36	118.43	124.84
4	1S	306	CHL	O2D-CGD-CBD	4.36	119.02	111.27
3	1N	603	CLA	CAC-C3C-C4C	4.36	130.46	124.81
3	1S	311	CLA	CHC-C4B-NB	-4.35	119.65	124.26
3	1S	311	CLA	O2D-CGD-CBD	4.35	119.00	111.27
3	1N	611	CLA	CHD-C1D-ND	-4.34	120.46	124.45
3	00	312	CLA	CHC-C4B-NB	-4.34	119.66	124.26
3	1G	611	CLA	C3D-C4D-ND	4.34	117.25	110.24
3	00	310	CLA	CHD-C1D-ND	-4.33	120.47	124.45
3	1S	304	CLA	CAC-C3C-C4C	4.33	130.43	124.81
3	1S	311	CLA	C3B-C2B-C1B	-4.33	101.93	107.16

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	1S	313	CLA	C1C-C2C-C3C	-4.32	102.42	106.96
3	1S	310	CLA	C3D-C2D-C1D	-4.31	99.94	105.83
3	00	310	CLA	C1C-C2C-C3C	-4.31	102.42	106.96
4	00	304	CHL	CHD-C4C-C3C	-4.30	118.52	124.84
3	1G	613	CLA	C4D-CHA-C1A	-4.30	116.02	121.25
3	1G	611	CLA	C3D-C2D-C1D	-4.30	99.97	105.83
3	00	319	CLA	O2D-CGD-CBD	4.30	118.90	111.27
3	1G	604	CLA	C1C-C2C-C3C	-4.29	102.45	106.96
3	1N	604	CLA	C1C-C2C-C3C	-4.29	102.45	106.96
3	1N	603	CLA	C1C-C2C-C3C	-4.29	102.45	106.96
4	00	305	CHL	CHD-C4C-C3C	-4.29	118.54	124.84
4	1N	606	CHL	CAC-C3C-C4C	4.28	130.37	124.81
3	1N	612	CLA	CAC-C3C-C4C	4.28	130.36	124.81
4	1N	607	CHL	CHD-C4C-C3C	-4.27	118.56	124.84
4	00	305	CHL	C1D-ND-C4D	-4.27	103.30	106.33
4	1N	608	CHL	C2D-C1D-ND	4.27	113.25	110.10
3	1N	614	CLA	C4D-CHA-C1A	-4.27	116.05	121.25
3	1N	613	CLA	C1C-C2C-C3C	-4.27	102.47	106.96
4	00	308	CHL	CHD-C4C-C3C	-4.27	118.56	124.84
3	1G	612	CLA	C1C-C2C-C3C	-4.27	102.47	106.96
4	1G	608	CHL	CHD-C4C-C3C	-4.27	118.57	124.84
4	1G	601	CHL	CHD-C4C-C3C	-4.26	118.58	124.84
3	1S	304	CLA	CHC-C4B-NB	-4.25	119.75	124.26
3	1S	311	CLA	CHD-C1D-ND	-4.25	120.55	124.45
4	1G	605	CHL	CHD-C4C-C3C	-4.25	118.60	124.84
3	00	302	CLA	C1C-C2C-C3C	-4.24	102.50	106.96
3	00	319	CLA	C3B-C2B-C1B	-4.24	102.04	107.16
3	1S	308	CLA	C3B-C2B-C1B	-4.24	102.05	107.16
4	1N	608	CHL	C1D-ND-C4D	-4.24	103.33	106.33
4	1G	609	CHL	CHD-C4C-C3C	-4.23	118.62	124.84
3	1S	314	CLA	CHD-C1D-ND	-4.23	120.57	124.45
3	1S	304	CLA	C3B-C2B-C1B	-4.23	102.06	107.16
5	1G	616	LUT	C19-C9-C10	-4.22	117.01	122.92
4	1G	606	CHL	CAC-C3C-C4C	4.22	130.29	124.81
3	1G	610	CLA	CMC-C2C-C1C	4.22	131.46	125.04
4	1N	605	CHL	CHD-C4C-C3C	-4.21	118.65	124.84
3	1S	311	CLA	C4D-CHA-C1A	-4.21	116.12	121.25
3	1S	309	CLA	C1C-C2C-C3C	-4.20	102.54	106.96
4	00	306	CHL	C2D-C1D-ND	4.20	113.20	110.10
3	1S	311	CLA	C1C-C2C-C3C	-4.20	102.54	106.96
3	1G	613	CLA	C3D-C2D-C1D	-4.20	100.11	105.83
3	00	312	CLA	C4D-CHA-C1A	-4.19	116.15	121.25

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
4	1G	609	CHL	C1D-ND-C4D	-4.19	103.36	106.33
4	1G	607	CHL	CHD-C4C-C3C	-4.17	118.71	124.84
4	1G	608	CHL	C1D-ND-C4D	-4.17	103.38	106.33
4	1G	607	CHL	O2D-CGD-CBD	4.16	118.66	111.27
3	1G	613	CLA	C3D-C4D-ND	4.16	116.97	110.24
4	00	304	CHL	C2D-C1D-ND	4.16	113.17	110.10
3	00	301	CLA	CAC-C3C-C4C	4.15	130.20	124.81
3	1S	313	CLA	CAC-C3C-C4C	4.15	130.20	124.81
4	1N	601	CHL	C2D-C1D-ND	4.15	113.16	110.10
3	1N	603	CLA	C4-C3-C5	4.15	122.25	115.27
4	1S	302	CHL	CHD-C4C-C3C	-4.14	118.75	124.84
3	1G	602	CLA	CMC-C2C-C1C	4.14	131.34	125.04
3	1G	602	CLA	C1C-C2C-C3C	-4.13	102.61	106.96
4	1N	601	CHL	CHD-C4C-C3C	-4.13	118.77	124.84
4	1G	609	CHL	C2D-C1D-ND	4.13	113.15	110.10
3	1G	613	CLA	C1C-C2C-C3C	-4.13	102.61	106.96
4	00	308	CHL	C2D-C1D-ND	4.12	113.14	110.10
3	1G	614	CLA	C1C-C2C-C3C	-4.12	102.62	106.96
4	1G	601	CHL	C1D-ND-C4D	-4.12	103.41	106.33
3	00	302	CLA	C3D-C2D-C1D	-4.12	100.21	105.83
4	1N	606	CHL	C3B-C4B-NB	4.12	114.33	110.52
3	00	319	CLA	C2D-C1D-ND	4.12	113.14	110.10
3	1G	611	CLA	C1C-C2C-C3C	-4.11	102.64	106.96
3	1S	314	CLA	C3D-C2D-C1D	-4.10	100.23	105.83
3	00	319	CLA	C3D-C2D-C1D	-4.10	100.23	105.83
3	1N	602	CLA	C4D-CHA-C1A	-4.10	116.26	121.25
4	1G	605	CHL	C1D-ND-C4D	-4.10	103.42	106.33
4	1G	601	CHL	C2D-C1D-ND	4.10	113.12	110.10
4	00	306	CHL	CHD-C4C-C3C	-4.09	118.82	124.84
4	1S	306	CHL	CHD-C4C-C3C	-4.09	118.82	124.84
4	00	307	CHL	C2D-C1D-ND	4.08	113.11	110.10
3	1N	611	CLA	C1C-C2C-C3C	-4.08	102.67	106.96
3	1N	610	CLA	CAC-C3C-C4C	4.07	130.10	124.81
3	1S	309	CLA	C3D-C4D-ND	4.07	116.83	110.24
3	1S	310	CLA	C2D-C1D-ND	4.07	113.11	110.10
4	1G	606	CHL	CHD-C4C-C3C	-4.07	118.86	124.84
3	1G	614	CLA	CHD-C1D-ND	-4.07	120.71	124.45
4	1G	606	CHL	C2D-C1D-ND	4.07	113.10	110.10
3	1N	603	CLA	CHB-C4A-NA	4.07	130.13	124.51
3	00	311	CLA	C1C-C2C-C3C	-4.06	102.69	106.96
3	1N	613	CLA	O2D-CGD-CBD	4.06	118.48	111.27
3	1N	614	CLA	C1C-C2C-C3C	-4.06	102.69	106.96

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
8	1G	617	XAT	O4-C5-C4	4.05	116.43	113.38
4	00	305	CHL	C2D-C1D-ND	4.05	113.09	110.10
3	1S	304	CLA	C1C-C2C-C3C	-4.04	102.71	106.96
4	00	308	CHL	C1D-ND-C4D	-4.04	103.47	106.33
4	00	306	CHL	C1D-ND-C4D	-4.03	103.47	106.33
4	1G	608	CHL	C2D-C1D-ND	4.03	113.08	110.10
3	1S	313	CLA	CHD-C1D-ND	-4.03	120.75	124.45
3	00	319	CLA	C4D-CHA-C1A	-4.03	116.34	121.25
3	00	312	CLA	C3D-C2D-C1D	-4.03	100.33	105.83
3	1G	610	CLA	O2D-CGD-CBD	4.03	118.43	111.27
3	1N	603	CLA	C3D-C2D-C1D	-4.03	100.34	105.83
3	1S	309	CLA	C3D-C2D-C1D	-4.03	100.34	105.83
3	00	301	CLA	C3D-C2D-C1D	-4.02	100.35	105.83
3	1N	610	CLA	CHD-C1D-ND	-4.02	120.76	124.45
3	1S	313	CLA	CHC-C1C-C2C	-4.01	115.59	126.73
4	1G	609	CHL	CAC-C3C-C4C	4.01	130.01	124.81
3	1G	611	CLA	C2D-C1D-ND	4.01	113.06	110.10
3	1N	611	CLA	C3D-C2D-C1D	-4.01	100.36	105.83
4	1N	606	CHL	CHD-C4C-C3C	-4.00	118.96	124.84
3	1G	613	CLA	CHD-C1D-ND	-4.00	120.78	124.45
4	1S	307	CHL	C3B-C4B-NB	4.00	114.22	110.52
4	1G	606	CHL	C1D-ND-C4D	-4.00	103.50	106.33
3	1G	612	CLA	C3B-C4B-NB	4.00	114.22	110.52
3	1S	308	CLA	C3D-C2D-C1D	-4.00	100.38	105.83
3	00	310	CLA	C4D-CHA-C1A	-3.99	116.39	121.25
4	00	305	CHL	CMB-C2B-C1B	3.99	131.44	125.37
4	1S	305	CHL	CHD-C4C-C3C	-3.98	118.98	124.84
3	00	311	CLA	C3D-C2D-C1D	-3.98	100.40	105.83
4	1G	605	CHL	C2D-C1D-ND	3.98	113.04	110.10
3	00	303	CLA	C3B-C4B-NB	3.98	114.21	110.52
3	1S	304	CLA	C3D-C2D-C1D	-3.98	100.40	105.83
8	1G	619	XAT	C35-C15-C14	-3.98	115.33	123.47
3	1N	602	CLA	C3D-C2D-C1D	-3.98	100.41	105.83
4	1N	607	CHL	C2D-C1D-ND	3.97	113.03	110.10
4	1S	307	CHL	CHD-C4C-C3C	-3.97	119.01	124.84
4	1S	306	CHL	C2D-C1D-ND	3.96	113.03	110.10
3	1S	309	CLA	CHD-C1D-ND	-3.96	120.81	124.45
3	1N	610	CLA	O2D-CGD-CBD	3.96	118.30	111.27
4	1N	601	CHL	C3B-C4B-NB	3.96	114.19	110.52
3	00	309	CLA	C1C-C2C-C3C	-3.96	102.79	106.96
3	1G	603	CLA	C3D-C2D-C1D	-3.96	100.43	105.83
3	1G	614	CLA	C3D-C2D-C1D	-3.96	100.43	105.83

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	00	301	CLA	CHD-C1D-ND	-3.96	120.82	124.45
3	00	310	CLA	C3D-C2D-C1D	-3.96	100.43	105.83
3	1N	614	CLA	C3D-C2D-C1D	-3.96	100.43	105.83
4	00	304	CHL	C1D-ND-C4D	-3.96	103.53	106.33
3	1S	314	CLA	C1C-C2C-C3C	-3.95	102.80	106.96
3	1G	610	CLA	C3D-C2D-C1D	-3.95	100.44	105.83
4	1S	302	CHL	C1D-ND-C4D	-3.95	103.53	106.33
3	1G	610	CLA	C1C-C2C-C3C	-3.95	102.81	106.96
5	1G	615	LUT	C19-C9-C10	-3.94	117.40	122.92
4	1S	302	CHL	C2D-C1D-ND	3.94	113.01	110.10
4	1N	606	CHL	C1D-ND-C4D	-3.94	103.54	106.33
3	1G	602	CLA	C3D-C2D-C1D	-3.94	100.46	105.83
3	1N	611	CLA	C4D-CHA-C1A	-3.94	116.46	121.25
3	00	309	CLA	CAC-C3C-C4C	3.93	129.91	124.81
3	1N	614	CLA	O2D-CGD-CBD	3.93	118.25	111.27
4	1G	607	CHL	C2D-C1D-ND	3.93	113.00	110.10
4	1N	609	CHL	CHD-C4C-C3C	-3.93	119.06	124.84
3	1G	604	CLA	C3D-C2D-C1D	-3.93	100.47	105.83
4	1G	607	CHL	C1D-ND-C4D	-3.93	103.55	106.33
3	1S	312	CLA	C4D-CHA-C1A	-3.92	116.47	121.25
4	00	306	CHL	CAC-C3C-C4C	3.92	129.90	124.81
3	1N	602	CLA	CHD-C1D-ND	-3.92	120.85	124.45
4	1S	307	CHL	C2D-C1D-ND	3.92	112.99	110.10
4	00	308	CHL	C3B-C4B-NB	3.92	114.15	110.52
3	00	302	CLA	C4D-CHA-C1A	-3.91	116.50	121.25
4	00	307	CHL	C1D-ND-C4D	-3.90	103.56	106.33
5	1G	615	LUT	C15-C35-C34	3.90	131.46	123.47
3	00	309	CLA	C4D-CHA-C1A	-3.90	116.51	121.25
3	1S	308	CLA	C4D-CHA-C1A	-3.90	116.51	121.25
3	1G	612	CLA	C3D-C2D-C1D	-3.89	100.52	105.83
4	1G	601	CHL	C3B-C4B-NB	3.89	114.13	110.52
4	1N	609	CHL	CAC-C3C-C4C	3.89	129.86	124.81
3	1G	603	CLA	C1C-C2C-C3C	-3.89	102.87	106.96
3	1N	604	CLA	C3D-C2D-C1D	-3.89	100.53	105.83
3	1S	313	CLA	CHB-C4A-NA	3.89	129.88	124.51
3	1S	303	CLA	C4D-CHA-C1A	-3.88	116.52	121.25
3	1G	602	CLA	CAC-C3C-C4C	3.88	129.85	124.81
4	1G	606	CHL	C3B-C4B-NB	3.88	114.11	110.52
3	00	303	CLA	C3D-C2D-C1D	-3.88	100.54	105.83
3	1S	303	CLA	CHD-C1D-ND	-3.87	120.89	124.45
3	1N	610	CLA	C4D-CHA-C1A	-3.87	116.53	121.25
3	00	309	CLA	C3D-C2D-C1D	-3.87	100.55	105.83

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
4	1N	606	CHL	C2D-C1D-ND	3.87	112.96	110.10
4	1S	306	CHL	CAC-C3C-C4C	3.87	129.83	124.81
4	1G	605	CHL	C3B-C4B-NB	3.87	114.10	110.52
3	1G	613	CLA	CHB-C4A-NA	3.87	129.86	124.51
3	1G	612	CLA	CAC-C3C-C4C	3.87	129.82	124.81
8	1G	617	XAT	C35-C34-C33	-3.86	121.81	127.31
4	1N	607	CHL	C1D-ND-C4D	-3.86	103.59	106.33
3	00	311	CLA	C2D-C1D-ND	3.85	112.94	110.10
3	00	302	CLA	CHB-C4A-NA	3.85	129.84	124.51
3	1N	612	CLA	C3D-C2D-C1D	-3.85	100.58	105.83
4	1N	601	CHL	C1D-ND-C4D	-3.85	103.60	106.33
4	00	307	CHL	O2D-CGD-CBD	3.85	118.10	111.27
3	1N	613	CLA	CHC-C4B-NB	-3.84	120.19	124.26
4	1N	609	CHL	C3B-C4B-NB	3.84	114.08	110.52
5	1S	316	LUT	C19-C9-C10	-3.84	117.54	122.92
4	1S	306	CHL	C3B-C4B-NB	3.84	114.08	110.52
5	00	314	LUT	C19-C9-C10	-3.84	117.55	122.92
3	1S	314	CLA	C4D-CHA-C1A	-3.84	116.58	121.25
4	00	308	CHL	CAC-C3C-C4C	3.84	129.79	124.81
3	1G	612	CLA	O2D-CGD-CBD	3.83	118.07	111.27
4	1S	306	CHL	C1D-ND-C4D	-3.83	103.62	106.33
3	1S	313	CLA	C3D-C2D-C1D	-3.83	100.61	105.83
3	00	301	CLA	C1C-C2C-C3C	-3.82	102.94	106.96
5	1G	615	LUT	C39-C29-C30	-3.82	117.57	122.92
3	1N	603	CLA	C3B-C4B-NB	3.82	114.06	110.52
3	1N	602	CLA	C2D-C1D-ND	3.81	112.91	110.10
3	1S	310	CLA	C1D-CHD-C4C	-3.81	117.84	126.06
4	00	307	CHL	C3B-C4B-NB	3.81	114.05	110.52
3	1G	614	CLA	CAC-C3C-C4C	3.80	129.74	124.81
4	00	305	CHL	C3D-C4D-ND	3.80	116.39	110.24
4	00	306	CHL	C3B-C4B-NB	3.80	114.04	110.52
3	1S	314	CLA	CMC-C2C-C1C	3.79	130.81	125.04
5	00	313	LUT	C39-C29-C30	-3.79	117.61	122.92
3	1S	312	CLA	C1C-C2C-C3C	-3.79	102.97	106.96
4	1S	302	CHL	C3D-C4D-ND	3.79	116.37	110.24
3	1S	311	CLA	C3D-C2D-C1D	-3.78	100.67	105.83
4	1G	608	CHL	C3D-C4D-ND	3.78	116.36	110.24
4	00	304	CHL	C3B-C4B-NB	3.78	114.02	110.52
4	1G	608	CHL	CAC-C3C-C4C	3.78	129.72	124.81
3	1S	310	CLA	CHC-C1C-C2C	-3.77	116.25	126.73
3	1S	303	CLA	C3D-C2D-C1D	-3.77	100.69	105.83
3	1G	614	CLA	CHB-C4A-NA	3.77	129.72	124.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	1G	614	CLA	C4D-CHA-C1A	-3.77	116.66	121.25
4	1N	609	CHL	C1D-ND-C4D	-3.77	103.66	106.33
4	1S	307	CHL	C1D-ND-C4D	-3.77	103.66	106.33
3	1S	312	CLA	CAC-C3C-C4C	3.76	129.69	124.81
3	1N	610	CLA	C3D-C2D-C1D	-3.76	100.69	105.83
3	1G	611	CLA	CAC-C3C-C4C	3.76	129.69	124.81
3	1S	313	CLA	CMC-C2C-C1C	3.76	130.77	125.04
4	1G	609	CHL	C3D-C4D-ND	3.75	116.31	110.24
8	1G	619	XAT	O24-C25-C38	3.75	119.55	115.06
4	1G	607	CHL	CHB-C4A-NA	3.75	129.70	124.51
3	1N	611	CLA	CAC-C3C-C4C	3.75	129.67	124.81
4	1S	305	CHL	C1D-ND-C4D	-3.75	103.67	106.33
3	1N	613	CLA	C3D-C2D-C1D	-3.75	100.72	105.83
4	1G	607	CHL	C3D-C4D-ND	3.75	116.30	110.24
3	00	303	CLA	C4D-CHA-C1A	-3.74	116.69	121.25
3	1S	313	CLA	C2D-C1D-ND	3.74	112.86	110.10
5	1S	315	LUT	C39-C29-C30	-3.74	117.68	122.92
3	00	311	CLA	C1D-CHD-C4C	-3.74	117.99	126.06
4	1N	605	CHL	C1D-ND-C4D	-3.73	103.68	106.33
3	1S	310	CLA	CHD-C1D-ND	-3.73	121.02	124.45
3	1N	604	CLA	C4D-CHA-C1A	-3.73	116.71	121.25
4	1N	606	CHL	C3D-C4D-ND	3.73	116.27	110.24
4	1N	605	CHL	C2D-C1D-ND	3.72	112.84	110.10
4	00	305	CHL	C3B-C4B-NB	3.72	113.96	110.52
4	1N	607	CHL	C3B-C4B-NB	3.71	113.96	110.52
3	1S	313	CLA	C1D-CHD-C4C	-3.71	118.05	126.06
3	1G	604	CLA	C4D-CHA-C1A	-3.71	116.73	121.25
4	1G	605	CHL	C3D-C4D-ND	3.71	116.24	110.24
4	1N	609	CHL	C3D-C4D-ND	3.71	116.24	110.24
3	1N	612	CLA	CHD-C1D-ND	-3.71	121.05	124.45
4	1N	607	CHL	CAC-C3C-C4C	3.71	129.62	124.81
3	00	311	CLA	CHD-C1D-ND	-3.70	121.05	124.45
3	1G	604	CLA	C3B-C2B-C1B	-3.70	102.69	107.16
4	1N	609	CHL	C2D-C1D-ND	3.70	112.83	110.10
3	00	301	CLA	C2D-C1D-ND	3.70	112.83	110.10
4	1N	607	CHL	O2D-CGD-CBD	3.69	117.83	111.27
5	00	314	LUT	C39-C29-C30	-3.69	117.76	122.92
4	1N	605	CHL	C3D-C4D-ND	3.69	116.20	110.24
4	1S	302	CHL	CAC-C3C-C4C	3.68	129.59	124.81
5	00	313	LUT	C15-C35-C34	3.68	131.01	123.47
8	1G	619	XAT	C6-C7-C8	-3.67	118.23	125.99
4	1N	608	CHL	C3D-C4D-ND	3.67	116.17	110.24

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	1S	309	CLA	C4D-CHA-C1A	-3.67	116.78	121.25
3	1N	612	CLA	CHC-C1C-C2C	-3.67	116.55	126.73
4	00	308	CHL	C3D-C4D-ND	3.67	116.17	110.24
3	1G	604	CLA	CAC-C3C-C4C	3.66	129.56	124.81
3	1N	612	CLA	C4D-CHA-C1A	-3.66	116.80	121.25
4	1G	608	CHL	C3B-C4B-NB	3.66	113.91	110.52
3	1N	613	CLA	C4D-CHA-C1A	-3.66	116.80	121.25
3	1S	309	CLA	CHC-C1C-C2C	-3.66	116.58	126.73
3	00	310	CLA	CAC-C3C-C4C	3.65	129.55	124.81
3	00	319	CLA	CHD-C1D-ND	-3.65	121.10	124.45
3	00	312	CLA	CHB-C4A-NA	3.65	129.56	124.51
3	00	303	CLA	CAC-C3C-C4C	3.65	129.54	124.81
3	1G	611	CLA	CHC-C1C-C2C	-3.65	116.60	126.73
3	1G	612	CLA	CHB-C4A-NA	3.65	129.56	124.51
3	1N	604	CLA	C3B-C4B-NB	3.65	113.90	110.52
4	00	306	CHL	C3D-C4D-ND	3.64	116.13	110.24
4	1G	609	CHL	C3B-C4B-NB	3.64	113.89	110.52
3	00	312	CLA	CMC-C2C-C1C	3.64	130.58	125.04
3	1S	308	CLA	CAC-C3C-C4C	3.63	129.52	124.81
3	1S	304	CLA	C4D-CHA-C1A	-3.63	116.83	121.25
5	1S	315	LUT	C19-C9-C10	-3.63	117.84	122.92
3	1G	603	CLA	CAC-C3C-C4C	3.63	129.52	124.81
4	1G	606	CHL	C3D-C4D-ND	3.63	116.10	110.24
3	1S	312	CLA	C3D-C2D-C1D	-3.62	100.89	105.83
4	1S	305	CHL	C3B-C4B-NB	3.62	113.87	110.52
4	1S	305	CHL	C3D-C4D-ND	3.61	116.08	110.24
3	00	311	CLA	CHB-C4A-NA	3.61	129.51	124.51
3	1S	310	CLA	CHB-C4A-NA	3.61	129.50	124.51
4	1G	601	CHL	C3D-C4D-ND	3.61	116.08	110.24
3	1N	613	CLA	CHD-C1D-ND	-3.61	121.14	124.45
3	00	309	CLA	O2D-CGD-CBD	3.60	117.67	111.27
3	1N	602	CLA	CAC-C3C-C4C	3.60	129.49	124.81
3	1S	308	CLA	C1C-C2C-C3C	-3.60	103.17	106.96
3	1G	603	CLA	C4D-CHA-C1A	-3.60	116.87	121.25
4	1S	305	CHL	CAC-C3C-C4C	3.60	129.48	124.81
3	1N	602	CLA	C1C-C2C-C3C	-3.60	103.17	106.96
5	1N	615	LUT	C39-C29-C30	-3.59	117.89	122.92
3	00	311	CLA	CHC-C1C-C2C	-3.59	116.76	126.73
3	00	309	CLA	CHB-C4A-NA	3.58	129.46	124.51
5	1S	316	LUT	C39-C29-C30	-3.58	117.92	122.92
3	1S	310	CLA	C1C-C2C-C3C	-3.57	103.20	106.96
3	1G	611	CLA	CHD-C1D-ND	-3.57	121.17	124.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	1N	612	CLA	CHB-C4A-NA	3.57	129.45	124.51
4	00	304	CHL	C3D-C4D-ND	3.57	116.01	110.24
4	1G	605	CHL	CAC-C3C-C4C	3.57	129.44	124.81
5	1N	615	LUT	C19-C9-C10	-3.57	117.93	122.92
3	1N	603	CLA	C4D-CHA-C1A	-3.57	116.91	121.25
9	1S	318	DGD	O2G-C1B-C2B	3.57	119.19	111.50
3	1G	611	CLA	CHB-C4A-NA	3.57	129.44	124.51
3	1S	303	CLA	CHB-C4A-NA	3.57	129.44	124.51
4	1S	305	CHL	C2D-C1D-ND	3.56	112.73	110.10
4	00	305	CHL	C2A-C1A-CHA	-3.56	117.63	123.86
4	1S	306	CHL	C3D-C4D-ND	3.56	116.00	110.24
4	1G	607	CHL	C3B-C4B-NB	3.56	113.82	110.52
3	00	311	CLA	C4D-CHA-C1A	-3.56	116.92	121.25
3	00	301	CLA	C4D-CHA-C1A	-3.56	116.92	121.25
3	1S	309	CLA	CMC-C2C-C1C	3.55	130.45	125.04
3	1S	311	CLA	CMC-C2C-C1C	3.55	130.45	125.04
8	1G	617	XAT	C26-C27-C28	-3.54	118.50	125.99
4	1N	605	CHL	C3B-C4B-NB	3.54	113.80	110.52
3	1N	610	CLA	C1C-C2C-C3C	-3.53	103.25	106.96
3	1G	611	CLA	C1D-CHD-C4C	-3.53	118.45	126.06
3	00	319	CLA	C1C-C2C-C3C	-3.52	103.26	106.96
5	00	313	LUT	C19-C9-C10	-3.52	118.00	122.92
4	1N	607	CHL	C3D-C4D-ND	3.51	115.92	110.24
3	1G	612	CLA	CHC-C1C-C2C	-3.51	116.98	126.73
3	00	310	CLA	CHB-C4A-NA	3.51	129.36	124.51
3	1N	611	CLA	CHB-C4A-NA	3.51	129.36	124.51
3	00	301	CLA	C5-C3-C2	-3.50	114.03	121.12
3	00	312	CLA	CHC-C1C-C2C	-3.50	117.00	126.73
3	1G	614	CLA	CHC-C1C-C2C	-3.50	117.00	126.73
4	1N	606	CHL	C2A-C1A-CHA	-3.50	117.74	123.86
3	00	303	CLA	CHC-C1C-C2C	-3.50	117.02	126.73
3	1S	314	CLA	CHC-C1C-C2C	-3.50	117.02	126.73
3	1G	603	CLA	CHB-C4A-NA	3.49	129.34	124.51
3	1N	603	CLA	CHC-C1C-C2C	-3.49	117.03	126.73
3	1S	310	CLA	C4A-NA-C1A	3.49	108.28	106.71
3	1S	309	CLA	CHB-C4A-NA	3.49	129.34	124.51
3	1N	613	CLA	CAC-C3C-C4C	3.49	129.34	124.81
5	00	314	LUT	C35-C15-C14	3.49	130.62	123.47
3	1G	604	CLA	CHC-C1C-C2C	-3.48	117.06	126.73
3	1G	603	CLA	CMC-C2C-C1C	3.48	130.34	125.04
5	1G	615	LUT	C35-C15-C14	3.48	130.61	123.47
3	1S	314	CLA	CHB-C4A-NA	3.48	129.33	124.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
4	1N	608	CHL	C3B-C4B-NB	3.48	113.74	110.52
3	1N	614	CLA	CMD-C2D-C3D	-3.48	119.61	127.61
3	1N	613	CLA	CHC-C1C-C2C	-3.48	117.06	126.73
3	1N	612	CLA	CMC-C2C-C1C	3.48	130.34	125.04
4	1S	307	CHL	C3D-C4D-ND	3.48	115.86	110.24
3	1S	308	CLA	CHC-C1C-C2C	-3.47	117.10	126.73
3	1S	312	CLA	CHB-C4A-NA	3.47	129.31	124.51
3	00	310	CLA	CMC-C2C-C1C	3.47	130.32	125.04
3	00	309	CLA	CMC-C2C-C1C	3.46	130.31	125.04
5	1G	616	LUT	C39-C29-C28	3.45	123.51	118.08
3	1G	602	CLA	CHB-C4A-NA	3.45	129.28	124.51
3	1N	611	CLA	CHC-C1C-C2C	-3.45	117.16	126.73
3	1G	611	CLA	C4D-CHA-C1A	-3.45	117.06	121.25
3	00	302	CLA	CHC-C1C-C2C	-3.44	117.17	126.73
3	1G	613	CLA	CHC-C1C-C2C	-3.44	117.18	126.73
5	1G	616	LUT	C39-C29-C30	-3.44	118.11	122.92
3	00	310	CLA	CHC-C1C-C2C	-3.43	117.19	126.73
3	1N	613	CLA	CHB-C4A-NA	3.43	129.26	124.51
3	1S	311	CLA	CHB-C4A-NA	3.43	129.26	124.51
4	00	305	CHL	CAC-C3C-C4C	3.43	129.26	124.81
4	00	307	CHL	C3D-C4D-ND	3.43	115.78	110.24
3	1S	304	CLA	CHC-C1C-C2C	-3.41	117.25	126.73
3	1N	614	CLA	CHB-C4A-NA	3.41	129.23	124.51
3	1N	602	CLA	C1D-CHD-C4C	-3.41	118.71	126.06
4	1G	608	CHL	C2A-C1A-CHA	-3.41	117.90	123.86
5	00	314	LUT	C15-C35-C34	3.41	130.45	123.47
3	00	303	CLA	CHB-C4A-NA	3.41	129.22	124.51
3	1N	603	CLA	CMC-C2C-C1C	3.39	130.21	125.04
3	1S	311	CLA	CAC-C3C-C4C	3.39	129.21	124.81
4	1N	606	CHL	CHB-C1B-NB	-3.39	120.67	124.26
3	1S	308	CLA	CHB-C4A-NA	3.39	129.19	124.51
3	00	319	CLA	CHB-C4A-NA	3.38	129.19	124.51
4	1S	307	CHL	OMC-CMC-C2C	-3.38	118.04	125.69
3	1N	610	CLA	CHB-C4A-NA	3.38	129.19	124.51
4	1N	609	CHL	C2A-C1A-CHA	-3.38	117.95	123.86
4	1G	609	CHL	C2A-C1A-CHA	-3.38	117.95	123.86
4	1G	601	CHL	CAC-C3C-C4C	3.38	129.19	124.81
4	1N	608	CHL	CAC-C3C-C4C	3.37	129.19	124.81
3	1G	611	CLA	C4A-NA-C1A	3.36	108.22	106.71
4	1N	601	CHL	C3D-C4D-ND	3.36	115.67	110.24
3	1G	603	CLA	CHC-C1C-C2C	-3.36	117.41	126.73
4	1G	607	CHL	CAC-C3C-C4C	3.35	129.16	124.81

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	1S	303	CLA	C2D-C1D-ND	3.35	112.58	110.10
8	1G	617	XAT	C30-C31-C32	3.35	133.68	123.22
3	1G	602	CLA	C4D-CHA-C1A	-3.35	117.18	121.25
3	1S	312	CLA	CMD-C2D-C3D	-3.34	119.93	127.61
8	1G	617	XAT	C18-C5-C4	3.34	118.03	114.28
5	1N	615	LUT	C19-C9-C8	3.34	123.33	118.08
4	00	307	CHL	CAC-C3C-C4C	3.33	129.14	124.81
4	1N	601	CHL	CHB-C1B-NB	-3.33	120.73	124.26
3	00	319	CLA	C4C-C3C-C2C	-3.33	102.04	106.90
3	1S	311	CLA	CHC-C1C-C2C	-3.33	117.48	126.73
3	1G	610	CLA	CHB-C4A-NA	3.33	129.12	124.51
3	1G	610	CLA	O2A-CGA-CBA	3.33	122.36	111.91
3	1S	310	CLA	C4C-C3C-C2C	-3.33	102.05	106.90
3	00	302	CLA	CMD-C2D-C3D	-3.33	119.96	127.61
4	00	304	CHL	CAC-C3C-C4C	3.32	129.12	124.81
3	1N	614	CLA	CAC-C3C-C4C	3.32	129.12	124.81
4	1G	605	CHL	C2A-C1A-CHA	-3.32	118.06	123.85
3	1N	604	CLA	CHC-C1C-C2C	-3.32	117.51	126.73
4	1G	606	CHL	CMB-C2B-C1B	3.32	130.42	125.37
3	00	302	CLA	C2D-C1D-ND	3.32	112.55	110.10
3	1N	602	CLA	CHB-C4A-NA	3.32	129.10	124.51
3	1N	614	CLA	CHC-C1C-C2C	-3.31	117.55	126.73
3	1G	614	CLA	CMC-C2C-C1C	3.30	130.06	125.04
3	1S	311	CLA	C2D-C1D-ND	3.29	112.53	110.10
3	1N	604	CLA	CHB-C4A-NA	3.29	129.07	124.51
8	1G	617	XAT	C11-C12-C13	-3.29	117.16	126.42
5	1S	315	LUT	C39-C29-C28	3.29	123.27	118.08
3	00	310	CLA	C2A-C1A-CHA	-3.29	118.11	123.86
4	1N	601	CHL	CAC-C3C-C4C	3.28	129.07	124.81
3	00	303	CLA	CMC-C2C-C1C	3.28	130.03	125.04
3	00	319	CLA	CHC-C1C-C2C	-3.28	117.62	126.73
4	1S	302	CHL	C2A-C1A-CHA	-3.28	118.13	123.86
3	00	310	CLA	C2D-C1D-ND	3.27	112.52	110.10
5	1S	315	LUT	C35-C15-C14	3.27	130.18	123.47
3	00	312	CLA	CMD-C2D-C3D	-3.27	120.09	127.61
4	00	304	CHL	CHB-C4A-NA	3.27	129.04	124.51
4	00	308	CHL	C2A-C1A-CHA	-3.27	118.14	123.86
3	00	301	CLA	C1D-CHD-C4C	-3.27	119.00	126.06
4	1G	601	CHL	C2A-C1A-CHA	-3.27	118.14	123.86
3	1S	313	CLA	C4D-CHA-C1A	-3.27	117.27	121.25
3	1G	611	CLA	C4C-C3C-C2C	-3.27	102.14	106.90
3	1S	304	CLA	CMC-C2C-C1C	3.27	130.01	125.04

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	1G	602	CLA	C3B-C4B-NB	3.26	113.54	110.52
3	1G	611	CLA	CMC-C2C-C1C	3.25	129.99	125.04
3	00	319	CLA	C1D-CHD-C4C	-3.25	119.05	126.06
3	1S	311	CLA	C2A-C1A-CHA	-3.25	118.18	123.86
3	1S	314	CLA	C2D-C1D-ND	3.25	112.50	110.10
3	00	302	CLA	CAC-C3C-C4C	3.24	129.02	124.81
3	1G	604	CLA	CMC-C2C-C1C	3.24	129.98	125.04
3	1S	308	CLA	C2D-C1D-ND	3.24	112.49	110.10
3	1S	303	CLA	C1C-C2C-C3C	-3.24	103.55	106.96
3	00	309	CLA	CHC-C1C-C2C	-3.24	117.74	126.73
3	1N	611	CLA	C2D-C1D-ND	3.23	112.49	110.10
3	1N	611	CLA	CMC-C2C-C1C	3.23	129.95	125.04
3	1G	613	CLA	C2D-C1D-ND	3.22	112.48	110.10
3	1S	312	CLA	CHC-C1C-C2C	-3.22	117.78	126.73
4	1G	606	CHL	C2A-C1A-CHA	-3.22	118.23	123.86
4	1N	608	CHL	C2A-C1A-CHA	-3.22	118.23	123.86
3	1N	612	CLA	C1D-CHD-C4C	-3.22	119.12	126.06
3	1N	613	CLA	C1D-CHD-C4C	-3.21	119.13	126.06
3	1S	310	CLA	C4D-CHA-C1A	-3.21	117.35	121.25
4	00	306	CHL	C2A-C1A-CHA	-3.20	118.26	123.86
3	1G	613	CLA	CAC-C3C-C4C	3.20	128.96	124.81
3	1S	308	CLA	C4C-C3C-C2C	-3.19	102.25	106.90
4	1S	305	CHL	C2A-C1A-CHA	-3.19	118.28	123.86
4	1N	605	CHL	C2A-C1A-CHA	-3.19	118.28	123.85
4	1S	306	CHL	C2A-C1A-CHA	-3.19	118.28	123.85
4	1S	302	CHL	C3B-C4B-NB	3.19	113.47	110.52
3	1N	603	CLA	O2A-CGA-CBA	3.19	121.91	111.91
3	00	312	CLA	CAC-C3C-C4C	3.18	128.94	124.81
3	1G	610	CLA	CHC-C1C-C2C	-3.18	117.89	126.73
4	1N	605	CHL	CMB-C2B-C1B	3.18	130.21	125.37
4	1N	601	CHL	C2A-C1A-CHA	-3.18	118.30	123.86
3	1N	613	CLA	CMC-C2C-C1C	3.18	129.88	125.04
3	1S	311	CLA	C1D-CHD-C4C	-3.18	119.21	126.06
3	00	310	CLA	O2A-CGA-CBA	3.17	121.87	111.91
8	1G	617	XAT	C38-C25-C24	3.17	117.85	114.28
3	1N	603	CLA	C2D-C1D-ND	3.17	112.44	110.10
3	1N	602	CLA	C4C-C3C-C2C	-3.17	102.28	106.90
3	1G	603	CLA	C2D-C1D-ND	3.17	112.44	110.10
4	00	304	CHL	CHB-C1B-NB	-3.16	120.91	124.26
3	1G	613	CLA	O2D-CGD-O1D	-3.16	117.66	123.84
8	1G	617	XAT	C4-C3-C2	-3.16	104.67	110.77
3	1N	613	CLA	C4C-C3C-C2C	-3.16	102.30	106.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	1S	303	CLA	C1D-CHD-C4C	-3.15	119.26	126.06
3	1G	610	CLA	C2D-C1D-ND	3.15	112.42	110.10
3	00	310	CLA	C1D-CHD-C4C	-3.15	119.27	126.06
5	1S	315	LUT	C20-C13-C14	-3.14	118.52	122.92
3	1G	613	CLA	C4C-C3C-C2C	-3.14	102.32	106.90
3	1N	604	CLA	C2A-C1A-CHA	-3.14	118.37	123.86
3	1N	603	CLA	CHB-C1B-NB	-3.14	120.93	124.26
8	1G	619	XAT	C11-C12-C13	-3.14	117.59	126.42
3	1G	604	CLA	CHB-C4A-NA	3.14	128.85	124.51
3	1N	612	CLA	C2D-C1D-ND	3.14	112.42	110.10
3	00	301	CLA	CHB-C4A-NA	3.14	128.85	124.51
3	00	302	CLA	CMC-C2C-C1C	3.14	129.82	125.04
5	1G	616	LUT	C15-C14-C13	3.14	131.78	127.31
3	1N	604	CLA	CMD-C2D-C3D	-3.13	120.40	127.61
8	1G	619	XAT	C15-C14-C13	-3.13	122.84	127.31
3	00	311	CLA	C4C-C3C-C2C	-3.13	102.33	106.90
3	1S	312	CLA	C2A-C1A-CHA	-3.13	118.38	123.86
4	1S	305	CHL	CMD-C2D-C3D	-3.13	120.42	127.61
3	00	309	CLA	CMD-C2D-C3D	-3.13	120.42	127.61
3	1N	614	CLA	C2D-C1D-ND	3.13	112.41	110.10
4	00	306	CHL	CMB-C2B-C1B	3.13	130.13	125.37
3	00	309	CLA	C5-C3-C2	-3.13	114.79	121.12
5	1S	315	LUT	C15-C35-C34	3.13	129.88	123.47
3	1N	611	CLA	C4C-C3C-C2C	-3.12	102.35	106.90
3	1S	303	CLA	C4C-C3C-C2C	-3.12	102.35	106.90
3	1G	614	CLA	C2D-C1D-ND	3.12	112.40	110.10
3	00	301	CLA	CHC-C1C-C2C	-3.11	118.08	126.73
3	1N	602	CLA	CHC-C1C-C2C	-3.11	118.09	126.73
3	1S	304	CLA	C2D-C1D-ND	3.11	112.40	110.10
3	1N	614	CLA	CMC-C2C-C1C	3.11	129.78	125.04
8	1G	619	XAT	C7-C8-C9	-3.11	120.71	125.53
3	1S	312	CLA	CMC-C2C-C1C	3.10	129.76	125.04
4	1N	605	CHL	CAC-C3C-C4C	3.10	128.83	124.81
3	1N	614	CLA	C4C-C3C-C2C	-3.10	102.38	106.90
4	1S	307	CHL	C2A-C1A-CHA	-3.09	118.45	123.86
3	1G	603	CLA	CMD-C2D-C3D	-3.09	120.50	127.61
4	1N	601	CHL	C1-C2-C3	-3.09	120.70	126.04
3	1G	613	CLA	CMC-C2C-C1C	3.09	129.75	125.04
4	1N	607	CHL	C2A-C1A-CHA	-3.09	118.46	123.86
3	1S	309	CLA	C4C-C3C-C2C	-3.09	102.39	106.90
3	1S	309	CLA	C1D-CHD-C4C	-3.08	119.42	126.06
4	00	307	CHL	C1-C2-C3	-3.08	120.72	126.04

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
4	00	306	CHL	CHB-C4A-NA	3.08	128.76	124.51
3	1S	314	CLA	C4C-C3C-C2C	-3.08	102.42	106.90
4	1N	605	CHL	CHB-C4A-NA	3.07	128.76	124.51
3	1S	310	CLA	CMC-C2C-C1C	3.07	129.72	125.04
3	1S	313	CLA	CMD-C2D-C3D	-3.07	120.55	127.61
3	1G	614	CLA	C1D-CHD-C4C	-3.07	119.44	126.06
3	00	312	CLA	C2D-C1D-ND	3.07	112.36	110.10
3	1G	614	CLA	C4C-C3C-C2C	-3.07	102.43	106.90
3	1S	311	CLA	CMB-C2B-C1B	3.07	130.04	125.37
4	00	307	CHL	O2A-CGA-CBA	3.06	121.52	111.91
3	1S	312	CLA	C4C-C3C-C2C	-3.06	102.43	106.90
4	00	304	CHL	CMB-C2B-C1B	3.06	130.03	125.37
3	1N	610	CLA	CHC-C1C-C2C	-3.06	118.24	126.73
4	1S	307	CHL	CHB-C1B-NB	-3.05	121.03	124.26
3	1N	610	CLA	C1D-CHD-C4C	-3.05	119.48	126.06
4	00	308	CHL	CMB-C2B-C1B	3.05	130.01	125.37
4	1G	606	CHL	CHB-C1B-NB	-3.04	121.04	124.26
3	1N	610	CLA	C4C-C3C-C2C	-3.04	102.47	106.90
5	1S	316	LUT	C40-C33-C34	-3.04	118.67	122.92
3	1G	604	CLA	CMD-C2D-C3D	-3.04	120.63	127.61
3	00	311	CLA	CMC-C2C-C1C	3.04	129.66	125.04
3	00	303	CLA	CMD-C2D-C3D	-3.03	120.64	127.61
3	1S	303	CLA	CHC-C4B-NB	-3.03	121.05	124.26
3	1N	611	CLA	C1D-CHD-C4C	-3.03	119.53	126.06
8	1G	617	XAT	C6-C7-C8	-3.03	119.59	125.99
3	1S	304	CLA	C4C-C3C-C2C	-3.03	102.49	106.90
5	00	314	LUT	C20-C13-C14	-3.03	118.69	122.92
3	1G	603	CLA	O2A-CGA-CBA	3.02	121.40	111.91
4	1G	609	CHL	C1-C2-C3	-3.02	120.82	126.04
3	1N	603	CLA	C1D-CHD-C4C	-3.02	119.55	126.06
3	1G	613	CLA	C1D-CHD-C4C	-3.01	119.55	126.06
3	1G	602	CLA	C2A-C1A-CHA	-3.01	118.59	123.86
3	1N	611	CLA	CMD-C2D-C3D	-3.01	120.68	127.61
4	00	308	CHL	CHB-C1B-NB	-3.01	121.07	124.26
3	1N	604	CLA	CAC-C3C-C4C	3.01	128.72	124.81
5	1S	315	LUT	C40-C33-C34	-3.01	118.71	122.92
4	00	305	CHL	CHB-C1B-NB	-3.01	121.07	124.26
3	1G	602	CLA	C4C-C3C-C2C	-3.01	102.51	106.90
4	1S	302	CHL	CMB-C2B-C1B	3.01	129.95	125.37
3	1G	602	CLA	CHC-C1C-C2C	-3.01	118.38	126.73
3	1S	308	CLA	C1D-CHD-C4C	-3.01	119.57	126.06
4	1G	605	CHL	CHB-C1B-NB	-3.00	121.08	124.26

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	1G	603	CLA	C4C-C3C-C2C	-3.00	102.52	106.90
3	1G	603	CLA	C1D-CHD-C4C	-3.00	119.58	126.06
3	00	301	CLA	C4C-C3C-C2C	-2.99	102.53	106.90
5	1G	615	LUT	C20-C13-C14	-2.99	118.73	122.92
4	1G	601	CHL	CHB-C1B-NB	-2.99	121.09	124.26
3	00	302	CLA	C1D-CHD-C4C	-2.98	119.62	126.06
4	00	305	CHL	CMD-C2D-C3D	-2.98	120.75	127.61
3	1S	304	CLA	C1D-CHD-C4C	-2.98	119.62	126.06
4	1G	607	CHL	C2A-C1A-CHA	-2.98	118.64	123.86
3	00	311	CLA	CMD-C2D-C3D	-2.98	120.76	127.61
3	1G	602	CLA	C2D-C1D-ND	2.98	112.30	110.10
5	1G	616	LUT	C40-C33-C34	-2.98	118.75	122.92
3	1N	602	CLA	O2A-CGA-CBA	2.97	121.24	111.91
4	1N	607	CHL	CHB-C1B-NB	-2.97	121.11	124.26
3	1S	311	CLA	C4C-C3C-C2C	-2.97	102.57	106.90
4	1S	306	CHL	CHB-C1B-NB	-2.96	121.12	124.26
3	1G	610	CLA	CMD-C2D-C3D	-2.96	120.80	127.61
5	1G	615	LUT	C40-C33-C34	-2.96	118.78	122.92
4	1G	607	CHL	CHB-C1B-NB	-2.96	121.12	124.26
8	1G	619	XAT	C18-C5-C4	2.96	117.61	114.28
3	1S	314	CLA	C1D-CHD-C4C	-2.95	119.69	126.06
3	1N	610	CLA	C2A-C1A-CHA	-2.95	118.70	123.85
3	1S	308	CLA	CMD-C2D-C3D	-2.95	120.83	127.61
3	00	312	CLA	C1D-CHD-C4C	-2.95	119.70	126.06
3	00	309	CLA	C4C-C3C-C2C	-2.94	102.61	106.90
3	00	310	CLA	CMD-C2D-C3D	-2.94	120.85	127.61
3	1G	604	CLA	C1D-CHD-C4C	-2.94	119.71	126.06
4	1N	605	CHL	CHB-C1B-NB	-2.94	121.14	124.26
3	1G	612	CLA	CMC-C2C-C1C	2.94	129.52	125.04
4	00	306	CHL	CHB-C1B-NB	-2.94	121.15	124.26
3	1S	304	CLA	CMD-C2D-C3D	-2.94	120.86	127.61
3	1N	612	CLA	C4C-C3C-C2C	-2.93	102.62	106.90
4	1S	302	CHL	OMC-CMC-C2C	-2.93	119.05	125.69
3	00	301	CLA	C2A-C1A-CHA	-2.93	118.73	123.86
8	1G	619	XAT	C38-C25-C24	2.93	117.58	114.28
8	1G	617	XAT	C27-C28-C29	-2.93	120.98	125.53
3	00	311	CLA	C4A-NA-C1A	2.93	108.02	106.71
4	1G	609	CHL	OMC-CMC-C2C	-2.92	119.08	125.69
3	1G	612	CLA	C4C-C3C-C2C	-2.92	102.64	106.90
3	1S	314	CLA	CMD-C2D-C3D	-2.92	120.89	127.61
3	1S	304	CLA	C2A-C1A-CHA	-2.92	118.75	123.86
5	00	313	LUT	C35-C15-C14	2.92	129.45	123.47

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	00	302	CLA	C4C-C3C-C2C	-2.91	102.65	106.90
3	1G	604	CLA	C2D-C1D-ND	2.91	112.25	110.10
5	00	313	LUT	C20-C13-C14	-2.91	118.84	122.92
3	1N	614	CLA	C1D-CHD-C4C	-2.91	119.78	126.06
3	1G	613	CLA	CMD-C2D-C3D	-2.91	120.92	127.61
3	1S	308	CLA	CMC-C2C-C1C	2.90	129.46	125.04
5	1G	615	LUT	C32-C33-C34	2.90	123.39	118.94
3	1S	312	CLA	C1D-CHD-C4C	-2.90	119.80	126.06
3	1G	604	CLA	C2A-C1A-CHA	-2.90	118.79	123.85
4	1N	607	CHL	CMB-C2B-C1B	2.90	129.78	125.37
3	1G	602	CLA	O2A-CGA-CBA	2.90	121.00	111.91
5	00	313	LUT	C40-C33-C34	-2.90	118.86	122.92
4	1G	607	CHL	CMB-C2B-C1B	2.90	129.78	125.37
3	1N	604	CLA	C4C-C3C-C2C	-2.90	102.68	106.90
3	1S	309	CLA	C2D-C1D-ND	2.90	112.24	110.10
4	1S	306	CHL	CHB-C4A-NA	2.89	128.51	124.51
3	1G	610	CLA	C1D-CHD-C4C	-2.89	119.82	126.06
3	1G	612	CLA	CMD-C2D-C3D	-2.89	120.97	127.61
4	1G	609	CHL	CHB-C4A-NA	2.89	128.51	124.51
3	1N	603	CLA	CMD-C2D-C3D	-2.89	120.97	127.61
3	1G	610	CLA	C4C-C3C-C2C	-2.89	102.69	106.90
4	00	308	CHL	C4-C3-C5	2.88	120.12	115.27
4	1N	601	CHL	CMB-C2B-C1B	2.88	129.75	125.37
4	1N	607	CHL	CHB-C4A-NA	2.88	128.49	124.51
4	00	307	CHL	CHB-C4A-NA	2.88	128.49	124.51
4	1N	601	CHL	CMD-C2D-C3D	-2.87	121.01	127.61
4	1S	307	CHL	CMB-C2B-C1B	2.87	129.74	125.37
3	1S	303	CLA	CHC-C1C-C2C	-2.87	118.76	126.73
5	1S	316	LUT	C39-C29-C28	2.87	122.60	118.08
3	1N	610	CLA	C2D-C1D-ND	2.87	112.22	110.10
8	1G	619	XAT	C39-C29-C30	-2.86	118.91	122.92
3	00	310	CLA	C4C-C3C-C2C	-2.86	102.72	106.90
3	1G	602	CLA	CHB-C1B-NB	-2.86	121.23	124.26
4	1G	606	CHL	CHB-C4A-NA	2.86	128.47	124.51
4	00	307	CHL	CHB-C1B-NB	-2.86	121.23	124.26
3	1G	614	CLA	CMD-C2D-C3D	-2.86	121.05	127.61
3	1S	304	CLA	CHB-C4A-NA	2.85	128.46	124.51
4	1N	607	CHL	C4-C3-C5	2.85	120.07	115.27
4	1G	608	CHL	CMD-C2D-C3D	-2.85	121.06	127.61
3	1N	602	CLA	C2A-C1A-CHA	-2.85	118.88	123.86
4	1G	601	CHL	CMD-C2D-C3D	-2.85	121.06	127.61
3	1G	604	CLA	C4C-C3C-C2C	-2.85	102.75	106.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
4	1G	609	CHL	CMB-C2B-C1B	2.84	129.70	125.37
4	1S	307	CHL	CHB-C4A-NA	2.84	128.44	124.51
3	00	303	CLA	C1D-CHD-C4C	-2.84	119.93	126.06
4	1G	601	CHL	CMB-C2B-C1B	2.84	129.70	125.37
3	00	303	CLA	C2A-C1A-CHA	-2.84	118.89	123.86
3	1G	613	CLA	O1D-CGD-CBD	-2.84	118.68	124.48
4	1G	609	CHL	O2A-CGA-CBA	2.83	120.80	111.91
4	1N	609	CHL	CHB-C4A-NA	2.83	128.43	124.51
3	1N	604	CLA	C1D-CHD-C4C	-2.83	119.95	126.06
4	00	308	CHL	CHB-C4A-NA	2.83	128.43	124.51
4	1N	608	CHL	CMB-C2B-C1B	2.83	129.68	125.37
4	1N	609	CHL	C1-C2-C3	-2.83	121.15	126.04
4	1S	302	CHL	CHB-C4A-NA	2.83	128.42	124.51
4	1G	609	CHL	CHB-C1B-NB	-2.83	121.27	124.26
3	00	319	CLA	C2A-C1A-CHA	-2.83	118.92	123.86
3	00	309	CLA	C1D-CHD-C4C	-2.82	119.96	126.06
3	1N	612	CLA	CMD-C2D-C3D	-2.82	121.12	127.61
4	1S	306	CHL	CMB-C2B-C1B	2.82	129.67	125.37
3	1S	303	CLA	CMB-C2B-C3B	2.82	133.42	126.59
8	1G	617	XAT	C20-C13-C14	-2.82	118.97	122.92
4	1G	605	CHL	CHB-C4A-NA	2.82	128.41	124.51
4	1N	601	CHL	CHB-C4A-NA	2.82	128.41	124.51
4	00	307	CHL	CMD-C2D-C3D	-2.82	121.14	127.61
3	1S	310	CLA	CMD-C2D-C3D	-2.81	121.14	127.61
4	1G	605	CHL	CMB-C2B-C1B	2.81	129.65	125.37
4	1S	306	CHL	CMD-C2D-C3D	-2.81	121.15	127.61
5	1G	616	LUT	C20-C13-C14	-2.81	118.99	122.92
4	1N	607	CHL	CMD-C2D-C3D	-2.81	121.15	127.61
4	1G	609	CHL	C4-C3-C5	2.81	120.00	115.27
4	1G	607	CHL	O2A-CGA-CBA	2.81	120.72	111.91
3	1N	603	CLA	C4C-C3C-C2C	-2.81	102.81	106.90
3	1S	309	CLA	C3B-C4B-NB	2.80	113.12	110.52
3	1G	612	CLA	C1D-CHD-C4C	-2.80	120.01	126.06
3	00	301	CLA	O2A-CGA-CBA	2.80	120.70	111.91
5	00	314	LUT	C40-C33-C34	-2.79	119.01	122.92
4	1G	606	CHL	CMD-C2D-C3D	-2.79	121.20	127.61
3	1S	314	CLA	C2A-C1A-CHA	-2.79	118.98	123.86
3	1G	602	CLA	C1D-CHD-C4C	-2.79	120.05	126.06
4	1N	605	CHL	CMD-C2D-C3D	-2.78	121.21	127.61
3	00	311	CLA	CAC-C3C-C4C	2.78	128.41	124.81
5	00	314	LUT	C39-C29-C28	2.78	122.45	118.08
3	00	310	CLA	C1-O2A-CGA	2.78	123.73	116.44

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
4	00	304	CHL	CMD-C2D-C3D	-2.78	121.23	127.61
4	1G	605	CHL	CMD-C2D-C3D	-2.77	121.24	127.61
3	1S	303	CLA	C2A-C1A-CHA	-2.77	119.02	123.85
3	1S	309	CLA	CMD-C2D-C3D	-2.77	121.24	127.61
4	00	306	CHL	C4-C3-C5	2.77	119.92	115.27
4	1N	607	CHL	C1-C2-C3	-2.77	121.26	126.04
5	1N	615	LUT	C15-C35-C34	2.77	129.14	123.47
3	1G	610	CLA	C2A-C1A-CHA	-2.77	119.02	123.86
4	1G	607	CHL	CMD-C2D-C3D	-2.76	121.26	127.61
3	1N	614	CLA	C2A-C1A-CHA	-2.76	119.03	123.85
3	1N	613	CLA	C2D-C1D-ND	2.76	112.14	110.10
4	1N	608	CHL	CMD-C2D-C3D	-2.76	121.27	127.61
4	1N	608	CHL	CHB-C1B-NB	-2.76	121.34	124.26
3	1S	309	CLA	C4-C3-C2	-2.76	116.61	123.68
5	1S	316	LUT	C20-C13-C14	-2.76	119.06	122.92
3	1S	311	CLA	CMD-C2D-C3D	-2.75	121.29	127.61
3	00	309	CLA	C2D-C1D-ND	2.75	112.13	110.10
4	00	306	CHL	CMD-C2D-C3D	-2.75	121.29	127.61
3	1S	311	CLA	C1-C2-C3	-2.75	121.29	126.04
3	00	302	CLA	C2A-C1A-CHA	-2.74	119.06	123.86
4	1S	307	CHL	CMD-C2D-C3D	-2.74	121.31	127.61
4	1N	608	CHL	CHB-C4A-NA	2.74	128.30	124.51
4	1G	607	CHL	C4-C3-C5	2.74	119.88	115.27
8	1G	617	XAT	C12-C13-C14	2.74	123.14	118.94
4	1N	609	CHL	C4-C3-C5	2.74	119.87	115.27
3	1N	604	CLA	CMC-C2C-C1C	2.73	129.20	125.04
3	1N	612	CLA	C3B-C4B-NB	2.73	113.05	110.52
4	1G	601	CHL	CHB-C4A-NA	2.73	128.28	124.51
5	1N	615	LUT	C39-C29-C28	2.73	122.37	118.08
3	1G	612	CLA	CHB-C1B-NB	-2.72	121.37	124.26
3	1S	309	CLA	O2D-CGD-O1D	-2.72	118.52	123.84
3	00	312	CLA	C3B-C4B-NB	2.72	113.03	110.52
5	1S	315	LUT	C12-C13-C14	2.72	123.11	118.94
4	00	307	CHL	C2A-C1A-CHA	-2.72	119.11	123.86
4	00	308	CHL	CMD-C2D-C3D	-2.72	121.37	127.61
4	00	308	CHL	C11-C10-C8	-2.71	107.16	115.92
4	1N	601	CHL	O2A-CGA-CBA	2.71	120.41	111.91
4	00	308	CHL	C1-C2-C3	-2.70	121.37	126.04
4	1G	601	CHL	O2A-CGA-CBA	2.70	120.39	111.91
4	1G	608	CHL	CMB-C2B-C1B	2.70	129.49	125.37
3	1G	612	CLA	C2D-C1D-ND	2.70	112.09	110.10
3	00	311	CLA	O2D-CGD-O1D	-2.70	118.56	123.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
4	1S	302	CHL	CMD-C2D-C3D	-2.70	121.41	127.61
3	00	303	CLA	C4C-C3C-C2C	-2.70	102.97	106.90
3	1N	613	CLA	CMB-C2B-C1B	2.69	129.47	125.37
3	1G	602	CLA	CMD-C2D-C3D	-2.69	121.42	127.61
4	1N	606	CHL	CMD-C2D-C3D	-2.69	121.42	127.61
3	00	312	CLA	C2A-C1A-CHA	-2.69	119.16	123.86
3	1S	310	CLA	O2A-CGA-CBA	2.69	120.34	111.91
4	1G	607	CHL	CMA-C3A-C4A	-2.69	104.55	111.77
3	00	303	CLA	C2D-C1D-ND	2.69	112.08	110.10
3	1N	610	CLA	CMD-C2D-C3D	-2.68	121.45	127.61
3	1S	313	CLA	C4C-C3C-C2C	-2.68	103.00	106.90
4	1N	609	CHL	CMD-C2D-C3D	-2.68	121.46	127.61
3	1N	604	CLA	C2D-C1D-ND	2.67	112.07	110.10
3	00	309	CLA	O2A-CGA-CBA	2.67	120.29	111.91
4	1N	607	CHL	O2A-CGA-CBA	2.67	120.28	111.91
5	1G	615	LUT	C39-C29-C28	2.67	122.28	118.08
3	1N	604	CLA	O2A-CGA-CBA	2.66	120.27	111.91
3	00	312	CLA	C4C-C3C-C2C	-2.66	103.02	106.90
5	1N	615	LUT	C20-C13-C14	-2.66	119.20	122.92
5	1G	616	LUT	C32-C33-C34	2.66	123.02	118.94
4	1G	609	CHL	CMD-C2D-C3D	-2.66	121.50	127.61
4	1S	305	CHL	CHB-C4A-NA	2.65	128.18	124.51
3	1S	308	CLA	O2A-CGA-CBA	2.65	120.23	111.91
3	1N	602	CLA	CMD-C2D-C3D	-2.65	121.53	127.61
4	1N	601	CHL	C1C-C2C-C3C	-2.64	105.02	107.11
3	1N	613	CLA	C2A-C1A-CHA	-2.64	119.25	123.86
4	00	304	CHL	C2A-C1A-CHA	-2.64	119.25	123.86
4	1G	608	CHL	CHB-C4A-NA	2.63	128.16	124.51
4	00	305	CHL	CHB-C4A-NA	2.63	128.15	124.51
3	1S	303	CLA	C3B-C4B-NB	2.63	112.95	110.52
3	1G	612	CLA	C4D-CHA-C1A	-2.62	118.06	121.25
3	1S	311	CLA	C4-C3-C5	2.62	119.68	115.27
3	00	311	CLA	C4-C3-C5	2.62	119.67	115.27
7	1S	301	LHG	O7-C7-O9	-2.61	117.38	123.70
5	1S	316	LUT	C31-C30-C29	2.61	131.04	127.31
4	1G	608	CHL	CHB-C1B-NB	-2.61	121.49	124.26
3	1S	312	CLA	O2A-CGA-CBA	2.61	120.09	111.91
8	1G	617	XAT	C7-C8-C9	-2.60	121.49	125.53
3	1G	612	CLA	C2A-C1A-CHA	-2.60	119.31	123.86
4	00	306	CHL	O2A-CGA-CBA	2.60	120.07	111.91
7	00	317	LHG	O7-C7-O9	-2.60	117.41	123.70
3	00	302	CLA	C3B-C4B-NB	2.60	112.93	110.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
5	00	313	LUT	C39-C29-C28	2.60	122.17	118.08
4	00	304	CHL	O2A-CGA-CBA	2.60	120.06	111.91
5	1G	616	LUT	C8-C9-C10	2.59	122.91	118.94
3	1G	614	CLA	C3B-C4B-NB	2.58	112.91	110.52
3	1G	613	CLA	O2A-CGA-CBA	2.58	120.02	111.91
5	1G	616	LUT	C31-C30-C29	2.58	130.99	127.31
5	1N	615	LUT	C40-C33-C34	-2.58	119.31	122.92
4	00	305	CHL	O2A-CGA-CBA	2.58	120.00	111.91
3	00	319	CLA	CMB-C2B-C1B	2.57	129.29	125.37
3	1S	303	CLA	CMD-C2D-C3D	-2.57	121.71	127.61
3	1G	602	CLA	CHC-C4B-NB	-2.57	121.54	124.26
8	1G	619	XAT	C35-C34-C33	-2.56	123.66	127.31
4	1S	306	CHL	O2D-CGD-O1D	-2.56	118.84	123.84
3	1G	611	CLA	CMD-C2D-C3D	-2.56	121.74	127.61
4	00	307	CHL	CMB-C2B-C1B	2.55	129.26	125.37
3	1N	613	CLA	CMD-C2D-C3D	-2.55	121.76	127.61
4	1G	601	CHL	C1C-C2C-C3C	-2.54	105.09	107.11
3	1N	611	CLA	O2D-CGD-O1D	-2.54	118.86	123.84
4	00	307	CHL	C4-C3-C5	2.54	119.55	115.27
4	1N	609	CHL	C1C-C2C-C3C	-2.54	105.10	107.11
3	1S	303	CLA	CHB-C1B-NB	-2.54	121.57	124.26
3	00	319	CLA	CMD-C2D-C3D	-2.54	121.77	127.61
3	1N	611	CLA	C3B-C4B-NB	2.54	112.87	110.52
4	00	304	CHL	C1C-C2C-C3C	-2.53	105.10	107.11
3	1S	311	CLA	O2A-CGA-CBA	2.52	119.83	111.91
8	1G	617	XAT	C19-C9-C10	-2.52	119.39	122.92
3	1S	312	CLA	O2D-CGD-O1D	-2.52	118.91	123.84
3	1N	614	CLA	C3B-C4B-NB	2.52	112.85	110.52
4	1G	607	CHL	OMC-CMC-C2C	-2.51	120.00	125.69
9	1S	318	DGD	O6D-C5D-C6D	2.51	111.74	106.67
4	1N	606	CHL	C1C-C2C-C3C	-2.51	105.12	107.11
4	1N	609	CHL	O2A-CGA-CBA	2.51	119.78	111.91
3	1G	611	CLA	O2D-CGD-O1D	-2.51	118.40	124.09
4	1S	306	CHL	OMC-CMC-C2C	-2.51	120.02	125.69
3	1N	603	CLA	CHC-C4B-NB	-2.50	121.61	124.26
3	00	310	CLA	C3B-C4B-NB	2.50	112.84	110.52
4	1G	601	CHL	O2D-CGD-O1D	-2.50	118.94	123.84
4	1G	605	CHL	C1C-C2C-C3C	-2.50	105.13	107.11
4	00	308	CHL	O2A-CGA-CBA	2.50	119.74	111.91
4	1N	601	CHL	C4-C3-C5	2.49	119.46	115.27
3	1S	314	CLA	C3B-C4B-NB	2.49	112.83	110.52
3	1N	604	CLA	O2D-CGD-O1D	-2.49	118.98	123.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
4	1S	305	CHL	O2D-CGD-O1D	-2.48	118.98	123.84
4	1N	606	CHL	CHB-C4A-NA	2.48	127.94	124.51
4	1S	302	CHL	CHB-C1B-NB	-2.48	121.64	124.26
4	1S	305	CHL	CMB-C2B-C1B	2.48	129.14	125.37
5	1N	615	LUT	C35-C15-C14	2.48	128.54	123.47
4	1N	605	CHL	O2D-CGD-O1D	-2.47	119.00	123.84
3	1S	312	CLA	C2D-C1D-ND	2.47	111.93	110.10
4	1G	605	CHL	O2D-CGD-O1D	-2.47	119.01	123.84
4	1S	305	CHL	CHB-C1B-NB	-2.47	121.64	124.26
4	1G	608	CHL	OMC-CMC-C2C	-2.47	120.11	125.69
3	1S	312	CLA	CHB-C1B-C2B	-2.46	120.28	127.24
3	1N	604	CLA	C1-C2-C3	-2.46	122.77	126.75
8	1G	619	XAT	C4-C3-C2	-2.46	106.03	110.77
3	00	309	CLA	C2A-C1A-CHA	-2.46	119.56	123.86
5	1G	615	LUT	C12-C13-C14	2.45	122.71	118.94
3	00	303	CLA	O2A-CGA-CBA	2.45	119.61	111.91
4	1G	601	CHL	C4-C3-C5	2.45	119.40	115.27
3	00	302	CLA	O2D-CGD-O1D	-2.44	119.06	123.84
3	1G	614	CLA	C2A-C1A-CHA	-2.44	119.59	123.86
4	00	305	CHL	OMC-CMC-C2C	-2.44	120.17	125.69
3	00	303	CLA	CHB-C1B-NB	-2.44	121.68	124.26
5	1S	315	LUT	C19-C9-C8	2.43	121.91	118.08
3	00	302	CLA	C4-C3-C2	-2.43	117.44	123.68
4	1G	606	CHL	C1C-C2C-C3C	-2.42	105.19	107.11
3	1N	611	CLA	C2A-C1A-CHA	-2.42	119.63	123.85
3	1G	611	CLA	C3B-C4B-NB	2.42	112.76	110.52
4	1N	607	CHL	OMC-CMC-C2C	-2.41	120.24	125.69
5	1S	316	LUT	C32-C33-C34	2.41	122.64	118.94
3	00	301	CLA	CMD-C2D-C3D	-2.40	122.08	127.61
4	1N	609	CHL	CHB-C1B-NB	-2.40	121.72	124.26
3	1S	308	CLA	C2A-C1A-CHA	-2.40	119.67	123.86
3	1S	310	CLA	C3B-C4B-NB	2.39	112.73	110.52
3	1S	309	CLA	C1-C2-C3	-2.39	121.91	126.04
8	1G	619	XAT	C31-C32-C33	-2.38	119.72	126.42
3	1N	610	CLA	CHB-C1B-C2B	-2.38	120.51	127.24
4	1G	606	CHL	O2D-CGD-O1D	-2.38	119.19	123.84
3	00	309	CLA	CHB-C1B-C2B	-2.38	120.52	127.24
8	1G	619	XAT	C26-C27-C28	-2.38	120.97	125.99
3	1S	310	CLA	O2D-CGD-O1D	-2.38	119.19	123.84
3	1N	613	CLA	O2A-CGA-CBA	2.38	119.36	111.91
4	1S	307	CHL	O2D-CGD-O1D	-2.37	119.21	123.84
3	1G	610	CLA	C3B-C4B-NB	2.37	112.71	110.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
4	1N	605	CHL	OMC-CMC-C2C	-2.37	120.34	125.69
9	1S	318	DGD	O1G-C1A-C2A	2.37	119.33	111.91
3	1N	604	CLA	CHB-C1B-NB	-2.36	121.76	124.26
8	1G	617	XAT	C40-C33-C32	2.36	121.80	118.08
3	1G	613	CLA	C3B-C4B-NB	2.36	112.70	110.52
3	1S	313	CLA	O2D-CGD-O1D	-2.36	119.23	123.84
3	1G	614	CLA	O2D-CGD-O1D	-2.34	119.26	123.84
7	1S	320	LHG	O4-P-O5	2.34	119.85	110.68
3	1G	602	CLA	CMB-C2B-C3B	2.34	132.26	126.59
4	00	308	CHL	C1C-C2C-C3C	-2.34	105.26	107.11
3	1G	604	CLA	C3B-C4B-NB	2.34	112.68	110.52
4	1S	306	CHL	C1C-C2C-C3C	-2.34	105.26	107.11
4	1N	606	CHL	O2D-CGD-O1D	-2.34	119.27	123.84
3	00	319	CLA	O2A-CGA-CBA	2.33	119.22	111.91
4	00	304	CHL	O2D-CGD-O1D	-2.33	119.29	123.84
3	00	310	CLA	O2D-CGD-O1D	-2.33	119.29	123.84
3	1S	303	CLA	O2D-CGD-O1D	-2.33	119.29	123.84
3	1N	612	CLA	C4A-NA-C1A	2.32	107.75	106.71
5	1S	316	LUT	C15-C14-C13	2.32	130.63	127.31
4	00	307	CHL	C1C-C2C-C3C	-2.32	105.27	107.11
4	00	304	CHL	OMC-CMC-C2C	-2.32	120.44	125.69
4	1S	305	CHL	C1C-C2C-C3C	-2.32	105.27	107.11
5	00	313	LUT	C19-C9-C8	2.32	121.73	118.08
3	00	303	CLA	CHC-C4B-NB	-2.32	121.80	124.26
5	00	313	LUT	C11-C10-C9	2.32	130.62	127.31
5	00	314	LUT	C12-C13-C14	2.32	122.50	118.94
3	00	302	CLA	O2A-CGA-CBA	2.32	119.17	111.91
4	1N	601	CHL	OMC-CMC-C2C	-2.31	120.47	125.69
3	1N	604	CLA	CHC-C4B-NB	-2.31	121.81	124.26
4	1S	302	CHL	O2D-CGD-O1D	-2.31	119.33	123.84
3	1G	602	CLA	O2D-CGD-O1D	-2.31	119.33	123.84
3	1N	612	CLA	O2D-CGD-O1D	-2.31	119.33	123.84
3	00	301	CLA	O2D-CGD-O1D	-2.30	119.34	123.84
3	00	311	CLA	C2A-C1A-CHA	-2.30	119.84	123.86
3	1G	603	CLA	CHB-C1B-C2B	-2.29	120.77	127.24
3	00	312	CLA	O2D-CGD-O1D	-2.29	119.36	123.84
4	1N	607	CHL	CED-O2D-CGD	2.29	121.12	115.94
4	00	305	CHL	CAA-CBA-CGA	-2.29	106.56	113.25
3	1N	613	CLA	C1-C2-C3	-2.29	122.09	126.04
4	1S	302	CHL	CED-O2D-CGD	2.29	121.11	115.94
3	1N	602	CLA	C3B-C4B-NB	2.29	112.64	110.52
3	00	311	CLA	O2A-CGA-CBA	2.28	119.07	111.91

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
4	1N	609	CHL	O2D-CGD-O1D	-2.28	119.38	123.84
4	1G	607	CHL	C1-C2-C3	-2.28	122.11	126.04
3	1G	603	CLA	C2A-C1A-CHA	-2.27	119.88	123.86
3	1S	308	CLA	CHB-C1B-C2B	-2.27	120.82	127.24
3	1S	314	CLA	O2D-CGD-O1D	-2.27	119.40	123.84
5	1S	315	LUT	C32-C33-C34	2.27	122.42	118.94
4	1G	607	CHL	C1C-C2C-C3C	-2.27	105.31	107.11
4	00	305	CHL	O2D-CGD-O1D	-2.27	119.40	123.84
5	00	314	LUT	C19-C9-C8	2.27	121.65	118.08
4	1G	609	CHL	O2D-CGD-O1D	-2.27	119.41	123.84
3	1N	603	CLA	CMB-C2B-C3B	2.26	132.07	126.59
3	1G	603	CLA	O2D-CGD-O1D	-2.26	119.41	123.84
3	1G	604	CLA	O2D-CGD-O1D	-2.26	119.41	123.84
3	1S	304	CLA	C1-C2-C3	-2.26	123.09	126.75
7	1S	320	LHG	O7-C5-C6	2.26	116.57	108.40
4	00	306	CHL	OMC-CMC-C2C	-2.25	120.60	125.69
4	1N	607	CHL	C1C-C2C-C3C	-2.25	105.33	107.11
3	1N	602	CLA	O2A-CGA-O1A	-2.25	117.92	123.59
3	1G	613	CLA	C2A-C1A-CHA	-2.24	119.93	123.86
3	00	311	CLA	C3B-C4B-NB	2.24	112.60	110.52
3	1N	613	CLA	C4-C3-C5	2.24	119.04	115.27
4	1N	608	CHL	OMC-CMC-C2C	-2.24	120.63	125.69
3	00	303	CLA	O2D-CGD-O1D	-2.23	119.47	123.84
3	1S	304	CLA	CHB-C1B-C2B	-2.23	120.94	127.24
3	1N	602	CLA	O2D-CGD-O1D	-2.22	119.49	123.84
3	1S	309	CLA	C4A-NA-C1A	2.22	107.70	106.71
3	1G	612	CLA	CMB-C2B-C1B	2.22	128.75	125.37
4	00	305	CHL	C1C-C2C-C3C	-2.22	105.36	107.11
3	1S	309	CLA	CHB-C1B-C2B	-2.21	120.98	127.24
3	1G	610	CLA	CHB-C1B-C2B	-2.21	120.99	127.24
3	1S	308	CLA	O2A-CGA-O1A	-2.21	118.02	123.59
4	1G	606	CHL	OMC-CMC-C2C	-2.21	120.70	125.69
6	00	315	VIV	C12-C5-C4	-2.21	117.90	121.30
3	1N	613	CLA	C3B-C4B-NB	2.20	112.56	110.52
3	1S	308	CLA	C3B-C4B-NB	2.20	112.56	110.52
4	00	307	CHL	OMC-CMC-C2C	-2.20	120.71	125.69
4	1N	601	CHL	CED-O2D-CGD	2.20	120.92	115.94
3	1G	602	CLA	C4-C3-C5	2.20	118.97	115.27
3	1N	603	CLA	O2D-CGD-O1D	-2.20	119.54	123.84
4	1S	305	CHL	OMC-CMC-C2C	-2.19	120.72	125.69
3	1G	612	CLA	C4A-NA-C1A	2.19	107.69	106.71
8	1G	617	XAT	C8-C9-C10	2.19	122.30	118.94

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	1G	612	CLA	CHC-C4B-NB	-2.19	121.94	124.26
4	1G	608	CHL	C1C-C2C-C3C	-2.19	105.38	107.11
4	00	308	CHL	OMC-CMC-C2C	-2.19	120.74	125.69
3	00	312	CLA	CMB-C2B-C1B	2.19	128.70	125.37
3	1S	311	CLA	C3B-C4B-NB	2.18	112.54	110.52
3	1G	611	CLA	O2A-CGA-CBA	2.18	121.04	114.03
4	1N	605	CHL	CAA-C2A-C3A	-2.18	111.01	116.10
3	1G	610	CLA	CED-O2D-CGD	2.17	120.86	115.94
4	1G	608	CHL	CHC-C4B-NB	-2.17	121.95	124.26
7	1S	319	LHG	O7-C7-O9	-2.17	118.45	123.70
4	1G	608	CHL	O2D-CGD-O1D	-2.17	119.59	123.84
3	00	310	CLA	O2A-CGA-O1A	-2.17	118.11	123.59
4	1N	609	CHL	OMC-CMC-C2C	-2.17	120.78	125.69
4	1S	302	CHL	CHB-C1B-C2B	-2.17	121.11	127.24
4	00	307	CHL	O2A-CGA-O1A	-2.17	118.11	123.59
3	1N	603	CLA	C1-C2-C3	-2.17	122.29	126.04
3	1S	304	CLA	O2D-CGD-O1D	-2.17	119.60	123.84
4	00	304	CHL	CAA-C2A-C3A	-2.17	106.85	112.78
3	1S	304	CLA	C3B-C4B-NB	2.16	112.52	110.52
3	1S	312	CLA	C3B-C4B-NB	2.16	112.52	110.52
5	00	313	LUT	C32-C33-C34	2.16	122.26	118.94
3	00	309	CLA	O2A-CGA-O1A	-2.15	118.17	123.59
3	1G	610	CLA	C1-O2A-CGA	2.15	122.08	116.44
7	00	317	LHG	C5-O7-C7	2.15	123.07	117.79
4	1N	609	CHL	CMB-C2B-C1B	2.14	128.63	125.37
3	1G	604	CLA	CHB-C1B-C2B	-2.14	121.20	127.24
3	1N	614	CLA	CED-O2D-CGD	2.14	120.77	115.94
6	00	315	VIV	O1-C9-C14	2.14	110.41	105.30
3	1G	612	CLA	O2A-CGA-CBA	2.14	118.61	111.91
3	1S	304	CLA	O2A-CGA-CBA	2.13	118.61	111.91
4	1N	601	CHL	O2D-CGD-O1D	-2.13	119.67	123.84
4	1S	305	CHL	CHB-C1B-C2B	-2.13	121.22	127.24
5	00	313	LUT	C31-C30-C29	2.13	130.35	127.31
5	1S	315	LUT	C31-C30-C29	2.13	130.34	127.31
4	1N	608	CHL	C1C-C2C-C3C	-2.12	105.43	107.11
5	00	314	LUT	C32-C33-C34	2.11	122.18	118.94
5	1S	316	LUT	C19-C9-C8	2.11	121.41	118.08
4	00	308	CHL	O2D-CGD-O1D	-2.11	119.71	123.84
3	00	302	CLA	CHB-C1B-C2B	-2.10	121.30	127.24
3	1G	614	CLA	CHB-C1B-C2B	-2.10	121.30	127.24
3	00	301	CLA	CHB-C1B-C2B	-2.10	121.31	127.24
3	1N	611	CLA	CHB-C1B-C2B	-2.10	121.31	127.24

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
4	1G	605	CHL	OMC-CMC-C2C	-2.10	120.94	125.69
3	1S	314	CLA	CHB-C1B-C2B	-2.10	121.31	127.24
8	1G	619	XAT	O24-C25-C26	-2.10	57.22	58.96
8	1G	617	XAT	O24-C25-C26	-2.10	57.22	58.96
4	1N	609	CHL	CHB-C1B-C2B	-2.10	121.32	127.24
3	1N	603	CLA	O2A-CGA-O1A	-2.09	118.31	123.59
5	1N	615	LUT	C31-C30-C29	2.09	130.30	127.31
3	1N	614	CLA	CHB-C1B-C2B	-2.09	121.33	127.24
4	1N	608	CHL	O2D-CGD-O1D	-2.09	119.75	123.84
4	1G	608	CHL	O1D-CGD-CBD	-2.09	120.20	124.48
3	1N	612	CLA	CHB-C1B-C2B	-2.09	121.34	127.24
4	1G	601	CHL	OMC-CMC-C2C	-2.08	120.98	125.69
3	1G	613	CLA	CHB-C1B-C2B	-2.08	121.36	127.24
3	1S	308	CLA	CED-O2D-CGD	2.08	120.63	115.94
3	1N	602	CLA	C4-C3-C5	2.07	118.76	115.27
3	1S	308	CLA	O2D-CGD-O1D	-2.07	119.78	123.84
4	1N	605	CHL	C1C-C2C-C3C	-2.07	105.47	107.11
3	1G	603	CLA	O1D-CGD-CBD	-2.07	120.25	124.48
4	1N	606	CHL	OMC-CMC-C2C	-2.07	121.02	125.69
4	1N	606	CHL	O1D-CGD-CBD	-2.06	120.26	124.48
4	1N	605	CHL	CMA-C3A-C2A	-2.06	111.28	116.10
3	1G	612	CLA	O2A-C1-C2	2.06	114.05	108.64
4	1N	608	CHL	CHB-C1B-C2B	-2.06	121.43	127.24
3	1S	309	CLA	C2A-C1A-CHA	-2.06	120.27	123.86
4	00	306	CHL	O2D-CGD-O1D	-2.05	119.82	123.84
3	1S	312	CLA	O1D-CGD-CBD	-2.05	120.28	124.48
3	1S	309	CLA	O2A-CGA-CBA	2.05	118.35	111.91
4	1N	606	CHL	O2A-CGA-CBA	2.05	120.62	114.03
3	00	312	CLA	CHB-C1B-C2B	-2.05	121.44	127.24
3	1S	309	CLA	O1D-CGD-CBD	-2.05	120.29	124.48
3	1N	612	CLA	C2A-C1A-CHA	-2.05	120.28	123.86
4	00	307	CHL	CHB-C1B-C2B	-2.04	121.46	127.24
8	1G	619	XAT	C28-C29-C30	2.04	122.08	118.94
3	1S	304	CLA	CMB-C2B-C1B	2.04	128.48	125.37
3	1G	603	CLA	CMB-C2B-C1B	2.04	128.48	125.37
4	1N	605	CHL	CHB-C1B-C2B	-2.04	121.48	127.24
8	1G	617	XAT	C5-C4-C3	-2.04	108.72	112.75
3	1N	612	CLA	O1D-CGD-CBD	-2.04	120.32	124.48
3	1N	610	CLA	C3B-C4B-NB	2.03	112.40	110.52
3	1G	612	CLA	C4-C3-C5	2.03	118.69	115.27
4	1G	608	CHL	CHB-C1B-C2B	-2.03	121.51	127.24
7	1N	617	LHG	O7-C5-C4	2.03	115.74	108.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	1N	613	CLA	CHB-C1B-C2B	-2.02	121.53	127.24
3	1G	610	CLA	O2A-CGA-O1A	-2.02	118.49	123.59
3	1S	311	CLA	O2D-CGD-O1D	-2.02	119.89	123.84
3	00	319	CLA	C1-O2A-CGA	2.02	121.74	116.44
4	1G	607	CHL	O2D-CGD-O1D	-2.02	119.89	123.84
3	00	303	CLA	CMB-C2B-C3B	2.02	131.47	126.59
3	1S	313	CLA	C3B-C4B-NB	2.02	112.39	110.52
3	1G	613	CLA	C4A-NA-C1A	2.02	107.61	106.71
3	1N	602	CLA	CHB-C1B-C2B	-2.01	121.56	127.24
4	1G	609	CHL	C1C-C2C-C3C	-2.01	105.52	107.11
5	00	313	LUT	C12-C13-C14	2.01	122.02	118.94
3	1G	603	CLA	C3B-C4B-NB	2.00	112.37	110.52
5	00	314	LUT	C1-C6-C5	-2.00	119.79	122.61

All (25) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
3	00	301	CLA	C8
3	00	302	CLA	C8
3	00	309	CLA	C8
3	00	310	CLA	C8
3	00	311	CLA	C8
3	00	319	CLA	C8
3	1G	602	CLA	C8
3	1G	603	CLA	C8
3	1G	610	CLA	C8
3	1G	612	CLA	C8
3	1N	602	CLA	C8
3	1N	603	CLA	C8
3	1N	613	CLA	C8
3	1S	308	CLA	C8
3	1S	309	CLA	C8
3	1S	311	CLA	C8
4	00	306	CHL	C8
4	00	307	CHL	C8
4	00	308	CHL	C8
4	1G	601	CHL	C8
4	1G	607	CHL	C8
4	1G	609	CHL	C8
4	1N	601	CHL	C8
4	1N	607	CHL	C8
4	1N	609	CHL	C8

All (649) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
3	00	303	CLA	CBD-CGD-O2D-CED
3	00	303	CLA	O1D-CGD-O2D-CED
3	00	310	CLA	CBA-CGA-O2A-C1
3	00	319	CLA	CHA-CBD-CGD-O1D
3	00	319	CLA	CHA-CBD-CGD-O2D
3	1G	612	CLA	CHA-CBD-CGD-O1D
3	1G	612	CLA	CHA-CBD-CGD-O2D
3	1G	612	CLA	CBD-CGD-O2D-CED
3	1G	612	CLA	O2A-C1-C2-C3
3	1N	603	CLA	C1A-C2A-CAA-CBA
3	1N	611	CLA	CHA-CBD-CGD-O1D
3	1N	611	CLA	CHA-CBD-CGD-O2D
3	1N	612	CLA	CHA-CBD-CGD-O1D
3	1N	612	CLA	CHA-CBD-CGD-O2D
3	1N	613	CLA	CBD-CGD-O2D-CED
4	00	304	CHL	C1A-C2A-CAA-CBA
4	00	304	CHL	CHA-CBD-CGD-O1D
4	00	304	CHL	CHA-CBD-CGD-O2D
4	00	304	CHL	CAD-CBD-CGD-O1D
4	00	304	CHL	CAD-CBD-CGD-O2D
4	00	305	CHL	C1C-C2C-CMC-OMC
4	00	306	CHL	C3A-C2A-CAA-CBA
4	00	307	CHL	C1A-C2A-CAA-CBA
4	00	307	CHL	CBD-CGD-O2D-CED
4	00	308	CHL	C6-C7-C8-C9
4	1G	605	CHL	CHA-CBD-CGD-O1D
4	1G	605	CHL	CHA-CBD-CGD-O2D
4	1G	605	CHL	CAD-CBD-CGD-O1D
4	1G	605	CHL	CAD-CBD-CGD-O2D
4	1G	607	CHL	C2A-CAA-CBA-CGA
4	1G	607	CHL	C11-C12-C13-C14
4	1G	608	CHL	CBD-CGD-O2D-CED
4	1G	609	CHL	C1A-C2A-CAA-CBA
4	1G	609	CHL	C3A-C2A-CAA-CBA
4	1G	609	CHL	C1C-C2C-CMC-OMC
4	1G	609	CHL	C3C-C2C-CMC-OMC
4	1N	605	CHL	CHA-CBD-CGD-O1D
4	1N	605	CHL	CHA-CBD-CGD-O2D
4	1N	605	CHL	CAD-CBD-CGD-O1D
4	1S	302	CHL	C2B-C3B-CAB-CBB
4	1S	302	CHL	C4B-C3B-CAB-CBB
4	1S	302	CHL	C1C-C2C-CMC-OMC

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Mol	Chain	Res	Type	Atoms
4	1S	302	CHL	C3C-C2C-CMC-OMC
4	1S	302	CHL	CHA-CBD-CGD-O1D
4	1S	302	CHL	CHA-CBD-CGD-O2D
4	1S	306	CHL	C3C-C2C-CMC-OMC
4	1S	306	CHL	CAD-CBD-CGD-O1D
4	1S	306	CHL	CAD-CBD-CGD-O2D
4	1S	306	CHL	CBD-CGD-O2D-CED
4	1S	307	CHL	C1C-C2C-CMC-OMC
4	1S	307	CHL	C3C-C2C-CMC-OMC
5	00	313	LUT	C7-C8-C9-C19
5	1G	615	LUT	C7-C8-C9-C19
6	00	315	VIV	C16-C15-C9-O1
6	00	315	VIV	C16-C15-C9-C11
6	00	315	VIV	C16-C15-C9-C14
7	00	317	LHG	O9-C7-O7-C5
7	00	317	LHG	C8-C7-O7-C5
7	00	318	LHG	C3-O3-P-O4
7	00	318	LHG	C3-O3-P-O5
7	00	318	LHG	C3-O3-P-O6
7	00	320	LHG	C3-O3-P-O5
7	00	320	LHG	C3-O3-P-O6
7	1G	618	LHG	C3-O3-P-O5
7	1N	616	LHG	C3-O3-P-O5
7	1N	617	LHG	C3-O3-P-O5
7	1N	617	LHG	C3-O3-P-O6
7	1S	301	LHG	O9-C7-O7-C5
7	1S	301	LHG	C8-C7-O7-C5
7	1S	317	LHG	C3-O3-P-O4
7	1S	317	LHG	C3-O3-P-O5
7	1S	317	LHG	O10-C23-O8-C6
7	1S	317	LHG	C24-C23-O8-C6
7	1S	319	LHG	O9-C7-O7-C5
7	1S	319	LHG	C8-C7-O7-C5
7	1S	319	LHG	O10-C23-O8-C6
7	1S	319	LHG	C24-C23-O8-C6
7	1S	320	LHG	C4-O6-P-O5
8	1G	617	XAT	C5-C6-C7-C8
8	1G	617	XAT	O4-C6-C7-C8
8	1G	617	XAT	O24-C26-C27-C28
8	1G	617	XAT	C29-C30-C31-C32
8	1G	619	XAT	C11-C12-C13-C14
8	1G	619	XAT	C11-C12-C13-C20

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Mol	Chain	Res	Type	Atoms
8	1G	619	XAT	C25-C26-C27-C28
8	1G	619	XAT	O24-C26-C27-C28
8	1G	619	XAT	C33-C34-C35-C15
9	1S	318	DGD	O6D-C1D-O3G-C3G
3	00	309	CLA	O1D-CGD-O2D-CED
3	00	309	CLA	CBD-CGD-O2D-CED
3	00	319	CLA	CBD-CGD-O2D-CED
3	1N	610	CLA	CBD-CGD-O2D-CED
3	1N	614	CLA	CBD-CGD-O2D-CED
3	1S	303	CLA	CBD-CGD-O2D-CED
4	00	306	CHL	CBD-CGD-O2D-CED
4	1G	607	CHL	CBD-CGD-O2D-CED
4	1N	608	CHL	CBD-CGD-O2D-CED
3	00	310	CLA	O1A-CGA-O2A-C1
3	1G	612	CLA	O1A-CGA-O2A-C1
4	1G	607	CHL	O1D-CGD-O2D-CED
4	1G	609	CHL	C8-C10-C11-C12
4	1N	605	CHL	C4C-C3C-CAC-CBC
3	1G	612	CLA	O1D-CGD-O2D-CED
3	1N	610	CLA	O1D-CGD-O2D-CED
4	1G	608	CHL	O1D-CGD-O2D-CED
3	1G	612	CLA	CBA-CGA-O2A-C1
3	1G	603	CLA	CBD-CGD-O2D-CED
3	1G	610	CLA	CBD-CGD-O2D-CED
3	1G	614	CLA	CBD-CGD-O2D-CED
3	1S	308	CLA	CBD-CGD-O2D-CED
3	1S	309	CLA	CBD-CGD-O2D-CED
3	1S	311	CLA	CBD-CGD-O2D-CED
4	00	305	CHL	CBD-CGD-O2D-CED
4	1N	607	CHL	CBD-CGD-O2D-CED
4	00	306	CHL	O1A-CGA-O2A-C1
3	1N	613	CLA	O1D-CGD-O2D-CED
4	00	307	CHL	O1D-CGD-O2D-CED
4	1S	306	CHL	O1D-CGD-O2D-CED
4	1N	605	CHL	C2C-C3C-CAC-CBC
4	1S	305	CHL	C4C-C3C-CAC-CBC
4	1N	601	CHL	CBD-CGD-O2D-CED
4	1N	606	CHL	CBD-CGD-O2D-CED
9	1S	318	DGD	O1B-C1B-O2G-C2G
4	1S	305	CHL	C2C-C3C-CAC-CBC
3	00	311	CLA	C3-C5-C6-C7
3	1G	603	CLA	C3-C5-C6-C7

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Mol	Chain	Res	Type	Atoms
3	1G	610	CLA	C3-C5-C6-C7
3	1G	612	CLA	C3-C5-C6-C7
4	00	307	CHL	C3-C5-C6-C7
4	1N	601	CHL	C3-C5-C6-C7
4	00	306	CHL	CBA-CGA-O2A-C1
9	1S	318	DGD	C2B-C1B-O2G-C2G
4	1N	608	CHL	O1D-CGD-O2D-CED
3	1N	603	CLA	CBD-CGD-O2D-CED
4	00	304	CHL	C2A-CAA-CBA-CGA
4	00	306	CHL	C2A-CAA-CBA-CGA
4	1N	606	CHL	C2A-CAA-CBA-CGA
4	1S	307	CHL	C2A-CAA-CBA-CGA
3	00	311	CLA	CBA-CGA-O2A-C1
3	00	302	CLA	CBD-CGD-O2D-CED
3	00	319	CLA	O1D-CGD-O2D-CED
3	1N	614	CLA	O1D-CGD-O2D-CED
4	00	306	CHL	O1D-CGD-O2D-CED
3	1S	304	CLA	CBD-CGD-O2D-CED
4	1G	605	CHL	CBD-CGD-O2D-CED
4	1N	609	CHL	CBD-CGD-O2D-CED
4	1S	307	CHL	CBD-CGD-O2D-CED
4	1G	601	CHL	CBA-CGA-O2A-C1
3	00	311	CLA	O1A-CGA-O2A-C1
3	1S	303	CLA	O1D-CGD-O2D-CED
4	1G	609	CHL	CBD-CGD-O2D-CED
4	1N	605	CHL	CBD-CGD-O2D-CED
4	00	304	CHL	CBD-CGD-O2D-CED
3	1G	602	CLA	C3-C5-C6-C7
4	1G	607	CHL	C3-C5-C6-C7
7	00	318	LHG	C2-C3-O3-P
4	1G	601	CHL	O1A-CGA-O2A-C1
3	00	301	CLA	C4-C3-C5-C6
3	00	309	CLA	C4-C3-C5-C6
3	1S	309	CLA	C4-C3-C5-C6
3	00	301	CLA	C2-C3-C5-C6
3	00	309	CLA	C2-C3-C5-C6
3	1S	309	CLA	C2-C3-C5-C6
4	00	308	CHL	CBA-CGA-O2A-C1
4	00	308	CHL	CBD-CGD-O2D-CED
9	1S	318	DGD	C2D-C1D-O3G-C3G
7	1S	320	LHG	O7-C5-C6-O8
3	00	302	CLA	C11-C10-C8-C9

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Mol	Chain	Res	Type	Atoms
3	1N	603	CLA	C6-C7-C8-C9
4	00	306	CHL	C6-C7-C8-C9
4	00	306	CHL	C11-C12-C13-C14
4	00	307	CHL	C11-C12-C13-C14
4	00	307	CHL	C14-C13-C15-C16
4	1G	601	CHL	C11-C10-C8-C9
4	1N	601	CHL	C11-C12-C13-C14
4	1N	607	CHL	C11-C12-C13-C14
4	1N	609	CHL	C11-C10-C8-C9
4	1N	609	CHL	C11-C12-C13-C14
6	00	315	VIV	C21-C22-C23-C1
3	1G	614	CLA	O1D-CGD-O2D-CED
3	00	312	CLA	CBD-CGD-O2D-CED
4	1G	607	CHL	C15-C16-C17-C18
3	1S	308	CLA	O1D-CGD-O2D-CED
4	00	305	CHL	O1D-CGD-O2D-CED
4	1N	607	CHL	O1D-CGD-O2D-CED
3	1G	603	CLA	O1D-CGD-O2D-CED
4	1N	607	CHL	C13-C15-C16-C17
4	1G	609	CHL	C2C-C3C-CAC-CBC
3	00	309	CLA	C5-C6-C7-C8
3	1G	602	CLA	C5-C6-C7-C8
4	1N	601	CHL	C15-C16-C17-C18
4	1N	607	CHL	C8-C10-C11-C12
4	1N	607	CHL	C15-C16-C17-C18
3	00	301	CLA	C5-C6-C7-C8
3	1G	603	CLA	C8-C10-C11-C12
4	1G	609	CHL	C5-C6-C7-C8
3	1G	602	CLA	CBD-CGD-O2D-CED
3	1G	604	CLA	CBD-CGD-O2D-CED
3	1S	311	CLA	O1D-CGD-O2D-CED
3	1G	602	CLA	C6-C7-C8-C10
4	00	306	CHL	C11-C12-C13-C15
4	1G	601	CHL	C6-C7-C8-C10
4	1N	601	CHL	C6-C7-C8-C10
4	1S	302	CHL	C2A-CAA-CBA-CGA
3	1G	610	CLA	O1D-CGD-O2D-CED
3	1S	309	CLA	O1D-CGD-O2D-CED
4	1N	601	CHL	O1D-CGD-O2D-CED
4	1N	606	CHL	O1D-CGD-O2D-CED
3	1N	613	CLA	C5-C6-C7-C8
3	1N	602	CLA	CBD-CGD-O2D-CED

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Mol	Chain	Res	Type	Atoms
4	00	306	CHL	C15-C16-C17-C18
7	00	320	LHG	C7-C8-C9-C10
3	1N	603	CLA	C10-C11-C12-C13
4	00	306	CHL	C13-C15-C16-C17
4	00	308	CHL	C13-C15-C16-C17
4	00	308	CHL	O1A-CGA-O2A-C1
3	00	309	CLA	C8-C10-C11-C12
3	1N	602	CLA	C8-C10-C11-C12
4	1G	601	CHL	C8-C10-C11-C12
4	1G	607	CHL	C8-C10-C11-C12
4	1N	601	CHL	C13-C15-C16-C17
7	00	317	LHG	C3-O3-P-O6
7	1S	317	LHG	C3-O3-P-O6
3	1G	610	CLA	C13-C15-C16-C17
3	1N	603	CLA	C4-C3-C5-C6
6	00	315	VIV	C15-C16-C17-C18
3	1N	603	CLA	O1D-CGD-O2D-CED
4	00	307	CHL	C16-C17-C18-C20
7	00	318	LHG	C15-C16-C17-C18
4	00	306	CHL	C16-C17-C18-C19
4	1N	607	CHL	C4-C3-C5-C6
4	1G	601	CHL	C6-C7-C8-C9
7	00	318	LHG	C16-C17-C18-C19
4	1S	305	CHL	C2A-CAA-CBA-CGA
8	1G	617	XAT	C7-C8-C9-C19
8	1G	617	XAT	C7-C8-C9-C10
3	1N	603	CLA	C3-C5-C6-C7
3	00	302	CLA	C5-C6-C7-C8
4	1S	307	CHL	O1D-CGD-O2D-CED
7	00	318	LHG	C31-C32-C33-C34
4	1N	601	CHL	C16-C17-C18-C20
4	1N	609	CHL	C16-C17-C18-C19
7	00	318	LHG	C29-C30-C31-C32
7	1N	617	LHG	C12-C13-C14-C15
3	00	302	CLA	O1D-CGD-O2D-CED
7	00	320	LHG	C23-C24-C25-C26
4	1N	609	CHL	C5-C6-C7-C8
3	1S	304	CLA	O1D-CGD-O2D-CED
4	1N	609	CHL	O1D-CGD-O2D-CED
3	00	311	CLA	C3A-C2A-CAA-CBA
3	1N	603	CLA	C3A-C2A-CAA-CBA
4	00	307	CHL	C3A-C2A-CAA-CBA

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Mol	Chain	Res	Type	Atoms
4	1G	601	CHL	C5-C6-C7-C8
8	1G	619	XAT	C9-C10-C11-C12
3	00	312	CLA	CBA-CGA-O2A-C1
4	00	308	CHL	C16-C17-C18-C20
4	1G	601	CHL	C16-C17-C18-C19
4	1S	307	CHL	C2C-C3C-CAC-CBC
7	1G	618	LHG	C10-C11-C12-C13
4	1G	605	CHL	O1D-CGD-O2D-CED
7	1N	617	LHG	C24-C25-C26-C27
3	00	309	CLA	C10-C11-C12-C13
4	00	306	CHL	C4-C3-C5-C6
4	1G	601	CHL	C4-C3-C5-C6
4	00	306	CHL	C2-C3-C5-C6
3	00	301	CLA	C15-C16-C17-C18
7	00	318	LHG	C34-C35-C36-C37
7	00	320	LHG	C25-C26-C27-C28
7	00	318	LHG	C32-C33-C34-C35
7	00	317	LHG	C13-C14-C15-C16
5	1N	615	LUT	C1-C6-C7-C8
5	1S	316	LUT	C1-C6-C7-C8
5	1S	316	LUT	C5-C6-C7-C8
7	1S	320	LHG	C26-C27-C28-C29
3	00	302	CLA	CBA-CGA-O2A-C1
3	1S	312	CLA	CBA-CGA-O2A-C1
4	00	307	CHL	C12-C13-C15-C16
4	1G	601	CHL	C2-C3-C5-C6
4	1G	607	CHL	C6-C7-C8-C10
4	1N	607	CHL	C2-C3-C5-C6
4	00	308	CHL	C2C-C3C-CAC-CBC
3	1N	603	CLA	C16-C17-C18-C19
4	1G	607	CHL	C16-C17-C18-C20
4	1N	607	CHL	C16-C17-C18-C20
4	1G	609	CHL	O1D-CGD-O2D-CED
3	00	303	CLA	CBA-CGA-O2A-C1
3	00	309	CLA	CBA-CGA-O2A-C1
4	1G	606	CHL	C2A-CAA-CBA-CGA
4	1N	607	CHL	C2A-CAA-CBA-CGA
4	1G	601	CHL	C15-C16-C17-C18
4	1N	605	CHL	O1D-CGD-O2D-CED
3	1S	304	CLA	CBA-CGA-O2A-C1
3	1S	309	CLA	CBA-CGA-O2A-C1
4	00	304	CHL	O1D-CGD-O2D-CED

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Mol	Chain	Res	Type	Atoms
3	00	311	CLA	C10-C11-C12-C13
3	1G	603	CLA	C10-C11-C12-C13
3	1N	603	CLA	C2-C3-C5-C6
3	1G	602	CLA	C6-C7-C8-C9
3	00	302	CLA	O1A-CGA-O2A-C1
7	00	320	LHG	C9-C10-C11-C12
4	00	306	CHL	C3-C5-C6-C7
4	1N	607	CHL	C3-C5-C6-C7
5	1S	315	LUT	C7-C8-C9-C19
3	00	303	CLA	O1A-CGA-O2A-C1
3	1S	312	CLA	O1A-CGA-O2A-C1
3	00	311	CLA	C1A-C2A-CAA-CBA
3	1G	610	CLA	C1A-C2A-CAA-CBA
3	1S	309	CLA	C1A-C2A-CAA-CBA
4	00	306	CHL	C1A-C2A-CAA-CBA
4	00	308	CHL	C16-C17-C18-C19
4	1N	601	CHL	C16-C17-C18-C19
4	00	308	CHL	O1D-CGD-O2D-CED
4	1G	607	CHL	C13-C15-C16-C17
7	1S	317	LHG	C2-C3-O3-P
3	00	310	CLA	C10-C11-C12-C13
7	00	318	LHG	C7-C8-C9-C10
7	00	317	LHG	C32-C33-C34-C35
4	1N	609	CHL	C16-C17-C18-C20
3	1G	610	CLA	CBA-CGA-O2A-C1
3	1N	602	CLA	CBA-CGA-O2A-C1
7	1G	618	LHG	C12-C13-C14-C15
4	1N	608	CHL	C2A-CAA-CBA-CGA
9	1S	318	DGD	C1G-C2G-C3G-O3G
3	00	309	CLA	O1A-CGA-O2A-C1
3	1G	610	CLA	O1A-CGA-O2A-C1
4	1G	609	CHL	C4C-C3C-CAC-CBC
7	1S	319	LHG	C10-C11-C12-C13
7	00	320	LHG	C29-C30-C31-C32
4	1N	609	CHL	C8-C10-C11-C12
3	00	310	CLA	C4-C3-C5-C6
4	00	304	CHL	CBA-CGA-O2A-C1
4	00	307	CHL	C5-C6-C7-C8
7	00	318	LHG	C25-C26-C27-C28
3	1N	603	CLA	CBA-CGA-O2A-C1
3	1N	602	CLA	O1A-CGA-O2A-C1
3	1S	304	CLA	O1A-CGA-O2A-C1

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Mol	Chain	Res	Type	Atoms
3	1S	309	CLA	O1A-CGA-O2A-C1
7	00	317	LHG	C11-C10-C9-C8
3	1G	602	CLA	C11-C12-C13-C15
4	00	308	CHL	C6-C7-C8-C10
4	1G	601	CHL	C12-C13-C15-C16
4	1N	601	CHL	C11-C12-C13-C15
4	1N	607	CHL	C11-C12-C13-C15
4	1N	609	CHL	C11-C12-C13-C15
4	1N	609	CHL	C12-C13-C15-C16
6	00	315	VIV	C21-C22-C23-C24
3	1G	602	CLA	C11-C12-C13-C14
3	1N	602	CLA	C14-C13-C15-C16
3	1N	603	CLA	C14-C13-C15-C16
4	1G	609	CHL	C6-C7-C8-C9
4	1N	609	CHL	C14-C13-C15-C16
3	00	301	CLA	CBA-CGA-O2A-C1
4	1G	607	CHL	C5-C6-C7-C8
3	1S	308	CLA	CBA-CGA-O2A-C1
4	1N	609	CHL	C13-C15-C16-C17
4	00	306	CHL	C16-C17-C18-C20
4	1G	601	CHL	C16-C17-C18-C20
7	1N	617	LHG	O6-C4-C5-C6
7	00	316	LHG	C23-C24-C25-C26
3	00	312	CLA	O1D-CGD-O2D-CED
3	00	310	CLA	C2-C3-C5-C6
4	1G	609	CHL	C11-C12-C13-C15
4	1N	607	CHL	C5-C6-C7-C8
7	00	318	LHG	C5-C4-O6-P
7	1N	617	LHG	C2-C3-O3-P
3	1G	613	CLA	O2A-C1-C2-C3
3	1G	603	CLA	C15-C16-C17-C18
7	1S	320	LHG	C4-C5-C6-O8
9	1S	318	DGD	C5B-C6B-C7B-C8B
3	1N	603	CLA	C16-C17-C18-C20
4	00	305	CHL	C3C-C2C-CMC-OMC
4	00	306	CHL	C3C-C2C-CMC-OMC
4	1N	601	CHL	C3C-C2C-CMC-OMC
4	1N	607	CHL	C3C-C2C-CMC-OMC
3	1S	308	CLA	O1A-CGA-O2A-C1
4	00	304	CHL	O1A-CGA-O2A-C1
3	1G	604	CLA	O1D-CGD-O2D-CED
7	1N	617	LHG	O6-C4-C5-O7

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Mol	Chain	Res	Type	Atoms
3	00	301	CLA	O1A-CGA-O2A-C1
3	1N	603	CLA	O1A-CGA-O2A-C1
7	1G	618	LHG	O8-C23-C24-C25
4	1G	607	CHL	C16-C17-C18-C19
7	1S	319	LHG	C24-C25-C26-C27
3	00	310	CLA	C3-C5-C6-C7
3	00	319	CLA	C2-C1-O2A-CGA
3	1N	613	CLA	C2-C1-O2A-CGA
4	1N	601	CHL	C2-C1-O2A-CGA
4	1N	609	CHL	C2-C1-O2A-CGA
3	00	319	CLA	C6-C7-C8-C9
4	1G	601	CHL	C14-C13-C15-C16
7	1N	617	LHG	C5-C4-O6-P
3	1S	312	CLA	C2A-CAA-CBA-CGA
4	00	307	CHL	C16-C17-C18-C19
4	1N	607	CHL	C16-C17-C18-C19
5	00	314	LUT	C1-C6-C7-C8
5	1N	615	LUT	C5-C6-C7-C8
3	1G	602	CLA	O1D-CGD-O2D-CED
4	1G	608	CHL	C1A-C2A-CAA-CBA
5	00	313	LUT	C7-C8-C9-C10
3	1N	603	CLA	C8-C10-C11-C12
3	1N	602	CLA	O1D-CGD-O2D-CED
3	1N	603	CLA	C12-C13-C15-C16
4	1G	601	CHL	C11-C10-C8-C7
4	1G	607	CHL	C11-C12-C13-C15
4	1G	607	CHL	C12-C13-C15-C16
4	1G	609	CHL	C6-C7-C8-C10
3	1G	613	CLA	C2A-CAA-CBA-CGA
4	1G	609	CHL	C11-C12-C13-C14
3	1G	613	CLA	CBA-CGA-O2A-C1
3	00	312	CLA	O1A-CGA-O2A-C1
3	00	311	CLA	CAD-CBD-CGD-O2D
3	00	312	CLA	CAD-CBD-CGD-O2D
3	1G	602	CLA	CAD-CBD-CGD-O2D
3	1G	603	CLA	CAD-CBD-CGD-O2D
3	1G	610	CLA	CAD-CBD-CGD-O2D
3	1N	603	CLA	CAD-CBD-CGD-O2D
3	1N	614	CLA	CAD-CBD-CGD-O2D
3	1S	309	CLA	CAD-CBD-CGD-O2D
3	1S	312	CLA	CAD-CBD-CGD-O2D
4	1G	606	CHL	CAD-CBD-CGD-O2D

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Mol	Chain	Res	Type	Atoms
4	1G	608	CHL	CAD-CBD-CGD-O2D
4	1N	605	CHL	CAD-CBD-CGD-O2D
7	00	320	LHG	C5-C4-O6-P
7	00	318	LHG	C9-C10-C11-C12
3	1G	604	CLA	CHA-CBD-CGD-O1D
3	1G	604	CLA	CHA-CBD-CGD-O2D
3	1G	613	CLA	CHA-CBD-CGD-O1D
3	1G	613	CLA	CHA-CBD-CGD-O2D
4	1S	305	CHL	CHA-CBD-CGD-O1D
4	1S	307	CHL	C4C-C3C-CAC-CBC
4	1G	607	CHL	C10-C11-C12-C13
4	1N	601	CHL	C6-C7-C8-C9
4	00	308	CHL	C4C-C3C-CAC-CBC
3	1G	613	CLA	O1A-CGA-O2A-C1
4	00	308	CHL	C8-C10-C11-C12
3	00	310	CLA	C1A-C2A-CAA-CBA
3	1G	610	CLA	C2-C1-O2A-CGA
7	1G	618	LHG	C3-O3-P-O6
4	00	307	CHL	O1A-CGA-O2A-C1
7	00	317	LHG	C3-O3-P-O5
7	00	318	LHG	C4-O6-P-O4
4	00	307	CHL	CBA-CGA-O2A-C1
3	1S	309	CLA	CAD-CBD-CGD-O1D
4	1G	609	CHL	C3-C5-C6-C7
3	00	310	CLA	C6-C7-C8-C10
3	1N	603	CLA	C6-C7-C8-C10
4	00	306	CHL	C6-C7-C8-C10
4	00	306	CHL	C12-C13-C15-C16
4	00	307	CHL	C11-C10-C8-C7
4	00	307	CHL	C11-C12-C13-C15
4	1G	609	CHL	C11-C10-C8-C7
4	1N	607	CHL	C6-C7-C8-C10
4	1N	609	CHL	C11-C10-C8-C7
4	00	306	CHL	C1C-C2C-CMC-OMC
4	1N	601	CHL	C1C-C2C-CMC-OMC
4	1N	607	CHL	C1C-C2C-CMC-OMC
4	1S	306	CHL	C1C-C2C-CMC-OMC
9	1S	318	DGD	O2G-C2G-C3G-O3G
3	1N	613	CLA	C10-C11-C12-C13
3	00	311	CLA	C4-C3-C5-C6
6	00	315	VIV	C1-C23-C24-C25
4	1G	607	CHL	C14-C13-C15-C16

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Mol	Chain	Res	Type	Atoms
3	1N	611	CLA	CBD-CGD-O2D-CED
8	1G	617	XAT	C30-C31-C32-C33
7	1S	320	LHG	C7-C8-C9-C10
3	1S	310	CLA	C1-C2-C3-C4
4	00	305	CHL	C1-C2-C3-C4
7	1S	320	LHG	C4-C5-O7-C7
3	1S	310	CLA	O1A-CGA-O2A-C1
3	1N	604	CLA	C2-C1-O2A-CGA
3	00	302	CLA	C3-C5-C6-C7
3	1S	309	CLA	C3-C5-C6-C7
3	1S	311	CLA	O1A-CGA-O2A-C1
3	1S	311	CLA	C4-C3-C5-C6
4	1N	609	CHL	C4-C3-C5-C6
3	1G	602	CLA	C10-C11-C12-C13
7	1N	616	LHG	C3-O3-P-O6
7	1N	617	LHG	C28-C29-C30-C31
3	1N	613	CLA	C4-C3-C5-C6
3	00	319	CLA	C6-C7-C8-C10
4	1N	601	CHL	C12-C13-C15-C16
4	00	306	CHL	C2C-C3C-CAC-CBC
7	1S	320	LHG	C11-C10-C9-C8
4	00	307	CHL	C11-C10-C8-C9
4	1G	609	CHL	C11-C10-C8-C9
4	1N	607	CHL	C6-C7-C8-C9
3	1S	311	CLA	CBA-CGA-O2A-C1
7	00	318	LHG	C30-C31-C32-C33
7	1G	618	LHG	O1-C1-C2-C3
4	00	305	CHL	O2A-C1-C2-C3
4	00	307	CHL	C4-C3-C5-C6
4	1N	609	CHL	C2-C3-C5-C6
3	1S	310	CLA	CBA-CGA-O2A-C1
3	00	319	CLA	O1A-CGA-O2A-C1
4	00	305	CHL	CAA-CBA-CGA-O2A
3	1G	602	CLA	C4-C3-C5-C6
3	00	302	CLA	C13-C15-C16-C17
4	1N	601	CHL	C10-C11-C12-C13
3	1N	603	CLA	C2-C1-O2A-CGA
3	1S	310	CLA	C2-C1-O2A-CGA
3	1S	311	CLA	C2-C1-O2A-CGA
3	1S	314	CLA	CBA-CGA-O2A-C1
8	1G	619	XAT	C13-C14-C15-C35
9	1S	318	DGD	C1B-C2B-C3B-C4B

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Mol	Chain	Res	Type	Atoms
3	00	301	CLA	C11-C12-C13-C14
3	1G	603	CLA	C14-C13-C15-C16
4	00	306	CHL	C8-C10-C11-C12
3	00	319	CLA	CBA-CGA-O2A-C1
3	1N	604	CLA	O1A-CGA-O2A-C1
7	1S	301	LHG	C28-C29-C30-C31
7	1S	320	LHG	C6-C5-O7-C7
4	00	308	CHL	C1A-C2A-CAA-CBA
4	1G	601	CHL	C11-C12-C13-C15
4	1G	607	CHL	C11-C10-C8-C7
4	1N	601	CHL	CBA-CGA-O2A-C1
3	1S	311	CLA	C2A-CAA-CBA-CGA
3	00	319	CLA	C10-C11-C12-C13
3	1G	612	CLA	C4-C3-C5-C6
4	1S	305	CHL	C2B-C3B-CAB-CBB
4	00	306	CHL	C10-C11-C12-C13
7	00	320	LHG	O7-C5-C6-O8
7	1S	301	LHG	C27-C28-C29-C30
4	1N	601	CHL	O1A-CGA-O2A-C1
4	1G	606	CHL	O1D-CGD-O2D-CED
4	00	306	CHL	C2-C1-O2A-CGA
4	1G	609	CHL	C2-C1-O2A-CGA
3	00	311	CLA	C2-C3-C5-C6
7	1N	617	LHG	C18-C19-C20-C21
4	1S	302	CHL	O1D-CGD-O2D-CED
3	00	319	CLA	C2A-CAA-CBA-CGA
3	1S	304	CLA	C2A-CAA-CBA-CGA
5	1S	315	LUT	C1-C6-C7-C8
3	1N	613	CLA	C2-C3-C5-C6
3	1S	311	CLA	C2-C3-C5-C6
4	1S	307	CHL	CAA-CBA-CGA-O2A
7	1S	320	LHG	C11-C12-C13-C14
4	1S	305	CHL	CAA-CBA-CGA-O2A
4	1S	305	CHL	CAA-CBA-CGA-O1A
7	1N	617	LHG	C29-C30-C31-C32
4	00	308	CHL	C4-C3-C5-C6
4	00	308	CHL	C11-C12-C13-C15
6	00	315	VIV	C17-C18-C20-C21
3	1N	604	CLA	CBA-CGA-O2A-C1
9	1S	318	DGD	C2B-C3B-C4B-C5B
7	1N	617	LHG	O7-C5-C6-O8
7	1N	617	LHG	C4-O6-P-O3

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Mol	Chain	Res	Type	Atoms
3	1G	602	CLA	C2-C3-C5-C6
3	1G	612	CLA	C2-C3-C5-C6
3	00	310	CLA	C6-C7-C8-C9
4	00	306	CHL	C14-C13-C15-C16
4	1G	601	CHL	C11-C12-C13-C14
4	1G	607	CHL	C11-C10-C8-C9
3	1S	304	CLA	C3A-C2A-CAA-CBA
4	1N	609	CHL	C3A-C2A-CAA-CBA
4	1S	302	CHL	CAA-CBA-CGA-O2A
3	00	309	CLA	CAD-CBD-CGD-O2D
3	1N	604	CLA	CAD-CBD-CGD-O2D
3	1N	610	CLA	CAD-CBD-CGD-O2D
3	1S	310	CLA	CAD-CBD-CGD-O2D
4	00	307	CHL	CAD-CBD-CGD-O2D
4	1S	305	CHL	CAD-CBD-CGD-O2D
4	1G	606	CHL	CAA-CBA-CGA-O2A
4	1G	609	CHL	C4-C3-C5-C6
7	00	316	LHG	C25-C26-C27-C28
3	00	319	CLA	CAA-CBA-CGA-O2A
3	1S	312	CLA	CAA-CBA-CGA-O2A
5	1G	615	LUT	C7-C8-C9-C10
5	1S	315	LUT	C7-C8-C9-C10
3	1S	311	CLA	CAA-CBA-CGA-O2A
3	1S	309	CLA	O2A-C1-C2-C3
4	1G	601	CHL	O2A-C1-C2-C3
4	1N	601	CHL	O2A-C1-C2-C3
4	1N	607	CHL	O2A-C1-C2-C3
3	00	302	CLA	C2A-CAA-CBA-CGA
3	1N	613	CLA	CAA-CBA-CGA-O2A
3	00	301	CLA	CHA-CBD-CGD-O1D
3	00	302	CLA	CHA-CBD-CGD-O2D
3	1S	304	CLA	CHA-CBD-CGD-O2D
4	1G	601	CHL	CHA-CBD-CGD-O1D
4	1G	601	CHL	CHA-CBD-CGD-O2D
4	1S	302	CHL	CAA-CBA-CGA-O1A
4	1N	606	CHL	CAA-CBA-CGA-O2A
3	00	302	CLA	CAA-CBA-CGA-O2A
7	1S	320	LHG	C23-C24-C25-C26
7	00	317	LHG	C29-C30-C31-C32
4	1G	606	CHL	CAA-CBA-CGA-O1A
4	00	306	CHL	C4C-C3C-CAC-CBC
4	1G	607	CHL	O1A-CGA-O2A-C1

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Mol	Chain	Res	Type	Atoms
4	1G	608	CHL	C2C-C3C-CAC-CBC
4	1S	307	CHL	CAA-CBA-CGA-O1A
4	00	308	CHL	C11-C12-C13-C14
3	00	302	CLA	C15-C16-C17-C18
4	1G	607	CHL	CBA-CGA-O2A-C1
3	1N	603	CLA	CAA-CBA-CGA-O2A
3	1G	602	CLA	O1A-CGA-O2A-C1
7	00	318	LHG	O7-C7-C8-C9
3	1S	311	CLA	CAA-CBA-CGA-O1A
3	1G	611	CLA	CHA-CBD-CGD-O2D
3	1S	304	CLA	C1A-C2A-CAA-CBA
4	1G	601	CHL	C1A-C2A-CAA-CBA
4	1N	608	CHL	C1A-C2A-CAA-CBA
7	00	318	LHG	C19-C20-C21-C22
7	1N	617	LHG	C30-C31-C32-C33
3	00	319	CLA	CAA-CBA-CGA-O1A
4	00	304	CHL	CAA-CBA-CGA-O2A
3	1S	312	CLA	CAA-CBA-CGA-O1A
4	1N	606	CHL	CAA-CBA-CGA-O1A
4	1N	609	CHL	C15-C16-C17-C18
3	1N	612	CLA	C4B-C3B-CAB-CBB
4	00	305	CHL	C4B-C3B-CAB-CBB
4	1N	606	CHL	C4B-C3B-CAB-CBB
4	1S	305	CHL	C4B-C3B-CAB-CBB
7	00	318	LHG	C4-O6-P-O5
7	1S	317	LHG	C4-O6-P-O5
7	1S	317	LHG	C25-C26-C27-C28
7	00	318	LHG	O9-C7-C8-C9
7	1S	301	LHG	C31-C32-C33-C34
3	1N	613	CLA	CAA-CBA-CGA-O1A
7	00	318	LHG	C11-C10-C9-C8
4	00	307	CHL	CAA-CBA-CGA-O2A
3	00	302	CLA	CAA-CBA-CGA-O1A
4	00	308	CHL	C2-C3-C5-C6
3	1G	613	CLA	CAD-CBD-CGD-O1D
4	1S	302	CHL	CBD-CGD-O2D-CED
3	1G	602	CLA	CAA-CBA-CGA-O2A
3	1G	612	CLA	CAA-CBA-CGA-O2A
7	1N	617	LHG	C34-C35-C36-C37
3	1N	602	CLA	C10-C11-C12-C13
4	1G	607	CHL	C4-C3-C5-C6
3	1G	611	CLA	CHA-CBD-CGD-O1D

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Mol	Chain	Res	Type	Atoms
3	1S	309	CLA	C6-C7-C8-C10
4	00	307	CHL	C2-C3-C5-C6
4	00	304	CHL	CAA-CBA-CGA-O1A
3	1S	314	CLA	CAA-CBA-CGA-O2A
4	1N	607	CHL	CAA-CBA-CGA-O2A
7	00	320	LHG	O8-C23-C24-C25
9	1S	318	DGD	O1G-C1A-C2A-C3A
7	00	317	LHG	C31-C32-C33-C34
5	00	314	LUT	C7-C8-C9-C10
3	1G	602	CLA	CAA-CBA-CGA-O1A
7	00	320	LHG	O10-C23-C24-C25
9	1S	318	DGD	O1A-C1A-C2A-C3A
6	00	315	VIV	C18-C20-C21-C22
4	1N	607	CHL	CAA-CBA-CGA-O1A
4	1G	601	CHL	CAA-CBA-CGA-O2A
4	1G	607	CHL	CAA-CBA-CGA-O2A
4	1N	601	CHL	CAA-CBA-CGA-O2A
4	1G	608	CHL	C4C-C3C-CAC-CBC
3	1G	612	CLA	CAA-CBA-CGA-O1A

There are no ring outliers.

63 monomers are involved in 392 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
9	1S	318	DGD	1	0
3	00	309	CLA	3	0
4	1N	607	CHL	14	0
4	1S	307	CHL	4	0
3	1G	604	CLA	2	0
7	1G	618	LHG	8	0
4	00	304	CHL	4	0
4	00	305	CHL	20	0
4	00	308	CHL	17	0
4	1G	607	CHL	23	0
4	1N	605	CHL	7	0
4	1G	608	CHL	3	0
7	1N	616	LHG	4	0
4	1G	601	CHL	30	0
3	00	311	CLA	1	0
4	1N	601	CHL	33	0
4	1S	305	CHL	10	0
3	1G	614	CLA	1	0

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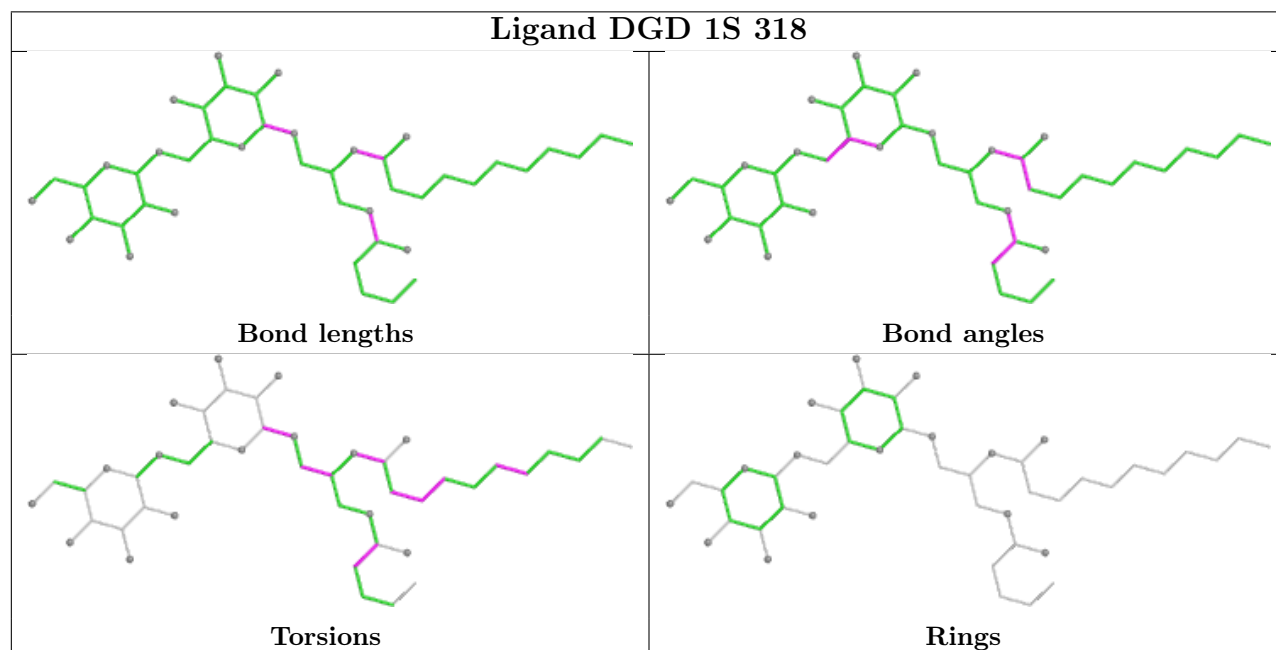
Mol	Chain	Res	Type	Clashes	Symm-Clashes
8	1G	619	XAT	16	0
3	1N	604	CLA	1	0
3	1G	611	CLA	1	0
3	1S	314	CLA	3	0
7	1S	317	LHG	2	0
8	1G	617	XAT	20	0
3	1G	602	CLA	6	0
4	1G	606	CHL	11	0
4	1G	609	CHL	14	0
5	00	313	LUT	13	0
5	1S	316	LUT	16	0
3	00	319	CLA	3	0
4	1S	302	CHL	3	0
3	1S	304	CLA	1	0
4	1N	608	CHL	4	0
4	1S	306	CHL	9	0
3	1G	610	CLA	4	0
3	00	301	CLA	4	0
4	1G	605	CHL	2	0
5	1G	616	LUT	24	0
7	00	318	LHG	4	0
5	00	314	LUT	20	0
3	1N	611	CLA	1	0
5	1S	315	LUT	17	0
3	1G	612	CLA	7	0
3	1N	602	CLA	8	0
4	1N	606	CHL	17	0
3	1S	311	CLA	1	0
4	1N	609	CHL	15	0
4	00	307	CHL	16	0
3	1N	603	CLA	8	0
3	1S	303	CLA	1	0
6	00	315	VIV	5	0
7	00	320	LHG	1	0
3	00	303	CLA	4	0
3	00	302	CLA	8	0
3	1G	603	CLA	2	0
3	00	312	CLA	4	0
3	1S	308	CLA	5	0
4	00	306	CHL	19	0
5	1G	615	LUT	18	0
5	1N	615	LUT	20	0

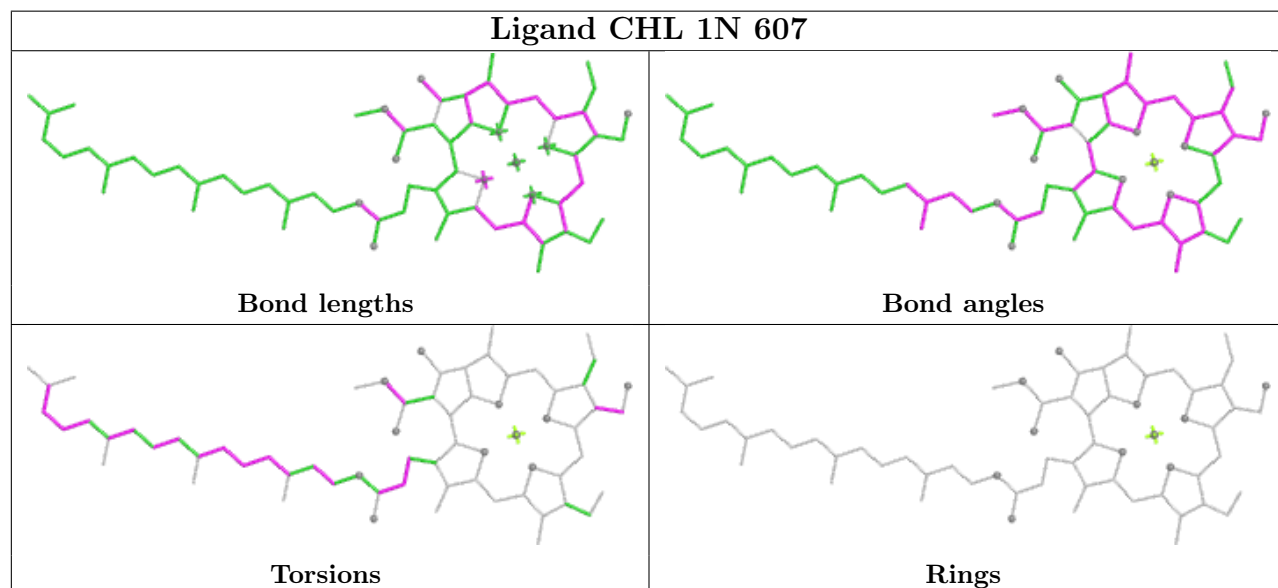
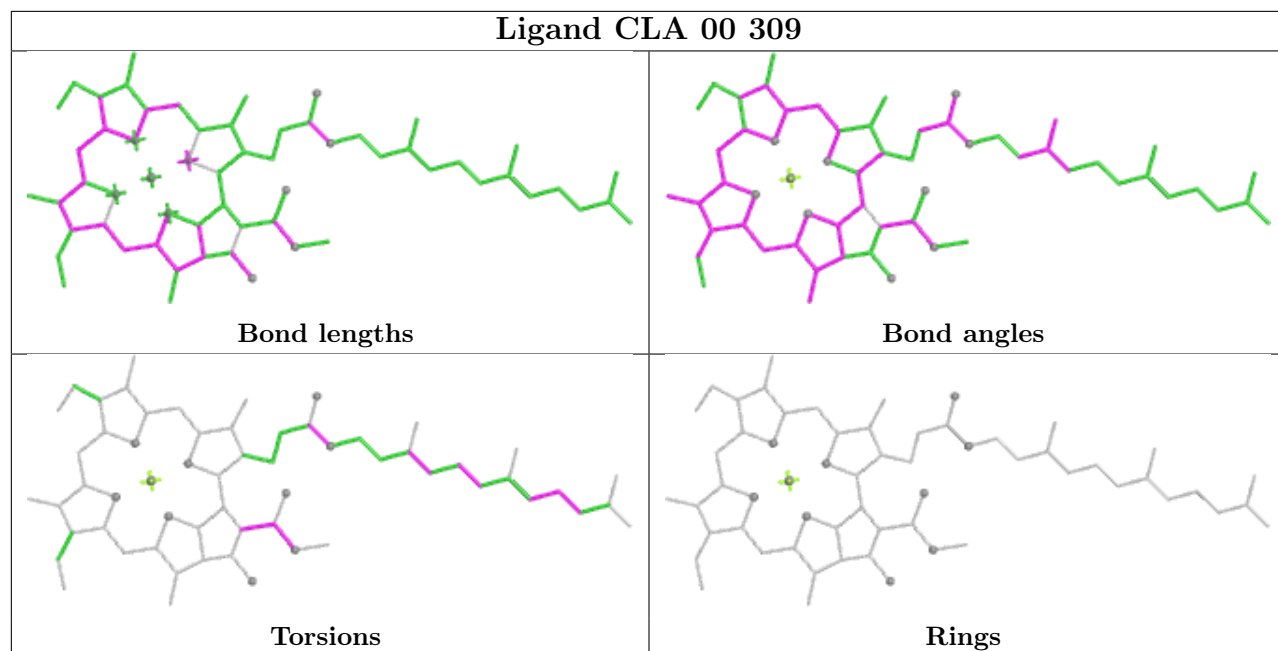
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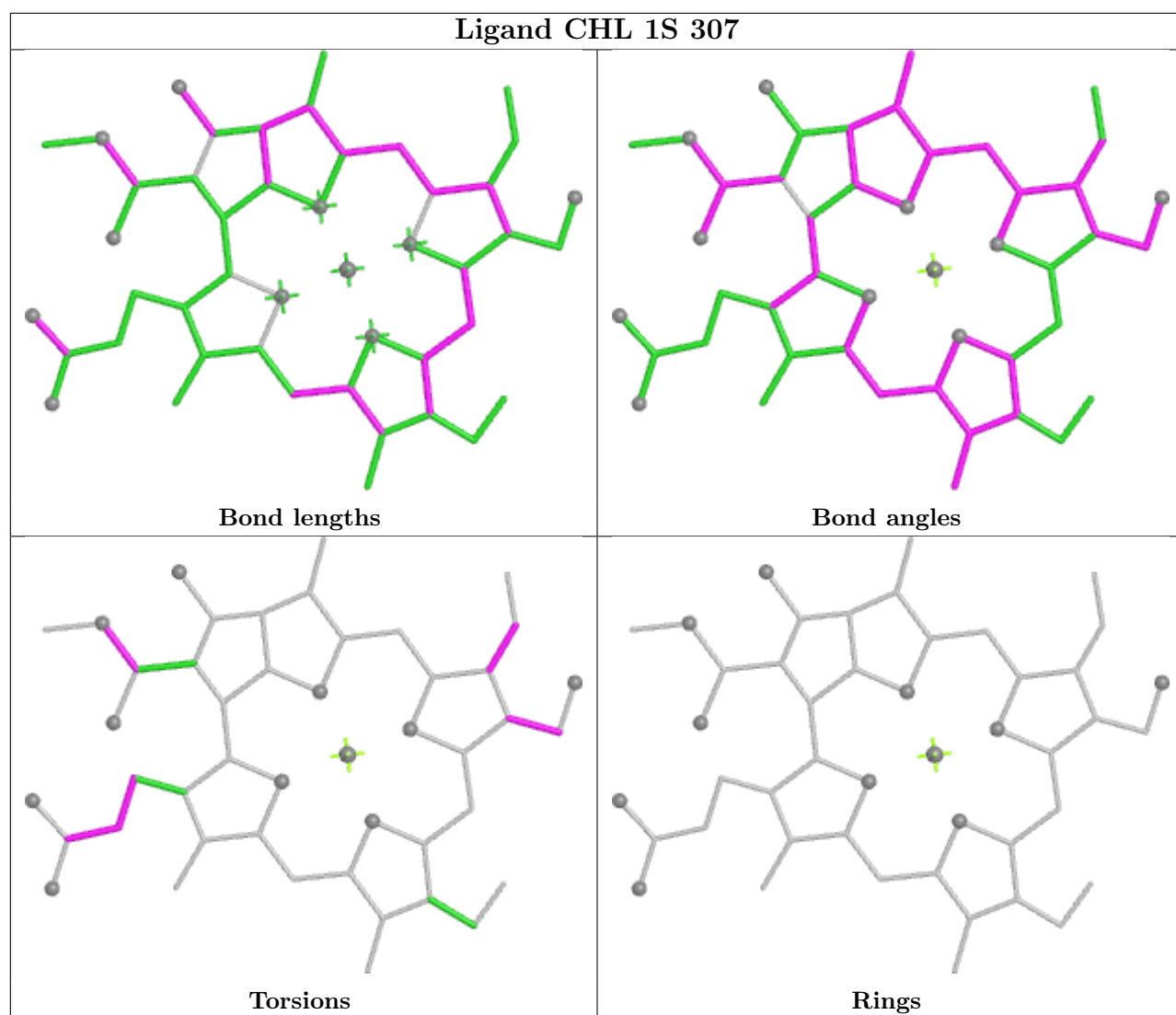
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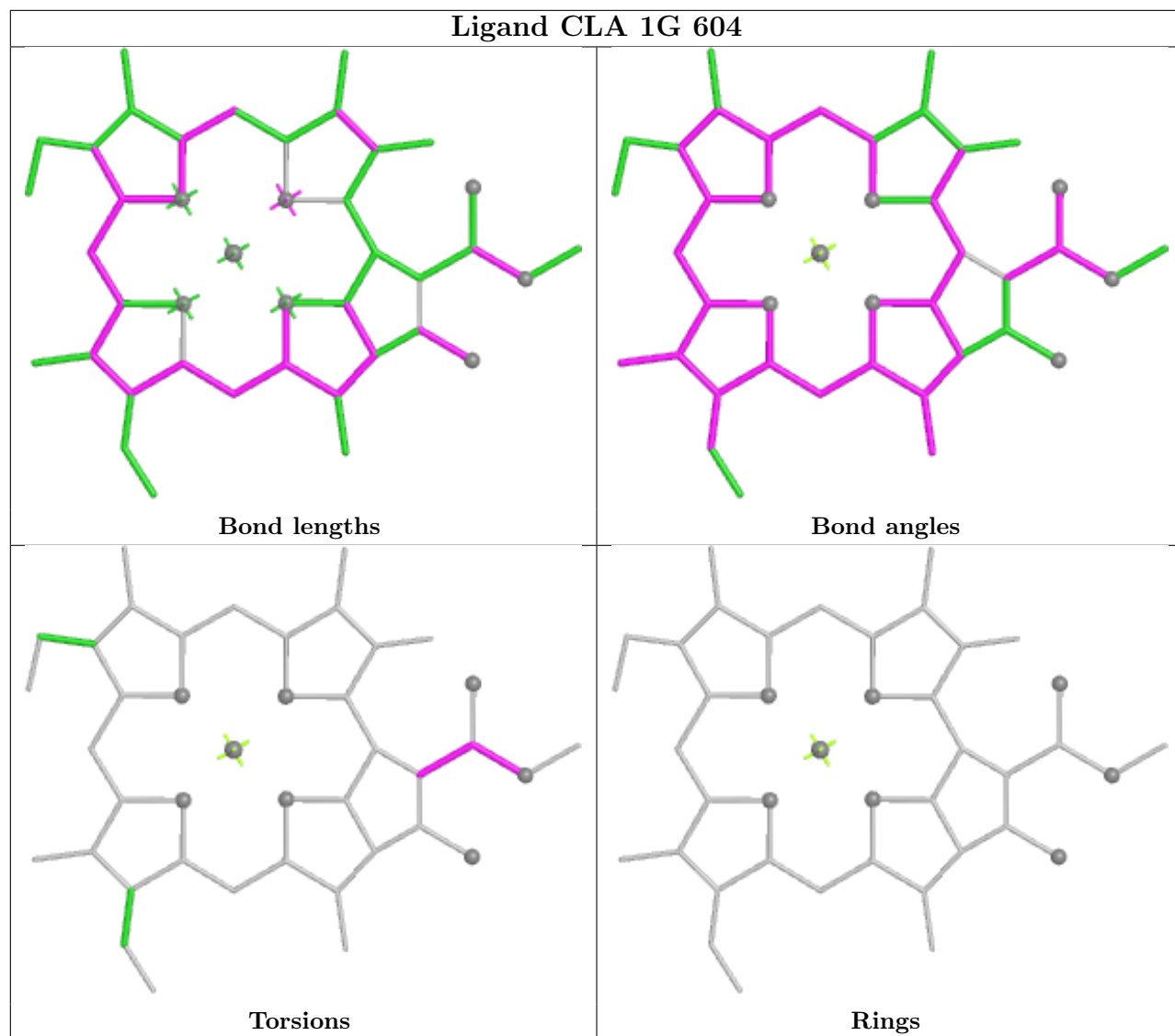
Mol	Chain	Res	Type	Clashes	Symm-Clashes
7	1N	617	LHG	3	0
3	1N	610	CLA	1	0
3	1S	310	CLA	2	0

The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less than 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.

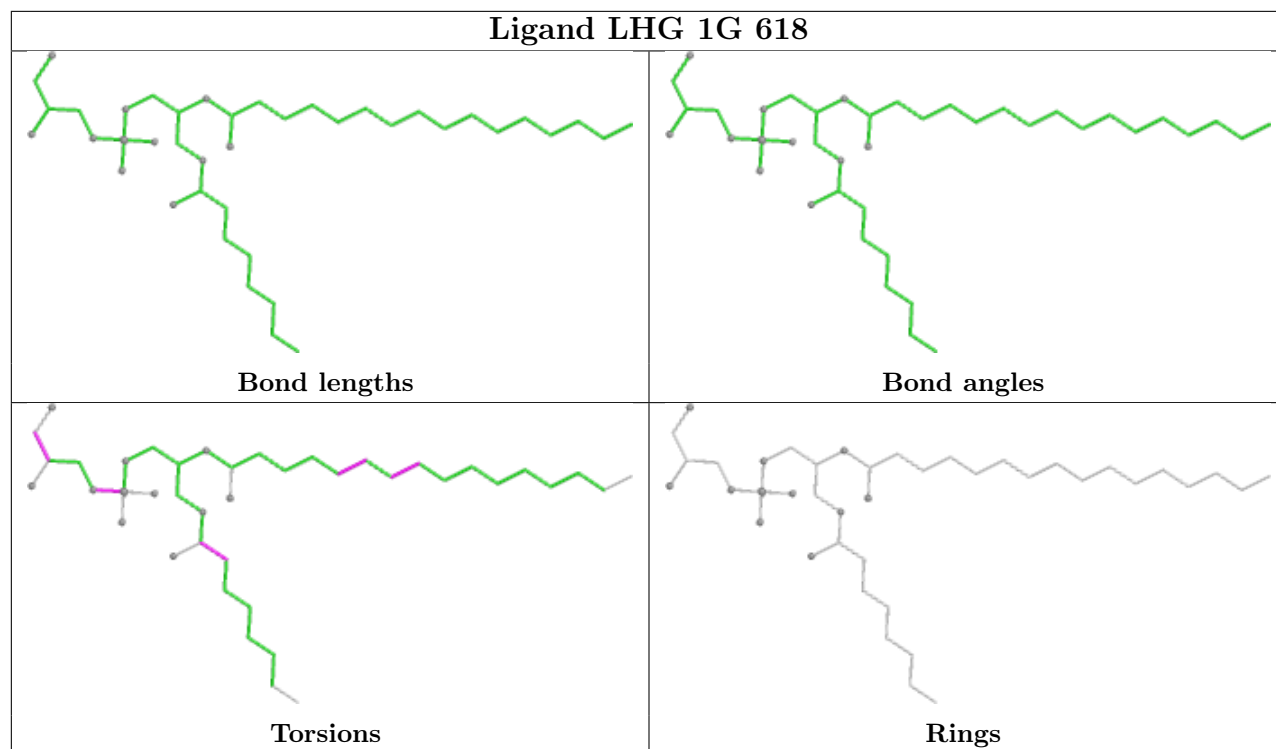




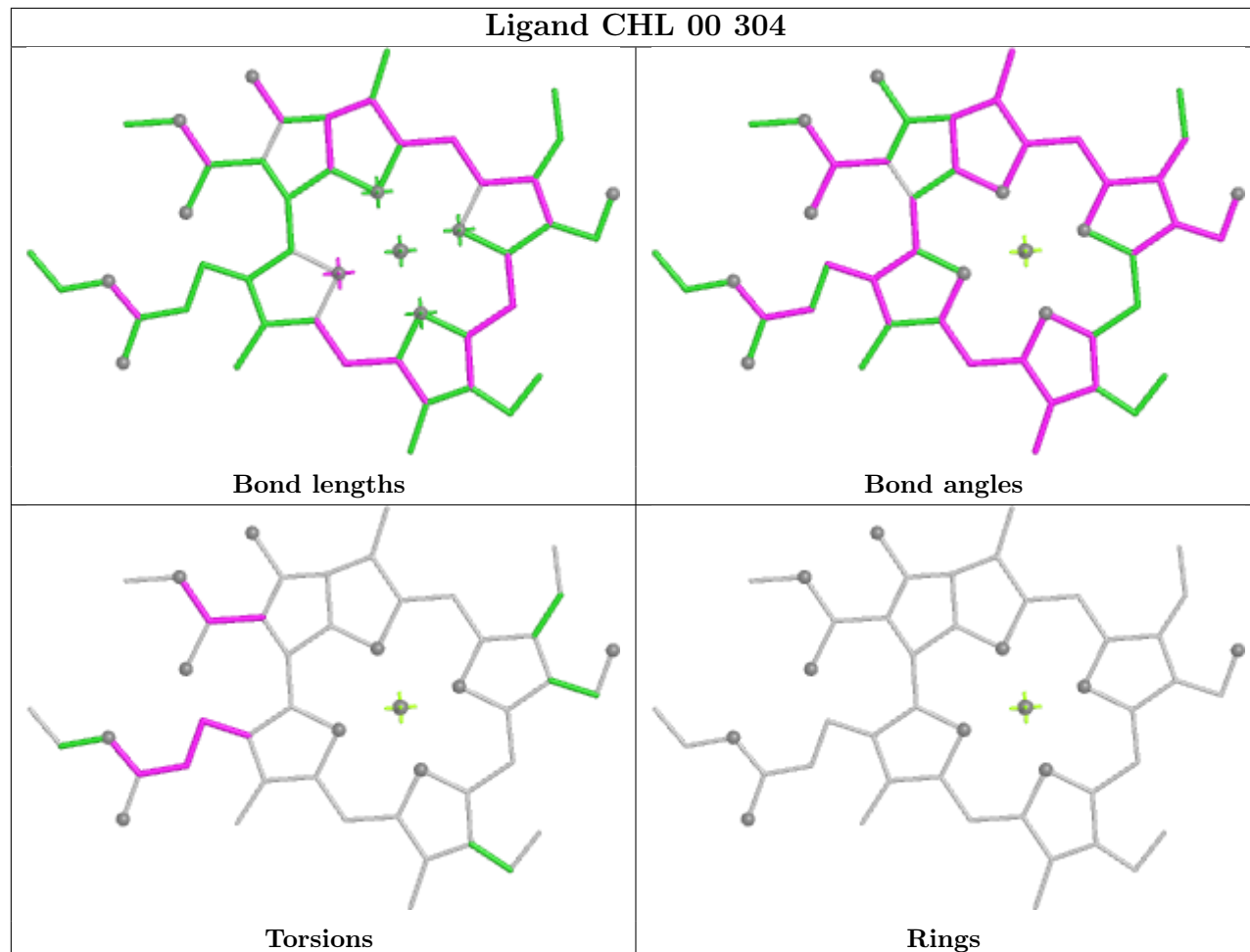


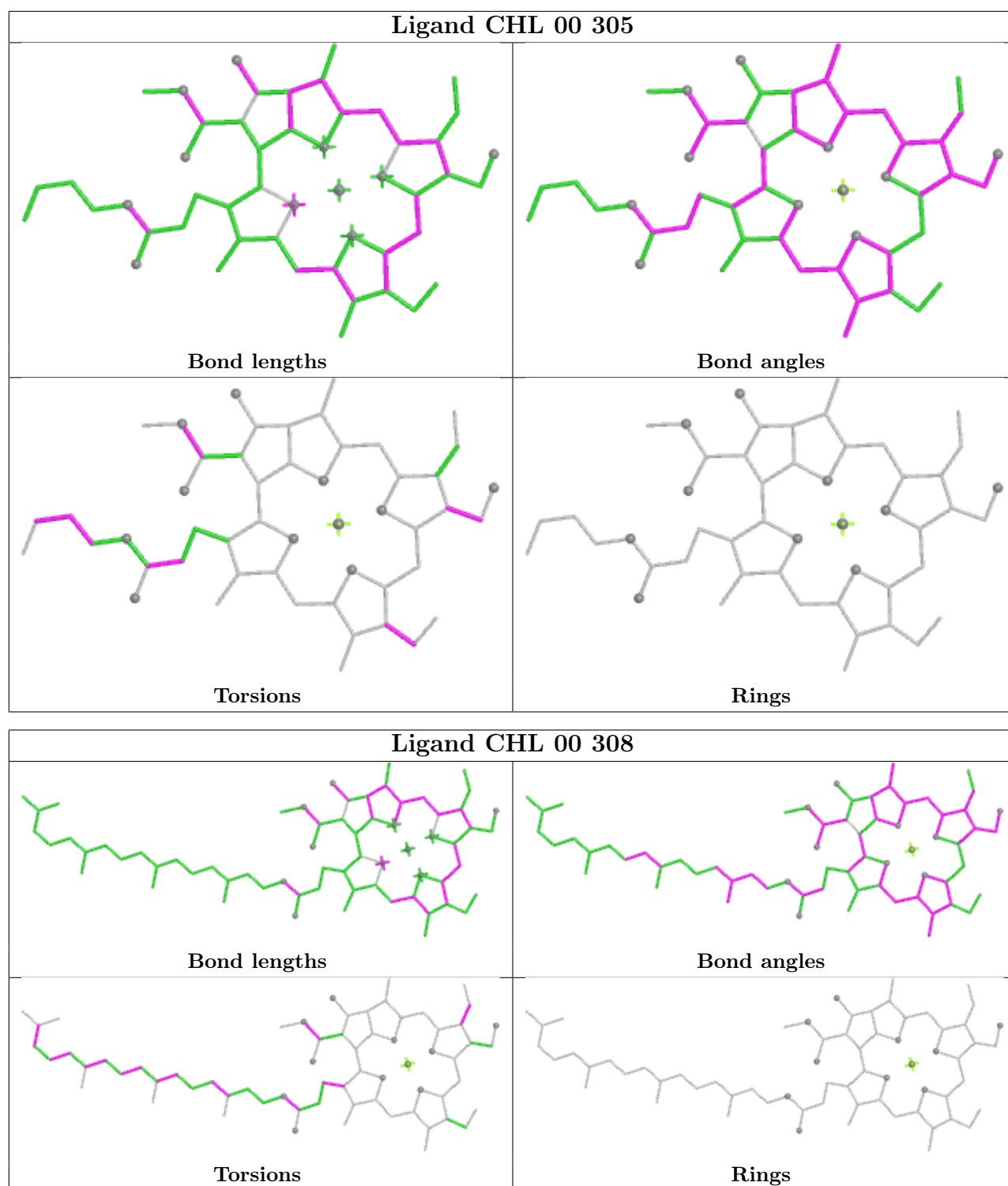


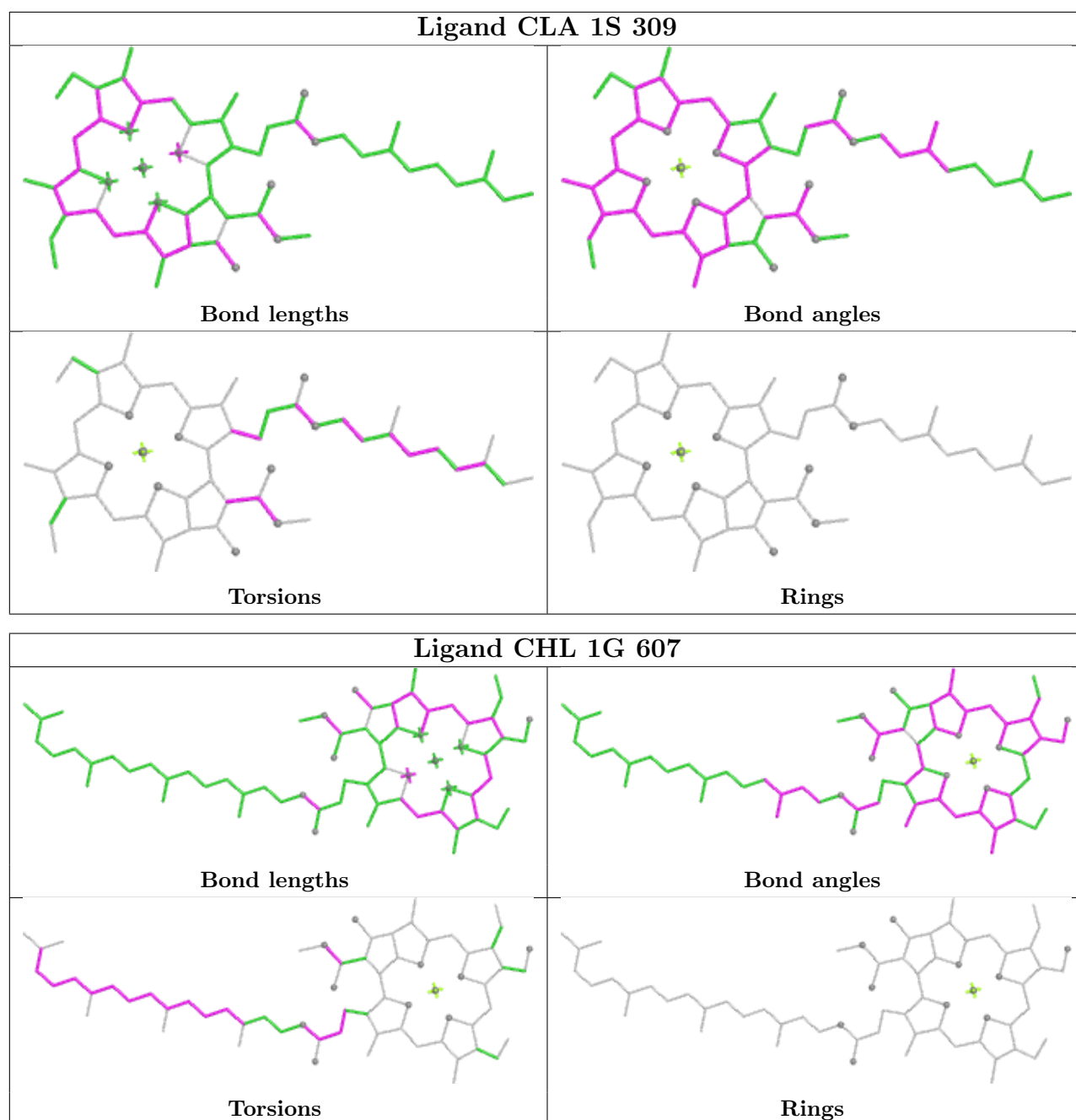
Ligand LHG 1G 618

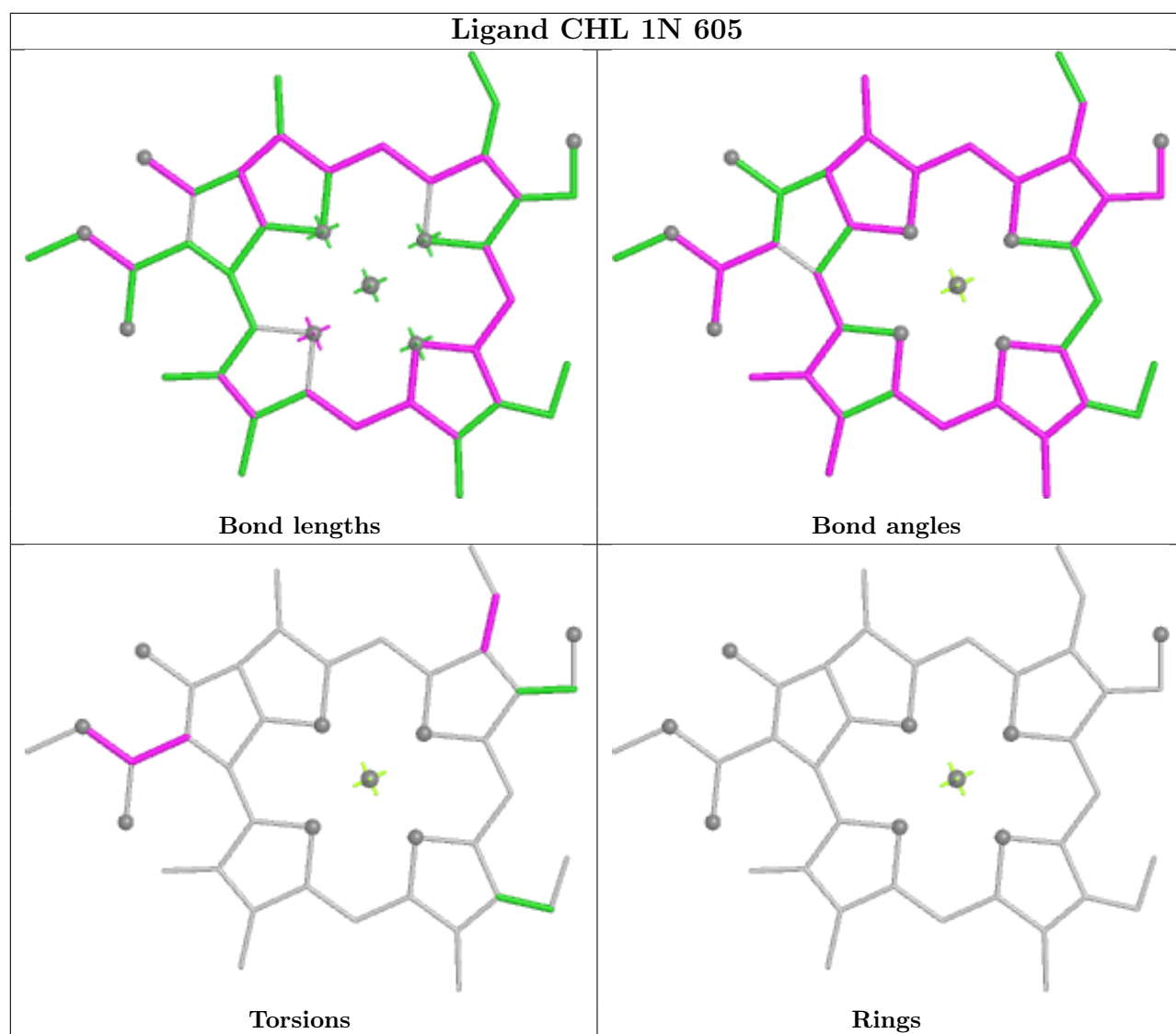


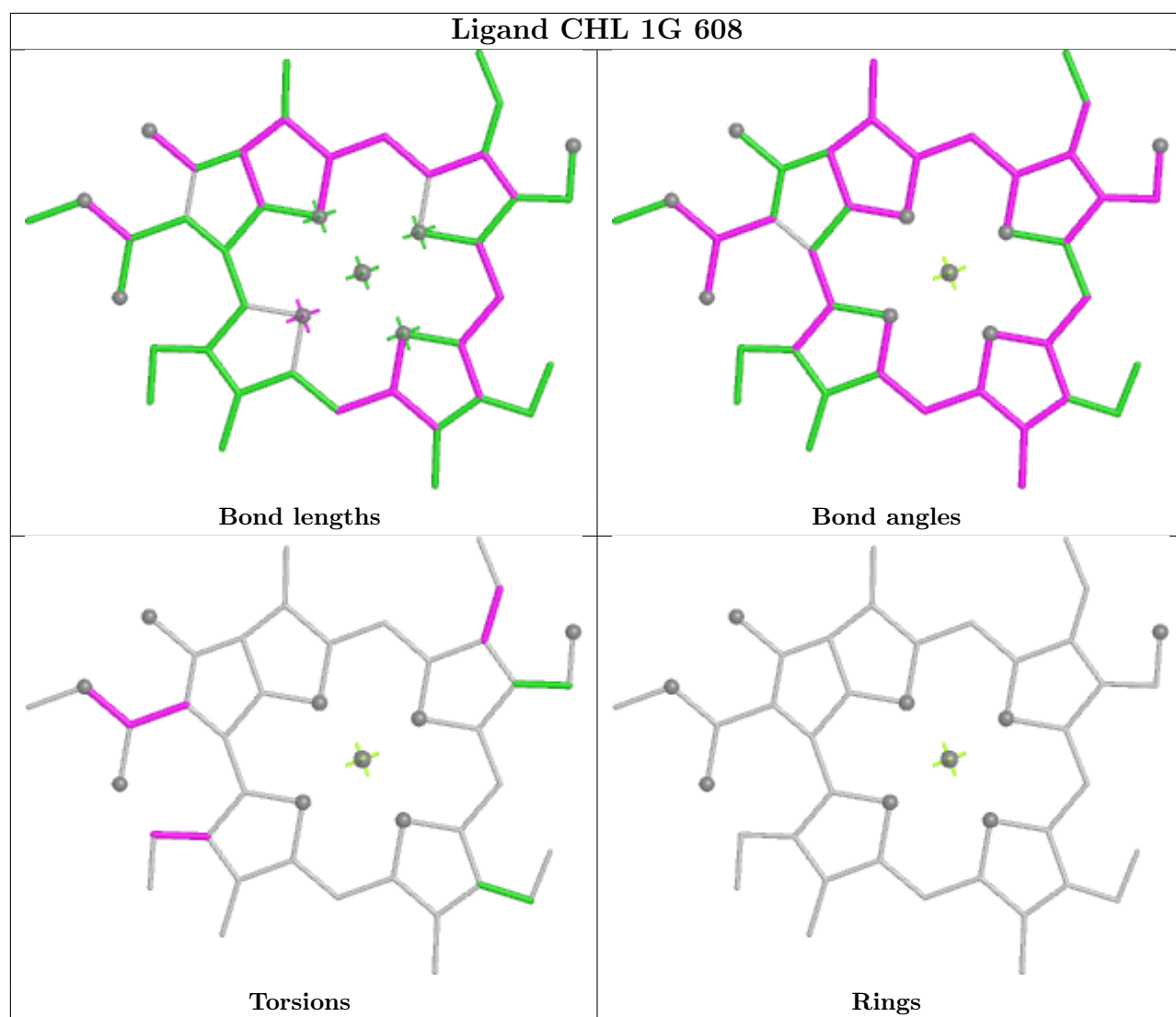
Ligand CHL 00 304

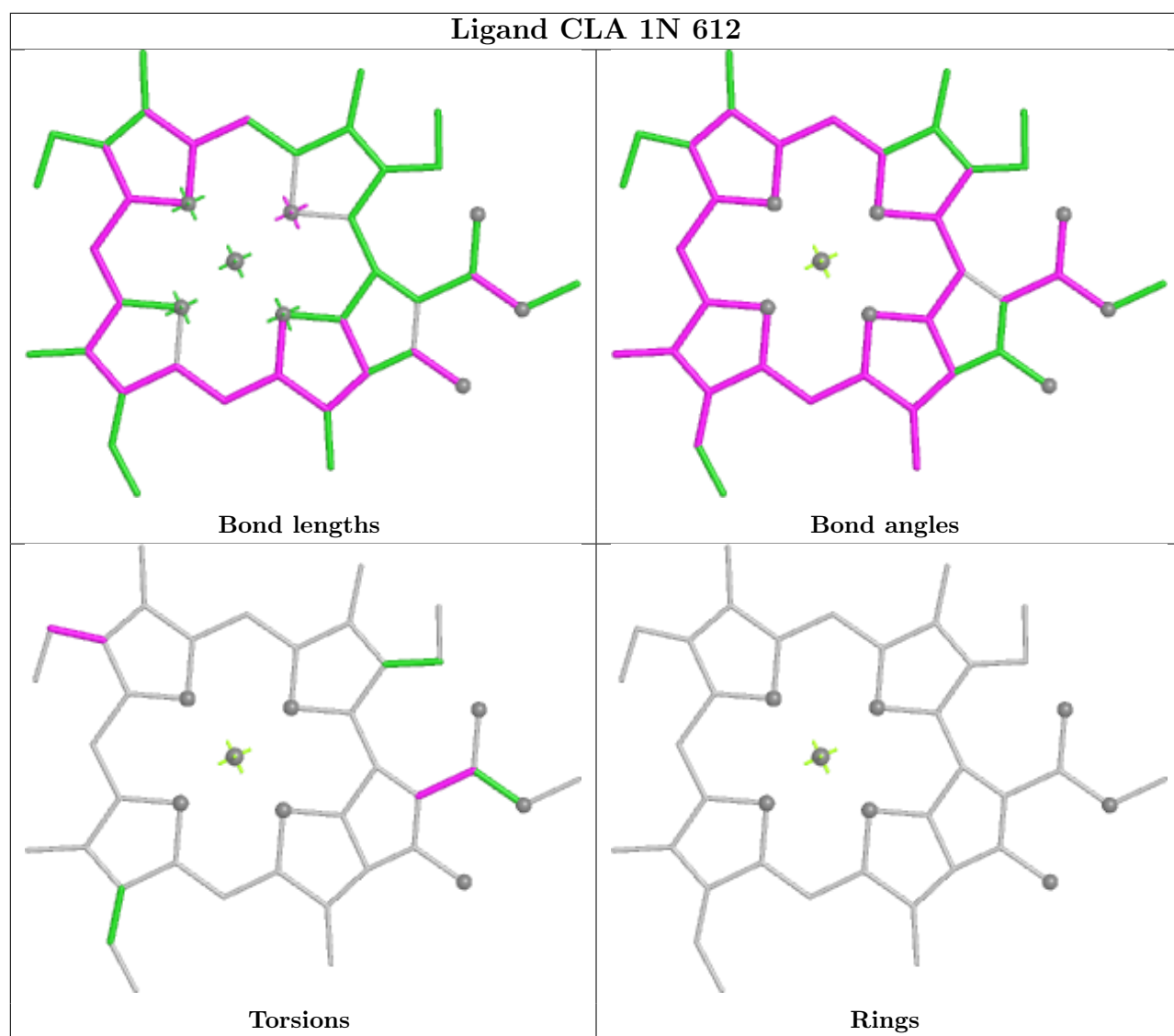


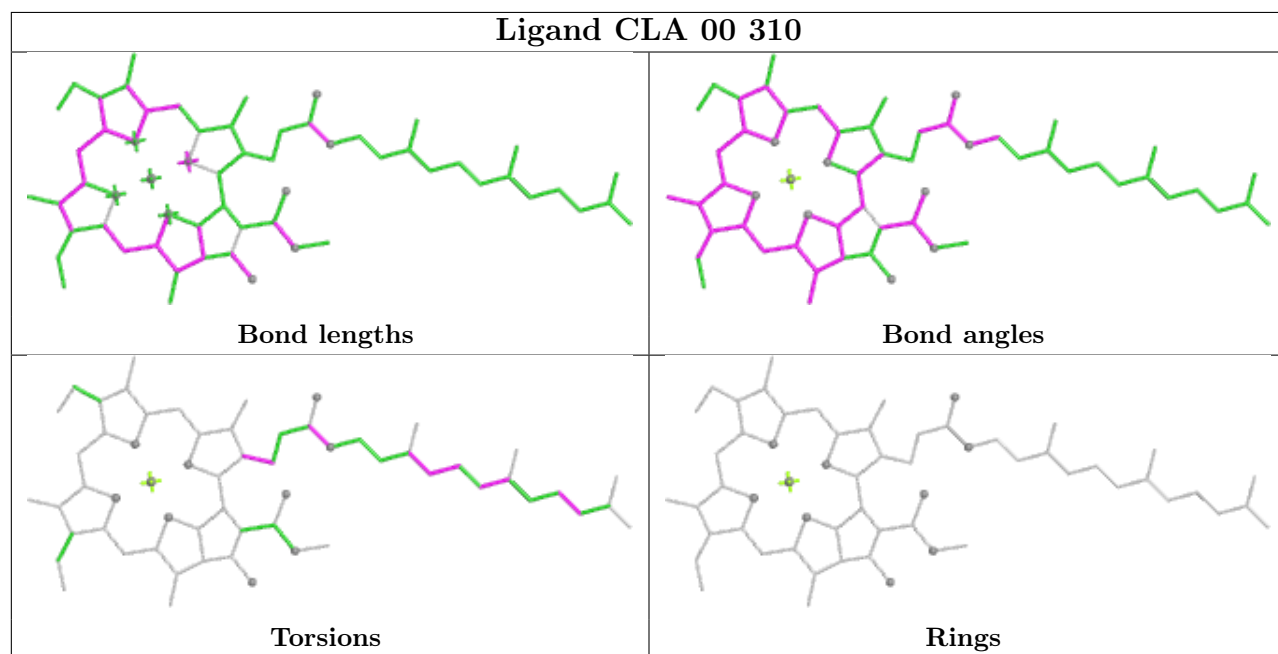
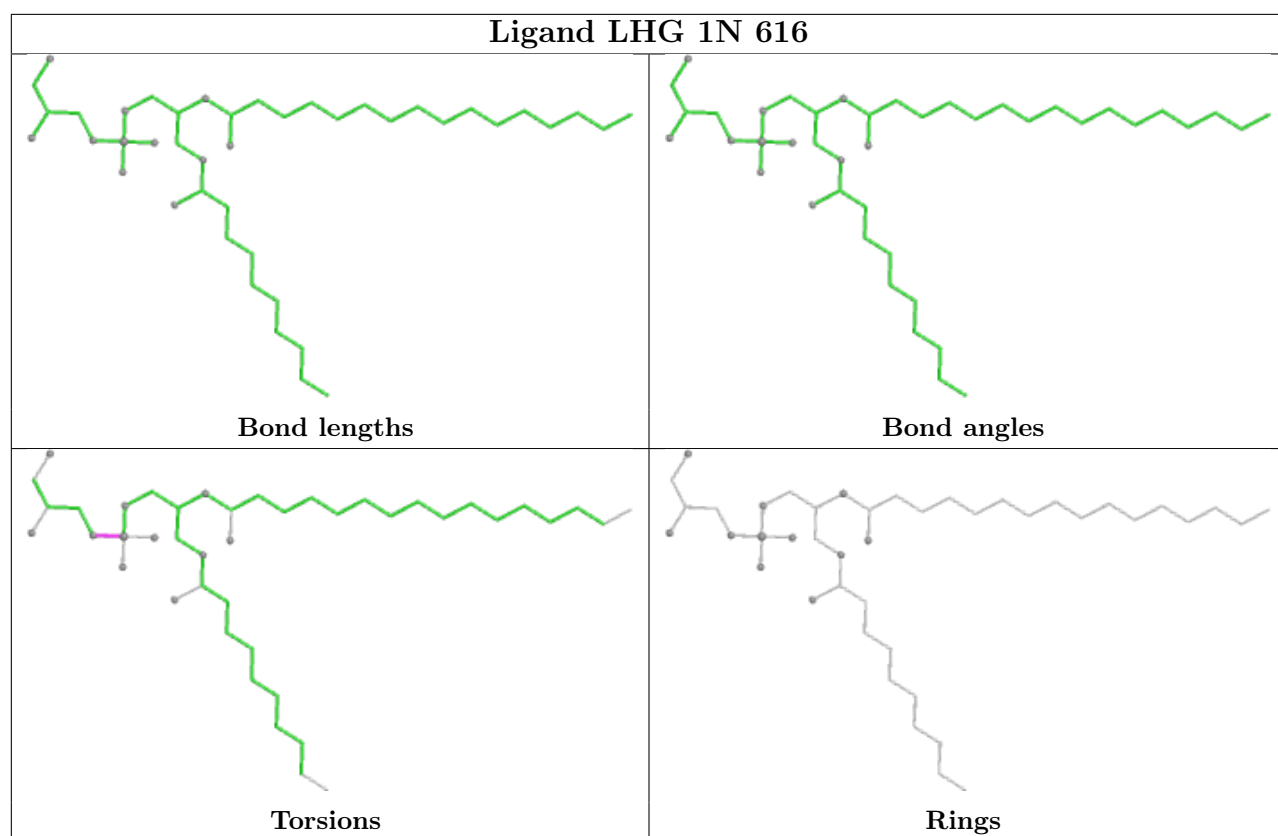


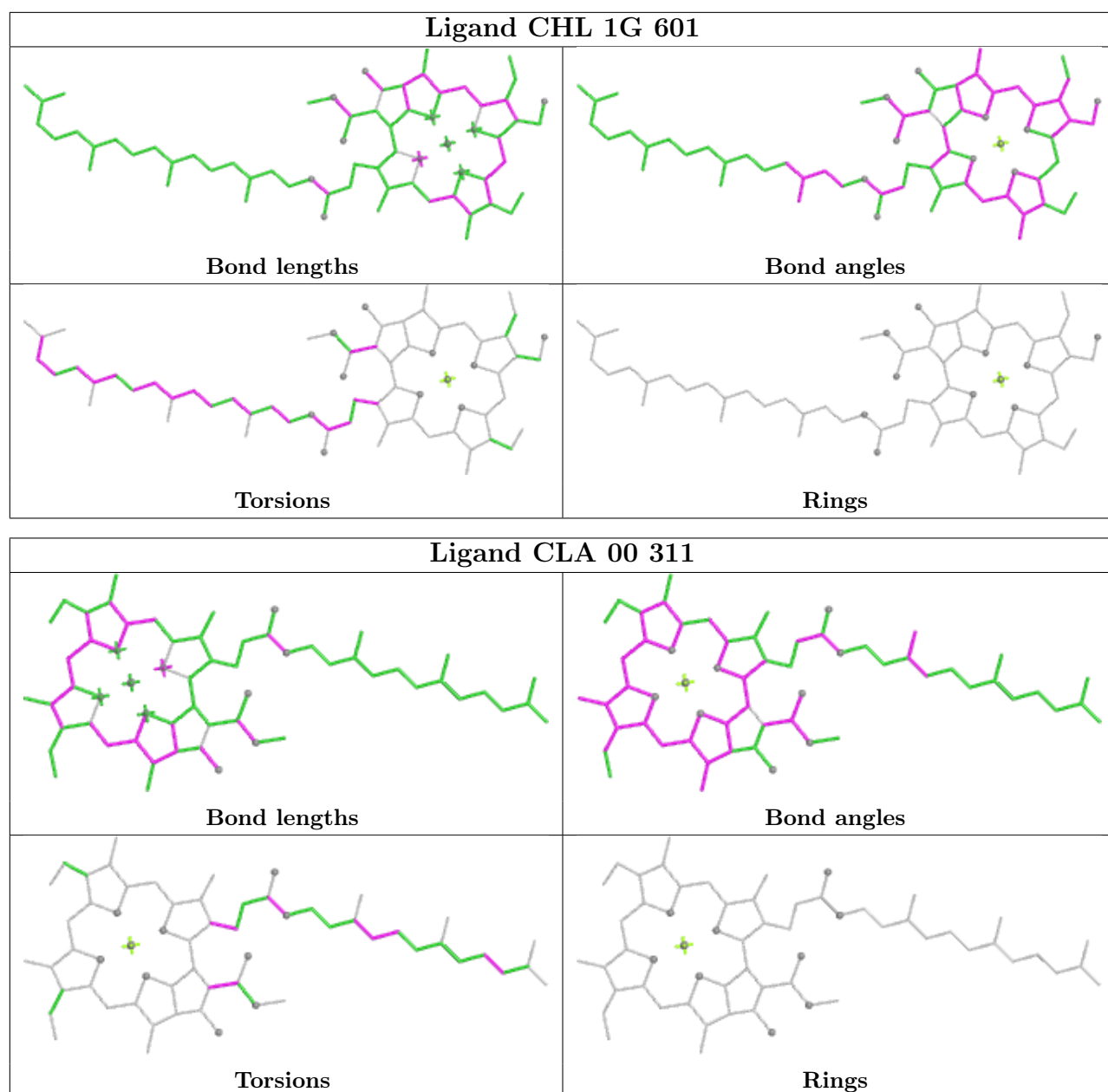


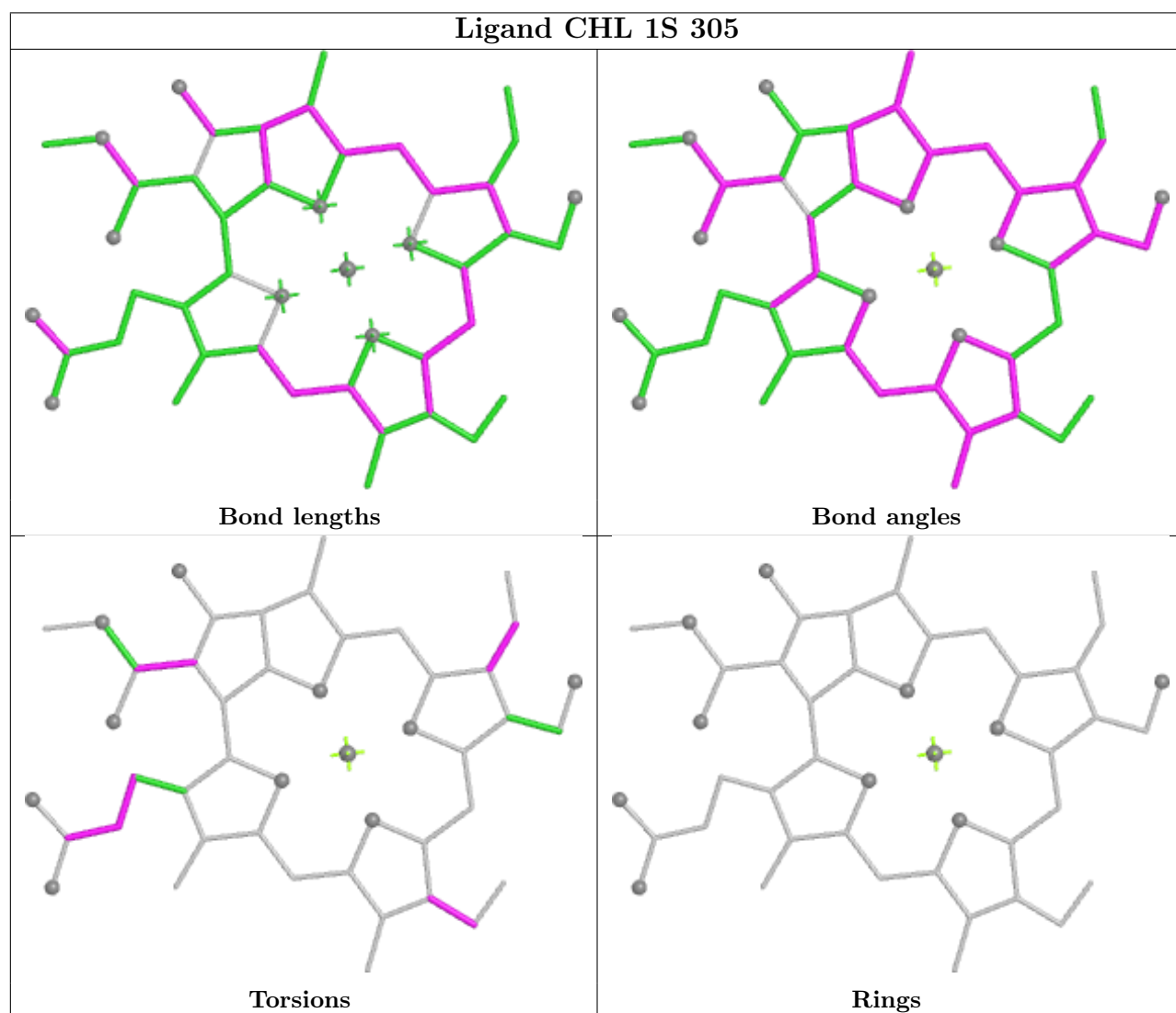
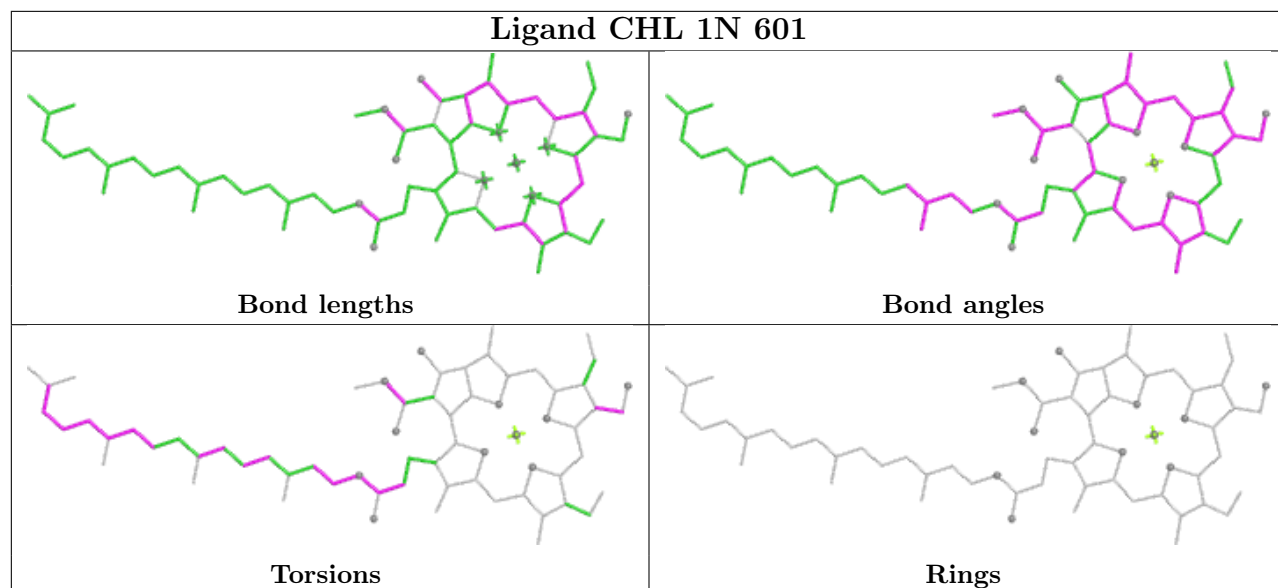




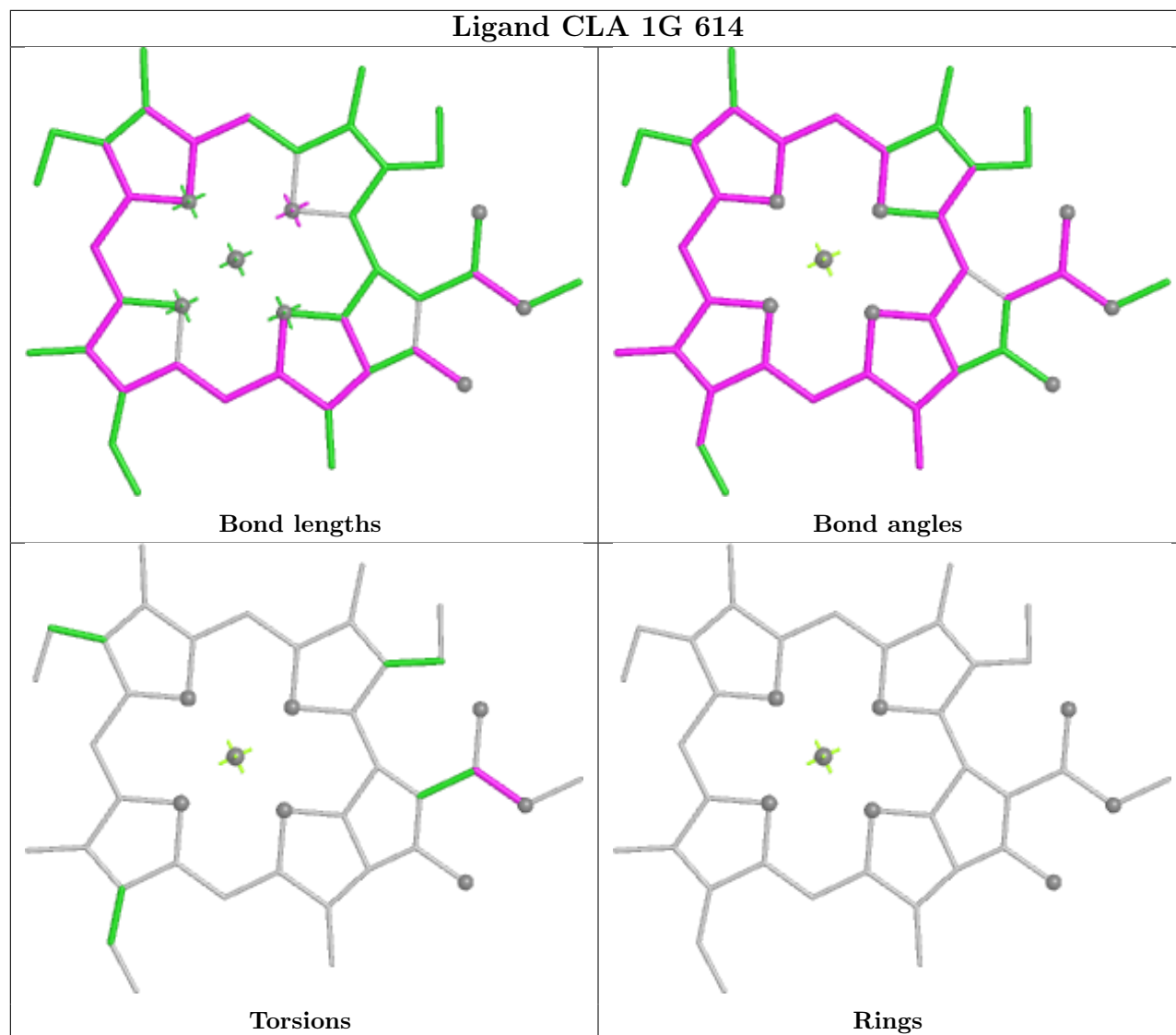




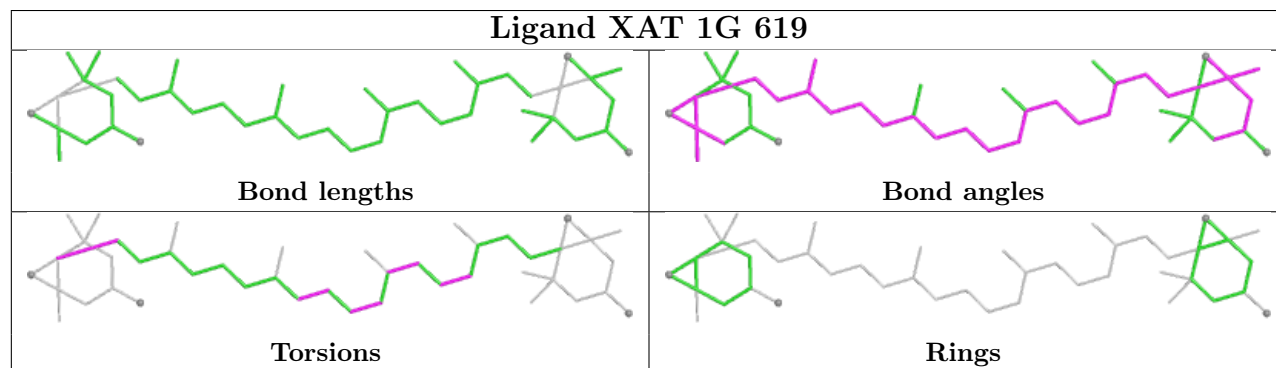


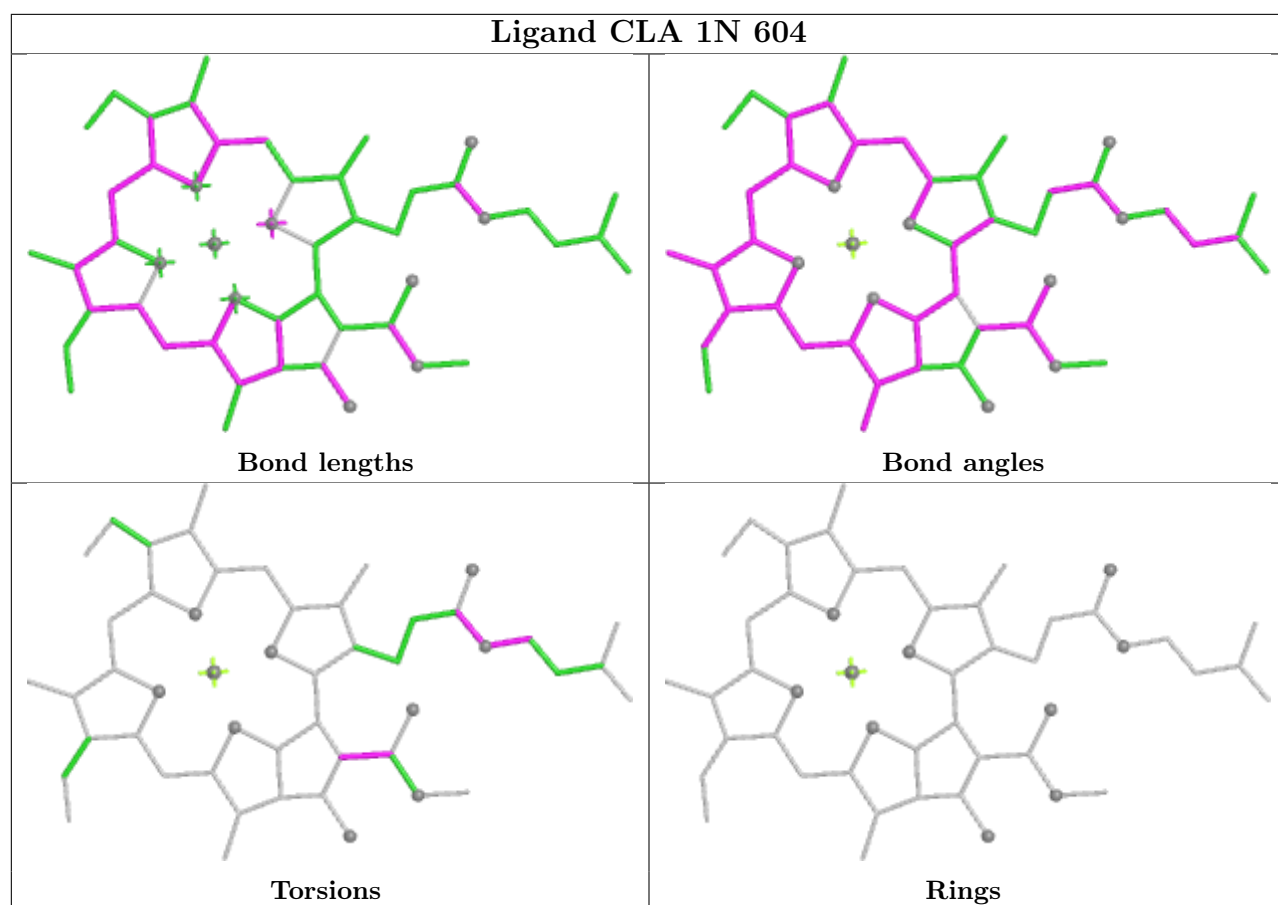


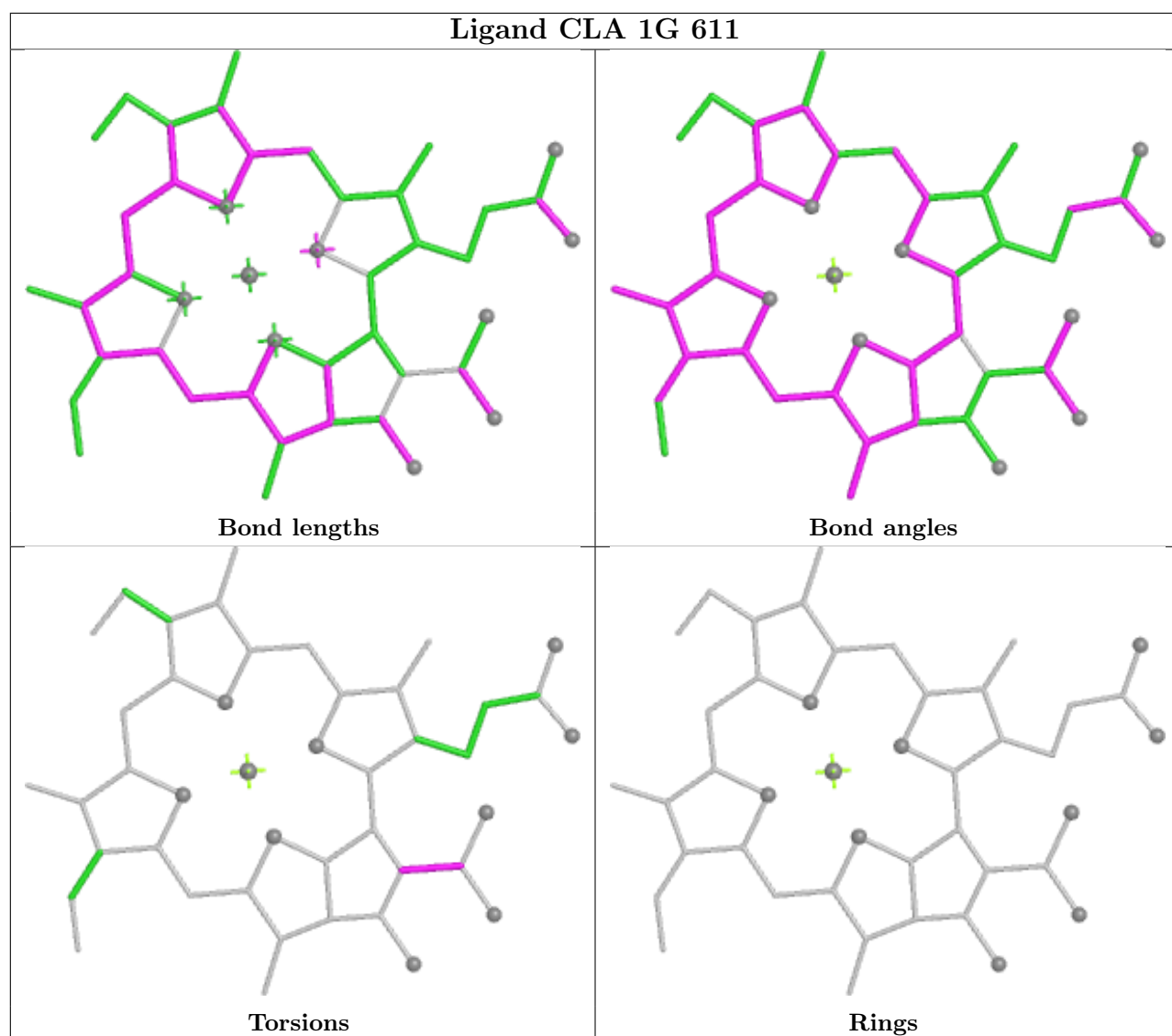
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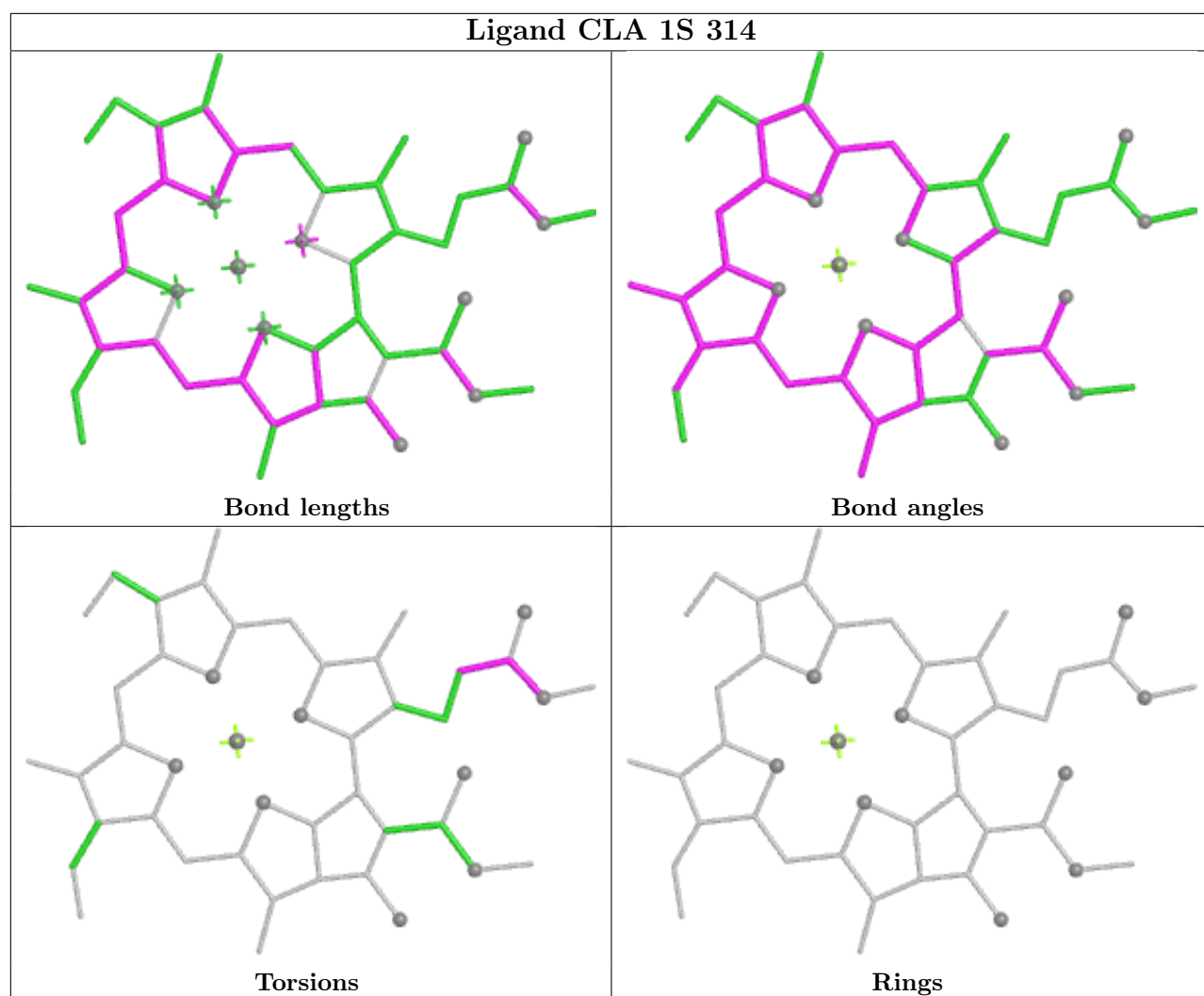


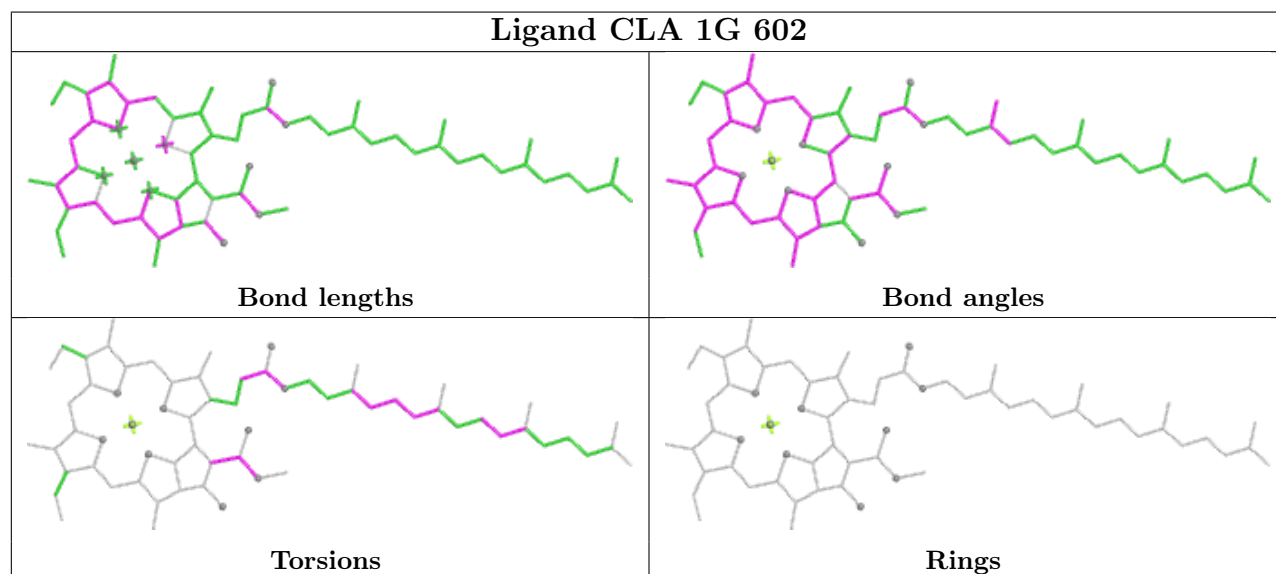
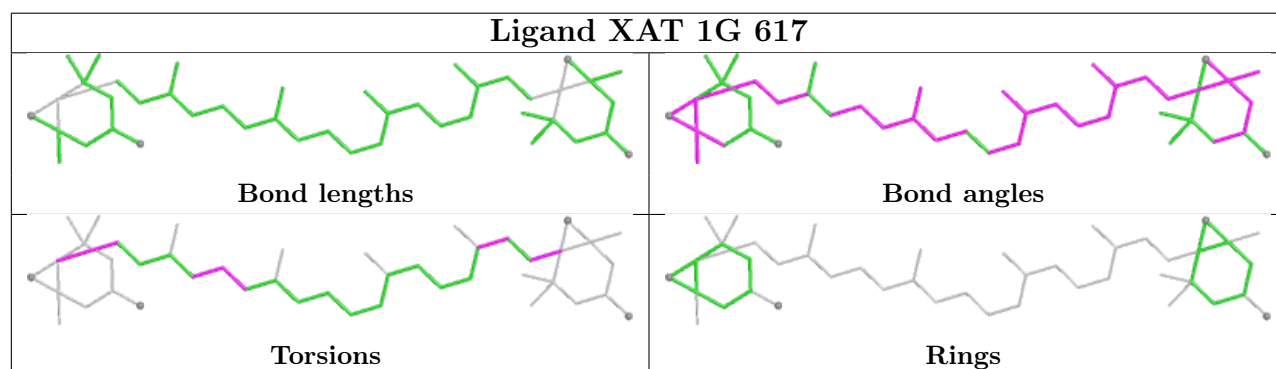
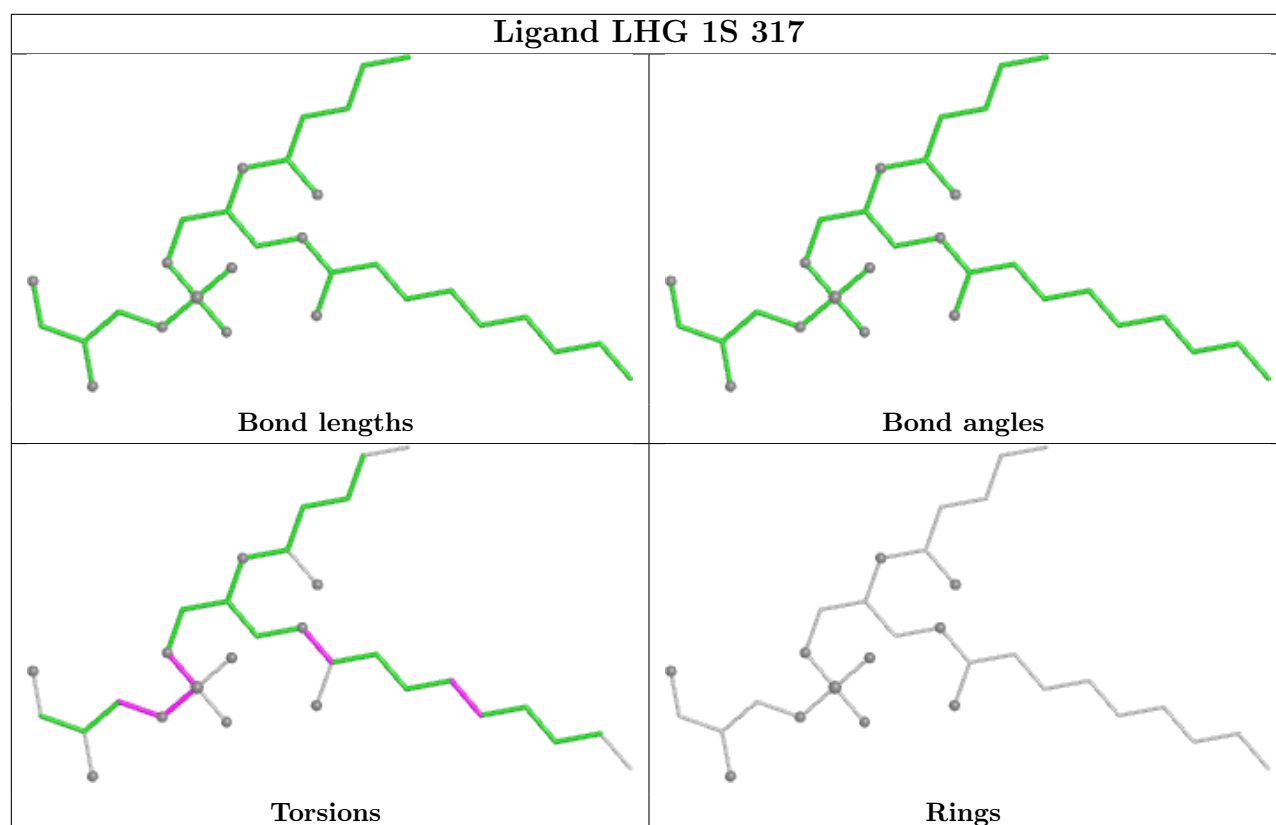
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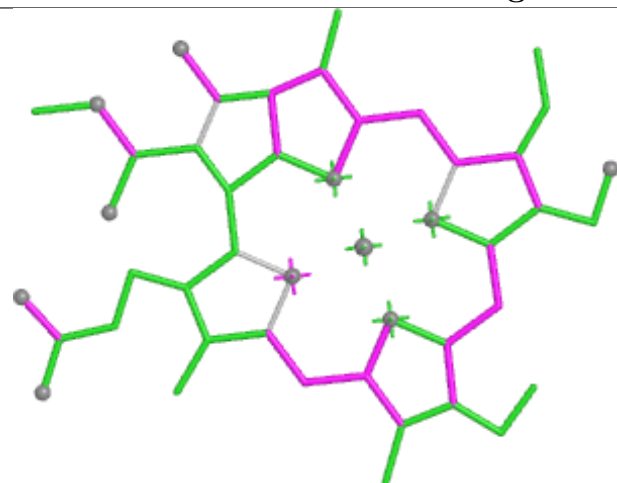




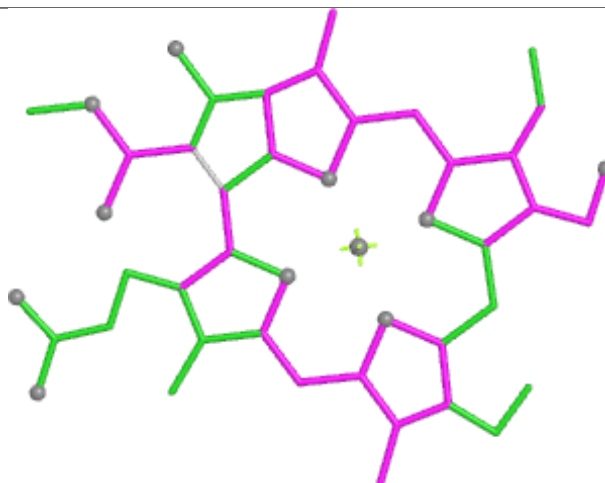




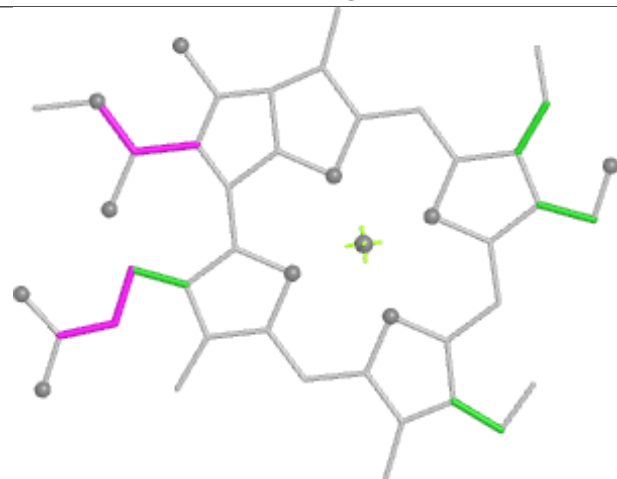
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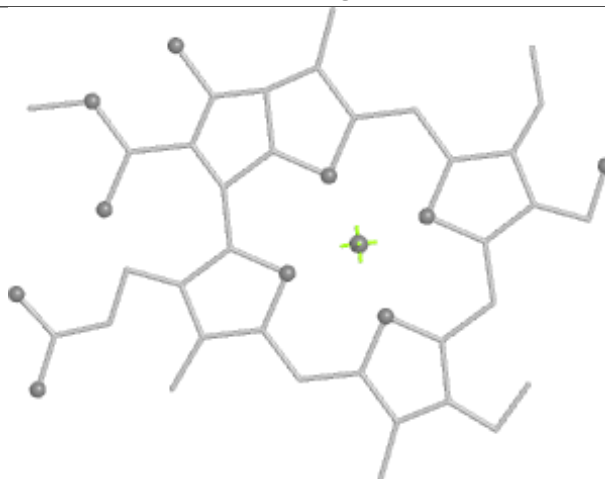
Bond lengths



Bond angles

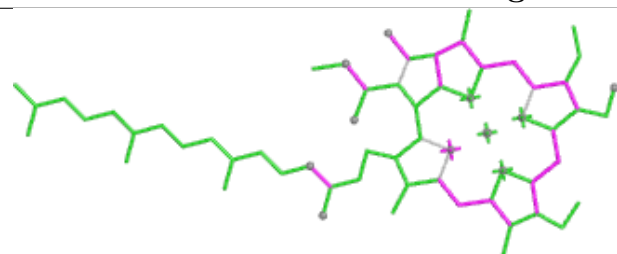


Torsions

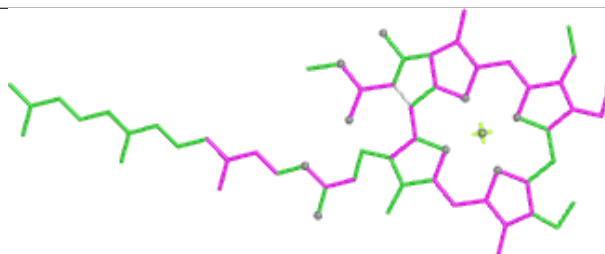


Rings

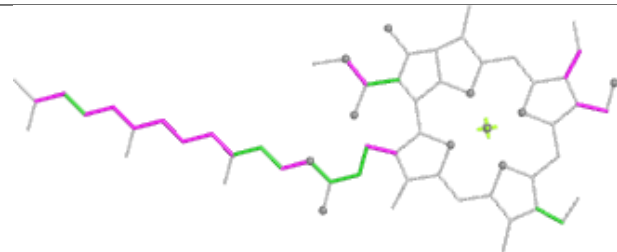
Ligand CHL 1G 609



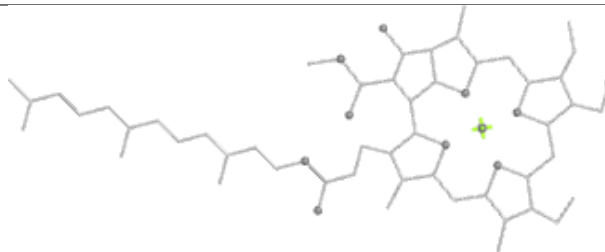
Bond lengths



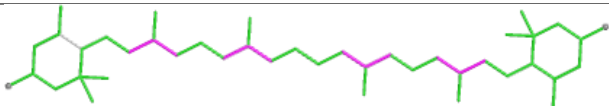
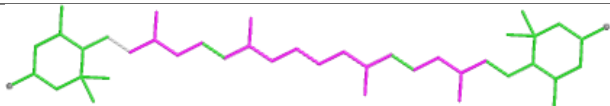
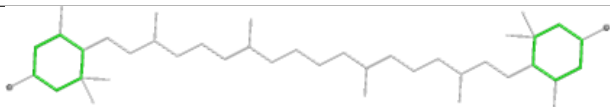
Bond angles

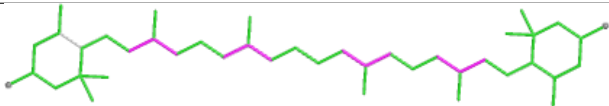
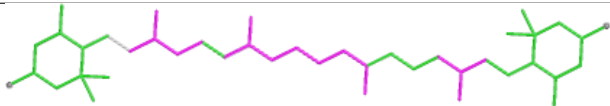
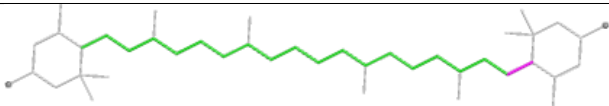
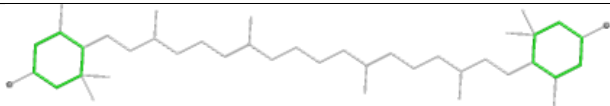


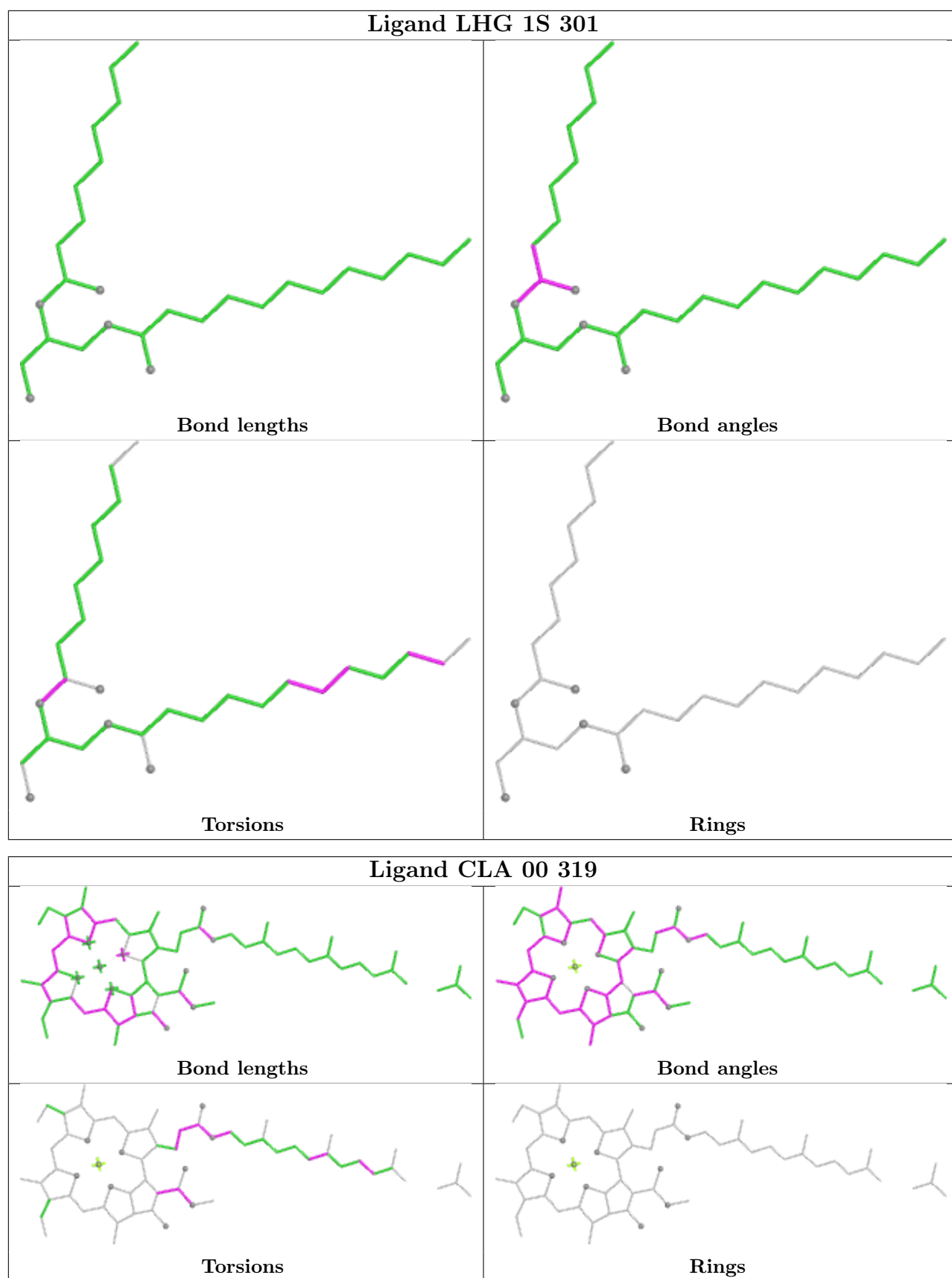
Torsions

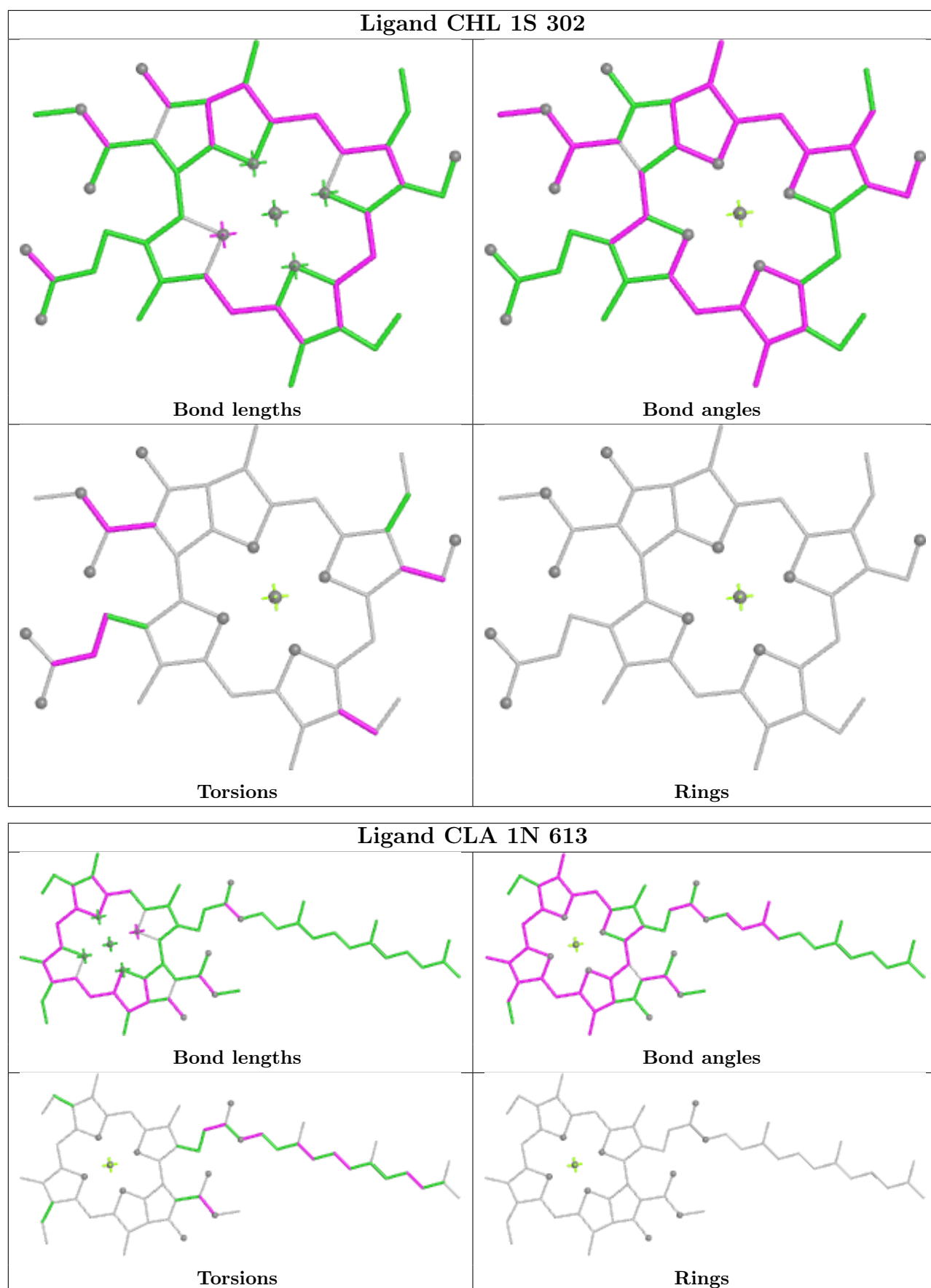


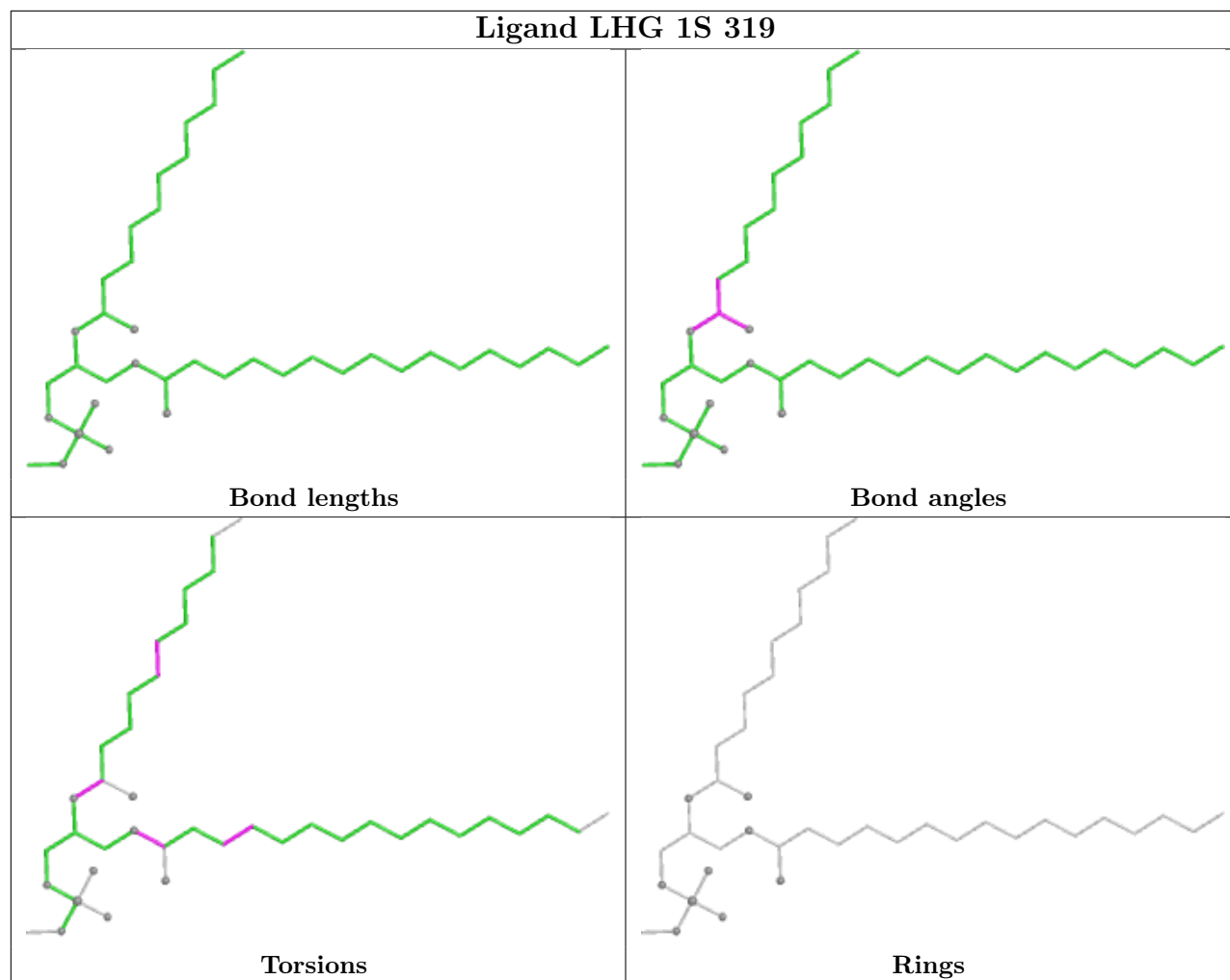
Rings

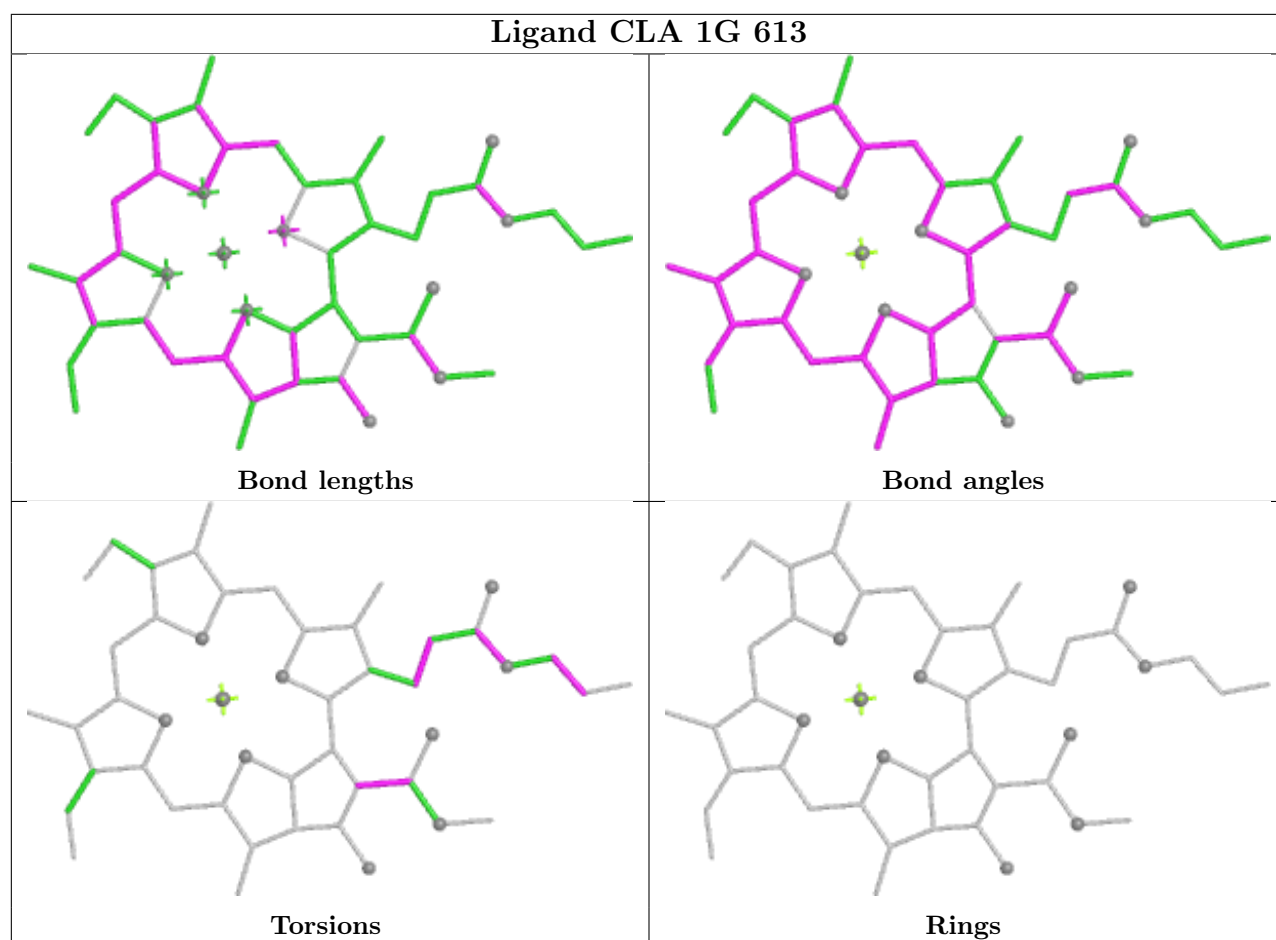
Ligand LUT 00 313	
	
Bond lengths	Bond angles
	
Torsions	Rings

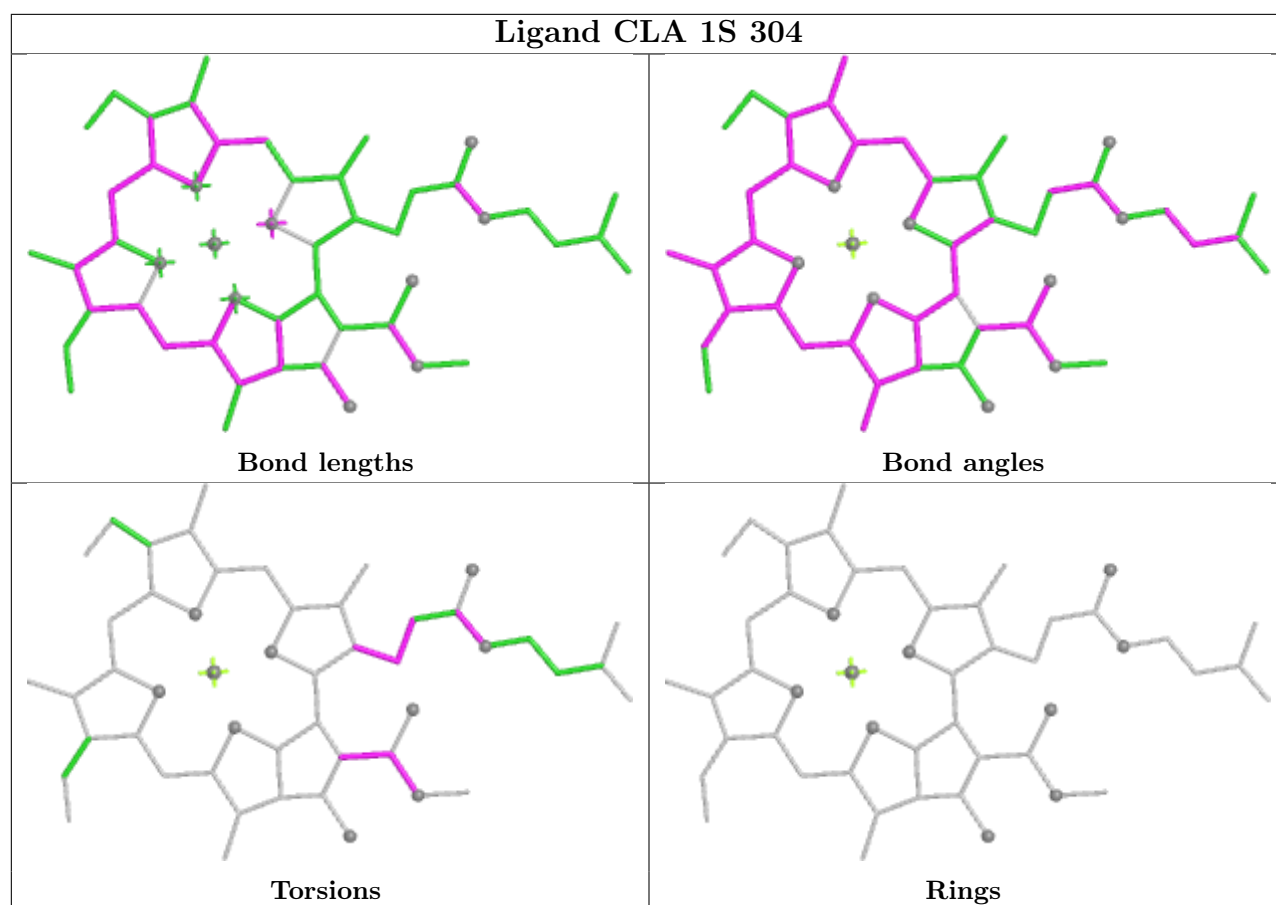
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Bond lengths	Bond angles
	
Torsions	Rings

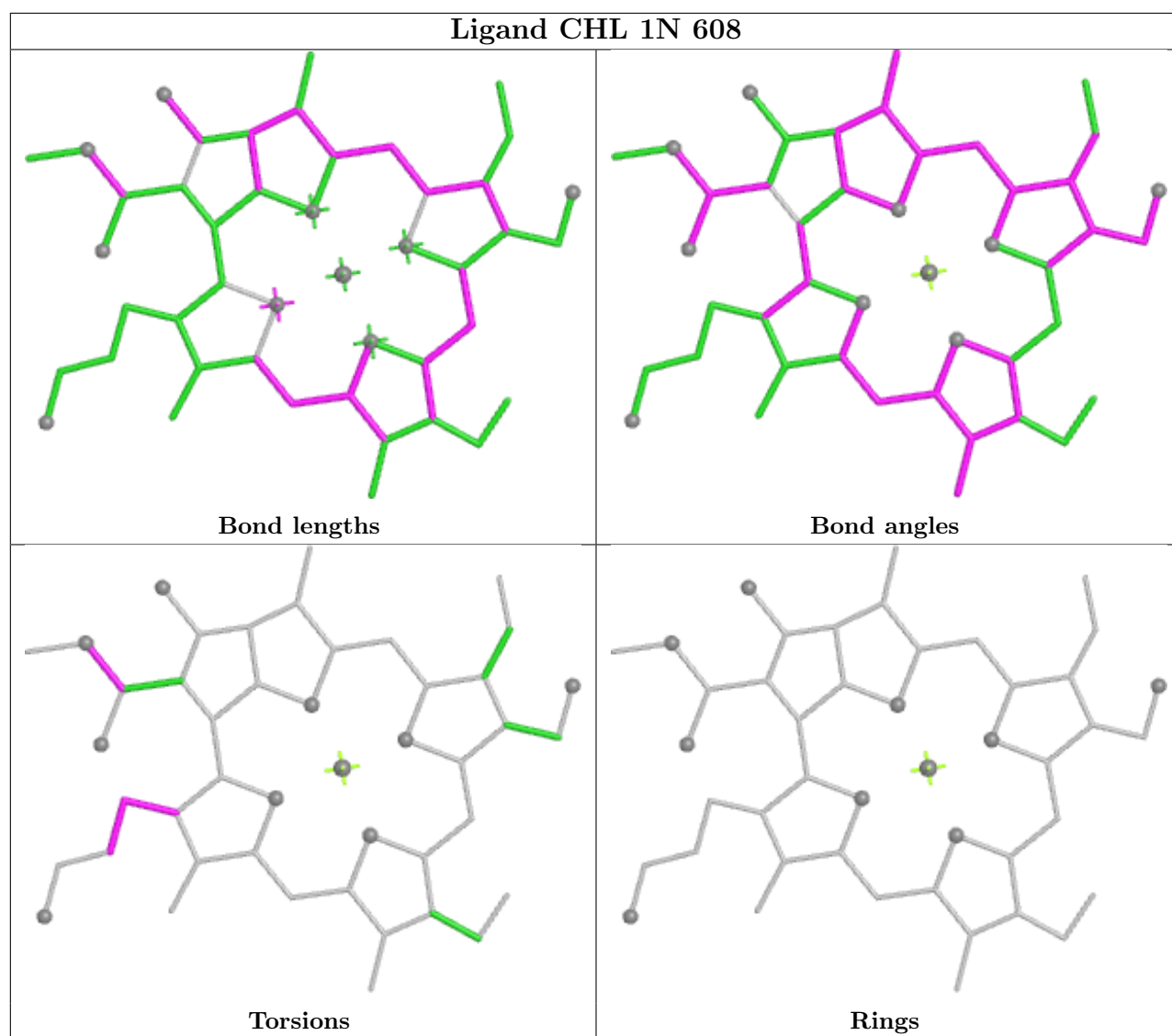


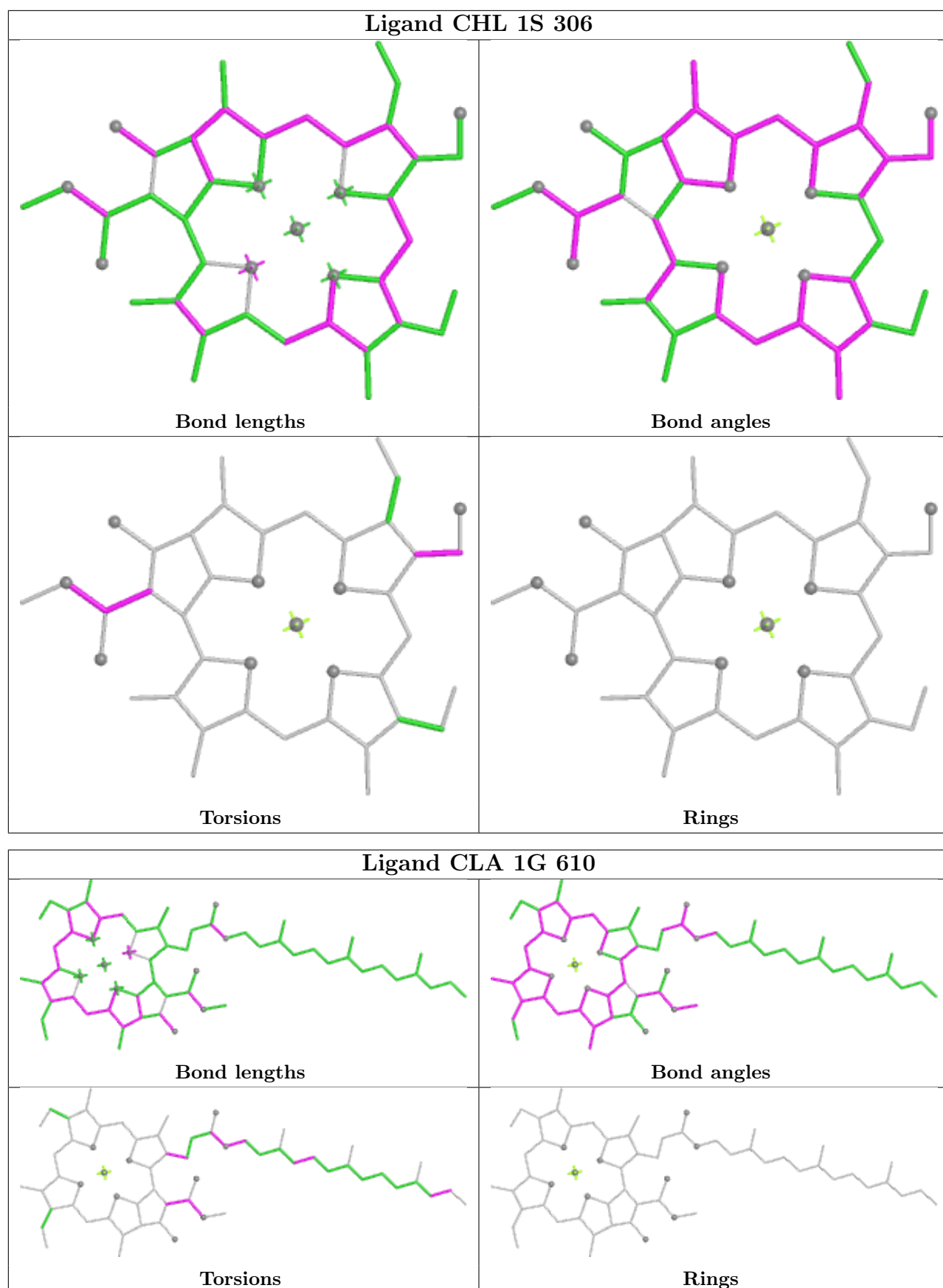


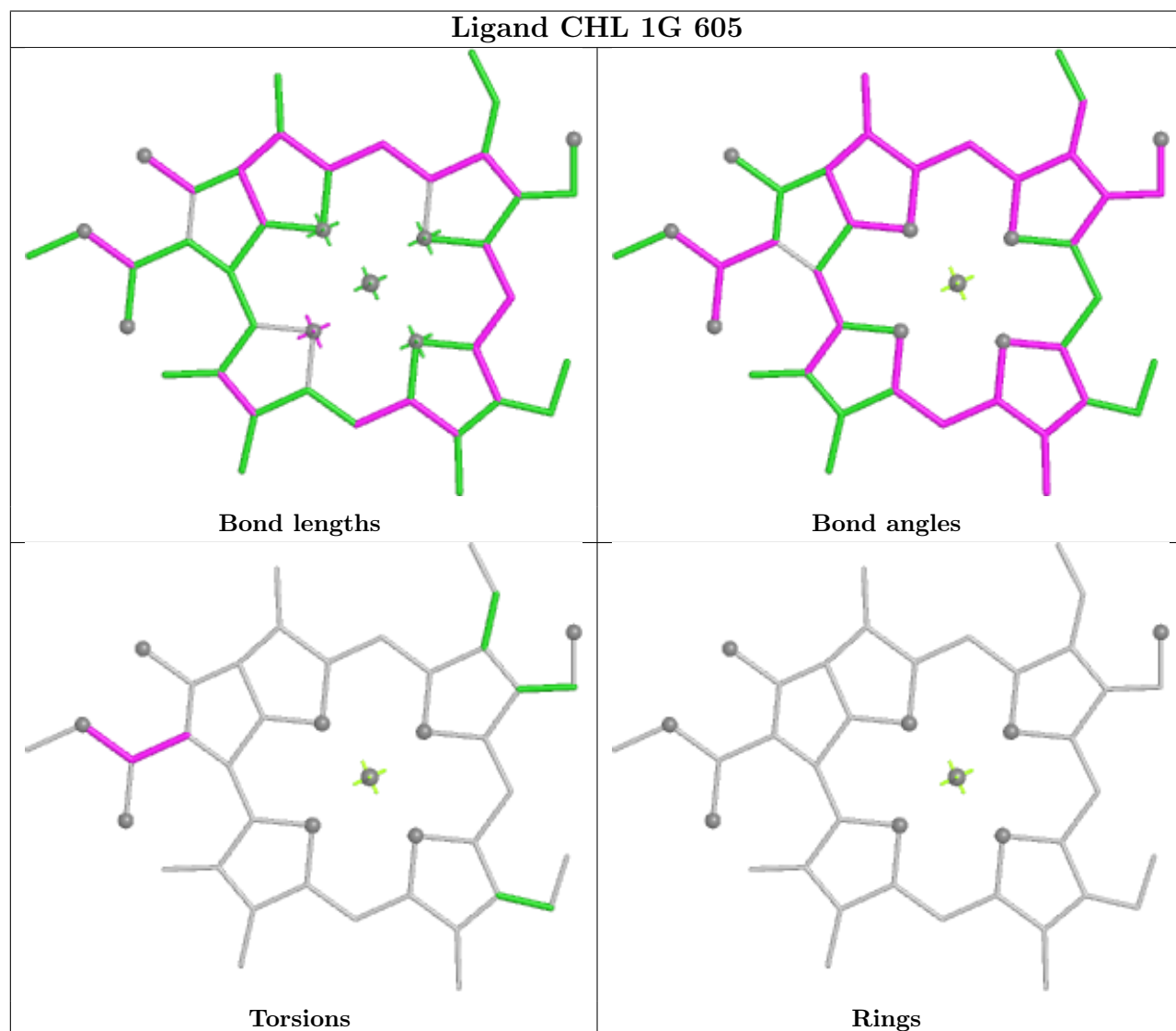
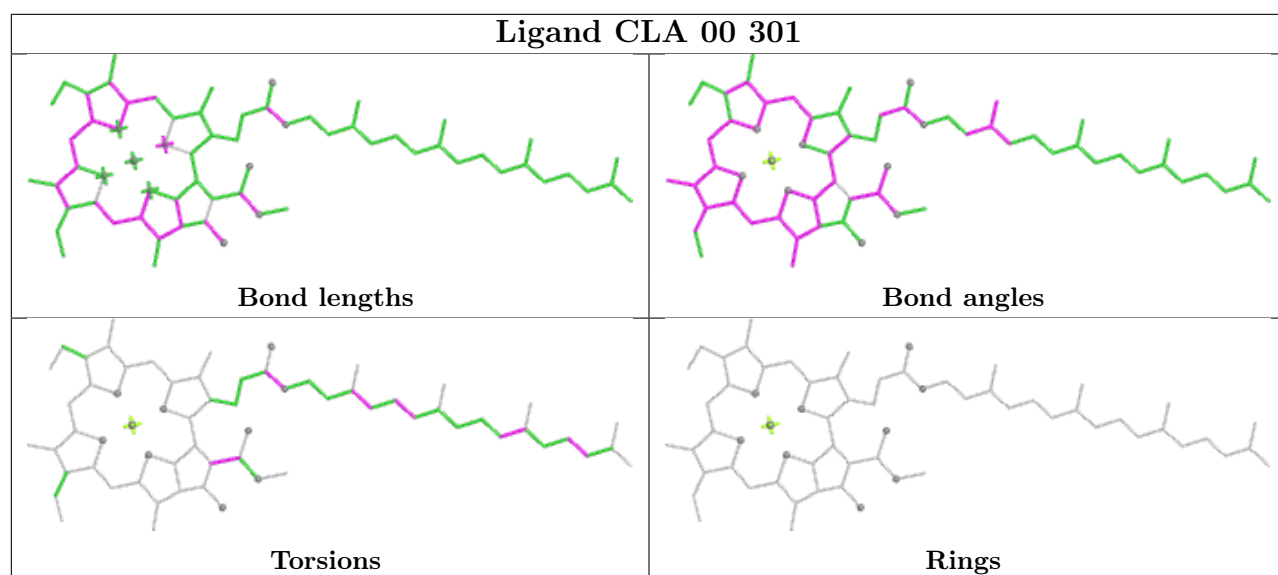


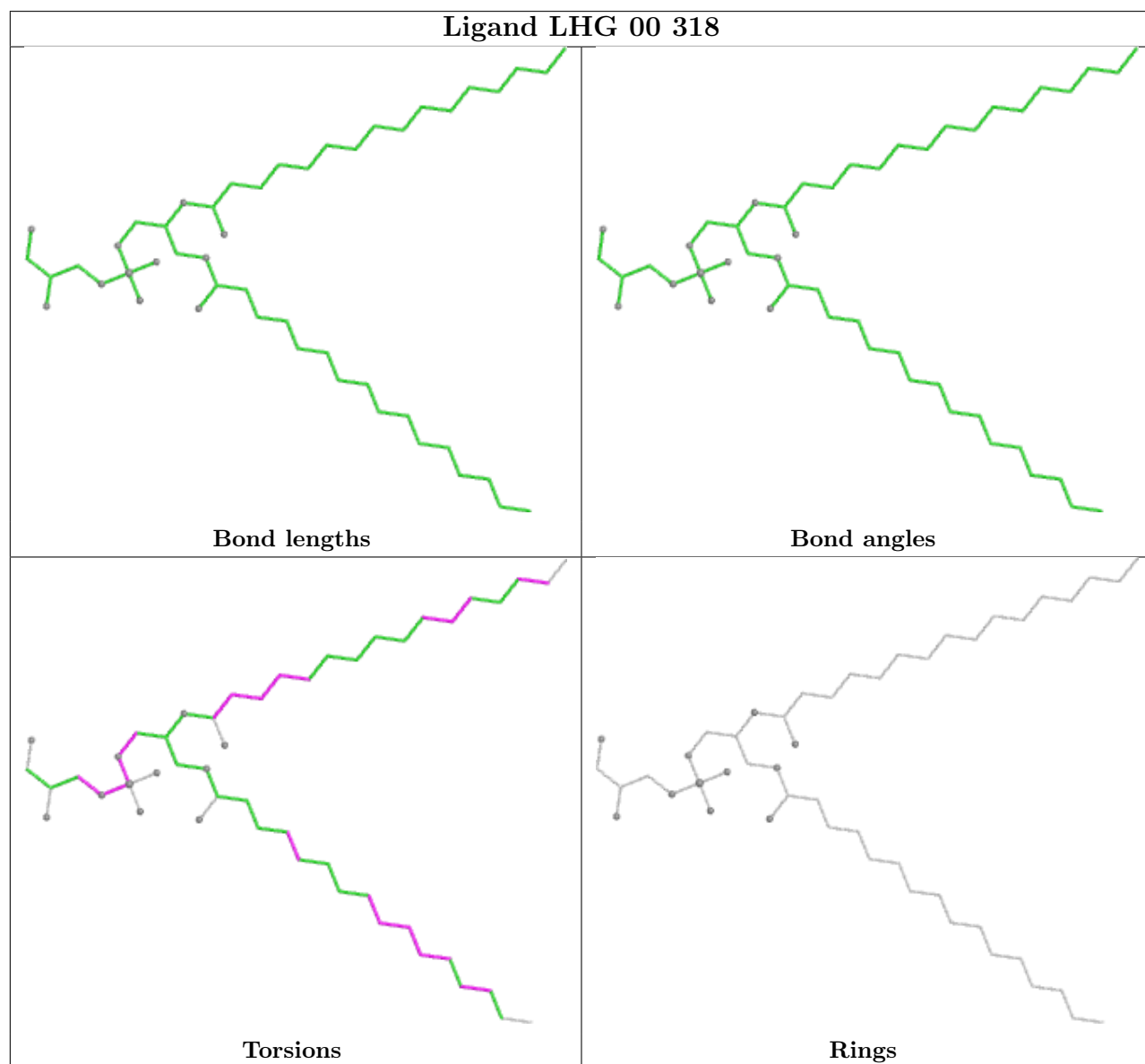
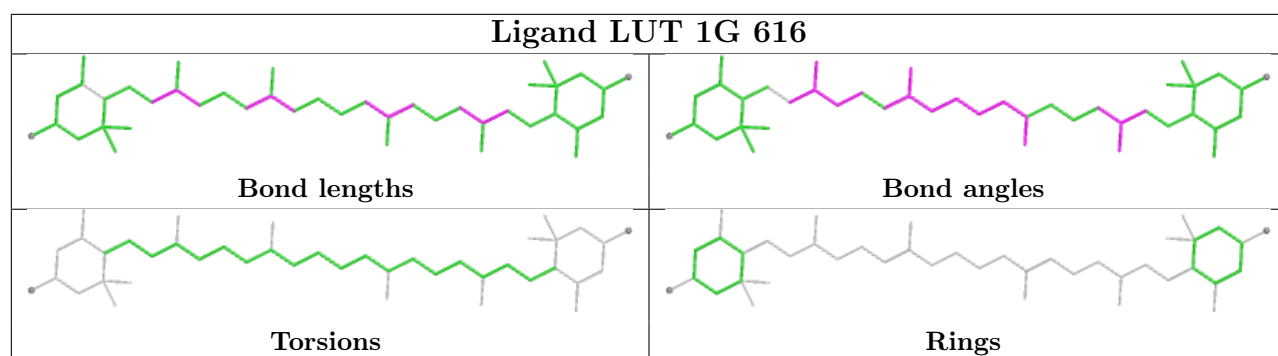


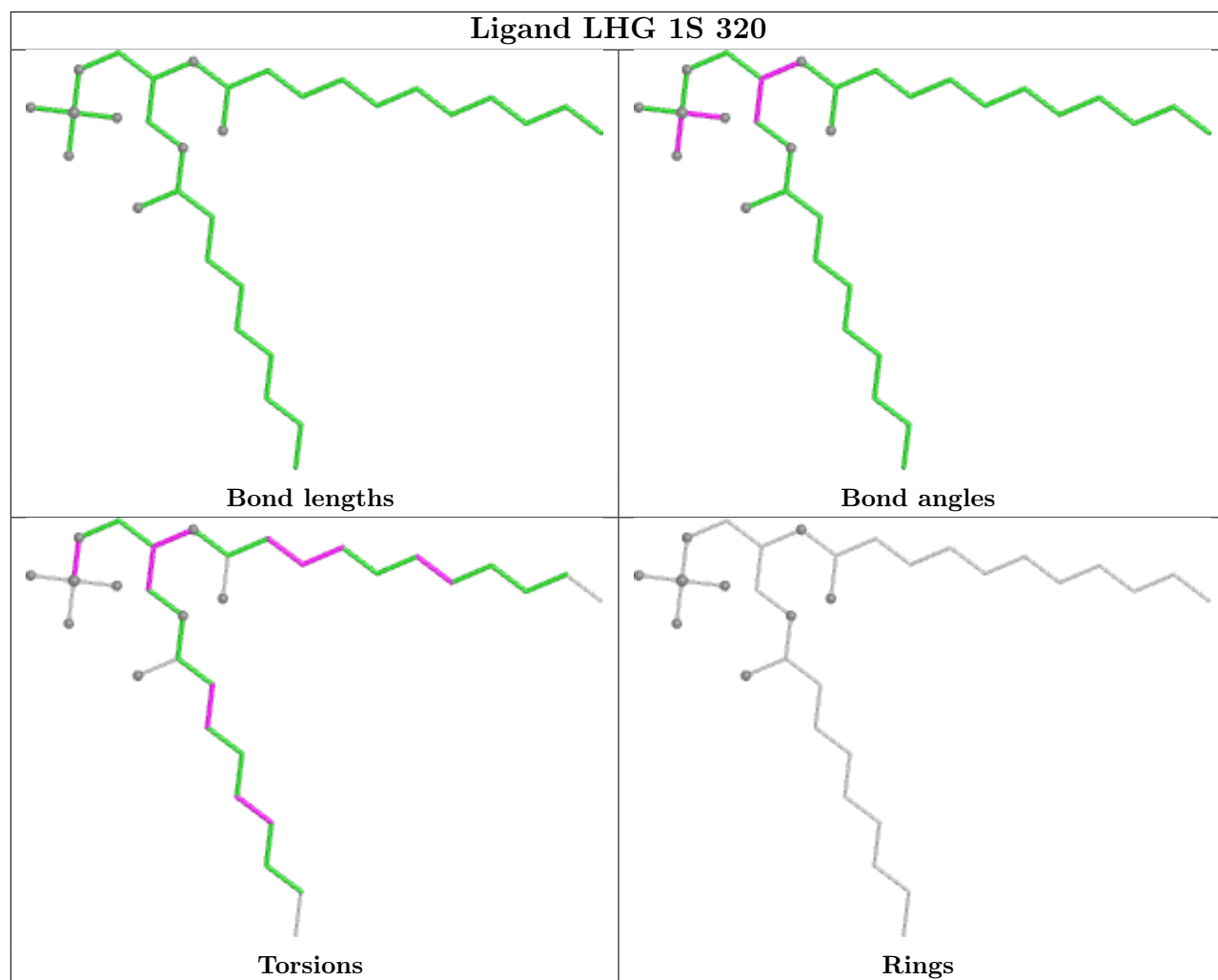
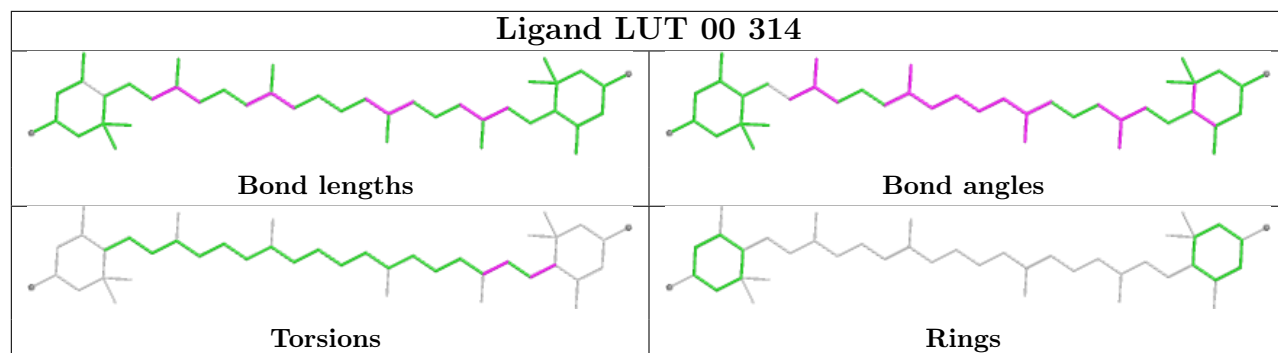




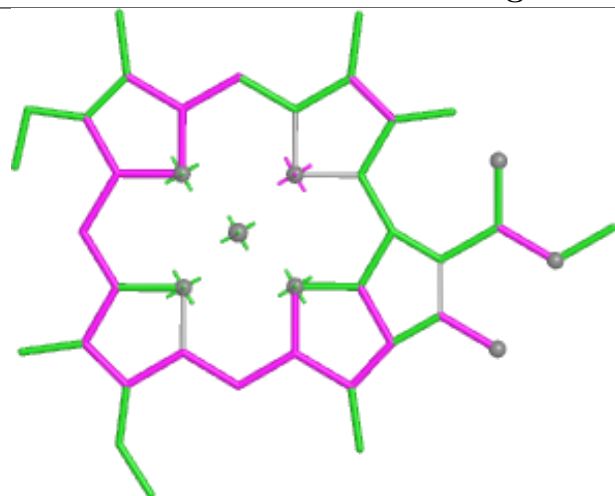








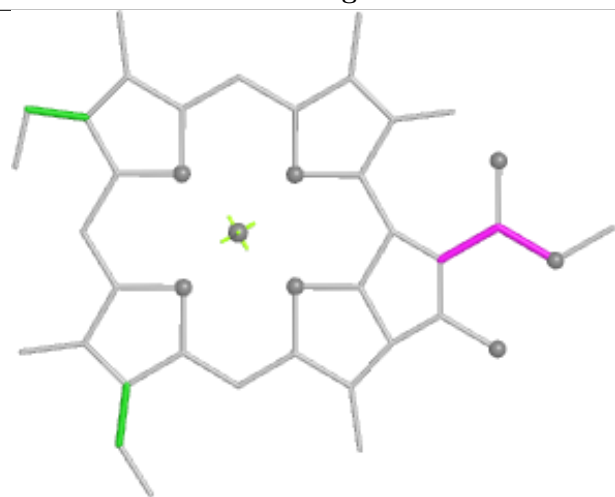
Ligand CLA 1N 611



Bond lengths



Bond angles

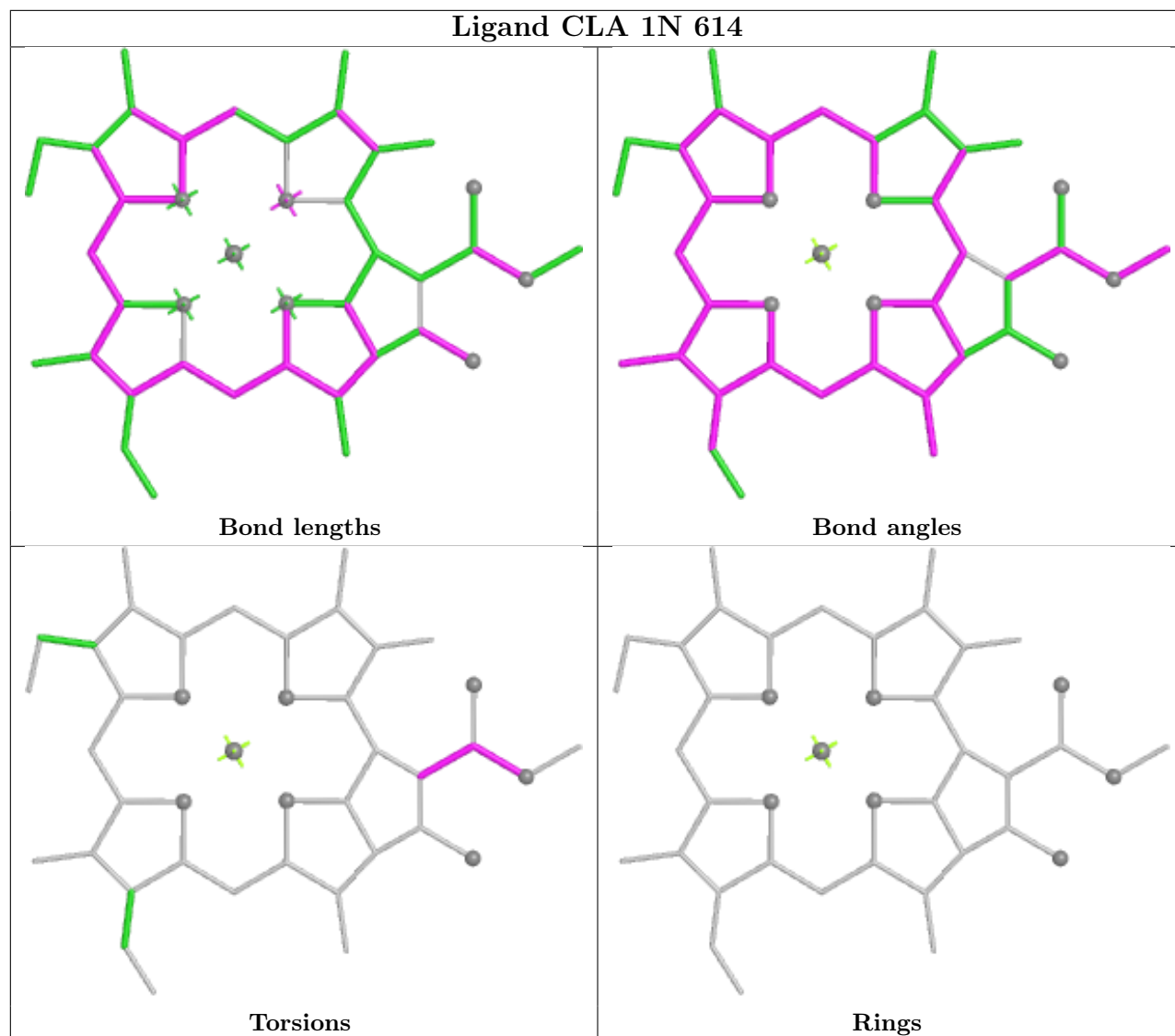


Torsions

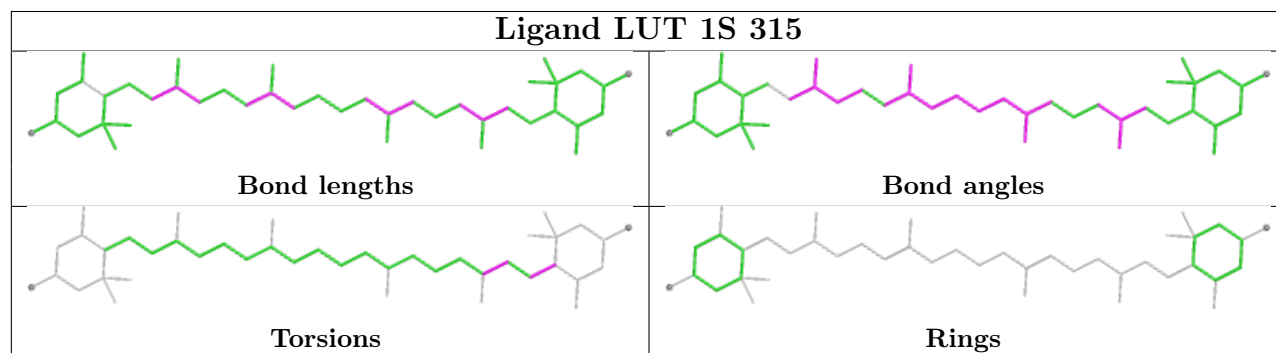


Rings

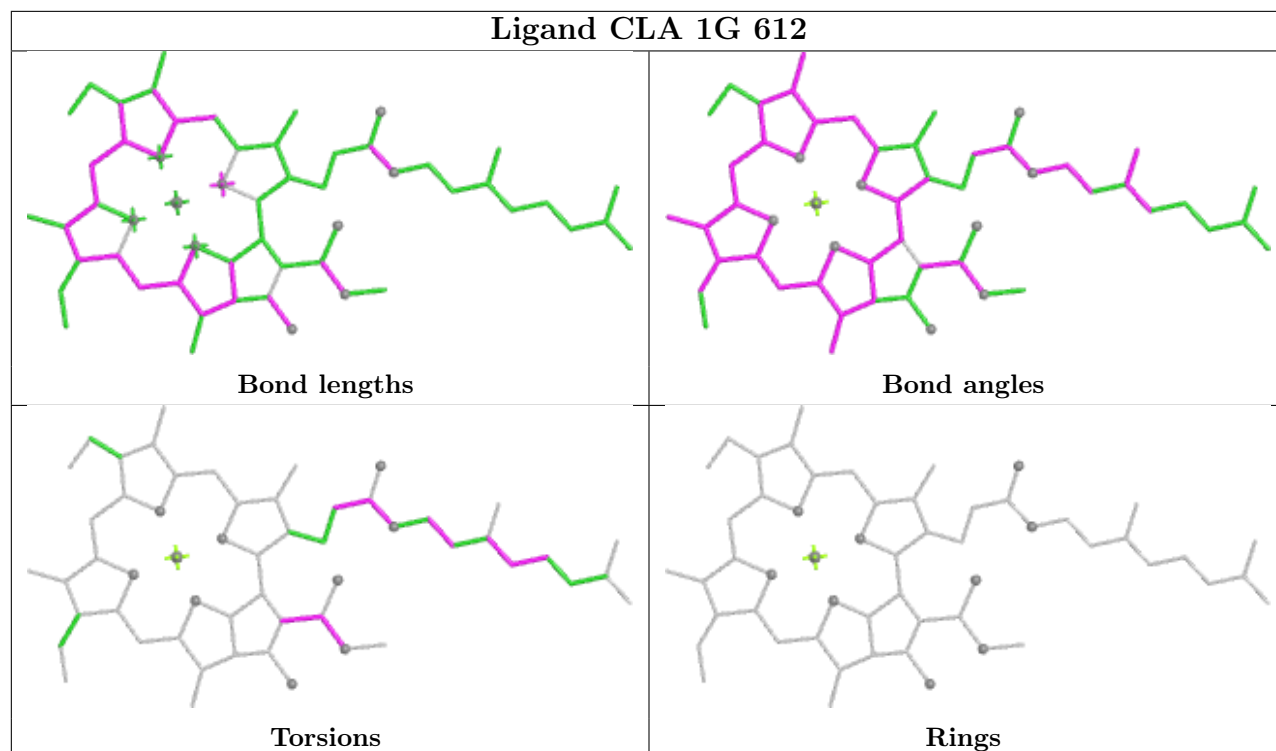
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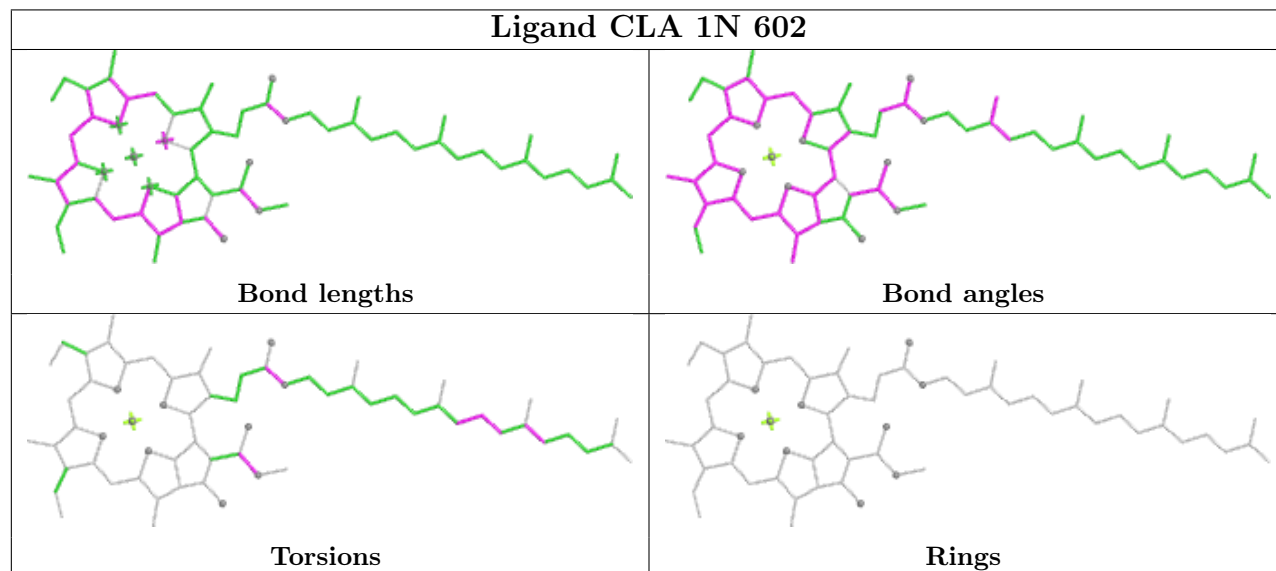
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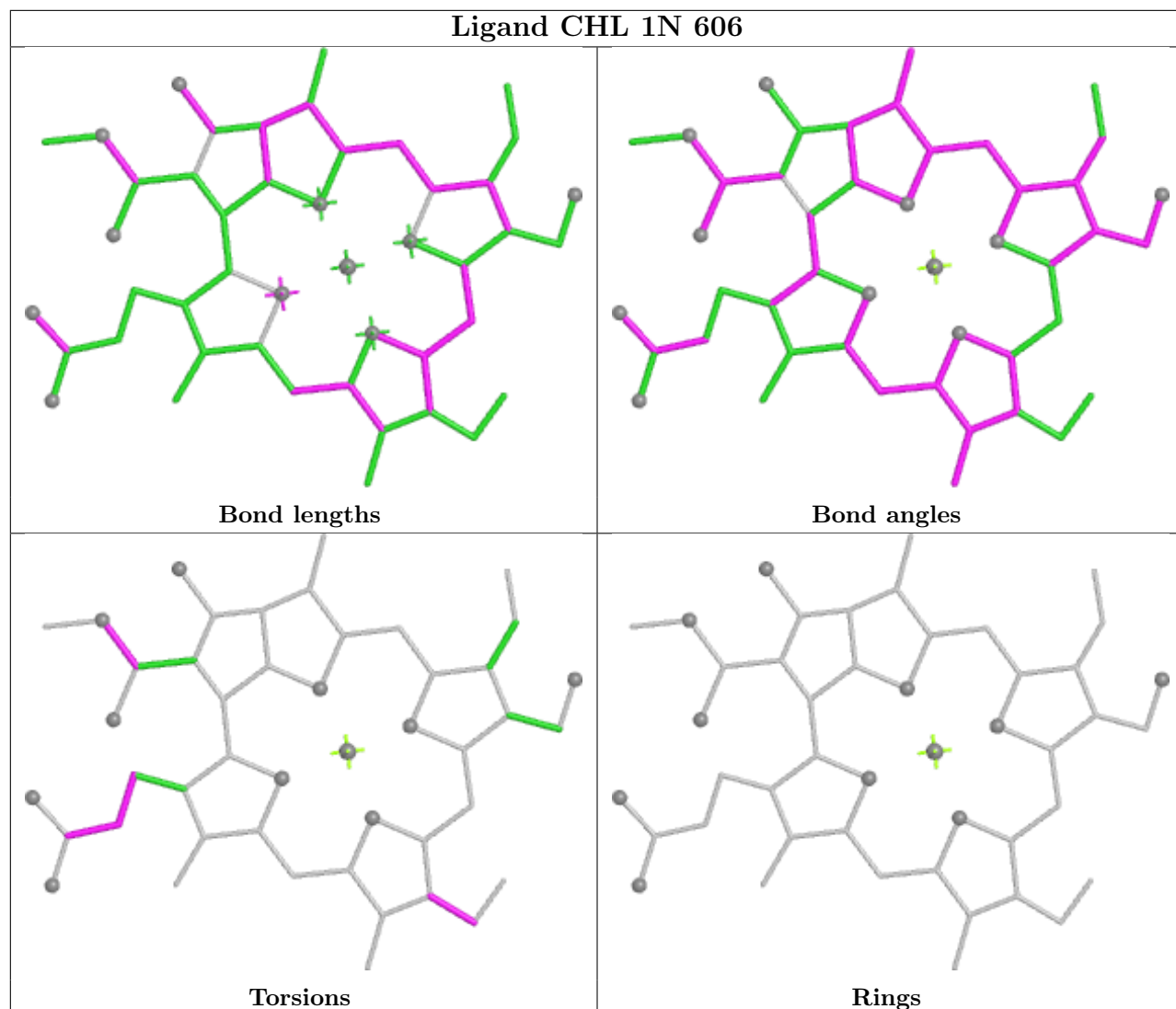
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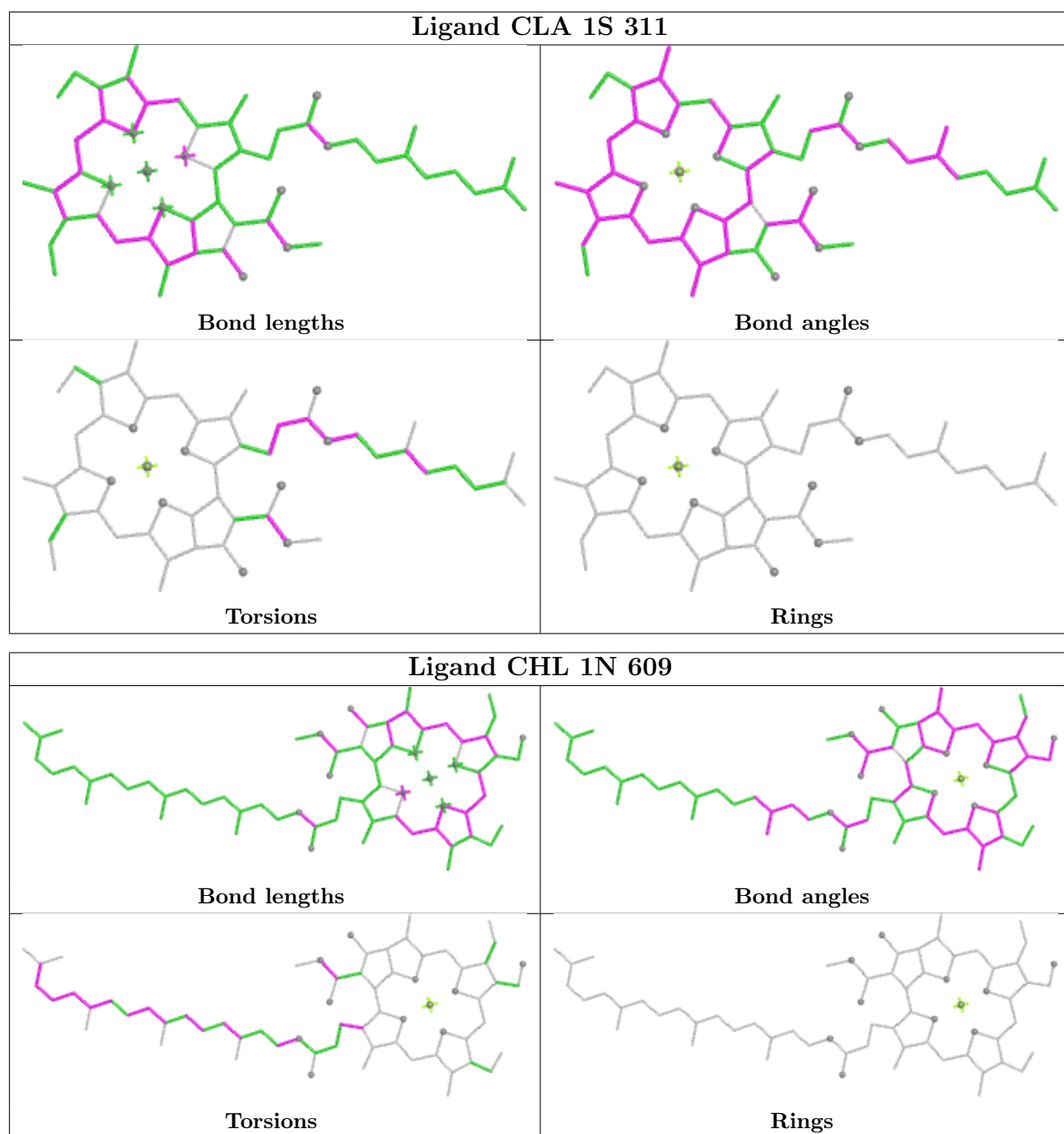


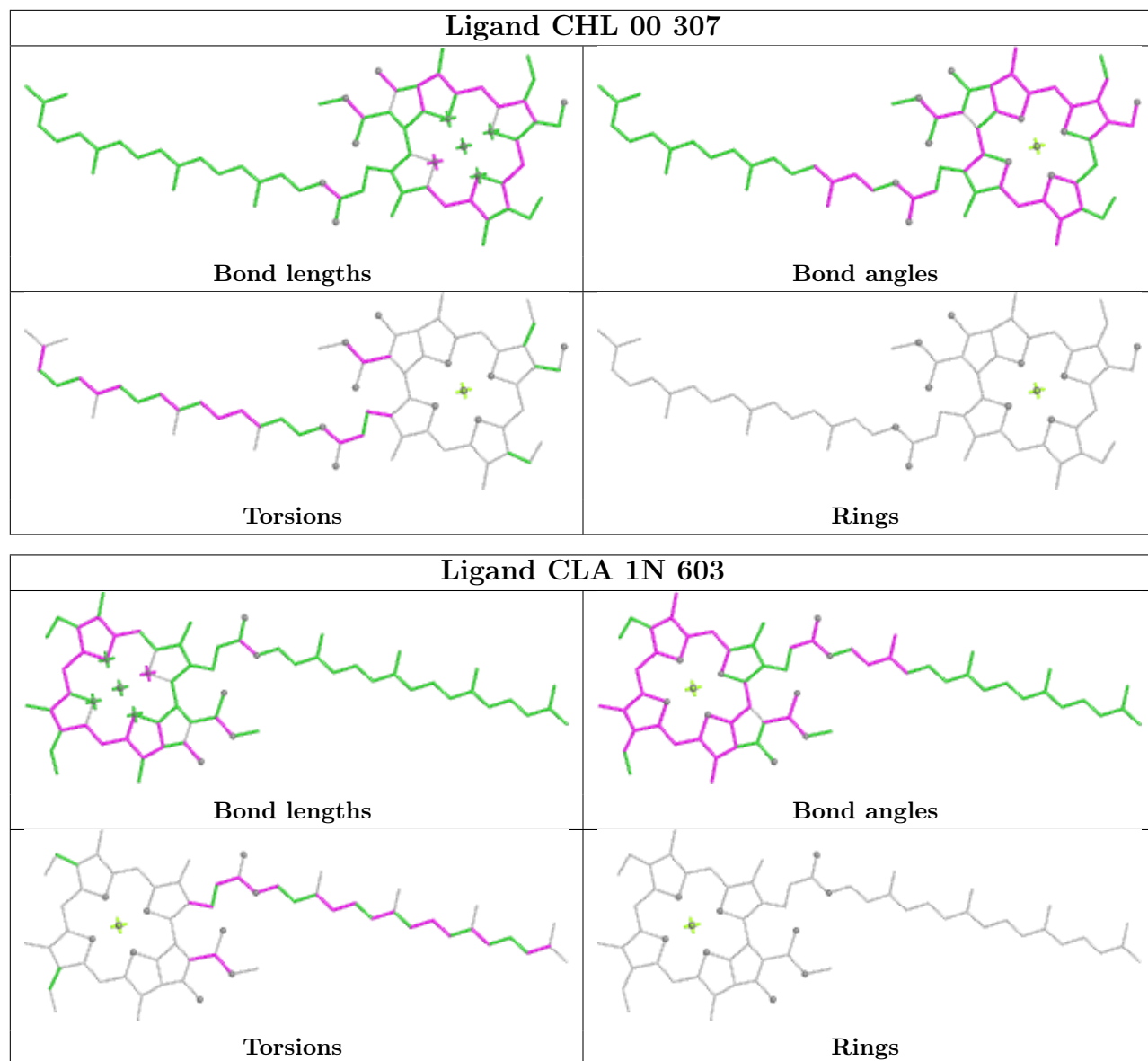
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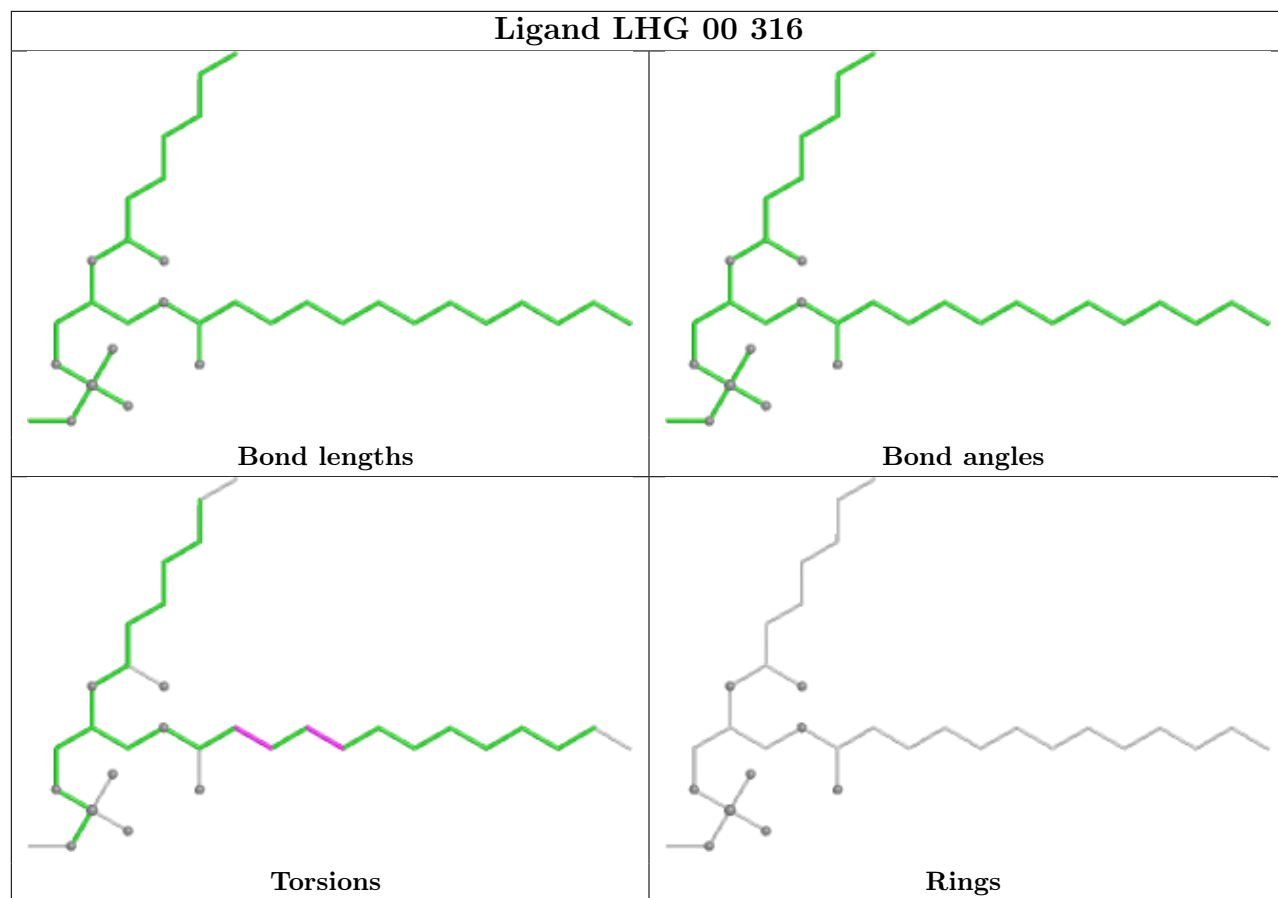


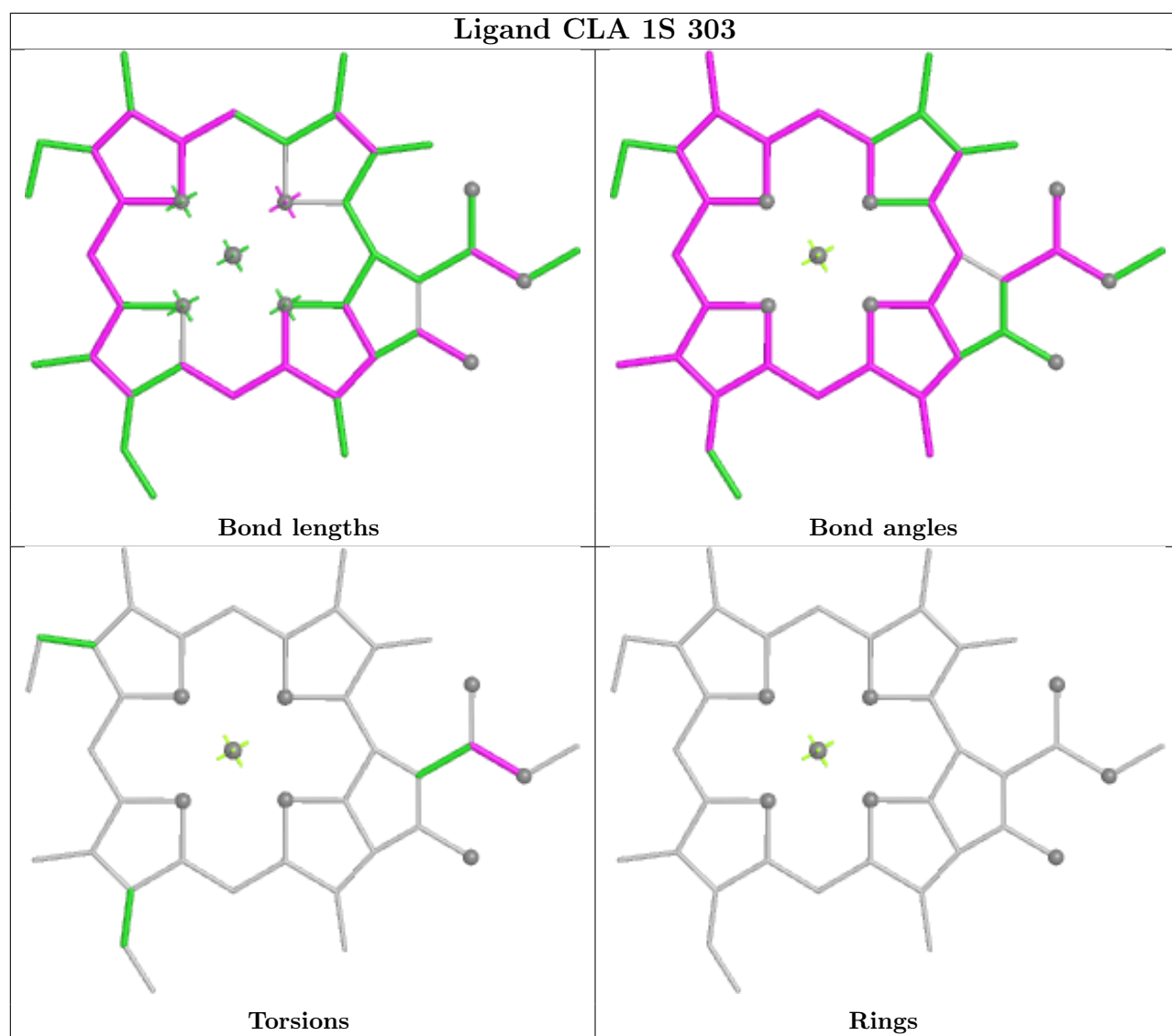
Ligand CHL 1N 606

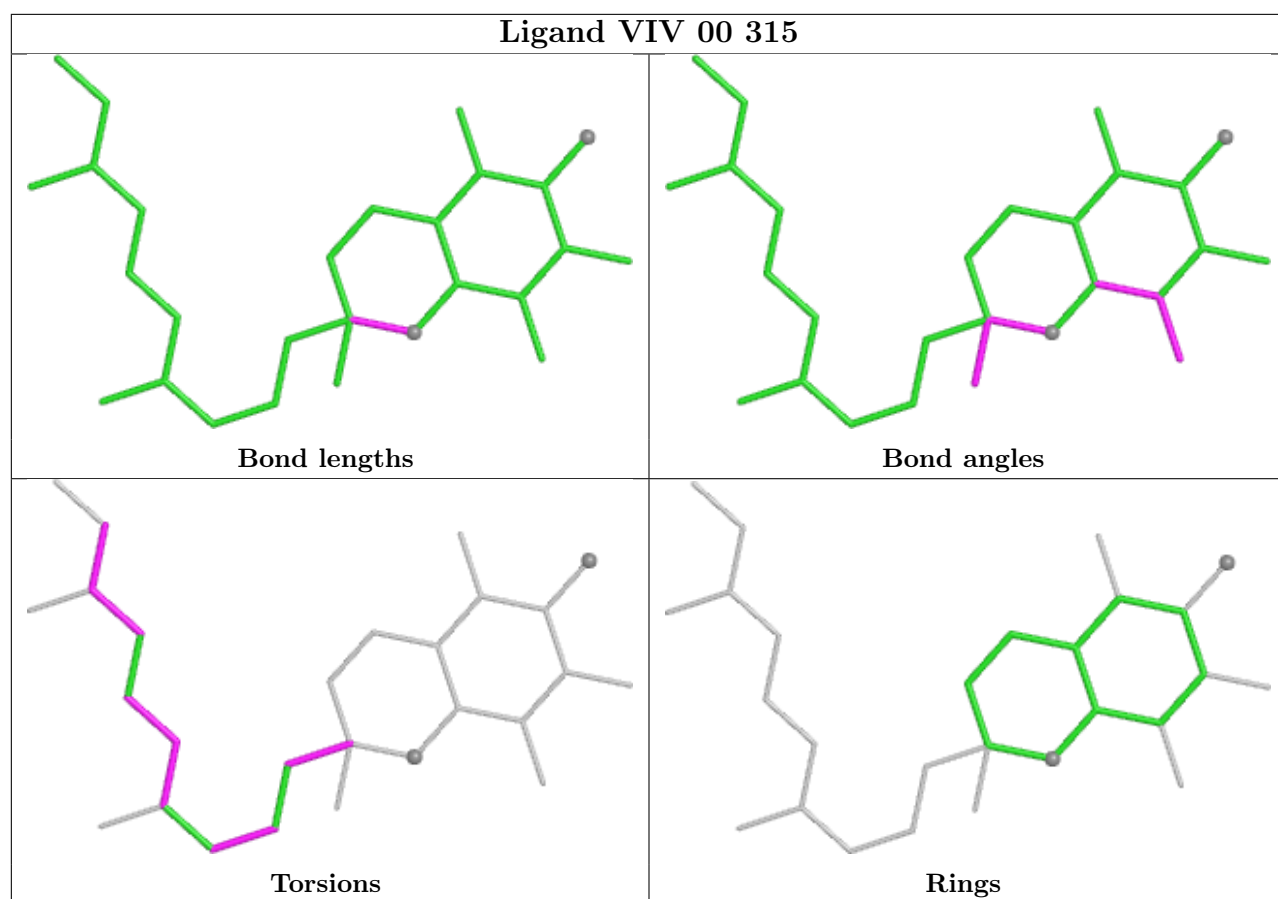


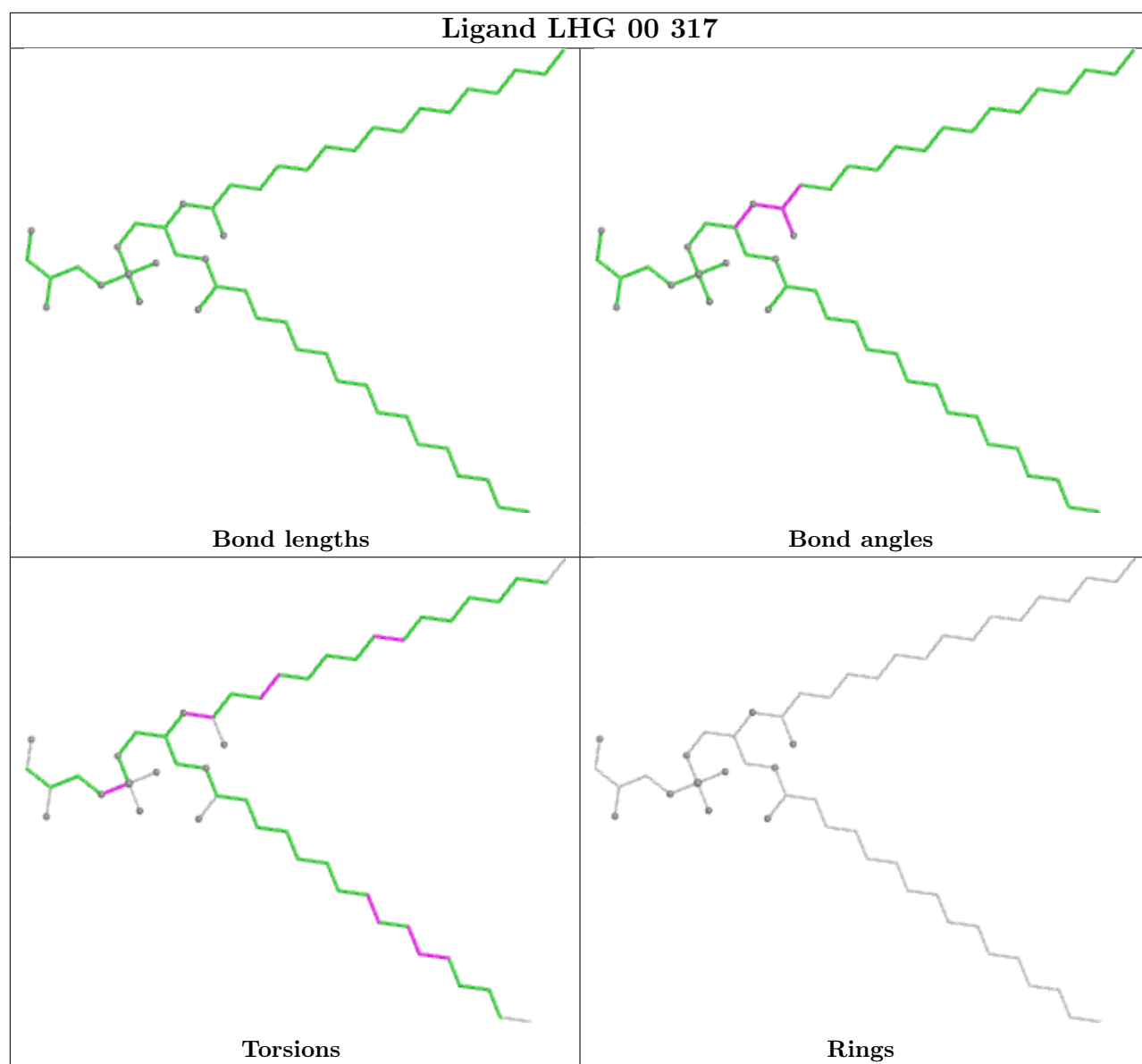


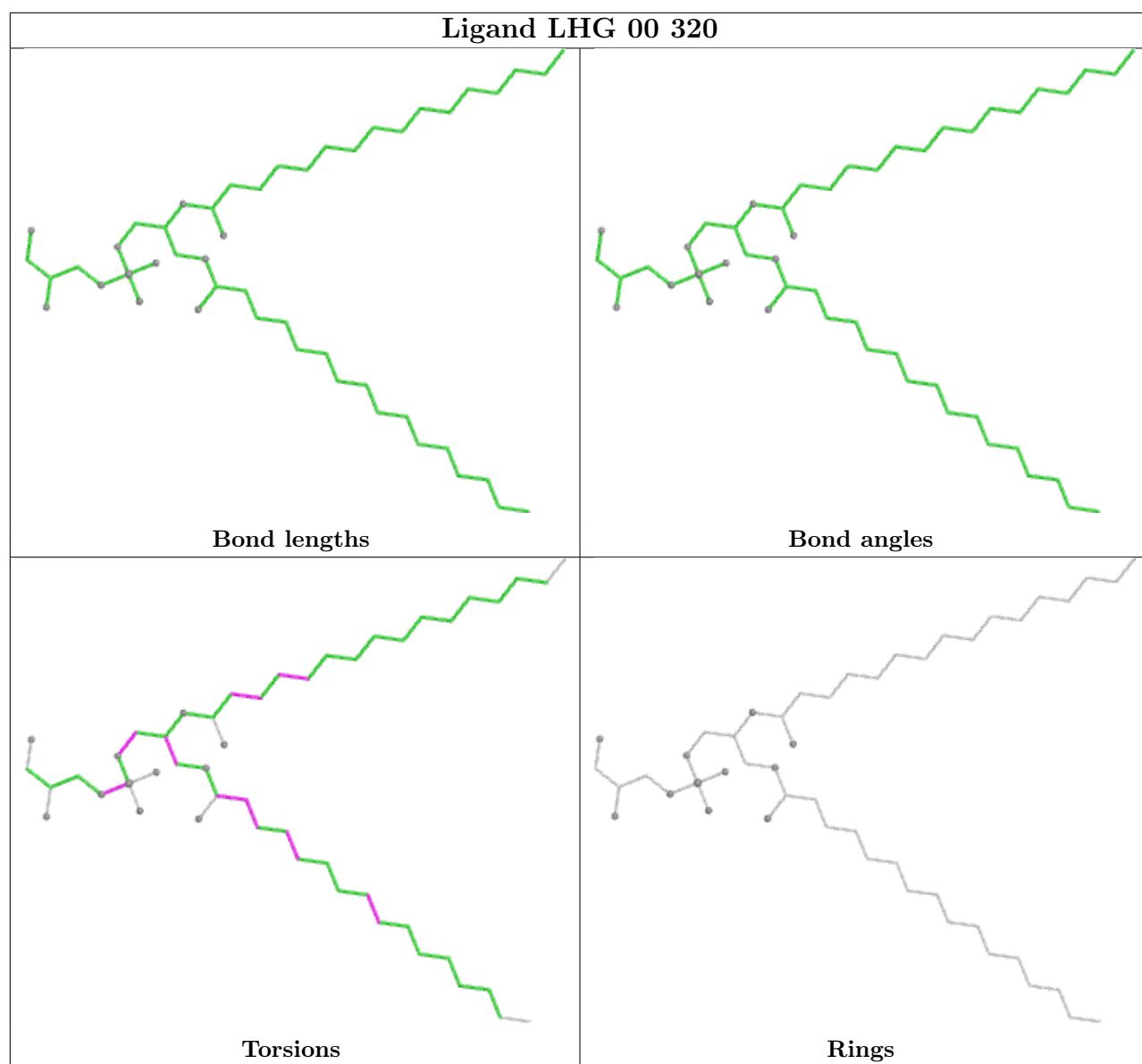


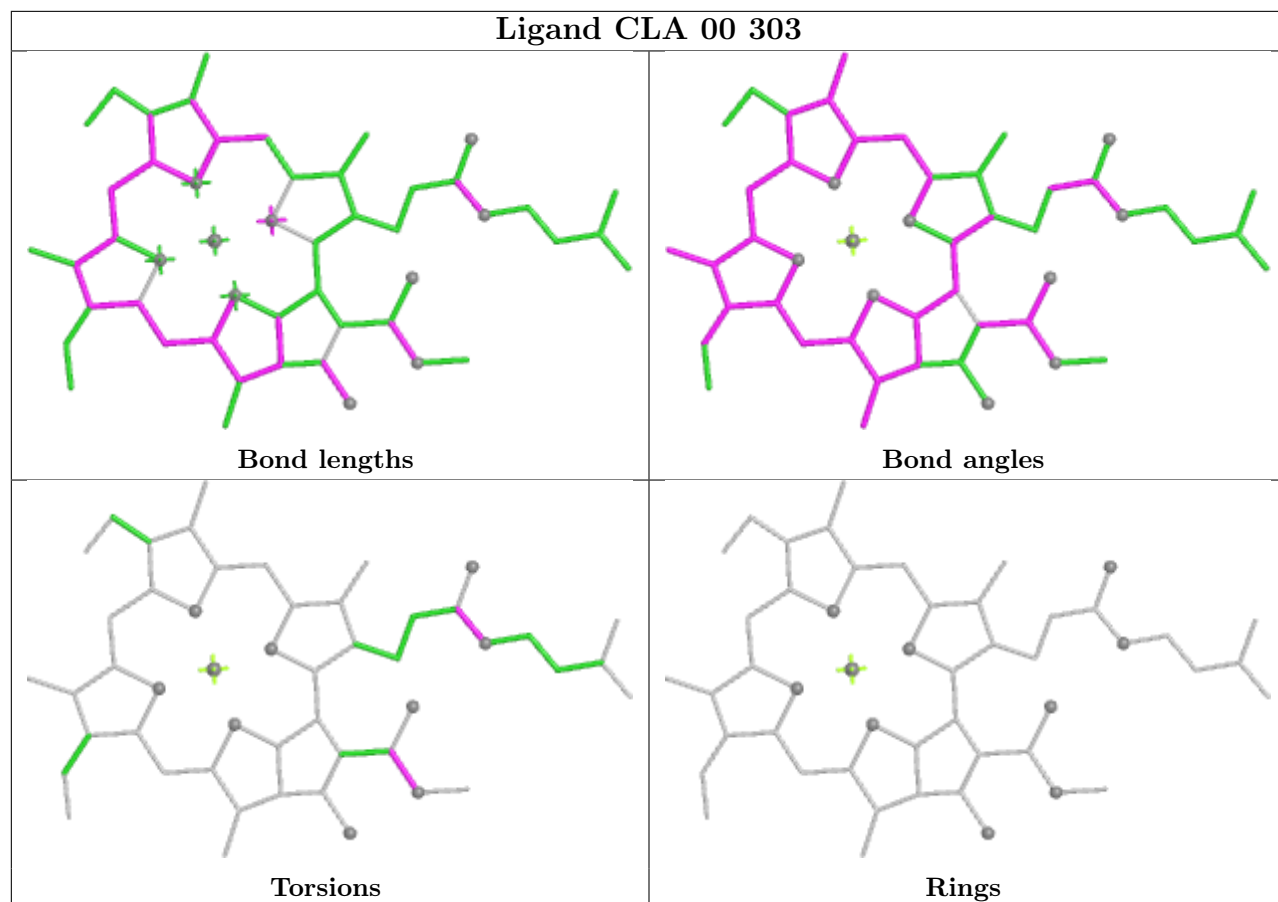


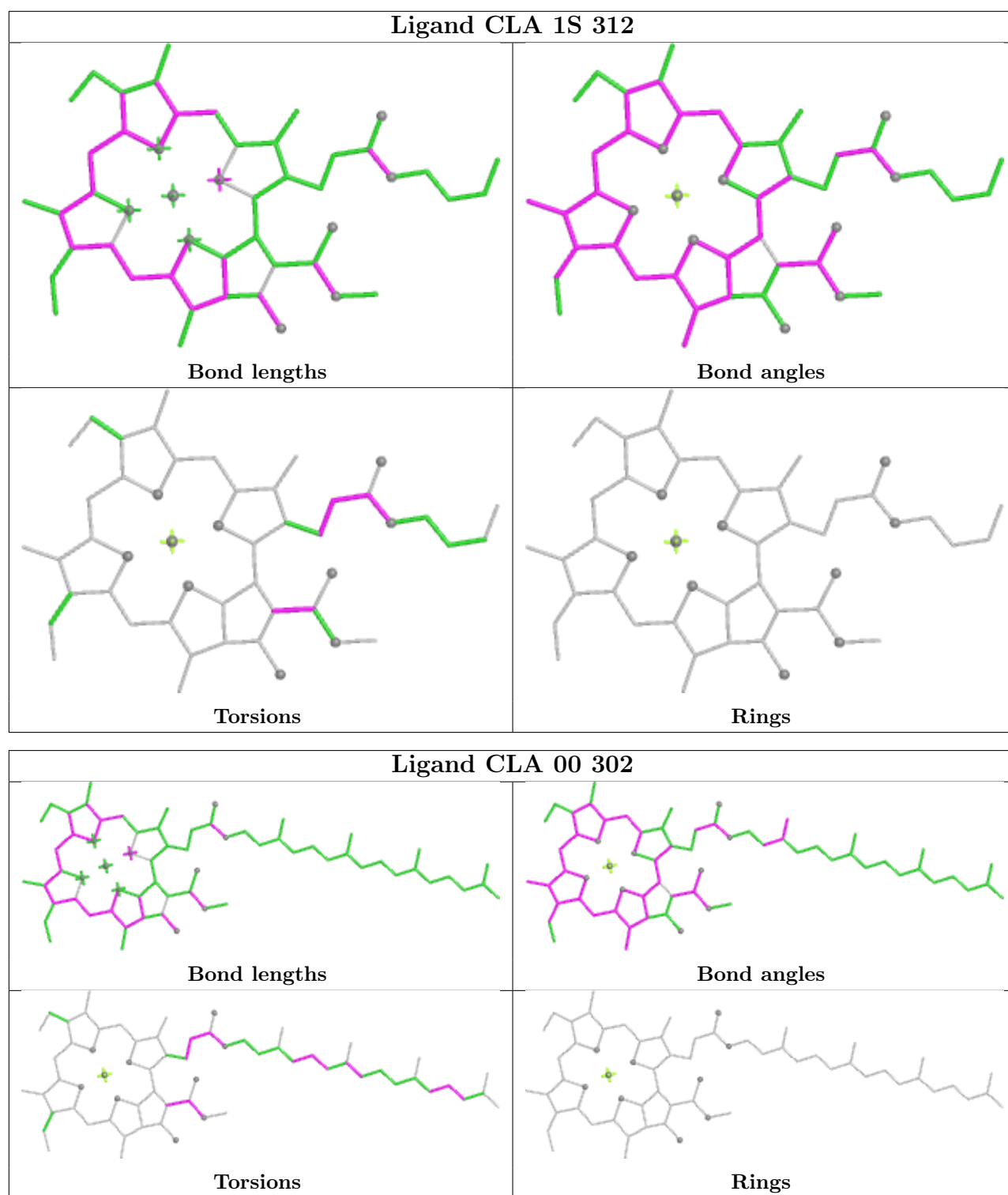


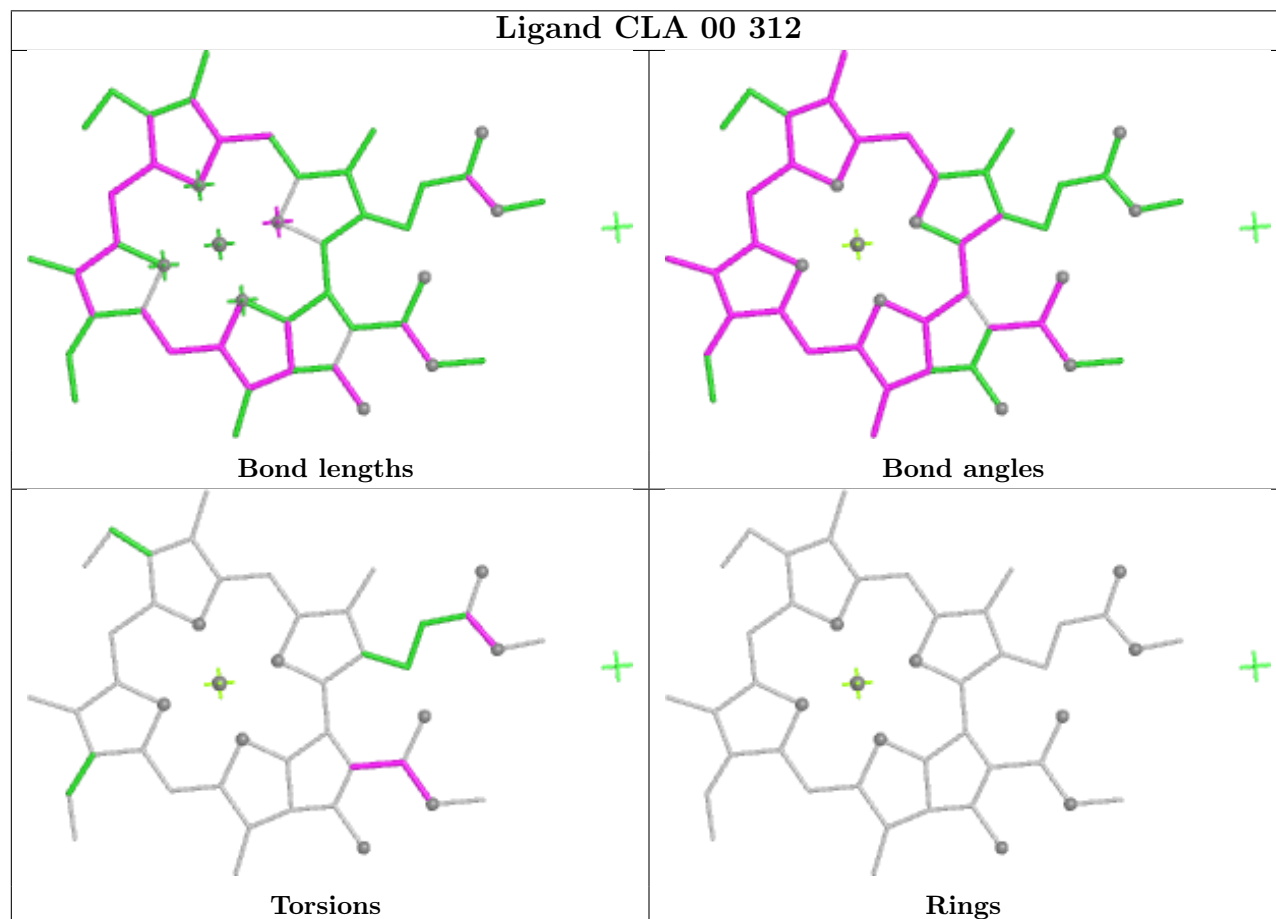
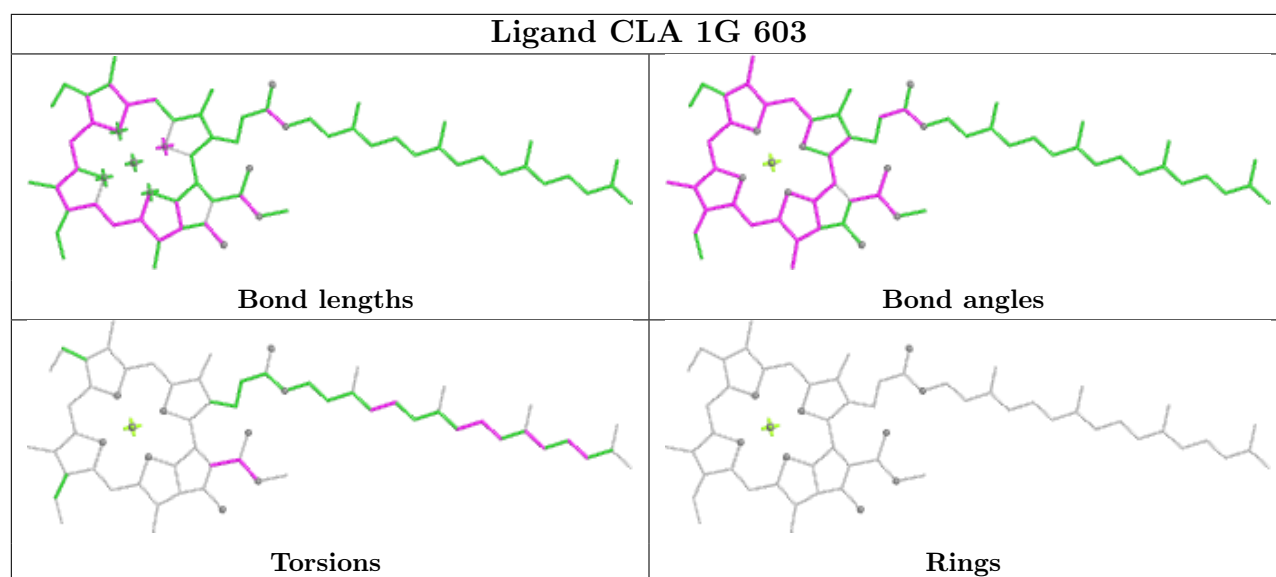


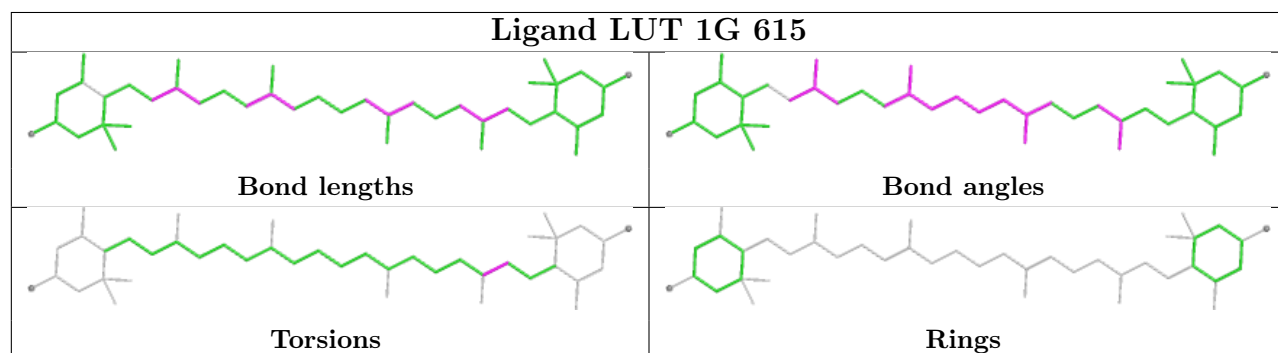
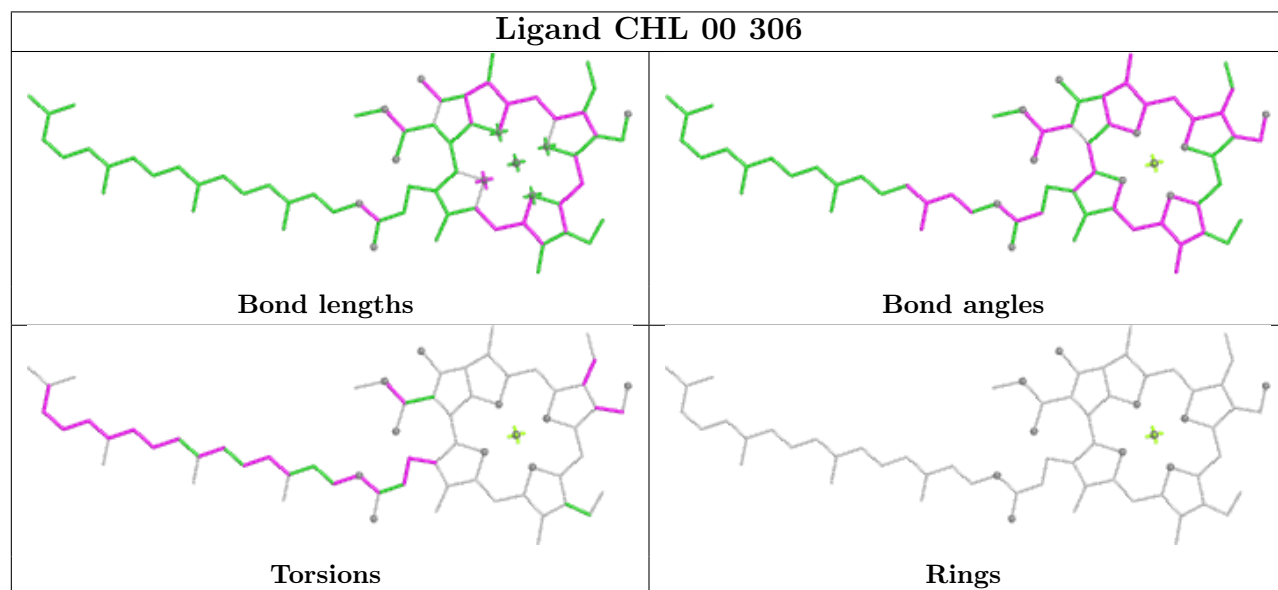
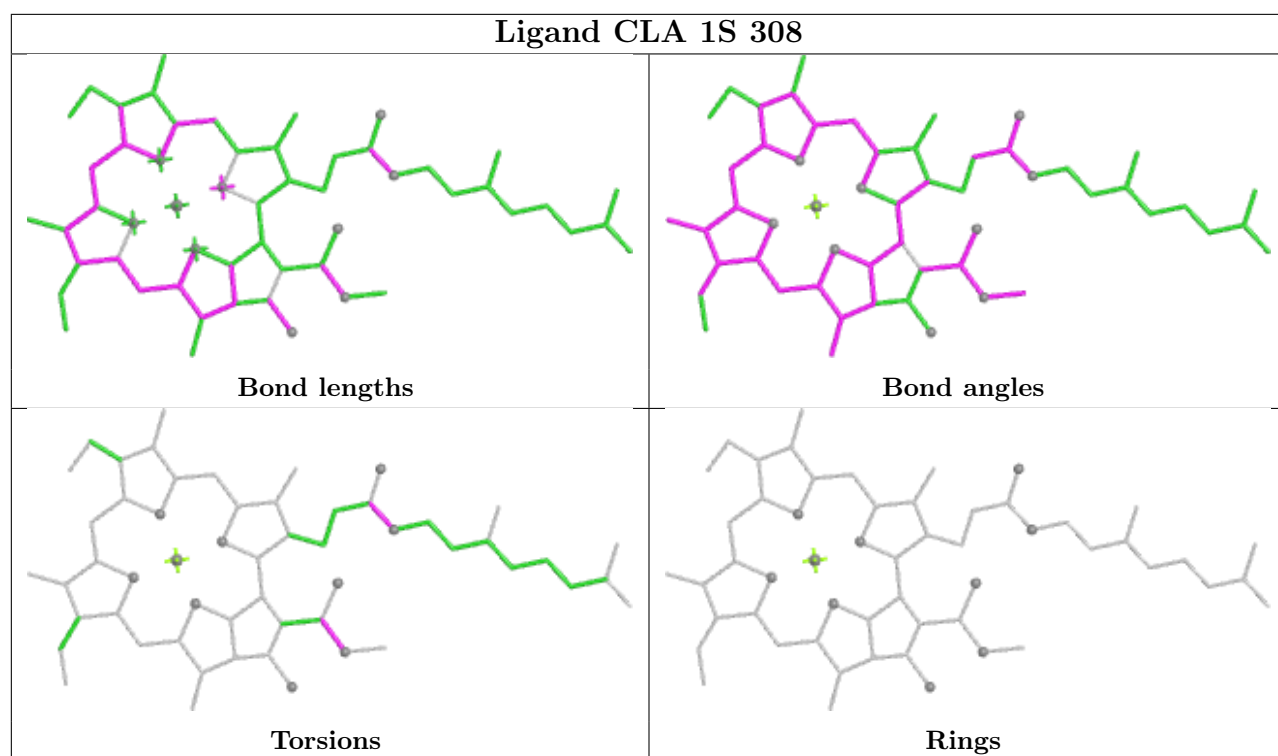


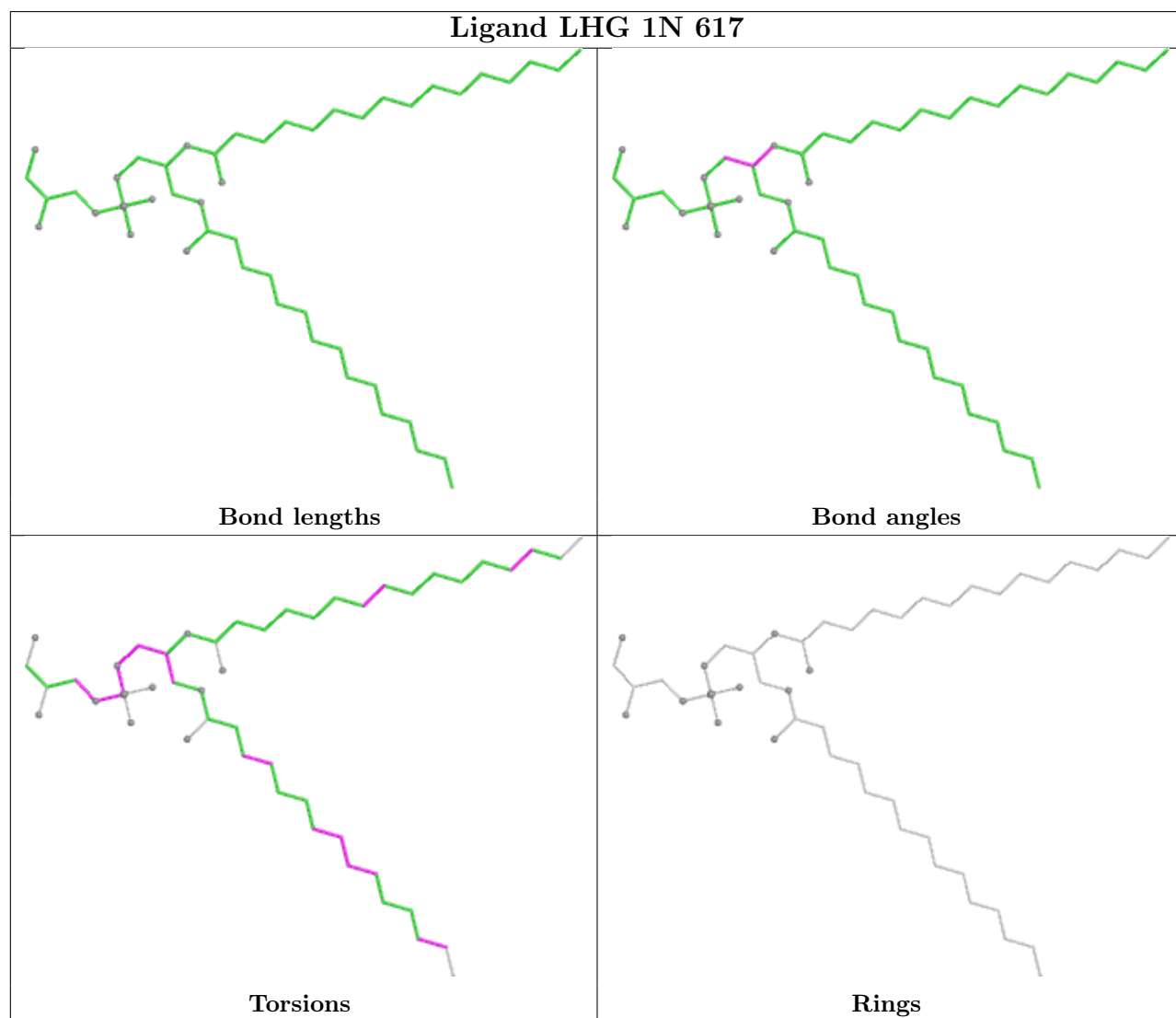
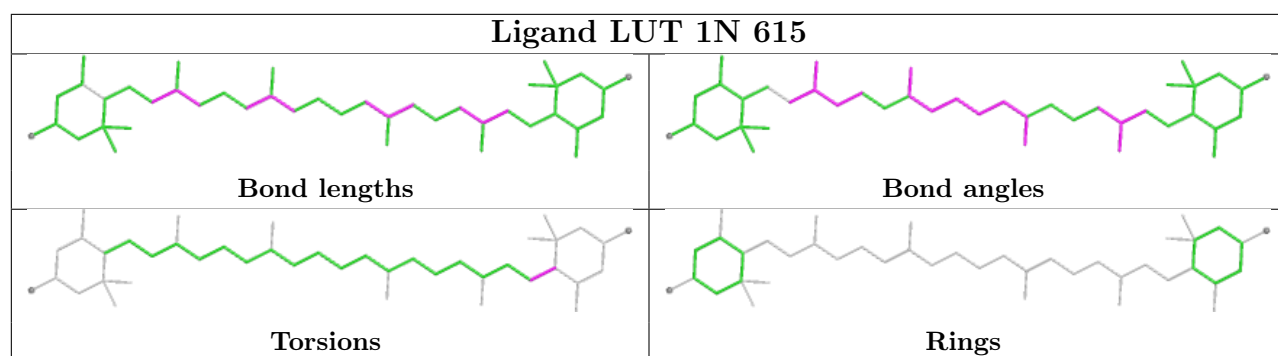


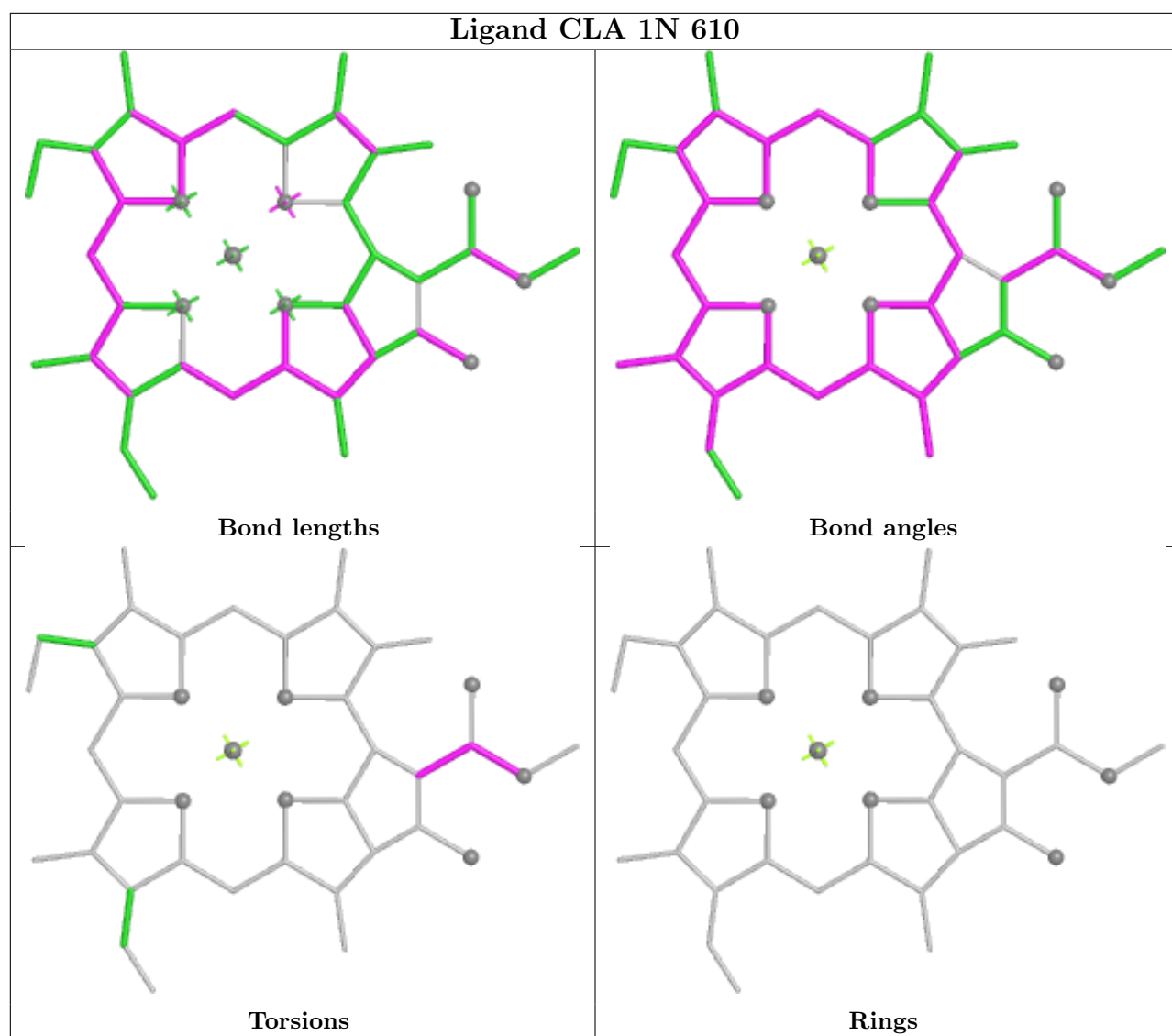


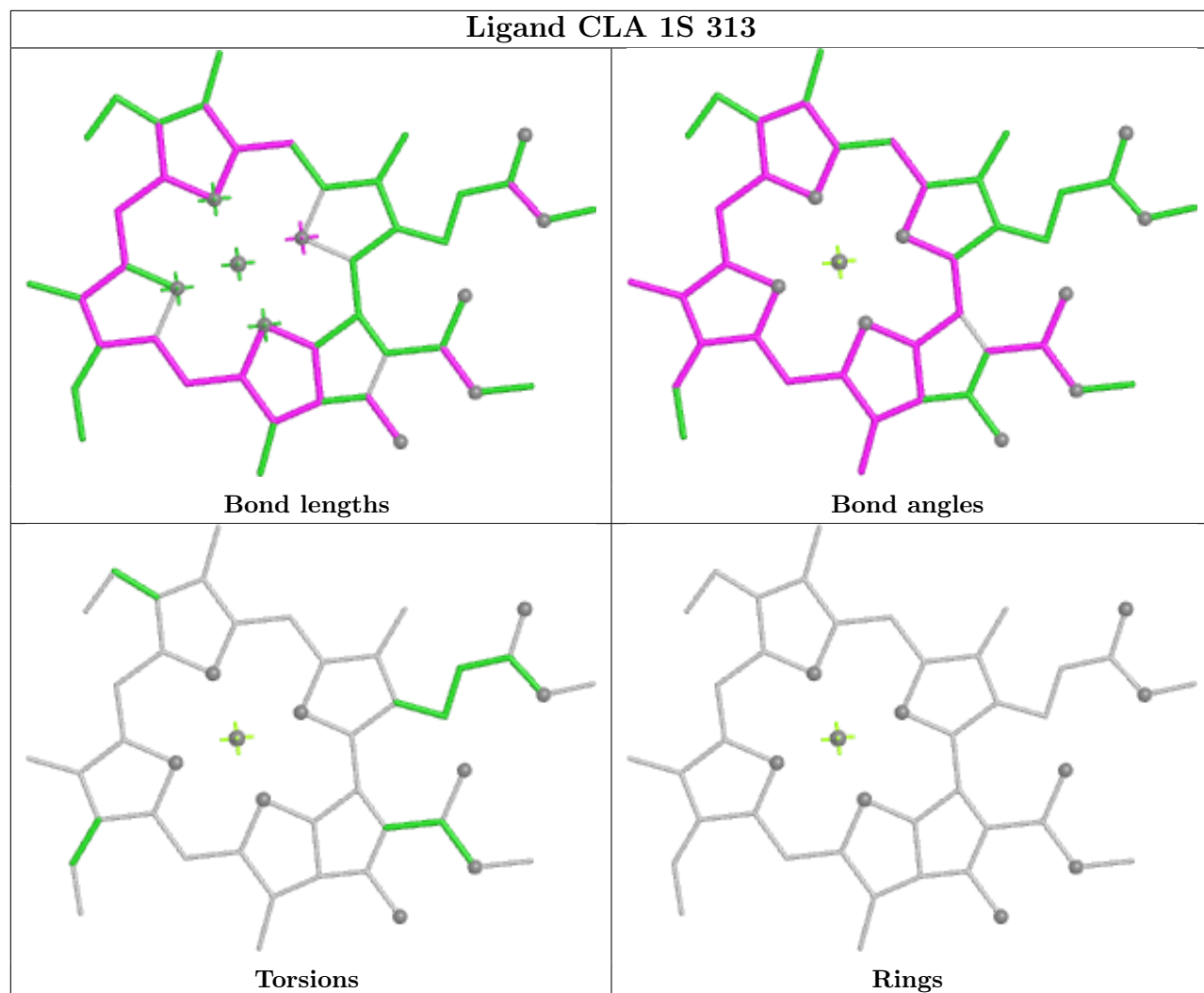


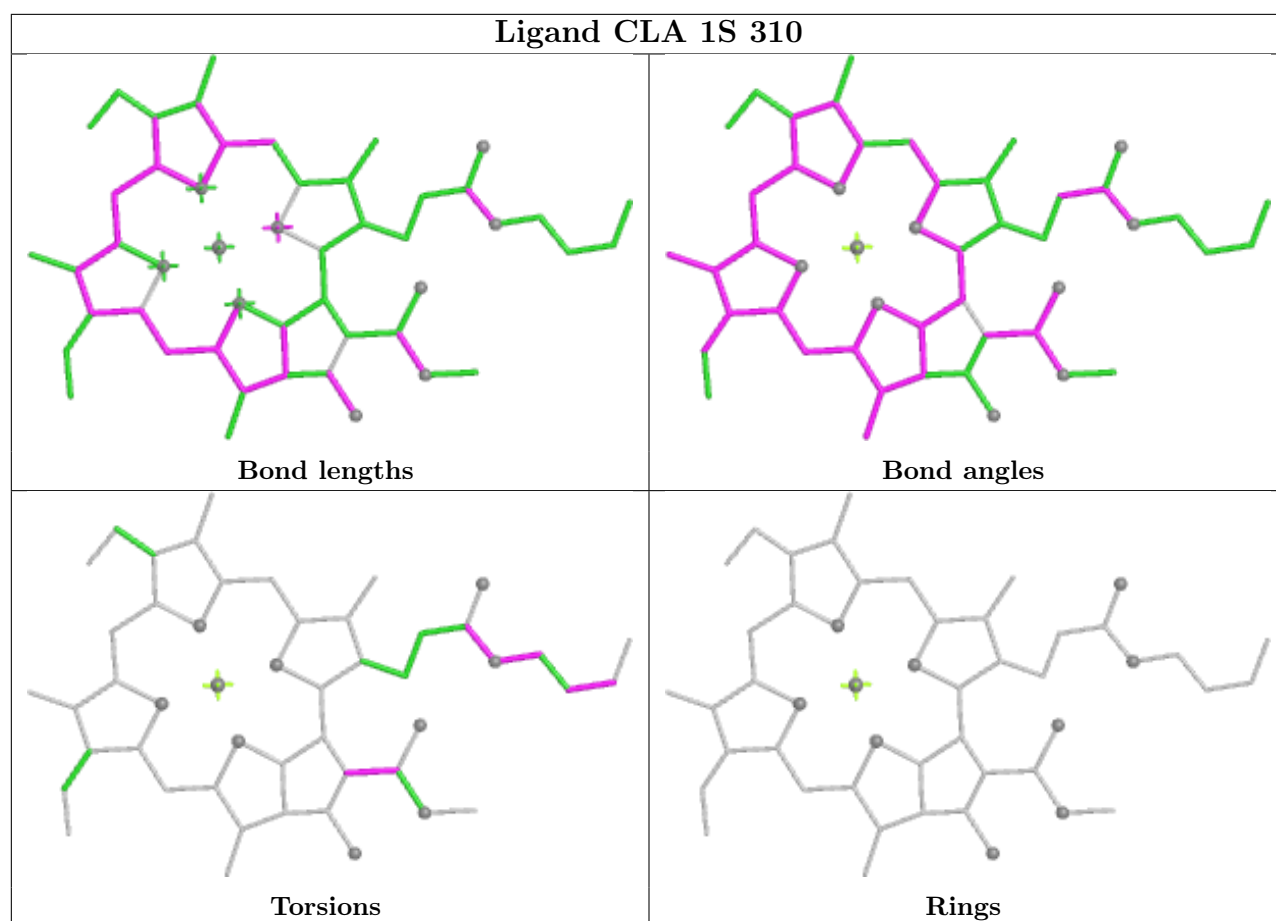












5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

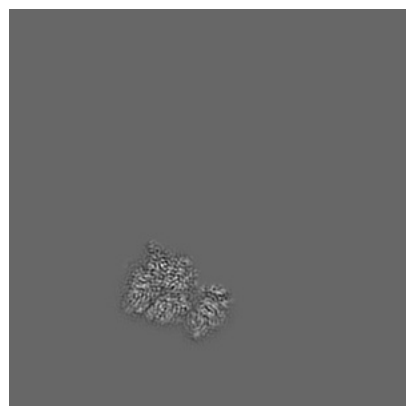
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-66949. These allow visual inspection of the internal detail of the map and identification of artifacts.

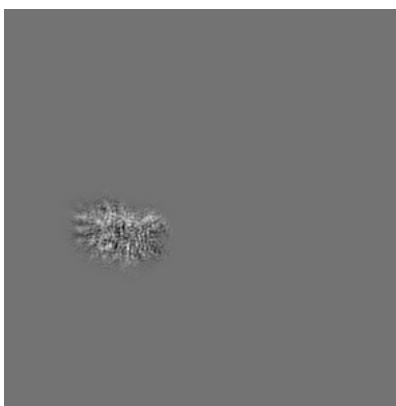
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

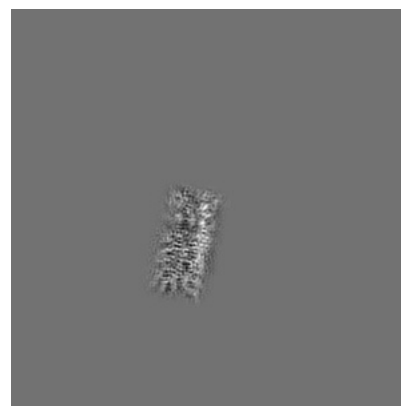
6.1.1 Primary map



X

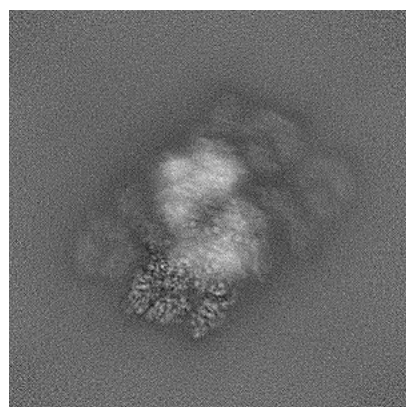


Y

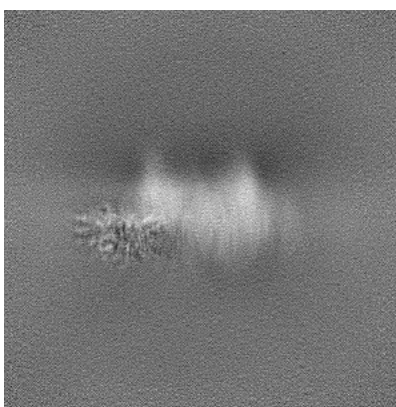


Z

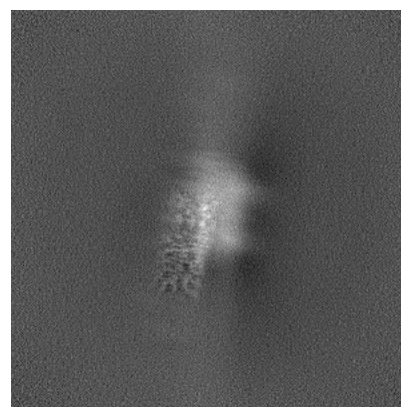
6.1.2 Raw map



X



Y

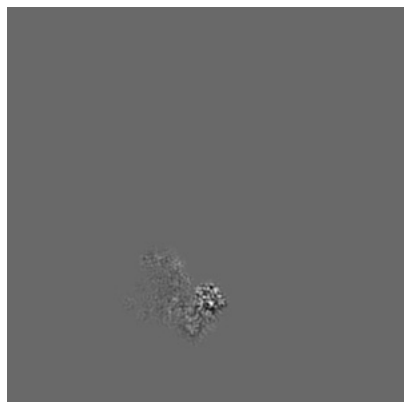


Z

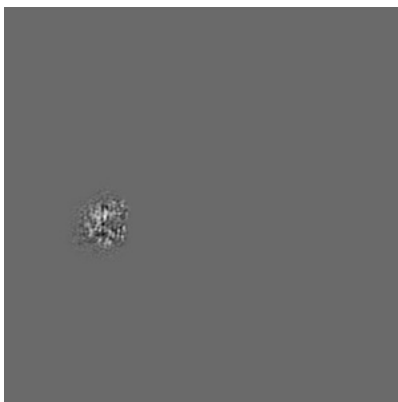
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

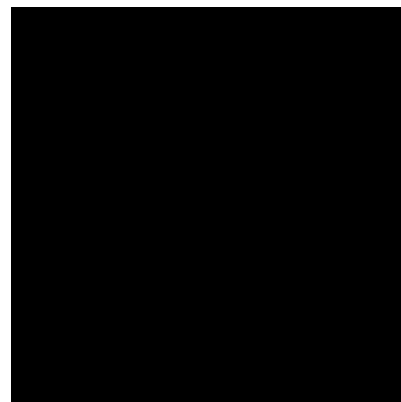
6.2.1 Primary map



X Index: 256

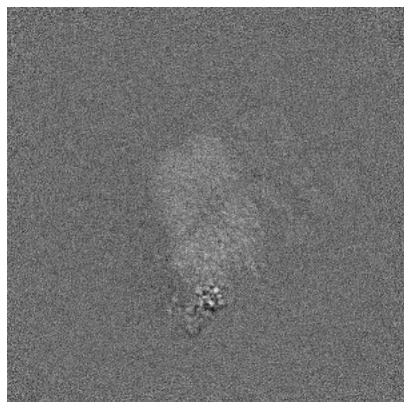


Y Index: 256

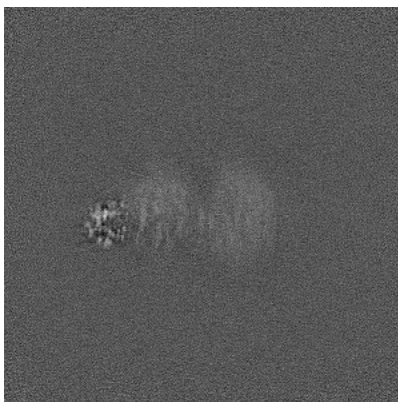


Z Index: 256

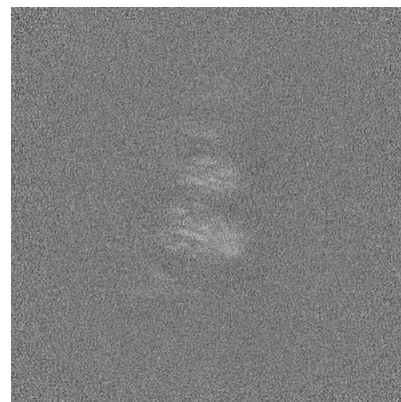
6.2.2 Raw map



X Index: 256



Y Index: 256

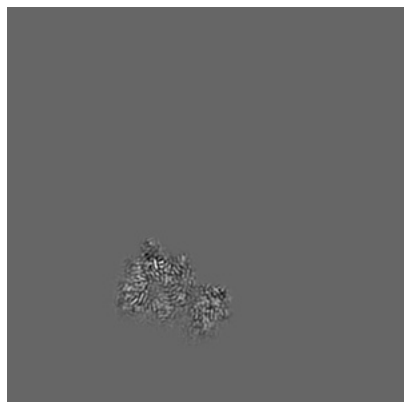


Z Index: 256

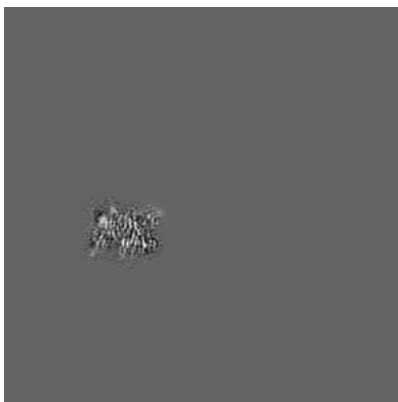
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

6.3.1 Primary map



X Index: 225

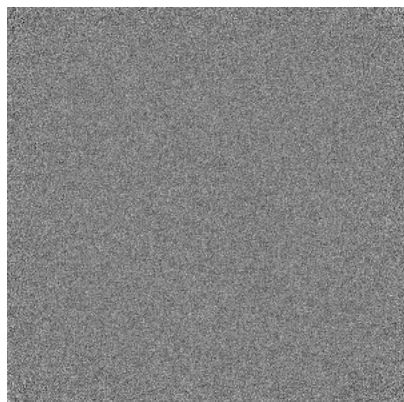


Y Index: 212

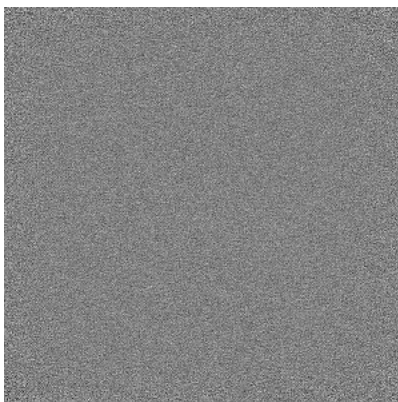


Z Index: 140

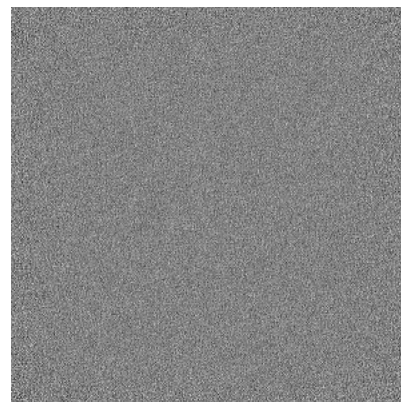
6.3.2 Raw map



X Index: 0



Y Index: 0

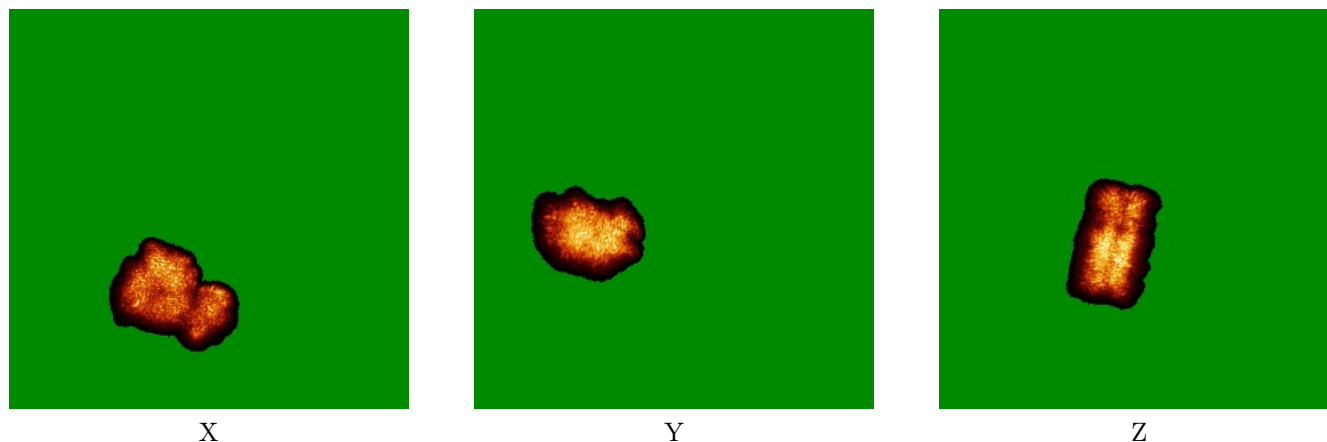


Z Index: 0

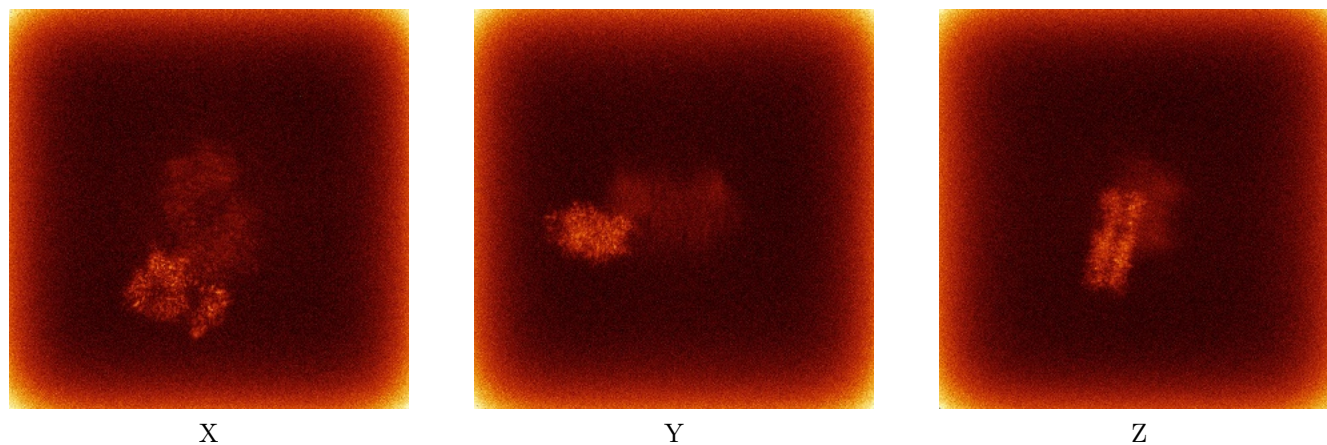
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal standard-deviation projections (False-color) [i](#)

6.4.1 Primary map



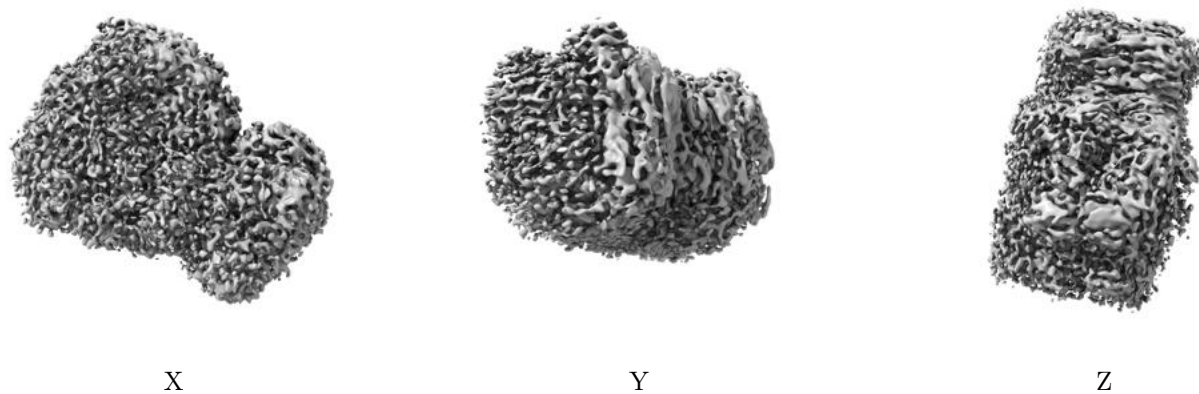
6.4.2 Raw map



The images above show the map standard deviation projections with false color in three orthogonal directions. Minimum values are shown in green, max in blue, and dark to light orange shades represent small to large values respectively.

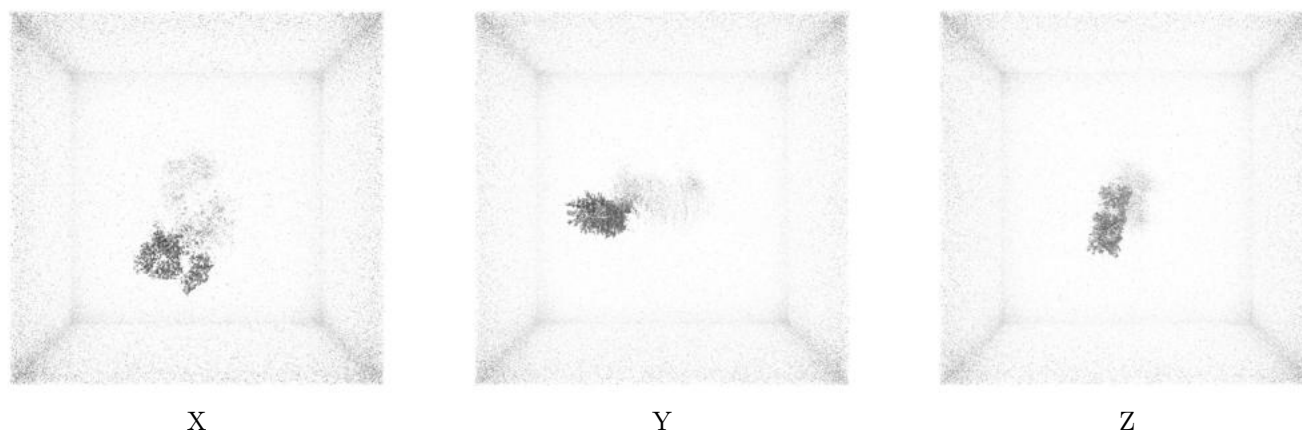
6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 0.012. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

6.5.2 Raw map



These images show the 3D surface of the raw map. The raw map's contour level was selected so that its surface encloses the same volume as the primary map does at its recommended contour level.

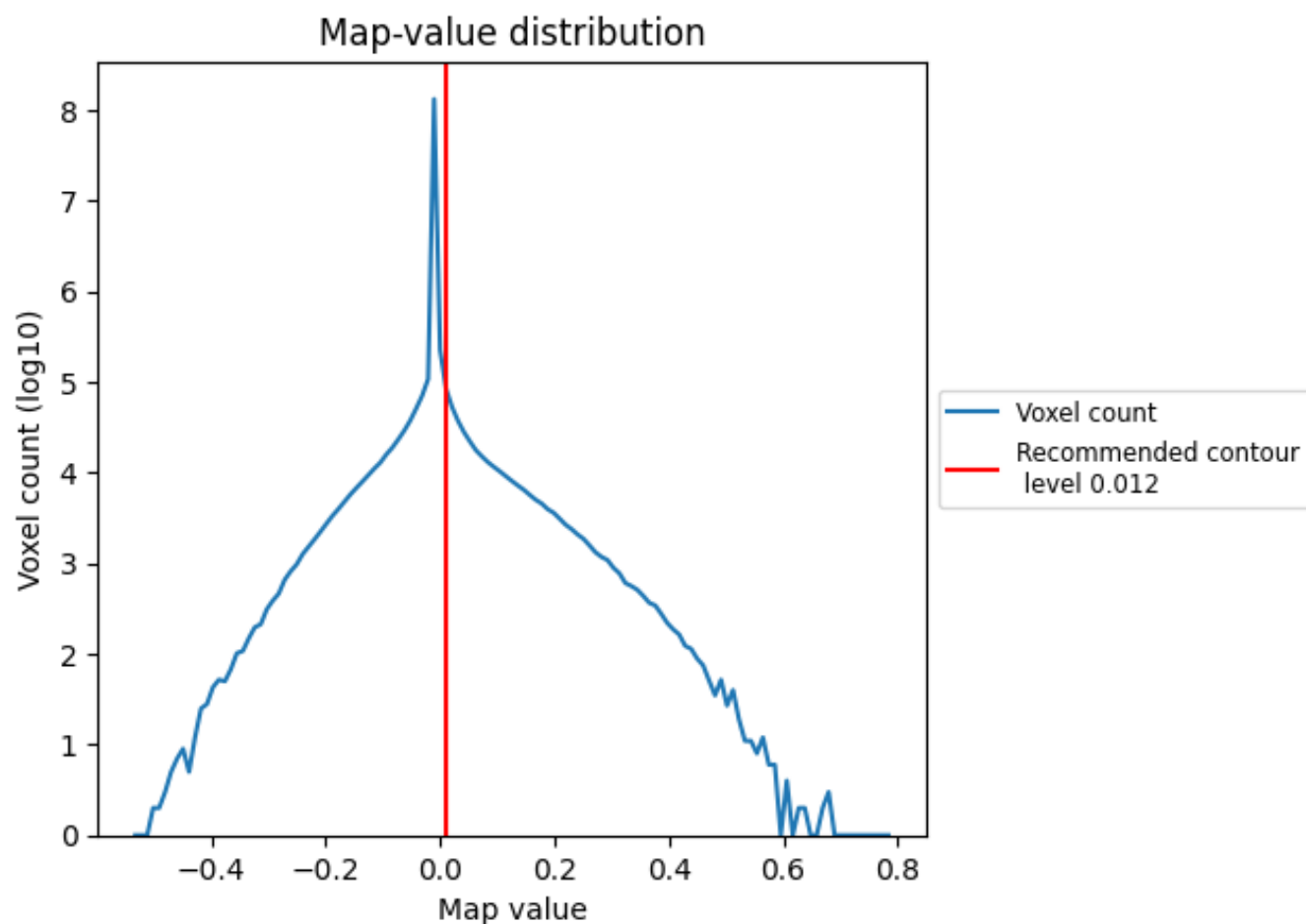
6.6 Mask visualisation [i](#)

This section was not generated. No masks/segmentation were deposited.

7 Map analysis [i](#)

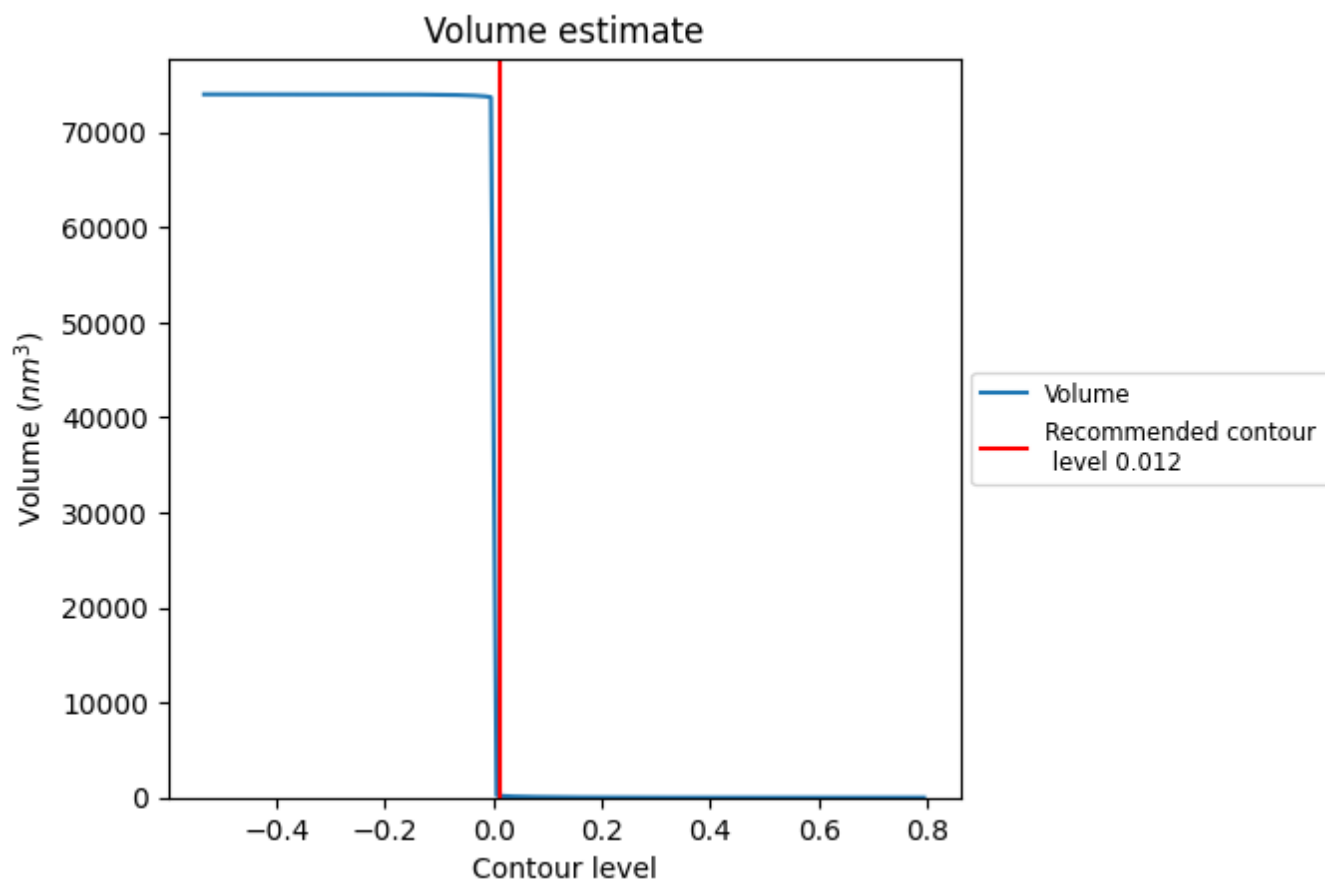
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution [i](#)



The map-value distribution is plotted in 128 intervals along the x-axis. The y-axis is logarithmic. A spike in this graph at zero usually indicates that the volume has been masked.

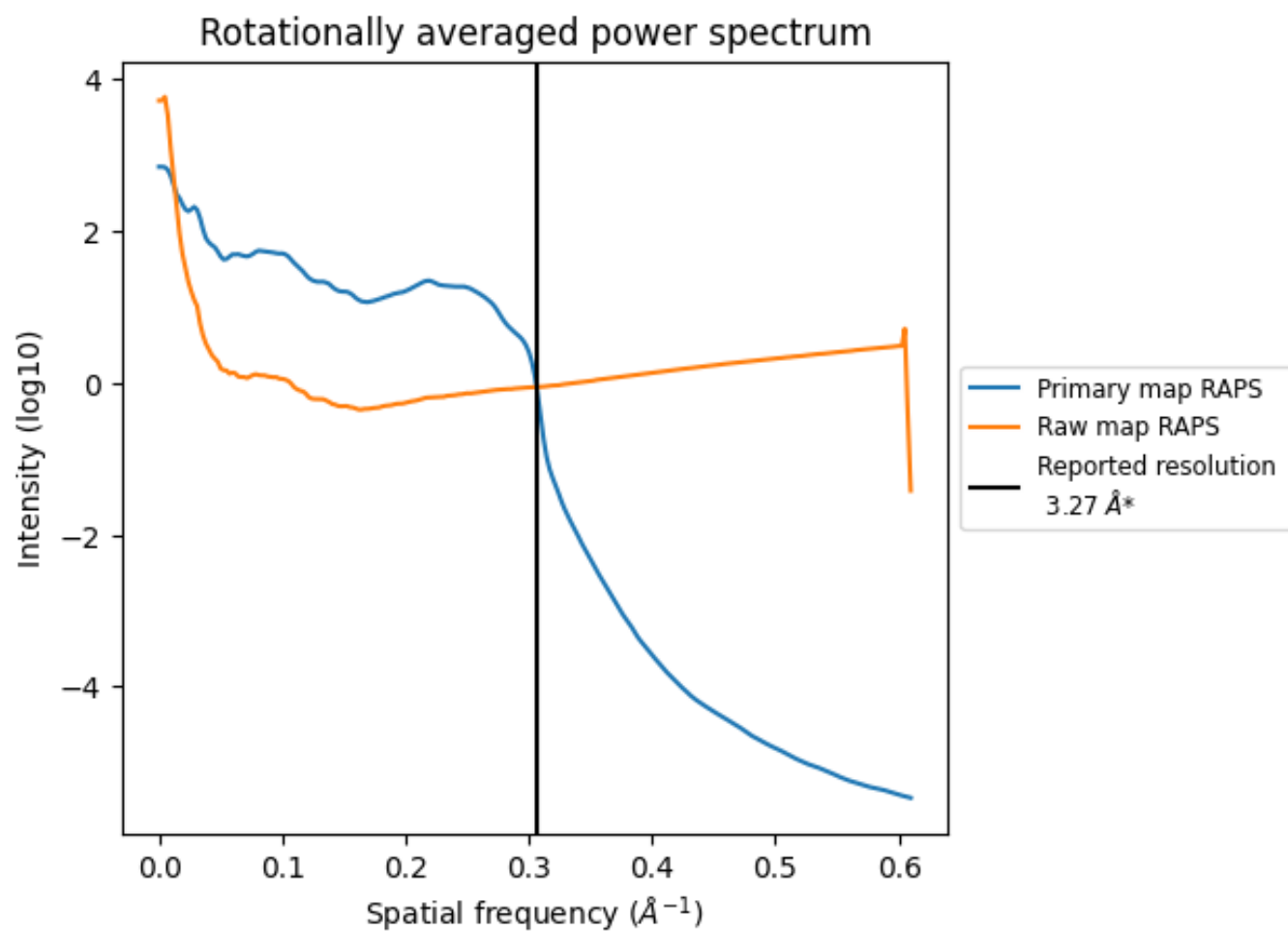
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 202 nm³; this corresponds to an approximate mass of 182 kDa.

The volume estimate graph shows how the enclosed volume varies with the contour level. The recommended contour level is shown as a vertical line and the intersection between the line and the curve gives the volume of the enclosed surface at the given level.

7.3 Rotationally averaged power spectrum ⓘ

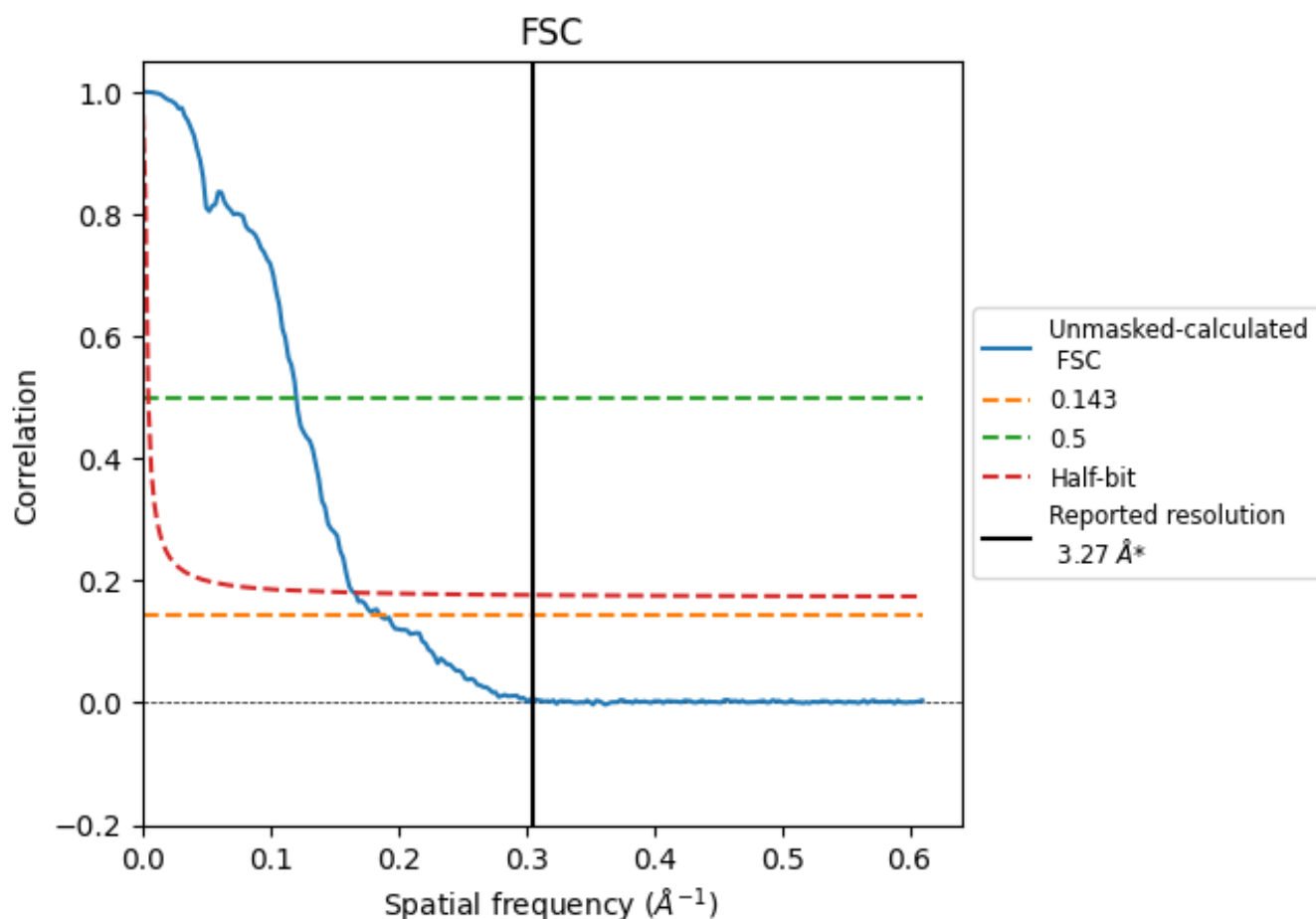


*Reported resolution corresponds to spatial frequency of 0.306 Å⁻¹

8 Fourier-Shell correlation [i](#)

Fourier-Shell Correlation (FSC) is the most commonly used method to estimate the resolution of single-particle and subtomogram-averaged maps. The shape of the curve depends on the imposed symmetry, mask and whether or not the two 3D reconstructions used were processed from a common reference. The reported resolution is shown as a black line. A curve is displayed for the half-bit criterion in addition to lines showing the 0.143 gold standard cut-off and 0.5 cut-off.

8.1 FSC [i](#)



*Reported resolution corresponds to spatial frequency of $0.306 \text{ \AA}^{-1}$

8.2 Resolution estimates [i](#)

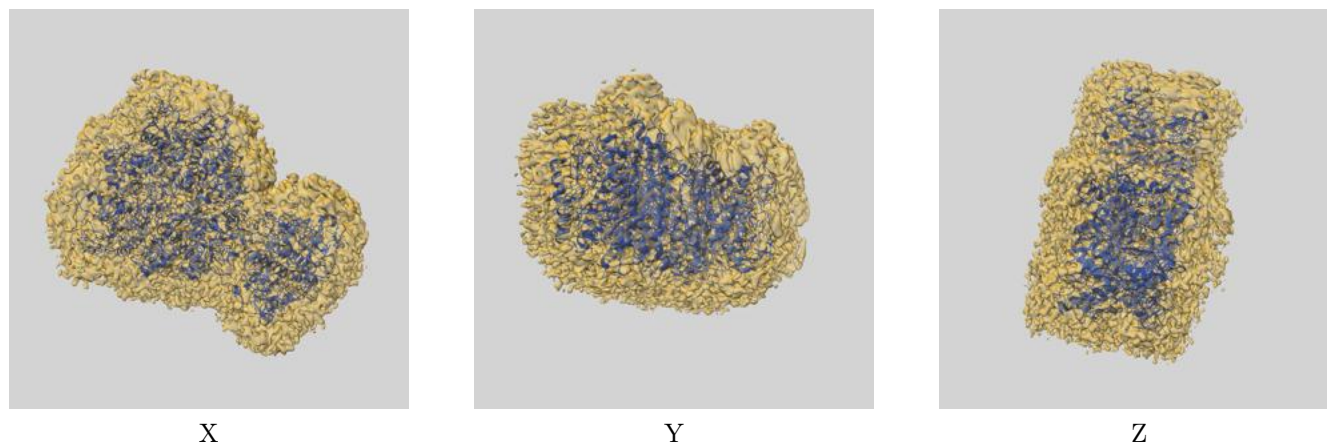
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	3.27	-	-
Author-provided FSC curve	-	-	-
Unmasked-calculated*	5.38	8.31	6.03

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from deposited half-maps intersecting FSC 0.143 CUT-OFF 5.38 differs from the reported value 3.27 by more than 10 %

9 Map-model fit [i](#)

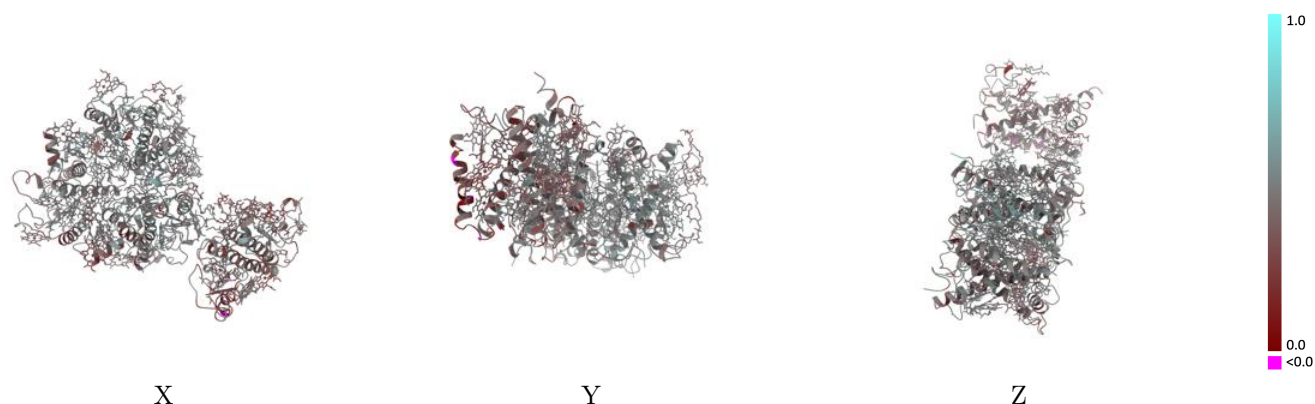
This section contains information regarding the fit between EMDB map EMD-66949 and PDB model 9XK6. Per-residue inclusion information can be found in [section 3](#) on [page 12](#).

9.1 Map-model overlay [i](#)



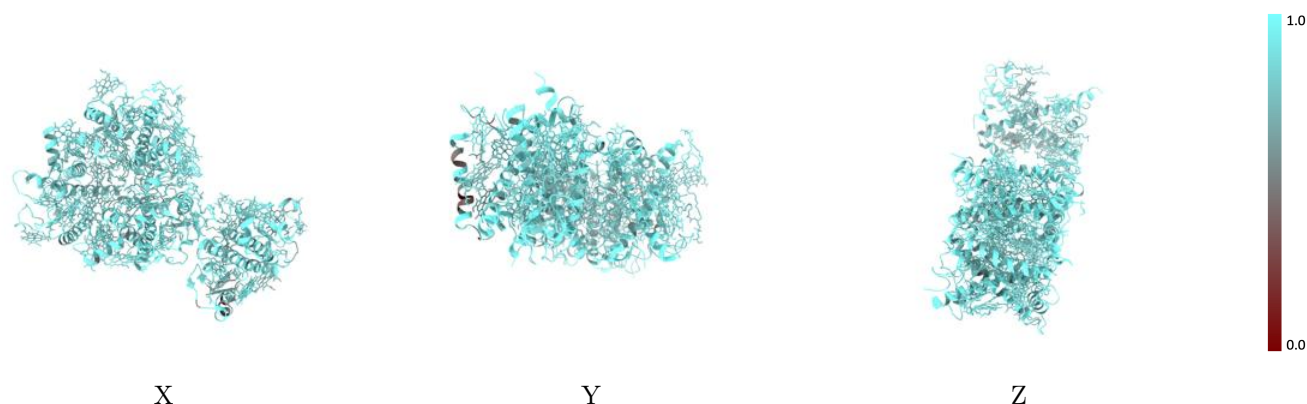
The images above show the 3D surface view of the map at the recommended contour level 0.012 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

9.2 Q-score mapped to coordinate model [i](#)



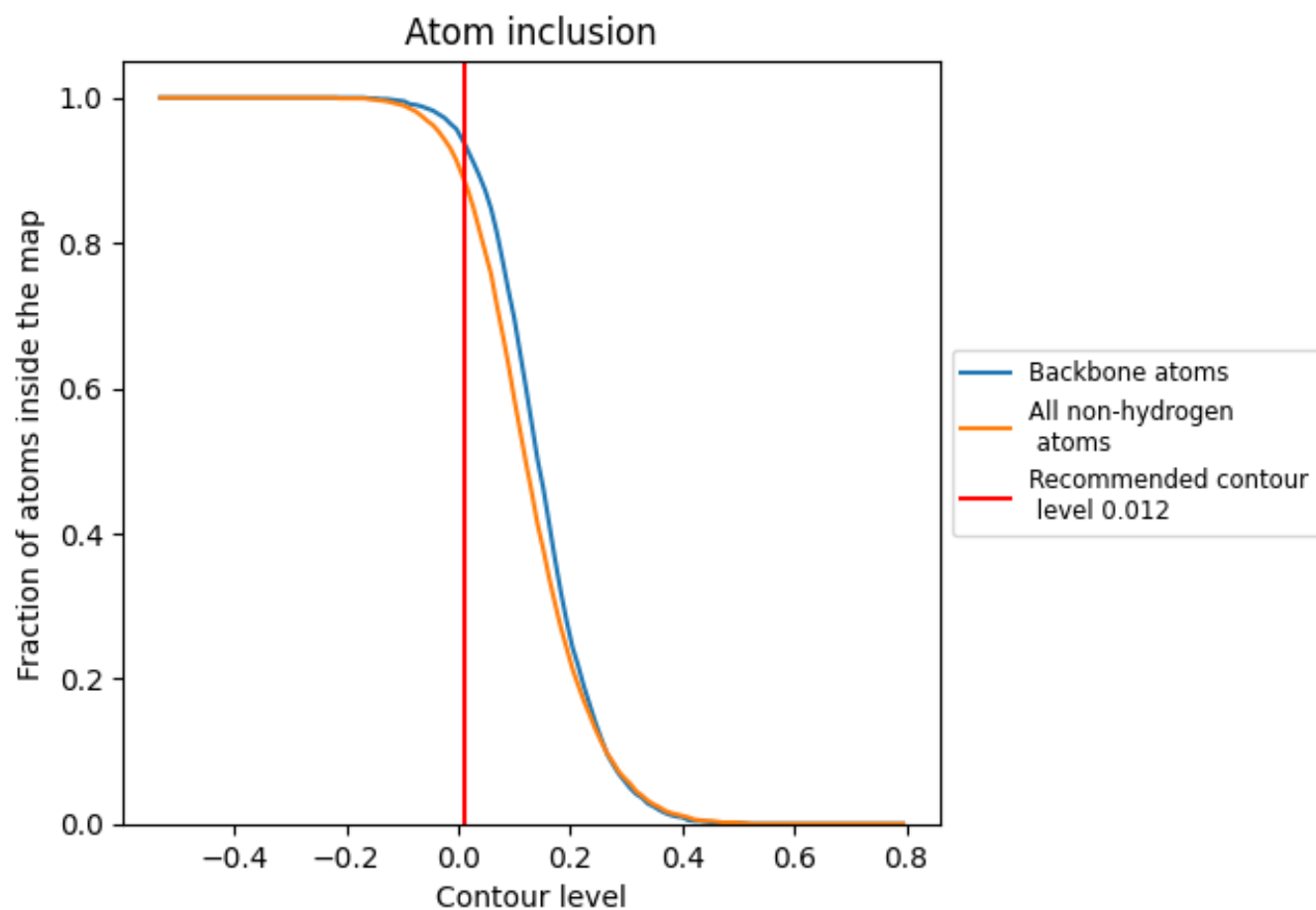
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions at which atoms can be resolved. Low Q-score values may therefore be expected for many entries.

9.3 Atom inclusion mapped to coordinate model [i](#)



The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.012).

9.4 Atom inclusion [i](#)



At the recommended contour level, 94% of all backbone atoms, 88% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary ⓘ

The table lists the average atom inclusion at the recommended contour level (0.012) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.8830	0.4360
00	0.8940	0.4710
1G	0.8880	0.4360
1N	0.9050	0.4500
1S	0.8420	0.3840

