



Full wwPDB EM Validation Report ⓘ

Oct 15, 2026 – 05:53 pm BST

PDB ID : 31FD / pdb_000031fd
EMDB ID : EMD-58358
Title : Photosystem II from Arabidopsis thaliana following high light and high temperature treatment
Authors : Forsman, J.A.; Graca, A.T.; Hall, M.; Messinger, J.; Schroder, W.P.
Deposited on : 2026-06-01
Resolution : 2.74 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:

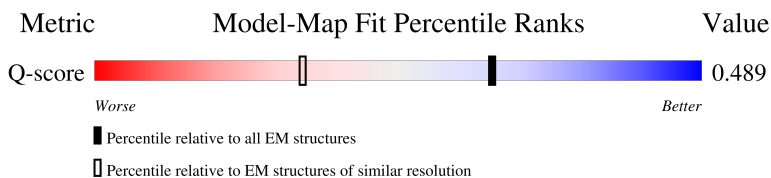
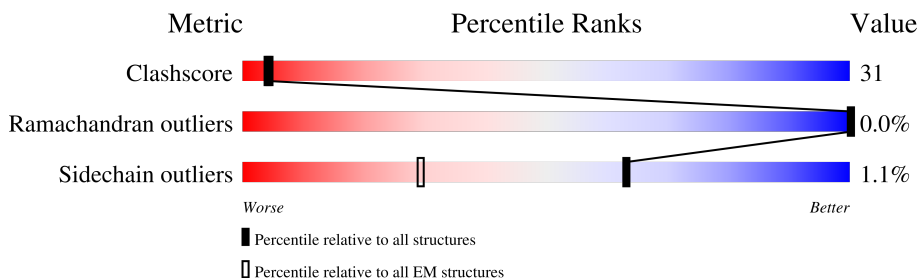
EMDB validation analysis : 0.0.1.dev133
Mogul : 1.8.4, CSD as541be (2020)
MolProbity : 4-5-2 with Phenix2.2
Buster-report : wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics : 20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics : 202505.v01 (Using data 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 2.74 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	10492 (2.24 - 3.24)

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	A	353	9% 39% 49% 10%
1	a	353	8% 38% 50% 10%
2	B	508	12% 50% 42% 7%
2	b	508	13% 54% 38% 7%

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Mol	Chain	Length	Quality of chain
3	C	473	
3	c	473	
4	D	353	
4	d	353	
5	E	83	
5	e	83	
6	F	39	
6	f	39	
7	H	73	
7	h	73	
8	I	36	
8	i	36	
9	K	61	
9	k	61	
10	L	38	
10	l	38	
11	M	34	
11	m	34	
12	O	332	
12	o	332	
13	T	33	
13	t	33	
14	U	103	
14	u	103	
15	X	116	

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Mol	Chain	Length	Quality of chain
15	x	116	

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
18	CLA	c	505	-	-	X	-

2 Entry composition

There are 28 unique types of molecules in this entry. The entry contains 39296 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 Photosystem II protein D1.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	A	316	Total	C	N	O	S	0	0
			2466	1621	410	422	13		
1	a	316	Total	C	N	O	S	0	0
			2466	1621	410	422	13		

- Molecule 2 is a protein called Photosystem II CP47 reaction center protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	B	473	Total	C	N	O	S	0	0
			3710	2436	625	637	12		
2	b	473	Total	C	N	O	S	0	0
			3710	2436	625	637	12		

- Molecule 3 is a protein called Photosystem II CP43 reaction center protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	C	385	Total	C	N	O	S	0	0
			3022	1996	508	507	11		
3	c	385	Total	C	N	O	S	0	0
			3022	1996	508	507	11		

- Molecule 4 is a protein called Photosystem II D2 protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
4	D	326	Total	C	N	O	S	0	0
			2604	1729	422	441	12		
4	d	326	Total	C	N	O	S	0	0
			2604	1729	422	441	12		

- Molecule 5 is a protein called Cytochrome b559 subunit alpha.

Mol	Chain	Residues	Atoms				AltConf	Trace
5	E	62	Total	C	N	O	0	0
			495	322	80	93		
5	e	62	Total	C	N	O	0	0
			495	322	80	93		

- Molecule 6 is a protein called Cytochrome b559 subunit beta.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	F	28	Total	C	N	O	S	0	0
			220	151	35	33	1		
6	f	28	Total	C	N	O	S	0	0
			220	151	35	33	1		

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
F	32	PHE	SER	variant	UNP P62095
f	32	PHE	SER	variant	UNP P62095

- Molecule 7 is a protein called Photosystem II reaction center protein H.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	H	57	Total	C	N	O	S	0	0
			425	281	66	76	2		
7	h	57	Total	C	N	O	S	0	0
			425	281	66	76	2		

- Molecule 8 is a protein called Photosystem II reaction center protein I.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	I	33	Total	C	N	O	S	0	0
			266	184	39	42	1		
8	i	33	Total	C	N	O	S	0	0
			266	184	39	42	1		

- Molecule 9 is a protein called Photosystem II reaction center protein K.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	K	27	Total	C	N	O	S	0	0
			216	153	30	32	1		
9	k	27	Total	C	N	O	S	0	0
			216	153	30	32	1		

- Molecule 10 is a protein called Photosystem II reaction center protein L.

Mol	Chain	Residues	Atoms				AltConf	Trace
10	L	35	Total	C	N	O	0	0
			293	195	45	53		
10	l	35	Total	C	N	O	0	0
			293	195	45	53		

- Molecule 11 is a protein called Photosystem II reaction center protein M.

Mol	Chain	Residues	Atoms				AltConf	Trace
11	M	31	Total	C	N	O	0	0
			242	168	34	40		
11	m	31	Total	C	N	O	0	0
			242	168	34	40		

- Molecule 12 is a protein called Oxygen-evolving enhancer protein 1-1, chloroplastic.

Mol	Chain	Residues	Atoms					AltConf	Trace
12	O	227	Total	C	N	O	S	0	0
			1742	1109	281	348	4		
12	o	227	Total	C	N	O	S	0	0
			1742	1109	281	348	4		

- Molecule 13 is a protein called Photosystem II reaction center protein T.

Mol	Chain	Residues	Atoms					AltConf	Trace
13	T	29	Total	C	N	O	S	0	0
			239	168	33	37	1		
13	t	29	Total	C	N	O	S	0	0
			239	168	33	37	1		

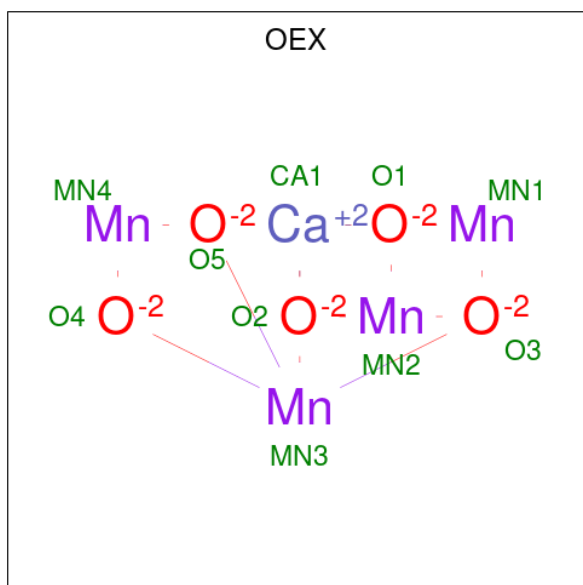
- Molecule 14 is a protein called Photosystem II 5 kDa protein, chloroplastic.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	U	25	Total	C	N	O	S	0	0
			194	122	36	33	3		
14	u	25	Total	C	N	O	S	0	0
			194	122	36	33	3		

- Molecule 15 is a protein called Expressed protein.

Mol	Chain	Residues	Atoms				AltConf	Trace
15	X	33	Total	C	N	O	0	0
			233	154	36	43		
15	x	33	Total	C	N	O	0	0
			233	154	36	43		

- Molecule 16 is CA-MN4-O5 CLUSTER (CCD ID: OEX) (formula: CaMn_4O_5) (labeled as "Ligand of Interest" by depositor).

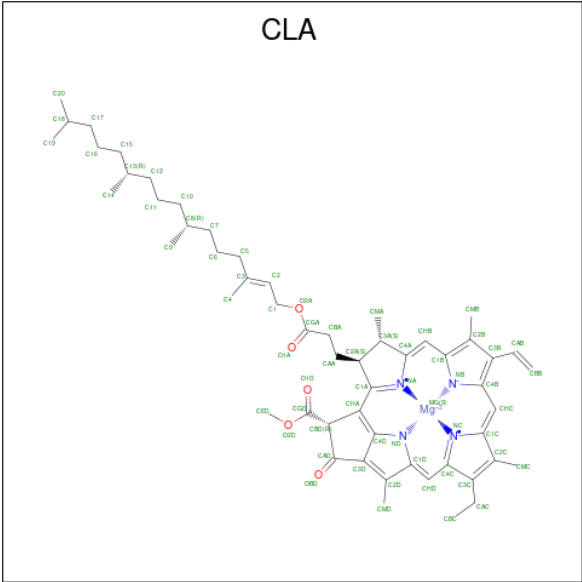


Mol	Chain	Residues	Atoms				AltConf
16	A	1	Total	Ca	Mn	O	0
			10	1	4	5	
16	a	1	Total	Ca	Mn	O	0
			10	1	4	5	

- Molecule 17 is CHLORIDE ION (CCD ID: CL) (formula: Cl).

Mol	Chain	Residues	Atoms		AltConf
17	A	1	Total	Cl	0
			1	1	
17	C	1	Total	Cl	0
			1	1	
17	a	1	Total	Cl	0
			1	1	
17	c	1	Total	Cl	0
			1	1	

- Molecule 18 is CHLOROPHYLL A (CCD ID: CLA) (formula: $\text{C}_{55}\text{H}_{72}\text{MgN}_4\text{O}_5$).



Mol	Chain	Residues	Atoms					AltConf
18	A	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
18	A	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
18	A	1	Total	C	Mg	N	O	0
			49	39	1	4	5	
18	A	1	Total	C	Mg	N	O	0
			60	50	1	4	5	
18	B	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
18	B	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
18	B	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
18	B	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
18	B	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
18	B	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
18	B	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
18	B	1	Total	C	Mg	N	O	0
			65	55	1	4	5	

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Mol	Chain	Residues	Atoms					AltConf
18	B	1	Total 65	C 55	Mg 1	N 4	O 5	0
18	B	1	Total 65	C 55	Mg 1	N 4	O 5	0
18	B	1	Total 65	C 55	Mg 1	N 4	O 5	0
18	B	1	Total 65	C 55	Mg 1	N 4	O 5	0
18	B	1	Total 65	C 55	Mg 1	N 4	O 5	0
18	C	1	Total 49	C 39	Mg 1	N 4	O 5	0
18	C	1	Total 65	C 55	Mg 1	N 4	O 5	0
18	C	1	Total 65	C 55	Mg 1	N 4	O 5	0
18	C	1	Total 52	C 42	Mg 1	N 4	O 5	0
18	C	1	Total 65	C 55	Mg 1	N 4	O 5	0
18	C	1	Total 65	C 55	Mg 1	N 4	O 5	0
18	C	1	Total 65	C 55	Mg 1	N 4	O 5	0
18	C	1	Total 65	C 55	Mg 1	N 4	O 5	0
18	C	1	Total 65	C 55	Mg 1	N 4	O 5	0
18	C	1	Total 65	C 55	Mg 1	N 4	O 5	0
18	C	1	Total 65	C 55	Mg 1	N 4	O 5	0
18	C	1	Total 65	C 55	Mg 1	N 4	O 5	0
18	D	1	Total 65	C 55	Mg 1	N 4	O 5	0
18	D	1	Total 65	C 55	Mg 1	N 4	O 5	0
18	H	1	Total 65	C 55	Mg 1	N 4	O 5	0

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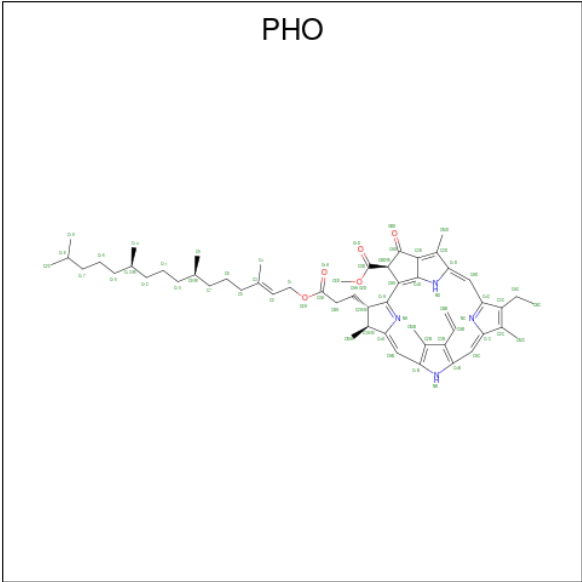
Mol	Chain	Residues	Atoms					AltConf
18	a	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
18	a	1	Total	C	Mg	N	O	0
			60	50	1	4	5	
18	a	1	Total	C	Mg	N	O	0
			49	39	1	4	5	
18	a	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
18	b	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
18	b	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
18	b	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
18	b	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
18	b	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
18	b	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
18	b	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
18	b	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
18	b	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
18	b	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
18	b	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
18	b	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
18	c	1	Total	C	Mg	N	O	0
			65	55	1	4	5	

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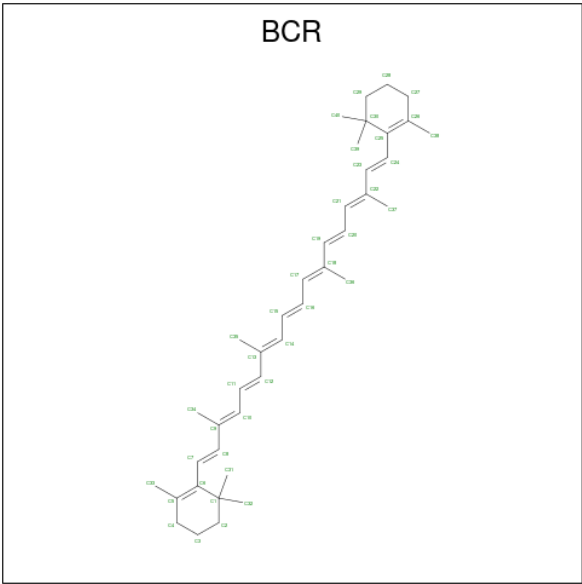
Mol	Chain	Residues	Atoms					AltConf
18	c	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
18	c	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
18	c	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
18	c	1	Total	C	Mg	N	O	0
			49	39	1	4	5	
18	c	1	Total	C	Mg	N	O	0
			52	42	1	4	5	
18	c	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
18	c	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
18	c	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
18	c	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
18	c	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
18	c	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
18	d	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
18	d	1	Total	C	Mg	N	O	0
			65	55	1	4	5	

- Molecule 19 is PHEOPHYTIN A (CCD ID: PHO) (formula: $C_{55}H_{74}N_4O_5$).



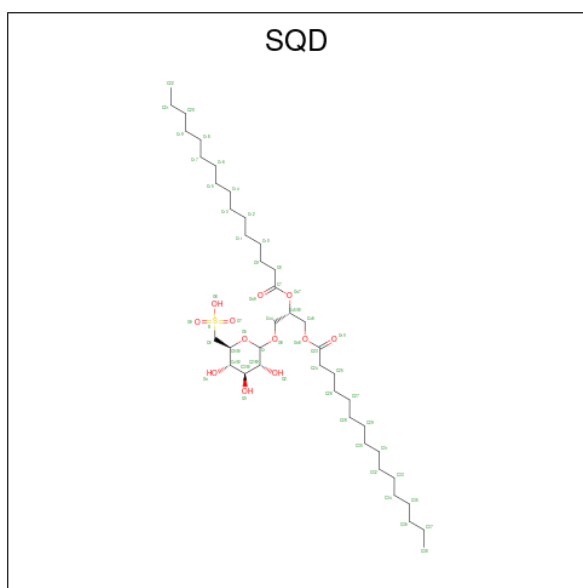
Mol	Chain	Residues	Atoms				AltConf
19	A	1	Total	C	N	O	0
			64	55	4	5	
19	D	1	Total	C	N	O	0
			64	55	4	5	
19	a	1	Total	C	N	O	0
			64	55	4	5	
19	d	1	Total	C	N	O	0
			64	55	4	5	

- Molecule 20 is BETA-CAROTENE (CCD ID: BCR) (formula: C₄₀H₅₆).



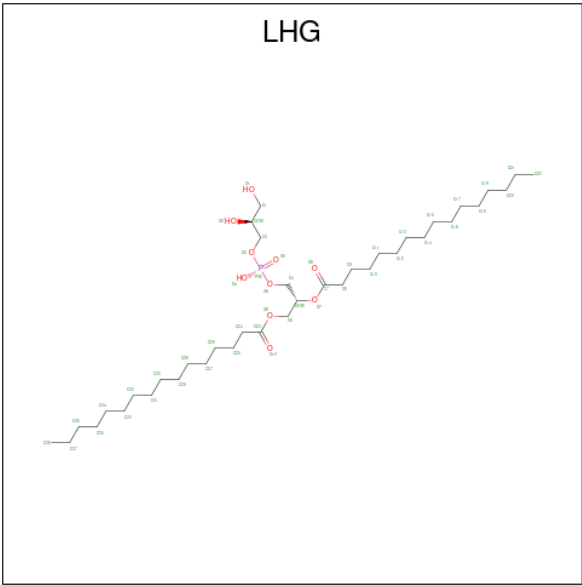
Mol	Chain	Residues	Atoms	AltConf
20	A	1	Total C 40 40	0
20	B	1	Total C 40 40	0
20	B	1	Total C 40 40	0
20	B	1	Total C 40 40	0
20	D	1	Total C 40 40	0
20	H	1	Total C 40 40	0
20	a	1	Total C 40 40	0
20	b	1	Total C 40 40	0
20	b	1	Total C 40 40	0
20	b	1	Total C 40 40	0
20	d	1	Total C 40 40	0
20	h	1	Total C 40 40	0

- Molecule 21 is 1,2-DI-O-ACYL-3-O-[6-DEOXY-6-SULFO-ALPHA-D-GLUCOPYRANOSYL]-SN-GLYCEROL (CCD ID: SQD) (formula: $C_{41}H_{78}O_{12}S$).



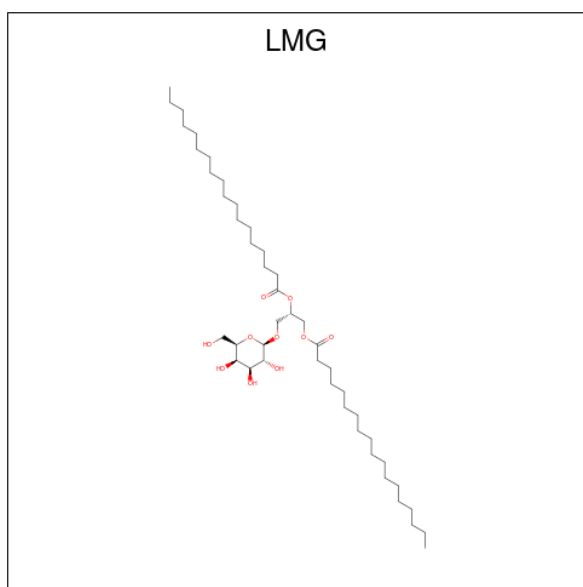
Mol	Chain	Residues	Atoms				AltConf
21	A	1	Total	C	O	S	0
			54	41	12	1	
21	a	1	Total	C	O	S	0
			54	41	12	1	

- Molecule 22 is 1,2-DIPALMITOYL-PHOSPHATIDYL-GLYCEROLE (CCD ID: LHG) (formula: C₃₈H₇₅O₁₀P).



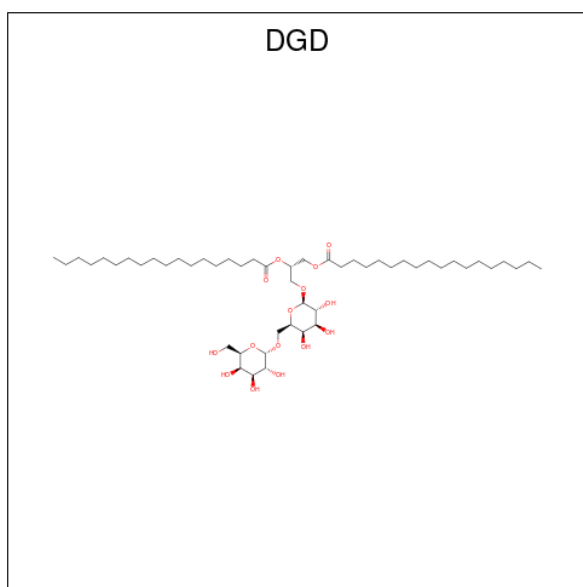
Mol	Chain	Residues	Atoms				AltConf
22	A	1	Total	C	O	P	0
			37	26	10	1	
22	D	1	Total	C	O	P	0
			49	38	10	1	
22	D	1	Total	C	O	P	0
			43	32	10	1	
22	L	1	Total	C	O	P	0
			49	38	10	1	
22	a	1	Total	C	O	P	0
			37	26	10	1	
22	d	1	Total	C	O	P	0
			43	32	10	1	
22	d	1	Total	C	O	P	0
			49	38	10	1	
22	l	1	Total	C	O	P	0
			49	38	10	1	

- Molecule 23 is 1,2-DISTEAROYL-MONOGALACTOSYL-DIGLYCERIDE (CCD ID: LMG) (formula: C₄₅H₈₆O₁₀).



Mol	Chain	Residues	Atoms			AltConf
23	B	1	Total	C	O	0
			51	41	10	
23	C	1	Total	C	O	0
			48	38	10	
23	D	1	Total	C	O	0
			46	36	10	
23	b	1	Total	C	O	0
			51	41	10	
23	c	1	Total	C	O	0
			48	38	10	
23	d	1	Total	C	O	0
			46	36	10	

- Molecule 24 is DIGALACTOSYL DIACYL GLYCEROL (DGDG) (CCD ID: DGD) (formula: $C_{51}H_{96}O_{15}$).

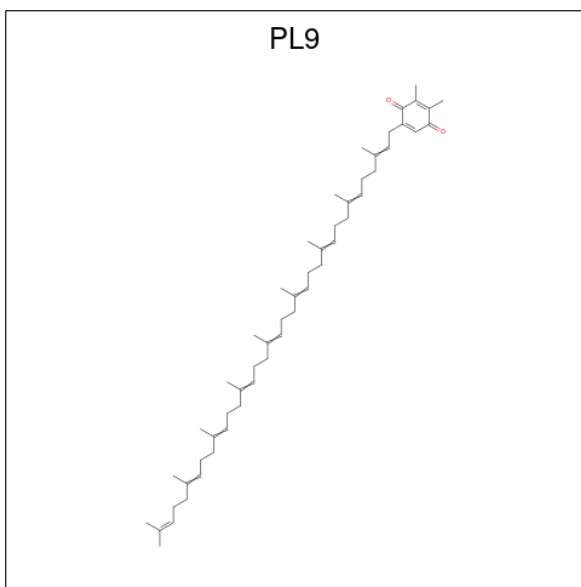


Mol	Chain	Residues	Atoms			AltConf
24	B	1	Total	C	O	0
			62	47	15	
24	C	1	Total	C	O	0
			50	35	15	
24	C	1	Total	C	O	0
			62	47	15	
24	b	1	Total	C	O	0
			62	47	15	
24	c	1	Total	C	O	0
			50	35	15	
24	c	1	Total	C	O	0
			62	47	15	

- Molecule 25 is FE (II) ION (CCD ID: FE2) (formula: Fe) (labeled as "Ligand of Interest" by depositor).

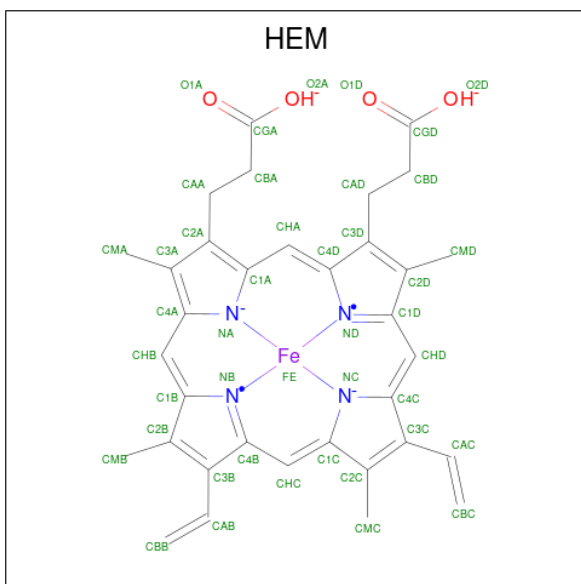
Mol	Chain	Residues	Atoms		AltConf
25	D	1	Total	Fe	0
			1	1	
25	d	1	Total	Fe	0
			1	1	

- Molecule 26 is 2,3-DIMETHYL-5-(3,7,11,15,19,23,27,31,35-NONAMETHYL-2,6,10,14,18,22,26,30,34-HEXATRIACONTANONAENYL-2,5-CYCLOHEXADIENE-1,4-DIONE-2,3-DIMETHYL-5-SOLANESYL-1,4-BENZOQUINONE (CCD ID: PL9) (formula: C₅₃H₈₀O₂).



Mol	Chain	Residues	Atoms			AltConf
26	D	1	Total	C	O	0
			55	53	2	
26	d	1	Total	C	O	0
			55	53	2	

- Molecule 27 is PROTOPORPHYRIN IX CONTAINING FE (CCD ID: HEM) (formula: $C_{34}H_{32}FeN_4O_4$).



Mol	Chain	Residues	Atoms					AltConf
27	F	1	Total	C	Fe	N	O	0
			43	34	1	4	4	

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Mol	Chain	Residues	Atoms					AltConf
27	f	1	Total	C	Fe	N	O	0
			43	34	1	4	4	

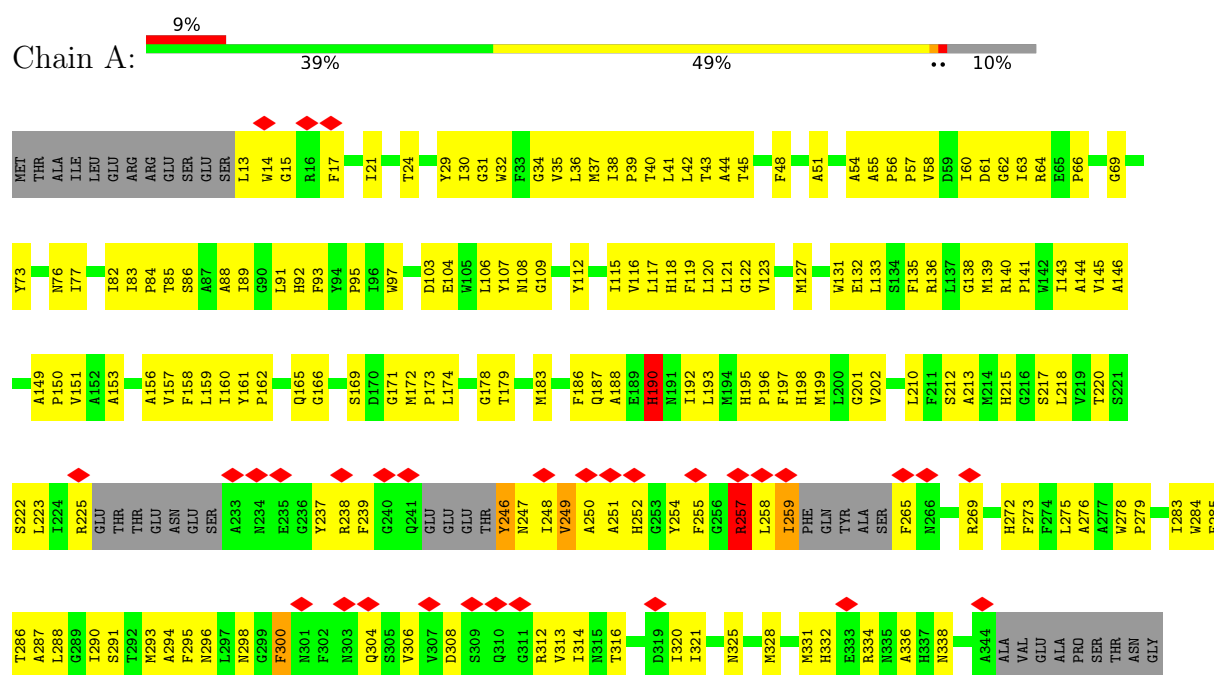
- Molecule 28 is water.

Mol	Chain	Residues	Atoms		AltConf
28	A	14	Total	O	0
			14	14	
28	B	5	Total	O	0
			5	5	
28	C	2	Total	O	0
			2	2	
28	D	5	Total	O	0
			5	5	
28	a	14	Total	O	0
			14	14	
28	b	5	Total	O	0
			5	5	
28	c	2	Total	O	0
			2	2	
28	d	5	Total	O	0
			5	5	

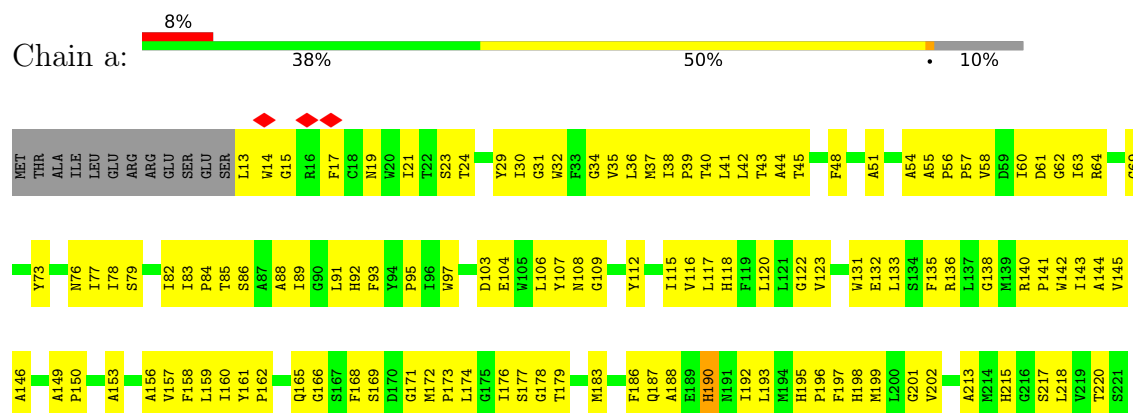
3 Residue-property plots

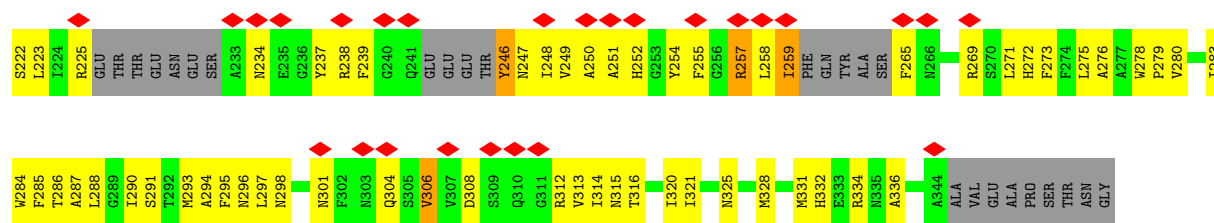
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion 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: Photosystem II protein D1

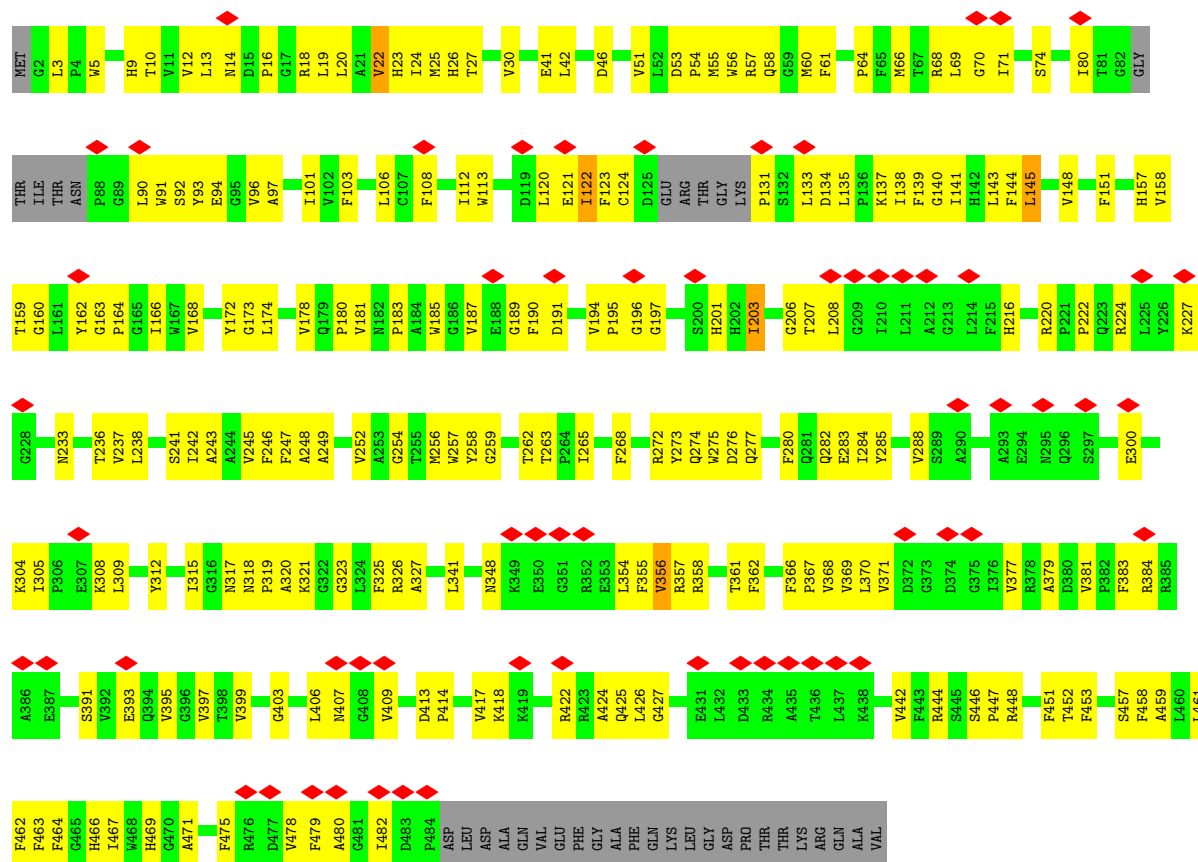


• Molecule 1: Photosystem II protein D1

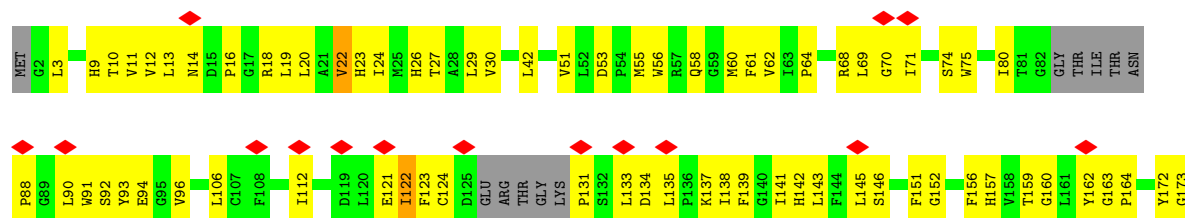


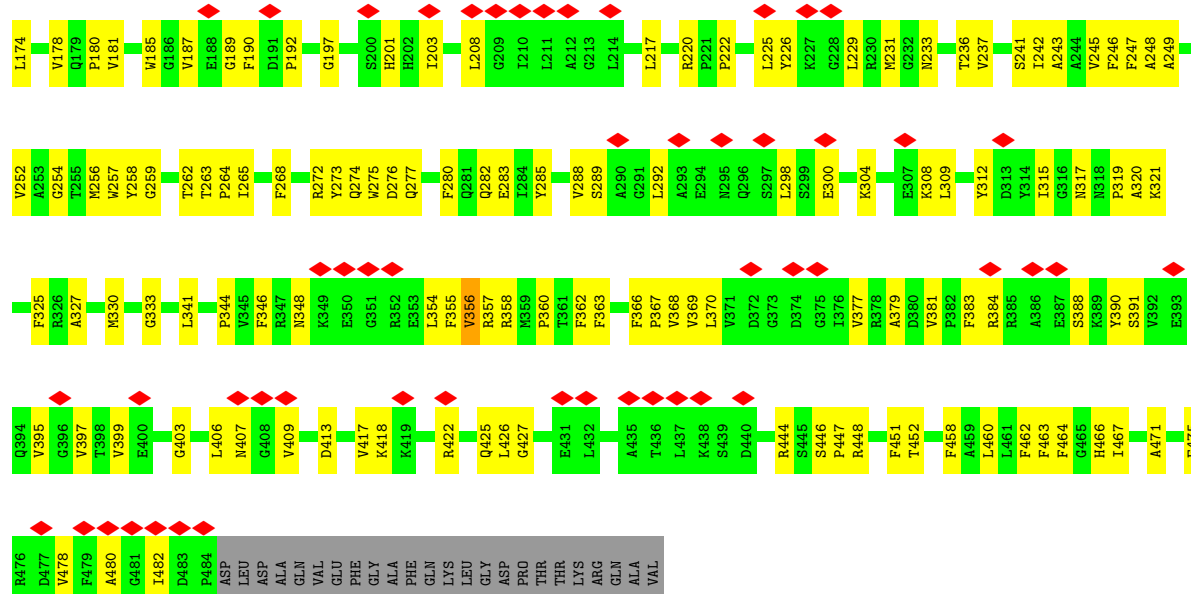


• Molecule 2: Photosystem II CP47 reaction center protein

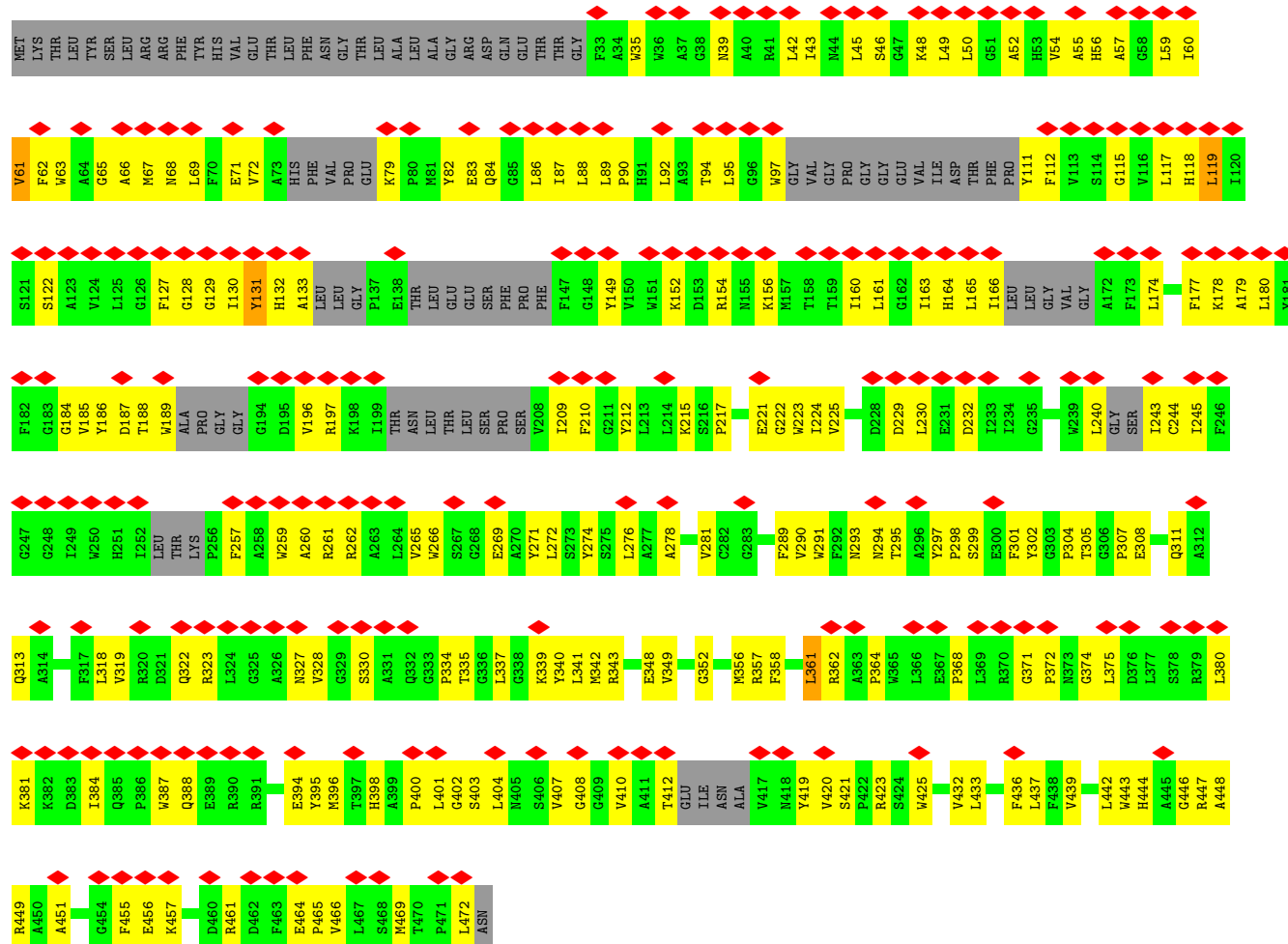


• Molecule 2: Photosystem II CP47 reaction center protein

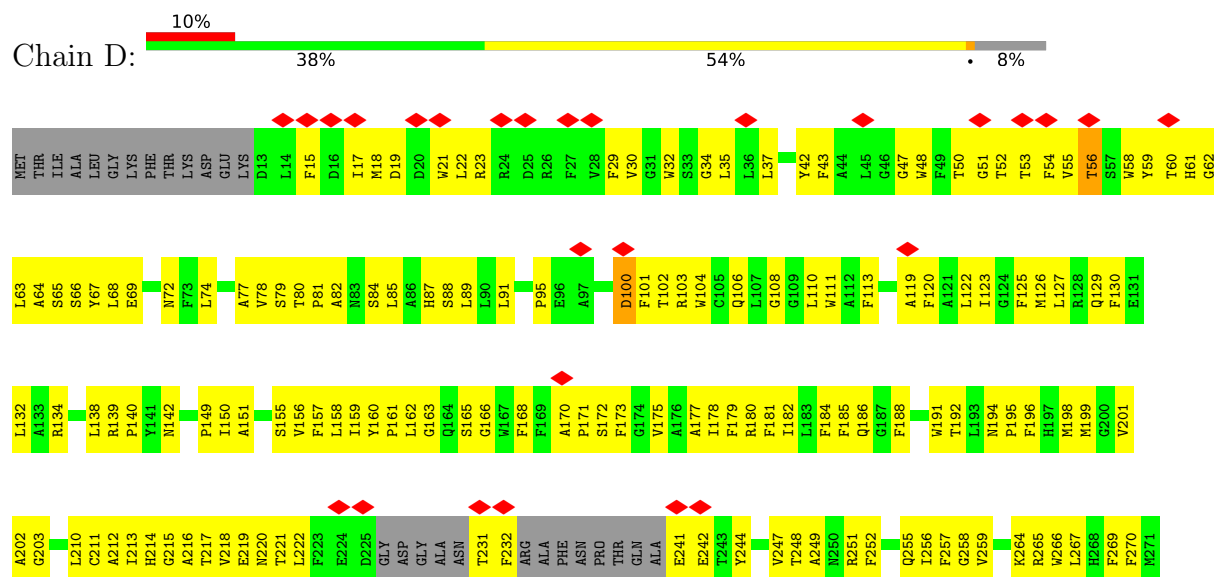


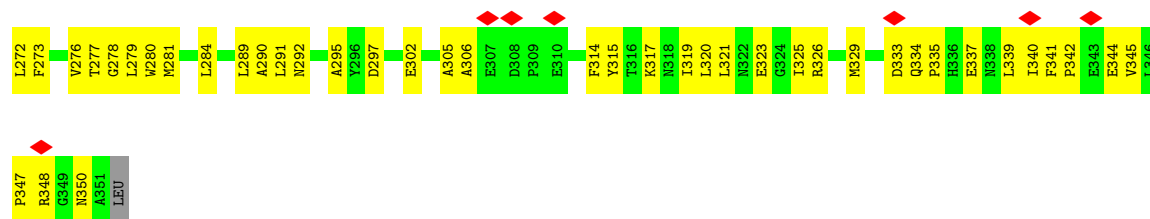


• Molecule 3: Photosystem II CP43 reaction center protein

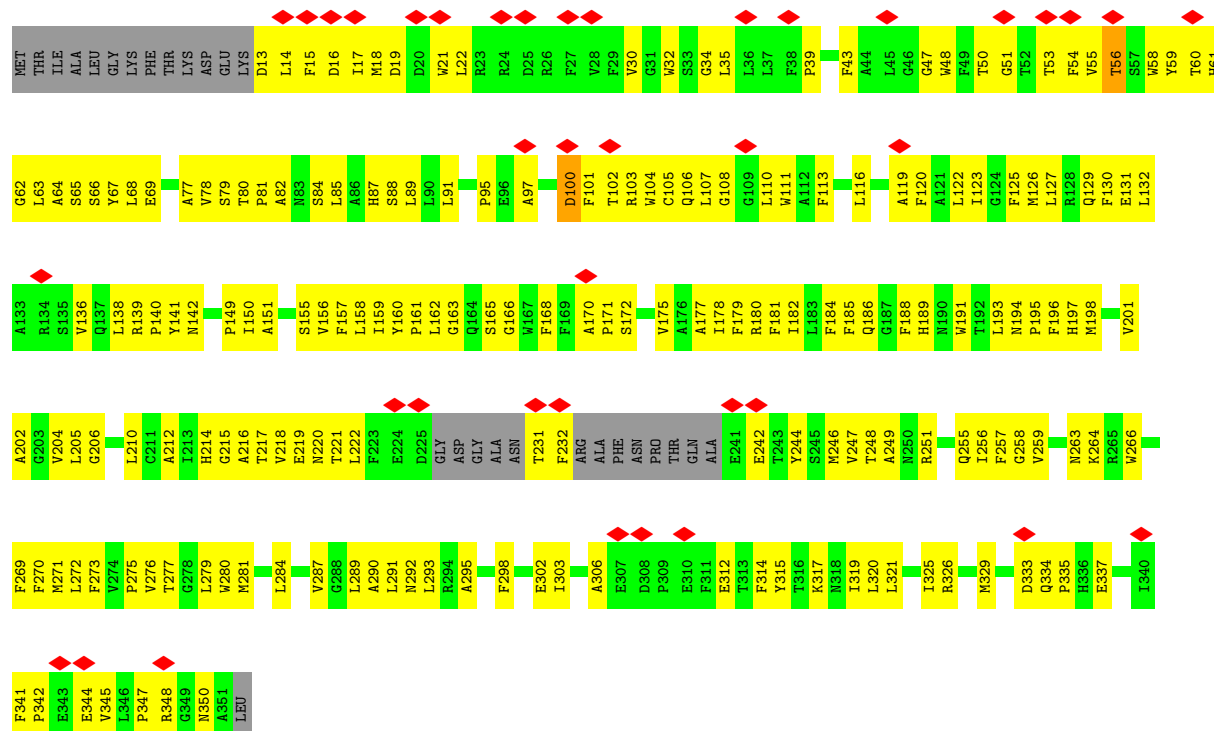


Chain c:

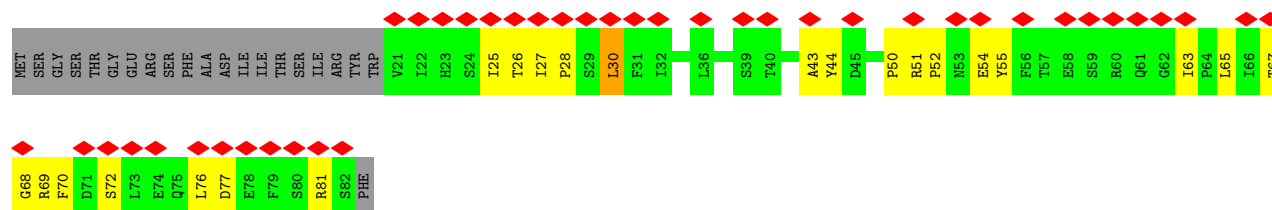




• Molecule 4: Photosystem II D2 protein

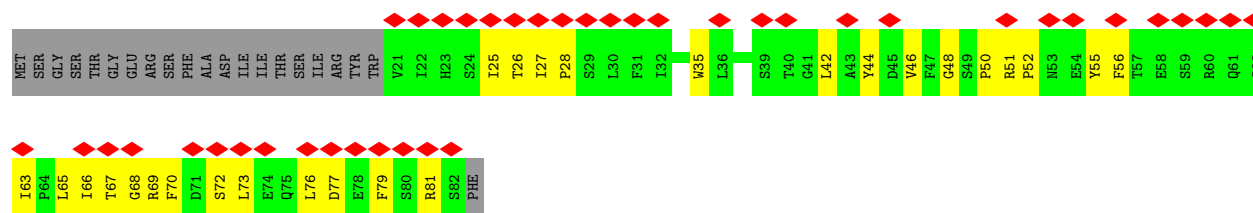


• Molecule 5: Cytochrome b559 subunit alpha

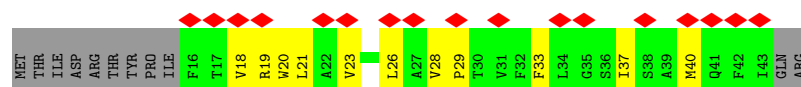


• Molecule 5: Cytochrome b559 subunit alpha

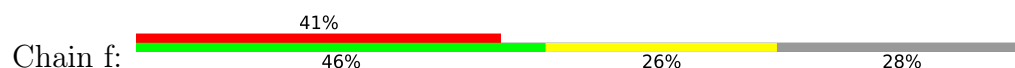




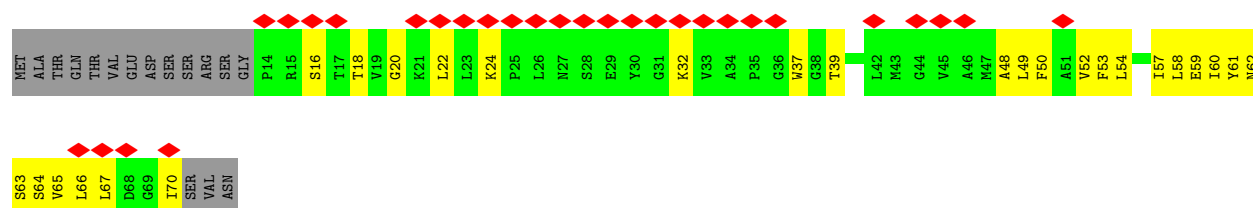
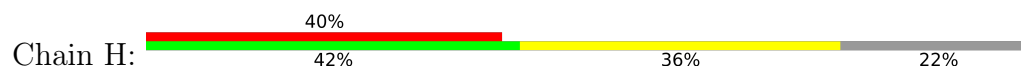
• Molecule 6: Cytochrome b559 subunit beta



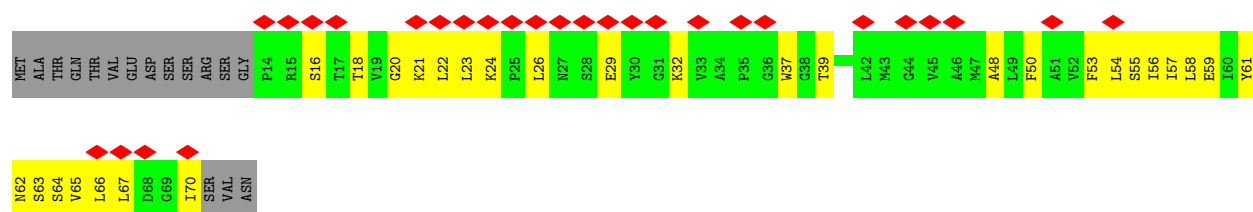
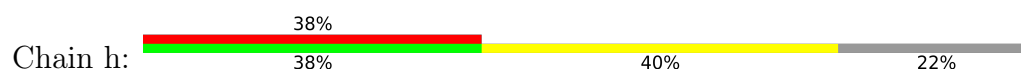
• Molecule 6: Cytochrome b559 subunit beta



• Molecule 7: Photosystem II reaction center protein H

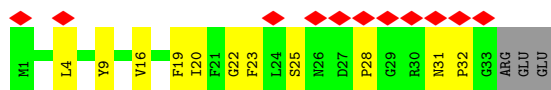


• Molecule 7: Photosystem II reaction center protein H

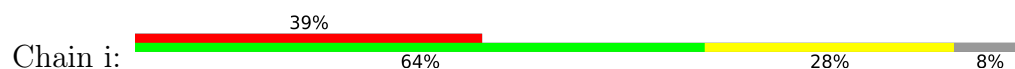


• Molecule 8: Photosystem II reaction center protein I

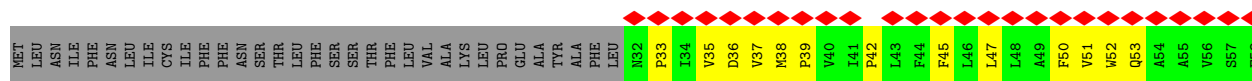




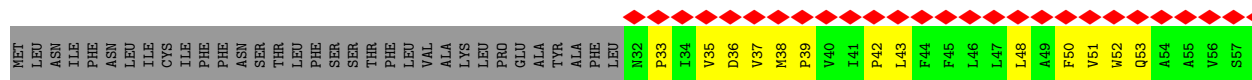
- Molecule 8: Photosystem II reaction center protein I



- Molecule 9: Photosystem II reaction center protein K



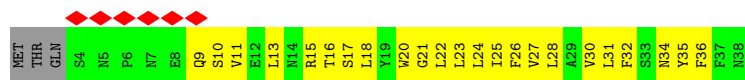
- Molecule 9: Photosystem II reaction center protein K



- Molecule 10: Photosystem II reaction center protein L

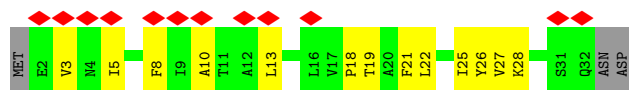


- Molecule 10: Photosystem II reaction center protein L

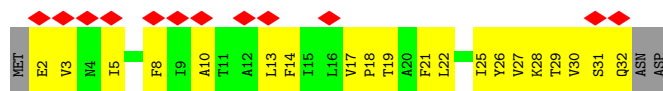


- Molecule 11: Photosystem II reaction center protein M

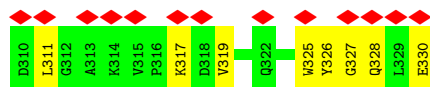
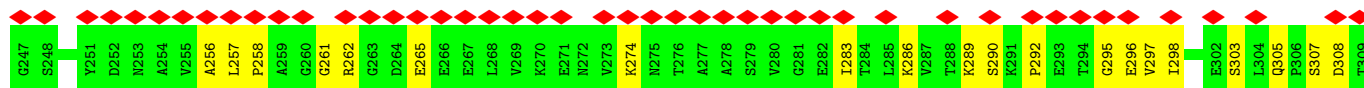
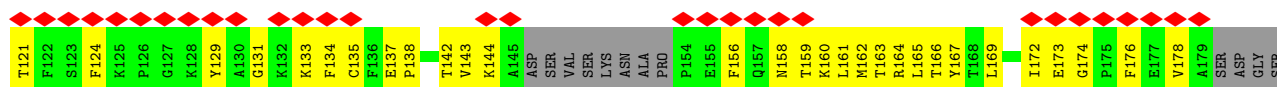




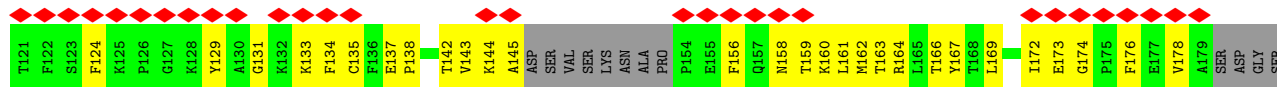
- Molecule 11: Photosystem II reaction center protein M

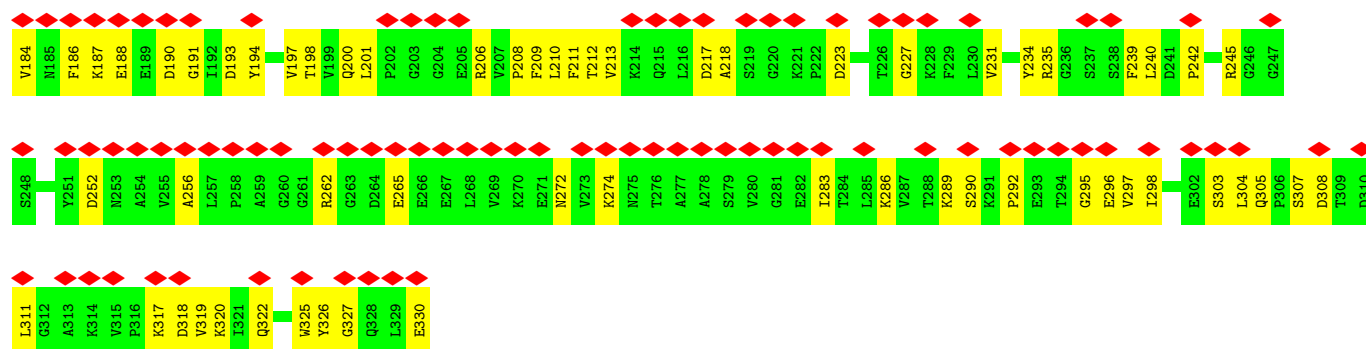


- Molecule 12: Oxygen-evolving enhancer protein 1-1, chloroplastic



- Molecule 12: Oxygen-evolving enhancer protein 1-1, chloroplastic

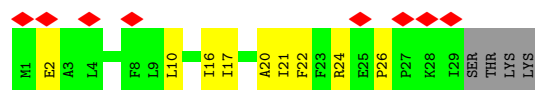




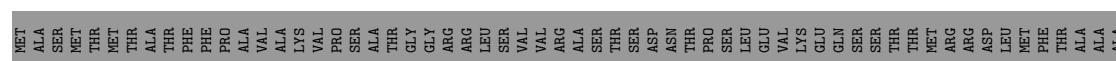
- Molecule 13: Photosystem II reaction center protein T



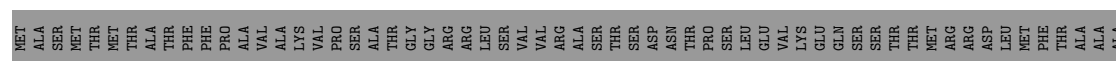
- Molecule 13: Photosystem II reaction center protein T



- Molecule 14: Photosystem II 5 kDa protein, chloroplastic



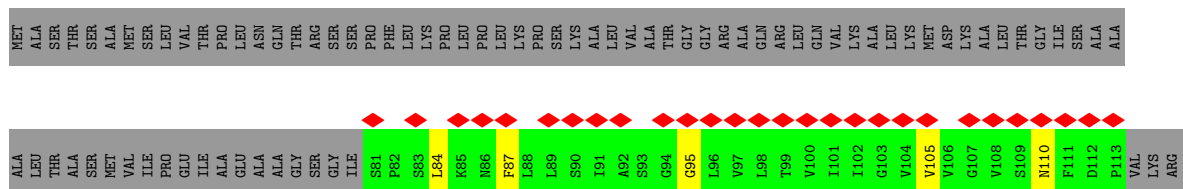
- Molecule 14: Photosystem II 5 kDa protein, chloroplastic



- Molecule 15: Expressed protein



- Molecule 15: Expressed protein



4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	57560	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 ($e^-/\text{\AA}^2$)	40	Depositor
Minimum defocus (nm)	1000	Depositor
Maximum defocus (nm)	2400	Depositor
Magnification	165000	Depositor
Image detector	FEI FALCON IV (4k x 4k)	Depositor
Maximum map value	10.181	Depositor
Minimum map value	-6.342	Depositor
Average map value	0.040	Depositor
Map value standard deviation	1.021	Depositor
Recommended contour level	2.216	Depositor
Map size (Å)	151.4675, 165.55751, 109.902	wwPDB
Map dimensions	156, 235, 215	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	0.7045, 0.7045, 0.7045	Depositor

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: CLA, LHG, OEX, FE2, PHO, PL9, LMG, HEM, CL, BCR, DGD, SQD

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	A	0.35	0/2542	0.55	2/3463 (0.1%)
1	a	0.34	0/2542	0.51	0/3463
2	B	0.26	0/3838	0.36	0/5225
2	b	0.26	0/3838	0.39	0/5225
3	C	0.25	0/3116	0.45	2/4226 (0.0%)
3	c	0.26	0/3116	0.47	3/4226 (0.1%)
4	D	0.28	0/2693	0.41	0/3669
4	d	0.32	0/2693	0.45	0/3669
5	E	0.24	0/509	0.46	0/692
5	e	0.22	0/509	0.43	0/692
6	F	0.18	0/227	0.32	0/309
6	f	0.20	0/227	0.42	0/309
7	H	0.25	0/434	0.39	0/590
7	h	0.25	0/434	0.43	0/590
8	I	0.17	0/274	0.37	0/371
8	i	0.18	0/274	0.38	0/371
9	K	0.21	0/224	0.42	0/309
9	k	0.24	0/224	0.49	0/309
10	L	0.25	0/301	0.32	0/409
10	l	0.27	0/301	0.33	0/409
11	M	0.18	0/246	0.31	0/337
11	m	0.23	0/246	0.37	0/337
12	O	0.24	0/1776	0.45	0/2396
12	o	0.24	0/1776	0.47	0/2396
13	T	0.23	0/246	0.31	0/333
13	t	0.23	0/246	0.32	0/333
14	U	0.17	0/196	0.39	0/261
14	u	0.18	0/196	0.39	0/261
15	X	0.16	0/236	0.29	0/322
15	x	0.21	0/236	0.33	0/322
All	All	0.27	0/33716	0.44	7/45824 (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	A	0	1
1	a	0	1
3	c	0	1
All	All	0	3

There are no bond length outliers.

All (7) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	C	131	TYR	CB-CA-C	-6.87	96.75	110.42
1	A	300	PHE	CA-CB-CG	6.32	120.11	113.80
3	C	61	VAL	CG1-CB-CG2	-5.64	98.38	110.80
3	c	131	TYR	N-CA-CB	5.60	118.10	109.98
3	c	130	ILE	CA-C-N	-5.27	113.46	120.63
3	c	130	ILE	C-N-CA	-5.27	113.46	120.63
1	A	190	HIS	CA-C-O	-5.15	113.73	119.34

There are no chirality outliers.

All (3) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	257	ARG	Sidechain
1	a	257	ARG	Sidechain
3	c	182	PHE	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	A	2466	0	2403	221	0
1	a	2466	0	2403	222	0
2	B	3710	0	3590	251	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
2	b	3710	0	3590	220	0
3	C	3022	0	2959	244	0
3	c	3022	0	2959	258	0
4	D	2604	0	2502	227	0
4	d	2604	0	2502	251	0
5	E	495	0	478	30	0
5	e	495	0	478	32	0
6	F	220	0	225	11	0
6	f	220	0	225	9	0
7	H	425	0	451	33	0
7	h	425	0	451	38	0
8	I	266	0	276	19	0
8	i	266	0	276	14	0
9	K	216	0	224	15	0
9	k	216	0	224	15	0
10	L	293	0	283	26	0
10	l	293	0	283	30	0
11	M	242	0	267	17	0
11	m	242	0	267	25	0
12	O	1742	0	1715	97	0
12	o	1742	0	1715	101	0
13	T	239	0	255	10	0
13	t	239	0	255	9	0
14	U	194	0	208	17	0
14	u	194	0	208	17	0
15	X	233	0	251	9	0
15	x	233	0	251	8	0
16	A	10	0	0	1	0
16	a	10	0	0	1	0
17	A	1	0	0	0	0
17	C	1	0	0	0	0
17	a	1	0	0	0	0
17	c	1	0	0	0	0
18	A	239	0	242	40	0
18	B	975	0	1080	136	0
18	C	816	0	874	125	0
18	D	130	0	144	19	0
18	H	65	0	72	17	0
18	a	239	0	242	40	0
18	b	1040	0	1152	153	0
18	c	816	0	874	125	0
18	d	130	0	144	22	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
19	A	64	0	74	9	0
19	D	64	0	74	8	0
19	a	64	0	74	9	0
19	d	64	0	74	11	0
20	A	40	0	56	7	0
20	B	120	0	168	18	0
20	D	40	0	56	6	0
20	H	40	0	56	9	0
20	a	40	0	56	7	0
20	b	120	0	168	19	0
20	d	40	0	56	4	0
20	h	40	0	56	7	0
21	A	54	0	78	4	0
21	a	54	0	78	5	0
22	A	37	0	44	4	0
22	D	92	0	133	21	0
22	L	49	0	74	9	0
22	a	37	0	44	4	0
22	d	92	0	133	20	0
22	l	49	0	74	9	0
23	B	51	0	72	9	0
23	C	48	0	66	12	0
23	D	46	0	62	4	0
23	b	51	0	72	10	0
23	c	48	0	66	14	0
23	d	46	0	62	3	0
24	B	62	0	82	14	0
24	C	112	0	140	18	0
24	b	62	0	82	11	0
24	c	112	0	140	15	0
25	D	1	0	0	0	0
25	d	1	0	0	0	0
26	D	55	0	80	7	0
26	d	55	0	80	11	0
27	F	43	0	30	3	0
27	f	43	0	30	2	0
28	A	14	0	0	3	0
28	B	5	0	0	1	0
28	C	2	0	0	0	0
28	D	5	0	0	0	0
28	a	14	0	0	2	0
28	b	5	0	0	1	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
28	c	2	0	0	0	0
28	d	5	0	0	1	0
All	All	39296	0	39688	2479	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 31.

All (2479) 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)
3:c:131:TYR:HB3	18:c:507:CLA:HAC1	1.49	0.94
3:c:82:TYR:HD2	3:c:419:TYR:HH	1.01	0.94
3:c:119:LEU:HD11	9:k:38:MET:HE1	1.48	0.93
18:B:609:CLA:H122	18:D:405:CLA:HMB2	1.51	0.92
18:b:604:CLA:H122	18:d:408:CLA:HMB2	1.52	0.91
3:C:165:LEU:HD11	18:C:510:CLA:HAB	1.53	0.91
2:b:152:GLY:O	2:b:156:PHE:HB2	1.69	0.91
4:D:242:GLU:HG2	4:D:264:LYS:HE3	1.52	0.91
2:b:162:TYR:HD2	18:b:614:CLA:HAC2	1.37	0.89
3:c:165:LEU:HD11	18:c:513:CLA:HAB	1.52	0.88
3:C:308:GLU:HG3	3:C:361:LEU:HD11	1.56	0.88
18:A:406:CLA:H3A	23:C:502:LMG:H122	1.57	0.87
18:a:404:CLA:H3A	23:c:502:LMG:H122	1.56	0.87
2:B:162:TYR:HD2	18:B:618:CLA:HAC2	1.38	0.86
4:d:242:GLU:HG2	4:d:264:LYS:HE3	1.56	0.86
2:B:315:ILE:HG13	2:B:321:LYS:HG3	1.57	0.86
12:O:307:SER:HB3	12:O:317:LYS:H	1.40	0.85
3:C:119:LEU:HD11	9:K:38:MET:HE1	1.58	0.85
20:B:610:BCR:H15C	22:L:101:LHG:H381	1.58	0.85
12:o:307:SER:HB3	12:o:317:LYS:H	1.41	0.85
3:c:95:LEU:HG	3:c:178:LYS:HE3	1.58	0.84
12:o:211:PHE:HA	12:o:305:GLN:HE22	1.42	0.84
1:a:63:ILE:HA	3:c:337:LEU:HD11	1.57	0.84
20:b:602:BCR:H15C	22:l:101:LHG:H381	1.58	0.83
3:c:318:LEU:HD12	3:c:340:TYR:HB3	1.60	0.83
3:C:402:GLY:HA2	3:C:408:GLY:HA2	1.59	0.83
3:C:131:TYR:CB	18:C:504:CLA:HAC1	2.09	0.82
3:c:402:GLY:HA2	3:c:408:GLY:HA2	1.62	0.82
18:c:515:CLA:HHC	18:c:515:CLA:HBB1	1.62	0.82
4:d:51:GLY:HA2	4:d:55:VAL:HB	1.60	0.82
18:C:517:CLA:HHC	18:C:517:CLA:HBB1	1.61	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:C:509:CLA:HMA2	18:C:509:CLA:H2	1.62	0.81
1:a:276:ALA:HA	4:d:212:ALA:HA	1.62	0.81
18:B:603:CLA:H191	18:B:605:CLA:H142	1.62	0.81
2:B:208:LEU:HD13	18:H:101:CLA:HAC2	1.62	0.81
4:d:126:MET:HE3	4:d:150:ILE:HD12	1.62	0.81
4:d:103:ARG:O	4:d:107:LEU:HD12	1.80	0.80
18:c:504:CLA:H2	18:c:504:CLA:HMA2	1.63	0.80
4:d:306:ALA:HA	12:o:245:ARG:HH12	1.47	0.80
12:O:95:ILE:HA	12:O:98:LYS:HZ3	1.46	0.80
2:b:174:LEU:HD21	2:b:309:LEU:HB2	1.64	0.79
2:B:479:PHE:HA	4:D:139:ARG:HD3	1.65	0.79
2:b:452:THR:HB	4:d:291:LEU:HD21	1.63	0.79
2:b:208:LEU:HD13	18:b:603:CLA:HAC2	1.63	0.79
2:b:315:ILE:HG13	2:b:321:LYS:HG3	1.65	0.78
2:B:189:GLY:HA2	2:B:197:GLY:HA3	1.65	0.78
2:B:71:ILE:HG12	18:B:618:CLA:HMA2	1.66	0.78
1:A:213:ALA:HA	4:D:272:LEU:HA	1.65	0.78
4:D:21:TRP:HE3	4:D:22:LEU:HD12	1.50	0.77
1:a:143:ILE:HG13	4:d:220:ASN:HD22	1.49	0.77
1:a:316:THR:HG22	4:d:64:ALA:HB3	1.66	0.77
2:b:388:SER:HA	4:d:344:GLU:HG2	1.67	0.77
20:b:616:BCR:H11C	18:b:619:CLA:H13	1.67	0.76
18:c:504:CLA:HBB2	18:c:505:CLA:H172	1.67	0.76
2:B:256:MET:HA	2:B:263:THR:HG21	1.67	0.76
3:c:308:GLU:HG3	3:c:361:LEU:HD11	1.65	0.76
18:B:603:CLA:H13	20:B:613:BCR:H11C	1.68	0.76
4:D:306:ALA:HA	12:O:245:ARG:HH12	1.50	0.76
4:d:104:TRP:HA	4:d:107:LEU:HD13	1.66	0.76
12:o:95:ILE:HA	12:o:98:LYS:HZ3	1.49	0.76
4:D:279:LEU:HD22	19:D:402:PHO:HBC3	1.67	0.75
3:c:166:ILE:HA	3:c:245:ILE:HD13	1.67	0.75
2:B:422:ARG:HB3	12:O:262:ARG:NH2	2.00	0.75
4:d:221:THR:HG21	4:d:249:ALA:HB2	1.69	0.75
18:A:403:CLA:H122	19:A:407:PHO:H3A	1.68	0.75
3:C:305:THR:HB	3:C:423:ARG:HH11	1.50	0.75
1:a:213:ALA:HA	4:d:272:LEU:HA	1.67	0.75
2:b:71:ILE:HG12	18:b:614:CLA:HMA2	1.68	0.75
4:d:59:TYR:HD2	4:d:106:GLN:HB3	1.52	0.75
2:B:272:ARG:HH21	4:D:292:ASN:HD21	1.35	0.75
4:d:22:LEU:HD23	4:d:32:TRP:HA	1.69	0.74
1:A:298:ASN:HB2	3:C:403:SER:HA	1.69	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:316:THR:HG22	4:D:64:ALA:HB3	1.68	0.74
2:B:174:LEU:HD21	2:B:309:LEU:HB2	1.67	0.74
3:C:318:LEU:HD12	3:C:340:TYR:HB3	1.67	0.74
3:C:188:THR:HG21	3:C:295:THR:HA	1.68	0.74
27:F:101:HEM:HBB2	27:F:101:HEM:HHC	1.69	0.74
1:a:77:ILE:HD13	10:l:30:VAL:HG13	1.69	0.74
1:a:140:ARG:HB2	4:d:220:ASN:HA	1.68	0.74
12:o:186:PHE:CZ	12:o:188:GLU:HB3	2.23	0.74
18:b:608:CLA:H102	18:b:620:CLA:HAA1	1.70	0.74
2:B:12:VAL:HG21	2:B:22:VAL:HG11	1.68	0.73
18:B:601:CLA:HBD	18:B:607:CLA:H152	1.70	0.73
4:d:279:LEU:HD22	19:d:401:PHO:HBC3	1.71	0.73
3:c:86:LEU:HD13	3:c:89:LEU:HB2	1.70	0.73
4:d:314:PHE:HA	4:d:317:LYS:HD3	1.69	0.73
18:A:406:CLA:H11	8:I:9:TYR:HA	1.71	0.73
4:D:126:MET:HE3	4:D:150:ILE:HD12	1.71	0.73
2:B:368:VAL:HG21	2:B:422:ARG:HE	1.51	0.72
2:b:478:VAL:HG13	4:d:139:ARG:HG3	1.70	0.72
1:a:217:SER:HB2	4:d:272:LEU:HD12	1.70	0.72
18:a:407:CLA:H122	19:a:409:PHO:H3A	1.69	0.72
4:d:21:TRP:HE3	4:d:22:LEU:HD12	1.52	0.72
22:D:409:LHG:H342	22:D:409:LHG:H101	1.71	0.72
12:o:162:MET:HB2	12:o:198:THR:HG23	1.71	0.72
2:b:157:HIS:HE1	18:b:614:CLA:NA	1.86	0.72
3:C:48:LYS:HA	3:C:133:ALA:HA	1.69	0.72
3:c:179:ALA:HA	3:c:184:GLY:HA3	1.71	0.72
4:D:314:PHE:HA	4:D:317:LYS:HD3	1.71	0.72
27:f:101:HEM:HBB2	27:f:101:HEM:HHC	1.70	0.72
7:h:53:PHE:HB2	20:h:101:BCR:H16C	1.72	0.72
1:A:258:LEU:HD11	4:D:125:PHE:CZ	2.24	0.72
1:A:276:ALA:HA	4:D:212:ALA:HA	1.71	0.72
2:b:162:TYR:CD2	18:b:614:CLA:HHD	2.25	0.72
18:b:605:CLA:HBD	18:b:608:CLA:H152	1.71	0.72
4:d:48:TRP:HA	4:d:78:VAL:HG21	1.72	0.72
4:d:102:THR:O	4:d:106:GLN:HG3	1.89	0.72
1:A:118:HIS:NE2	18:A:406:CLA:NA	2.38	0.71
3:c:425:TRP:HB3	18:c:510:CLA:HMB3	1.71	0.71
1:a:38:ILE:O	1:a:42:LEU:HB2	1.91	0.71
18:b:605:CLA:H13	18:b:607:CLA:HAB	1.71	0.71
3:C:327:ASN:HD21	12:O:190:ASP:HB2	1.56	0.71
18:C:509:CLA:HBB2	18:C:516:CLA:H172	1.70	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:a:258:LEU:HD11	4:d:125:PHE:CZ	2.25	0.71
1:A:143:ILE:HG13	4:D:220:ASN:HD22	1.53	0.71
18:B:601:CLA:H13	18:B:602:CLA:HAB	1.72	0.71
7:h:50:PHE:HA	20:h:101:BCR:H352	1.73	0.71
3:c:223:TRP:CG	3:c:224:ILE:H	2.09	0.71
1:A:140:ARG:HB2	4:D:220:ASN:HA	1.71	0.71
1:a:190:HIS:HB2	1:a:293:MET:HE2	1.73	0.71
4:d:182:ILE:HG23	18:d:404:CLA:HAC2	1.73	0.71
12:o:262:ARG:HG2	12:o:265:GLU:HB2	1.73	0.71
12:O:162:MET:HB2	12:O:198:THR:HG23	1.73	0.70
3:c:260:ALA:HB2	18:c:513:CLA:HAA1	1.73	0.70
3:c:307:PRO:HB2	3:c:361:LEU:HD13	1.72	0.70
18:B:609:CLA:H151	18:D:405:CLA:HHB	1.72	0.70
1:a:118:HIS:NE2	18:a:404:CLA:NA	2.40	0.70
18:a:404:CLA:H11	8:i:9:TYR:HA	1.72	0.70
2:B:442:VAL:HG23	2:B:444:ARG:HH12	1.56	0.70
1:a:89:ILE:HD11	1:a:108:ASN:HB3	1.73	0.70
18:b:606:CLA:HBB1	18:b:607:CLA:HBC2	1.74	0.70
2:b:341:LEU:HG	2:b:406:LEU:HD13	1.71	0.70
3:C:425:TRP:HB3	18:C:506:CLA:HMB3	1.71	0.70
18:B:609:CLA:H13	18:B:614:CLA:H172	1.74	0.70
18:B:616:CLA:H91	18:B:616:CLA:H172	1.74	0.70
2:b:422:ARG:HB3	12:o:262:ARG:HH22	1.55	0.70
2:B:318:ASN:HD21	2:B:361:THR:HG22	1.56	0.70
1:a:188:ALA:HB2	1:a:328:MET:HB3	1.73	0.70
28:A:501:HOH:O	3:C:357:ARG:NH2	2.23	0.70
4:D:22:LEU:HD23	4:D:32:TRP:HA	1.72	0.70
2:b:10:THR:HB	2:b:13:LEU:HD23	1.74	0.70
2:B:162:TYR:CD2	18:B:618:CLA:HHD	2.26	0.69
26:d:405:PL9:H111	22:d:406:LHG:HC92	1.74	0.69
12:O:262:ARG:HG2	12:O:265:GLU:HB2	1.73	0.69
24:b:621:DGD:HA31	7:h:58:LEU:HD11	1.74	0.69
3:c:130:ILE:HD13	18:c:512:CLA:H122	1.74	0.69
4:D:54:PHE:CD1	4:D:68:LEU:HB2	2.27	0.69
12:O:186:PHE:CZ	12:O:188:GLU:HB3	2.26	0.69
18:b:604:CLA:H13	18:b:617:CLA:H172	1.74	0.69
1:A:192:ILE:HA	1:A:293:MET:HE1	1.74	0.69
12:O:262:ARG:HA	12:O:265:GLU:HB2	1.74	0.69
11:M:28:LYS:HB2	11:m:27:VAL:HG12	1.75	0.69
7:h:54:LEU:HD23	7:h:57:ILE:HD11	1.73	0.69
10:l:27:VAL:HG11	22:l:101:LHG:H201	1.75	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:b:609:CLA:HBC3	20:b:610:BCR:HC8	1.75	0.69
4:d:186:GLN:HB2	18:d:404:CLA:HBC1	1.75	0.69
3:c:188:THR:HG21	3:c:295:THR:HA	1.73	0.68
4:D:48:TRP:HA	4:D:78:VAL:HG21	1.75	0.68
1:a:41:LEU:HG	1:a:122:GLY:HA3	1.75	0.68
2:b:422:ARG:HB3	12:o:262:ARG:NH2	2.08	0.68
3:C:160:ILE:HD13	18:C:505:CLA:HBC3	1.74	0.68
3:c:48:LYS:HA	3:c:133:ALA:HA	1.76	0.68
1:a:131:TRP:HZ2	3:c:449:ARG:HG3	1.57	0.68
3:c:319:VAL:HG22	3:c:384:ILE:HD13	1.75	0.68
3:c:261:ARG:HA	3:c:266:TRP:HE1	1.59	0.68
18:c:505:CLA:CHA	18:c:509:CLA:H12	2.24	0.68
1:a:298:ASN:HB2	3:c:403:SER:HA	1.75	0.68
18:B:606:CLA:H203	20:H:102:BCR:H15C	1.75	0.67
13:t:17:ILE:O	13:t:21:ILE:HD12	1.94	0.67
18:b:611:CLA:H203	20:h:101:BCR:H15C	1.75	0.67
3:c:404:LEU:HD11	24:c:517:DGD:HBE1	1.76	0.67
18:B:601:CLA:H171	18:B:602:CLA:HBB2	1.76	0.67
4:D:221:THR:HG21	4:D:249:ALA:HB2	1.75	0.67
1:A:38:ILE:O	1:A:42:LEU:HB2	1.94	0.67
2:B:157:HIS:HE1	18:B:618:CLA:NA	1.92	0.67
18:B:602:CLA:HBC2	18:B:605:CLA:HBB1	1.75	0.67
3:C:305:THR:HB	3:C:423:ARG:NH1	2.10	0.67
2:B:318:ASN:ND2	2:B:361:THR:HG22	2.09	0.67
24:B:620:DGD:HB51	18:H:101:CLA:H42	1.76	0.67
1:A:41:LEU:HG	1:A:122:GLY:HA3	1.77	0.67
18:B:611:CLA:HBC3	20:B:612:BCR:HC8	1.75	0.67
3:C:95:LEU:HG	3:C:178:LYS:HE3	1.77	0.67
3:c:225:VAL:HA	3:c:289:PHE:CD1	2.30	0.67
3:c:343:ARG:HB2	12:o:166:THR:HB	1.74	0.67
7:H:50:PHE:HA	20:H:102:BCR:H352	1.77	0.67
2:b:256:MET:HA	2:b:263:THR:HG21	1.75	0.67
2:B:55:MET:HB2	2:B:60:MET:HB2	1.77	0.67
1:A:332:HIS:HB3	4:D:321:LEU:HD21	1.77	0.67
2:B:248:ALA:HA	18:B:619:CLA:H42	1.77	0.67
4:D:58:TRP:CE2	5:E:50:PRO:HG3	2.30	0.67
18:b:604:CLA:H151	18:d:408:CLA:HBB	1.76	0.67
3:c:189:TRP:HA	3:c:364:PRO:HB3	1.77	0.67
3:C:225:VAL:HA	3:C:289:PHE:CD1	2.30	0.66
22:D:404:LHG:H302	13:T:21:ILE:HD11	1.76	0.66
2:b:68:ARG:HD2	2:b:262:THR:O	1.94	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:a:401:BCR:H16C	18:a:404:CLA:HAC2	1.75	0.66
3:c:86:LEU:HD12	3:c:90:PRO:HD3	1.78	0.66
1:A:131:TRP:HZ2	3:C:449:ARG:HG2	1.59	0.66
18:B:603:CLA:H192	18:B:616:CLA:H62	1.77	0.66
18:c:503:CLA:H42	18:c:511:CLA:H171	1.78	0.66
1:A:89:ILE:HD11	1:A:108:ASN:HB3	1.76	0.66
18:B:607:CLA:H102	18:B:616:CLA:HAA1	1.77	0.66
19:D:402:PHO:H152	18:D:406:CLA:H172	1.77	0.66
22:D:404:LHG:HC92	26:D:407:PL9:H111	1.76	0.66
3:c:466:VAL:HG13	4:d:251:ARG:HD2	1.78	0.66
12:o:135:CYS:HB2	12:o:326:TYR:HB3	1.77	0.66
18:C:511:CLA:HED1	18:C:512:CLA:HAB	1.78	0.66
4:d:85:LEU:HA	5:e:69:ARG:HB3	1.78	0.66
4:d:122:LEU:HD21	18:d:404:CLA:H8	1.77	0.66
2:b:157:HIS:CE1	18:b:614:CLA:NA	2.64	0.66
18:b:603:CLA:HMD2	7:h:54:LEU:HD21	1.78	0.66
3:c:342:MET:HE3	3:c:352:GLY:HA2	1.77	0.66
2:B:320:ALA:HB1	4:D:292:ASN:HD22	1.61	0.66
2:b:285:TYR:HA	2:b:288:VAL:HG12	1.78	0.66
3:C:289:PHE:HD2	3:C:297:TYR:HE2	1.43	0.66
2:b:248:ALA:HA	18:b:615:CLA:H42	1.78	0.66
2:b:384:ARG:HH21	4:d:348:ARG:HB3	1.60	0.66
18:c:506:CLA:HAB	18:c:511:CLA:HED1	1.78	0.66
2:B:393:GLU:HG3	2:B:414:PRO:HB3	1.78	0.66
3:C:260:ALA:HB2	18:C:510:CLA:HAA1	1.77	0.66
1:a:56:PRO:HB3	12:o:206:ARG:HH21	1.61	0.66
2:B:243:ALA:HA	2:B:246:PHE:CE2	2.31	0.65
12:O:110:ASN:HD21	12:O:167:TYR:H	1.44	0.65
1:a:84:PRO:HA	1:a:112:TYR:CG	2.32	0.65
18:b:612:CLA:H192	11:m:13:LEU:HD21	1.77	0.65
12:o:131:GLY:HA3	12:o:173:GLU:HA	1.76	0.65
1:a:123:VAL:HG21	18:a:407:CLA:H91	1.78	0.65
2:B:285:TYR:HA	2:B:288:VAL:HG12	1.78	0.65
3:C:131:TYR:HB3	18:C:504:CLA:HAC1	1.77	0.65
12:O:131:GLY:HA3	12:O:173:GLU:HA	1.79	0.65
18:B:601:CLA:H111	18:B:602:CLA:HAB	1.78	0.65
4:D:122:LEU:HD21	18:D:406:CLA:H8	1.78	0.65
18:b:605:CLA:H171	18:b:607:CLA:HBB2	1.77	0.65
19:d:401:PHO:H152	18:d:404:CLA:H172	1.77	0.65
3:c:217:PRO:HD3	23:c:502:LMG:H291	1.78	0.65
2:B:12:VAL:HG12	2:B:18:ARG:HB3	1.77	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:22:VAL:HG23	18:B:608:CLA:HHB	1.78	0.65
2:B:384:ARG:HH21	4:D:348:ARG:HB3	1.61	0.65
3:c:42:LEU:HD11	3:c:48:LYS:HB3	1.78	0.65
3:C:131:TYR:HB2	18:C:504:CLA:HAC1	1.76	0.65
4:d:22:LEU:HD21	4:d:35:LEU:HD23	1.79	0.65
18:A:406:CLA:HAC2	20:A:408:BCR:H16C	1.77	0.65
3:C:179:ALA:HA	3:C:184:GLY:HA3	1.79	0.65
3:c:177:PHE:HB3	18:c:509:CLA:H203	1.79	0.65
3:c:437:LEU:HA	18:c:506:CLA:HMC2	1.79	0.65
1:A:190:HIS:HB2	1:A:293:MET:HE2	1.79	0.65
1:A:258:LEU:HD13	4:D:129:GLN:OE1	1.97	0.65
3:C:437:LEU:HA	18:C:512:CLA:HMC2	1.78	0.65
1:a:225:ARG:HH11	2:b:480:ALA:HB3	1.62	0.65
12:o:144:LYS:HD3	12:o:156:PHE:HB3	1.79	0.65
4:D:85:LEU:HA	5:E:69:ARG:HB3	1.77	0.64
18:b:605:CLA:H111	18:b:607:CLA:HAB	1.77	0.64
24:b:621:DGD:HG32	7:h:61:TYR:CE1	2.32	0.64
3:c:63:TRP:CH2	18:c:509:CLA:HHB	2.32	0.64
1:A:123:VAL:HG21	18:A:403:CLA:H91	1.78	0.64
3:C:86:LEU:HD13	3:C:89:LEU:HB2	1.79	0.64
12:O:178:VAL:HA	12:O:184:VAL:HG12	1.79	0.64
1:a:89:ILE:HG23	1:a:92:HIS:HB2	1.79	0.64
2:b:189:GLY:HA2	2:b:197:GLY:HA2	1.79	0.64
1:A:58:VAL:HB	1:A:83:ILE:HB	1.79	0.64
3:c:289:PHE:CD2	18:c:508:CLA:HBA2	2.33	0.64
16:A:401:OEX:CA1	28:A:503:HOH:O	1.72	0.64
4:D:161:PRO:HG3	4:D:170:ALA:HB2	1.78	0.64
2:b:20:LEU:HD21	18:b:619:CLA:C2C	2.27	0.64
4:d:193:LEU:HD22	4:d:315:TYR:OH	1.96	0.64
2:B:381:VAL:HG11	2:B:422:ARG:NH2	2.13	0.64
18:B:619:CLA:H3A	18:H:101:CLA:HED2	1.80	0.64
4:D:186:GLN:HB2	18:D:406:CLA:HBC1	1.78	0.64
3:c:118:HIS:HE1	18:c:505:CLA:NA	1.94	0.64
12:o:218:ALA:HA	12:o:227:GLY:HA3	1.79	0.64
1:A:84:PRO:HA	1:A:112:TYR:CG	2.31	0.64
3:C:289:PHE:CD2	18:C:507:CLA:HBA2	2.33	0.64
3:C:305:THR:HG23	3:C:308:GLU:H	1.62	0.64
2:b:55:MET:HB2	2:b:60:MET:HB2	1.78	0.64
4:d:184:PHE:HA	4:d:329:MET:HE1	1.78	0.64
18:B:602:CLA:HMB1	18:B:615:CLA:HBB2	1.80	0.64
3:C:223:TRP:CG	3:C:224:ILE:H	2.15	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:172:SER:HB2	4:D:177:ALA:HB1	1.80	0.64
12:O:113:PRO:HD2	12:O:135:CYS:SG	2.38	0.64
18:b:606:CLA:H42	18:b:613:CLA:H2	1.80	0.64
23:c:502:LMG:H371	18:c:513:CLA:H18	1.80	0.64
10:L:27:VAL:HG11	22:L:101:LHG:H201	1.78	0.64
1:a:179:THR:O	1:a:183:MET:HG3	1.98	0.64
10:l:22:LEU:HB3	13:t:16:ILE:HD13	1.80	0.64
1:A:131:TRP:HE1	3:C:446:GLY:HA2	1.63	0.63
2:b:243:ALA:HA	2:b:246:PHE:CE2	2.33	0.63
2:B:46:ASP:HB3	2:B:58:GLN:HE22	1.62	0.63
3:C:319:VAL:HG22	3:C:384:ILE:HD13	1.79	0.63
4:D:34:GLY:HA2	4:D:37:LEU:HB3	1.80	0.63
4:D:184:PHE:HA	4:D:329:MET:HE1	1.80	0.63
2:b:30:VAL:HG12	18:b:613:CLA:HHD	1.79	0.63
1:a:192:ILE:HA	1:a:293:MET:HE1	1.80	0.63
3:C:166:ILE:HA	3:C:245:ILE:HD13	1.80	0.63
3:c:87:ILE:HG13	3:c:88:LEU:HD12	1.79	0.63
1:A:179:THR:O	1:A:183:MET:HG3	1.98	0.63
2:B:30:VAL:HG12	18:B:617:CLA:HHD	1.79	0.63
3:C:49:LEU:HD21	18:C:511:CLA:CHC	2.29	0.63
3:C:293:ASN:HA	24:C:503:DGD:HE2	1.80	0.63
13:T:17:ILE:O	13:T:21:ILE:HD12	1.98	0.63
7:H:54:LEU:HD21	18:H:101:CLA:HMD2	1.80	0.63
1:a:195:HIS:CE1	1:a:197:PHE:HB2	2.34	0.63
3:c:293:ASN:HA	24:c:514:DGD:HE2	1.81	0.63
12:O:134:PHE:CD1	12:O:327:GLY:HA2	2.34	0.63
2:b:333:GLY:HA2	2:b:444:ARG:HH11	1.63	0.63
18:B:605:CLA:H42	18:B:617:CLA:H2	1.80	0.63
4:D:297:ASP:HA	4:D:315:TYR:OH	1.99	0.63
7:H:50:PHE:HD2	20:H:102:BCR:H311	1.62	0.63
18:A:403:CLA:H151	18:A:404:CLA:H152	1.80	0.63
2:B:68:ARG:HD2	2:B:262:THR:O	1.99	0.63
2:B:157:HIS:HA	2:B:163:GLY:HA3	1.81	0.63
2:B:224:ARG:HE	2:B:227:LYS:HE2	1.64	0.63
20:B:613:BCR:H271	13:t:22:PHE:HB3	1.81	0.63
3:C:281:VAL:HG13	23:C:502:LMG:H391	1.80	0.63
12:O:194:TYR:HD2	12:O:210:LEU:HD11	1.64	0.63
2:b:71:ILE:HD11	18:b:614:CLA:H2A	1.80	0.63
19:d:401:PHO:H3A	18:d:404:CLA:H112	1.81	0.63
12:O:135:CYS:HB2	12:O:326:TYR:HB3	1.81	0.62
18:c:504:CLA:H192	18:c:504:CLA:HBC3	1.80	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:d:60:THR:HA	4:d:82:ALA:HB2	1.80	0.62
1:A:220:THR:HA	1:A:223:LEU:HG	1.79	0.62
18:C:505:CLA:H42	18:C:511:CLA:H171	1.80	0.62
1:A:141:PRO:HG3	3:C:446:GLY:C	2.24	0.62
18:C:515:CLA:H12	18:C:516:CLA:CHA	2.28	0.62
12:o:131:GLY:HA3	12:o:174:GLY:H	1.64	0.62
3:C:186:TYR:OH	3:C:298:PRO:HB2	1.99	0.62
13:T:22:PHE:HB3	20:b:616:BCR:H271	1.80	0.62
18:b:619:CLA:H192	18:b:620:CLA:H62	1.82	0.62
1:A:44:ALA:HB2	1:A:118:HIS:HB2	1.80	0.62
3:C:130:ILE:HG21	18:C:514:CLA:H122	1.81	0.62
18:b:601:CLA:HBB2	18:b:607:CLA:HMB1	1.80	0.62
4:d:54:PHE:CD1	4:d:68:LEU:HB2	2.35	0.62
1:A:89:ILE:HG23	1:A:92:HIS:HB2	1.82	0.62
3:C:289:PHE:CD2	3:C:297:TYR:HE2	2.17	0.62
18:a:403:CLA:H152	18:a:407:CLA:H151	1.82	0.62
2:b:422:ARG:CB	12:o:262:ARG:HH22	2.13	0.62
12:o:262:ARG:HA	12:o:265:GLU:HB2	1.81	0.62
1:A:60:ILE:HB	1:A:83:ILE:HG22	1.81	0.62
23:C:502:LMG:H371	18:C:510:CLA:H18	1.80	0.62
1:a:258:LEU:HD13	4:d:129:GLN:OE1	1.99	0.62
12:o:134:PHE:CD1	12:o:327:GLY:HA2	2.35	0.62
1:A:29:TYR:H	4:D:255:GLN:HB3	1.65	0.62
2:B:51:VAL:HG12	2:B:308:LYS:HE3	1.82	0.62
3:C:156:LYS:NZ	3:C:160:ILE:HD11	2.14	0.62
3:C:447:ARG:NH1	3:C:451:ALA:HB2	2.14	0.62
4:D:22:LEU:HD21	4:D:35:LEU:HD23	1.81	0.62
4:D:53:THR:O	4:D:54:PHE:HD1	1.83	0.62
2:b:160:GLY:HA3	2:b:180:PRO:HB3	1.82	0.62
12:O:218:ALA:HA	12:O:227:GLY:HA3	1.81	0.62
3:c:408:GLY:HA3	3:c:419:TYR:O	1.99	0.62
1:A:55:ALA:HA	20:A:408:BCR:H272	1.82	0.62
1:a:332:HIS:HB3	4:d:321:LEU:HD21	1.81	0.62
2:b:22:VAL:HG23	18:b:612:CLA:HHB	1.82	0.62
4:d:172:SER:HB2	4:d:177:ALA:HB1	1.82	0.62
3:C:130:ILE:HD13	18:C:514:CLA:H122	1.82	0.61
2:b:320:ALA:HB1	4:d:292:ASN:HD22	1.64	0.61
2:B:185:TRP:CZ3	2:B:203:ILE:HG21	2.35	0.61
4:d:58:TRP:CE2	5:e:50:PRO:HG3	2.35	0.61
2:B:162:TYR:CD2	18:B:618:CLA:HAC2	2.29	0.61
4:D:53:THR:HA	4:D:67:TYR:CD2	2.36	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:a:331:MET:HE3	4:d:320:LEU:HB3	1.83	0.61
4:d:116:LEU:HD12	18:d:408:CLA:HED1	1.82	0.61
2:B:160:GLY:HA3	2:B:180:PRO:HB3	1.81	0.61
2:B:395:VAL:HG23	2:B:397:VAL:HG23	1.82	0.61
19:D:402:PHO:H3A	18:D:406:CLA:H112	1.82	0.61
18:b:603:CLA:HED2	18:b:615:CLA:H3A	1.82	0.61
1:A:296:ASN:HD22	3:C:291:TRP:HH2	1.46	0.61
2:B:157:HIS:CE1	18:B:618:CLA:NA	2.68	0.61
3:C:46:SER:HA	3:C:149:TYR:CZ	2.36	0.61
3:C:177:PHE:HB3	18:C:515:CLA:H203	1.82	0.61
10:L:22:LEU:HB3	13:T:16:ILE:HD13	1.81	0.61
1:a:156:ALA:HA	1:a:160:ILE:HB	1.81	0.61
19:a:409:PHO:HED1	26:d:405:PL9:H122	1.80	0.61
2:B:122:ILE:HB	7:H:20:GLY:HA2	1.82	0.61
3:C:79:LYS:HD2	3:C:84:GLN:HG3	1.83	0.61
12:O:115:ILE:HG13	12:O:298:ILE:HG23	1.83	0.61
1:a:141:PRO:HG3	3:c:446:GLY:C	2.26	0.61
2:b:106:LEU:HB3	20:b:616:BCR:H15C	1.81	0.61
3:c:281:VAL:HG13	23:c:502:LMG:H391	1.82	0.61
3:c:327:ASN:HD21	12:o:190:ASP:HB2	1.66	0.61
3:C:466:VAL:HG13	4:D:251:ARG:HD2	1.80	0.61
1:a:169:SER:OG	28:a:501:HOH:O	2.06	0.61
1:A:36:LEU:HA	18:A:406:CLA:HBB2	1.83	0.61
3:C:408:GLY:HA3	3:C:419:TYR:O	2.00	0.61
3:C:61:VAL:HG12	3:C:122:SER:HB3	1.83	0.61
4:D:157:PHE:CE2	4:D:171:PRO:HG2	2.36	0.61
18:b:604:CLA:HAB	4:d:123:ILE:HG12	1.82	0.61
4:d:161:PRO:HG3	4:d:170:ALA:HB2	1.83	0.61
2:B:272:ARG:HA	2:B:318:ASN:OD1	2.01	0.60
18:b:603:CLA:H42	24:b:621:DGD:HB51	1.83	0.60
24:B:620:DGD:HG32	7:H:61:TYR:CE1	2.36	0.60
18:C:511:CLA:H3A	18:C:511:CLA:CGA	2.30	0.60
4:d:160:TYR:HA	4:d:290:ALA:HB2	1.83	0.60
12:o:296:GLU:HG2	12:o:326:TYR:OH	2.01	0.60
14:u:8:ALA:HA	14:u:11:LYS:HE3	1.84	0.60
3:C:212:TYR:HD1	3:C:215:LYS:HZ2	1.48	0.60
3:C:400:PRO:HA	3:C:421:SER:HB2	1.82	0.60
4:D:60:THR:HA	4:D:82:ALA:HB2	1.83	0.60
4:D:198:MET:HE3	10:L:31:LEU:HD11	1.82	0.60
12:O:212:THR:HG21	12:O:231:VAL:HA	1.82	0.60
2:B:135:LEU:HA	2:B:138:ILE:HD12	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:185:TRP:HZ3	2:B:203:ILE:HG21	1.66	0.60
3:c:402:GLY:HA3	3:c:420:VAL:HG13	1.83	0.60
4:d:18:MET:HB2	15:x:105:VAL:HG12	1.83	0.60
2:b:395:VAL:HG23	2:b:397:VAL:HG23	1.82	0.60
18:c:505:CLA:H102	18:c:511:CLA:H61	1.83	0.60
4:d:193:LEU:HD13	4:d:315:TYR:CE1	2.35	0.60
24:B:620:DGD:HA31	7:H:58:LEU:HD11	1.82	0.60
10:l:10:SER:HB2	11:m:28:LYS:HZ1	1.65	0.60
2:B:189:GLY:HA2	2:B:197:GLY:CA	2.31	0.60
2:B:259:GLY:HA2	2:B:448:ARG:HH12	1.67	0.60
3:C:86:LEU:HD12	3:C:90:PRO:HD3	1.82	0.60
4:D:258:GLY:HA3	13:T:21:ILE:HG12	1.83	0.60
1:a:44:ALA:HB2	1:a:118:HIS:HB2	1.84	0.60
4:d:89:LEU:HG	7:h:62:ASN:HD22	1.67	0.60
5:e:25:ILE:HG23	5:e:26:THR:HG23	1.84	0.60
2:B:358:ARG:HH11	2:B:427:GLY:HA2	1.65	0.60
1:A:159:LEU:HD21	24:C:503:DGD:HA52	1.84	0.60
3:C:274:TYR:HB3	18:C:517:CLA:C3B	2.31	0.60
4:D:68:LEU:HD21	5:E:44:TYR:CE2	2.36	0.60
1:a:58:VAL:HB	1:a:83:ILE:HB	1.83	0.60
1:A:283:ILE:HA	1:A:286:THR:HG22	1.84	0.60
18:B:609:CLA:H162	18:D:405:CLA:H3A	1.82	0.60
2:b:135:LEU:HA	2:b:138:ILE:HD12	1.84	0.60
3:c:436:PHE:HE2	18:c:510:CLA:H13	1.66	0.60
1:A:195:HIS:CE1	1:A:197:PHE:HB2	2.37	0.59
3:C:318:LEU:HG	3:C:328:VAL:HG11	1.83	0.59
14:U:8:ALA:HA	14:U:11:LYS:HE3	1.83	0.59
2:b:70:GLY:HA2	2:b:178:VAL:HG11	1.84	0.59
3:c:225:VAL:HA	3:c:289:PHE:HD1	1.67	0.59
3:C:65:GLY:O	3:C:69:LEU:HB3	2.02	0.59
4:D:279:LEU:HD21	19:D:402:PHO:HMC2	1.83	0.59
1:a:173:PRO:HB2	1:a:178:GLY:HA3	1.82	0.59
1:a:215:HIS:CG	1:a:275:LEU:HD21	2.37	0.59
4:d:258:GLY:HA3	13:t:21:ILE:HG12	1.84	0.59
19:A:407:PHO:HED1	26:D:407:PL9:H122	1.83	0.59
12:O:194:TYR:CD2	12:O:210:LEU:HD11	2.37	0.59
1:a:55:ALA:HA	20:a:401:BCR:H272	1.84	0.59
2:b:122:ILE:HB	7:h:20:GLY:HA2	1.84	0.59
4:d:157:PHE:CE2	4:d:171:PRO:HG2	2.37	0.59
22:d:406:LHG:H302	13:t:21:ILE:HD11	1.84	0.59
12:o:194:TYR:HD2	12:o:210:LEU:HD11	1.66	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:223:LEU:HB2	4:D:139:ARG:HH21	1.67	0.59
1:A:288:LEU:HD13	3:C:432:VAL:HG22	1.84	0.59
18:a:404:CLA:H8	23:c:502:LMG:H152	1.85	0.59
18:b:603:CLA:H152	24:b:621:DGD:HAW2	1.83	0.59
18:b:608:CLA:H52	18:b:615:CLA:HBC3	1.85	0.59
4:D:276:VAL:HG23	22:D:409:LHG:H261	1.85	0.59
1:a:283:ILE:HA	1:a:286:THR:HG22	1.84	0.59
1:A:77:ILE:H	10:L:34:ASN:ND2	2.00	0.59
1:A:156:ALA:HA	1:A:160:ILE:HB	1.83	0.59
2:B:69:LEU:HD21	18:B:619:CLA:OBD	2.01	0.59
3:c:46:SER:HA	3:c:149:TYR:CZ	2.38	0.59
12:o:124:PHE:CZ	12:o:292:PRO:HA	2.37	0.59
4:D:53:THR:HG22	4:D:54:PHE:CD1	2.37	0.59
18:b:613:CLA:H93	18:b:615:CLA:H2	1.85	0.59
3:c:289:PHE:CD2	3:c:297:TYR:HE2	2.20	0.59
12:o:194:TYR:CD2	12:o:210:LEU:HD11	2.37	0.59
11:M:5:ILE:HA	11:M:8:PHE:HD2	1.68	0.59
15:X:94:GLY:HA2	15:X:97:VAL:HB	1.85	0.59
1:a:77:ILE:H	10:l:34:ASN:ND2	2.01	0.59
1:a:159:LEU:HD21	24:c:514:DGD:HA52	1.85	0.59
3:c:299:SER:HA	3:c:423:ARG:HH21	1.66	0.59
2:B:452:THR:HB	4:D:291:LEU:HD21	1.85	0.59
4:D:79:SER:HA	4:D:172:SER:HB3	1.85	0.59
12:o:137:GLU:HG2	12:o:167:TYR:HE1	1.67	0.59
1:A:36:LEU:HD11	23:C:502:LMG:H191	1.84	0.59
18:A:403:CLA:H192	22:D:404:LHG:H192	1.85	0.59
18:A:406:CLA:H8	23:C:502:LMG:H152	1.85	0.59
2:B:422:ARG:HB3	12:O:262:ARG:HH22	1.67	0.59
3:C:307:PRO:HB2	3:C:361:LEU:HD13	1.83	0.59
12:O:209:PHE:HE2	12:O:211:PHE:HB2	1.66	0.59
12:O:296:GLU:HG2	12:O:326:TYR:OH	2.03	0.59
1:a:60:ILE:HB	1:a:83:ILE:HG22	1.84	0.59
18:b:609:CLA:H2	23:b:618:LMG:H161	1.85	0.59
3:c:92:LEU:O	3:c:95:LEU:HB2	2.02	0.59
18:c:511:CLA:H3A	18:c:511:CLA:CGA	2.32	0.59
22:d:403:LHG:H342	22:d:403:LHG:H101	1.83	0.59
1:A:63:ILE:HB	3:C:335:THR:HG21	1.84	0.58
12:O:124:PHE:CZ	12:O:292:PRO:HA	2.38	0.58
2:b:358:ARG:HH11	2:b:427:GLY:HA2	1.68	0.58
4:d:53:THR:HA	4:d:67:TYR:CD2	2.38	0.58
12:o:212:THR:HG22	12:o:231:VAL:HG12	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:B:602:CLA:HED3	18:B:602:CLA:H2	1.85	0.58
3:c:265:VAL:HG12	3:c:267:SER:H	1.67	0.58
12:O:131:GLY:HA3	12:O:174:GLY:H	1.67	0.58
18:a:405:CLA:HED3	4:d:175:VAL:HG22	1.84	0.58
3:c:79:LYS:HG2	3:c:83:GLU:HB2	1.83	0.58
3:C:225:VAL:HA	3:C:289:PHE:HD1	1.67	0.58
1:a:296:ASN:HB3	3:c:401:LEU:HA	1.85	0.58
2:b:23:HIS:ND1	18:b:620:CLA:OBD	2.33	0.58
3:c:186:TYR:OH	3:c:298:PRO:HB2	2.04	0.58
1:A:131:TRP:CZ2	3:C:449:ARG:HG2	2.38	0.58
1:A:138:GLY:HA3	3:C:465:PRO:HG2	1.86	0.58
1:A:173:PRO:HB2	1:A:178:GLY:HA3	1.84	0.58
2:B:124:CYS:HA	2:B:131:PRO:HA	1.85	0.58
23:B:604:LMG:H161	18:B:611:CLA:H2	1.86	0.58
12:O:162:MET:HE2	12:O:200:GLN:HB2	1.84	0.58
3:c:52:ALA:HB1	18:c:511:CLA:HBB1	1.86	0.58
4:d:329:MET:O	4:d:333:ASP:HB2	2.02	0.58
12:o:174:GLY:HA3	12:o:188:GLU:HA	1.86	0.58
18:C:512:CLA:HBC3	18:C:512:CLA:HHD	1.84	0.58
12:O:212:THR:HG22	12:O:231:VAL:HG12	1.85	0.58
1:a:131:TRP:HE1	3:c:446:GLY:HA2	1.68	0.58
18:b:620:CLA:H91	18:b:620:CLA:H172	1.85	0.58
20:B:613:BCR:HC8	18:B:618:CLA:H61	1.84	0.58
2:B:106:LEU:HB3	20:B:613:BCR:H15C	1.84	0.58
3:c:274:TYR:HB3	18:c:515:CLA:C3B	2.34	0.58
4:d:185:PHE:HA	4:d:189:HIS:HD2	1.67	0.58
3:C:466:VAL:HG21	4:D:248:THR:HA	1.85	0.58
1:a:36:LEU:HA	18:a:404:CLA:HBB2	1.84	0.58
3:C:117:LEU:HD21	18:C:516:CLA:HMB2	1.86	0.58
4:D:15:PHE:HA	4:D:18:MET:HE2	1.86	0.58
2:b:157:HIS:HA	2:b:163:GLY:HA3	1.85	0.58
1:A:328:MET:HG3	4:D:325:ILE:HG12	1.86	0.57
3:C:72:VAL:HG22	3:C:111:TYR:HB3	1.85	0.57
2:b:19:LEU:O	2:b:22:VAL:HG12	2.04	0.57
2:b:478:VAL:O	4:d:139:ARG:HD2	2.04	0.57
18:c:504:CLA:HBC1	9:k:42:PRO:HB2	1.86	0.57
3:C:302:TYR:HB2	3:C:423:ARG:HE	1.68	0.57
23:C:502:LMG:H342	18:C:510:CLA:H18	1.86	0.57
4:D:182:ILE:HG23	18:D:406:CLA:HAC2	1.85	0.57
1:a:220:THR:HA	1:a:223:LEU:HG	1.84	0.57
1:a:296:ASN:HD22	3:c:291:TRP:HH2	1.51	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:a:328:MET:HG3	4:d:325:ILE:HG12	1.86	0.57
12:o:114:THR:HG23	12:o:298:ILE:HG21	1.85	0.57
12:o:262:ARG:HG2	12:o:265:GLU:HG3	1.87	0.57
1:A:77:ILE:HD13	10:L:30:VAL:HG13	1.85	0.57
1:a:142:TRP:HZ2	3:c:447:ARG:HB2	1.69	0.57
23:c:502:LMG:H342	18:c:513:CLA:H18	1.85	0.57
1:A:296:ASN:HB3	3:C:401:LEU:HA	1.85	0.57
1:A:300:PHE:CE1	3:C:404:LEU:HD23	2.39	0.57
10:l:10:SER:HB2	11:m:28:LYS:NZ	2.19	0.57
1:A:161:TYR:HA	1:A:294:ALA:HB2	1.87	0.57
2:B:69:LEU:HD13	2:B:166:ILE:HG22	1.87	0.57
2:B:277:GLN:HB3	14:U:24:LYS:HB3	1.86	0.57
4:D:335:PRO:HB2	5:E:65:LEU:HD21	1.86	0.57
18:b:607:CLA:HED3	18:b:607:CLA:H2	1.85	0.57
18:b:607:CLA:OBD	18:b:612:CLA:HHC	2.05	0.57
1:A:131:TRP:CZ3	18:C:508:CLA:HAA2	2.39	0.57
3:C:240:LEU:HA	3:C:243:ILE:HG12	1.86	0.57
3:C:436:PHE:HE2	18:C:506:CLA:H13	1.69	0.57
5:E:77:ASP:O	5:E:81:ARG:HD2	2.04	0.57
2:b:201:HIS:HB2	18:b:603:CLA:CHB	2.35	0.57
3:c:71:GLU:HB3	3:c:86:LEU:HD22	1.85	0.57
12:o:131:GLY:HA2	12:o:134:PHE:CZ	2.40	0.57
2:B:70:GLY:HA2	2:B:178:VAL:HG11	1.87	0.57
2:B:187:VAL:HA	2:B:190:PHE:HD2	1.70	0.57
16:a:402:OEX:O4	28:a:501:HOH:O	2.17	0.57
5:e:77:ASP:O	5:e:81:ARG:HD2	2.04	0.57
18:b:614:CLA:H61	20:b:616:BCR:HC8	1.86	0.57
24:b:621:DGD:HG32	7:h:61:TYR:HE1	1.67	0.57
12:o:212:THR:HG21	12:o:231:VAL:HA	1.86	0.57
1:A:17:PHE:HZ	20:A:408:BCR:HC32	1.69	0.57
3:C:52:ALA:HB2	18:C:514:CLA:HMA1	1.87	0.57
12:O:110:ASN:HD22	12:O:165:LEU:C	2.12	0.57
4:d:15:PHE:HA	4:d:18:MET:HE2	1.86	0.57
4:d:79:SER:HA	4:d:172:SER:HB3	1.85	0.57
3:C:63:TRP:CH2	18:C:515:CLA:HHB	2.38	0.57
2:b:69:LEU:HD21	18:b:615:CLA:OBD	2.05	0.57
4:d:202:ALA:HB2	26:d:405:PL9:H353	1.87	0.57
1:A:334:ARG:HD3	1:A:334:ARG:H	1.70	0.56
1:a:138:GLY:HA3	3:c:465:PRO:HG2	1.87	0.56
3:c:127:PHE:HB2	18:c:512:CLA:H202	1.87	0.56
1:a:166:GLY:HA3	3:c:358:PHE:CE1	2.40	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:a:287:ALA:HA	18:a:407:CLA:HED3	1.86	0.56
7:h:50:PHE:HD2	20:h:101:BCR:H311	1.70	0.56
1:A:325:ASN:HA	1:A:328:MET:HE3	1.87	0.56
2:B:245:VAL:HG12	18:B:605:CLA:HAC1	1.87	0.56
2:B:370:LEU:HB2	2:B:379:ALA:HB3	1.87	0.56
2:B:475:PHE:CZ	4:D:134:ARG:HG2	2.40	0.56
3:C:69:LEU:HG	9:K:35:VAL:HG13	1.87	0.56
3:C:156:LYS:HZ3	3:C:160:ILE:HD11	1.70	0.56
4:D:222:LEU:HA	4:D:244:TYR:HA	1.87	0.56
5:E:30:LEU:HD21	6:F:28:VAL:HG13	1.87	0.56
9:K:39:PRO:O	9:K:42:PRO:HD2	2.06	0.56
12:O:131:GLY:HA2	12:O:134:PHE:CZ	2.40	0.56
18:b:619:CLA:H171	18:b:620:CLA:H71	1.87	0.56
3:c:240:LEU:HA	3:c:243:ILE:HG12	1.87	0.56
4:D:54:PHE:HD2	5:E:43:ALA:HB1	1.71	0.56
4:D:266:TRP:HH2	22:L:101:LHG:H102	1.70	0.56
7:H:20:GLY:O	7:H:24:LYS:HG2	2.06	0.56
1:a:63:ILE:HB	3:c:335:THR:HG21	1.86	0.56
4:D:95:PRO:HD3	7:H:64:SER:O	2.06	0.56
12:O:144:LYS:HD3	12:O:156:PHE:HB3	1.87	0.56
18:b:613:CLA:H202	18:b:615:CLA:HMC3	1.87	0.56
23:b:618:LMG:H361	11:m:10:ALA:HB1	1.87	0.56
3:c:39:ASN:O	3:c:42:LEU:HB2	2.05	0.56
3:c:318:LEU:HG	3:c:328:VAL:HG11	1.88	0.56
12:o:304:LEU:HD11	12:o:318:ASP:HB3	1.86	0.56
1:a:334:ARG:HD3	1:a:334:ARG:H	1.71	0.56
18:C:509:CLA:HBC1	9:K:42:PRO:HB2	1.87	0.56
12:O:142:THR:HG22	12:O:158:ASN:HA	1.86	0.56
2:b:61:PHE:HE1	2:b:451:PHE:HB2	1.70	0.56
3:c:68:ASN:O	3:c:72:VAL:HG23	2.05	0.56
1:A:287:ALA:HA	18:A:403:CLA:HED3	1.86	0.56
2:B:238:LEU:HD13	2:B:469:HIS:CD2	2.41	0.56
2:b:162:TYR:CD2	18:b:614:CLA:HAC2	2.29	0.56
2:b:458:PHE:HB3	18:b:606:CLA:HBC2	1.87	0.56
4:d:222:LEU:HA	4:d:244:TYR:HA	1.87	0.56
18:B:601:CLA:H192	18:B:617:CLA:H61	1.87	0.56
18:B:614:CLA:HBB2	18:B:617:CLA:H193	1.87	0.56
3:C:43:ILE:HG12	18:C:511:CLA:HMC1	1.87	0.56
3:C:127:PHE:N	18:C:514:CLA:H171	2.21	0.56
3:c:118:HIS:CE1	18:c:505:CLA:NA	2.74	0.56
4:d:279:LEU:HD21	19:d:401:PHO:HMC2	1.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:69:GLY:HA3	1:A:83:ILE:HD11	1.88	0.56
1:A:166:GLY:HA3	3:C:358:PHE:CE1	2.41	0.56
18:B:617:CLA:H93	18:B:619:CLA:H2	1.86	0.56
3:C:269:GLU:HG3	3:C:448:ALA:HB2	1.88	0.56
3:C:311:GLN:HG3	3:C:361:LEU:HD22	1.88	0.56
2:b:257:TRP:HB2	2:b:452:THR:HG21	1.87	0.56
2:b:379:ALA:HA	2:b:390:TYR:HB3	1.87	0.56
3:c:420:VAL:HB	3:c:425:TRP:NE1	2.20	0.56
18:c:507:CLA:H2	18:c:507:CLA:HBA2	1.87	0.56
18:C:511:CLA:H61	18:C:516:CLA:H102	1.88	0.55
1:a:13:LEU:HG	1:a:15:GLY:H	1.70	0.55
7:h:56:ILE:HG13	15:x:87:PHE:HE2	1.71	0.55
1:A:225:ARG:HH11	2:B:480:ALA:HB3	1.71	0.55
1:A:331:MET:SD	4:D:347:PRO:HB2	2.46	0.55
11:M:27:VAL:HG12	11:m:28:LYS:HB2	1.88	0.55
2:b:187:VAL:HA	2:b:190:PHE:HD2	1.70	0.55
18:c:506:CLA:HBC3	18:c:506:CLA:HHD	1.87	0.55
1:A:188:ALA:HB2	1:A:328:MET:HB3	1.88	0.55
2:B:257:TRP:HB2	2:B:452:THR:HG21	1.87	0.55
18:B:602:CLA:OBD	18:B:608:CLA:HHC	2.05	0.55
1:a:131:TRP:CZ3	18:c:516:CLA:HAA2	2.41	0.55
1:a:161:TYR:HA	1:a:294:ALA:HB2	1.88	0.55
18:b:604:CLA:H51	18:b:617:CLA:H121	1.89	0.55
18:b:605:CLA:H192	18:b:613:CLA:H61	1.87	0.55
3:c:57:ALA:O	3:c:61:VAL:HG23	2.07	0.55
3:C:465:PRO:HB3	8:I:32:PRO:HB2	1.88	0.55
4:D:102:THR:O	4:D:106:GLN:HG3	2.06	0.55
18:b:601:CLA:H142	22:l:101:LHG:H382	1.89	0.55
4:d:266:TRP:HH2	22:l:101:LHG:H102	1.71	0.55
7:h:55:SER:O	7:h:59:GLU:HG3	2.05	0.55
2:B:478:VAL:HG23	2:B:482:ILE:HA	1.89	0.55
3:C:131:TYR:O	3:C:132:HIS:C	2.48	0.55
5:E:25:ILE:HG23	5:E:26:THR:HG23	1.87	0.55
7:H:50:PHE:HE1	18:H:101:CLA:HHD	1.70	0.55
10:L:24:LEU:HD13	22:L:101:LHG:H152	1.86	0.55
12:O:234:TYR:HB2	12:O:308:ASP:HB3	1.87	0.55
2:b:464:PHE:HB2	4:d:280:TRP:CH2	2.42	0.55
18:b:604:CLA:HMB1	4:d:126:MET:HB3	1.89	0.55
18:b:605:CLA:HBB1	18:b:605:CLA:HMB1	1.88	0.55
3:c:52:ALA:CB	18:c:511:CLA:HBB1	2.36	0.55
4:d:81:PRO:HD3	4:d:111:TRP:HB3	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:M:28:LYS:HG3	11:m:31:SER:HB3	1.89	0.55
1:a:166:GLY:HA3	3:c:358:PHE:HE1	1.72	0.55
3:c:79:LYS:HD2	3:c:84:GLN:HG3	1.89	0.55
1:A:13:LEU:HG	1:A:15:GLY:H	1.70	0.55
2:B:381:VAL:HG22	2:B:418:LYS:HG2	1.88	0.55
2:B:458:PHE:HB3	18:B:605:CLA:HBC2	1.89	0.55
3:C:290:VAL:HG12	3:C:423:ARG:HG2	1.87	0.55
3:C:420:VAL:HB	3:C:425:TRP:HE1	1.71	0.55
18:C:504:CLA:H2	18:C:504:CLA:HBA2	1.89	0.55
10:L:10:SER:HB2	11:M:28:LYS:HZ1	1.72	0.55
18:b:604:CLA:H162	18:d:408:CLA:H3A	1.89	0.55
18:c:504:CLA:HED3	18:c:506:CLA:H8	1.89	0.55
1:A:97:TRP:HE1	8:I:4:LEU:HB3	1.71	0.55
18:C:509:CLA:HED3	18:C:512:CLA:H8	1.89	0.55
4:D:158:LEU:C	4:D:161:PRO:HD2	2.32	0.55
5:E:44:TYR:CE2	5:E:51:ARG:HA	2.42	0.55
1:a:320:ILE:HD11	4:d:63:LEU:HD21	1.89	0.55
18:c:505:CLA:H122	18:c:511:CLA:H61	1.88	0.55
4:d:80:THR:HG22	4:d:111:TRP:CE2	2.42	0.55
12:o:138:PRO:HD2	12:o:167:TYR:HD1	1.72	0.55
2:B:18:ARG:CZ	10:L:5:ASN:HD22	2.20	0.55
18:B:608:CLA:H192	11:M:13:LEU:HD21	1.89	0.55
4:D:171:PRO:HB2	4:D:178:ILE:HD13	1.89	0.55
1:a:145:VAL:HG23	3:c:442:LEU:HD22	1.88	0.55
2:b:135:LEU:HD22	2:b:237:VAL:HG21	1.89	0.55
2:b:259:GLY:HA2	2:b:448:ARG:HH12	1.70	0.55
18:c:504:CLA:O1D	18:c:506:CLA:H2	2.07	0.55
1:A:186:PHE:CE1	1:A:192:ILE:HD13	2.42	0.55
2:B:458:PHE:CE2	18:B:605:CLA:HAB	2.42	0.55
3:C:294:ASN:HA	3:C:297:TYR:O	2.08	0.55
3:C:368:PRO:HB2	3:C:388:GLN:NE2	2.22	0.55
1:a:118:HIS:CE1	18:a:404:CLA:NA	2.75	0.55
1:a:135:PHE:CZ	8:i:31:ASN:HB3	2.42	0.55
4:d:171:PRO:HB2	4:d:178:ILE:HD13	1.89	0.55
4:d:335:PRO:HB3	5:e:63:ILE:HD11	1.88	0.55
7:h:18:THR:O	7:h:22:LEU:HG	2.07	0.55
12:o:129:TYR:HD1	12:o:330:GLU:C	2.15	0.55
1:A:118:HIS:CE1	18:A:406:CLA:NA	2.75	0.54
3:c:160:ILE:HD11	18:c:503:CLA:C4C	2.36	0.54
12:o:178:VAL:HA	12:o:184:VAL:HG12	1.88	0.54
1:A:39:PRO:O	1:A:43:THR:HG22	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:265:ILE:HG21	2:B:274:GLN:HE22	1.72	0.54
3:c:311:GLN:HG3	3:c:361:LEU:HD22	1.89	0.54
3:c:327:ASN:ND2	12:o:190:ASP:HB2	2.22	0.54
1:A:37:MET:HE1	22:D:404:LHG:H371	1.89	0.54
1:A:145:VAL:HG23	3:C:442:LEU:HD22	1.90	0.54
18:C:515:CLA:ND	18:C:516:CLA:H162	2.22	0.54
4:D:266:TRP:CD1	22:D:404:LHG:HC31	2.42	0.54
9:K:38:MET:HG3	9:K:39:PRO:HD3	1.88	0.54
2:b:16:PRO:HG2	2:b:123:PHE:HB3	1.90	0.54
5:e:67:THR:O	14:u:27:ARG:HD2	2.07	0.54
9:k:39:PRO:O	9:k:42:PRO:HD2	2.07	0.54
10:l:15:ARG:HG2	11:m:26:TYR:CE1	2.42	0.54
3:C:420:VAL:HB	3:C:425:TRP:NE1	2.22	0.54
4:D:80:THR:HG22	4:D:111:TRP:CE2	2.43	0.54
2:b:466:HIS:NE2	18:b:604:CLA:ND	2.56	0.54
9:k:48:LEU:HA	9:k:51:VAL:HG12	1.90	0.54
1:A:215:HIS:CG	1:A:275:LEU:HD21	2.42	0.54
18:A:406:CLA:H121	23:C:502:LMG:H292	1.88	0.54
2:B:16:PRO:HG2	2:B:123:PHE:HB3	1.89	0.54
2:B:23:HIS:ND1	18:B:616:CLA:OBD	2.33	0.54
2:B:112:ILE:HG21	20:B:613:BCR:H272	1.89	0.54
2:B:247:PHE:HD1	18:H:101:CLA:H142	1.71	0.54
23:B:604:LMG:H361	11:M:10:ALA:HB1	1.89	0.54
4:D:85:LEU:HD13	5:E:69:ARG:HB3	1.89	0.54
1:a:17:PHE:HZ	20:a:401:BCR:HC32	1.73	0.54
4:d:58:TRP:CZ2	5:e:50:PRO:HG3	2.43	0.54
4:d:104:TRP:HA	4:d:107:LEU:CD1	2.36	0.54
2:B:466:HIS:NE2	18:B:609:CLA:ND	2.55	0.54
12:O:129:TYR:HD1	12:O:330:GLU:C	2.15	0.54
18:c:505:CLA:HBD	18:c:505:CLA:HBA1	1.90	0.54
2:B:357:ARG:CZ	14:U:21:PRO:HD2	2.38	0.54
7:H:53:PHE:HB2	20:H:102:BCR:H16C	1.90	0.54
1:a:61:ASP:HB2	1:a:63:ILE:HG12	1.89	0.54
1:A:135:PHE:CZ	8:I:31:ASN:HB3	2.43	0.54
2:B:356:VAL:O	14:U:19:THR:HG23	2.07	0.54
4:D:59:TYR:HD2	4:D:106:GLN:HB3	1.73	0.54
13:T:13:THR:O	13:T:17:ILE:HG12	2.07	0.54
2:b:141:ILE:HG13	2:b:217:LEU:HD21	1.89	0.54
2:b:256:MET:HG3	2:b:448:ARG:HG3	1.89	0.54
18:b:613:CLA:H193	18:b:617:CLA:HBB2	1.90	0.54
12:o:134:PHE:HE2	12:o:186:PHE:CE1	2.26	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:21:ILE:HD11	1:A:32:TRP:CZ2	2.43	0.54
18:A:405:CLA:HED3	4:D:175:VAL:HG22	1.90	0.54
2:B:16:PRO:HB3	2:B:133:LEU:HD11	1.88	0.54
2:B:25:MET:HE1	2:B:108:PHE:HD1	1.73	0.54
18:B:609:CLA:H51	18:B:614:CLA:H121	1.89	0.54
3:C:48:LYS:HE3	18:C:514:CLA:HMA2	1.88	0.54
20:D:403:BCR:H14C	6:F:33:PHE:CD2	2.42	0.54
1:a:32:TRP:CZ2	8:i:22:GLY:HA3	2.43	0.54
3:c:319:VAL:O	3:c:323:ARG:HG2	2.07	0.54
1:A:76:ASN:HB2	10:L:34:ASN:HD22	1.73	0.54
18:B:615:CLA:H142	22:L:101:LHG:H382	1.89	0.54
2:b:96:VAL:HG11	18:b:613:CLA:HMA3	1.90	0.54
3:c:130:ILE:HG21	18:c:512:CLA:H101	1.89	0.54
12:o:234:TYR:HB2	12:o:308:ASP:HB3	1.90	0.54
13:t:20:ALA:O	13:t:24:ARG:HB3	2.08	0.54
12:O:134:PHE:HB2	12:O:172:ILE:HB	1.90	0.53
1:a:36:LEU:O	1:a:40:THR:HG22	2.08	0.53
1:a:186:PHE:CD1	1:a:192:ILE:HB	2.43	0.53
2:b:42:LEU:HD13	2:b:94:GLU:HG3	1.89	0.53
2:b:51:VAL:HG12	2:b:308:LYS:HE3	1.89	0.53
1:A:97:TRP:HE1	8:I:4:LEU:CB	2.22	0.53
2:B:30:VAL:HG13	18:B:602:CLA:HMC2	1.90	0.53
18:C:517:CLA:H2	18:C:517:CLA:HMA1	1.90	0.53
1:a:21:ILE:HD11	1:a:32:TRP:CZ2	2.43	0.53
2:b:460:LEU:HG	4:d:280:TRP:CZ3	2.43	0.53
18:b:606:CLA:H142	18:b:619:CLA:H191	1.90	0.53
3:c:66:ALA:HB1	9:k:39:PRO:HA	1.90	0.53
3:c:466:VAL:HG21	4:d:248:THR:HA	1.90	0.53
21:A:409:SQD:O2	4:D:232:PHE:HB3	2.08	0.53
13:T:20:ALA:O	13:T:24:ARG:HB3	2.09	0.53
2:b:189:GLY:HA2	2:b:197:GLY:CA	2.38	0.53
3:c:420:VAL:HB	3:c:425:TRP:HE1	1.72	0.53
18:c:505:CLA:H162	18:c:509:CLA:ND	2.24	0.53
18:c:515:CLA:H102	18:c:515:CLA:H142	1.89	0.53
18:c:515:CLA:H2	18:c:515:CLA:HMA1	1.90	0.53
4:d:30:VAL:O	4:d:34:GLY:HA3	2.09	0.53
5:e:27:ILE:HG12	27:f:101:HEM:HMC3	1.90	0.53
4:D:43:PHE:HB3	4:D:113:PHE:CZ	2.44	0.53
2:b:247:PHE:HD1	18:b:603:CLA:H142	1.72	0.53
2:b:370:LEU:HB2	2:b:379:ALA:HB3	1.90	0.53
3:c:59:LEU:HD12	9:k:42:PRO:HA	1.88	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:o:262:ARG:HG2	12:o:265:GLU:CB	2.39	0.53
1:A:63:ILE:HG21	1:A:336:ALA:HA	1.91	0.53
2:B:42:LEU:HD13	2:B:94:GLU:HG3	1.90	0.53
3:C:342:MET:HE3	3:C:352:GLY:HA2	1.90	0.53
18:C:517:CLA:H102	18:C:517:CLA:H142	1.89	0.53
1:a:218:LEU:HB3	1:a:251:ALA:HB1	1.89	0.53
1:a:288:LEU:HD13	3:c:432:VAL:HG22	1.89	0.53
2:b:187:VAL:HG23	18:b:611:CLA:HMD2	1.91	0.53
3:c:316:THR:O	3:c:320:ARG:HG2	2.09	0.53
18:c:503:CLA:HED2	18:c:511:CLA:H111	1.90	0.53
6:f:23:VAL:HG23	6:f:24:HIS:CD2	2.43	0.53
12:o:209:PHE:HE2	12:o:211:PHE:HB2	1.73	0.53
2:B:471:ALA:HB2	4:D:130:PHE:HE1	1.73	0.53
18:C:509:CLA:H192	18:C:509:CLA:HBC3	1.91	0.53
18:C:511:CLA:H61	18:C:516:CLA:H122	1.91	0.53
4:D:89:LEU:HG	7:H:62:ASN:HD22	1.73	0.53
7:H:18:THR:O	7:H:22:LEU:HG	2.09	0.53
1:a:63:ILE:HG21	1:a:336:ALA:HA	1.89	0.53
2:b:356:VAL:O	14:u:19:THR:HG23	2.08	0.53
3:c:50:LEU:O	3:c:54:VAL:HG23	2.09	0.53
3:c:223:TRP:CG	3:c:224:ILE:N	2.76	0.53
3:c:465:PRO:HB3	8:i:32:PRO:HB2	1.91	0.53
4:d:19:ASP:HB2	4:d:32:TRP:HE1	1.72	0.53
18:B:615:CLA:H93	22:D:409:LHG:H152	1.91	0.53
3:C:59:LEU:HD12	9:K:42:PRO:HA	1.91	0.53
18:C:509:CLA:O1D	18:C:512:CLA:H2	2.08	0.53
4:D:51:GLY:HA2	4:D:55:VAL:HB	1.90	0.53
4:D:259:VAL:HG11	22:D:404:LHG:H262	1.90	0.53
2:b:357:ARG:CZ	14:u:21:PRO:HD2	2.39	0.53
18:b:619:CLA:CBB	18:b:620:CLA:H2	2.39	0.53
18:c:504:CLA:HMA1	18:c:506:CLA:HBB1	1.91	0.53
18:c:513:CLA:HMB3	18:c:515:CLA:H122	1.91	0.53
4:d:158:LEU:C	4:d:161:PRO:HD2	2.33	0.53
4:d:160:TYR:HA	4:d:290:ALA:CB	2.38	0.53
4:d:273:PHE:HD1	22:d:403:LHG:H251	1.74	0.53
18:B:607:CLA:H52	18:B:619:CLA:HBC3	1.91	0.53
3:C:290:VAL:HG22	3:C:297:TYR:CZ	2.44	0.53
3:C:319:VAL:O	3:C:323:ARG:HG2	2.09	0.53
5:E:67:THR:O	14:U:27:ARG:HD2	2.08	0.53
1:a:76:ASN:HB2	10:l:34:ASN:HD22	1.73	0.53
1:a:186:PHE:CE1	1:a:192:ILE:HD13	2.44	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:b:237:VAL:HG22	18:b:608:CLA:HBC2	1.90	0.53
3:c:209:ILE:HG13	3:c:210:PHE:N	2.23	0.53
4:D:18:MET:HB2	15:X:105:VAL:HG12	1.88	0.53
4:D:82:ALA:HA	4:D:168:PHE:HD2	1.73	0.53
1:a:144:ALA:HB3	3:c:442:LEU:HD21	1.91	0.53
1:a:284:TRP:CZ2	3:c:439:VAL:HG11	2.44	0.53
22:a:410:LHG:HC31	3:c:443:TRP:HZ2	1.73	0.53
3:c:43:ILE:HG12	18:c:511:CLA:HMC1	1.90	0.53
3:c:52:ALA:HB2	18:c:512:CLA:HMA1	1.90	0.53
3:c:419:TYR:OH	3:c:421:SER:HA	2.09	0.53
2:B:348:ASN:HB3	2:B:354:LEU:HD11	1.91	0.53
3:C:189:TRP:HA	3:C:364:PRO:HB3	1.91	0.53
3:C:372:PRO:HG2	12:O:96:GLN:HA	1.90	0.53
12:O:262:ARG:HG2	12:O:265:GLU:HG3	1.90	0.53
12:O:290:SER:HB3	12:O:297:VAL:HG13	1.90	0.53
1:a:39:PRO:O	1:a:43:THR:HG22	2.08	0.53
2:b:20:LEU:O	2:b:24:ILE:HG13	2.09	0.53
2:b:248:ALA:O	2:b:252:VAL:HG13	2.09	0.53
22:d:406:LHG:O3	10:l:16:THR:HG21	2.09	0.53
14:u:17:CYS:SG	14:u:26:CYS:HB3	2.49	0.53
1:A:61:ASP:HB2	1:A:63:ILE:HG12	1.91	0.52
1:A:144:ALA:HB3	3:C:442:LEU:HD21	1.91	0.52
1:A:159:LEU:HD11	24:C:503:DGD:HA31	1.92	0.52
3:C:215:LYS:HE2	3:C:221:GLU:O	2.09	0.52
12:O:114:THR:HG23	12:O:298:ILE:HG21	1.89	0.52
1:a:37:MET:HE1	22:d:406:LHG:H371	1.90	0.52
1:a:162:PRO:HG3	1:a:171:GLY:CA	2.39	0.52
2:b:12:VAL:HG12	2:b:18:ARG:HB3	1.90	0.52
26:d:405:PL9:H362	10:l:31:LEU:HD13	1.91	0.52
12:o:143:VAL:HG22	12:o:319:VAL:HG22	1.91	0.52
12:o:290:SER:HB3	12:o:297:VAL:HG13	1.90	0.52
1:A:201:GLY:HA3	1:A:286:THR:HB	1.92	0.52
18:B:603:CLA:CBB	18:B:616:CLA:H2	2.39	0.52
3:C:368:PRO:HG2	3:C:387:TRP:CH2	2.43	0.52
1:a:304:GLN:HG2	1:a:313:VAL:HG11	1.92	0.52
18:a:407:CLA:H192	22:d:406:LHG:H192	1.91	0.52
18:c:513:CLA:HAA2	18:c:515:CLA:H191	1.92	0.52
4:D:171:PRO:HB3	4:D:181:PHE:CG	2.44	0.52
11:M:3:VAL:HG21	13:T:2:GLU:HB3	1.90	0.52
5:e:70:PHE:CE1	7:h:66:LEU:HD11	2.44	0.52
1:A:162:PRO:HG3	1:A:171:GLY:CA	2.39	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:166:GLY:HA3	3:C:358:PHE:HE1	1.75	0.52
18:B:617:CLA:H202	18:B:619:CLA:HMC3	1.91	0.52
18:C:510:CLA:HMB3	18:C:517:CLA:H122	1.91	0.52
4:D:149:PRO:HB3	18:D:406:CLA:H41	1.92	0.52
4:D:192:THR:HG23	18:D:406:CLA:HBC3	1.91	0.52
12:O:290:SER:HB2	12:O:297:VAL:HG22	1.91	0.52
14:U:17:CYS:SG	14:U:26:CYS:HB3	2.50	0.52
1:a:107:TYR:CG	12:o:162:MET:HB3	2.45	0.52
1:a:159:LEU:HD11	24:c:514:DGD:HA31	1.92	0.52
2:b:369:VAL:HG13	2:b:377:VAL:HG13	1.90	0.52
20:b:616:BCR:H20C	18:b:619:CLA:HBA1	1.92	0.52
3:c:313:GLN:HA	3:c:396:MET:HG3	1.91	0.52
3:c:361:LEU:HA	24:c:514:DGD:HE5	1.92	0.52
4:d:82:ALA:HA	4:d:168:PHE:HD2	1.74	0.52
1:A:24:THR:HG22	1:A:136:ARG:HB3	1.92	0.52
1:A:36:LEU:HG	8:I:19:PHE:CD2	2.45	0.52
3:C:297:TYR:HD1	3:C:302:TYR:CE2	2.27	0.52
3:C:305:THR:OG1	3:C:307:PRO:HD2	2.09	0.52
3:C:361:LEU:HA	24:C:503:DGD:HE5	1.90	0.52
1:a:48:PHE:HE1	1:a:174:LEU:HB3	1.74	0.52
1:a:217:SER:HA	1:a:220:THR:HG22	1.92	0.52
2:b:56:TRP:HA	2:b:447:PRO:HG2	1.91	0.52
2:b:246:PHE:HB3	2:b:462:PHE:HB3	1.92	0.52
2:b:367:PRO:HB2	4:d:345:VAL:HB	1.91	0.52
4:d:51:GLY:HA2	4:d:55:VAL:CB	2.35	0.52
2:B:13:LEU:HD23	2:B:14:ASN:H	1.75	0.52
2:B:158:VAL:HG13	2:B:166:ILE:HG12	1.91	0.52
18:C:509:CLA:HMA1	18:C:512:CLA:HBB1	1.91	0.52
4:D:160:TYR:HA	4:D:290:ALA:HB2	1.92	0.52
1:a:186:PHE:HD1	1:a:192:ILE:HB	1.74	0.52
18:a:404:CLA:H121	23:c:502:LMG:H292	1.91	0.52
2:b:185:TRP:HB2	18:b:611:CLA:HED2	1.90	0.52
3:c:154:ARG:HG2	3:c:266:TRP:CD2	2.45	0.52
3:c:297:TYR:HD1	3:c:302:TYR:CE2	2.28	0.52
18:c:505:CLA:H71	18:c:509:CLA:H2	1.91	0.52
1:A:334:ARG:HG3	12:O:240:LEU:HD22	1.91	0.52
18:C:516:CLA:HBD	18:C:516:CLA:HBA1	1.92	0.52
4:D:54:PHE:CD2	5:E:43:ALA:HB1	2.43	0.52
2:b:12:VAL:HG21	2:b:22:VAL:HG11	1.92	0.52
2:b:30:VAL:HG13	18:b:607:CLA:HMC2	1.92	0.52
2:b:475:PHE:CG	4:d:140:PRO:HD3	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:c:72:VAL:HG22	3:c:111:TYR:HB3	1.92	0.52
3:c:472:LEU:HD11	13:t:26:PRO:HB3	1.91	0.52
4:d:103:ARG:C	4:d:107:LEU:HD12	2.34	0.52
2:B:249:ALA:HA	2:B:252:VAL:HG22	1.90	0.52
2:B:422:ARG:HG3	2:B:425:GLN:NE2	2.24	0.52
3:C:52:ALA:CB	18:C:511:CLA:HBB1	2.40	0.52
18:C:512:CLA:H43	18:C:514:CLA:HAC1	1.92	0.52
12:O:137:GLU:HG2	12:O:167:TYR:HE1	1.74	0.52
2:b:458:PHE:CE2	18:b:606:CLA:HAB	2.45	0.52
18:c:508:CLA:HBB2	18:c:515:CLA:H52	1.91	0.52
6:f:37:ILE:HA	6:f:40:MET:HG3	1.91	0.52
4:D:30:VAL:HG22	6:F:18:VAL:HG11	1.92	0.52
3:c:63:TRP:CH2	3:c:88:LEU:HD21	2.45	0.52
4:d:201:VAL:HG22	18:d:404:CLA:C1B	2.39	0.52
7:h:29:GLU:HB3	7:h:32:LYS:HB3	1.92	0.52
1:A:133:LEU:HD23	4:D:256:ILE:HG12	1.90	0.52
3:C:290:VAL:HG21	18:C:515:CLA:HED2	1.92	0.52
1:a:57:PRO:HD3	1:a:73:TYR:CD2	2.45	0.52
2:b:172:TYR:CE1	2:b:283:GLU:HB2	2.45	0.52
3:c:215:LYS:HE2	3:c:221:GLU:O	2.10	0.52
4:d:266:TRP:CD1	22:d:406:LHG:HC31	2.44	0.52
1:A:36:LEU:O	1:A:40:THR:HG22	2.10	0.51
18:B:601:CLA:HMB1	18:B:601:CLA:HBB1	1.92	0.51
24:B:620:DGD:HAT2	4:D:120:PHE:CE2	2.45	0.51
3:c:425:TRP:HB3	18:c:510:CLA:CMB	2.39	0.51
5:e:44:TYR:CE2	5:e:51:ARG:HA	2.45	0.51
12:o:163:THR:OG1	12:o:198:THR:HG22	2.10	0.51
1:A:187:GLN:HB2	18:A:403:CLA:HAC1	1.92	0.51
2:B:185:TRP:HB2	18:B:606:CLA:HED2	1.92	0.51
24:B:620:DGD:HAW2	18:H:101:CLA:H152	1.93	0.51
3:C:92:LEU:O	3:C:95:LEU:HB2	2.11	0.51
18:C:507:CLA:HBB2	18:C:517:CLA:H52	1.90	0.51
1:A:135:PHE:CE1	3:C:449:ARG:HG3	2.45	0.51
2:B:282:GLN:HG3	14:U:25:ILE:HG13	1.92	0.51
24:B:620:DGD:HG32	7:H:61:TYR:HE1	1.74	0.51
12:O:124:PHE:HE2	12:O:295:GLY:HA2	1.74	0.51
2:b:399:VAL:HG12	2:b:417:VAL:HG22	1.92	0.51
2:b:406:LEU:O	2:b:409:VAL:HG22	2.09	0.51
18:b:608:CLA:H161	18:b:608:CLA:OBD	2.10	0.51
4:d:95:PRO:HD3	7:h:64:SER:O	2.10	0.51
6:f:19:ARG:O	6:f:23:VAL:HG22	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:i:16:VAL:O	8:i:20:ILE:HG12	2.10	0.51
10:l:25:ILE:HG13	11:m:18:PRO:HB2	1.92	0.51
12:o:134:PHE:HB2	12:o:172:ILE:HB	1.92	0.51
2:B:475:PHE:CE1	4:D:140:PRO:HG3	2.45	0.51
3:C:330:SER:HA	12:O:194:TYR:HE1	1.75	0.51
4:D:342:PRO:HB2	4:D:344:GLU:HG2	1.91	0.51
1:a:202:VAL:HG22	18:a:407:CLA:C1B	2.41	0.51
1:a:296:ASN:HD22	3:c:400:PRO:HB2	1.76	0.51
2:B:19:LEU:O	2:B:22:VAL:HG12	2.10	0.51
3:C:313:GLN:HA	3:C:396:MET:HG3	1.92	0.51
18:C:509:CLA:HHB	18:C:512:CLA:CBB	2.40	0.51
1:a:196:PRO:HA	1:a:199:MET:HB2	1.91	0.51
3:c:289:PHE:HD2	3:c:297:TYR:HE2	1.57	0.51
1:A:218:LEU:HB3	1:A:251:ALA:HB1	1.92	0.51
1:A:320:ILE:HD11	4:D:63:LEU:HD21	1.92	0.51
2:B:238:LEU:HD12	18:B:601:CLA:HBC3	1.91	0.51
2:B:391:SER:O	2:B:395:VAL:HG22	2.11	0.51
3:C:71:GLU:HB3	3:C:86:LEU:HD22	1.92	0.51
3:C:87:ILE:HG13	3:C:88:LEU:HD12	1.93	0.51
3:C:174:LEU:HD11	18:C:505:CLA:H92	1.92	0.51
4:D:201:VAL:HG22	18:D:406:CLA:C1B	2.40	0.51
2:b:247:PHE:CE2	18:b:615:CLA:H41	2.46	0.51
4:d:125:PHE:CE1	19:d:401:PHO:HBD	2.45	0.51
4:d:188:PHE:HA	4:d:326:ARG:HD3	1.93	0.51
12:o:142:THR:HG22	12:o:158:ASN:HA	1.90	0.51
2:B:168:VAL:HG13	2:B:195:PRO:HG2	1.91	0.51
4:D:53:THR:HA	4:D:67:TYR:HD2	1.74	0.51
1:a:301:ASN:H	3:c:405:ASN:HD22	1.59	0.51
18:b:606:CLA:CHA	18:b:606:CLA:HBA1	2.40	0.51
3:c:330:SER:HA	12:o:194:TYR:HE1	1.76	0.51
1:A:140:ARG:HH12	4:D:231:THR:HG21	1.75	0.51
23:B:604:LMG:H111	20:B:610:BCR:H322	1.93	0.51
18:B:605:CLA:HBA1	18:B:605:CLA:CHA	2.39	0.51
4:D:56:THR:OG1	4:D:106:GLN:HG2	2.11	0.51
1:a:107:TYR:HD1	12:o:206:ARG:NH1	2.09	0.51
18:b:606:CLA:H72	18:b:608:CLA:H62	1.92	0.51
3:c:318:LEU:HD11	3:c:380:LEU:HD13	1.92	0.51
3:c:334:PRO:O	12:o:239:PHE:HB2	2.10	0.51
4:d:18:MET:HB2	15:x:105:VAL:CG1	2.40	0.51
1:A:32:TRP:CZ2	8:I:22:GLY:HA3	2.46	0.51
18:C:505:CLA:HED2	18:C:511:CLA:H111	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:C:508:CLA:H71	8:I:19:PHE:CZ	2.46	0.51
18:C:510:CLA:HAA2	18:C:517:CLA:H191	1.93	0.51
2:b:233:ASN:O	2:b:236:THR:HG22	2.10	0.51
24:b:621:DGD:HAT2	4:d:120:PHE:CE2	2.46	0.51
3:c:304:PRO:HG2	3:c:398:HIS:O	2.11	0.51
18:c:506:CLA:H43	18:c:512:CLA:HAC1	1.92	0.51
4:d:66:SER:HB3	4:d:69:GLU:HG3	1.92	0.51
4:d:101:PHE:HE1	20:d:407:BCR:HC42	1.76	0.51
5:e:68:GLY:HA3	14:u:28:TYR:HB3	1.92	0.51
1:A:107:TYR:CG	12:O:162:MET:HB3	2.46	0.51
2:B:356:VAL:HG21	2:B:424:ALA:HB3	1.93	0.51
3:C:68:ASN:O	3:C:72:VAL:HG23	2.10	0.51
3:C:154:ARG:HH21	3:C:266:TRP:CD1	2.29	0.51
12:O:262:ARG:HG2	12:O:265:GLU:CB	2.40	0.51
1:a:112:TYR:CZ	1:a:116:VAL:HG21	2.46	0.51
18:b:605:CLA:H192	18:b:613:CLA:H8	1.93	0.51
2:B:268:PHE:HB3	2:B:448:ARG:HB2	1.92	0.50
18:B:603:CLA:HBA1	20:B:613:BCR:H20C	1.92	0.50
1:a:201:GLY:HA3	1:a:286:THR:HB	1.93	0.50
2:b:292:LEU:HD21	2:b:298:LEU:HD13	1.92	0.50
18:b:608:CLA:H8	18:b:608:CLA:H2	1.93	0.50
3:c:349:VAL:H	3:c:374:GLY:HA3	1.75	0.50
18:c:511:CLA:H42	18:c:511:CLA:H2A	1.94	0.50
2:B:369:VAL:HG21	4:D:341:PHE:CD1	2.45	0.50
4:D:199:MET:HE3	4:D:281:MET:HB3	1.92	0.50
1:a:76:ASN:HB2	10:l:34:ASN:ND2	2.26	0.50
1:a:84:PRO:HB2	1:a:169:SER:HA	1.94	0.50
1:a:325:ASN:HA	1:a:328:MET:HE3	1.92	0.50
3:c:80:PRO:HD2	3:c:83:GLU:HG3	1.92	0.50
3:c:177:PHE:HA	3:c:180:LEU:HG	1.92	0.50
1:A:31:GLY:O	1:A:35:VAL:HG13	2.12	0.50
18:B:609:CLA:HMB1	4:D:126:MET:HB3	1.93	0.50
18:B:619:CLA:HHB	18:H:101:CLA:O1D	2.12	0.50
3:C:334:PRO:O	12:O:239:PHE:HB2	2.11	0.50
1:a:103:ASP:HB3	12:o:162:MET:HE1	1.93	0.50
2:b:124:CYS:HA	2:b:131:PRO:HA	1.92	0.50
2:b:245:VAL:HG12	18:b:606:CLA:HAC1	1.93	0.50
2:b:258:TYR:OH	4:d:162:LEU:HB3	2.12	0.50
3:c:161:LEU:HD11	18:c:515:CLA:C2D	2.42	0.50
1:A:121:LEU:HD11	24:C:503:DGD:HA81	1.93	0.50
1:A:196:PRO:HA	1:A:199:MET:HB2	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:B:603:CLA:HMA1	20:B:613:BCR:H16C	1.93	0.50
3:C:334:PRO:HG3	4:D:350:ASN:ND2	2.27	0.50
18:C:517:CLA:CHC	18:C:517:CLA:H171	2.42	0.50
4:D:101:PHE:HE1	20:D:403:BCR:HC42	1.77	0.50
4:D:210:LEU:HD21	4:D:270:PHE:CD2	2.46	0.50
5:E:70:PHE:CE1	7:H:66:LEU:HD11	2.45	0.50
12:O:274:LYS:HB3	12:O:311:LEU:HB2	1.94	0.50
21:a:406:SQD:O2	4:d:232:PHE:HB3	2.12	0.50
2:b:273:TYR:HE1	4:d:165:SER:HA	1.77	0.50
18:b:603:CLA:HHD	7:h:50:PHE:HE1	1.77	0.50
3:c:86:LEU:CD1	3:c:89:LEU:HB2	2.41	0.50
3:c:128:GLY:O	18:c:507:CLA:HMC1	2.11	0.50
3:c:334:PRO:HG3	4:d:350:ASN:ND2	2.26	0.50
18:c:505:CLA:CBD	18:c:509:CLA:H12	2.41	0.50
2:B:20:LEU:HD11	18:B:603:CLA:C2C	2.42	0.50
3:C:86:LEU:CD1	3:C:90:PRO:HD3	2.41	0.50
20:b:602:BCR:H322	23:b:618:LMG:H111	1.94	0.50
1:A:157:VAL:HG11	18:A:404:CLA:HMC1	1.93	0.50
1:A:202:VAL:HG22	18:A:403:CLA:C1B	2.41	0.50
3:C:45:LEU:HD23	3:C:45:LEU:H	1.77	0.50
3:C:54:VAL:HB	3:C:129:GLY:HA2	1.93	0.50
3:C:86:LEU:CD1	3:C:89:LEU:HB2	2.40	0.50
4:D:72:ASN:OD1	23:D:408:LMG:HC3	2.11	0.50
14:U:4:ARG:HB2	14:U:25:ILE:HA	1.94	0.50
2:b:348:ASN:HB3	2:b:354:LEU:HD11	1.94	0.50
2:b:464:PHE:HB2	4:d:280:TRP:CZ2	2.47	0.50
3:c:188:THR:HG23	3:c:189:TRP:CE3	2.47	0.50
4:d:47:GLY:HA2	4:d:50:THR:HG22	1.92	0.50
4:d:87:HIS:CD2	4:d:166:GLY:HA2	2.46	0.50
1:A:84:PRO:HB2	1:A:169:SER:HA	1.94	0.50
2:B:121:GLU:HG2	7:H:16:SER:HA	1.93	0.50
18:B:601:CLA:H192	18:B:617:CLA:H8	1.93	0.50
3:C:444:HIS:CE1	18:C:512:CLA:NA	2.80	0.50
3:C:472:LEU:HD11	13:T:26:PRO:HB3	1.92	0.50
18:C:515:CLA:H12	18:C:516:CLA:CBD	2.41	0.50
18:H:101:CLA:HBD	18:H:101:CLA:HBA2	1.93	0.50
1:a:116:VAL:HG13	1:a:158:PHE:HB3	1.94	0.50
1:a:133:LEU:HD22	4:d:255:GLN:HB2	1.93	0.50
2:b:142:HIS:O	2:b:146:SER:HB2	2.11	0.50
2:b:289:SER:HA	2:b:292:LEU:HD12	1.93	0.50
2:b:391:SER:O	2:b:395:VAL:HG22	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:b:452:THR:CB	4:d:291:LEU:HD21	2.40	0.50
2:b:471:ALA:HB2	4:d:130:PHE:HE1	1.76	0.50
3:c:307:PRO:HB2	3:c:361:LEU:CD1	2.41	0.50
3:c:372:PRO:HG2	12:o:96:GLN:HA	1.93	0.50
1:A:60:ILE:HD12	4:D:314:PHE:HZ	1.76	0.50
2:B:422:ARG:CZ	12:O:262:ARG:HH22	2.24	0.50
18:B:607:CLA:H161	18:B:607:CLA:OBD	2.11	0.50
3:C:131:TYR:C	3:C:133:ALA:N	2.69	0.50
10:L:13:LEU:HD23	11:M:26:TYR:HB2	1.93	0.50
12:O:174:GLY:HA3	12:O:188:GLU:HA	1.93	0.50
18:a:403:CLA:H71	19:a:409:PHO:HMB2	1.93	0.50
2:b:381:VAL:HG11	2:b:422:ARG:NH2	2.26	0.50
18:b:619:CLA:NB	18:b:620:CLA:H111	2.26	0.50
4:d:210:LEU:HD21	4:d:270:PHE:CD2	2.47	0.50
7:h:67:LEU:HD21	15:x:84:LEU:HD13	1.93	0.50
1:A:278:TRP:HB3	1:A:279:PRO:HD3	1.94	0.50
4:D:55:VAL:O	4:D:66:SER:HB3	2.12	0.50
2:b:26:HIS:HB2	18:b:605:CLA:HMB2	1.93	0.50
7:h:59:GLU:HB2	7:h:65:VAL:HG22	1.93	0.50
1:A:57:PRO:HD3	1:A:73:TYR:CD2	2.46	0.49
2:B:20:LEU:O	2:B:24:ILE:HG13	2.12	0.49
4:D:125:PHE:CE1	19:D:402:PHO:HBD	2.47	0.49
1:a:24:THR:HG22	1:a:136:ARG:HB3	1.94	0.49
1:a:157:VAL:HG11	18:a:403:CLA:HMC1	1.93	0.49
1:a:234:ASN:HB3	4:d:263:ASN:ND2	2.27	0.49
1:a:278:TRP:HB3	1:a:279:PRO:HD3	1.94	0.49
3:c:174:LEU:HD11	18:c:503:CLA:H92	1.94	0.49
3:c:261:ARG:HA	3:c:266:TRP:NE1	2.27	0.49
4:d:171:PRO:HB3	4:d:181:PHE:CG	2.47	0.49
1:A:321:ILE:HD11	4:D:179:PHE:HB2	1.93	0.49
2:B:96:VAL:HG11	18:B:617:CLA:HMA3	1.94	0.49
2:B:185:TRP:HZ3	2:B:203:ILE:CG2	2.25	0.49
4:D:210:LEU:HA	4:D:213:ILE:HG22	1.92	0.49
4:d:21:TRP:CE3	4:d:22:LEU:HD12	2.40	0.49
4:d:53:THR:O	4:d:54:PHE:HD1	1.95	0.49
4:d:85:LEU:HD13	5:e:69:ARG:HB3	1.94	0.49
5:e:70:PHE:HZ	7:h:63:SER:HB3	1.77	0.49
1:A:103:ASP:HB3	12:O:162:MET:HE1	1.95	0.49
1:A:116:VAL:HG13	1:A:158:PHE:HB3	1.94	0.49
2:B:187:VAL:HG23	18:B:606:CLA:HMD2	1.94	0.49
3:C:52:ALA:HB1	18:C:511:CLA:HBB1	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:C:510:CLA:CBB	18:C:517:CLA:H93	2.43	0.49
22:D:404:LHG:O3	10:L:16:THR:HG21	2.12	0.49
2:b:11:VAL:HG23	2:b:12:VAL:HG13	1.93	0.49
1:A:112:TYR:CZ	1:A:116:VAL:HG21	2.46	0.49
1:A:272:HIS:ND1	4:D:218:VAL:HG11	2.27	0.49
2:B:273:TYR:HE1	4:D:165:SER:HA	1.78	0.49
4:D:196:PHE:HB3	4:D:281:MET:O	2.12	0.49
12:O:209:PHE:CE2	12:O:211:PHE:HB2	2.46	0.49
1:a:29:TYR:H	4:d:255:GLN:HB3	1.76	0.49
18:c:504:CLA:HHB	18:c:506:CLA:CBB	2.41	0.49
18:c:515:CLA:CHC	18:c:515:CLA:H171	2.42	0.49
9:k:36:ASP:O	9:k:39:PRO:HD2	2.12	0.49
1:A:32:TRP:HB2	8:I:23:PHE:CZ	2.48	0.49
1:A:284:TRP:CZ2	3:C:439:VAL:HG11	2.46	0.49
3:C:402:GLY:HA3	3:C:420:VAL:HG13	1.93	0.49
3:C:425:TRP:HB3	18:C:506:CLA:CMB	2.41	0.49
1:a:140:ARG:HH12	4:d:231:THR:HG21	1.77	0.49
1:A:250:ALA:HB1	4:D:138:LEU:HD21	1.95	0.49
2:B:237:VAL:HG22	18:B:607:CLA:HBC2	1.94	0.49
3:C:188:THR:HG23	3:C:189:TRP:CE3	2.47	0.49
3:C:299:SER:HA	3:C:423:ARG:NH2	2.27	0.49
4:D:103:ARG:HD2	5:E:76:LEU:HB3	1.95	0.49
2:b:273:TYR:HA	2:b:276:ASP:HB2	1.95	0.49
18:b:604:CLA:H202	4:d:116:LEU:HD13	1.92	0.49
18:b:620:CLA:H172	18:b:620:CLA:H112	1.93	0.49
14:u:4:ARG:HB2	14:u:25:ILE:HA	1.93	0.49
1:A:338:ASN:HB3	3:C:339:LYS:HG3	1.95	0.49
3:C:464:GLU:OE2	4:D:248:THR:HG23	2.13	0.49
3:c:165:LEU:HD11	18:c:513:CLA:CAB	2.35	0.49
4:d:269:PHE:CZ	22:d:403:LHG:HC5	2.48	0.49
4:d:334:GLN:OE1	4:d:337:GLU:HG3	2.12	0.49
7:h:20:GLY:O	7:h:24:LYS:HG2	2.13	0.49
12:o:138:PRO:HD2	12:o:167:TYR:CD1	2.47	0.49
12:o:142:THR:HB	12:o:156:PHE:HB2	1.94	0.49
1:A:132:GLU:O	1:A:136:ARG:HG2	2.12	0.49
1:A:213:ALA:O	1:A:217:SER:HB3	2.12	0.49
18:B:603:CLA:NB	18:B:616:CLA:H111	2.27	0.49
18:B:616:CLA:H172	18:B:616:CLA:H112	1.95	0.49
1:a:79:SER:HA	1:a:177:SER:HB2	1.95	0.49
3:c:277:ALA:HB2	3:c:441:HIS:CG	2.47	0.49
1:A:186:PHE:HE1	1:A:192:ILE:HD13	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:339:LYS:HD2	3:C:340:TYR:CZ	2.48	0.49
10:L:11:VAL:HG13	11:M:25:ILE:HG23	1.95	0.49
12:O:283:ILE:HA	12:O:303:SER:HA	1.95	0.49
1:a:88:ALA:HB2	3:c:356:MET:HE2	1.94	0.49
4:d:78:VAL:O	4:d:111:TRP:HD1	1.96	0.49
4:d:191:TRP:CE3	4:d:289:LEU:HD11	2.47	0.49
1:A:13:LEU:HG	1:A:15:GLY:N	2.27	0.49
2:B:354:LEU:HB3	2:B:370:LEU:HB3	1.94	0.49
18:B:614:CLA:HMD1	7:H:39:THR:HB	1.95	0.49
4:D:195:PRO:HA	4:D:198:MET:HE2	1.95	0.49
1:a:13:LEU:HG	1:a:15:GLY:N	2.27	0.49
2:b:112:ILE:HG21	20:b:616:BCR:H272	1.95	0.49
18:b:603:CLA:HBD	18:b:603:CLA:HBA2	1.95	0.49
3:c:337:LEU:HB3	3:c:342:MET:HE2	1.94	0.49
18:c:513:CLA:CBB	18:c:515:CLA:H93	2.43	0.49
4:d:30:VAL:HG22	6:f:18:VAL:HG11	1.93	0.49
2:B:258:TYR:OH	4:D:162:LEU:HB3	2.13	0.48
2:B:327:ALA:HB1	23:B:604:LMG:HC8	1.95	0.48
2:B:368:VAL:CG2	2:B:422:ARG:HE	2.21	0.48
23:B:604:LMG:H342	20:B:612:BCR:HC42	1.95	0.48
3:C:209:ILE:HG13	3:C:210:PHE:N	2.27	0.48
18:b:604:CLA:H152	4:d:120:PHE:CZ	2.48	0.48
3:c:68:ASN:HB2	18:c:505:CLA:CED	2.42	0.48
3:c:86:LEU:CD1	3:c:90:PRO:HD3	2.42	0.48
3:c:209:ILE:HA	3:c:212:TYR:HD2	1.78	0.48
3:c:322:GLN:OE1	3:c:381:LYS:HA	2.13	0.48
18:c:505:CLA:H62	18:c:505:CLA:H13	1.95	0.48
4:d:53:THR:HG22	4:d:54:PHE:CD1	2.47	0.48
5:e:35:TRP:HA	6:f:39:ALA:CB	2.42	0.48
1:A:222:SER:O	1:A:246:TYR:HA	2.13	0.48
2:B:139:PHE:HB2	18:B:607:CLA:C1D	2.43	0.48
2:B:467:ILE:HG23	4:D:130:PHE:HZ	1.78	0.48
18:B:605:CLA:H72	18:B:607:CLA:H62	1.96	0.48
18:C:509:CLA:H18	18:C:512:CLA:H142	1.95	0.48
1:a:132:GLU:O	1:a:136:ARG:HG2	2.13	0.48
1:a:222:SER:O	1:a:246:TYR:HA	2.13	0.48
1:a:272:HIS:ND1	4:d:218:VAL:HG11	2.28	0.48
2:b:51:VAL:HA	2:b:308:LYS:HE3	1.95	0.48
3:c:285:ILE:O	3:c:289:PHE:HB2	2.13	0.48
4:d:151:ALA:HB2	4:d:280:TRP:CZ2	2.48	0.48
12:o:290:SER:HB2	12:o:297:VAL:HG22	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:A:404:CLA:H162	19:A:407:PHO:H102	1.95	0.48
3:C:165:LEU:HD11	18:C:510:CLA:CAB	2.35	0.48
18:C:506:CLA:H71	24:C:513:DGD:HBW1	1.94	0.48
4:D:88:SER:HB3	5:E:69:ARG:CZ	2.43	0.48
1:a:97:TRP:HE1	8:i:4:LEU:HB3	1.77	0.48
1:a:187:GLN:HB2	18:a:407:CLA:HAC1	1.94	0.48
1:a:331:MET:SD	4:d:347:PRO:HB2	2.53	0.48
20:b:610:BCR:HC42	23:b:618:LMG:H342	1.95	0.48
4:d:139:ARG:H	4:d:139:ARG:HD3	1.78	0.48
4:d:291:LEU:HB3	4:d:293:LEU:HD13	1.94	0.48
11:m:5:ILE:HA	11:m:8:PHE:HD1	1.77	0.48
12:o:187:LYS:HG2	12:o:217:ASP:OD1	2.13	0.48
1:A:223:LEU:HB2	4:D:139:ARG:NH2	2.28	0.48
2:B:57:ARG:HD3	2:B:317:ASN:OD1	2.13	0.48
2:B:369:VAL:HG13	2:B:377:VAL:HG13	1.96	0.48
20:H:102:BCR:H372	15:X:88:LEU:HD21	1.95	0.48
2:b:282:GLN:HG3	14:u:25:ILE:HG13	1.94	0.48
18:b:603:CLA:O1D	18:b:615:CLA:HHB	2.13	0.48
3:c:49:LEU:HD11	18:c:511:CLA:C2C	2.43	0.48
22:d:406:LHG:H171	10:l:23:LEU:HD21	1.96	0.48
18:C:511:CLA:H42	18:C:511:CLA:H2A	1.96	0.48
4:D:277:THR:O	4:D:281:MET:HG2	2.13	0.48
7:H:54:LEU:HA	7:H:57:ILE:HG12	1.95	0.48
7:H:58:LEU:HB2	18:H:101:CLA:H62	1.96	0.48
12:O:160:LYS:HB2	12:O:200:GLN:HB3	1.95	0.48
3:c:257:PHE:O	3:c:261:ARG:HG3	2.13	0.48
3:c:305:THR:HA	3:c:423:ARG:HD2	1.96	0.48
3:c:464:GLU:OE2	4:d:248:THR:HG23	2.13	0.48
5:e:27:ILE:HB	5:e:28:PRO:HD3	1.95	0.48
11:m:3:VAL:HG21	13:t:2:GLU:HB3	1.95	0.48
2:B:362:PHE:HB3	4:D:188:PHE:CD2	2.48	0.48
18:C:517:CLA:H161	18:C:517:CLA:H143	1.64	0.48
8:I:16:VAL:O	8:I:20:ILE:HG12	2.14	0.48
1:a:14:TRP:CH2	8:i:25:SER:HB3	2.49	0.48
18:a:403:CLA:H162	19:a:409:PHO:H102	1.96	0.48
21:a:406:SQD:HO8	3:c:35:TRP:CD1	2.31	0.48
20:b:616:BCR:H16C	18:b:619:CLA:HMA1	1.95	0.48
3:c:61:VAL:HG22	18:c:505:CLA:HAC2	1.95	0.48
3:c:87:ILE:C	3:c:90:PRO:HD2	2.38	0.48
24:c:517:DGD:HB62	24:c:517:DGD:HA72	1.95	0.48
4:d:104:TRP:CZ2	4:d:113:PHE:HB2	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:d:303:ILE:HG21	11:m:2:GLU:HG3	1.95	0.48
1:A:104:GLU:OE2	12:O:164:ARG:HG2	2.14	0.48
2:B:51:VAL:HA	2:B:308:LYS:HE3	1.94	0.48
18:C:514:CLA:HBB1	9:K:45:PHE:HE2	1.78	0.48
4:D:89:LEU:HG	7:H:62:ASN:ND2	2.29	0.48
5:E:27:ILE:HB	5:E:28:PRO:HD3	1.95	0.48
1:a:172:MET:HE3	1:a:179:THR:OG1	2.13	0.48
1:a:315:ASN:HB3	4:d:63:LEU:HD23	1.95	0.48
2:b:220:ARG:HG3	7:h:32:LYS:HG3	1.96	0.48
2:b:463:PHE:HD2	4:d:280:TRP:HH2	1.62	0.48
10:l:26:PHE:HE1	11:m:19:THR:HG21	1.78	0.48
24:C:513:DGD:HAN2	24:C:513:DGD:HAW2	1.54	0.48
1:a:37:MET:HG3	1:a:122:GLY:O	2.14	0.48
1:a:143:ILE:HG13	4:d:220:ASN:ND2	2.22	0.48
1:a:250:ALA:HB1	4:d:138:LEU:HD21	1.94	0.48
2:b:357:ARG:O	2:b:425:GLN:HG2	2.12	0.48
3:c:64:ALA:HB1	18:c:505:CLA:HED3	1.95	0.48
3:c:215:LYS:HD2	3:c:221:GLU:OE1	2.14	0.48
4:d:14:LEU:O	4:d:17:ILE:HG12	2.14	0.48
5:e:35:TRP:HA	6:f:39:ALA:HB2	1.96	0.48
1:A:195:HIS:ND1	1:A:197:PHE:HB2	2.28	0.48
1:A:238:ARG:HE	1:A:239:PHE:H	1.62	0.48
3:C:318:LEU:HD11	3:C:380:LEU:HD13	1.96	0.48
12:O:134:PHE:HE2	12:O:186:PHE:CE1	2.32	0.48
2:b:243:ALA:HB1	18:b:604:CLA:CHD	2.44	0.48
4:d:55:VAL:HG13	4:d:105:CYS:HB3	1.96	0.48
1:A:76:ASN:HB2	10:L:34:ASN:ND2	2.29	0.48
2:B:162:TYR:CE2	18:B:618:CLA:HHD	2.48	0.48
2:B:241:SER:O	2:B:245:VAL:HG23	2.14	0.48
3:C:118:HIS:CD2	18:C:516:CLA:HED1	2.48	0.48
18:C:510:CLA:HMB1	18:C:517:CLA:H202	1.95	0.48
12:O:163:THR:OG1	12:O:198:THR:HG22	2.14	0.48
1:a:32:TRP:HB2	8:i:23:PHE:CZ	2.48	0.48
2:b:187:VAL:HG12	7:h:70:ILE:HD11	1.96	0.48
18:b:612:CLA:HMD3	11:m:21:PHE:HE1	1.79	0.48
4:d:58:TRP:HA	4:d:63:LEU:H	1.78	0.48
1:A:97:TRP:HE1	8:I:4:LEU:CG	2.27	0.47
4:D:78:VAL:HB	4:D:173:PHE:HB2	1.95	0.47
12:O:243:LYS:HA	12:O:243:LYS:HE2	1.96	0.47
1:a:31:GLY:O	1:a:35:VAL:HG13	2.14	0.47
1:a:45:THR:HG23	18:a:403:CLA:H201	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:b:300:GLU:O	2:b:304:LYS:HG2	2.14	0.47
18:c:504:CLA:H18	18:c:506:CLA:H142	1.96	0.47
4:d:101:PHE:CE1	20:d:407:BCR:HC42	2.49	0.47
11:m:28:LYS:O	11:m:32:GLN:HG3	2.14	0.47
12:o:283:ILE:HA	12:o:303:SER:HA	1.95	0.47
18:B:608:CLA:HMD3	11:M:21:PHE:HE1	1.79	0.47
4:D:81:PRO:HD3	4:D:111:TRP:HB3	1.95	0.47
4:D:161:PRO:CG	4:D:170:ALA:HB2	2.43	0.47
12:O:229:PHE:HZ	12:O:305:GLN:HG2	1.79	0.47
18:b:611:CLA:HAB	20:h:101:BCR:H17C	1.94	0.47
4:d:54:PHE:CZ	6:f:36:SER:HB2	2.50	0.47
4:d:139:ARG:CZ	4:d:141:TYR:HE2	2.27	0.47
1:A:186:PHE:CD1	1:A:192:ILE:HB	2.50	0.47
1:A:331:MET:HE3	4:D:320:LEU:HB3	1.96	0.47
2:B:80:ILE:HB	2:B:93:TYR:OH	2.14	0.47
2:B:183:PRO:HA	2:B:196:GLY:O	2.14	0.47
4:D:104:TRP:CZ2	4:D:113:PHE:HB2	2.49	0.47
1:a:196:PRO:HG2	24:c:517:DGD:HBT2	1.95	0.47
3:c:61:VAL:HB	3:c:122:SER:HB3	1.96	0.47
3:c:154:ARG:HG2	3:c:266:TRP:CE3	2.50	0.47
4:d:161:PRO:CG	4:d:170:ALA:HB2	2.44	0.47
10:l:24:LEU:HD13	22:l:101:LHG:H152	1.95	0.47
18:A:404:CLA:H71	19:A:407:PHO:HMB2	1.95	0.47
2:B:341:LEU:HG	2:B:406:LEU:HD13	1.96	0.47
18:C:511:CLA:H42	18:C:511:CLA:HAA2	1.96	0.47
1:a:60:ILE:HD12	4:d:314:PHE:HZ	1.77	0.47
1:a:117:LEU:HD12	18:a:404:CLA:HED2	1.95	0.47
2:b:141:ILE:O	2:b:145:LEU:HG	2.15	0.47
3:c:160:ILE:O	3:c:163:ILE:HG12	2.13	0.47
3:c:344:SER:HB3	3:c:350:ILE:HG21	1.97	0.47
4:d:259:VAL:HG11	22:d:406:LHG:H262	1.97	0.47
1:A:45:THR:HG23	18:A:404:CLA:H201	1.95	0.47
1:A:172:MET:HE3	1:A:179:THR:OG1	2.14	0.47
2:B:464:PHE:HB2	4:D:280:TRP:CZ2	2.49	0.47
3:C:178:LYS:HE2	3:C:178:LYS:HB2	1.70	0.47
18:C:515:CLA:H2	18:C:516:CLA:H71	1.95	0.47
4:D:65:SER:HB3	4:D:77:ALA:O	2.15	0.47
4:D:337:GLU:HB3	4:D:339:LEU:HG	1.97	0.47
7:H:60:ILE:HG13	7:H:65:VAL:HG23	1.95	0.47
1:a:131:TRP:CZ2	3:c:449:ARG:HG3	2.43	0.47
1:a:254:TYR:HE1	4:d:142:ASN:HD22	1.60	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:c:209:ILE:HG21	3:c:236:GLY:HA2	1.96	0.47
3:c:229:ASP:HB2	3:c:232:ASP:HB2	1.96	0.47
4:d:180:ARG:C	4:d:180:ARG:HD3	2.39	0.47
2:B:56:TRP:HA	2:B:447:PRO:HG2	1.95	0.47
2:B:134:ASP:CG	2:B:137:LYS:HB2	2.40	0.47
3:C:115:GLY:O	3:C:119:LEU:HD22	2.14	0.47
3:C:209:ILE:HA	3:C:212:TYR:HD2	1.80	0.47
4:D:151:ALA:HB2	4:D:280:TRP:CZ2	2.49	0.47
22:L:101:LHG:H202	22:L:101:LHG:H172	1.80	0.47
1:a:36:LEU:HD11	23:c:502:LMG:H191	1.96	0.47
1:a:82:ILE:HB	1:a:174:LEU:HB2	1.96	0.47
1:a:85:THR:HA	1:a:109:GLY:HA3	1.95	0.47
1:a:89:ILE:CD1	1:a:108:ASN:HB3	2.44	0.47
1:a:306:VAL:HG13	1:a:314:ILE:HB	1.96	0.47
3:c:88:LEU:HD23	18:c:505:CLA:HED2	1.97	0.47
1:A:37:MET:HG3	1:A:122:GLY:O	2.15	0.47
1:A:103:ASP:HA	1:A:106:LEU:HD12	1.97	0.47
1:A:192:ILE:HG13	1:A:198:HIS:CG	2.50	0.47
1:A:196:PRO:HG2	24:C:513:DGD:HBT2	1.96	0.47
1:A:296:ASN:HD22	3:C:400:PRO:HB2	1.80	0.47
2:B:61:PHE:HE1	2:B:451:PHE:HB2	1.80	0.47
18:B:609:CLA:H152	4:D:120:PHE:CZ	2.49	0.47
3:C:187:ASP:HB2	3:C:197:ARG:HE	1.80	0.47
3:C:223:TRP:CG	3:C:224:ILE:N	2.81	0.47
18:C:505:CLA:HBC2	18:C:505:CLA:HHD	1.97	0.47
4:D:89:LEU:HD12	4:D:91:LEU:HD11	1.97	0.47
4:D:202:ALA:HB2	26:D:407:PL9:H353	1.96	0.47
5:E:52:PRO:HA	5:E:55:TYR:CE2	2.50	0.47
5:E:70:PHE:HZ	7:H:63:SER:HB3	1.80	0.47
14:U:7:GLU:HA	14:U:10:LYS:HG2	1.96	0.47
1:a:104:GLU:OE2	12:o:164:ARG:HG2	2.14	0.47
1:a:106:LEU:HD11	20:a:401:BCR:H402	1.97	0.47
1:a:133:LEU:CD2	4:d:255:GLN:HB2	2.44	0.47
1:a:308:ASP:HB3	1:a:314:ILE:HD11	1.97	0.47
2:b:80:ILE:HB	2:b:93:TYR:OH	2.15	0.47
18:b:611:CLA:H92	18:b:611:CLA:H62	1.69	0.47
3:c:297:TYR:HA	3:c:302:TYR:CE1	2.50	0.47
18:c:504:CLA:H191	9:k:43:LEU:HD13	1.95	0.47
4:d:89:LEU:HG	7:h:62:ASN:ND2	2.28	0.47
4:d:103:ARG:HH21	5:e:77:ASP:HA	1.80	0.47
4:d:149:PRO:HB3	18:d:404:CLA:H41	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:d:196:PHE:HB3	4:d:281:MET:O	2.14	0.47
12:o:143:VAL:HG23	12:o:159:THR:HG21	1.97	0.47
12:o:223:ASP:O	12:o:286:LYS:HG3	2.15	0.47
1:A:188:ALA:HB2	1:A:328:MET:CB	2.44	0.47
1:A:254:TYR:HA	4:D:132:LEU:HD21	1.97	0.47
19:A:407:PHO:HED2	4:D:257:PHE:CG	2.49	0.47
2:B:71:ILE:HD11	18:B:618:CLA:H2A	1.97	0.47
2:B:91:TRP:CD1	18:B:618:CLA:HBD	2.50	0.47
2:B:273:TYR:CB	24:B:620:DGD:HD4	2.45	0.47
2:B:397:VAL:HG12	2:B:417:VAL:HG11	1.97	0.47
18:B:601:CLA:HAA2	18:B:607:CLA:H141	1.96	0.47
3:C:82:TYR:OH	3:C:394:GLU:HG3	2.14	0.47
4:D:17:ILE:HD12	15:X:110:ASN:OD1	2.15	0.47
1:a:254:TYR:CD2	4:d:132:LEU:HD22	2.50	0.47
1:a:272:HIS:CD2	4:d:214:HIS:NE2	2.83	0.47
2:b:61:PHE:C	2:b:64:PRO:HD2	2.39	0.47
2:b:249:ALA:HA	2:b:252:VAL:HG22	1.96	0.47
24:c:517:DGD:HAH1	24:c:517:DGD:HAT2	1.78	0.47
4:d:273:PHE:CD1	22:d:403:LHG:H251	2.49	0.47
11:m:26:TYR:O	11:m:29:THR:HG22	2.15	0.47
1:A:133:LEU:HD22	4:D:255:GLN:HB2	1.97	0.47
2:B:14:ASN:HD22	10:L:7:ASN:HD21	1.63	0.47
2:B:233:ASN:O	2:B:236:THR:HG22	2.15	0.47
3:C:257:PHE:O	3:C:261:ARG:HG3	2.15	0.47
3:C:341:LEU:HD11	3:C:380:LEU:HD12	1.97	0.47
1:a:103:ASP:HA	1:a:106:LEU:HD12	1.97	0.47
2:b:70:GLY:HA2	2:b:178:VAL:HG21	1.96	0.47
2:b:327:ALA:HB1	23:b:618:LMG:HC8	1.96	0.47
18:b:605:CLA:HAA2	18:b:608:CLA:H141	1.97	0.47
12:o:119:SER:N	12:o:289:LYS:HE3	2.29	0.47
2:B:71:ILE:HD13	18:B:618:CLA:HED1	1.96	0.47
18:B:609:CLA:H18	18:D:405:CLA:HAA2	1.96	0.47
4:D:272:LEU:O	4:D:276:VAL:HG22	2.14	0.47
9:K:33:PRO:O	9:K:37:VAL:HG23	2.14	0.47
2:b:362:PHE:HB3	4:d:188:PHE:CD2	2.48	0.47
3:c:63:TRP:CZ2	18:c:509:CLA:HMB3	2.50	0.47
3:c:189:TRP:CD1	3:c:364:PRO:HA	2.50	0.47
4:d:156:VAL:HG12	4:d:171:PRO:HG3	1.95	0.47
18:d:408:CLA:H72	15:x:95:GLY:HA2	1.96	0.47
12:o:209:PHE:CE2	12:o:211:PHE:HB2	2.50	0.47
12:o:235:ARG:HB2	12:o:311:LEU:HD21	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:135:LEU:HD22	2:B:237:VAL:HG21	1.97	0.46
2:B:166:ILE:HD13	18:B:619:CLA:HED2	1.96	0.46
2:B:300:GLU:O	2:B:304:LYS:HG2	2.15	0.46
24:B:620:DGD:HBN2	4:D:163:GLY:HA2	1.96	0.46
4:D:214:HIS:HA	26:D:407:PL9:O2	2.15	0.46
12:O:131:GLY:HA3	12:O:174:GLY:N	2.30	0.46
1:a:97:TRP:HE1	8:i:4:LEU:CG	2.28	0.46
1:a:239:PHE:CZ	4:d:247:VAL:HA	2.50	0.46
1:a:273:PHE:CE2	21:a:406:SQD:H91	2.51	0.46
2:b:26:HIS:HB2	18:b:605:CLA:CMB	2.44	0.46
18:b:604:CLA:C17	18:d:408:CLA:H3A	2.45	0.46
12:o:209:PHE:HA	12:o:308:ASP:HB2	1.97	0.46
1:A:193:LEU:HD21	18:A:403:CLA:HMC3	1.97	0.46
18:B:602:CLA:H41	18:B:602:CLA:H61	1.40	0.46
3:C:177:PHE:HD1	3:C:180:LEU:HD21	1.79	0.46
3:C:297:TYR:O	3:C:423:ARG:NH2	2.48	0.46
4:D:21:TRP:CE3	4:D:22:LEU:HD12	2.38	0.46
4:D:67:TYR:HB3	6:F:40:MET:HE1	1.98	0.46
4:D:101:PHE:CE1	20:D:403:BCR:HC42	2.50	0.46
4:D:155:SER:HA	4:D:159:ILE:HB	1.97	0.46
4:D:269:PHE:CZ	22:D:409:LHG:HC5	2.50	0.46
18:D:405:CLA:H72	15:X:95:GLY:HA2	1.97	0.46
1:a:32:TRP:CE2	8:i:22:GLY:HA3	2.50	0.46
21:a:406:SQD:H171	21:a:406:SQD:H141	1.63	0.46
3:c:177:PHE:HD1	3:c:180:LEU:HD21	1.80	0.46
3:c:361:LEU:CD1	24:c:514:DGD:HE62	2.45	0.46
4:d:214:HIS:HA	26:d:405:PL9:O2	2.15	0.46
4:d:277:THR:O	4:d:281:MET:HG2	2.15	0.46
1:A:106:LEU:HD11	20:A:408:BCR:H402	1.96	0.46
1:A:143:ILE:HD11	4:D:217:THR:HA	1.97	0.46
1:A:186:PHE:HD1	1:A:192:ILE:HB	1.80	0.46
21:A:409:SQD:HO8	3:C:35:TRP:CD1	2.34	0.46
2:B:257:TRP:HZ2	2:B:272:ARG:HD2	1.80	0.46
18:B:609:CLA:HAB	4:D:123:ILE:HG12	1.96	0.46
3:C:371:GLY:O	12:O:100:TYR:HB2	2.15	0.46
4:D:87:HIS:CD2	4:D:166:GLY:HA2	2.49	0.46
8:I:19:PHE:CE2	8:I:23:PHE:HE2	2.33	0.46
12:O:124:PHE:CE2	12:O:295:GLY:HA2	2.49	0.46
2:b:277:GLN:HB3	14:u:24:LYS:HB3	1.97	0.46
3:c:212:TYR:HD1	3:c:215:LYS:HZ2	1.59	0.46
4:d:88:SER:HB3	5:e:69:ARG:CZ	2.44	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:95:PRO:HB2	1:A:97:TRP:CE3	2.50	0.46
1:A:304:GLN:HG2	1:A:313:VAL:HG11	1.98	0.46
2:B:74:SER:HA	2:B:92:SER:OG	2.15	0.46
2:B:248:ALA:O	2:B:252:VAL:HG13	2.15	0.46
18:B:614:CLA:C2B	20:H:102:BCR:H323	2.46	0.46
3:C:361:LEU:HD12	24:C:503:DGD:HE62	1.97	0.46
4:D:42:TYR:OH	6:F:29:PRO:HG2	2.14	0.46
19:D:402:PHO:H42	19:D:402:PHO:O1A	2.16	0.46
5:E:72:SER:O	5:E:76:LEU:HD23	2.16	0.46
12:O:209:PHE:HA	12:O:308:ASP:HB2	1.97	0.46
2:b:9:HIS:CG	18:b:605:CLA:HBB2	2.49	0.46
20:b:602:BCR:H361	20:b:602:BCR:H20C	1.61	0.46
20:b:602:BCR:H372	18:b:612:CLA:H52	1.98	0.46
3:c:61:VAL:CG2	18:c:505:CLA:HAC2	2.45	0.46
3:c:290:VAL:O	3:c:423:ARG:HD3	2.16	0.46
4:d:194:ASN:HA	4:d:295:ALA:HB3	1.97	0.46
5:e:52:PRO:HA	5:e:55:TYR:CE2	2.50	0.46
20:h:101:BCR:H371	15:x:84:LEU:HD11	1.98	0.46
12:o:162:MET:HE2	12:o:200:GLN:HB2	1.98	0.46
1:A:88:ALA:HB2	3:C:356:MET:HE2	1.98	0.46
20:B:610:BCR:H15C	20:B:610:BCR:H351	1.58	0.46
3:C:361:LEU:CD1	24:C:503:DGD:HE62	2.46	0.46
9:K:36:ASP:O	9:K:39:PRO:HD2	2.15	0.46
18:b:611:CLA:H72	18:b:611:CLA:HAA2	1.98	0.46
3:c:45:LEU:HD23	3:c:45:LEU:H	1.80	0.46
3:c:217:PRO:HG3	23:c:502:LMG:H352	1.96	0.46
3:c:225:VAL:HA	3:c:289:PHE:CE1	2.49	0.46
26:d:405:PL9:HC8	26:d:405:PL9:HC2	1.71	0.46
3:C:95:LEU:HB3	3:C:97:TRP:HD1	1.81	0.46
3:C:307:PRO:HB2	3:C:361:LEU:CD1	2.46	0.46
11:M:5:ILE:HA	11:M:8:PHE:CD2	2.49	0.46
12:O:134:PHE:HB2	12:O:172:ILE:O	2.15	0.46
1:a:293:MET:HG2	1:a:297:LEU:O	2.16	0.46
18:a:407:CLA:HBC3	18:d:404:CLA:HBC2	1.98	0.46
3:c:182:PHE:HB2	3:c:184:GLY:H	1.80	0.46
3:c:304:PRO:HG3	3:c:395:TYR:HA	1.97	0.46
24:c:514:DGD:HB52	24:c:514:DGD:HB22	1.75	0.46
19:d:401:PHO:H42	19:d:401:PHO:O1A	2.16	0.46
14:u:7:GLU:HA	14:u:10:LYS:HE3	1.98	0.46
1:A:140:ARG:O	4:D:220:ASN:HB3	2.16	0.46
2:B:9:HIS:NE2	18:B:608:CLA:NB	2.63	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:258:TYR:CE2	24:B:620:DGD:HG12	2.51	0.46
20:B:610:BCR:H361	20:B:610:BCR:H20C	1.61	0.46
18:B:617:CLA:H62	18:B:617:CLA:H41	1.55	0.46
3:C:128:GLY:C	18:C:504:CLA:HMC2	2.41	0.46
3:C:297:TYR:HD1	3:C:302:TYR:CZ	2.34	0.46
3:C:348:GLU:HG2	12:O:100:TYR:CE1	2.50	0.46
3:C:349:VAL:H	3:C:374:GLY:HA3	1.81	0.46
1:a:69:GLY:HA3	1:a:83:ILE:HD11	1.98	0.46
1:a:153:ALA:HA	18:a:407:CLA:HED1	1.98	0.46
2:b:369:VAL:HG21	4:d:341:PHE:CD1	2.51	0.46
18:b:605:CLA:H102	18:b:605:CLA:H61	1.56	0.46
3:c:157:MET:O	3:c:160:ILE:HG22	2.16	0.46
4:d:302:GLU:HB3	12:o:256:ALA:HB1	1.97	0.46
1:A:140:ARG:NH1	4:D:231:THR:HG21	2.30	0.46
1:A:269:ARG:HD3	4:D:222:LEU:HD13	1.97	0.46
2:B:383:PHE:CD2	4:D:347:PRO:HA	2.51	0.46
3:C:161:LEU:HD11	18:C:517:CLA:C2D	2.46	0.46
4:D:81:PRO:HA	4:D:108:GLY:HA3	1.97	0.46
22:L:101:LHG:H271	11:M:22:LEU:HD21	1.98	0.46
12:O:223:ASP:O	12:O:286:LYS:HG3	2.15	0.46
18:b:617:CLA:H92	18:b:617:CLA:H62	1.75	0.46
3:c:289:PHE:HD2	18:c:508:CLA:HBA2	1.80	0.46
12:o:124:PHE:HE2	12:o:295:GLY:HA2	1.81	0.46
1:A:56:PRO:HD2	1:A:106:LEU:HB3	1.98	0.46
2:B:220:ARG:HG3	7:H:32:LYS:CD	2.46	0.46
2:B:243:ALA:HB1	18:B:609:CLA:CHD	2.46	0.46
18:B:619:CLA:HMB2	18:B:619:CLA:H52	1.98	0.46
4:D:68:LEU:HD21	5:E:44:TYR:CD2	2.51	0.46
1:a:97:TRP:HE1	8:i:4:LEU:CB	2.29	0.46
2:b:27:THR:HG23	18:b:613:CLA:HAC1	1.97	0.46
18:b:619:CLA:H142	18:b:619:CLA:H112	1.75	0.46
3:c:165:LEU:HB3	3:c:244:CYS:O	2.16	0.46
3:c:387:TRP:CE2	3:c:388:GLN:HG3	2.51	0.46
4:d:132:LEU:O	4:d:136:VAL:HG23	2.16	0.46
26:d:405:PL9:H401	22:d:406:LHG:H201	1.97	0.46
12:o:90:LEU:O	12:o:113:PRO:HA	2.15	0.46
14:u:7:GLU:HA	14:u:10:LYS:HG2	1.98	0.46
1:A:14:TRP:CH2	8:I:25:SER:HB3	2.51	0.46
1:A:107:TYR:CZ	12:O:198:THR:HG21	2.50	0.46
3:C:63:TRP:CZ2	18:C:515:CLA:HMB3	2.51	0.46
18:H:101:CLA:H61	18:H:101:CLA:H41	1.56	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:a:140:ARG:NH1	4:d:231:THR:HG21	2.31	0.46
1:a:161:TYR:HA	1:a:294:ALA:CB	2.46	0.46
2:b:91:TRP:CD1	18:b:614:CLA:HBD	2.51	0.46
2:b:164:PRO:HG3	18:b:614:CLA:O1D	2.15	0.46
3:c:290:VAL:HG22	3:c:297:TYR:CZ	2.51	0.46
3:c:371:GLY:O	12:o:100:TYR:HB2	2.16	0.46
18:c:507:CLA:HHC	18:c:507:CLA:HMC3	1.57	0.46
18:c:511:CLA:H71	18:c:515:CLA:O1A	2.16	0.46
4:d:321:LEU:O	4:d:325:ILE:HG13	2.15	0.46
12:o:115:ILE:HG12	12:o:298:ILE:HG23	1.98	0.46
12:o:143:VAL:HB	12:o:201:LEU:HD11	1.98	0.46
1:A:161:TYR:HA	1:A:294:ALA:CB	2.46	0.45
2:B:66:MET:HE1	2:B:93:TYR:HA	1.96	0.45
2:B:257:TRP:CZ2	2:B:272:ARG:HD2	2.52	0.45
18:B:606:CLA:HAA2	18:B:606:CLA:H72	1.98	0.45
18:B:608:CLA:H52	20:B:610:BCR:H372	1.98	0.45
3:C:50:LEU:O	3:C:54:VAL:HG23	2.16	0.45
3:C:259:TRP:HA	3:C:262:ARG:HE	1.82	0.45
4:D:19:ASP:HB2	4:D:32:TRP:HE1	1.81	0.45
4:D:119:ALA:O	4:D:123:ILE:HG13	2.16	0.45
4:D:180:ARG:C	4:D:180:ARG:HD3	2.41	0.45
10:L:26:PHE:HE1	11:M:19:THR:HG21	1.82	0.45
2:b:75:TRP:HA	2:b:88:PRO:HG2	1.98	0.45
3:c:127:PHE:N	18:c:512:CLA:H171	2.31	0.45
3:c:273:SER:OG	3:c:445:ALA:HB2	2.15	0.45
3:c:368:PRO:HB2	3:c:388:GLN:NE2	2.31	0.45
4:d:91:LEU:HD22	18:d:408:CLA:HAA1	1.97	0.45
10:l:11:VAL:HG13	11:m:25:ILE:HG23	1.98	0.45
12:o:159:THR:HG22	12:o:201:LEU:HD13	1.97	0.45
1:A:169:SER:OG	28:A:501:HOH:O	2.13	0.45
1:A:273:PHE:CE2	21:A:409:SQD:H91	2.51	0.45
18:A:404:CLA:HAA1	26:D:407:PL9:H371	1.97	0.45
22:A:410:LHG:HC31	3:C:443:TRP:HZ2	1.81	0.45
2:B:216:HIS:NE2	18:B:614:CLA:NA	2.64	0.45
2:B:247:PHE:CE2	18:B:619:CLA:H41	2.51	0.45
3:C:62:PHE:HD2	9:K:42:PRO:HG3	1.80	0.45
3:C:166:ILE:HG12	3:C:245:ILE:HA	1.98	0.45
3:C:403:SER:OG	3:C:407:VAL:HG22	2.15	0.45
4:D:58:TRP:HA	4:D:63:LEU:H	1.80	0.45
4:D:100:ASP:C	4:D:102:THR:H	2.23	0.45
10:L:10:SER:HB2	11:M:28:LYS:NZ	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:O:119:SER:N	12:O:289:LYS:HE3	2.32	0.45
1:a:328:MET:HG3	4:d:325:ILE:CG1	2.46	0.45
2:b:71:ILE:CG1	18:b:614:CLA:HMA2	2.45	0.45
2:b:139:PHE:HB2	18:b:608:CLA:C1D	2.46	0.45
2:b:162:TYR:CE2	18:b:614:CLA:HHD	2.51	0.45
24:b:621:DGD:HBN2	4:d:163:GLY:HA2	1.98	0.45
3:c:60:ILE:HD11	18:c:504:CLA:CHC	2.46	0.45
18:c:504:CLA:NB	18:c:504:CLA:H151	2.31	0.45
4:d:125:PHE:CZ	19:d:401:PHO:HAA2	2.51	0.45
7:h:55:SER:HB3	15:x:87:PHE:HZ	1.81	0.45
2:B:245:VAL:HG13	18:B:601:CLA:H202	1.99	0.45
2:B:273:TYR:HA	2:B:276:ASP:HB2	1.98	0.45
2:B:357:ARG:NE	14:U:21:PRO:HD2	2.31	0.45
23:B:604:LMG:H121	23:B:604:LMG:H151	1.53	0.45
18:B:605:CLA:H93	18:B:605:CLA:H61	1.83	0.45
1:a:93:PHE:CE2	1:a:95:PRO:HG3	2.51	0.45
1:a:301:ASN:N	3:c:405:ASN:HD22	2.14	0.45
18:b:606:CLA:H93	18:b:606:CLA:H61	1.83	0.45
18:c:516:CLA:H62	18:c:516:CLA:H102	1.69	0.45
4:d:84:SER:HB2	5:e:68:GLY:HA2	1.97	0.45
7:h:59:GLU:CB	7:h:65:VAL:HG22	2.46	0.45
1:A:117:LEU:HD12	18:A:406:CLA:HED2	1.97	0.45
2:B:145:LEU:HB2	18:B:605:CLA:H162	1.98	0.45
2:B:172:TYR:CE1	2:B:283:GLU:HB2	2.52	0.45
2:B:187:VAL:HG12	7:H:70:ILE:HD11	1.98	0.45
2:B:191:ASP:HB3	2:B:194:VAL:HB	1.99	0.45
2:B:208:LEU:HD22	18:H:101:CLA:HBC1	1.98	0.45
3:C:131:TYR:O	3:C:133:ALA:N	2.49	0.45
3:C:217:PRO:HB3	24:C:503:DGD:HB31	1.99	0.45
4:D:168:PHE:HZ	4:D:335:PRO:HD2	1.80	0.45
1:a:30:ILE:O	1:a:34:GLY:HA3	2.17	0.45
1:a:48:PHE:CE1	1:a:82:ILE:HD13	2.51	0.45
1:a:193:LEU:HD21	18:a:407:CLA:HMC3	1.98	0.45
1:a:297:LEU:HG	3:c:428:THR:HG21	1.98	0.45
2:b:237:VAL:HG13	18:b:608:CLA:C1D	2.46	0.45
2:b:356:VAL:HG11	2:b:425:GLN:HB2	1.97	0.45
18:b:603:CLA:H62	7:h:58:LEU:HB2	1.99	0.45
3:c:444:HIS:CE1	18:c:506:CLA:NA	2.84	0.45
28:d:501:HOH:O	5:e:66:ILE:HD11	2.16	0.45
12:o:129:TYR:HB2	12:o:176:PHE:HB3	1.98	0.45
12:o:252:ASP:O	12:o:272:ASN:HB3	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:133:LEU:CD2	4:D:255:GLN:HB2	2.47	0.45
2:B:282:GLN:HG3	14:U:25:ILE:CG1	2.46	0.45
2:B:406:LEU:O	2:B:409:VAL:HG22	2.15	0.45
2:B:422:ARG:O	2:B:426:LEU:HD13	2.17	0.45
18:B:605:CLA:HMB1	18:B:611:CLA:HHC	1.98	0.45
18:C:508:CLA:H143	18:C:508:CLA:H162	1.75	0.45
12:O:229:PHE:CZ	12:O:305:GLN:HG2	2.50	0.45
12:O:328:GLN:HG2	12:O:330:GLU:OE2	2.17	0.45
2:b:325:PHE:CG	10:l:35:TYR:HB3	2.52	0.45
18:b:605:CLA:HMD2	18:b:608:CLA:H193	1.98	0.45
24:b:621:DGD:HB51	24:b:621:DGD:HB21	1.66	0.45
18:c:511:CLA:H42	18:c:511:CLA:HAA2	1.97	0.45
4:d:155:SER:HA	4:d:159:ILE:HB	1.98	0.45
1:A:123:VAL:HG22	1:A:151:VAL:HG22	1.99	0.45
1:A:217:SER:HA	1:A:220:THR:HG22	1.99	0.45
2:B:358:ARG:HG2	14:U:19:THR:HG22	1.97	0.45
3:C:215:LYS:HD2	3:C:221:GLU:OE1	2.17	0.45
1:a:56:PRO:HG2	1:a:106:LEU:HD13	1.99	0.45
1:a:255:PHE:O	1:a:259:ILE:HG12	2.17	0.45
19:a:409:PHO:H61	19:a:409:PHO:H2	1.59	0.45
4:d:60:THR:OG1	4:d:61:HIS:HD2	1.99	0.45
22:l:101:LHG:H271	11:m:22:LEU:HD21	1.99	0.45
12:o:131:GLY:HA3	12:o:174:GLY:N	2.30	0.45
1:A:120:LEU:HD21	1:A:159:LEU:HB2	1.99	0.45
2:B:46:ASP:HB3	2:B:58:GLN:NE2	2.28	0.45
2:B:237:VAL:HB	18:B:601:CLA:CMD	2.47	0.45
2:B:242:ILE:HG22	2:B:466:HIS:HB2	1.98	0.45
18:B:609:CLA:C17	18:D:405:CLA:H3A	2.47	0.45
18:B:609:CLA:C16	18:D:405:CLA:H3A	2.47	0.45
3:C:95:LEU:HB3	3:C:97:TRP:CD1	2.52	0.45
4:D:168:PHE:CZ	4:D:335:PRO:HD2	2.51	0.45
5:E:27:ILE:HG12	27:F:101:HEM:HMC3	1.98	0.45
1:a:254:TYR:OH	4:d:142:ASN:HB3	2.17	0.45
2:b:134:ASP:CG	2:b:137:LYS:HB2	2.41	0.45
2:b:357:ARG:NE	14:u:21:PRO:HD2	2.31	0.45
3:c:403:SER:OG	3:c:407:VAL:HG22	2.16	0.45
4:D:84:SER:HB2	5:E:68:GLY:HA2	1.98	0.45
5:E:30:LEU:HD12	5:E:30:LEU:HA	1.84	0.45
12:O:120:GLU:HG2	12:O:121:THR:H	1.82	0.45
2:b:137:LYS:HG2	2:b:220:ARG:NH1	2.32	0.45
2:b:151:PHE:CE2	2:b:203:ILE:HG13	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:c:164:HIS:CE1	18:c:511:CLA:H172	2.52	0.45
18:c:505:CLA:C4D	18:c:509:CLA:H12	2.47	0.45
18:c:509:CLA:H92	18:c:509:CLA:H61	1.75	0.45
4:d:39:PRO:HB2	18:d:408:CLA:HBB1	1.98	0.45
1:A:257:ARG:HB3	4:D:132:LEU:HD11	1.99	0.45
2:B:242:ILE:HG23	2:B:462:PHE:HD2	1.82	0.45
18:C:505:CLA:H12	18:C:511:CLA:H171	1.99	0.45
1:a:238:ARG:HE	1:a:239:PHE:H	1.63	0.45
1:a:296:ASN:OD1	3:c:401:LEU:HG	2.17	0.45
19:a:409:PHO:HED2	4:d:257:PHE:CG	2.51	0.45
2:b:383:PHE:CD2	4:d:347:PRO:HA	2.51	0.45
1:A:30:ILE:O	1:A:34:GLY:HA3	2.16	0.45
1:A:64:ARG:NH1	3:C:337:LEU:HD21	2.31	0.45
2:B:273:TYR:HB3	24:B:620:DGD:HD4	1.98	0.45
3:C:179:ALA:HA	3:C:184:GLY:CA	2.44	0.45
4:D:52:THR:O	4:D:66:SER:HA	2.16	0.45
4:D:191:TRP:CE3	4:D:289:LEU:HD11	2.52	0.45
14:U:7:GLU:HA	14:U:10:LYS:HE3	1.98	0.45
1:a:334:ARG:HG3	12:o:240:LEU:HD22	1.99	0.45
2:b:273:TYR:CB	24:b:621:DGD:HD4	2.47	0.45
18:b:601:CLA:H141	18:b:601:CLA:H161	1.65	0.45
18:b:613:CLA:H122	18:b:615:CLA:H72	1.99	0.45
18:c:513:CLA:HMB1	18:c:515:CLA:H202	1.98	0.45
4:d:335:PRO:HB2	5:e:65:LEU:HD22	1.99	0.45
22:d:406:LHG:H141	10:l:23:LEU:HD21	1.98	0.45
9:k:33:PRO:O	9:k:37:VAL:HG23	2.16	0.45
12:o:274:LYS:HB3	12:o:311:LEU:HB2	1.99	0.45
1:A:30:ILE:HG22	1:A:31:GLY:O	2.18	0.44
1:A:48:PHE:CE1	1:A:82:ILE:HD13	2.52	0.44
1:A:85:THR:HA	1:A:109:GLY:HA3	1.99	0.44
1:A:197:PHE:HB3	1:A:285:PHE:O	2.17	0.44
2:B:325:PHE:CG	10:L:35:TYR:HB3	2.52	0.44
18:B:605:CLA:HBA2	18:B:617:CLA:H11	1.99	0.44
18:B:618:CLA:H111	18:B:618:CLA:H71	1.38	0.44
3:C:186:TYR:CE1	3:C:301:PHE:CE2	3.05	0.44
3:C:223:TRP:CD2	23:C:502:LMG:H351	2.52	0.44
3:C:322:GLN:OE1	3:C:381:LYS:HA	2.17	0.44
18:C:505:CLA:H13	18:C:505:CLA:H171	1.79	0.44
4:D:340:ILE:HG13	4:D:340:ILE:O	2.17	0.44
1:a:197:PHE:HB3	1:a:285:PHE:O	2.17	0.44
2:b:268:PHE:HB2	2:b:448:ARG:NH2	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:b:422:ARG:O	2:b:425:GLN:HB3	2.17	0.44
3:c:48:LYS:HE3	18:c:512:CLA:HMA2	1.98	0.44
3:c:128:GLY:CA	18:c:507:CLA:HMC2	2.47	0.44
3:c:299:SER:OG	3:c:304:PRO:HA	2.17	0.44
4:d:103:ARG:C	4:d:107:LEU:CD1	2.91	0.44
22:A:410:LHG:HC91	22:A:410:LHG:H332	1.99	0.44
2:B:164:PRO:HG3	18:B:618:CLA:O1D	2.17	0.44
24:B:620:DGD:HB51	24:B:620:DGD:HB21	1.64	0.44
3:C:297:TYR:HA	3:C:302:TYR:CE1	2.52	0.44
3:C:307:PRO:HA	3:C:358:PHE:CD2	2.52	0.44
4:D:125:PHE:CZ	19:D:402:PHO:HAA2	2.51	0.44
4:D:215:GLY:O	4:D:219:GLU:HG2	2.17	0.44
4:D:305:ALA:CB	12:O:243:LYS:HE3	2.47	0.44
1:a:321:ILE:HD11	4:d:179:PHE:HB2	1.99	0.44
2:b:413:ASP:O	2:b:417:VAL:HG23	2.17	0.44
18:b:606:CLA:HBA1	18:b:606:CLA:HBD	1.99	0.44
3:c:433:LEU:O	3:c:437:LEU:HG	2.18	0.44
3:c:459:ILE:HG22	3:c:461:ARG:H	1.82	0.44
4:d:193:LEU:HG	4:d:193:LEU:O	2.15	0.44
2:B:254:GLY:HA3	24:B:620:DGD:HB42	1.98	0.44
20:B:612:BCR:H361	20:B:612:BCR:H20C	1.57	0.44
3:C:400:PRO:HA	3:C:421:SER:CB	2.47	0.44
10:L:25:ILE:HG13	11:M:18:PRO:HB2	1.99	0.44
12:O:208:PRO:HB2	12:O:234:TYR:CE2	2.53	0.44
1:a:195:HIS:ND1	1:a:197:PHE:HB2	2.30	0.44
2:b:478:VAL:HG23	2:b:482:ILE:HA	1.97	0.44
18:b:617:CLA:H193	18:b:617:CLA:H162	1.75	0.44
3:c:42:LEU:HD12	3:c:49:LEU:CA	2.47	0.44
3:c:348:GLU:HG2	12:o:100:TYR:CE1	2.53	0.44
4:d:100:ASP:C	4:d:102:THR:H	2.26	0.44
4:d:198:MET:HE3	10:l:31:LEU:HD11	1.99	0.44
6:f:27:ALA:O	6:f:31:VAL:HG22	2.17	0.44
1:A:17:PHE:CZ	20:A:408:BCR:HC32	2.50	0.44
1:A:145:VAL:HG21	3:C:443:TRP:HE3	1.83	0.44
2:B:54:PRO:HB2	2:B:56:TRP:CD1	2.52	0.44
2:B:90:LEU:HD23	18:B:618:CLA:H202	2.00	0.44
3:C:66:ALA:HB1	9:K:39:PRO:HA	1.98	0.44
3:C:212:TYR:HA	3:C:215:LYS:NZ	2.33	0.44
4:D:85:LEU:HD13	5:E:69:ARG:CB	2.47	0.44
20:D:403:BCR:H14C	6:F:33:PHE:CE2	2.52	0.44
26:D:407:PL9:H362	10:L:31:LEU:HD13	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:H:53:PHE:HA	20:H:102:BCR:H363	1.98	0.44
2:b:245:VAL:HG13	18:b:605:CLA:H202	1.98	0.44
2:b:403:GLY:H	2:b:407:ASN:CG	2.26	0.44
3:c:95:LEU:HD11	18:c:505:CLA:O1A	2.18	0.44
3:c:118:HIS:CD2	18:c:505:CLA:HED1	2.52	0.44
18:c:503:CLA:H171	18:c:503:CLA:H13	1.79	0.44
1:A:62:GLY:O	3:C:337:LEU:HD11	2.18	0.44
2:B:9:HIS:CG	18:B:601:CLA:HBB2	2.52	0.44
2:B:56:TRP:HB2	2:B:447:PRO:HD2	1.99	0.44
2:B:61:PHE:O	2:B:64:PRO:HD2	2.18	0.44
2:B:174:LEU:HD23	2:B:308:LYS:HG2	1.99	0.44
18:B:607:CLA:HMA1	18:B:617:CLA:H152	1.99	0.44
3:C:278:ALA:HB2	18:C:517:CLA:HMB3	1.98	0.44
22:D:404:LHG:H201	26:D:407:PL9:H401	2.00	0.44
3:c:54:VAL:HB	3:c:129:GLY:HA2	2.00	0.44
4:d:181:PHE:CZ	4:d:185:PHE:CZ	3.06	0.44
4:d:204:VAL:HG21	18:d:404:CLA:H3A	1.98	0.44
4:d:333:ASP:O	4:d:335:PRO:HD3	2.18	0.44
9:k:35:VAL:O	9:k:38:MET:HG2	2.17	0.44
10:l:18:LEU:HD22	11:m:26:TYR:CD2	2.52	0.44
2:B:10:THR:O	2:B:13:LEU:HD22	2.18	0.44
23:C:502:LMG:H302	23:C:502:LMG:H332	1.70	0.44
18:C:511:CLA:H192	18:C:511:CLA:H13	2.00	0.44
18:C:511:CLA:H71	18:C:517:CLA:O1A	2.17	0.44
7:H:59:GLU:HB3	7:H:65:VAL:HG22	1.98	0.44
13:T:19:PHE:HD1	13:T:23:PHE:CD2	2.36	0.44
1:a:247:ASN:HD22	1:a:250:ALA:HB2	1.82	0.44
22:a:410:LHG:HC91	22:a:410:LHG:H332	1.98	0.44
2:b:254:GLY:HA3	24:b:621:DGD:HB42	1.99	0.44
18:b:604:CLA:H18	18:d:408:CLA:HAA2	1.98	0.44
18:b:615:CLA:HMB2	18:b:615:CLA:H52	1.99	0.44
3:c:94:THR:O	3:c:185:VAL:HG22	2.18	0.44
3:c:290:VAL:HG21	18:c:509:CLA:HED2	1.98	0.44
18:c:503:CLA:CGA	18:c:503:CLA:H3A	2.46	0.44
4:d:263:ASN:HB3	4:d:266:TRP:HB3	2.00	0.44
1:A:60:ILE:HD12	1:A:84:PRO:HD2	2.00	0.44
1:A:64:ARG:NH2	12:O:163:THR:HG23	2.33	0.44
1:A:255:PHE:O	1:A:259:ILE:HG12	2.18	0.44
3:C:433:LEU:HD22	18:C:509:CLA:H143	1.99	0.44
18:C:516:CLA:H161	18:C:516:CLA:H72	2.00	0.44
4:D:30:VAL:O	4:D:34:GLY:HA3	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:161:PRO:HG3	4:D:170:ALA:CB	2.47	0.44
4:D:323:GLU:HG2	4:D:326:ARG:NH2	2.33	0.44
23:D:408:LMG:H221	23:D:408:LMG:H191	1.71	0.44
1:a:188:ALA:HB2	1:a:328:MET:CB	2.44	0.44
2:b:16:PRO:HB2	2:b:123:PHE:CD1	2.53	0.44
2:b:145:LEU:HD12	2:b:146:SER:N	2.32	0.44
23:b:618:LMG:H352	23:b:618:LMG:H322	1.80	0.44
4:d:68:LEU:HD21	5:e:44:TYR:CD2	2.52	0.44
6:f:37:ILE:O	6:f:40:MET:HG3	2.18	0.44
2:B:113:TRP:HZ3	2:B:120:LEU:HD11	1.83	0.44
2:B:187:VAL:HG23	18:B:606:CLA:CMD	2.48	0.44
3:C:323:ARG:HE	3:C:323:ARG:N	2.14	0.44
7:H:57:ILE:HB	18:H:101:CLA:HBA1	1.99	0.44
12:O:143:VAL:HG22	12:O:319:VAL:HG13	2.00	0.44
1:a:290:ILE:HG13	18:a:407:CLA:OBD	2.18	0.44
2:b:275:TRP:CH2	2:b:358:ARG:HD2	2.53	0.44
20:b:602:BCR:H312	23:b:618:LMG:H352	1.99	0.44
23:c:502:LMG:H302	23:c:502:LMG:H332	1.75	0.44
26:d:405:PL9:H513	13:t:10:LEU:HD22	2.00	0.44
1:A:308:ASP:HB2	5:E:52:PRO:O	2.18	0.44
18:A:403:CLA:H201	22:D:404:LHG:H312	2.00	0.44
2:B:282:GLN:HG2	14:U:13:TYR:CD1	2.53	0.44
2:B:366:PHE:CD1	2:B:367:PRO:HD2	2.53	0.44
3:C:63:TRP:CH2	3:C:88:LEU:HD21	2.53	0.44
3:C:177:PHE:HA	3:C:180:LEU:HG	2.00	0.44
3:C:223:TRP:NE1	23:C:502:LMG:H331	2.33	0.44
18:C:514:CLA:H43	9:K:52:TRP:CG	2.53	0.44
4:D:125:PHE:O	4:D:129:GLN:HG2	2.18	0.44
12:O:134:PHE:CE2	12:O:186:PHE:CE1	3.06	0.44
1:a:21:ILE:HD11	1:a:32:TRP:CE2	2.52	0.44
1:a:172:MET:HE1	18:a:403:CLA:CHC	2.48	0.44
1:a:269:ARG:HD3	4:d:222:LEU:HD13	1.98	0.44
2:b:74:SER:HA	2:b:92:SER:HB3	1.99	0.44
23:b:618:LMG:H151	23:b:618:LMG:H121	1.53	0.44
4:d:17:ILE:HD12	15:x:110:ASN:OD1	2.17	0.44
7:h:59:GLU:HB3	7:h:64:SER:HB2	1.99	0.44
10:l:13:LEU:HD23	11:m:26:TYR:HB2	1.99	0.44
1:A:63:ILE:HA	3:C:337:LEU:HD11	2.00	0.43
2:B:257:TRP:CD1	2:B:273:TYR:HH	2.36	0.43
2:B:268:PHE:HB2	2:B:448:ARG:NH2	2.33	0.43
18:B:611:CLA:H203	18:B:611:CLA:H161	1.73	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:C:505:CLA:HBA1	18:C:505:CLA:H3A	1.73	0.43
18:C:512:CLA:H62	9:K:50:PHE:HZ	1.83	0.43
4:D:18:MET:HB2	15:X:105:VAL:CG1	2.48	0.43
1:a:82:ILE:HG21	1:a:115:ILE:HD12	2.00	0.43
1:a:107:TYR:CZ	12:o:198:THR:HG21	2.53	0.43
18:b:605:CLA:H12	18:b:608:CLA:H13	2.00	0.43
18:b:606:CLA:HMB1	18:b:609:CLA:HHC	1.99	0.43
3:c:212:TYR:HA	3:c:215:LYS:NZ	2.32	0.43
18:c:506:CLA:H62	9:k:50:PHE:HZ	1.83	0.43
23:d:409:LMG:H221	23:d:409:LMG:H191	1.74	0.43
12:o:208:PRO:HB2	12:o:234:TYR:CE2	2.53	0.43
1:A:247:ASN:HD22	1:A:250:ALA:HB2	1.83	0.43
2:B:403:GLY:H	2:B:407:ASN:CG	2.26	0.43
2:B:463:PHE:HE1	18:B:609:CLA:CHC	2.31	0.43
3:C:130:ILE:HG22	18:C:514:CLA:H91	1.99	0.43
3:C:259:TRP:HA	3:C:262:ARG:HH21	1.82	0.43
3:C:362:ARG:O	24:C:503:DGD:HE61	2.18	0.43
3:C:404:LEU:HD21	24:C:513:DGD:HBE1	2.00	0.43
18:C:514:CLA:HBC2	9:K:53:GLN:HG3	1.99	0.43
1:a:44:ALA:HB2	1:a:118:HIS:CB	2.48	0.43
1:a:254:TYR:HA	4:d:132:LEU:HD21	2.00	0.43
2:b:187:VAL:HG23	18:b:611:CLA:CMD	2.47	0.43
4:d:43:PHE:HB3	4:d:113:PHE:CZ	2.53	0.43
4:d:103:ARG:HA	4:d:103:ARG:HD3	1.72	0.43
5:e:68:GLY:O	5:e:72:SER:HB2	2.18	0.43
22:l:101:LHG:H111	22:l:101:LHG:H241	2.00	0.43
1:A:48:PHE:HE1	1:A:174:LEU:HB3	1.83	0.43
1:A:82:ILE:HB	1:A:174:LEU:HD12	1.99	0.43
1:A:153:ALA:HA	18:A:403:CLA:HED1	2.00	0.43
1:A:325:ASN:HB3	3:C:412:THR:HG22	1.98	0.43
2:B:30:VAL:HG11	18:B:601:CLA:H112	1.99	0.43
2:B:90:LEU:HA	28:B:705:HOH:O	2.18	0.43
18:C:505:CLA:H3A	18:C:505:CLA:CGA	2.46	0.43
4:D:273:PHE:CD1	22:D:409:LHG:H251	2.52	0.43
22:D:409:LHG:H142	22:D:409:LHG:H112	1.75	0.43
5:E:27:ILE:HG12	27:F:101:HEM:C2C	2.53	0.43
7:H:49:LEU:HD23	7:H:49:LEU:HA	1.84	0.43
18:a:403:CLA:HAA1	26:d:405:PL9:H371	1.99	0.43
2:b:190:PHE:HE1	7:h:53:PHE:CZ	2.36	0.43
2:b:208:LEU:HD22	18:b:603:CLA:HBC1	2.01	0.43
2:b:225:LEU:O	2:b:229:LEU:HB2	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:b:355:PHE:HB3	14:u:19:THR:OG1	2.18	0.43
2:b:366:PHE:HB3	2:b:425:GLN:NE2	2.33	0.43
20:b:616:BCR:H371	20:b:616:BCR:H24C	1.81	0.43
3:c:45:LEU:HD11	3:c:48:LYS:HD3	2.00	0.43
3:c:166:ILE:HG12	3:c:245:ILE:HA	2.00	0.43
18:c:503:CLA:H12	18:c:511:CLA:H171	2.00	0.43
18:c:505:CLA:C6	18:c:505:CLA:H111	2.48	0.43
18:c:505:CLA:H2	18:c:509:CLA:H11	2.00	0.43
18:c:512:CLA:HBC2	9:k:53:GLN:HG3	1.99	0.43
4:d:89:LEU:HD12	4:d:91:LEU:HD11	2.00	0.43
12:o:262:ARG:HG2	12:o:265:GLU:CG	2.48	0.43
1:A:210:LEU:HG	19:D:402:PHO:ND	2.33	0.43
2:B:26:HIS:HB2	18:B:601:CLA:HMB2	2.01	0.43
2:B:368:VAL:HG21	2:B:422:ARG:HB2	2.00	0.43
2:B:462:PHE:HA	18:B:615:CLA:HMC1	2.00	0.43
3:C:222:GLY:O	3:C:225:VAL:HB	2.17	0.43
18:C:514:CLA:H193	18:C:514:CLA:H162	1.81	0.43
4:D:156:VAL:HG12	4:D:171:PRO:HG3	2.00	0.43
6:F:37:ILE:HA	6:F:40:MET:SD	2.59	0.43
2:b:192:PRO:HG2	7:h:61:TYR:CD2	2.53	0.43
2:b:226:TYR:HA	2:b:231:MET:HG3	2.00	0.43
18:b:613:CLA:H62	18:b:613:CLA:H41	1.55	0.43
18:c:505:CLA:H161	18:c:505:CLA:H72	2.01	0.43
4:d:119:ALA:O	4:d:123:ILE:HG13	2.17	0.43
1:A:306:VAL:HG13	1:A:314:ILE:HB	1.99	0.43
19:A:407:PHO:H2	19:A:407:PHO:H61	1.59	0.43
21:A:409:SQD:H341	21:A:409:SQD:H371	1.29	0.43
2:B:222:PRO:HB3	7:H:37:TRP:C	2.43	0.43
2:B:280:PHE:CD2	2:B:312:TYR:HB3	2.54	0.43
3:C:57:ALA:HA	3:C:60:ILE:HG13	1.99	0.43
18:C:515:CLA:H12	18:C:516:CLA:C4D	2.48	0.43
4:D:74:LEU:O	4:D:175:VAL:HB	2.18	0.43
4:D:222:LEU:HD23	4:D:244:TYR:HB3	2.01	0.43
12:O:256:ALA:O	12:O:258:PRO:HD3	2.18	0.43
1:a:161:TYR:O	1:a:165:GLN:HG2	2.18	0.43
2:b:222:PRO:HB3	7:h:37:TRP:C	2.43	0.43
2:b:282:GLN:HG3	14:u:25:ILE:CG1	2.48	0.43
23:b:618:LMG:H372	11:m:14:PHE:HB2	2.01	0.43
3:c:341:LEU:HA	3:c:341:LEU:HD23	1.78	0.43
5:e:76:LEU:HA	5:e:79:PHE:CD2	2.54	0.43
12:o:169:LEU:HD13	12:o:193:ASP:O	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:61:PHE:C	2:B:64:PRO:HD2	2.44	0.43
23:B:604:LMG:H322	23:B:604:LMG:H352	1.81	0.43
3:C:94:THR:O	3:C:185:VAL:HG22	2.18	0.43
3:C:271:TYR:CZ	18:C:517:CLA:HAC2	2.53	0.43
3:C:272:LEU:HD21	18:C:512:CLA:HMB3	2.00	0.43
3:C:410:VAL:HG12	3:C:412:THR:H	1.84	0.43
18:C:509:CLA:H2	18:C:509:CLA:H61	1.69	0.43
4:D:58:TRP:CD1	4:D:58:TRP:H	2.36	0.43
4:D:181:PHE:CZ	4:D:185:PHE:CZ	3.06	0.43
12:O:95:ILE:HD12	12:O:113:PRO:HG3	1.99	0.43
18:a:405:CLA:C1C	18:d:404:CLA:H12	2.49	0.43
2:b:16:PRO:HB3	2:b:133:LEU:HD11	2.00	0.43
2:b:344:PRO:HB2	2:b:346:PHE:CZ	2.54	0.43
18:b:609:CLA:H151	18:b:609:CLA:H111	1.92	0.43
18:b:614:CLA:H111	18:b:614:CLA:H71	1.41	0.43
3:c:161:LEU:HD11	18:c:515:CLA:C1D	2.49	0.43
4:d:81:PRO:HG3	4:d:108:GLY:O	2.18	0.43
1:A:136:ARG:O	3:C:469:MET:HE1	2.18	0.43
2:B:280:PHE:CE2	2:B:312:TYR:HB3	2.53	0.43
2:B:471:ALA:HB1	4:D:140:PRO:HG2	2.00	0.43
12:O:90:LEU:O	12:O:113:PRO:HA	2.18	0.43
12:O:129:TYR:HB2	12:O:176:PHE:HB3	2.01	0.43
22:a:410:LHG:H262	4:d:216:ALA:HB2	2.00	0.43
3:c:49:LEU:HD13	3:c:149:TYR:OH	2.19	0.43
3:c:217:PRO:HB3	24:c:514:DGD:HB31	2.01	0.43
3:c:259:TRP:HA	3:c:262:ARG:HG2	2.01	0.43
18:A:406:CLA:HMC2	20:A:408:BCR:H12C	2.00	0.43
2:B:5:TRP:HH2	22:D:409:LHG:H142	1.83	0.43
2:B:19:LEU:HD11	18:B:601:CLA:C4C	2.48	0.43
2:B:55:MET:HE2	2:B:80:ILE:HG12	2.00	0.43
2:B:318:ASN:OD1	2:B:319:PRO:HD2	2.19	0.43
18:B:605:CLA:HBA1	18:B:605:CLA:HBD	2.01	0.43
24:B:620:DGD:HB21	18:H:101:CLA:H42	1.99	0.43
3:C:154:ARG:HG2	3:C:266:TRP:CE3	2.53	0.43
3:C:189:TRP:CD1	3:C:364:PRO:HA	2.54	0.43
3:C:265:VAL:HG21	3:C:449:ARG:HD3	2.01	0.43
3:C:341:LEU:HD21	3:C:380:LEU:HD11	2.01	0.43
5:E:44:TYR:HE2	5:E:51:ARG:HA	1.83	0.43
1:a:17:PHE:CZ	20:a:401:BCR:HC32	2.51	0.43
1:a:133:LEU:HD23	4:d:256:ILE:HG12	2.01	0.43
1:a:140:ARG:O	4:d:220:ASN:HB3	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:b:273:TYR:HB3	24:b:621:DGD:HD4	1.99	0.43
2:b:280:PHE:CD2	2:b:312:TYR:HB3	2.54	0.43
18:b:604:CLA:HMA1	4:d:130:PHE:CZ	2.54	0.43
3:c:87:ILE:HD13	18:c:510:CLA:HMB1	2.00	0.43
3:c:297:TYR:HD1	3:c:302:TYR:CZ	2.36	0.43
1:A:172:MET:HE1	18:A:404:CLA:CHC	2.49	0.43
18:B:615:CLA:HMD1	22:D:409:LHG:HC61	2.01	0.43
18:C:509:CLA:HBA1	18:C:509:CLA:H11	1.43	0.43
6:F:19:ARG:O	6:F:23:VAL:HG22	2.18	0.43
7:H:59:GLU:CB	7:H:65:VAL:HG22	2.49	0.43
14:U:22:THR:HA	14:U:27:ARG:CZ	2.49	0.43
1:a:136:ARG:O	3:c:469:MET:HE1	2.19	0.43
18:a:404:CLA:HAA2	23:c:502:LMG:H112	2.01	0.43
20:b:602:BCR:H15C	20:b:602:BCR:H351	1.57	0.43
3:c:47:GLY:HA3	3:c:137:PRO:O	2.19	0.43
3:c:79:LYS:HB3	3:c:84:GLN:NE2	2.34	0.43
18:c:504:CLA:H2	18:c:504:CLA:H61	1.65	0.43
4:d:54:PHE:CE1	4:d:68:LEU:HB2	2.53	0.43
4:d:58:TRP:CD1	4:d:58:TRP:H	2.37	0.43
4:d:287:VAL:O	4:d:290:ALA:HB3	2.18	0.43
1:A:138:GLY:HA2	3:C:455:PHE:CZ	2.54	0.43
1:A:290:ILE:HG13	18:A:403:CLA:OBD	2.18	0.43
2:B:13:LEU:HD23	2:B:14:ASN:N	2.34	0.43
2:B:358:ARG:NH1	2:B:427:GLY:HA2	2.32	0.43
18:B:603:CLA:HBB2	18:B:616:CLA:H2	2.00	0.43
3:C:187:ASP:CG	3:C:197:ARG:HE	2.26	0.43
4:D:257:PHE:CE1	22:D:404:LHG:H322	2.53	0.43
4:D:277:THR:OG1	22:D:409:LHG:H262	2.19	0.43
1:a:291:SER:O	1:a:294:ALA:HB3	2.19	0.43
19:a:409:PHO:H8	19:a:409:PHO:H121	1.40	0.43
2:b:71:ILE:HD13	18:b:614:CLA:HED1	2.01	0.43
18:c:513:CLA:H62	18:c:513:CLA:H2	1.57	0.43
4:d:103:ARG:HD2	5:e:76:LEU:HB2	2.01	0.43
4:d:215:GLY:O	4:d:219:GLU:HG2	2.18	0.43
7:h:21:LYS:HA	7:h:24:LYS:HG2	2.01	0.43
7:h:24:LYS:HA	7:h:24:LYS:HD2	1.92	0.43
1:A:32:TRP:HB2	8:I:23:PHE:CE1	2.54	0.42
1:A:195:HIS:HD1	1:A:197:PHE:HB2	1.83	0.42
1:A:237:TYR:CE1	4:D:264:LYS:HE2	2.54	0.42
1:A:308:ASP:OD2	1:A:312:ARG:HB3	2.19	0.42
22:A:410:LHG:H262	4:D:216:ALA:HB2	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:173:GLY:HA3	2:B:265:ILE:HD11	2.01	0.42
20:B:613:BCR:H371	20:B:613:BCR:H24C	1.81	0.42
3:C:165:LEU:HB3	3:C:244:CYS:O	2.19	0.42
3:C:327:ASN:ND2	12:O:190:ASP:HB2	2.27	0.42
18:C:515:CLA:H101	18:C:516:CLA:C2B	2.49	0.42
18:C:517:CLA:HMC2	18:C:517:CLA:H203	2.01	0.42
4:D:214:HIS:HD1	4:D:267:LEU:HD21	1.83	0.42
6:F:33:PHE:O	6:F:37:ILE:HG12	2.18	0.42
2:b:55:MET:HE2	2:b:80:ILE:HG12	2.01	0.42
2:b:397:VAL:HG12	2:b:417:VAL:HG11	2.00	0.42
2:b:475:PHE:CE1	4:d:140:PRO:HG3	2.54	0.42
18:b:601:CLA:HMD1	22:d:403:LHG:HC61	2.01	0.42
18:b:620:CLA:H91	18:b:620:CLA:H112	1.76	0.42
3:c:433:LEU:HD22	18:c:504:CLA:H143	2.01	0.42
18:c:512:CLA:H43	9:k:52:TRP:CG	2.54	0.42
18:c:515:CLA:H143	18:c:515:CLA:H161	1.64	0.42
4:d:191:TRP:CE2	4:d:197:HIS:HB2	2.53	0.42
4:d:312:GLU:HG3	12:o:242:PRO:HB3	2.00	0.42
4:d:315:TYR:HH	4:d:319:ILE:HD11	1.84	0.42
23:d:409:LMG:H121	23:d:409:LMG:H152	1.83	0.42
12:o:187:LYS:C	12:o:187:LYS:HD3	2.44	0.42
1:A:63:ILE:HA	3:C:337:LEU:CD1	2.49	0.42
18:A:406:CLA:H3A	23:C:502:LMG:C12	2.38	0.42
2:B:137:LYS:HG2	2:B:220:ARG:HH11	1.84	0.42
2:B:201:HIS:HB2	18:H:101:CLA:CHB	2.49	0.42
2:B:325:PHE:CD2	10:L:35:TYR:HB3	2.54	0.42
18:B:601:CLA:H12	18:B:607:CLA:H13	2.01	0.42
23:B:604:LMG:H352	20:B:610:BCR:H312	2.01	0.42
24:B:620:DGD:HB62	24:B:620:DGD:HB91	1.64	0.42
1:a:60:ILE:HD12	1:a:84:PRO:HD2	2.00	0.42
2:b:142:HIS:NE2	18:b:620:CLA:NB	2.67	0.42
2:b:265:ILE:HG21	2:b:274:GLN:HE22	1.83	0.42
2:b:333:GLY:HA2	2:b:444:ARG:NH1	2.31	0.42
3:c:38:GLY:HA3	18:c:512:CLA:HMD2	2.01	0.42
3:c:128:GLY:O	3:c:131:TYR:N	2.53	0.42
18:c:507:CLA:HBA1	18:c:507:CLA:H3A	1.80	0.42
4:d:280:TRP:O	4:d:284:LEU:HG	2.18	0.42
12:o:135:CYS:HB2	12:o:326:TYR:N	2.35	0.42
18:A:403:CLA:H162	18:A:404:CLA:H102	2.01	0.42
18:B:615:CLA:H2	18:B:615:CLA:H61	1.74	0.42
18:B:617:CLA:H122	18:B:619:CLA:H72	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:118:HIS:NE2	18:C:516:CLA:HED1	2.34	0.42
24:C:503:DGD:HB22	24:C:503:DGD:HB52	1.81	0.42
4:D:160:TYR:HA	4:D:290:ALA:CB	2.49	0.42
4:D:203:GLY:HA3	4:D:278:GLY:HA3	2.00	0.42
12:O:289:LYS:HB2	12:O:298:ILE:HD11	2.00	0.42
1:a:135:PHE:HD2	1:a:136:ARG:HH11	1.66	0.42
1:a:202:VAL:HG11	18:a:405:CLA:C2D	2.50	0.42
2:b:358:ARG:HG2	14:u:19:THR:HG22	2.01	0.42
18:b:604:CLA:OBD	18:b:608:CLA:HBB1	2.19	0.42
3:c:63:TRP:CD2	3:c:63:TRP:C	2.97	0.42
3:c:266:TRP:HE3	3:c:271:TYR:OH	2.02	0.42
4:d:110:LEU:HD11	20:d:407:BCR:H332	2.00	0.42
11:m:5:ILE:HA	11:m:8:PHE:CD1	2.55	0.42
1:A:21:ILE:HD11	1:A:32:TRP:CH2	2.54	0.42
1:A:157:VAL:HG11	18:A:404:CLA:CMC	2.49	0.42
1:A:239:PHE:CZ	4:D:247:VAL:HA	2.53	0.42
1:A:272:HIS:CD2	4:D:214:HIS:NE2	2.87	0.42
2:B:27:THR:HG23	18:B:617:CLA:HAC1	2.01	0.42
2:B:103:PHE:HD1	20:B:613:BCR:H353	1.84	0.42
2:B:123:PHE:HE1	18:B:603:CLA:HBC2	1.84	0.42
18:B:606:CLA:H171	18:B:606:CLA:C3B	2.50	0.42
18:B:608:CLA:HAC1	22:L:101:LHG:H331	2.01	0.42
3:C:87:ILE:HD13	18:C:506:CLA:HMB1	2.00	0.42
3:C:465:PRO:HB3	8:I:32:PRO:CB	2.48	0.42
18:C:516:CLA:H111	18:C:516:CLA:C6	2.49	0.42
12:O:172:ILE:HG12	12:O:191:GLY:O	2.18	0.42
1:a:149:ALA:HB1	1:a:283:ILE:HB	2.01	0.42
1:a:158:PHE:O	1:a:162:PRO:HG2	2.19	0.42
1:a:312:ARG:HD3	5:e:56:PHE:CE2	2.54	0.42
2:b:9:HIS:NE2	18:b:612:CLA:NB	2.67	0.42
2:b:90:LEU:HA	28:b:705:HOH:O	2.19	0.42
2:b:141:ILE:CG1	2:b:217:LEU:HD21	2.50	0.42
2:b:257:TRP:HZ2	2:b:272:ARG:HD2	1.83	0.42
18:b:606:CLA:HBA2	18:b:613:CLA:H11	2.01	0.42
3:c:223:TRP:CD2	23:c:502:LMG:H351	2.55	0.42
3:c:307:PRO:HA	3:c:358:PHE:CD2	2.55	0.42
4:d:80:THR:HA	4:d:111:TRP:CG	2.55	0.42
1:A:198:HIS:O	1:A:202:VAL:HG23	2.20	0.42
2:B:97:ALA:O	2:B:101:ILE:HG12	2.19	0.42
3:C:130:ILE:HG21	18:C:514:CLA:H101	2.01	0.42
3:C:304:PRO:HG3	3:C:395:TYR:CD1	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:456:GLU:HG2	3:C:457:LYS:N	2.34	0.42
4:D:62:GLY:HA3	5:E:63:ILE:HD12	2.01	0.42
4:D:66:SER:OG	4:D:69:GLU:HG3	2.19	0.42
4:D:334:GLN:OE1	4:D:337:GLU:HG3	2.19	0.42
12:O:92:TYR:CE1	12:O:133:LYS:HG3	2.55	0.42
18:b:601:CLA:H203	18:b:607:CLA:H8	2.00	0.42
3:c:57:ALA:O	3:c:60:ILE:HB	2.20	0.42
3:c:130:ILE:HG22	18:c:512:CLA:H91	2.00	0.42
3:c:187:ASP:CG	3:c:197:ARG:HE	2.27	0.42
4:d:85:LEU:HD13	5:e:69:ARG:CB	2.50	0.42
4:d:125:PHE:O	4:d:129:GLN:HG2	2.20	0.42
12:o:124:PHE:CE2	12:o:295:GLY:HA2	2.55	0.42
1:A:143:ILE:HG13	4:D:220:ASN:ND2	2.27	0.42
1:A:146:ALA:HB2	22:A:410:LHG:H261	2.01	0.42
1:A:161:TYR:O	1:A:165:GLN:HG2	2.19	0.42
18:A:406:CLA:HAA2	23:C:502:LMG:H112	2.00	0.42
2:B:151:PHE:N	2:B:206:GLY:HA3	2.34	0.42
2:B:478:VAL:HG13	4:D:139:ARG:HG2	2.02	0.42
18:B:619:CLA:H161	18:B:619:CLA:H141	1.72	0.42
3:C:304:PRO:HG2	3:C:398:HIS:O	2.20	0.42
18:C:508:CLA:H71	8:I:19:PHE:HZ	1.84	0.42
18:C:508:CLA:H2	18:C:508:CLA:H61	1.77	0.42
18:C:509:CLA:NB	18:C:509:CLA:H151	2.34	0.42
18:C:514:CLA:H142	18:C:514:CLA:H111	1.88	0.42
18:C:515:CLA:H92	18:C:515:CLA:H61	1.74	0.42
4:D:188:PHE:CD1	4:D:326:ARG:HG2	2.55	0.42
12:O:235:ARG:HB2	12:O:311:LEU:HD21	2.01	0.42
2:b:61:PHE:O	2:b:64:PRO:HD2	2.20	0.42
2:b:141:ILE:HD11	7:h:26:LEU:HG	2.02	0.42
2:b:241:SER:O	2:b:245:VAL:HG23	2.19	0.42
2:b:422:ARG:NH2	12:o:262:ARG:HH12	2.18	0.42
18:b:603:CLA:CED	18:b:615:CLA:H3A	2.49	0.42
3:c:186:TYR:CE1	3:c:301:PHE:CE2	3.07	0.42
3:c:447:ARG:NH1	18:c:506:CLA:HED3	2.34	0.42
18:c:505:CLA:H62	18:c:505:CLA:H111	2.01	0.42
4:d:14:LEU:H	4:d:14:LEU:HD12	1.85	0.42
12:o:169:LEU:HD12	12:o:213:VAL:HG22	2.01	0.42
1:A:93:PHE:CE2	1:A:95:PRO:HG3	2.55	0.42
19:A:407:PHO:H121	19:A:407:PHO:H8	1.41	0.42
2:B:399:VAL:HG12	2:B:417:VAL:HG22	2.01	0.42
23:B:604:LMG:H172	23:B:604:LMG:H142	1.91	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:55:ALA:N	3:C:129:GLY:HA3	2.35	0.42
3:C:56:HIS:CE1	3:C:60:ILE:HD11	2.55	0.42
3:C:265:VAL:HG23	8:I:28:PRO:HB3	2.01	0.42
4:D:42:TYR:HE1	6:F:26:LEU:HD23	1.84	0.42
4:D:194:ASN:HA	4:D:295:ALA:HB3	2.01	0.42
23:D:408:LMG:H121	23:D:408:LMG:H152	1.87	0.42
7:H:67:LEU:HD21	15:X:84:LEU:HD13	2.01	0.42
1:a:64:ARG:NH2	12:o:163:THR:HG23	2.34	0.42
1:a:138:GLY:HA2	3:c:455:PHE:CZ	2.55	0.42
1:a:308:ASP:OD2	1:a:312:ARG:HB3	2.20	0.42
18:b:612:CLA:HAC1	22:l:101:LHG:H331	2.02	0.42
3:c:91:HIS:HA	3:c:302:TYR:OH	2.20	0.42
3:c:223:TRP:NE1	23:c:502:LMG:H331	2.35	0.42
4:d:65:SER:HB3	4:d:77:ALA:O	2.18	0.42
4:d:188:PHE:CD1	4:d:326:ARG:HG2	2.54	0.42
11:m:17:VAL:HB	11:m:18:PRO:HD3	2.02	0.42
1:A:37:MET:HG2	1:A:41:LEU:HD12	2.01	0.42
1:A:158:PHE:O	1:A:162:PRO:HG2	2.20	0.42
1:A:254:TYR:OH	4:D:142:ASN:HB3	2.20	0.42
2:B:66:MET:HE2	2:B:71:ILE:HG21	2.02	0.42
2:B:284:ILE:HG23	2:B:305:ILE:HG21	2.01	0.42
18:B:608:CLA:H62	18:B:608:CLA:H41	1.63	0.42
18:B:609:CLA:H42	4:D:127:LEU:HD11	2.02	0.42
18:B:614:CLA:HMC2	20:H:102:BCR:H11C	2.02	0.42
4:D:23:ARG:HA	4:D:29:PHE:CZ	2.54	0.42
12:O:162:MET:HE3	12:O:206:ARG:NH2	2.34	0.42
12:O:169:LEU:HD12	12:O:213:VAL:HG22	2.01	0.42
12:O:238:SER:O	12:O:240:LEU:HD12	2.20	0.42
1:a:32:TRP:O	1:a:35:VAL:HG22	2.19	0.42
20:a:401:BCR:H12C	18:a:404:CLA:HMC2	2.00	0.42
2:b:29:LEU:HD22	20:b:610:BCR:H351	2.00	0.42
2:b:462:PHE:CE2	18:b:607:CLA:HMB2	2.54	0.42
18:b:620:CLA:CBB	7:h:23:LEU:HD11	2.49	0.42
3:c:160:ILE:HD11	18:c:503:CLA:C3C	2.50	0.42
3:c:340:TYR:O	3:c:341:LEU:HD23	2.19	0.42
18:c:503:CLA:H2	18:c:503:CLA:H61	1.82	0.42
4:d:56:THR:HG21	5:e:48:GLY:C	2.45	0.42
4:d:81:PRO:HA	4:d:108:GLY:HA3	2.02	0.42
4:d:222:LEU:HD23	4:d:244:TYR:HB3	2.02	0.42
4:d:246:MET:HE3	26:d:405:PL9:H522	2.02	0.42
19:d:401:PHO:H92	19:d:401:PHO:H61	1.73	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:o:99:THR:HG23	12:o:101:MET:H	1.85	0.42
12:o:135:CYS:SG	12:o:326:TYR:HB3	2.59	0.42
1:A:82:ILE:HB	1:A:174:LEU:HB2	2.02	0.42
3:C:39:ASN:O	3:C:42:LEU:HB2	2.20	0.42
3:C:48:LYS:HE2	18:C:514:CLA:O2D	2.20	0.42
3:C:83:GLU:HA	3:C:419:TYR:CD1	2.54	0.42
3:C:342:MET:HG2	3:C:343:ARG:H	1.85	0.42
4:D:182:ILE:HA	18:D:406:CLA:HMD2	2.02	0.42
1:a:86:SER:HB3	1:a:89:ILE:HD13	2.02	0.42
1:a:198:HIS:O	1:a:202:VAL:HG23	2.19	0.42
1:a:258:LEU:N	4:d:132:LEU:HD11	2.35	0.42
2:b:146:SER:OG	18:b:613:CLA:H141	2.20	0.42
2:b:159:THR:HA	2:b:181:VAL:O	2.19	0.42
2:b:262:THR:O	2:b:264:PRO:HD3	2.18	0.42
18:b:604:CLA:H42	4:d:127:LEU:HD11	2.01	0.42
3:c:248:GLY:O	3:c:252:ILE:HG12	2.20	0.42
3:c:278:ALA:HB2	18:c:515:CLA:HMB3	2.01	0.42
3:c:424:SER:O	3:c:428:THR:HG23	2.19	0.42
3:c:465:PRO:HB3	8:i:32:PRO:CB	2.50	0.42
18:c:503:CLA:HAA1	18:c:503:CLA:HBD	2.02	0.42
18:c:504:CLA:HBA1	18:c:504:CLA:H11	1.43	0.42
18:d:408:CLA:H91	7:h:48:ALA:HB1	2.01	0.42
1:A:51:ALA:HA	1:A:55:ALA:HB2	2.02	0.42
18:A:403:CLA:C12	19:A:407:PHO:H3A	2.45	0.42
2:B:249:ALA:HB3	2:B:459:ALA:HB2	2.02	0.42
3:C:87:ILE:C	3:C:90:PRO:HD2	2.45	0.42
3:C:225:VAL:HA	3:C:289:PHE:CE1	2.55	0.42
3:C:229:ASP:HB2	3:C:232:ASP:CB	2.50	0.42
10:L:21:GLY:O	10:L:25:ILE:HG12	2.19	0.42
12:O:161:LEU:HD11	12:O:197:VAL:HG13	2.02	0.42
1:a:120:LEU:HD21	1:a:159:LEU:HB2	2.02	0.42
2:b:257:TRP:CD1	2:b:273:TYR:HH	2.38	0.42
2:b:315:ILE:HB	2:b:426:LEU:O	2.19	0.42
3:c:280:SER:O	3:c:284:PHE:HD1	2.03	0.42
3:c:349:VAL:N	3:c:374:GLY:HA3	2.35	0.42
4:d:210:LEU:HD23	4:d:271:MET:HA	2.02	0.42
5:e:42:LEU:O	5:e:46:VAL:HG22	2.20	0.42
1:A:291:SER:O	1:A:294:ALA:HB3	2.20	0.41
2:B:151:PHE:HD2	2:B:207:THR:HG1	1.68	0.41
2:B:159:THR:HA	2:B:181:VAL:O	2.20	0.41
18:B:601:CLA:H102	18:B:601:CLA:H61	1.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:B:607:CLA:HBB1	18:B:609:CLA:OBD	2.19	0.41
3:C:67:MET:O	3:C:71:GLU:HG3	2.20	0.41
18:C:515:CLA:H11	18:C:516:CLA:H2	2.01	0.41
4:D:51:GLY:O	4:D:55:VAL:HB	2.20	0.41
4:D:54:PHE:CE1	4:D:68:LEU:HB2	2.54	0.41
4:D:60:THR:OG1	4:D:61:HIS:HD2	2.02	0.41
14:U:8:ALA:O	14:U:11:LYS:HG2	2.21	0.41
1:a:157:VAL:HG11	18:a:403:CLA:CMC	2.49	0.41
1:a:332:HIS:CB	4:d:321:LEU:HD21	2.48	0.41
2:b:142:HIS:HA	2:b:145:LEU:HD11	2.02	0.41
2:b:325:PHE:CD2	10:l:35:TYR:HB3	2.55	0.41
18:b:612:CLA:H11	18:b:612:CLA:C4D	2.50	0.41
18:b:615:CLA:H111	18:b:615:CLA:H91	1.67	0.41
3:c:67:MET:O	3:c:71:GLU:HG3	2.20	0.41
18:c:511:CLA:H13	18:c:511:CLA:H192	2.01	0.41
19:d:401:PHO:CAB	18:d:404:CLA:H11	2.49	0.41
12:o:145:ALA:HA	12:o:317:LYS:HE3	2.02	0.41
1:A:118:HIS:CE1	18:A:406:CLA:C1A	3.03	0.41
1:A:252:HIS:NE2	1:A:265:PHE:O	2.53	0.41
2:B:3:LEU:HD23	2:B:3:LEU:HA	1.88	0.41
2:B:91:TRP:CE3	2:B:96:VAL:HG22	2.55	0.41
2:B:113:TRP:CZ3	2:B:120:LEU:HD11	2.55	0.41
2:B:413:ASP:O	2:B:417:VAL:HG23	2.20	0.41
2:B:457:SER:HB2	4:D:284:LEU:HD22	2.02	0.41
18:B:619:CLA:H91	18:B:619:CLA:H111	1.70	0.41
3:C:437:LEU:HD11	18:C:515:CLA:HAC2	2.02	0.41
4:D:103:ARG:HH21	5:E:77:ASP:HA	1.84	0.41
4:D:104:TRP:HH2	4:D:113:PHE:CD2	2.38	0.41
4:D:329:MET:O	4:D:333:ASP:HB2	2.19	0.41
20:H:102:BCR:H371	15:X:84:LEU:HD11	2.02	0.41
1:a:37:MET:HG2	1:a:41:LEU:HD12	2.02	0.41
1:a:160:ILE:HD11	24:c:514:DGD:HB91	2.02	0.41
2:b:237:VAL:HB	18:b:605:CLA:HMD1	2.02	0.41
20:b:616:BCR:H362	18:b:619:CLA:HMA2	2.02	0.41
18:b:617:CLA:H111	18:b:617:CLA:H152	1.73	0.41
18:b:619:CLA:HBB2	18:b:620:CLA:H2	2.01	0.41
3:c:447:ARG:HH11	18:c:506:CLA:HED3	1.86	0.41
26:d:405:PL9:H171	22:d:406:LHG:H131	2.02	0.41
12:o:160:LYS:HB2	12:o:200:GLN:HB3	2.01	0.41
12:o:289:LYS:HB2	12:o:298:ILE:HD11	2.02	0.41
1:A:32:TRP:O	1:A:35:VAL:HG22	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:89:ILE:CD1	1:A:108:ASN:HB3	2.47	0.41
1:A:139:MET:SD	4:D:252:PHE:HB2	2.60	0.41
2:B:144:PHE:O	2:B:148:VAL:HG23	2.21	0.41
2:B:246:PHE:HB3	2:B:462:PHE:HB3	2.03	0.41
2:B:256:MET:HG3	2:B:448:ARG:HG3	2.03	0.41
3:C:152:LYS:HA	3:C:152:LYS:HD2	1.72	0.41
3:C:343:ARG:HB2	12:O:166:THR:HB	2.02	0.41
3:C:461:ARG:HH12	4:D:241:GLU:HB3	1.84	0.41
18:C:506:CLA:H102	24:C:513:DGD:HBW1	2.00	0.41
22:D:404:LHG:H141	10:L:23:LEU:HD21	2.02	0.41
1:a:78:ILE:HD13	1:a:176:ILE:HD13	2.02	0.41
19:a:409:PHO:HAB	4:d:205:LEU:HD13	2.01	0.41
18:b:601:CLA:H2	18:b:601:CLA:H61	1.76	0.41
18:b:607:CLA:H61	18:b:607:CLA:H41	1.40	0.41
3:c:55:ALA:N	3:c:129:GLY:HA3	2.36	0.41
3:c:179:ALA:HA	3:c:184:GLY:CA	2.44	0.41
18:c:516:CLA:H71	8:i:19:PHE:CZ	2.55	0.41
4:d:161:PRO:HG3	4:d:170:ALA:CB	2.50	0.41
19:d:401:PHO:H3A	19:d:401:PHO:HBA2	1.76	0.41
1:A:82:ILE:HG21	1:A:115:ILE:HD12	2.01	0.41
2:B:237:VAL:HG13	18:B:607:CLA:C1D	2.51	0.41
2:B:238:LEU:HD23	2:B:238:LEU:HA	1.81	0.41
3:C:49:LEU:O	3:C:49:LEU:HD22	2.20	0.41
3:C:160:ILE:O	3:C:163:ILE:HG12	2.21	0.41
3:C:186:TYR:HA	3:C:196:VAL:HA	2.02	0.41
24:C:503:DGD:HD5	24:C:503:DGD:HE1	1.87	0.41
4:D:91:LEU:HD22	18:D:405:CLA:HAA1	2.03	0.41
22:L:101:LHG:H111	22:L:101:LHG:H241	2.01	0.41
1:a:286:THR:HG21	18:a:407:CLA:HMA2	2.02	0.41
2:b:9:HIS:CD2	18:b:612:CLA:NA	2.88	0.41
18:b:608:CLA:H142	18:b:608:CLA:H111	1.75	0.41
23:c:502:LMG:H361	24:c:514:DGD:HB42	2.02	0.41
18:c:505:CLA:H12	18:c:508:CLA:C3D	2.51	0.41
22:d:406:LHG:O9	10:l:20:TRP:HZ2	2.04	0.41
10:l:21:GLY:O	10:l:25:ILE:HG12	2.20	0.41
12:o:211:PHE:HA	12:o:305:GLN:NE2	2.22	0.41
1:A:150:PRO:HB2	18:A:403:CLA:H62	2.01	0.41
1:A:286:THR:HG21	18:A:403:CLA:HMA2	2.02	0.41
2:B:315:ILE:CG1	2:B:321:LYS:HG3	2.40	0.41
3:C:49:LEU:HD21	18:C:511:CLA:C1C	2.50	0.41
18:C:515:CLA:H12	18:C:516:CLA:HBD	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:K:47:LEU:O	9:K:51:VAL:HG23	2.20	0.41
12:O:169:LEU:HD13	12:O:193:ASP:O	2.21	0.41
1:a:62:GLY:O	3:c:356:MET:HE1	2.20	0.41
1:a:86:SER:HB3	1:a:89:ILE:CD1	2.51	0.41
1:a:131:TRP:HH2	3:c:449:ARG:NH1	2.19	0.41
2:b:55:MET:CE	2:b:80:ILE:HG12	2.51	0.41
3:c:361:LEU:HD12	24:c:514:DGD:HE62	2.03	0.41
3:c:400:PRO:HA	3:c:421:SER:CB	2.51	0.41
12:o:161:LEU:HD11	12:o:197:VAL:HG13	2.02	0.41
1:A:295:PHE:HD1	3:C:291:TRP:CD2	2.39	0.41
2:B:53:ASP:N	2:B:54:PRO:HD3	2.35	0.41
3:C:67:MET:HB2	3:C:88:LEU:HD22	2.03	0.41
3:C:337:LEU:HA	3:C:337:LEU:HD23	1.87	0.41
18:C:505:CLA:HBD	18:C:505:CLA:HAA1	2.03	0.41
22:D:404:LHG:O9	10:L:20:TRP:HZ2	2.04	0.41
5:E:51:ARG:HB2	5:E:54:GLU:HB2	2.02	0.41
1:a:78:ILE:HG12	10:l:34:ASN:OD1	2.20	0.41
1:a:252:HIS:NE2	1:a:265:PHE:O	2.54	0.41
18:a:407:CLA:C12	19:a:409:PHO:H3A	2.46	0.41
2:b:121:GLU:HG2	7:h:16:SER:HA	2.03	0.41
2:b:257:TRP:CZ2	2:b:272:ARG:HD2	2.55	0.41
2:b:282:GLN:HG2	14:u:13:TYR:CD1	2.56	0.41
2:b:460:LEU:HG	4:d:280:TRP:HZ3	1.86	0.41
2:b:482:ILE:HG21	4:d:138:LEU:HD23	2.01	0.41
3:c:46:SER:HA	3:c:149:TYR:OH	2.20	0.41
3:c:48:LYS:HE2	18:c:512:CLA:O2D	2.21	0.41
3:c:130:ILE:HG21	18:c:512:CLA:H122	2.03	0.41
3:c:157:MET:HA	3:c:160:ILE:HG22	2.01	0.41
24:c:517:DGD:HAN2	24:c:517:DGD:HAW2	1.55	0.41
4:d:257:PHE:CE1	22:d:406:LHG:H322	2.55	0.41
10:l:17:SER:HA	22:l:101:LHG:HC62	2.02	0.41
10:l:32:PHE:HB3	10:l:36:PHE:CZ	2.56	0.41
1:A:296:ASN:OD1	3:C:401:LEU:HG	2.20	0.41
18:A:405:CLA:C1C	18:D:406:CLA:H12	2.50	0.41
2:B:69:LEU:O	18:B:618:CLA:HMA3	2.20	0.41
2:B:143:LEU:HD11	18:B:614:CLA:HBB1	2.02	0.41
2:B:257:TRP:CZ3	2:B:319:PRO:HB2	2.56	0.41
2:B:355:PHE:HB3	14:U:19:THR:OG1	2.20	0.41
2:B:367:PRO:HB2	4:D:345:VAL:HB	2.02	0.41
2:B:422:ARG:HA	2:B:425:GLN:HG2	2.02	0.41
3:C:128:GLY:HA2	18:C:504:CLA:HBC3	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:C:507:CLA:HBC3	18:C:516:CLA:H101	2.02	0.41
18:C:508:CLA:H62	18:C:508:CLA:H102	1.74	0.41
18:C:516:CLA:H62	18:C:516:CLA:H13	2.01	0.41
12:O:142:THR:HB	12:O:156:PHE:HB2	2.02	0.41
1:a:118:HIS:CE1	18:a:404:CLA:C1A	3.04	0.41
2:b:360:PRO:HB2	2:b:363:PHE:CD1	2.55	0.41
11:m:21:PHE:CE1	11:m:25:ILE:HD11	2.56	0.41
18:D:405:CLA:H91	7:H:48:ALA:HB1	2.02	0.41
18:a:405:CLA:C4D	18:a:405:CLA:HED2	2.50	0.41
2:b:69:LEU:O	18:b:614:CLA:HMA3	2.20	0.41
2:b:90:LEU:HD23	18:b:614:CLA:H202	2.03	0.41
2:b:222:PRO:HG3	7:h:39:THR:H	1.86	0.41
18:b:609:CLA:H192	10:l:28:LEU:HD11	2.03	0.41
18:b:617:CLA:C2B	20:h:101:BCR:H323	2.50	0.41
3:c:229:ASP:HB2	3:c:232:ASP:CB	2.51	0.41
3:c:299:SER:HA	3:c:423:ARG:NH2	2.34	0.41
18:c:503:CLA:HBC2	18:c:503:CLA:HHD	2.03	0.41
18:c:505:CLA:C2B	18:c:509:CLA:H101	2.51	0.41
18:c:516:CLA:H61	18:c:516:CLA:H2	1.76	0.41
9:k:38:MET:HG3	9:k:39:PRO:HD3	2.03	0.41
12:o:92:TYR:CE1	12:o:133:LYS:HG3	2.56	0.41
12:o:135:CYS:O	12:o:325:TRP:HB2	2.21	0.41
1:A:32:TRP:CH2	8:I:22:GLY:HA3	2.56	0.41
1:A:119:PHE:CD2	1:A:120:LEU:HD12	2.56	0.41
1:A:202:VAL:HG11	18:A:405:CLA:C2D	2.50	0.41
1:A:249:VAL:H	1:A:249:VAL:HG23	1.52	0.41
2:B:26:HIS:HB2	18:B:601:CLA:CMB	2.51	0.41
2:B:91:TRP:HE3	2:B:96:VAL:HG22	1.85	0.41
2:B:246:PHE:CD1	2:B:246:PHE:C	2.98	0.41
2:B:275:TRP:CH2	2:B:358:ARG:HD2	2.56	0.41
2:B:379:ALA:HB2	2:B:395:VAL:HG21	2.02	0.41
2:B:475:PHE:CD1	4:D:140:PRO:HG3	2.55	0.41
2:B:482:ILE:HG21	4:D:138:LEU:HD23	2.03	0.41
3:C:276:LEU:HD21	18:C:512:CLA:CAB	2.51	0.41
18:C:504:CLA:H3A	18:C:504:CLA:HBA1	1.83	0.41
18:C:506:CLA:H43	24:C:513:DGD:HB42	2.03	0.41
4:D:47:GLY:HA2	4:D:50:THR:HG22	2.03	0.41
4:D:134:ARG:NE	4:D:134:ARG:HA	2.35	0.41
7:H:57:ILE:HG13	7:H:58:LEU:N	2.36	0.41
1:a:150:PRO:HB2	18:a:407:CLA:H62	2.02	0.41
1:a:276:ALA:HB2	4:d:215:GLY:HA3	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:a:406:SQD:H121	21:a:406:SQD:H152	1.72	0.41
2:b:62:VAL:HB	18:b:613:CLA:HED2	2.03	0.41
2:b:173:GLY:HA3	2:b:265:ILE:HD11	2.02	0.41
2:b:242:ILE:HG23	2:b:462:PHE:CD2	2.56	0.41
18:b:609:CLA:H102	10:l:32:PHE:CE1	2.56	0.41
20:b:610:BCR:H20C	20:b:610:BCR:H361	1.61	0.41
18:b:611:CLA:H171	18:b:611:CLA:C3B	2.50	0.41
3:c:60:ILE:HD13	18:c:504:CLA:HMC1	2.02	0.41
3:c:342:MET:HG2	3:c:343:ARG:H	1.86	0.41
3:c:375:LEU:HD12	3:c:375:LEU:O	2.20	0.41
4:d:53:THR:HA	4:d:67:TYR:HD2	1.86	0.41
4:d:195:PRO:HA	4:d:198:MET:HE2	2.03	0.41
4:d:269:PHE:HZ	22:d:403:LHG:HC5	1.85	0.41
20:d:407:BCR:H20C	20:d:407:BCR:H361	1.80	0.41
1:A:86:SER:HB3	1:A:89:ILE:HD13	2.02	0.41
1:A:160:ILE:HD11	24:C:503:DGD:HB91	2.02	0.41
1:A:183:MET:HE3	18:A:404:CLA:HAC1	2.03	0.41
2:B:140:GLY:HA2	2:B:216:HIS:HB2	2.03	0.41
2:B:247:PHE:CD1	18:H:101:CLA:H142	2.53	0.41
2:B:356:VAL:HG22	2:B:370:LEU:HD21	2.02	0.41
2:B:453:PHE:HB2	4:D:291:LEU:HD22	2.02	0.41
2:B:463:PHE:HZ	18:B:609:CLA:CBB	2.34	0.41
3:C:72:VAL:HG11	3:C:112:PHE:HB2	2.01	0.41
3:C:166:ILE:HG23	3:C:245:ILE:HG23	2.03	0.41
3:C:262:ARG:O	8:I:28:PRO:HD2	2.21	0.41
3:C:449:ARG:HD3	3:C:449:ARG:HA	1.81	0.41
12:O:143:VAL:HG23	12:O:159:THR:HG21	2.03	0.41
1:a:54:ALA:O	20:a:401:BCR:H282	2.21	0.41
2:b:26:HIS:O	2:b:30:VAL:HG23	2.20	0.41
2:b:56:TRP:HB2	2:b:447:PRO:HD2	2.03	0.41
2:b:139:PHE:CZ	2:b:143:LEU:HD22	2.56	0.41
2:b:381:VAL:HG22	2:b:418:LYS:HG2	2.02	0.41
3:c:62:PHE:HD2	9:k:42:PRO:HG3	1.86	0.41
3:c:82:TYR:CG	3:c:303:GLY:HA2	2.55	0.41
4:d:87:HIS:CD2	4:d:162:LEU:HD23	2.56	0.41
4:d:275:PRO:HB2	19:d:401:PHO:CAC	2.51	0.41
8:i:19:PHE:CE2	8:i:23:PHE:HE2	2.38	0.41
12:o:134:PHE:CE2	12:o:186:PHE:CE1	3.07	0.41
12:o:320:LYS:NZ	12:o:322:GLN:HB2	2.36	0.41
1:A:202:VAL:HG11	18:A:405:CLA:C3D	2.51	0.40
2:B:9:HIS:CD2	18:B:608:CLA:NA	2.90	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:256:MET:SD	2:B:448:ARG:HA	2.61	0.40
2:B:259:GLY:HA2	2:B:448:ARG:NH1	2.31	0.40
2:B:323:GLY:HA3	2:B:326:ARG:HG3	2.03	0.40
2:B:371:VAL:HG12	2:B:377:VAL:HA	2.03	0.40
18:B:615:CLA:H141	18:B:615:CLA:H161	1.65	0.40
18:C:512:CLA:H62	18:C:512:CLA:H41	1.92	0.40
4:D:81:PRO:HG3	4:D:108:GLY:O	2.20	0.40
4:D:302:GLU:OE2	4:D:319:ILE:HG13	2.21	0.40
12:O:135:CYS:O	12:O:325:TRP:HB2	2.20	0.40
12:O:257:LEU:HB2	12:O:261:GLY:N	2.36	0.40
15:X:104:VAL:O	15:X:108:VAL:HG12	2.21	0.40
1:a:19:ASN:O	1:a:23:SER:HB2	2.21	0.40
1:a:143:ILE:HD11	4:d:217:THR:HA	2.03	0.40
1:a:146:ALA:HB2	22:a:410:LHG:H261	2.03	0.40
1:a:215:HIS:HD1	1:a:271:LEU:HD21	1.86	0.40
2:b:256:MET:HE2	2:b:256:MET:HB2	1.96	0.40
2:b:317:ASN:O	2:b:330:MET:HE1	2.21	0.40
2:b:368:VAL:HG21	2:b:422:ARG:HE	1.85	0.40
2:b:463:PHE:O	2:b:467:ILE:HG12	2.21	0.40
2:b:463:PHE:CD2	4:d:280:TRP:HH2	2.40	0.40
3:c:158:THR:OG1	3:c:256:PRO:HG3	2.21	0.40
4:d:32:TRP:H	4:d:131:GLU:CD	2.29	0.40
4:d:62:GLY:HA3	5:e:63:ILE:HD13	2.02	0.40
4:d:97:ALA:HA	5:e:73:LEU:HD12	2.03	0.40
12:o:172:ILE:HG12	12:o:191:GLY:O	2.21	0.40
1:A:149:ALA:HB1	1:A:283:ILE:HB	2.02	0.40
19:A:407:PHO:H152	19:A:407:PHO:H112	1.84	0.40
2:B:466:HIS:CE1	18:B:609:CLA:C4D	3.04	0.40
3:C:39:ASN:ND2	18:C:509:CLA:O1A	2.54	0.40
3:C:164:HIS:CE1	18:C:511:CLA:H172	2.55	0.40
4:D:221:THR:HG21	4:D:249:ALA:CB	2.47	0.40
12:O:89:ARG:HB3	12:O:90:LEU:H	1.78	0.40
1:a:161:TYR:OH	1:a:190:HIS:NE2	2.43	0.40
1:a:280:VAL:HG23	4:d:212:ALA:HB1	2.02	0.40
2:b:321:LYS:HB3	2:b:321:LYS:HE3	1.82	0.40
18:b:612:CLA:H62	18:b:612:CLA:H41	1.63	0.40
23:b:618:LMG:H172	23:b:618:LMG:H142	1.92	0.40
3:c:310:SER:HB3	3:c:358:PHE:HD2	1.87	0.40
3:c:329:GLY:HA2	3:c:341:LEU:HB2	2.02	0.40
4:d:56:THR:OG1	4:d:106:GLN:HG2	2.21	0.40
4:d:58:TRP:CD1	4:d:58:TRP:N	2.89	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:d:206:GLY:O	4:d:210:LEU:HD13	2.22	0.40
4:d:342:PRO:O	4:d:345:VAL:HG22	2.20	0.40
11:m:27:VAL:HA	11:m:30:VAL:HG22	2.03	0.40
14:u:8:ALA:O	14:u:11:LYS:HG2	2.22	0.40
1:A:54:ALA:O	20:A:408:BCR:H282	2.21	0.40
2:B:141:ILE:O	2:B:145:LEU:HD23	2.21	0.40
2:B:319:PRO:HB3	2:B:446:SER:OG	2.21	0.40
18:B:606:CLA:H92	18:B:606:CLA:H62	1.70	0.40
18:B:611:CLA:H102	10:L:32:PHE:CE1	2.55	0.40
18:C:516:CLA:H111	18:C:516:CLA:H62	2.02	0.40
4:D:58:TRP:CD1	4:D:58:TRP:N	2.89	0.40
4:D:280:TRP:O	4:D:284:LEU:HG	2.21	0.40
12:O:138:PRO:HD2	12:O:167:TYR:HD1	1.85	0.40
1:a:95:PRO:HB2	1:a:97:TRP:CE3	2.56	0.40
1:a:202:VAL:HG11	18:a:405:CLA:C3D	2.51	0.40
1:a:295:PHE:HD1	3:c:291:TRP:CD2	2.39	0.40
2:b:3:LEU:HG	10:l:9:GLN:HB2	2.04	0.40
2:b:259:GLY:HA2	2:b:448:ARG:NH1	2.35	0.40
3:c:163:ILE:HD12	18:c:503:CLA:CAB	2.51	0.40
3:c:341:LEU:HD11	3:c:380:LEU:HD12	2.03	0.40
3:c:380:LEU:HD23	3:c:380:LEU:HA	1.92	0.40
12:o:131:GLY:CA	12:o:174:GLY:H	2.32	0.40
1:A:64:ARG:O	1:A:66:PRO:HD3	2.22	0.40
1:A:127:MET:HE2	1:A:127:MET:HB3	1.93	0.40
2:B:461:LEU:HG	4:D:284:LEU:HD21	2.02	0.40
2:B:463:PHE:O	2:B:467:ILE:HG12	2.20	0.40
18:B:606:CLA:HBB1	18:H:101:CLA:CHC	2.51	0.40
4:D:321:LEU:O	4:D:325:ILE:HG13	2.21	0.40
20:D:403:BCR:H402	23:D:408:LMG:H141	2.03	0.40
6:F:20:TRP:CE3	6:F:21:LEU:HD22	2.56	0.40
7:H:48:ALA:O	7:H:52:VAL:HG23	2.21	0.40
10:L:32:PHE:HB3	10:L:36:PHE:CZ	2.56	0.40
12:O:161:LEU:HD12	12:O:161:LEU:HA	1.74	0.40
2:b:30:VAL:HG11	18:b:605:CLA:H112	2.03	0.40
2:b:53:ASP:OD1	2:b:58:GLN:HG2	2.21	0.40
3:c:276:LEU:HD21	18:c:506:CLA:CAB	2.51	0.40
3:c:324:LEU:HD22	3:c:326:ALA:HB2	2.03	0.40
4:d:13:ASP:HB3	4:d:16:ASP:HB2	2.03	0.40
4:d:172:SER:HB2	4:d:177:ALA:CB	2.50	0.40
4:d:189:HIS:HB3	4:d:289:LEU:HD22	2.04	0.40
4:d:193:LEU:HD11	4:d:298:PHE:CE2	2.57	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:d:403:LHG:H142	22:d:403:LHG:H112	1.87	0.40
1:A:120:LEU:O	1:A:123:VAL:HG12	2.22	0.40
1:A:212:SER:OG	4:D:211:CYS:HB2	2.21	0.40
1:A:223:LEU:CD2	4:D:265:ARG:HG2	2.52	0.40
2:B:41:GLU:CD	2:B:61:PHE:H	2.30	0.40
18:C:509:CLA:H142	18:C:509:CLA:H111	1.73	0.40
18:C:510:CLA:CBB	18:C:510:CLA:HHC	2.52	0.40
4:D:53:THR:C	4:D:66:SER:HB2	2.46	0.40
4:D:110:LEU:HD11	20:D:403:BCR:H332	2.04	0.40
4:D:219:GLU:HA	4:D:222:LEU:HG	2.02	0.40
10:L:18:LEU:HD22	11:M:26:TYR:CD2	2.56	0.40
1:a:51:ALA:HA	1:a:55:ALA:HB2	2.02	0.40
1:a:78:ILE:HD12	4:d:198:MET:HE1	2.03	0.40
1:a:84:PRO:HB3	1:a:168:PHE:O	2.21	0.40
1:a:222:SER:HG	1:a:246:TYR:HD2	1.70	0.40
1:a:237:TYR:CE1	4:d:264:LYS:HE2	2.56	0.40
18:a:404:CLA:C15	18:c:516:CLA:H142	2.51	0.40
18:a:405:CLA:HED1	4:d:175:VAL:HG13	2.04	0.40
2:b:13:LEU:HD12	2:b:14:ASN:N	2.36	0.40
2:b:319:PRO:HB3	2:b:446:SER:OG	2.21	0.40
2:b:475:PHE:HZ	4:d:130:PHE:O	2.04	0.40
18:b:603:CLA:H41	18:b:603:CLA:H61	1.57	0.40
18:b:604:CLA:C16	18:d:408:CLA:H3A	2.51	0.40
3:c:82:TYR:O	3:c:419:TYR:HE1	2.05	0.40
3:c:83:GLU:OE2	3:c:398:HIS:CG	2.75	0.40
3:c:131:TYR:O	3:c:132:HIS:C	2.62	0.40
4:d:79:SER:O	4:d:111:TRP:HB2	2.21	0.40
4:d:272:LEU:O	4:d:276:VAL:HG23	2.22	0.40
23:d:409:LMG:H371	23:d:409:LMG:H342	1.87	0.40

There are no symmetry-related clashes.

5.3 Torsion angles ⓘ

5.3.1 Protein backbone ⓘ

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	A	308/353 (87%)	303 (98%)	5 (2%)	0	100	100
1	a	308/353 (87%)	300 (97%)	8 (3%)	0	100	100
2	B	467/508 (92%)	462 (99%)	5 (1%)	0	100	100
2	b	467/508 (92%)	461 (99%)	6 (1%)	0	100	100
3	C	363/473 (77%)	353 (97%)	10 (3%)	0	100	100
3	c	363/473 (77%)	352 (97%)	11 (3%)	0	100	100
4	D	320/353 (91%)	311 (97%)	8 (2%)	1 (0%)	36	54
4	d	320/353 (91%)	310 (97%)	9 (3%)	1 (0%)	36	54
5	E	60/83 (72%)	58 (97%)	2 (3%)	0	100	100
5	e	60/83 (72%)	58 (97%)	2 (3%)	0	100	100
6	F	26/39 (67%)	26 (100%)	0	0	100	100
6	f	26/39 (67%)	24 (92%)	2 (8%)	0	100	100
7	H	55/73 (75%)	52 (94%)	3 (6%)	0	100	100
7	h	55/73 (75%)	53 (96%)	2 (4%)	0	100	100
8	I	31/36 (86%)	30 (97%)	1 (3%)	0	100	100
8	i	31/36 (86%)	30 (97%)	1 (3%)	0	100	100
9	K	25/61 (41%)	25 (100%)	0	0	100	100
9	k	25/61 (41%)	24 (96%)	1 (4%)	0	100	100
10	L	33/38 (87%)	33 (100%)	0	0	100	100
10	l	33/38 (87%)	32 (97%)	1 (3%)	0	100	100
11	M	29/34 (85%)	28 (97%)	1 (3%)	0	100	100
11	m	29/34 (85%)	28 (97%)	1 (3%)	0	100	100
12	O	219/332 (66%)	206 (94%)	13 (6%)	0	100	100
12	o	219/332 (66%)	204 (93%)	15 (7%)	0	100	100
13	T	27/33 (82%)	27 (100%)	0	0	100	100
13	t	27/33 (82%)	27 (100%)	0	0	100	100
14	U	23/103 (22%)	21 (91%)	2 (9%)	0	100	100
14	u	23/103 (22%)	20 (87%)	3 (13%)	0	100	100
15	X	31/116 (27%)	31 (100%)	0	0	100	100
15	x	31/116 (27%)	30 (97%)	1 (3%)	0	100	100
All	All	4034/5270 (76%)	3919 (97%)	113 (3%)	2 (0%)	100	100

All (2) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
4	D	100	ASP
4	d	100	ASP

5.3.2 Protein sidechains ⓘ

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	A	253/285 (89%)	246 (97%)	7 (3%)	38	60
1	a	253/285 (89%)	245 (97%)	8 (3%)	34	56
2	B	374/402 (93%)	369 (99%)	5 (1%)	61	75
2	b	374/402 (93%)	371 (99%)	3 (1%)	73	83
3	C	302/373 (81%)	298 (99%)	4 (1%)	61	75
3	c	302/373 (81%)	299 (99%)	3 (1%)	68	80
4	D	263/283 (93%)	262 (100%)	1 (0%)	84	90
4	d	263/283 (93%)	262 (100%)	1 (0%)	84	90
5	E	55/73 (75%)	54 (98%)	1 (2%)	51	69
5	e	55/73 (75%)	55 (100%)	0	100	100
6	F	23/34 (68%)	23 (100%)	0	100	100
6	f	23/34 (68%)	23 (100%)	0	100	100
7	H	47/61 (77%)	47 (100%)	0	100	100
7	h	47/61 (77%)	47 (100%)	0	100	100
8	I	30/33 (91%)	30 (100%)	0	100	100
8	i	30/33 (91%)	30 (100%)	0	100	100
9	K	24/55 (44%)	24 (100%)	0	100	100
9	k	24/55 (44%)	24 (100%)	0	100	100
10	L	33/36 (92%)	33 (100%)	0	100	100
10	l	33/36 (92%)	33 (100%)	0	100	100
11	M	27/30 (90%)	27 (100%)	0	100	100
11	m	27/30 (90%)	27 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
12	O	190/268 (71%)	188 (99%)	2 (1%)	65	79
12	o	190/268 (71%)	189 (100%)	1 (0%)	81	88
13	T	26/30 (87%)	25 (96%)	1 (4%)	29	51
13	t	26/30 (87%)	26 (100%)	0	100	100
14	U	20/82 (24%)	20 (100%)	0	100	100
14	u	20/82 (24%)	20 (100%)	0	100	100
15	X	28/92 (30%)	28 (100%)	0	100	100
15	x	28/92 (30%)	28 (100%)	0	100	100
All	All	3390/4274 (79%)	3353 (99%)	37 (1%)	63	79

All (37) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	91	LEU
1	A	190	HIS
1	A	246	TYR
1	A	248	ILE
1	A	249	VAL
1	A	257	ARG
1	A	259	ILE
2	B	22	VAL
2	B	122	ILE
2	B	145	LEU
2	B	203	ILE
2	B	356	VAL
3	C	119	LEU
3	C	230	LEU
3	C	361	LEU
3	C	375	LEU
4	D	56	THR
5	E	30	LEU
12	O	95	ILE
12	O	112	CYS
13	T	21	ILE
1	a	91	LEU
1	a	190	HIS
1	a	246	TYR
1	a	248	ILE
1	a	249	VAL

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Mol	Chain	Res	Type
1	a	257	ARG
1	a	259	ILE
1	a	306	VAL
2	b	22	VAL
2	b	122	ILE
2	b	356	VAL
3	c	119	LEU
3	c	230	LEU
3	c	375	LEU
4	d	56	THR
12	o	112	CYS

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (32) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	108	ASN
1	A	181	ASN
1	A	296	ASN
1	A	338	ASN
2	B	114	HIS
3	C	164	HIS
3	C	405	ASN
4	D	83	ASN
4	D	106	GLN
4	D	164	GLN
4	D	220	ASN
4	D	292	ASN
10	L	7	ASN
10	L	34	ASN
12	O	110	ASN
12	O	111	GLN
12	O	328	GLN
1	a	181	ASN
1	a	296	ASN
2	b	202	HIS
2	b	277	GLN
2	b	425	GLN
3	c	118	HIS
3	c	164	HIS
3	c	332	GLN
3	c	385	GLN
4	d	189	HIS

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Mol	Chain	Res	Type
4	d	220	ASN
4	d	350	ASN
10	l	34	ASN
12	o	305	GLN
12	o	328	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](#)

Of 120 ligands modelled in this entry, 6 are monoatomic - leaving 114 for Mogul analysis.

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	$\# Z > 2$
26	PL9	d	405	-	55,55,55	1.36	5 (9%)	68,69,69	1.54	12 (17%)
20	BCR	B	613	-	41,41,41	0.37	0	56,56,56	2.32	14 (25%)
27	HEM	F	101	-	50,50,50	1.39	7 (14%)	66,82,82	1.27	7 (10%)
18	CLA	B	609	2	69,73,73	1.36	11 (15%)	83,113,113	1.21	9 (10%)
24	DGD	C	513	-	63,63,67	0.54	0	77,77,81	0.80	1 (1%)
18	CLA	a	403	-	69,73,73	1.23	9 (13%)	83,113,113	1.25	8 (9%)
18	CLA	a	405	-	53,57,73	1.41	10 (18%)	62,93,113	1.29	7 (11%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
18	CLA	b	608	-	69,73,73	1.28	9 (13%)	83,113,113	1.27	12 (14%)
16	OEX	A	401	3,1	0,14,14	-	-	-		
23	LMG	b	618	-	51,51,55	0.52	0	59,59,63	0.64	0
27	HEM	f	101	-	50,50,50	1.40	7 (14%)	66,82,82	1.27	7 (10%)
18	CLA	b	604	2	69,73,73	1.37	11 (15%)	83,113,113	1.21	9 (10%)
18	CLA	b	609	-	69,73,73	1.25	8 (11%)	83,113,113	1.16	9 (10%)
18	CLA	c	513	-	69,73,73	1.34	8 (11%)	83,113,113	1.22	9 (10%)
18	CLA	B	603	-	69,73,73	1.23	8 (11%)	83,113,113	1.17	6 (7%)
18	CLA	c	512	3	69,73,73	1.24	8 (11%)	83,113,113	1.15	6 (7%)
24	DGD	C	503	-	51,51,67	0.68	0	65,65,81	1.16	5 (7%)
18	CLA	b	612	2	69,73,73	1.25	9 (13%)	83,113,113	1.09	7 (8%)
18	CLA	H	101	2	69,73,73	1.36	10 (14%)	83,113,113	1.18	5 (6%)
22	LHG	l	101	-	48,48,48	0.51	0	51,54,54	0.51	0
18	CLA	c	511	3	69,73,73	1.25	8 (11%)	83,113,113	1.27	9 (10%)
18	CLA	b	606	2	69,73,73	1.27	9 (13%)	83,113,113	1.41	8 (9%)
18	CLA	b	603	2	69,73,73	1.22	8 (11%)	83,113,113	1.17	5 (6%)
18	CLA	C	514	3	69,73,73	1.23	8 (11%)	83,113,113	1.16	7 (8%)
18	CLA	C	506	-	69,73,73	1.23	7 (10%)	83,113,113	1.25	5 (6%)
18	CLA	B	616	2	69,73,73	1.21	8 (11%)	83,113,113	1.34	8 (9%)
23	LMG	D	408	-	46,46,55	0.52	0	54,54,63	0.64	0
26	PL9	D	407	-	55,55,55	1.43	5 (9%)	68,69,69	1.52	13 (19%)
18	CLA	c	503	-	69,73,73	1.22	8 (11%)	83,113,113	1.21	11 (13%)
18	CLA	b	613	2	69,73,73	1.22	9 (13%)	83,113,113	1.28	10 (12%)
23	LMG	C	502	-	48,48,55	0.52	0	56,56,63	0.71	0
18	CLA	B	618	2	69,73,73	1.35	12 (17%)	83,113,113	1.52	16 (19%)
18	CLA	c	505	-	69,73,73	1.34	10 (14%)	83,113,113	1.53	9 (10%)
24	DGD	c	517	-	63,63,67	0.55	0	77,77,81	0.79	1 (1%)
18	CLA	B	605	2	69,73,73	1.27	9 (13%)	83,113,113	1.44	10 (12%)
18	CLA	C	516	-	69,73,73	1.30	9 (13%)	83,113,113	1.27	8 (9%)
20	BCR	B	612	-	41,41,41	0.32	0	56,56,56	0.77	1 (1%)
18	CLA	C	509	3	69,73,73	1.20	7 (10%)	83,113,113	1.24	8 (9%)
18	CLA	c	515	-	69,73,73	1.20	6 (8%)	83,113,113	1.24	7 (8%)
18	CLA	B	611	-	69,73,73	1.24	8 (11%)	83,113,113	1.16	8 (9%)
19	PHO	D	402	-	58,69,69	1.97	10 (17%)	56,99,99	1.66	10 (17%)
18	CLA	B	608	2	69,73,73	1.24	9 (13%)	83,113,113	1.08	7 (8%)
23	LMG	B	604	-	51,51,55	0.51	0	59,59,63	0.64	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
18	CLA	b	601	-	69,73,73	1.22	9 (13%)	83,113,113	1.27	8 (9%)
18	CLA	A	404	-	69,73,73	1.24	9 (13%)	83,113,113	1.23	8 (9%)
20	BCR	b	602	-	41,41,41	0.34	0	56,56,56	1.63	11 (19%)
24	DGD	c	514	-	51,51,67	0.67	0	65,65,81	1.17	6 (9%)
18	CLA	C	504	-	53,57,73	1.76	10 (18%)	62,93,113	2.30	16 (25%)
18	CLA	D	405	-	69,73,73	1.26	10 (14%)	83,113,113	1.22	7 (8%)
18	CLA	c	507	-	53,57,73	1.80	11 (20%)	62,93,113	2.53	16 (25%)
18	CLA	b	617	2	69,73,73	1.27	10 (14%)	83,113,113	1.23	4 (4%)
18	CLA	B	614	2	69,73,73	1.25	8 (11%)	83,113,113	1.22	5 (6%)
18	CLA	b	614	2	69,73,73	1.33	12 (17%)	83,113,113	1.52	16 (19%)
18	CLA	B	607	-	69,73,73	1.27	8 (11%)	83,113,113	1.25	11 (13%)
18	CLA	b	607	2	69,73,73	1.24	10 (14%)	83,113,113	1.23	6 (7%)
18	CLA	B	601	2	69,73,73	1.36	10 (14%)	83,113,113	1.25	7 (8%)
18	CLA	B	619	-	69,73,73	1.30	10 (14%)	83,113,113	1.16	8 (9%)
18	CLA	b	619	-	69,73,73	1.23	8 (11%)	83,113,113	1.17	6 (7%)
19	PHO	a	409	-	58,69,69	1.97	11 (18%)	56,99,99	1.56	7 (12%)
18	CLA	c	510	-	69,73,73	1.23	6 (8%)	83,113,113	1.27	5 (6%)
18	CLA	a	407	1	69,73,73	1.23	8 (11%)	83,113,113	1.19	6 (7%)
21	SQD	A	409	-	53,54,54	1.55	8 (15%)	62,65,65	1.34	6 (9%)
18	CLA	b	620	2	69,73,73	1.21	7 (10%)	83,113,113	1.36	7 (8%)
20	BCR	b	610	-	41,41,41	0.31	0	56,56,56	0.75	1 (1%)
18	CLA	B	606	-	69,73,73	1.26	10 (14%)	83,113,113	1.19	9 (10%)
22	LHG	D	409	-	42,42,48	0.55	0	45,48,54	0.55	0
22	LHG	A	410	-	36,36,48	0.57	0	39,42,54	0.59	0
18	CLA	B	615	-	69,73,73	1.22	8 (11%)	83,113,113	1.28	8 (9%)
18	CLA	C	507	-	56,60,73	1.37	7 (12%)	67,97,113	1.57	10 (14%)
19	PHO	d	401	-	58,69,69	1.97	10 (17%)	56,99,99	1.65	7 (12%)
18	CLA	C	508	3	69,73,73	1.20	7 (10%)	83,113,113	1.21	7 (8%)
18	CLA	c	516	3	69,73,73	1.20	7 (10%)	83,113,113	1.21	7 (8%)
22	LHG	d	403	-	42,42,48	0.55	0	45,48,54	0.55	0
22	LHG	a	410	-	36,36,48	0.55	0	39,42,54	0.63	0
16	OEX	a	402	3,1	0,14,14	-	-	-	-	-
18	CLA	a	404	1	64,68,73	1.30	9 (14%)	77,107,113	1.25	11 (14%)
18	CLA	C	512	3	69,73,73	1.23	9 (13%)	83,113,113	1.36	11 (13%)
18	CLA	b	611	-	69,73,73	1.27	9 (13%)	83,113,113	1.21	9 (10%)
24	DGD	B	620	-	63,63,67	0.59	0	77,77,81	0.90	4 (5%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
18	CLA	b	615	2	69,73,73	1.30	10 (14%)	83,113,113	1.15	8 (9%)
19	PHO	A	407	-	58,69,69	1.96	11 (18%)	56,99,99	1.54	7 (12%)
23	LMG	d	409	-	46,46,55	0.52	0	54,54,63	0.65	0
20	BCR	a	401	-	41,41,41	0.38	0	56,56,56	0.79	2 (3%)
18	CLA	C	510	-	69,73,73	1.34	8 (11%)	83,113,113	1.23	10 (12%)
18	CLA	D	406	4	69,73,73	1.28	10 (14%)	83,113,113	1.33	12 (14%)
18	CLA	B	617	2	69,73,73	1.21	8 (11%)	83,113,113	1.27	10 (12%)
20	BCR	B	610	-	41,41,41	0.34	0	56,56,56	1.63	11 (19%)
20	BCR	D	403	-	41,41,41	0.32	0	56,56,56	0.91	1 (1%)
22	LHG	D	404	-	48,48,48	0.51	0	51,54,54	0.56	0
18	CLA	C	515	3	69,73,73	1.24	9 (13%)	83,113,113	1.36	9 (10%)
20	BCR	d	407	-	41,41,41	0.32	0	56,56,56	0.91	1 (1%)
18	CLA	b	605	2	69,73,73	1.35	9 (13%)	83,113,113	1.24	6 (7%)
18	CLA	c	508	-	56,60,73	1.37	8 (14%)	67,97,113	1.60	11 (16%)
20	BCR	H	102	-	41,41,41	0.44	0	56,56,56	1.77	8 (14%)
18	CLA	C	505	-	69,73,73	1.22	7 (10%)	83,113,113	1.19	9 (10%)
18	CLA	B	602	2	69,73,73	1.24	10 (14%)	83,113,113	1.23	6 (7%)
22	LHG	d	406	-	48,48,48	0.52	0	51,54,54	0.56	0
23	LMG	c	502	-	48,48,55	0.52	0	56,56,63	0.73	0
18	CLA	A	406	1	64,68,73	1.31	10 (15%)	77,107,113	1.25	8 (10%)
20	BCR	A	408	-	41,41,41	0.38	0	56,56,56	0.79	1 (1%)
24	DGD	b	621	-	63,63,67	0.58	0	77,77,81	0.94	4 (5%)
22	LHG	L	101	-	48,48,48	0.51	0	51,54,54	0.52	0
18	CLA	c	506	3	69,73,73	1.22	8 (11%)	83,113,113	1.40	10 (12%)
18	CLA	c	504	3	69,73,73	1.20	7 (10%)	83,113,113	1.26	9 (10%)
20	BCR	b	616	-	41,41,41	0.37	0	56,56,56	2.33	14 (25%)
21	SQD	a	406	-	53,54,54	1.55	8 (15%)	62,65,65	1.33	6 (9%)
18	CLA	c	509	3	69,73,73	1.25	9 (13%)	83,113,113	1.40	12 (14%)
18	CLA	C	511	3	69,73,73	1.24	8 (11%)	83,113,113	1.26	8 (9%)
18	CLA	A	403	1	69,73,73	1.24	8 (11%)	83,113,113	1.18	5 (6%)
20	BCR	h	101	-	41,41,41	0.44	0	56,56,56	1.77	8 (14%)
18	CLA	C	517	-	69,73,73	1.20	6 (8%)	83,113,113	1.23	7 (8%)
18	CLA	A	405	-	53,57,73	1.41	10 (18%)	62,93,113	1.29	7 (11%)
18	CLA	d	408	-	69,73,73	1.23	8 (11%)	83,113,113	1.24	7 (8%)
18	CLA	d	404	4	69,73,73	1.27	11 (15%)	83,113,113	1.33	12 (14%)

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
26	PL9	d	405	-	-	12/53/73/73	0/1/1/1
20	BCR	B	613	-	-	10/29/63/63	0/2/2/2
27	HEM	F	101	-	-	9/14/54/54	-
18	CLA	B	609	2	-	13/39/115/115	-
24	DGD	C	513	-	-	25/51/91/95	0/2/2/2
18	CLA	a	403	-	-	16/39/115/115	-
18	CLA	a	405	-	-	9/20/96/115	-
18	CLA	b	608	-	-	18/39/115/115	-
23	LMG	b	618	-	-	17/46/66/70	0/1/1/1
27	HEM	f	101	-	-	9/14/54/54	-
18	CLA	b	604	2	-	13/39/115/115	-
18	CLA	b	609	-	-	17/39/115/115	-
18	CLA	c	513	-	-	14/39/115/115	-
18	CLA	B	603	-	-	9/39/115/115	-
18	CLA	c	512	3	-	18/39/115/115	-
24	DGD	C	503	-	-	17/39/79/95	0/2/2/2
18	CLA	b	612	2	-	16/39/115/115	-
18	CLA	H	101	2	-	14/39/115/115	-
22	LHG	l	101	-	-	16/53/53/53	-
18	CLA	c	511	3	-	20/39/115/115	-
18	CLA	b	606	2	-	16/39/115/115	-
18	CLA	b	603	2	-	14/39/115/115	-
18	CLA	C	514	3	-	18/39/115/115	-
18	CLA	C	506	-	-	17/39/115/115	-
18	CLA	B	616	2	-	14/39/115/115	-
23	LMG	D	408	-	-	18/41/61/70	0/1/1/1
26	PL9	D	407	-	-	13/53/73/73	0/1/1/1
18	CLA	c	503	-	-	18/39/115/115	-
18	CLA	b	613	2	-	17/39/115/115	-
23	LMG	C	502	-	-	20/43/63/70	0/1/1/1
18	CLA	B	618	2	-	20/39/115/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
18	CLA	c	505	-	-	21/39/115/115	-
24	DGD	c	517	-	-	26/51/91/95	0/2/2/2
18	CLA	B	605	2	-	16/39/115/115	-
18	CLA	C	516	-	-	24/39/115/115	-
20	BCR	B	612	-	-	9/29/63/63	0/2/2/2
18	CLA	C	509	3	-	15/39/115/115	-
18	CLA	c	515	-	-	15/39/115/115	-
18	CLA	B	611	-	-	17/39/115/115	-
19	PHO	D	402	-	-	7/37/103/103	0/5/6/6
18	CLA	B	608	2	-	16/39/115/115	-
23	LMG	B	604	-	-	17/46/66/70	0/1/1/1
18	CLA	b	601	-	-	9/39/115/115	-
18	CLA	A	404	-	-	15/39/115/115	-
20	BCR	b	602	-	-	6/29/63/63	0/2/2/2
24	DGD	c	514	-	-	20/39/79/95	0/2/2/2
18	CLA	C	504	-	-	5/20/96/115	-
18	CLA	D	405	-	-	18/39/115/115	-
18	CLA	c	507	-	-	5/20/96/115	-
18	CLA	b	617	2	-	16/39/115/115	-
18	CLA	B	614	2	-	16/39/115/115	-
18	CLA	b	614	2	-	20/39/115/115	-
18	CLA	B	607	-	-	14/39/115/115	-
18	CLA	b	607	2	-	18/39/115/115	-
18	CLA	B	601	2	-	14/39/115/115	-
18	CLA	B	619	-	-	15/39/115/115	-
18	CLA	b	619	-	-	8/39/115/115	-
19	PHO	a	409	-	-	15/37/103/103	0/5/6/6
18	CLA	c	510	-	-	17/39/115/115	-
18	CLA	a	407	1	-	10/39/115/115	-
21	SQD	A	409	-	-	26/49/69/69	0/1/1/1
18	CLA	b	620	2	-	11/39/115/115	-
20	BCR	b	610	-	-	9/29/63/63	0/2/2/2
18	CLA	B	606	-	-	20/39/115/115	-
22	LHG	D	409	-	-	15/47/47/53	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
22	LHG	A	410	-	-	17/41/41/53	-
18	CLA	B	615	-	-	9/39/115/115	-
18	CLA	C	507	-	-	11/24/100/115	-
19	PHO	d	401	-	-	8/37/103/103	0/5/6/6
18	CLA	C	508	3	-	21/39/115/115	-
18	CLA	c	516	3	-	20/39/115/115	-
22	LHG	d	403	-	-	18/47/47/53	-
22	LHG	a	410	-	-	12/41/41/53	-
18	CLA	a	404	1	-	15/33/109/115	-
18	CLA	C	512	3	-	15/39/115/115	-
18	CLA	b	611	-	-	20/39/115/115	-
24	DGD	B	620	-	-	20/51/91/95	0/2/2/2
18	CLA	b	615	2	-	15/39/115/115	-
19	PHO	A	407	-	-	16/37/103/103	0/5/6/6
23	LMG	d	409	-	-	17/41/61/70	0/1/1/1
20	BCR	a	401	-	-	7/29/63/63	0/2/2/2
18	CLA	C	510	-	-	14/39/115/115	-
18	CLA	D	406	4	-	18/39/115/115	-
18	CLA	B	617	2	-	19/39/115/115	-
20	BCR	B	610	-	-	6/29/63/63	0/2/2/2
20	BCR	D	403	-	-	7/29/63/63	0/2/2/2
22	LHG	D	404	-	-	21/53/53/53	-
18	CLA	C	515	3	-	18/39/115/115	-
20	BCR	d	407	-	-	4/29/63/63	0/2/2/2
18	CLA	b	605	2	-	13/39/115/115	-
18	CLA	c	508	-	-	10/24/100/115	-
20	BCR	H	102	-	-	10/29/63/63	0/2/2/2
18	CLA	C	505	-	-	18/39/115/115	-
18	CLA	B	602	2	-	18/39/115/115	-
22	LHG	d	406	-	-	20/53/53/53	-
23	LMG	c	502	-	-	19/43/63/70	0/1/1/1
18	CLA	A	406	1	-	15/33/109/115	-
20	BCR	A	408	-	-	6/29/63/63	0/2/2/2
24	DGD	b	621	-	-	19/51/91/95	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
22	LHG	L	101	-	-	16/53/53/53	-
18	CLA	c	506	3	-	16/39/115/115	-
18	CLA	c	504	3	-	17/39/115/115	-
20	BCR	b	616	-	-	10/29/63/63	0/2/2/2
21	SQD	a	406	-	-	26/49/69/69	0/1/1/1
18	CLA	c	509	3	-	16/39/115/115	-
18	CLA	C	511	3	-	20/39/115/115	-
18	CLA	A	403	1	-	10/39/115/115	-
20	BCR	h	101	-	-	10/29/63/63	0/2/2/2
18	CLA	C	517	-	-	15/39/115/115	-
18	CLA	A	405	-	-	9/20/96/115	-
18	CLA	d	408	-	-	19/39/115/115	-
18	CLA	d	404	4	-	17/39/115/115	-

All (694) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
19	A	407	PHO	C1B-C2B	8.83	1.49	1.39
19	a	409	PHO	C1B-C2B	8.82	1.49	1.39
19	d	401	PHO	C1B-C2B	8.69	1.49	1.39
19	D	402	PHO	C1B-C2B	8.63	1.49	1.39
19	d	401	PHO	C3B-C4B	7.45	1.50	1.41
19	D	402	PHO	C3B-C4B	7.37	1.49	1.41
19	a	409	PHO	C3B-C4B	7.07	1.49	1.41
19	A	407	PHO	C3B-C4B	7.03	1.49	1.41
26	D	407	PL9	C7-C3	-5.11	1.46	1.51
18	c	507	CLA	MG-NB	5.10	2.15	2.05
18	C	504	CLA	MG-NB	4.84	2.15	2.05
21	A	409	SQD	O48-C23	4.78	1.47	1.33
21	a	406	SQD	O48-C23	4.76	1.47	1.33
26	d	405	PL9	C7-C3	-4.66	1.46	1.51
18	C	504	CLA	MG-NC	-4.58	1.95	2.06
18	b	604	CLA	MG-ND	-4.36	1.97	2.05
18	B	609	CLA	MG-ND	-4.28	1.97	2.05
18	H	101	CLA	MG-NA	4.15	2.16	2.06
18	B	601	CLA	MG-NB	-4.14	1.97	2.05
18	b	605	CLA	MG-ND	-4.09	1.97	2.05
18	c	507	CLA	C4D-ND	-4.07	1.32	1.37
18	c	505	CLA	C1D-ND	4.06	1.42	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
18	C	504	CLA	C4D-ND	-4.05	1.32	1.37
26	D	407	PL9	C3-C4	-4.04	1.42	1.49
18	c	507	CLA	MG-NC	-4.01	1.96	2.06
18	B	601	CLA	MG-ND	-3.99	1.97	2.05
18	c	507	CLA	MG-NA	-3.93	1.96	2.06
18	b	609	CLA	C1D-ND	3.86	1.42	1.37
18	b	605	CLA	MG-NB	-3.86	1.98	2.05
18	C	516	CLA	C1D-ND	3.85	1.42	1.37
18	b	611	CLA	C1D-ND	3.80	1.42	1.37
18	A	406	CLA	C1D-ND	3.79	1.42	1.37
18	B	611	CLA	C1D-ND	3.79	1.42	1.37
18	c	503	CLA	C1D-ND	3.77	1.42	1.37
18	a	404	CLA	C1D-ND	3.74	1.42	1.37
18	c	510	CLA	C1D-ND	3.74	1.42	1.37
18	C	517	CLA	C1D-ND	3.73	1.42	1.37
18	C	506	CLA	C1D-ND	3.72	1.42	1.37
18	B	605	CLA	C1D-ND	3.71	1.42	1.37
18	b	606	CLA	C1D-ND	3.71	1.42	1.37
18	c	511	CLA	C1D-ND	3.70	1.42	1.37
18	B	606	CLA	C1D-ND	3.70	1.42	1.37
18	C	510	CLA	MG-ND	-3.68	1.98	2.05
26	d	405	PL9	C3-C4	-3.68	1.43	1.49
18	b	619	CLA	C1D-ND	3.67	1.42	1.37
18	A	403	CLA	C1D-ND	3.67	1.42	1.37
18	C	511	CLA	C1D-ND	3.66	1.42	1.37
19	D	402	PHO	C1D-C2D	3.66	1.43	1.39
18	b	614	CLA	C1D-ND	3.66	1.42	1.37
18	C	505	CLA	C1D-ND	3.65	1.42	1.37
27	f	101	HEM	FE-ND	3.65	2.06	1.94
18	a	407	CLA	C1D-ND	3.64	1.42	1.37
18	a	405	CLA	C4D-ND	-3.64	1.32	1.37
27	F	101	HEM	FE-ND	3.63	2.06	1.94
18	B	618	CLA	C1D-ND	3.63	1.42	1.37
21	a	406	SQD	O47-C45	-3.62	1.37	1.46
18	c	512	CLA	C1D-ND	3.62	1.42	1.37
18	c	513	CLA	MG-ND	-3.62	1.98	2.05
18	B	603	CLA	C1D-ND	3.61	1.42	1.37
18	A	405	CLA	C4D-ND	-3.61	1.32	1.37
21	A	409	SQD	O47-C45	-3.60	1.37	1.46
18	C	510	CLA	MG-NB	-3.58	1.98	2.05
18	C	514	CLA	C1D-ND	3.58	1.42	1.37
18	c	513	CLA	C1D-ND	3.57	1.42	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
18	c	513	CLA	C4D-ND	-3.57	1.32	1.37
18	b	608	CLA	MG-NB	-3.57	1.98	2.05
18	b	603	CLA	C1D-ND	3.57	1.42	1.37
18	C	510	CLA	C1D-ND	3.56	1.42	1.37
18	b	607	CLA	C1D-ND	3.56	1.42	1.37
18	c	509	CLA	C4D-ND	-3.55	1.32	1.37
19	d	401	PHO	C1D-C2D	3.55	1.43	1.39
18	c	515	CLA	C1D-ND	3.55	1.42	1.37
18	b	620	CLA	C1D-ND	3.55	1.42	1.37
18	b	608	CLA	C1D-ND	3.54	1.42	1.37
18	B	607	CLA	C1D-ND	3.54	1.42	1.37
18	C	510	CLA	C4D-ND	-3.53	1.32	1.37
18	a	403	CLA	C1D-ND	3.53	1.42	1.37
18	B	602	CLA	C1D-ND	3.52	1.42	1.37
18	c	515	CLA	C4D-ND	-3.52	1.32	1.37
18	B	619	CLA	C1D-ND	3.51	1.42	1.37
18	C	504	CLA	MG-NA	-3.50	1.97	2.06
18	B	614	CLA	C1D-ND	3.50	1.42	1.37
18	d	408	CLA	C1D-ND	3.50	1.42	1.37
19	A	407	PHO	C1D-C2D	3.50	1.43	1.39
18	C	517	CLA	C4D-ND	-3.50	1.32	1.37
18	H	101	CLA	C1D-ND	3.50	1.42	1.37
19	a	409	PHO	C1D-C2D	3.49	1.43	1.39
18	C	515	CLA	C4D-ND	-3.49	1.32	1.37
18	B	617	CLA	C4D-ND	-3.49	1.32	1.37
18	b	613	CLA	C1D-ND	3.49	1.42	1.37
18	C	512	CLA	C4D-ND	-3.49	1.32	1.37
18	A	404	CLA	C1D-ND	3.48	1.42	1.37
18	C	509	CLA	C1D-ND	3.48	1.42	1.37
18	B	619	CLA	MG-ND	-3.47	1.98	2.05
18	B	616	CLA	C1D-ND	3.47	1.42	1.37
18	b	615	CLA	C1D-ND	3.46	1.42	1.37
18	b	617	CLA	C1D-ND	3.46	1.42	1.37
18	c	506	CLA	C4D-ND	-3.45	1.32	1.37
18	b	613	CLA	C4D-ND	-3.45	1.32	1.37
18	c	504	CLA	C1D-ND	3.45	1.42	1.37
18	D	405	CLA	C1D-ND	3.45	1.42	1.37
18	B	615	CLA	C1D-ND	3.45	1.42	1.37
18	B	617	CLA	C1D-ND	3.45	1.42	1.37
18	A	404	CLA	C4D-ND	-3.44	1.33	1.37
18	B	607	CLA	MG-NB	-3.44	1.99	2.05
18	b	617	CLA	C4D-ND	-3.43	1.33	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
18	B	608	CLA	C1D-ND	3.43	1.42	1.37
18	b	612	CLA	C1D-ND	3.43	1.42	1.37
18	d	404	CLA	C1D-ND	3.42	1.42	1.37
18	b	604	CLA	C4B-NB	3.42	1.42	1.37
18	D	406	CLA	C4B-NB	3.41	1.42	1.37
18	C	512	CLA	C1D-ND	3.41	1.42	1.37
18	b	614	CLA	C4B-NB	3.41	1.42	1.37
18	c	513	CLA	MG-NB	-3.41	1.99	2.05
18	a	403	CLA	C4D-ND	-3.40	1.33	1.37
18	C	507	CLA	C1D-ND	3.40	1.42	1.37
18	B	618	CLA	C4B-NB	3.40	1.42	1.37
18	C	515	CLA	C1D-ND	3.40	1.42	1.37
18	d	404	CLA	C4B-NB	3.39	1.42	1.37
18	c	504	CLA	C4D-ND	-3.39	1.33	1.37
18	D	406	CLA	C1D-ND	3.39	1.41	1.37
18	B	614	CLA	C4D-ND	-3.38	1.33	1.37
18	c	516	CLA	C1D-ND	3.38	1.41	1.37
18	c	508	CLA	C1D-ND	3.38	1.41	1.37
18	c	506	CLA	C1D-ND	3.37	1.41	1.37
18	B	609	CLA	C4B-NB	3.36	1.41	1.37
21	A	409	SQD	O5-C1	3.35	1.50	1.41
18	A	405	CLA	C1D-ND	3.35	1.41	1.37
18	a	405	CLA	C1D-ND	3.35	1.41	1.37
18	B	609	CLA	C1D-ND	3.34	1.41	1.37
18	b	601	CLA	C1D-ND	3.33	1.41	1.37
18	C	508	CLA	C1D-ND	3.33	1.41	1.37
18	C	509	CLA	C4D-ND	-3.33	1.33	1.37
18	c	511	CLA	C4D-ND	-3.32	1.33	1.37
21	a	406	SQD	O5-C1	3.32	1.50	1.41
18	c	516	CLA	C4D-ND	-3.31	1.33	1.37
26	d	405	PL9	C6-C1	-3.31	1.42	1.48
18	C	511	CLA	C4D-ND	-3.31	1.33	1.37
26	D	407	PL9	C6-C1	-3.29	1.42	1.48
18	B	618	CLA	MG-ND	-3.29	1.99	2.05
18	C	506	CLA	C4D-ND	-3.29	1.33	1.37
18	b	604	CLA	C1D-ND	3.28	1.41	1.37
18	H	101	CLA	C4D-ND	-3.28	1.33	1.37
18	a	404	CLA	C4D-ND	-3.28	1.33	1.37
18	c	510	CLA	C4D-ND	-3.27	1.33	1.37
18	b	603	CLA	C4D-ND	-3.27	1.33	1.37
19	A	407	PHO	C4D-CHA	3.27	1.44	1.39
18	c	505	CLA	MG-NA	3.26	2.14	2.06

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
27	F	101	HEM	FE-NB	3.26	2.04	1.94
18	C	515	CLA	C4B-NB	3.25	1.41	1.37
18	c	509	CLA	C1D-ND	3.24	1.41	1.37
18	C	507	CLA	C4D-ND	-3.24	1.33	1.37
18	C	516	CLA	C4B-NB	3.24	1.41	1.37
18	C	504	CLA	C1D-ND	3.23	1.41	1.37
18	c	505	CLA	C4B-NB	3.23	1.41	1.37
18	c	507	CLA	C1D-ND	3.23	1.41	1.37
18	D	406	CLA	C4D-ND	-3.22	1.33	1.37
19	D	402	PHO	C4D-CHA	3.22	1.44	1.39
18	b	609	CLA	C4B-NB	3.21	1.41	1.37
18	C	505	CLA	C4D-ND	-3.21	1.33	1.37
18	b	617	CLA	C4B-NB	3.21	1.41	1.37
18	A	403	CLA	C4D-ND	-3.21	1.33	1.37
18	c	508	CLA	C4D-ND	-3.21	1.33	1.37
18	B	615	CLA	C4D-ND	-3.20	1.33	1.37
18	b	601	CLA	C4D-ND	-3.20	1.33	1.37
18	b	612	CLA	C4D-ND	-3.20	1.33	1.37
18	A	406	CLA	MG-NB	-3.20	1.99	2.05
18	b	615	CLA	C4D-ND	-3.19	1.33	1.37
18	c	509	CLA	C4B-NB	3.19	1.41	1.37
19	a	409	PHO	C4D-CHA	3.19	1.44	1.39
18	C	508	CLA	C4D-ND	-3.19	1.33	1.37
18	b	612	CLA	C4B-NB	3.19	1.41	1.37
21	A	409	SQD	O47-C7	3.18	1.43	1.34
18	A	406	CLA	C4D-ND	-3.18	1.33	1.37
18	B	611	CLA	C4B-NB	3.18	1.41	1.37
18	c	509	CLA	C1B-C2B	3.18	1.50	1.43
18	b	607	CLA	C4D-ND	-3.17	1.33	1.37
18	c	503	CLA	C4D-ND	-3.17	1.33	1.37
19	d	401	PHO	C4D-CHA	3.17	1.44	1.39
18	B	608	CLA	C4D-ND	-3.17	1.33	1.37
18	B	614	CLA	C4B-NB	3.17	1.41	1.37
18	b	611	CLA	C4D-ND	-3.16	1.33	1.37
18	c	516	CLA	C4B-NB	3.16	1.41	1.37
27	f	101	HEM	FE-NB	3.16	2.04	1.94
18	d	404	CLA	C4D-ND	-3.16	1.33	1.37
18	b	615	CLA	MG-ND	-3.16	1.99	2.05
18	b	619	CLA	C4B-NB	3.15	1.41	1.37
18	a	407	CLA	C4D-ND	-3.15	1.33	1.37
21	a	406	SQD	O47-C7	3.14	1.43	1.34
18	C	515	CLA	C1B-C2B	3.13	1.50	1.43

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
18	C	505	CLA	C4B-NB	3.13	1.41	1.37
18	c	512	CLA	C4D-ND	-3.12	1.33	1.37
18	B	606	CLA	C4D-ND	-3.12	1.33	1.37
18	C	508	CLA	C4B-NB	3.12	1.41	1.37
18	B	619	CLA	C4D-ND	-3.11	1.33	1.37
18	B	602	CLA	C4D-ND	-3.11	1.33	1.37
18	c	508	CLA	C3B-C4B	3.11	1.50	1.42
18	B	601	CLA	C4D-ND	-3.11	1.33	1.37
18	B	608	CLA	C4B-NB	3.10	1.41	1.37
18	C	514	CLA	C4D-ND	-3.10	1.33	1.37
18	b	606	CLA	MG-ND	-3.10	1.99	2.05
18	c	507	CLA	C1B-C2B	3.10	1.50	1.43
18	c	512	CLA	C4B-NB	3.10	1.41	1.37
18	c	503	CLA	C4B-NB	3.10	1.41	1.37
18	B	616	CLA	C4B-NB	3.09	1.41	1.37
18	c	515	CLA	C3B-C4B	3.09	1.50	1.42
18	B	607	CLA	C4D-ND	-3.09	1.33	1.37
18	C	507	CLA	C3B-C4B	3.09	1.50	1.42
18	b	620	CLA	C4B-NB	3.09	1.41	1.37
18	C	514	CLA	C4B-NB	3.08	1.41	1.37
18	B	603	CLA	C4B-NB	3.08	1.41	1.37
18	b	615	CLA	C4B-NB	3.08	1.41	1.37
18	D	406	CLA	C3B-C4B	3.07	1.50	1.42
18	b	605	CLA	C1D-ND	3.07	1.41	1.37
18	C	517	CLA	C3B-C4B	3.07	1.49	1.42
18	B	601	CLA	C1D-ND	3.07	1.41	1.37
21	A	409	SQD	C24-C23	3.07	1.59	1.50
18	B	609	CLA	C4D-ND	-3.07	1.33	1.37
18	b	607	CLA	C4B-NB	3.06	1.41	1.37
18	c	507	CLA	CMC-C2C	-3.06	1.44	1.50
18	d	404	CLA	C3B-C4B	3.06	1.49	1.42
18	b	603	CLA	C4B-NB	3.05	1.41	1.37
18	c	507	CLA	C1B-NB	-3.05	1.34	1.37
18	b	605	CLA	C4D-ND	-3.05	1.33	1.37
18	B	603	CLA	C3B-C4B	3.05	1.49	1.42
21	a	406	SQD	C24-C23	3.04	1.59	1.50
18	a	404	CLA	MG-NB	-3.04	1.99	2.05
18	B	603	CLA	C4D-ND	-3.04	1.33	1.37
18	b	620	CLA	C4D-ND	-3.04	1.33	1.37
18	B	619	CLA	C4B-NB	3.04	1.41	1.37
18	C	505	CLA	C3B-C4B	3.04	1.49	1.42
18	B	611	CLA	C4D-ND	-3.04	1.33	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
18	b	619	CLA	C3B-C4B	3.03	1.49	1.42
18	c	503	CLA	C3B-C4B	3.03	1.49	1.42
18	b	608	CLA	C4D-ND	-3.02	1.33	1.37
18	B	602	CLA	C4B-NB	3.02	1.41	1.37
18	d	408	CLA	C4D-ND	-3.01	1.33	1.37
18	c	504	CLA	C4B-NB	3.01	1.41	1.37
18	D	405	CLA	C4B-NB	3.01	1.41	1.37
18	b	619	CLA	C4D-ND	-3.01	1.33	1.37
18	C	512	CLA	C3B-C4B	3.01	1.49	1.42
18	c	513	CLA	C4B-NB	3.00	1.41	1.37
18	b	604	CLA	C4D-ND	-3.00	1.33	1.37
18	c	510	CLA	C4B-NB	3.00	1.41	1.37
18	B	616	CLA	C4D-ND	-3.00	1.33	1.37
18	C	504	CLA	C1B-C2B	3.00	1.50	1.43
18	b	609	CLA	C4D-ND	-3.00	1.33	1.37
18	D	405	CLA	C4D-ND	-2.99	1.33	1.37
18	b	608	CLA	C4B-NB	2.99	1.41	1.37
18	c	506	CLA	C3B-C4B	2.99	1.49	1.42
18	C	510	CLA	C4B-NB	2.98	1.41	1.37
18	H	101	CLA	C4B-NB	2.98	1.41	1.37
18	C	506	CLA	C4B-NB	2.98	1.41	1.37
18	A	406	CLA	C4B-NB	2.97	1.41	1.37
18	d	408	CLA	C4B-NB	2.97	1.41	1.37
18	B	605	CLA	C4D-ND	-2.96	1.33	1.37
18	c	508	CLA	C4B-NB	2.96	1.41	1.37
18	C	512	CLA	C4B-NB	2.96	1.41	1.37
18	b	614	CLA	MG-ND	-2.96	1.99	2.05
18	B	602	CLA	C3B-C4B	2.95	1.49	1.42
18	C	516	CLA	C4D-ND	-2.95	1.33	1.37
18	a	404	CLA	C4B-NB	2.95	1.41	1.37
18	B	605	CLA	MG-ND	-2.95	1.99	2.05
18	b	606	CLA	C4D-ND	-2.95	1.33	1.37
18	c	504	CLA	C3B-C4B	2.94	1.49	1.42
18	H	101	CLA	C3B-C4B	2.94	1.49	1.42
27	f	101	HEM	FE-NA	2.94	2.05	1.95
18	C	504	CLA	C1B-NB	-2.94	1.34	1.37
26	D	407	PL9	C52-C5	-2.94	1.44	1.50
18	b	613	CLA	C4B-NB	2.93	1.41	1.37
27	F	101	HEM	CAB-C3B	2.93	1.55	1.47
18	b	605	CLA	C4B-NB	2.93	1.41	1.37
18	b	611	CLA	C4B-NB	2.93	1.41	1.37
18	c	511	CLA	C4B-NB	2.93	1.41	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
18	C	507	CLA	C4B-NB	2.92	1.41	1.37
18	b	605	CLA	CMD-C2D	-2.92	1.44	1.50
18	B	606	CLA	C4B-NB	2.92	1.41	1.37
18	B	607	CLA	C4B-NB	2.92	1.41	1.37
18	D	406	CLA	MG-ND	-2.92	2.00	2.05
18	b	607	CLA	C3B-C4B	2.92	1.49	1.42
18	b	615	CLA	MG-NB	-2.91	2.00	2.05
18	B	619	CLA	MG-NB	-2.91	2.00	2.05
18	B	608	CLA	C3B-C4B	2.91	1.49	1.42
18	C	506	CLA	C1B-C2B	2.91	1.50	1.43
27	f	101	HEM	CAC-C3C	2.91	1.55	1.47
18	B	617	CLA	C4B-NB	2.91	1.41	1.37
18	b	603	CLA	C3B-C4B	2.90	1.49	1.42
18	c	505	CLA	C3B-C4B	2.90	1.49	1.42
18	c	512	CLA	C3B-C4B	2.90	1.49	1.42
18	c	510	CLA	C1B-C2B	2.89	1.50	1.43
18	B	605	CLA	C4B-NB	2.89	1.41	1.37
18	b	612	CLA	C3B-C4B	2.89	1.49	1.42
18	C	509	CLA	C4B-NB	2.88	1.41	1.37
18	b	606	CLA	C4B-NB	2.88	1.41	1.37
18	C	514	CLA	C3B-C4B	2.87	1.49	1.42
18	B	601	CLA	C4B-NB	2.86	1.41	1.37
27	F	101	HEM	CAC-C3C	2.86	1.55	1.47
18	B	601	CLA	CMD-C2D	-2.86	1.44	1.50
18	B	616	CLA	C3B-C4B	2.84	1.49	1.42
18	B	615	CLA	C4B-NB	2.84	1.41	1.37
18	B	614	CLA	C3B-C4B	2.84	1.49	1.42
27	f	101	HEM	CAB-C3B	2.84	1.55	1.47
18	C	504	CLA	C3B-C4B	2.83	1.49	1.42
18	C	516	CLA	C3B-C4B	2.81	1.49	1.42
18	B	611	CLA	C3B-C4B	2.81	1.49	1.42
18	B	607	CLA	C3B-C4B	2.81	1.49	1.42
18	b	617	CLA	C3B-C4B	2.80	1.49	1.42
18	c	515	CLA	C4B-NB	2.80	1.41	1.37
18	b	609	CLA	C3B-C4B	2.80	1.49	1.42
18	b	608	CLA	C3B-C4B	2.80	1.49	1.42
18	B	618	CLA	MG-NC	2.80	2.12	2.06
18	a	405	CLA	C4B-NB	2.79	1.41	1.37
18	c	506	CLA	C4B-NB	2.79	1.41	1.37
18	b	601	CLA	C4B-NB	2.79	1.41	1.37
18	B	606	CLA	C1B-C2B	2.78	1.49	1.43
18	A	405	CLA	C4B-NB	2.78	1.41	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
18	C	516	CLA	C1B-C2B	2.78	1.49	1.43
18	C	511	CLA	C4B-NB	2.77	1.41	1.37
18	C	508	CLA	C3B-C4B	2.77	1.49	1.42
18	b	620	CLA	C3B-C4B	2.77	1.49	1.42
18	C	509	CLA	C3B-C4B	2.77	1.49	1.42
18	b	620	CLA	C1B-C2B	2.77	1.49	1.43
18	b	611	CLA	C1B-C2B	2.75	1.49	1.43
18	c	507	CLA	CHC-C4B	-2.75	1.33	1.39
18	C	517	CLA	C4B-NB	2.75	1.41	1.37
18	c	511	CLA	C3B-C4B	2.75	1.49	1.42
18	B	609	CLA	C3B-C4B	2.74	1.49	1.42
18	d	408	CLA	C3B-C4B	2.74	1.49	1.42
18	b	615	CLA	CMD-C2D	-2.74	1.45	1.50
19	D	402	PHO	CMC-C2C	-2.74	1.46	1.50
18	D	405	CLA	MG-ND	-2.74	2.00	2.05
18	c	507	CLA	C3B-C4B	2.73	1.49	1.42
18	d	404	CLA	MG-ND	-2.73	2.00	2.05
18	a	405	CLA	C3B-C4B	2.72	1.49	1.42
19	d	401	PHO	CMC-C2C	-2.72	1.46	1.50
18	A	405	CLA	C3B-C4B	2.72	1.49	1.42
18	D	405	CLA	C3B-C4B	2.72	1.49	1.42
26	d	405	PL9	C52-C5	-2.72	1.45	1.50
18	A	404	CLA	C4B-NB	2.72	1.41	1.37
18	a	403	CLA	C4B-NB	2.72	1.41	1.37
18	C	511	CLA	C3B-C4B	2.71	1.49	1.42
18	C	504	CLA	CMC-C2C	-2.71	1.45	1.50
18	B	619	CLA	C3B-C4B	2.71	1.49	1.42
18	b	617	CLA	MG-NC	2.71	2.12	2.06
18	c	505	CLA	C1B-C2B	2.71	1.49	1.43
18	B	619	CLA	CMD-C2D	-2.71	1.45	1.50
18	c	516	CLA	C3B-C4B	2.70	1.49	1.42
18	b	601	CLA	C3B-C4B	2.70	1.49	1.42
19	a	409	PHO	CMD-C2D	-2.70	1.46	1.51
18	B	615	CLA	C3B-C4B	2.70	1.49	1.42
18	C	506	CLA	C3B-C4B	2.69	1.49	1.42
19	A	407	PHO	CMD-C2D	-2.69	1.46	1.51
26	d	405	PL9	C53-C6	-2.68	1.45	1.50
18	b	613	CLA	C1B-C2B	2.68	1.49	1.43
26	D	407	PL9	C53-C6	-2.68	1.45	1.50
18	b	604	CLA	CMB-C2B	-2.68	1.45	1.50
18	B	617	CLA	C1B-C2B	2.68	1.49	1.43
18	c	509	CLA	CMB-C2B	-2.67	1.45	1.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
18	A	403	CLA	C4B-NB	2.67	1.41	1.37
18	b	603	CLA	C1B-C2B	2.67	1.49	1.43
18	b	613	CLA	C3B-C4B	2.67	1.49	1.42
18	b	615	CLA	C3B-C4B	2.66	1.49	1.42
18	A	403	CLA	C1B-C2B	2.66	1.49	1.43
18	H	101	CLA	C1B-C2B	2.66	1.49	1.43
18	c	510	CLA	C3B-C4B	2.66	1.49	1.42
18	c	505	CLA	C4D-ND	-2.66	1.34	1.37
19	a	409	PHO	CMC-C2C	-2.65	1.46	1.50
18	c	503	CLA	C1B-C2B	2.65	1.49	1.43
18	C	505	CLA	C1B-C2B	2.65	1.49	1.43
19	D	402	PHO	C4D-ND	-2.65	1.34	1.38
19	A	407	PHO	CMC-C2C	-2.65	1.46	1.50
18	a	407	CLA	C1B-C2B	2.65	1.49	1.43
19	d	401	PHO	C4D-ND	-2.64	1.34	1.38
18	B	617	CLA	C3B-C4B	2.64	1.48	1.42
18	b	619	CLA	C1B-C2B	2.64	1.49	1.43
18	B	605	CLA	C1B-C2B	2.64	1.49	1.43
18	C	512	CLA	C1B-C2B	2.63	1.49	1.43
18	b	606	CLA	C1B-C2B	2.62	1.49	1.43
18	a	404	CLA	C3B-C4B	2.62	1.48	1.42
18	A	403	CLA	C3B-C4B	2.62	1.48	1.42
18	c	506	CLA	C1B-C2B	2.62	1.49	1.43
27	F	101	HEM	FE-NA	2.61	2.04	1.95
18	A	404	CLA	MG-ND	-2.61	2.00	2.05
18	b	605	CLA	C1B-C2B	2.61	1.49	1.43
18	B	616	CLA	C1B-C2B	2.61	1.49	1.43
18	a	407	CLA	C3B-C4B	2.60	1.48	1.42
18	A	405	CLA	C1B-C2B	2.60	1.49	1.43
18	C	508	CLA	C1B-C2B	2.60	1.49	1.43
18	b	614	CLA	C3B-C4B	2.60	1.48	1.42
18	C	515	CLA	CMB-C2B	-2.59	1.45	1.50
19	A	407	PHO	CMB-C2B	-2.59	1.46	1.51
18	a	405	CLA	C1B-C2B	2.59	1.49	1.43
18	B	603	CLA	C1B-C2B	2.59	1.49	1.43
27	f	101	HEM	FE-NC	2.59	2.03	1.95
18	b	604	CLA	C3B-C4B	2.59	1.48	1.42
19	a	409	PHO	CMB-C2B	-2.59	1.46	1.51
18	b	614	CLA	MG-NC	2.58	2.12	2.06
18	c	516	CLA	C1B-C2B	2.58	1.49	1.43
19	D	402	PHO	CMB-C2B	-2.58	1.46	1.51
18	c	513	CLA	C3B-C4B	2.58	1.48	1.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
18	a	403	CLA	C3B-C4B	2.58	1.48	1.42
18	C	514	CLA	C1B-C2B	2.57	1.49	1.43
19	D	402	PHO	CMD-C2D	-2.57	1.46	1.51
19	d	401	PHO	CMB-C2B	-2.57	1.46	1.51
18	b	617	CLA	C1B-C2B	2.57	1.49	1.43
18	a	407	CLA	C4B-NB	2.57	1.40	1.37
18	C	517	CLA	C1B-C2B	2.57	1.49	1.43
18	b	601	CLA	C1B-C2B	2.57	1.49	1.43
18	c	515	CLA	C1B-C2B	2.56	1.49	1.43
18	B	605	CLA	C3B-C4B	2.56	1.48	1.42
18	A	404	CLA	C3B-C4B	2.56	1.48	1.42
18	B	618	CLA	C3B-C4B	2.56	1.48	1.42
18	a	403	CLA	C1B-C2B	2.56	1.49	1.43
19	d	401	PHO	CMD-C2D	-2.56	1.46	1.51
18	B	615	CLA	C1B-C2B	2.56	1.49	1.43
18	C	510	CLA	C3B-C4B	2.55	1.48	1.42
18	B	609	CLA	CMB-C2B	-2.55	1.45	1.50
18	C	511	CLA	C1B-C2B	2.55	1.49	1.43
18	B	614	CLA	C1B-C2B	2.55	1.49	1.43
18	c	511	CLA	C1B-C2B	2.55	1.49	1.43
18	a	405	CLA	MG-NB	-2.55	2.00	2.05
18	c	512	CLA	C1B-C2B	2.54	1.49	1.43
18	A	405	CLA	MG-NB	-2.54	2.00	2.05
18	b	604	CLA	MG-NB	-2.54	2.00	2.05
18	A	404	CLA	C1B-C2B	2.53	1.49	1.43
18	C	504	CLA	CHC-C4B	-2.53	1.33	1.39
19	a	409	PHO	CAC-C3C	-2.53	1.47	1.51
18	b	606	CLA	C3B-C4B	2.52	1.48	1.42
18	b	612	CLA	CMB-C2B	-2.51	1.45	1.50
18	a	403	CLA	MG-ND	-2.51	2.00	2.05
18	C	509	CLA	C1B-C2B	2.50	1.49	1.43
18	b	614	CLA	C4D-ND	-2.50	1.34	1.37
18	c	506	CLA	CMC-C2C	-2.50	1.45	1.50
18	B	601	CLA	C3B-C4B	2.50	1.48	1.42
18	B	619	CLA	C1B-C2B	2.49	1.49	1.43
18	C	516	CLA	MG-ND	-2.49	2.00	2.05
18	B	618	CLA	C4D-ND	-2.49	1.34	1.37
18	a	404	CLA	C1B-C2B	2.48	1.49	1.43
18	A	406	CLA	C1B-C2B	2.48	1.49	1.43
19	A	407	PHO	CAC-C3C	-2.48	1.47	1.51
18	B	601	CLA	C1B-C2B	2.48	1.49	1.43
18	b	615	CLA	C1B-C2B	2.48	1.49	1.43

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
18	A	406	CLA	C3B-C4B	2.47	1.48	1.42
18	B	618	CLA	CMD-C2D	-2.47	1.45	1.50
18	b	617	CLA	CMC-C2C	-2.46	1.45	1.50
18	B	608	CLA	MG-ND	-2.46	2.00	2.05
18	B	614	CLA	MG-ND	-2.45	2.00	2.05
18	C	512	CLA	CMC-C2C	-2.45	1.45	1.50
18	B	614	CLA	CMC-C2C	-2.45	1.45	1.50
18	B	608	CLA	CMB-C2B	-2.44	1.45	1.50
18	b	611	CLA	C3B-C4B	2.44	1.48	1.42
18	b	614	CLA	CMD-C2D	-2.44	1.45	1.50
18	D	406	CLA	CMB-C2B	-2.43	1.45	1.50
18	c	504	CLA	C1B-C2B	2.43	1.49	1.43
18	B	618	CLA	MG-NA	2.42	2.12	2.06
18	B	606	CLA	C3B-C4B	2.42	1.48	1.42
18	C	510	CLA	CMB-C2B	-2.42	1.45	1.50
18	d	404	CLA	CMB-C2B	-2.42	1.45	1.50
18	c	513	CLA	C1B-C2B	2.42	1.49	1.43
19	D	402	PHO	CAC-C3C	-2.42	1.47	1.51
18	B	615	CLA	MG-ND	-2.41	2.01	2.05
18	c	513	CLA	CMB-C2B	-2.41	1.45	1.50
18	a	407	CLA	CMC-C2C	-2.41	1.45	1.50
18	d	404	CLA	CMD-C2D	-2.41	1.45	1.50
18	C	507	CLA	C1B-C2B	2.40	1.48	1.43
18	b	606	CLA	CMB-C2B	-2.40	1.45	1.50
18	d	408	CLA	C1B-C2B	2.39	1.48	1.43
18	B	611	CLA	C1B-C2B	2.39	1.48	1.43
18	D	406	CLA	CMD-C2D	-2.38	1.45	1.50
18	b	609	CLA	C1B-C2B	2.38	1.48	1.43
18	B	605	CLA	CMB-C2B	-2.38	1.45	1.50
18	A	403	CLA	CMC-C2C	-2.38	1.45	1.50
18	D	405	CLA	C1B-C2B	2.38	1.48	1.43
18	B	602	CLA	C1B-C2B	2.38	1.48	1.43
18	c	508	CLA	C1B-C2B	2.37	1.48	1.43
18	C	510	CLA	C1B-C2B	2.37	1.48	1.43
19	A	407	PHO	C4D-ND	-2.37	1.35	1.38
19	a	409	PHO	C4D-ND	-2.37	1.35	1.38
18	b	606	CLA	CMD-C2D	-2.37	1.45	1.50
18	H	101	CLA	CHC-C1C	2.37	1.43	1.38
18	b	605	CLA	C3B-C4B	2.37	1.48	1.42
18	b	607	CLA	C1B-C2B	2.37	1.48	1.43
18	B	605	CLA	CMD-C2D	-2.37	1.45	1.50
18	A	403	CLA	MG-NB	-2.36	2.01	2.05

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
18	B	608	CLA	C1B-C2B	2.36	1.48	1.43
18	a	407	CLA	MG-NB	-2.36	2.01	2.05
18	B	609	CLA	MG-NB	-2.36	2.01	2.05
18	c	509	CLA	MG-NB	-2.34	2.01	2.05
18	b	612	CLA	C1B-C2B	2.34	1.48	1.43
18	d	408	CLA	MG-ND	-2.34	2.01	2.05
18	b	601	CLA	MG-ND	-2.34	2.01	2.05
18	c	504	CLA	CHC-C1C	2.34	1.43	1.38
18	b	609	CLA	CMB-C2B	-2.34	1.45	1.50
18	A	403	CLA	CMD-C2D	-2.33	1.45	1.50
18	b	603	CLA	CHC-C1C	2.33	1.43	1.38
18	d	408	CLA	CMB-C2B	-2.32	1.45	1.50
18	C	505	CLA	CHC-C1C	2.32	1.43	1.38
18	c	503	CLA	CHC-C1C	2.32	1.43	1.38
18	B	608	CLA	CMD-C2D	-2.31	1.45	1.50
19	d	401	PHO	CAC-C3C	-2.31	1.47	1.51
18	A	404	CLA	CMC-C2C	-2.31	1.45	1.50
18	b	612	CLA	CMD-C2D	-2.30	1.45	1.50
18	B	618	CLA	C1B-C2B	2.30	1.48	1.43
18	b	607	CLA	CHC-C1C	2.30	1.43	1.38
18	H	101	CLA	MG-NB	2.30	2.10	2.05
18	b	617	CLA	MG-ND	-2.30	2.01	2.05
18	D	405	CLA	CMB-C2B	-2.30	1.45	1.50
18	B	602	CLA	CHC-C1C	2.30	1.43	1.38
18	B	602	CLA	MG-ND	-2.30	2.01	2.05
18	b	615	CLA	CMC-C2C	-2.29	1.45	1.50
18	C	516	CLA	MG-NA	2.29	2.11	2.06
18	c	510	CLA	CMB-C2B	-2.29	1.46	1.50
18	a	403	CLA	CMC-C2C	-2.28	1.46	1.50
18	b	608	CLA	CMB-C2B	-2.27	1.46	1.50
18	C	507	CLA	MG-ND	-2.27	2.01	2.05
18	d	404	CLA	C1B-C2B	2.27	1.48	1.43
18	D	405	CLA	MG-NB	-2.27	2.01	2.05
18	B	615	CLA	CMD-C2D	-2.26	1.46	1.50
18	a	407	CLA	CMD-C2D	-2.26	1.46	1.50
18	B	607	CLA	CMB-C2B	-2.26	1.46	1.50
18	C	506	CLA	CMB-C2B	-2.26	1.46	1.50
18	C	508	CLA	CMB-C2B	-2.25	1.46	1.50
18	c	516	CLA	CMB-C2B	-2.25	1.46	1.50
18	B	614	CLA	CHC-C1C	2.25	1.43	1.38
18	b	617	CLA	CHC-C1C	2.25	1.43	1.38
18	c	505	CLA	CMD-C2D	-2.25	1.46	1.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
18	C	515	CLA	C3B-C4B	2.24	1.48	1.42
18	C	511	CLA	CMB-C2B	-2.23	1.46	1.50
27	F	101	HEM	FE-NC	2.23	2.02	1.95
18	b	607	CLA	MG-ND	-2.23	2.01	2.05
18	b	614	CLA	C1B-C2B	2.23	1.48	1.43
18	B	611	CLA	CMB-C2B	-2.23	1.46	1.50
18	A	405	CLA	CMD-C2D	-2.22	1.46	1.50
18	c	511	CLA	CMB-C2B	-2.22	1.46	1.50
18	c	508	CLA	MG-ND	-2.22	2.01	2.05
18	B	617	CLA	CMC-C2C	-2.22	1.46	1.50
18	B	603	CLA	CHC-C1C	2.22	1.43	1.38
18	a	403	CLA	CMB-C2B	-2.22	1.46	1.50
18	b	601	CLA	CMC-C2C	-2.22	1.46	1.50
18	b	604	CLA	MG-NA	2.22	2.11	2.06
18	a	405	CLA	CMD-C2D	-2.21	1.46	1.50
18	C	516	CLA	CMD-C2D	-2.21	1.46	1.50
18	A	404	CLA	CMB-C2B	-2.21	1.46	1.50
18	c	508	CLA	CHC-C1C	2.21	1.43	1.38
18	b	613	CLA	CMC-C2C	-2.20	1.46	1.50
18	b	615	CLA	CMB-C2B	-2.20	1.46	1.50
18	b	619	CLA	CHC-C1C	2.20	1.43	1.38
18	B	609	CLA	CMD-C2D	-2.20	1.46	1.50
18	b	604	CLA	CMD-C2D	-2.20	1.46	1.50
18	D	406	CLA	C1B-C2B	2.20	1.48	1.43
18	b	601	CLA	CMD-C2D	-2.20	1.46	1.50
19	a	409	PHO	C3D-C4D	2.20	1.44	1.41
21	A	409	SQD	O9-S	2.19	1.51	1.45
18	B	615	CLA	CMC-C2C	-2.18	1.46	1.50
18	C	507	CLA	CHC-C1C	2.17	1.42	1.38
21	a	406	SQD	O9-S	2.17	1.51	1.45
18	B	616	CLA	CHC-C1C	2.17	1.42	1.38
18	B	618	CLA	MG-NB	-2.17	2.01	2.05
18	c	505	CLA	CHC-C1C	2.17	1.42	1.38
18	B	617	CLA	CMD-C2D	-2.17	1.46	1.50
18	b	613	CLA	CMD-C2D	-2.17	1.46	1.50
21	a	406	SQD	O7-S	2.16	1.51	1.45
18	c	512	CLA	CMB-C2B	-2.16	1.46	1.50
21	A	409	SQD	O7-S	2.16	1.51	1.45
18	D	406	CLA	CHC-C1C	2.16	1.42	1.38
18	b	608	CLA	CMD-C2D	-2.15	1.46	1.50
18	b	611	CLA	MG-NA	2.15	2.11	2.06
18	B	619	CLA	CMC-C2C	-2.15	1.46	1.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
19	A	407	PHO	C3D-C4D	2.15	1.44	1.41
18	b	620	CLA	CMD-C2D	-2.15	1.46	1.50
18	b	607	CLA	CMD-C2D	-2.14	1.46	1.50
18	d	404	CLA	CHC-C1C	2.14	1.42	1.38
18	b	614	CLA	MG-NA	2.14	2.11	2.06
18	c	509	CLA	CMD-C2D	-2.14	1.46	1.50
18	B	607	CLA	CMD-C2D	-2.13	1.46	1.50
18	H	101	CLA	CMD-C2D	-2.13	1.46	1.50
18	c	509	CLA	C3B-C4B	2.13	1.47	1.42
18	C	515	CLA	CMD-C2D	-2.13	1.46	1.50
18	C	511	CLA	CMC-C2C	-2.13	1.46	1.50
18	b	614	CLA	CMC-C2C	-2.13	1.46	1.50
18	B	606	CLA	MG-NA	2.13	2.11	2.06
18	b	608	CLA	C1B-C2B	2.13	1.48	1.43
18	B	605	CLA	CMC-C2C	-2.12	1.46	1.50
18	c	512	CLA	CHC-C1C	2.12	1.42	1.38
18	b	620	CLA	CHC-C1C	2.12	1.42	1.38
18	C	508	CLA	CMD-C2D	-2.12	1.46	1.50
18	b	607	CLA	CMB-C2B	-2.12	1.46	1.50
18	c	516	CLA	CMD-C2D	-2.12	1.46	1.50
18	B	608	CLA	CHC-C1C	2.12	1.42	1.38
18	B	602	CLA	CMD-C2D	-2.11	1.46	1.50
18	b	619	CLA	CMC-C2C	-2.11	1.46	1.50
18	B	607	CLA	C1B-C2B	2.11	1.48	1.43
18	a	405	CLA	CHC-C1C	2.11	1.42	1.38
18	B	616	CLA	CMD-C2D	-2.11	1.46	1.50
18	b	609	CLA	CMD-C2D	-2.11	1.46	1.50
18	c	503	CLA	CMC-C2C	-2.11	1.46	1.50
18	C	514	CLA	CMD-C2D	-2.11	1.46	1.50
18	C	514	CLA	CMB-C2B	-2.11	1.46	1.50
18	A	405	CLA	CHC-C1C	2.10	1.42	1.38
18	B	602	CLA	CMC-C2C	-2.10	1.46	1.50
18	c	505	CLA	MG-ND	-2.10	2.01	2.05
18	c	512	CLA	CMD-C2D	-2.10	1.46	1.50
18	a	405	CLA	CMB-C2B	-2.09	1.46	1.50
18	C	517	CLA	CMB-C2B	-2.09	1.46	1.50
18	b	605	CLA	CMB-C2B	-2.09	1.46	1.50
18	B	609	CLA	C1B-C2B	2.09	1.48	1.43
27	F	101	HEM	CMD-C2D	2.09	1.55	1.50
19	D	402	PHO	C3D-C4D	2.09	1.44	1.41
18	C	512	CLA	CMD-C2D	-2.09	1.46	1.50
18	C	509	CLA	CHC-C1C	2.09	1.42	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
18	c	515	CLA	CMB-C2B	-2.09	1.46	1.50
18	C	512	CLA	CHC-C1C	2.09	1.42	1.38
18	b	607	CLA	CMC-C2C	-2.08	1.46	1.50
19	a	409	PHO	C3B-C2B	-2.08	1.37	1.40
18	c	506	CLA	CHC-C1C	2.08	1.42	1.38
18	A	406	CLA	CMD-C2D	-2.08	1.46	1.50
19	d	401	PHO	C3D-C4D	2.08	1.44	1.41
18	b	612	CLA	MG-ND	-2.08	2.01	2.05
18	b	611	CLA	C1D-C2D	2.08	1.49	1.45
18	b	608	CLA	MG-ND	-2.08	2.01	2.05
18	b	603	CLA	CMB-C2B	-2.08	1.46	1.50
18	C	515	CLA	MG-NB	-2.08	2.01	2.05
18	a	404	CLA	CMD-C2D	-2.08	1.46	1.50
18	b	606	CLA	CMC-C2C	-2.08	1.46	1.50
18	A	405	CLA	CMB-C2B	-2.08	1.46	1.50
18	B	619	CLA	CMB-C2B	-2.08	1.46	1.50
18	B	603	CLA	CMC-C2C	-2.07	1.46	1.50
18	b	603	CLA	CMD-C2D	-2.07	1.46	1.50
18	b	604	CLA	C1B-C2B	2.07	1.48	1.43
18	C	516	CLA	CHC-C1C	2.07	1.42	1.38
18	C	509	CLA	CMD-C2D	-2.07	1.46	1.50
18	B	602	CLA	CMB-C2B	-2.07	1.46	1.50
18	D	405	CLA	CMD-C2D	-2.07	1.46	1.50
18	b	612	CLA	CHC-C1C	2.06	1.42	1.38
18	C	514	CLA	CHC-C1C	2.06	1.42	1.38
18	H	101	CLA	CMB-C2B	-2.06	1.46	1.50
18	B	601	CLA	CMB-C2B	-2.06	1.46	1.50
18	B	618	CLA	CMB-C2B	-2.06	1.46	1.50
18	d	404	CLA	C3C-C2C	2.06	1.41	1.36
18	b	613	CLA	CHC-C1C	2.06	1.42	1.38
18	b	614	CLA	CMB-C2B	-2.05	1.46	1.50
18	b	611	CLA	CMD-C2D	-2.05	1.46	1.50
18	A	406	CLA	CMB-C2B	-2.05	1.46	1.50
18	B	616	CLA	CMB-C2B	-2.05	1.46	1.50
18	a	404	CLA	CMB-C2B	-2.05	1.46	1.50
18	a	405	CLA	CMC-C2C	-2.05	1.46	1.50
18	B	618	CLA	CMC-C2C	-2.05	1.46	1.50
18	B	611	CLA	CHC-C1C	2.05	1.42	1.38
18	c	511	CLA	CMC-C2C	-2.05	1.46	1.50
18	b	613	CLA	CMB-C2B	-2.04	1.46	1.50
18	a	403	CLA	CMD-C2D	-2.04	1.46	1.50
18	B	611	CLA	CMD-C2D	-2.04	1.46	1.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
18	b	609	CLA	CHC-C1C	2.04	1.42	1.38
18	A	405	CLA	CMC-C2C	-2.04	1.46	1.50
21	A	409	SQD	O5-C5	2.04	1.49	1.44
27	f	101	HEM	CMD-C2D	2.04	1.55	1.50
18	b	604	CLA	CMC-C2C	-2.03	1.46	1.50
19	A	407	PHO	C3B-C2B	-2.03	1.37	1.40
18	d	404	CLA	CMC-C2C	-2.03	1.46	1.50
18	c	506	CLA	CMD-C2D	-2.03	1.46	1.50
18	c	505	CLA	MG-NB	-2.03	2.01	2.05
18	b	611	CLA	CMB-C2B	-2.03	1.46	1.50
18	C	515	CLA	CMC-C2C	-2.03	1.46	1.50
18	B	606	CLA	CMD-C2D	-2.03	1.46	1.50
18	a	404	CLA	CHC-C1C	2.03	1.42	1.38
18	D	405	CLA	CHC-C1C	2.03	1.42	1.38
18	B	617	CLA	CMB-C2B	-2.02	1.46	1.50
18	b	614	CLA	MG-NB	-2.02	2.01	2.05
18	B	603	CLA	CMB-C2B	-2.02	1.46	1.50
18	c	511	CLA	CMD-C2D	-2.02	1.46	1.50
18	B	606	CLA	C1D-C2D	2.02	1.49	1.45
18	B	601	CLA	CMC-C2C	-2.02	1.46	1.50
21	a	406	SQD	O5-C5	2.02	1.49	1.44
18	d	408	CLA	CHC-C1C	2.02	1.42	1.38
18	B	606	CLA	CMB-C2B	-2.02	1.46	1.50
18	A	406	CLA	MG-ND	-2.02	2.01	2.05
18	b	601	CLA	CMB-C2B	-2.02	1.46	1.50
18	A	404	CLA	CMD-C2D	-2.02	1.46	1.50
18	b	619	CLA	CMB-C2B	-2.01	1.46	1.50
18	B	606	CLA	MG-NB	-2.01	2.01	2.05
18	B	609	CLA	MG-NA	2.01	2.11	2.06
18	B	609	CLA	CMC-C2C	-2.01	1.46	1.50
18	b	617	CLA	CMD-C2D	-2.01	1.46	1.50
18	c	507	CLA	CMB-C2B	-2.01	1.46	1.50
18	C	512	CLA	CMB-C2B	-2.01	1.46	1.50
18	c	508	CLA	CMC-C2C	-2.01	1.46	1.50
18	c	504	CLA	CMD-C2D	-2.00	1.46	1.50
18	C	505	CLA	CMD-C2D	-2.00	1.46	1.50
18	C	506	CLA	CMD-C2D	-2.00	1.46	1.50
18	c	509	CLA	CMC-C2C	-2.00	1.46	1.50
18	A	406	CLA	CMC-C2C	-2.00	1.46	1.50
18	C	511	CLA	CMD-C2D	-2.00	1.46	1.50
18	D	406	CLA	CMC-C2C	-2.00	1.46	1.50
18	c	503	CLA	CMD-C2D	-2.00	1.46	1.50

All (773) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
18	C	504	CLA	CHC-C4B-NB	-8.08	115.71	124.26
18	c	507	CLA	C4A-NA-C1A	7.92	110.27	106.71
18	C	504	CLA	C4A-NA-C1A	7.86	110.24	106.71
18	c	507	CLA	CHC-C4B-NB	-7.76	116.04	124.26
18	c	505	CLA	C4A-NA-C1A	7.72	110.18	106.71
18	c	507	CLA	CMC-C2C-C1C	-7.54	113.56	125.04
19	D	402	PHO	C4D-CHA-CBD	-7.43	105.15	108.52
19	d	401	PHO	C4D-CHA-CBD	-7.38	105.18	108.52
18	c	509	CLA	C4A-NA-C1A	7.27	109.97	106.71
18	C	515	CLA	C4A-NA-C1A	7.13	109.91	106.71
18	B	605	CLA	C4A-NA-C1A	7.10	109.90	106.71
18	b	606	CLA	C4A-NA-C1A	6.83	109.78	106.71
19	a	409	PHO	C4D-CHA-CBD	-6.64	105.51	108.52
19	A	407	PHO	C4D-CHA-CBD	-6.55	105.55	108.52
20	b	616	BCR	C11-C10-C9	6.50	136.58	127.31
20	B	613	BCR	C11-C10-C9	6.48	136.55	127.31
20	h	101	BCR	C15-C14-C13	6.29	136.29	127.31
20	H	102	BCR	C15-C14-C13	6.11	136.03	127.31
20	b	616	BCR	C7-C8-C9	-6.09	117.03	126.23
18	b	620	CLA	C4A-NA-C1A	6.06	109.43	106.71
20	b	616	BCR	C15-C14-C13	6.06	135.95	127.31
20	B	613	BCR	C7-C8-C9	-6.02	117.14	126.23
20	B	613	BCR	C15-C14-C13	5.98	135.85	127.31
20	b	602	BCR	C16-C17-C18	-5.95	118.82	127.31
20	B	610	BCR	C16-C17-C18	-5.94	118.83	127.31
18	B	616	CLA	C4A-NA-C1A	5.79	109.31	106.71
18	c	510	CLA	C4A-NA-C1A	5.72	109.28	106.71
20	b	602	BCR	C15-C14-C13	-5.69	119.19	127.31
20	B	610	BCR	C15-C14-C13	-5.66	119.24	127.31
20	b	616	BCR	C11-C12-C13	5.64	142.25	126.42
20	h	101	BCR	C11-C12-C13	5.60	142.15	126.42
20	b	616	BCR	C10-C11-C12	5.60	140.69	123.22
20	B	613	BCR	C11-C12-C13	5.60	142.15	126.42
20	H	102	BCR	C11-C12-C13	5.59	142.12	126.42
18	C	506	CLA	C4A-NA-C1A	5.57	109.21	106.71
20	B	613	BCR	C10-C11-C12	5.55	140.53	123.22
20	h	101	BCR	C10-C11-C12	5.38	140.02	123.22
18	b	617	CLA	C4A-NA-C1A	5.37	109.12	106.71
20	H	102	BCR	C10-C11-C12	5.36	139.94	123.22
26	d	405	PL9	C7-C3-C4	5.33	121.21	116.88
18	C	517	CLA	C4A-NA-C1A	5.27	109.07	106.71
18	c	515	CLA	C4A-NA-C1A	5.23	109.06	106.71

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	c	514	DGD	O6E-C5E-C4E	5.21	119.16	109.69
24	C	503	DGD	O6E-C5E-C4E	5.16	119.06	109.69
18	B	614	CLA	C4A-NA-C1A	5.16	109.03	106.71
18	c	507	CLA	CHC-C1C-NC	5.15	132.02	124.20
20	b	616	BCR	C12-C13-C14	-5.14	111.05	118.94
20	B	613	BCR	C12-C13-C14	-5.06	111.17	118.94
18	B	615	CLA	C4A-NA-C1A	5.06	108.98	106.71
26	D	407	PL9	C7-C3-C4	4.99	120.94	116.88
18	c	508	CLA	CHB-C4A-NA	4.96	131.37	124.51
18	b	601	CLA	C4A-NA-C1A	4.95	108.93	106.71
18	c	506	CLA	CAC-C3C-C4C	4.92	131.19	124.81
18	b	607	CLA	C4A-NA-C1A	4.89	108.91	106.71
18	B	602	CLA	C4A-NA-C1A	4.89	108.91	106.71
18	C	507	CLA	CHB-C4A-NA	4.87	131.25	124.51
18	b	603	CLA	C4A-NA-C1A	4.83	108.88	106.71
18	b	619	CLA	C4A-NA-C1A	4.82	108.87	106.71
18	B	603	CLA	C4A-NA-C1A	4.82	108.87	106.71
18	c	507	CLA	CHD-C1D-ND	-4.81	120.03	124.45
18	C	504	CLA	CHD-C1D-ND	-4.70	120.14	124.45
18	c	506	CLA	C4A-NA-C1A	4.70	108.82	106.71
18	c	508	CLA	C2A-C3A-C4A	-4.68	94.31	101.87
18	C	512	CLA	C4A-NA-C1A	4.65	108.80	106.71
18	C	507	CLA	C2A-C3A-C4A	-4.62	94.41	101.87
18	b	605	CLA	C4A-NA-C1A	4.59	108.77	106.71
20	H	102	BCR	C16-C15-C14	4.56	132.82	123.47
18	C	512	CLA	CAC-C3C-C4C	4.53	130.69	124.81
21	a	406	SQD	O7-S-C6	4.52	112.31	106.94
18	C	509	CLA	C4A-NA-C1A	4.49	108.72	106.71
18	c	504	CLA	C4A-NA-C1A	4.49	108.72	106.71
21	A	409	SQD	O7-S-C6	4.46	112.24	106.94
18	B	601	CLA	C4A-NA-C1A	4.46	108.71	106.71
18	H	101	CLA	C4A-NA-C1A	4.43	108.70	106.71
18	C	504	CLA	CMC-C2C-C1C	-4.41	118.32	125.04
20	B	613	BCR	C16-C17-C18	4.41	133.60	127.31
18	C	516	CLA	C4A-NA-C1A	4.37	108.67	106.71
18	b	613	CLA	C4A-NA-C1A	4.34	108.66	106.71
18	B	619	CLA	C4A-NA-C1A	4.32	108.65	106.71
18	A	406	CLA	O2D-CGD-O1D	-4.31	115.42	123.84
18	C	511	CLA	C4A-NA-C1A	4.31	108.64	106.71
18	d	408	CLA	C4A-NA-C1A	4.30	108.64	106.71
18	D	405	CLA	C4A-NA-C1A	4.29	108.63	106.71
18	a	404	CLA	O2D-CGD-O1D	-4.29	115.46	123.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
18	B	611	CLA	C4A-NA-C1A	4.26	108.62	106.71
20	h	101	BCR	C16-C15-C14	4.26	132.19	123.47
18	B	617	CLA	C4A-NA-C1A	4.25	108.62	106.71
20	b	616	BCR	C16-C17-C18	4.21	133.32	127.31
18	D	406	CLA	C4A-NA-C1A	4.20	108.59	106.71
18	c	511	CLA	C4A-NA-C1A	4.19	108.59	106.71
18	c	507	CLA	CMC-C2C-C3C	4.16	137.42	126.12
18	c	507	CLA	CHB-C4A-NA	4.15	130.26	124.51
18	C	514	CLA	C4A-NA-C1A	4.15	108.57	106.71
18	b	609	CLA	C4A-NA-C1A	4.13	108.56	106.71
18	B	618	CLA	O2D-CGD-O1D	-4.03	115.97	123.84
18	C	507	CLA	C2A-C1A-CHA	4.02	130.89	123.86
18	C	504	CLA	CHD-C4C-C3C	-4.02	118.93	124.84
18	C	504	CLA	CHC-C1C-NC	4.02	130.30	124.20
18	c	507	CLA	CHB-C1B-NB	-4.01	120.02	124.26
20	B	610	BCR	C16-C15-C14	4.00	131.67	123.47
18	d	404	CLA	C4A-NA-C1A	3.99	108.50	106.71
20	b	602	BCR	C16-C15-C14	3.98	131.62	123.47
18	b	614	CLA	O2D-CGD-O1D	-3.89	116.23	123.84
18	C	508	CLA	O2D-CGD-O1D	-3.89	116.23	123.84
18	c	508	CLA	C2A-C1A-CHA	3.88	130.64	123.86
18	c	516	CLA	O2D-CGD-O1D	-3.88	116.26	123.84
18	C	505	CLA	C4A-NA-C1A	3.83	108.43	106.71
18	c	512	CLA	C4A-NA-C1A	3.83	108.43	106.71
18	c	507	CLA	CHC-C1C-C2C	-3.82	116.12	126.73
18	C	504	CLA	CHB-C4A-NA	3.82	129.79	124.51
18	B	618	CLA	O2D-CGD-CBD	3.81	118.05	111.27
21	A	409	SQD	O47-C7-C8	3.81	119.72	111.50
18	A	406	CLA	O2D-CGD-CBD	3.79	118.00	111.27
20	B	613	BCR	C8-C9-C10	-3.78	113.14	118.94
18	A	405	CLA	CHD-C1D-ND	-3.77	120.99	124.45
18	B	618	CLA	CHB-C1B-NB	3.77	128.25	124.26
18	a	404	CLA	O2D-CGD-CBD	3.77	117.96	111.27
18	B	607	CLA	C4A-NA-C1A	3.76	108.40	106.71
19	d	401	PHO	CMB-C2B-C3B	3.76	131.71	124.68
19	D	402	PHO	CMB-C2B-C3B	3.74	131.68	124.68
20	b	616	BCR	C8-C9-C10	-3.72	113.23	118.94
20	B	610	BCR	C15-C16-C17	3.71	131.08	123.47
18	a	405	CLA	CHD-C1D-ND	-3.71	121.04	124.45
18	b	615	CLA	C4A-NA-C1A	3.71	108.37	106.71
18	d	408	CLA	CHB-C4A-NA	3.70	129.63	124.51
20	b	602	BCR	C15-C16-C17	3.69	131.04	123.47

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
18	b	604	CLA	CHB-C1B-NB	3.68	128.16	124.26
19	A	407	PHO	C2B-C1B-NB	-3.66	107.00	109.53
18	b	614	CLA	O2D-CGD-CBD	3.65	117.75	111.27
19	a	409	PHO	C2B-C1B-NB	-3.65	107.01	109.53
18	b	614	CLA	CHB-C1B-NB	3.64	128.11	124.26
21	a	406	SQD	O9-S-C6	3.63	111.25	106.94
18	b	608	CLA	O2D-CGD-O1D	-3.63	116.74	123.84
18	B	609	CLA	CHB-C1B-NB	3.62	128.09	124.26
18	b	608	CLA	C4A-NA-C1A	3.60	108.33	106.71
18	c	507	CLA	CHD-C4C-C3C	-3.58	119.58	124.84
18	B	607	CLA	O2D-CGD-O1D	-3.57	116.86	123.84
21	A	409	SQD	O9-S-C6	3.57	111.18	106.94
18	a	405	CLA	C4A-NA-C1A	3.56	108.31	106.71
21	a	406	SQD	O47-C7-C8	3.55	119.15	111.50
18	C	504	CLA	CHD-C4C-NC	3.55	129.79	124.20
18	C	510	CLA	C4A-NA-C1A	3.54	108.30	106.71
18	B	618	CLA	CAC-C3C-C4C	3.53	129.40	124.81
18	b	611	CLA	CHD-C1D-ND	-3.53	121.21	124.45
18	b	614	CLA	CAC-C3C-C4C	3.53	129.39	124.81
18	b	613	CLA	CHD-C1D-ND	-3.53	121.21	124.45
18	B	617	CLA	CHD-C1D-ND	-3.52	121.22	124.45
19	D	402	PHO	O1D-CGD-CBD	3.49	130.56	124.74
18	A	405	CLA	C4A-NA-C1A	3.49	108.27	106.71
18	d	408	CLA	O2D-CGD-O1D	-3.48	117.03	123.84
18	C	515	CLA	O2D-CGD-O1D	-3.48	117.03	123.84
18	H	101	CLA	CHD-C1D-ND	-3.48	121.26	124.45
18	c	505	CLA	O2A-CGA-O1A	-3.48	114.82	123.59
20	B	613	BCR	C34-C9-C10	3.47	127.79	122.92
18	A	403	CLA	CHB-C4A-NA	3.46	129.30	124.51
18	a	403	CLA	CHB-C4A-NA	3.46	129.29	124.51
18	a	407	CLA	CHB-C4A-NA	3.45	129.29	124.51
21	a	406	SQD	O9-S-O7	-3.45	102.00	113.95
21	A	409	SQD	O9-S-O7	-3.45	102.00	113.95
20	b	616	BCR	C34-C9-C10	3.45	127.75	122.92
19	d	401	PHO	O1D-CGD-CBD	3.45	130.48	124.74
18	A	404	CLA	CHB-C4A-NA	3.45	129.28	124.51
20	h	101	BCR	C12-C13-C14	-3.44	113.67	118.94
18	D	405	CLA	O2D-CGD-O1D	-3.43	117.12	123.84
26	d	405	PL9	C7-C3-C2	-3.43	118.78	123.30
18	B	605	CLA	CHB-C4A-NA	3.43	129.25	124.51
18	C	504	CLA	CHB-C1B-NB	-3.42	120.63	124.26
18	B	615	CLA	O2D-CGD-O1D	-3.41	117.17	123.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
18	B	618	CLA	CHC-C4B-NB	3.41	127.86	124.26
18	c	509	CLA	O2D-CGD-O1D	-3.41	117.18	123.84
18	c	513	CLA	C4A-NA-C1A	3.40	108.23	106.71
18	b	620	CLA	CHB-C4A-NA	3.39	129.20	124.51
18	b	620	CLA	O2D-CGD-O1D	-3.37	117.25	123.84
18	B	606	CLA	CHD-C1D-ND	-3.35	121.37	124.45
27	F	101	HEM	C1B-NB-C4B	3.34	108.53	105.07
18	b	601	CLA	O2D-CGD-O1D	-3.34	117.31	123.84
18	D	405	CLA	CHB-C4A-NA	3.33	129.12	124.51
18	c	505	CLA	C6-C5-C3	-3.32	104.75	113.45
18	b	606	CLA	CHB-C4A-NA	3.32	129.10	124.51
18	b	614	CLA	C2D-C1D-ND	-3.31	107.67	110.10
18	B	616	CLA	O2D-CGD-O1D	-3.30	117.38	123.84
18	b	613	CLA	C1-C2-C3	-3.30	120.34	126.04
26	D	407	PL9	C7-C3-C2	-3.28	118.98	123.30
18	B	616	CLA	CHB-C4A-NA	3.28	129.04	124.51
27	f	101	HEM	C1B-NB-C4B	3.27	108.45	105.07
18	c	511	CLA	CHD-C1D-ND	-3.26	121.46	124.45
18	c	508	CLA	CHD-C1D-ND	-3.24	121.47	124.45
18	B	609	CLA	O2D-CGD-O1D	-3.24	117.51	123.84
18	c	503	CLA	C4A-NA-C1A	3.23	108.16	106.71
18	A	403	CLA	C4A-NA-C1A	3.23	108.16	106.71
18	c	503	CLA	CHB-C4A-NA	3.22	128.97	124.51
18	A	404	CLA	C4A-NA-C1A	3.22	108.15	106.71
18	B	618	CLA	C2D-C1D-ND	-3.22	107.73	110.10
18	B	617	CLA	C1-C2-C3	-3.22	120.48	126.04
18	C	507	CLA	CHD-C1D-ND	-3.20	121.51	124.45
18	a	403	CLA	C4A-NA-C1A	3.20	108.14	106.71
18	c	507	CLA	CHD-C4C-NC	3.20	129.24	124.20
18	b	604	CLA	O2D-CGD-O1D	-3.20	117.58	123.84
20	H	102	BCR	C12-C13-C14	-3.19	114.05	118.94
24	b	621	DGD	C1D-C2D-C3D	-3.19	103.35	110.00
18	b	614	CLA	CHC-C4B-NB	3.18	127.63	124.26
18	a	407	CLA	C4A-NA-C1A	3.17	108.13	106.71
18	C	511	CLA	CHD-C1D-ND	-3.17	121.55	124.45
19	a	409	PHO	O1D-CGD-CBD	3.16	130.01	124.74
18	C	512	CLA	O2D-CGD-O1D	-3.16	117.67	123.84
18	c	510	CLA	O2D-CGD-O1D	-3.14	117.69	123.84
19	A	407	PHO	O1D-CGD-CBD	3.14	129.97	124.74
18	b	603	CLA	CHD-C1D-ND	-3.14	121.57	124.45
18	C	506	CLA	O2D-CGD-O1D	-3.13	117.72	123.84
19	a	409	PHO	O2D-CGD-O1D	-3.12	117.74	123.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
18	c	513	CLA	CHD-C1D-ND	-3.11	121.59	124.45
18	C	505	CLA	CHB-C4A-NA	3.11	128.81	124.51
18	c	506	CLA	O2D-CGD-O1D	-3.10	117.78	123.84
19	D	402	PHO	O2D-CGD-O1D	-3.09	117.80	123.84
18	C	510	CLA	O2D-CGD-O1D	-3.08	117.81	123.84
18	a	403	CLA	O2D-CGD-O1D	-3.08	117.81	123.84
18	B	606	CLA	C4A-NA-C1A	3.07	108.09	106.71
18	c	516	CLA	O2D-CGD-CBD	3.07	116.73	111.27
18	b	619	CLA	C3B-C4B-NB	-3.07	107.67	110.52
19	d	401	PHO	O2D-CGD-O1D	-3.06	117.86	123.84
18	B	614	CLA	C3B-C4B-NB	-3.06	107.68	110.52
18	A	404	CLA	O2D-CGD-O1D	-3.06	117.86	123.84
18	C	514	CLA	CHB-C4A-NA	3.05	128.73	124.51
18	B	601	CLA	O2D-CGD-O1D	-3.04	117.89	123.84
18	c	504	CLA	O2D-CGD-O1D	-3.04	117.89	123.84
18	B	603	CLA	C3B-C4B-NB	-3.04	107.69	110.52
18	d	404	CLA	CAC-C3C-C2C	3.04	132.73	127.53
20	d	407	BCR	C20-C21-C22	-3.04	122.97	127.31
18	C	508	CLA	CHD-C1D-ND	-3.03	121.67	124.45
24	B	620	DGD	C1D-C2D-C3D	-3.03	103.69	110.00
18	b	612	CLA	CHB-C4A-NA	3.03	128.70	124.51
18	C	510	CLA	CHD-C1D-ND	-3.03	121.67	124.45
18	b	605	CLA	O2D-CGD-O1D	-3.02	117.93	123.84
18	B	602	CLA	CHB-C4A-NA	3.02	128.69	124.51
19	A	407	PHO	O2D-CGD-O1D	-3.02	117.94	123.84
18	b	607	CLA	CHB-C4A-NA	3.02	128.69	124.51
18	b	611	CLA	O2D-CGD-O1D	-3.02	117.94	123.84
18	D	406	CLA	C3B-C4B-NB	-3.01	107.72	110.52
18	c	516	CLA	C1-C2-C3	-3.01	120.84	126.04
18	a	403	CLA	C1-C2-C3	-3.00	120.85	126.04
19	a	409	PHO	CMB-C2B-C3B	3.00	130.29	124.68
18	C	504	CLA	CHC-C1C-C2C	-3.00	118.40	126.73
18	D	406	CLA	CAC-C3C-C2C	3.00	132.66	127.53
26	D	407	PL9	C7-C8-C9	-3.00	121.81	126.79
18	b	617	CLA	C3B-C4B-NB	-3.00	107.74	110.52
27	f	101	HEM	C3B-C2B-C1B	2.99	108.71	106.49
18	C	509	CLA	O2D-CGD-O1D	-2.99	117.99	123.84
18	B	606	CLA	O2D-CGD-O1D	-2.98	118.02	123.84
18	A	404	CLA	C1-C2-C3	-2.97	120.91	126.04
18	d	404	CLA	C3B-C4B-NB	-2.97	107.76	110.52
18	c	516	CLA	CHD-C1D-ND	-2.97	121.73	124.45
18	B	602	CLA	O2D-CGD-O1D	-2.96	118.05	123.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
19	A	407	PHO	CMB-C2B-C3B	2.96	130.22	124.68
18	C	508	CLA	O2D-CGD-CBD	2.96	116.53	111.27
18	c	512	CLA	CHB-C4A-NA	2.96	128.60	124.51
18	c	503	CLA	O2D-CGD-O1D	-2.95	118.06	123.84
18	a	403	CLA	CHD-C1D-ND	-2.95	121.74	124.45
18	a	407	CLA	O2D-CGD-O1D	-2.95	118.06	123.84
18	c	513	CLA	O2D-CGD-O1D	-2.95	118.07	123.84
18	c	507	CLA	C1D-CHD-C4C	-2.95	119.69	126.06
18	b	611	CLA	C4A-NA-C1A	2.95	108.03	106.71
18	B	614	CLA	O2D-CGD-O1D	-2.94	118.09	123.84
18	B	618	CLA	C4A-NA-C1A	2.94	108.03	106.71
18	H	101	CLA	CHB-C4A-NA	2.94	128.57	124.51
18	B	602	CLA	C3B-C4B-NB	-2.94	107.79	110.52
18	c	510	CLA	CHD-C1D-ND	-2.94	121.75	124.45
18	b	607	CLA	O2D-CGD-O1D	-2.93	118.10	123.84
20	b	616	BCR	C35-C13-C14	2.93	127.03	122.92
18	C	508	CLA	C1-C2-C3	-2.93	120.98	126.04
18	b	617	CLA	O2D-CGD-O1D	-2.92	118.12	123.84
18	b	603	CLA	O2D-CGD-O1D	-2.92	118.13	123.84
18	A	403	CLA	O2D-CGD-O1D	-2.92	118.14	123.84
18	A	404	CLA	CHD-C1D-ND	-2.92	121.77	124.45
18	c	515	CLA	O2D-CGD-O1D	-2.91	118.14	123.84
18	B	608	CLA	O2D-CGD-O1D	-2.91	118.14	123.84
18	b	607	CLA	C3B-C4B-NB	-2.91	107.81	110.52
18	C	505	CLA	O2D-CGD-O1D	-2.91	118.15	123.84
27	F	101	HEM	C4A-NA-C1A	2.90	108.19	105.35
18	B	609	CLA	CMB-C2B-C1B	-2.90	120.95	125.37
18	C	506	CLA	CHD-C1D-ND	-2.90	121.79	124.45
20	H	102	BCR	C15-C16-C17	-2.90	117.53	123.47
18	C	517	CLA	O2D-CGD-O1D	-2.89	118.18	123.84
18	C	516	CLA	C6-C5-C3	-2.89	105.87	113.45
27	F	101	HEM	C3B-C2B-C1B	2.89	108.63	106.49
18	C	511	CLA	CHB-C4A-NA	2.89	128.51	124.51
18	b	614	CLA	C4D-CHA-C1A	-2.88	117.75	121.25
18	D	406	CLA	O2D-CGD-O1D	-2.88	118.21	123.84
18	c	508	CLA	O2D-CGD-O1D	-2.87	118.23	123.84
18	C	508	CLA	CHB-C4A-NA	2.86	128.47	124.51
18	B	608	CLA	CHB-C4A-NA	2.86	128.46	124.51
18	a	405	CLA	O2D-CGD-O1D	-2.86	118.26	123.84
18	C	504	CLA	O2D-CGD-O1D	-2.85	118.26	123.84
18	B	617	CLA	CHB-C4A-NA	2.85	128.46	124.51
18	b	614	CLA	C4A-NA-C1A	2.85	107.99	106.71

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
18	b	613	CLA	O2D-CGD-O1D	-2.85	118.27	123.84
18	C	511	CLA	O2D-CGD-O1D	-2.85	118.27	123.84
18	a	403	CLA	O2D-CGD-CBD	2.85	116.33	111.27
20	H	102	BCR	C16-C17-C18	2.84	131.37	127.31
18	c	511	CLA	O2D-CGD-O1D	-2.84	118.28	123.84
18	A	405	CLA	O2D-CGD-O1D	-2.84	118.28	123.84
18	b	619	CLA	O2D-CGD-O1D	-2.84	118.28	123.84
18	B	603	CLA	O2D-CGD-O1D	-2.84	118.29	123.84
26	d	405	PL9	C22-C23-C24	-2.83	120.83	127.66
18	B	618	CLA	C4D-CHA-C1A	-2.83	117.80	121.25
27	f	101	HEM	C4A-NA-C1A	2.83	108.12	105.35
20	B	613	BCR	C35-C13-C14	2.83	126.89	122.92
18	b	603	CLA	CHB-C4A-NA	2.83	128.43	124.51
18	c	507	CLA	O2D-CGD-O1D	-2.83	118.30	123.84
18	C	504	CLA	CMC-C2C-C3C	2.83	133.80	126.12
18	H	101	CLA	O2D-CGD-O1D	-2.83	118.31	123.84
18	c	511	CLA	CHB-C4A-NA	2.83	128.42	124.51
18	C	507	CLA	O2D-CGD-O1D	-2.83	118.31	123.84
18	b	612	CLA	O2D-CGD-O1D	-2.83	118.31	123.84
18	B	605	CLA	O2D-CGD-O1D	-2.83	118.31	123.84
18	c	505	CLA	C3B-C4B-NB	-2.82	107.90	110.52
18	c	503	CLA	CAC-C3C-C4C	2.82	128.46	124.81
18	B	619	CLA	O2D-CGD-O1D	-2.81	118.33	123.84
18	C	516	CLA	O2A-CGA-O1A	-2.81	116.50	123.59
18	d	404	CLA	O2D-CGD-O1D	-2.81	118.34	123.84
18	b	612	CLA	CHD-C1D-ND	-2.80	121.88	124.45
26	d	405	PL9	C40-C39-C41	2.80	119.99	115.27
18	A	406	CLA	C4A-NA-C1A	2.80	107.97	106.71
18	b	613	CLA	CHB-C4A-NA	2.80	128.39	124.51
26	d	405	PL9	C7-C8-C9	-2.80	122.13	126.79
18	C	514	CLA	O2D-CGD-O1D	-2.80	118.37	123.84
26	D	407	PL9	C22-C23-C24	-2.80	120.93	127.66
18	b	606	CLA	O2D-CGD-O1D	-2.79	118.38	123.84
18	b	614	CLA	CMB-C2B-C1B	-2.79	121.12	125.37
18	b	608	CLA	CHB-C1B-NB	2.78	127.20	124.26
24	C	513	DGD	C3D-C4D-C5D	-2.77	105.29	110.24
18	c	516	CLA	CHB-C4A-NA	2.77	128.34	124.51
27	f	101	HEM	C4D-ND-C1D	2.76	107.92	105.07
18	c	512	CLA	C3B-C4B-NB	-2.75	107.96	110.52
20	B	613	BCR	C8-C7-C6	2.75	134.93	127.20
18	B	617	CLA	O2D-CGD-O1D	-2.75	118.46	123.84
18	c	512	CLA	O2D-CGD-O1D	-2.75	118.46	123.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
20	b	616	BCR	C8-C7-C6	2.74	134.90	127.20
19	d	401	PHO	C2B-C1B-NB	-2.74	107.63	109.53
24	c	517	DGD	C3D-C4D-C5D	-2.74	105.36	110.24
18	C	507	CLA	O2A-CGA-O1A	-2.74	116.69	123.59
18	B	618	CLA	CMB-C2B-C1B	-2.73	121.20	125.37
18	b	607	CLA	CHD-C1D-ND	-2.73	121.94	124.45
18	A	406	CLA	CHB-C4A-NA	2.73	128.28	124.51
18	D	406	CLA	CHB-C1B-NB	2.72	127.14	124.26
18	b	609	CLA	CHB-C1B-NB	2.72	127.13	124.26
18	C	511	CLA	O2A-C1-C2	-2.72	101.50	108.64
18	C	509	CLA	CHB-C4A-NA	2.71	128.26	124.51
19	A	407	PHO	C1C-C2C-C3C	-2.71	106.36	108.61
20	D	403	BCR	C20-C21-C22	-2.71	123.45	127.31
18	B	602	CLA	CHD-C1D-ND	-2.71	121.97	124.45
18	b	614	CLA	CHB-C4A-NA	2.71	128.25	124.51
18	c	508	CLA	O2A-CGA-O1A	-2.70	116.77	123.59
18	C	516	CLA	O2D-CGD-O1D	-2.70	118.55	123.84
18	B	611	CLA	O2D-CGD-O1D	-2.70	118.56	123.84
26	D	407	PL9	C40-C39-C41	2.70	119.81	115.27
18	B	607	CLA	CHB-C1B-NB	2.70	127.11	124.26
18	D	406	CLA	CAC-C3C-C4C	-2.70	121.31	124.81
18	b	615	CLA	O2D-CGD-O1D	-2.69	118.57	123.84
18	c	506	CLA	CHB-C4A-NA	2.69	128.23	124.51
18	b	608	CLA	C11-C10-C8	-2.69	107.23	115.92
18	b	609	CLA	O2D-CGD-O1D	-2.69	118.58	123.84
24	C	503	DGD	C3E-C4E-C5E	2.69	115.03	110.24
18	d	404	CLA	CMC-C2C-C1C	-2.68	120.95	125.04
18	A	404	CLA	O2D-CGD-CBD	2.68	116.03	111.27
18	c	512	CLA	CHD-C1D-ND	-2.68	121.99	124.45
18	d	404	CLA	CHD-C1D-ND	-2.67	122.00	124.45
21	A	409	SQD	O48-C23-C24	2.67	120.29	111.91
18	b	604	CLA	C1-C2-C3	-2.66	121.44	126.04
19	a	409	PHO	C1C-C2C-C3C	-2.66	106.40	108.61
18	a	404	CLA	CHB-C4A-NA	2.66	128.19	124.51
18	c	511	CLA	O2A-C1-C2	-2.66	101.64	108.64
18	b	605	CLA	CHB-C4A-NA	2.66	128.19	124.51
24	c	514	DGD	C3E-C4E-C5E	2.66	114.98	110.24
24	b	621	DGD	O3G-C1D-C2D	2.65	112.45	108.30
18	C	514	CLA	C3B-C4B-NB	-2.65	108.06	110.52
18	B	611	CLA	CHB-C1B-NB	2.65	127.06	124.26
18	c	508	CLA	C3B-C4B-NB	-2.65	108.06	110.52
18	C	514	CLA	CHD-C1D-ND	-2.65	122.02	124.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
18	c	505	CLA	O2D-CGD-O1D	-2.65	118.67	123.84
18	B	608	CLA	CHD-C1D-ND	-2.65	122.02	124.45
18	C	507	CLA	C3B-C4B-NB	-2.64	108.06	110.52
18	B	609	CLA	C1-C2-C3	-2.64	121.47	126.04
18	B	607	CLA	CHB-C4A-NA	2.64	128.16	124.51
18	B	601	CLA	CHB-C4A-NA	2.64	128.16	124.51
18	B	615	CLA	O2A-CGA-O1A	-2.64	116.94	123.59
18	D	405	CLA	C3B-C4B-NB	-2.64	108.07	110.52
18	C	512	CLA	CHB-C4A-NA	2.63	128.15	124.51
18	c	506	CLA	CHC-C1C-NC	2.63	128.19	124.20
26	D	407	PL9	C20-C19-C21	2.63	119.69	115.27
18	B	615	CLA	CHB-C4A-NA	2.63	128.14	124.51
18	c	515	CLA	CHD-C1D-ND	-2.62	122.04	124.45
18	C	509	CLA	CHD-C1D-ND	-2.62	122.05	124.45
18	d	404	CLA	CAC-C3C-C4C	-2.62	121.41	124.81
21	a	406	SQD	O48-C23-C24	2.61	120.11	111.91
18	c	505	CLA	C1-C2-C3	-2.61	121.53	126.04
18	b	601	CLA	CHB-C4A-NA	2.61	128.12	124.51
18	c	511	CLA	CHC-C1C-NC	2.61	128.16	124.20
18	b	620	CLA	CHD-C1D-ND	-2.60	122.06	124.45
18	b	605	CLA	CHC-C4B-NB	2.60	127.01	124.26
18	b	612	CLA	C4A-NA-C1A	2.60	107.88	106.71
20	h	101	BCR	C15-C16-C17	-2.60	118.16	123.47
18	c	504	CLA	CHB-C4A-NA	2.60	128.10	124.51
18	C	504	CLA	C1D-CHD-C4C	-2.59	120.46	126.06
18	b	608	CLA	CHB-C4A-NA	2.59	128.10	124.51
18	B	601	CLA	CMD-C2D-C1D	-2.59	120.15	124.71
20	b	602	BCR	C35-C13-C14	-2.59	119.30	122.92
26	d	405	PL9	C20-C19-C21	2.58	119.62	115.27
20	B	613	BCR	C19-C18-C17	-2.58	114.98	118.94
20	B	610	BCR	C35-C13-C14	-2.58	119.31	122.92
18	B	618	CLA	CHB-C4A-NA	2.57	128.07	124.51
18	c	505	CLA	C2D-C1D-ND	-2.57	108.21	110.10
18	d	404	CLA	CBC-CAC-C3C	2.56	119.50	112.43
18	B	611	CLA	CHB-C4A-NA	2.56	128.05	124.51
18	C	509	CLA	O2A-CGA-O1A	-2.55	117.14	123.59
18	c	504	CLA	CHD-C1D-ND	-2.55	122.11	124.45
18	b	611	CLA	C2D-C1D-ND	-2.55	108.22	110.10
18	D	405	CLA	O2D-CGD-CBD	2.54	115.79	111.27
18	b	601	CLA	C1-C2-C3	-2.54	121.65	126.04
18	C	512	CLA	C3B-C4B-NB	-2.54	108.16	110.52
18	c	504	CLA	C3B-C4B-NB	-2.54	108.16	110.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
18	c	504	CLA	O2A-CGA-O1A	-2.54	117.19	123.59
18	C	517	CLA	CHB-C4A-NA	2.53	128.01	124.51
27	F	101	HEM	C4C-NC-C1C	2.53	107.82	105.35
18	B	606	CLA	CHC-C4B-NB	2.52	126.93	124.26
27	F	101	HEM	C4D-ND-C1D	2.52	107.68	105.07
20	b	616	BCR	C19-C18-C17	-2.52	115.07	118.94
18	c	506	CLA	CHD-C1D-ND	-2.52	122.14	124.45
18	b	614	CLA	CAC-C3C-C2C	-2.52	123.22	127.53
18	C	516	CLA	C3B-C4B-NB	-2.52	108.18	110.52
18	C	511	CLA	CHC-C1C-NC	2.52	128.02	124.20
18	A	406	CLA	CHC-C4B-NB	2.51	126.92	124.26
21	A	409	SQD	O5-C5-C4	2.51	114.26	109.69
18	B	616	CLA	CHD-C1D-ND	-2.51	122.15	124.45
20	h	101	BCR	C20-C21-C22	2.51	130.89	127.31
18	b	601	CLA	O2A-CGA-O1A	-2.50	117.28	123.59
18	C	505	CLA	CAC-C3C-C4C	2.50	128.06	124.81
18	b	608	CLA	CMB-C2B-C1B	-2.50	121.56	125.37
18	c	508	CLA	C3A-C2A-C1A	-2.50	97.59	101.34
18	d	408	CLA	C3B-C4B-NB	-2.50	108.20	110.52
18	C	516	CLA	CHB-C4A-NA	2.50	127.97	124.51
26	D	407	PL9	C27-C28-C29	-2.50	121.64	127.66
18	c	508	CLA	C4A-NA-C1A	-2.50	105.58	106.71
19	D	402	PHO	C2B-C1B-NB	-2.50	107.80	109.53
18	C	517	CLA	CHD-C1D-ND	-2.50	122.16	124.45
18	B	619	CLA	CHB-C4A-NA	2.50	127.96	124.51
18	B	616	CLA	C3B-C4B-NB	-2.50	108.20	110.52
18	C	516	CLA	CAC-C3C-C4C	2.49	128.05	124.81
18	b	614	CLA	O2A-CGA-O1A	-2.49	117.30	123.59
18	b	611	CLA	C3B-C4B-NB	-2.49	108.20	110.52
18	B	615	CLA	O2D-CGD-CBD	2.49	115.69	111.27
18	D	406	CLA	CBC-CAC-C3C	2.49	119.30	112.43
18	B	615	CLA	C1-C2-C3	-2.49	121.74	126.04
18	B	618	CLA	O2A-CGA-O1A	-2.49	117.31	123.59
18	B	601	CLA	CHC-C4B-NB	2.49	126.89	124.26
18	b	611	CLA	CHB-C4A-NA	2.49	127.95	124.51
18	b	605	CLA	CMD-C2D-C1D	-2.48	120.35	124.71
18	B	618	CLA	CAC-C3C-C2C	-2.48	123.29	127.53
18	c	513	CLA	C3B-C4B-NB	-2.47	108.22	110.52
18	B	619	CLA	O2A-CGA-O1A	-2.47	117.35	123.59
18	C	512	CLA	CHD-C1D-ND	-2.47	122.19	124.45
26	d	405	PL9	C27-C28-C29	-2.47	121.72	127.66
18	c	503	CLA	C2A-C1A-CHA	2.46	128.17	123.86

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	f	101	HEM	C4C-NC-C1C	2.46	107.76	105.35
18	c	515	CLA	CHB-C4A-NA	2.46	127.92	124.51
18	b	612	CLA	C3B-C4B-NB	-2.46	108.23	110.52
18	B	601	CLA	C3B-C4B-NB	-2.46	108.24	110.52
18	B	606	CLA	CHB-C4A-NA	2.46	127.91	124.51
18	a	405	CLA	CHB-C4A-NA	2.45	127.91	124.51
18	b	615	CLA	CMB-C2B-C1B	-2.45	121.63	125.37
18	c	510	CLA	CHB-C4A-NA	2.45	127.90	124.51
18	B	609	CLA	C3B-C4B-NB	-2.45	108.24	110.52
18	b	620	CLA	O2D-CGD-CBD	2.45	115.61	111.27
18	b	601	CLA	O2D-CGD-CBD	2.45	115.61	111.27
20	B	613	BCR	C35-C13-C12	2.44	121.93	118.08
18	C	512	CLA	O2A-CGA-O1A	-2.44	117.43	123.59
27	F	101	HEM	CHD-C4C-NC	2.44	127.08	124.44
18	B	608	CLA	C3B-C4B-NB	-2.44	108.25	110.52
18	a	404	CLA	C3B-C4B-NB	-2.44	108.25	110.52
18	B	607	CLA	CMB-C2B-C1B	-2.44	121.66	125.37
18	A	406	CLA	C3B-C4B-NB	-2.44	108.25	110.52
18	b	608	CLA	C11-C12-C13	-2.44	108.05	115.92
18	d	404	CLA	CHB-C4A-NA	2.43	127.88	124.51
18	C	510	CLA	C3B-C4B-NB	-2.43	108.26	110.52
18	d	408	CLA	O2D-CGD-CBD	2.43	115.58	111.27
18	b	615	CLA	O2A-CGA-O1A	-2.43	117.46	123.59
18	b	604	CLA	C3B-C4B-NB	-2.43	108.26	110.52
18	b	603	CLA	C3B-C4B-NB	-2.43	108.26	110.52
20	b	616	BCR	C35-C13-C12	2.43	121.90	118.08
18	d	404	CLA	CHB-C1B-NB	2.42	126.82	124.26
18	A	405	CLA	C3B-C4B-NB	-2.42	108.27	110.52
18	A	405	CLA	CHB-C4A-NA	2.42	127.86	124.51
18	C	506	CLA	CHB-C4A-NA	2.42	127.86	124.51
18	b	609	CLA	CHB-C4A-NA	2.42	127.86	124.51
18	B	606	CLA	C2D-C1D-ND	-2.42	108.32	110.10
18	d	408	CLA	CHD-C1D-ND	-2.42	122.23	124.45
18	c	509	CLA	CHC-C4B-NB	2.42	126.82	124.26
18	C	512	CLA	CHC-C1C-NC	2.42	127.87	124.20
18	b	611	CLA	CHD-C1D-C2D	2.42	130.55	125.48
18	a	405	CLA	C3B-C4B-NB	-2.40	108.29	110.52
18	c	506	CLA	O2A-CGA-O1A	-2.40	117.53	123.59
18	c	506	CLA	C3B-C4B-NB	-2.40	108.29	110.52
18	b	604	CLA	CMB-C2B-C1B	-2.39	121.72	125.37
18	C	515	CLA	CHC-C4B-NB	2.39	126.79	124.26
18	b	619	CLA	CHB-C4A-NA	2.39	127.82	124.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
18	C	505	CLA	C2A-C1A-CHA	2.39	128.04	123.86
18	b	613	CLA	O2A-CGA-O1A	-2.39	117.56	123.59
18	b	615	CLA	CHB-C4A-NA	2.39	127.81	124.51
18	C	515	CLA	O2A-CGA-O1A	-2.39	117.57	123.59
18	B	608	CLA	C4A-NA-C1A	2.38	107.78	106.71
20	B	610	BCR	C7-C8-C9	-2.38	122.63	126.23
18	c	509	CLA	O2A-CGA-O1A	-2.38	117.58	123.59
18	b	604	CLA	CHC-C4B-NB	2.38	126.78	124.26
18	B	606	CLA	C3B-C4B-NB	-2.38	108.31	110.52
18	b	619	CLA	CHD-C1D-ND	-2.38	122.27	124.45
18	C	507	CLA	C3A-C2A-C1A	-2.38	97.77	101.34
18	C	505	CLA	C3B-C4B-NB	-2.38	108.31	110.52
18	c	509	CLA	C2B-C1B-NB	-2.38	108.64	110.23
18	c	507	CLA	C1D-ND-C4D	-2.38	104.65	106.33
18	C	515	CLA	CHD-C1D-ND	-2.38	122.27	124.45
18	c	506	CLA	CAC-C3C-C2C	-2.38	123.47	127.53
18	B	619	CLA	CMB-C2B-C1B	-2.37	121.76	125.37
20	b	602	BCR	C7-C8-C9	-2.37	122.66	126.23
18	B	603	CLA	CHD-C1D-ND	-2.36	122.28	124.45
21	a	406	SQD	O5-C5-C4	2.36	113.98	109.69
18	C	508	CLA	C3B-C4B-NB	-2.36	108.33	110.52
18	c	509	CLA	CHD-C1D-ND	-2.36	122.29	124.45
18	B	603	CLA	CHB-C4A-NA	2.35	127.77	124.51
18	a	404	CLA	C4A-NA-C1A	2.35	107.76	106.71
24	C	503	DGD	O6E-C1E-C2E	-2.35	105.38	110.35
24	b	621	DGD	C6D-O5D-C1E	2.35	118.33	113.74
24	c	514	DGD	O6E-C1E-C2E	-2.35	105.38	110.35
18	b	613	CLA	C11-C10-C8	-2.35	108.34	115.92
18	c	516	CLA	C3B-C4B-NB	-2.34	108.34	110.52
18	B	616	CLA	O2A-CGA-O1A	-2.34	117.68	123.59
18	D	406	CLA	CHB-C4A-NA	2.34	127.75	124.51
18	b	611	CLA	CHC-C4B-NB	2.34	126.73	124.26
18	B	602	CLA	C1-C2-C3	-2.33	122.01	126.04
18	D	406	CLA	CHD-C1D-ND	-2.33	122.31	124.45
20	b	602	BCR	C35-C13-C12	2.33	121.75	118.08
18	D	406	CLA	CMC-C2C-C1C	-2.33	121.50	125.04
18	b	605	CLA	C3B-C4B-NB	-2.33	108.36	110.52
18	b	607	CLA	C1-C2-C3	-2.33	122.02	126.04
18	D	406	CLA	O2A-CGA-O1A	-2.33	117.72	123.59
18	B	617	CLA	O2A-CGA-O1A	-2.32	117.73	123.59
18	B	616	CLA	O2D-CGD-CBD	2.32	115.39	111.27
18	d	404	CLA	CMC-C2C-C3C	2.32	132.41	126.12

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
18	b	615	CLA	C1-C2-C3	-2.31	122.04	126.04
24	B	620	DGD	C6D-O5D-C1E	2.31	118.26	113.74
20	A	408	BCR	C16-C17-C18	-2.31	124.01	127.31
19	D	402	PHO	CMC-C2C-C3C	2.31	132.39	126.12
20	a	401	BCR	C16-C17-C18	-2.31	124.02	127.31
18	C	515	CLA	CHB-C4A-NA	2.30	127.70	124.51
20	B	610	BCR	C11-C12-C13	2.30	132.88	126.42
18	B	617	CLA	C11-C10-C8	-2.30	108.49	115.92
18	c	515	CLA	C3B-C4B-NB	-2.30	108.38	110.52
18	B	606	CLA	CHD-C1D-C2D	2.29	130.29	125.48
18	a	404	CLA	CMB-C2B-C1B	-2.29	121.88	125.37
18	c	509	CLA	O1D-CGD-CBD	2.29	129.17	124.48
18	b	620	CLA	O2A-CGA-O1A	-2.29	117.82	123.59
18	b	606	CLA	C2A-C1A-CHA	2.29	127.86	123.86
18	c	513	CLA	CHB-C4A-NA	2.28	127.67	124.51
18	b	606	CLA	CHA-C1A-NA	-2.28	121.17	126.40
18	c	509	CLA	C1-C2-C3	-2.28	122.10	126.04
18	b	614	CLA	C1-C2-C3	-2.28	122.11	126.04
18	H	101	CLA	C3B-C4B-NB	-2.27	108.41	110.52
18	B	605	CLA	C2A-C1A-CHA	2.27	127.82	123.86
18	d	404	CLA	O2A-CGA-O1A	-2.27	117.87	123.59
20	b	602	BCR	C11-C12-C13	2.26	132.78	126.42
18	B	607	CLA	C11-C12-C13	-2.26	108.61	115.92
24	B	620	DGD	O3G-C1D-C2D	2.25	111.81	108.30
18	B	609	CLA	CAC-C3C-C4C	2.25	127.73	124.81
18	B	605	CLA	C1-C2-C3	-2.25	122.16	126.04
18	C	515	CLA	C2B-C1B-NB	-2.24	108.73	110.23
18	b	608	CLA	C3B-C4B-NB	-2.24	108.43	110.52
18	C	515	CLA	C1-C2-C3	-2.24	122.17	126.04
18	B	607	CLA	CHD-C1D-ND	-2.24	122.39	124.45
18	C	512	CLA	C1-C2-C3	-2.24	122.17	126.04
20	B	610	BCR	C35-C13-C12	2.24	121.60	118.08
18	b	606	CLA	C1-C2-C3	-2.23	122.18	126.04
18	a	404	CLA	CHC-C4B-NB	2.23	126.62	124.26
18	b	606	CLA	CAA-C2A-C3A	-2.23	106.67	112.78
18	c	506	CLA	CBC-CAC-C3C	2.23	118.56	112.43
18	b	608	CLA	O2A-CGA-O1A	-2.22	117.98	123.59
18	C	510	CLA	CHB-C4A-NA	2.22	127.58	124.51
18	c	503	CLA	CMB-C2B-C1B	-2.22	121.99	125.37
18	B	607	CLA	C3B-C4B-NB	-2.22	108.46	110.52
18	C	517	CLA	C3B-C4B-NB	-2.22	108.46	110.52
27	f	101	HEM	CHD-C4C-NC	2.22	126.84	124.44

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
18	b	613	CLA	C6-C7-C8	-2.22	108.75	115.92
18	c	507	CLA	C3A-C2A-C1A	2.21	104.66	101.34
18	b	604	CLA	CAC-C3C-C4C	2.21	127.68	124.81
18	B	611	CLA	C3B-C4B-NB	-2.21	108.46	110.52
18	b	620	CLA	C3B-C4B-NB	-2.21	108.46	110.52
18	B	611	CLA	CHD-C1D-ND	-2.21	122.42	124.45
24	b	621	DGD	O4D-C4D-C5D	2.21	114.78	109.30
18	C	507	CLA	CHA-C1A-NA	-2.21	121.34	126.40
18	b	609	CLA	C3B-C4B-NB	-2.20	108.47	110.52
18	B	607	CLA	O2A-CGA-O1A	-2.20	118.03	123.59
18	B	605	CLA	CAA-C2A-C3A	-2.20	106.74	112.78
18	C	515	CLA	O1D-CGD-CBD	2.20	128.98	124.48
18	B	605	CLA	CHA-C1A-NA	-2.20	121.36	126.40
20	B	612	BCR	C20-C19-C18	-2.20	120.24	126.42
19	D	402	PHO	C1C-C2C-C3C	-2.20	106.78	108.61
18	c	503	CLA	C3B-C4B-NB	-2.19	108.48	110.52
18	B	615	CLA	CMB-C2B-C1B	-2.19	122.03	125.37
18	B	615	CLA	C3B-C4B-NB	-2.19	108.48	110.52
18	C	511	CLA	CHC-C1C-C2C	-2.19	120.66	126.73
18	b	606	CLA	O2D-CGD-CBD	2.18	115.15	111.27
18	B	611	CLA	CMB-C2B-C1B	-2.18	122.04	125.37
19	d	401	PHO	C1-C2-C3	-2.18	122.27	126.04
18	C	512	CLA	CAC-C3C-C2C	-2.18	123.80	127.53
18	b	601	CLA	C3B-C4B-NB	-2.17	108.50	110.52
18	B	617	CLA	C6-C7-C8	-2.17	108.90	115.92
18	C	504	CLA	C1D-ND-C4D	-2.17	104.79	106.33
18	c	509	CLA	CHB-C4A-NA	2.17	127.51	124.51
24	B	620	DGD	O4D-C4D-C5D	2.17	114.68	109.30
18	a	404	CLA	O2A-CGA-O1A	-2.17	118.13	123.59
18	B	605	CLA	CHC-C1C-NC	2.17	127.49	124.20
18	B	605	CLA	C11-C12-C13	-2.16	108.94	115.92
18	C	510	CLA	O2A-CGA-O1A	-2.16	118.14	123.59
18	B	617	CLA	CHC-C1C-NC	2.16	127.48	124.20
18	b	609	CLA	CMB-C2B-C1B	-2.16	122.08	125.37
18	C	505	CLA	CMB-C2B-C1B	-2.16	122.08	125.37
24	c	514	DGD	C1D-C2D-C3D	-2.16	105.51	110.00
18	b	617	CLA	CHB-C4A-NA	2.15	127.49	124.51
18	A	406	CLA	O2A-CGA-O1A	-2.15	118.16	123.59
20	h	101	BCR	C16-C17-C18	2.15	130.38	127.31
18	C	510	CLA	CHA-C1A-NA	-2.15	121.47	126.40
18	b	612	CLA	O2A-CGA-O1A	-2.15	118.17	123.59
18	b	609	CLA	CHD-C1D-ND	-2.15	122.48	124.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
18	B	618	CLA	C1-C2-C3	-2.15	122.33	126.04
18	b	601	CLA	CMB-C2B-C1B	-2.15	122.10	125.37
18	c	513	CLA	O2A-CGA-O1A	-2.15	118.17	123.59
18	C	509	CLA	C3B-C4B-NB	-2.15	108.53	110.52
18	b	614	CLA	C3C-C4C-NC	-2.14	108.17	110.57
18	D	406	CLA	CMC-C2C-C3C	2.14	131.94	126.12
18	c	511	CLA	CHC-C1C-C2C	-2.14	120.78	126.73
18	C	506	CLA	C3B-C4B-NB	-2.14	108.53	110.52
18	c	504	CLA	C6-C7-C8	-2.13	109.02	115.92
18	c	509	CLA	O2A-C1-C2	2.13	114.24	108.64
18	b	611	CLA	O2A-CGA-O1A	-2.13	118.21	123.59
18	c	513	CLA	CHA-C1A-NA	-2.13	121.52	126.40
18	B	606	CLA	O2A-CGA-O1A	-2.13	118.22	123.59
24	C	503	DGD	C1D-C2D-C3D	-2.13	105.56	110.00
18	B	619	CLA	C3B-C4B-NB	-2.13	108.54	110.52
18	b	608	CLA	CHD-C1D-ND	-2.13	122.50	124.45
18	c	505	CLA	CHB-C4A-NA	2.13	127.45	124.51
18	C	510	CLA	O2D-CGD-CBD	2.12	115.04	111.27
18	B	608	CLA	O2A-CGA-O1A	-2.12	118.23	123.59
18	B	611	CLA	O2A-CGA-O1A	-2.12	118.24	123.59
18	b	613	CLA	CHC-C1C-NC	2.12	127.42	124.20
18	b	609	CLA	O2A-CGA-O1A	-2.12	118.25	123.59
26	d	405	PL9	O2-C1-C2	-2.12	116.93	121.78
24	c	514	DGD	C1E-O6E-C5E	2.12	117.84	113.69
19	d	401	PHO	CMC-C2C-C3C	2.12	131.86	126.12
26	D	407	PL9	O2-C1-C2	-2.11	116.94	121.78
18	d	408	CLA	O2A-CGA-O1A	-2.11	118.26	123.59
18	b	619	CLA	O2A-CGA-O1A	-2.11	118.27	123.59
18	C	510	CLA	CHB-C1B-NB	2.11	126.49	124.26
18	c	508	CLA	CHA-C1A-NA	-2.11	121.57	126.40
18	B	603	CLA	O2A-CGA-O1A	-2.11	118.28	123.59
18	b	608	CLA	O1D-CGD-CBD	2.10	128.79	124.48
18	D	405	CLA	CHB-C1B-NB	2.10	126.48	124.26
19	D	402	PHO	C1-C2-C3	-2.10	122.41	126.04
18	c	516	CLA	O2A-CGA-O1A	-2.10	118.28	123.59
18	C	504	CLA	C3A-C2A-C1A	2.10	104.48	101.34
20	B	610	BCR	C19-C18-C17	2.10	122.16	118.94
18	b	604	CLA	O2A-CGA-O1A	-2.10	118.30	123.59
20	B	613	BCR	C36-C18-C17	2.10	125.86	122.92
18	c	505	CLA	CHA-C4D-ND	2.10	136.89	132.50
18	a	404	CLA	CHB-C1B-NB	2.09	126.47	124.26
18	c	515	CLA	CHC-C1C-C2C	-2.09	120.91	126.73

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
18	c	512	CLA	O2A-CGA-O1A	-2.09	118.31	123.59
18	c	509	CLA	C1-O2A-CGA	2.09	121.94	116.44
18	C	508	CLA	O2A-CGA-O1A	-2.09	118.31	123.59
18	b	614	CLA	CMB-C2B-C3B	2.09	131.65	126.59
18	c	504	CLA	O1D-CGD-CBD	2.09	128.76	124.48
18	B	609	CLA	O2A-CGA-O1A	-2.09	118.32	123.59
18	a	407	CLA	CHC-C1C-NC	2.09	127.37	124.20
18	c	504	CLA	CHD-C4C-NC	2.09	127.49	124.20
18	D	405	CLA	O2A-CGA-O1A	-2.09	118.33	123.59
18	b	609	CLA	CHC-C4B-NB	2.09	126.47	124.26
24	c	514	DGD	C6E-C5E-C4E	-2.08	108.12	113.00
18	b	614	CLA	CHB-C1B-C2B	-2.08	121.36	127.24
18	c	503	CLA	O2D-CGD-CBD	2.08	114.97	111.27
20	B	610	BCR	C10-C11-C12	2.08	129.71	123.22
18	a	404	CLA	CHD-C1D-ND	-2.08	122.54	124.45
18	B	605	CLA	O2D-CGD-CBD	2.08	114.96	111.27
20	H	102	BCR	C20-C21-C22	2.08	130.28	127.31
18	A	405	CLA	O2A-CGA-O1A	-2.08	118.35	123.59
18	B	601	CLA	CMD-C2D-C3D	2.08	132.39	127.61
26	D	407	PL9	O1-C4-C3	-2.08	118.43	120.72
18	b	604	CLA	C2D-C1D-ND	-2.07	108.58	110.10
18	a	407	CLA	CMB-C2B-C1B	-2.07	122.21	125.37
26	D	407	PL9	C12-C13-C14	-2.07	122.67	127.66
18	C	514	CLA	O2A-CGA-O1A	-2.07	118.36	123.59
18	a	403	CLA	CMB-C2B-C1B	-2.07	122.21	125.37
18	b	608	CLA	CMB-C2B-C3B	2.07	131.60	126.59
18	c	511	CLA	CMB-C2B-C1B	-2.07	122.22	125.37
18	B	617	CLA	C3B-C4B-NB	-2.07	108.59	110.52
18	A	403	CLA	CHC-C1C-NC	2.07	127.34	124.20
18	c	511	CLA	C1-C2-C3	-2.07	122.47	126.04
18	B	609	CLA	CMB-C2B-C3B	2.07	131.59	126.59
18	B	607	CLA	O1D-CGD-CBD	2.07	128.71	124.48
18	C	517	CLA	CHC-C1C-C2C	-2.07	120.99	126.73
19	D	402	PHO	CMC-C2C-C1C	-2.07	120.83	124.73
18	c	509	CLA	CHD-C4C-NC	2.06	127.46	124.20
26	d	405	PL9	C12-C13-C14	-2.06	122.69	127.66
18	b	613	CLA	C3B-C4B-NB	-2.06	108.60	110.52
18	C	509	CLA	O1D-CGD-CBD	2.06	128.70	124.48
26	D	407	PL9	C50-C49-C48	-2.06	116.69	122.65
18	a	404	CLA	CMB-C2B-C3B	2.06	131.58	126.59
18	a	405	CLA	O2A-CGA-O1A	-2.06	118.40	123.59
27	F	101	HEM	C2A-C1A-NA	-2.06	107.85	110.15

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
19	D	402	PHO	CMA-C3A-C4A	-2.06	109.87	114.38
18	c	510	CLA	C3B-C4B-NB	-2.06	108.61	110.52
18	B	618	CLA	CHB-C1B-C2B	-2.06	121.43	127.24
18	c	508	CLA	CAA-C2A-C1A	-2.06	105.24	111.97
18	C	507	CLA	C4A-NA-C1A	-2.06	105.78	106.71
20	b	602	BCR	C10-C11-C12	2.05	129.63	123.22
18	b	615	CLA	CHB-C1B-NB	2.05	126.43	124.26
18	c	515	CLA	C1-C2-C3	-2.05	122.50	126.04
20	b	610	BCR	C20-C19-C18	-2.05	120.66	126.42
26	D	407	PL9	C31-C32-C33	-2.05	105.14	111.88
26	d	405	PL9	O1-C4-C3	-2.05	118.46	120.72
20	b	602	BCR	C19-C18-C17	2.05	122.09	118.94
18	B	614	CLA	CAA-CBA-CGA	-2.05	107.27	113.25
18	c	513	CLA	CAA-CBA-CGA	-2.05	107.27	113.25
18	B	619	CLA	C1-C2-C3	-2.05	122.50	126.04
20	b	602	BCR	C20-C19-C18	-2.05	120.66	126.42
18	B	614	CLA	CHB-C4A-NA	2.05	127.34	124.51
18	C	505	CLA	O2D-CGD-CBD	2.05	114.90	111.27
18	A	404	CLA	CMB-C2B-C1B	-2.04	122.26	125.37
18	c	503	CLA	CHA-C1A-NA	-2.04	121.72	126.40
18	c	503	CLA	CMB-C2B-C3B	2.04	131.53	126.59
20	b	616	BCR	C36-C18-C17	2.04	125.78	122.92
18	C	517	CLA	C1-C2-C3	-2.04	122.52	126.04
20	a	401	BCR	C23-C22-C21	-2.04	115.81	118.94
18	B	618	CLA	CMB-C2B-C3B	2.04	131.52	126.59
18	B	608	CLA	CHB-C1B-NB	2.04	126.41	124.26
18	B	607	CLA	CMB-C2B-C3B	2.04	131.52	126.59
18	B	616	CLA	C11-C10-C8	-2.03	109.34	115.92
20	B	610	BCR	C20-C19-C18	-2.03	120.70	126.42
18	C	505	CLA	CHA-C1A-NA	-2.03	121.74	126.40
18	C	516	CLA	C2D-C1D-ND	-2.03	108.61	110.10
18	c	503	CLA	C1D-ND-C4D	-2.03	104.89	106.33
18	C	509	CLA	C6-C7-C8	-2.03	109.35	115.92
19	a	409	PHO	O2A-CGA-O1A	-2.03	118.47	123.59
18	b	615	CLA	C3B-C4B-NB	-2.03	108.63	110.52
27	f	101	HEM	C2A-C1A-NA	-2.03	107.88	110.15
18	C	511	CLA	C1-C2-C3	-2.03	122.54	126.04
26	d	405	PL9	C31-C32-C33	-2.03	105.22	111.88
18	b	612	CLA	O2D-CGD-CBD	2.03	114.87	111.27
18	B	619	CLA	CHB-C1B-NB	2.03	126.40	124.26
18	B	618	CLA	C3C-C4C-NC	-2.02	108.30	110.57
18	c	507	CLA	O2A-CGA-O1A	-2.02	118.48	123.59

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
18	A	404	CLA	O2A-CGA-O1A	-2.02	118.49	123.59
18	A	403	CLA	O2A-CGA-O1A	-2.02	118.49	123.59
19	A	407	PHO	O2A-CGA-O1A	-2.02	118.49	123.59
18	a	407	CLA	O2A-CGA-O1A	-2.02	118.50	123.59
18	B	609	CLA	C2D-C1D-ND	-2.02	108.62	110.10
26	d	405	PL9	C50-C49-C48	-2.01	116.83	122.65
18	C	514	CLA	C1-C2-C3	-2.01	122.56	126.04
26	D	407	PL9	O2-C1-C6	2.01	124.08	120.59
24	C	503	DGD	C1E-O6E-C5E	2.01	117.64	113.69
18	a	403	CLA	O2A-CGA-O1A	-2.01	118.52	123.59
18	C	504	CLA	O2A-CGA-O1A	-2.01	118.53	123.59
18	C	510	CLA	C1-C2-C3	-2.01	122.57	126.04
18	c	513	CLA	CHB-C1B-NB	2.01	126.38	124.26
18	a	405	CLA	CHD-C4C-NC	2.01	127.36	124.20
18	A	406	CLA	CMB-C2B-C1B	-2.00	122.32	125.37
18	C	512	CLA	CBC-CAC-C3C	2.00	117.96	112.43
18	A	405	CLA	CHD-C1D-C2D	2.00	129.68	125.48

There are no chirality outliers.

All (1679) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
18	A	405	CLA	C2B-C3B-CAB-CBB
18	A	405	CLA	C4B-C3B-CAB-CBB
18	A	405	CLA	CBD-CGD-O2D-CED
18	B	601	CLA	C3A-C2A-CAA-CBA
18	B	602	CLA	C2-C3-C5-C6
18	B	602	CLA	C4-C3-C5-C6
18	B	605	CLA	C1A-C2A-CAA-CBA
18	B	605	CLA	CHA-CBD-CGD-O1D
18	B	605	CLA	CHA-CBD-CGD-O2D
18	B	605	CLA	C6-C7-C8-C9
18	B	606	CLA	CHA-CBD-CGD-O1D
18	B	606	CLA	CHA-CBD-CGD-O2D
18	B	606	CLA	CAD-CBD-CGD-O1D
18	B	606	CLA	C6-C7-C8-C9
18	B	608	CLA	C1A-C2A-CAA-CBA
18	B	608	CLA	CBD-CGD-O2D-CED
18	B	609	CLA	CBA-CGA-O2A-C1
18	B	609	CLA	O1A-CGA-O2A-C1
18	B	614	CLA	C1A-C2A-CAA-CBA
18	B	614	CLA	C3A-C2A-CAA-CBA

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Mol	Chain	Res	Type	Atoms
18	B	617	CLA	C2B-C3B-CAB-CBB
18	B	617	CLA	C4B-C3B-CAB-CBB
18	B	617	CLA	CBD-CGD-O2D-CED
18	B	618	CLA	CAD-CBD-CGD-O2D
18	C	505	CLA	C1A-C2A-CAA-CBA
18	C	505	CLA	CBD-CGD-O2D-CED
18	C	506	CLA	CHA-CBD-CGD-O1D
18	C	506	CLA	CHA-CBD-CGD-O2D
18	C	506	CLA	C2-C3-C5-C6
18	C	506	CLA	C4-C3-C5-C6
18	C	509	CLA	CBA-CGA-O2A-C1
18	C	509	CLA	O1A-CGA-O2A-C1
18	C	510	CLA	C1A-C2A-CAA-CBA
18	C	510	CLA	CHA-CBD-CGD-O1D
18	C	510	CLA	CHA-CBD-CGD-O2D
18	C	510	CLA	CAD-CBD-CGD-O1D
18	C	510	CLA	CAD-CBD-CGD-O2D
18	C	511	CLA	C1A-C2A-CAA-CBA
18	C	511	CLA	C3A-C2A-CAA-CBA
18	C	511	CLA	C2B-C3B-CAB-CBB
18	C	511	CLA	C4B-C3B-CAB-CBB
18	C	511	CLA	CBD-CGD-O2D-CED
18	C	512	CLA	C2-C3-C5-C6
18	C	512	CLA	C4-C3-C5-C6
18	C	514	CLA	CHA-CBD-CGD-O1D
18	C	514	CLA	CHA-CBD-CGD-O2D
18	C	514	CLA	CBD-CGD-O2D-CED
18	C	514	CLA	C14-C13-C15-C16
18	C	515	CLA	C3A-C2A-CAA-CBA
18	C	516	CLA	C1A-C2A-CAA-CBA
18	C	516	CLA	CBD-CGD-O2D-CED
18	C	517	CLA	CBD-CGD-O2D-CED
18	C	517	CLA	O1D-CGD-O2D-CED
18	D	405	CLA	CHA-CBD-CGD-O1D
18	D	405	CLA	CHA-CBD-CGD-O2D
18	D	406	CLA	C1A-C2A-CAA-CBA
18	H	101	CLA	C6-C7-C8-C9
18	a	405	CLA	C2B-C3B-CAB-CBB
18	a	405	CLA	C4B-C3B-CAB-CBB
18	a	405	CLA	CBD-CGD-O2D-CED
18	b	603	CLA	C1A-C2A-CAA-CBA
18	b	604	CLA	CBA-CGA-O2A-C1

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Mol	Chain	Res	Type	Atoms
18	b	604	CLA	O1A-CGA-O2A-C1
18	b	605	CLA	C1A-C2A-CAA-CBA
18	b	605	CLA	C3A-C2A-CAA-CBA
18	b	606	CLA	C1A-C2A-CAA-CBA
18	b	606	CLA	CHA-CBD-CGD-O1D
18	b	606	CLA	CHA-CBD-CGD-O2D
18	b	606	CLA	C6-C7-C8-C9
18	b	607	CLA	C4-C3-C5-C6
18	b	609	CLA	CBD-CGD-O2D-CED
18	b	611	CLA	CHA-CBD-CGD-O1D
18	b	611	CLA	CHA-CBD-CGD-O2D
18	b	611	CLA	CAD-CBD-CGD-O1D
18	b	611	CLA	C6-C7-C8-C9
18	b	612	CLA	C1A-C2A-CAA-CBA
18	b	612	CLA	CBD-CGD-O2D-CED
18	b	613	CLA	C2B-C3B-CAB-CBB
18	b	613	CLA	C4B-C3B-CAB-CBB
18	b	615	CLA	CBD-CGD-O2D-CED
18	b	617	CLA	C1A-C2A-CAA-CBA
18	b	617	CLA	C3A-C2A-CAA-CBA
18	c	503	CLA	C1A-C2A-CAA-CBA
18	c	503	CLA	CBD-CGD-O2D-CED
18	c	504	CLA	CBA-CGA-O2A-C1
18	c	504	CLA	O1A-CGA-O2A-C1
18	c	505	CLA	C1A-C2A-CAA-CBA
18	c	505	CLA	CBD-CGD-O2D-CED
18	c	506	CLA	C4C-C3C-CAC-CBC
18	c	506	CLA	C2-C3-C5-C6
18	c	506	CLA	C4-C3-C5-C6
18	c	509	CLA	C1A-C2A-CAA-CBA
18	c	509	CLA	C3A-C2A-CAA-CBA
18	c	510	CLA	CHA-CBD-CGD-O1D
18	c	510	CLA	CHA-CBD-CGD-O2D
18	c	510	CLA	C2-C3-C5-C6
18	c	510	CLA	C4-C3-C5-C6
18	c	511	CLA	C1A-C2A-CAA-CBA
18	c	511	CLA	C3A-C2A-CAA-CBA
18	c	511	CLA	C2B-C3B-CAB-CBB
18	c	511	CLA	C4B-C3B-CAB-CBB
18	c	511	CLA	CBD-CGD-O2D-CED
18	c	512	CLA	CHA-CBD-CGD-O1D
18	c	512	CLA	CHA-CBD-CGD-O2D

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Mol	Chain	Res	Type	Atoms
18	c	512	CLA	CBD-CGD-O2D-CED
18	c	513	CLA	C1A-C2A-CAA-CBA
18	c	513	CLA	CHA-CBD-CGD-O1D
18	c	513	CLA	CHA-CBD-CGD-O2D
18	c	513	CLA	CAD-CBD-CGD-O1D
18	c	513	CLA	CAD-CBD-CGD-O2D
18	c	515	CLA	CBD-CGD-O2D-CED
18	c	515	CLA	O1D-CGD-O2D-CED
18	c	516	CLA	C6-C7-C8-C10
18	c	516	CLA	C14-C13-C15-C16
18	d	404	CLA	C1A-C2A-CAA-CBA
18	d	404	CLA	C3A-C2A-CAA-CBA
20	A	408	BCR	C17-C18-C19-C20
20	A	408	BCR	C36-C18-C19-C20
20	B	610	BCR	C5-C6-C7-C8
20	B	613	BCR	C7-C8-C9-C10
20	B	613	BCR	C7-C8-C9-C34
20	B	613	BCR	C9-C10-C11-C12
20	B	613	BCR	C17-C18-C19-C20
20	B	613	BCR	C36-C18-C19-C20
20	H	102	BCR	C7-C8-C9-C10
20	H	102	BCR	C7-C8-C9-C34
20	H	102	BCR	C11-C12-C13-C14
20	H	102	BCR	C11-C12-C13-C35
20	a	401	BCR	C17-C18-C19-C20
20	a	401	BCR	C36-C18-C19-C20
20	b	602	BCR	C5-C6-C7-C8
20	b	610	BCR	C11-C12-C13-C35
20	b	616	BCR	C7-C8-C9-C10
20	b	616	BCR	C7-C8-C9-C34
20	b	616	BCR	C9-C10-C11-C12
20	b	616	BCR	C17-C18-C19-C20
20	b	616	BCR	C36-C18-C19-C20
20	h	101	BCR	C7-C8-C9-C10
20	h	101	BCR	C7-C8-C9-C34
20	h	101	BCR	C11-C12-C13-C14
20	h	101	BCR	C11-C12-C13-C35
20	h	101	BCR	C13-C14-C15-C16
21	A	409	SQD	O47-C45-C46-O48
21	a	406	SQD	O47-C45-C46-O48
22	A	410	LHG	C3-O3-P-O5
22	A	410	LHG	C4-O6-P-O5

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Mol	Chain	Res	Type	Atoms
22	D	404	LHG	C1-C2-C3-O3
22	D	404	LHG	C3-O3-P-O4
22	D	409	LHG	C3-O3-P-O4
22	L	101	LHG	C1-C2-C3-O3
22	L	101	LHG	C3-O3-P-O5
22	L	101	LHG	C4-O6-P-O4
22	d	403	LHG	C3-O3-P-O4
22	d	403	LHG	C4-O6-P-O5
22	d	406	LHG	C1-C2-C3-O3
22	d	406	LHG	C3-O3-P-O4
22	l	101	LHG	C1-C2-C3-O3
22	l	101	LHG	C3-O3-P-O5
22	l	101	LHG	C4-O6-P-O4
23	C	502	LMG	C2-C1-O1-C7
23	C	502	LMG	O6-C1-O1-C7
23	c	502	LMG	C2-C1-O1-C7
24	C	503	DGD	C2D-C1D-O3G-C3G
24	C	503	DGD	O6D-C1D-O3G-C3G
24	C	503	DGD	O6E-C1E-O5D-C6D
24	C	513	DGD	C2B-C1B-O2G-C2G
24	c	514	DGD	C2D-C1D-O3G-C3G
24	c	514	DGD	O6D-C1D-O3G-C3G
24	c	514	DGD	O6E-C1E-O5D-C6D
24	c	517	DGD	C2B-C1B-O2G-C2G
26	D	407	PL9	C7-C8-C9-C11
26	D	407	PL9	C42-C43-C44-C45
26	d	405	PL9	C7-C8-C9-C11
26	d	405	PL9	C12-C13-C14-C15
26	d	405	PL9	C42-C43-C44-C45
18	C	512	CLA	C2C-C3C-CAC-CBC
18	c	506	CLA	C2C-C3C-CAC-CBC
18	C	516	CLA	O1D-CGD-O2D-CED
18	A	403	CLA	O1D-CGD-O2D-CED
18	A	405	CLA	O1D-CGD-O2D-CED
18	C	505	CLA	O1D-CGD-O2D-CED
18	C	507	CLA	O1D-CGD-O2D-CED
18	C	514	CLA	O1D-CGD-O2D-CED
18	a	405	CLA	O1D-CGD-O2D-CED
18	a	407	CLA	O1D-CGD-O2D-CED
18	b	613	CLA	O1D-CGD-O2D-CED
18	c	503	CLA	O1D-CGD-O2D-CED
18	c	508	CLA	O1D-CGD-O2D-CED

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Mol	Chain	Res	Type	Atoms
18	c	512	CLA	O1D-CGD-O2D-CED
18	A	403	CLA	CBD-CGD-O2D-CED
18	B	609	CLA	CBD-CGD-O2D-CED
18	B	611	CLA	CBD-CGD-O2D-CED
18	B	619	CLA	CBD-CGD-O2D-CED
18	C	506	CLA	CBD-CGD-O2D-CED
18	C	507	CLA	CBD-CGD-O2D-CED
18	C	510	CLA	CBD-CGD-O2D-CED
18	C	512	CLA	CBD-CGD-O2D-CED
18	a	407	CLA	CBD-CGD-O2D-CED
18	b	604	CLA	CBD-CGD-O2D-CED
18	b	613	CLA	CBD-CGD-O2D-CED
18	c	506	CLA	CBD-CGD-O2D-CED
18	c	508	CLA	CBD-CGD-O2D-CED
18	c	510	CLA	CBD-CGD-O2D-CED
18	c	513	CLA	CBD-CGD-O2D-CED
19	D	402	PHO	CBD-CGD-O2D-CED
19	d	401	PHO	CBD-CGD-O2D-CED
18	C	512	CLA	C4C-C3C-CAC-CBC
18	D	406	CLA	C2C-C3C-CAC-CBC
18	B	608	CLA	O1D-CGD-O2D-CED
18	B	609	CLA	O1D-CGD-O2D-CED
18	b	604	CLA	O1D-CGD-O2D-CED
18	b	612	CLA	O1D-CGD-O2D-CED
18	c	505	CLA	O1D-CGD-O2D-CED
18	c	506	CLA	O1D-CGD-O2D-CED
18	C	512	CLA	O1D-CGD-O2D-CED
18	B	614	CLA	CBD-CGD-O2D-CED
18	C	509	CLA	CBD-CGD-O2D-CED
18	D	405	CLA	CBD-CGD-O2D-CED
18	c	504	CLA	CBD-CGD-O2D-CED
18	D	406	CLA	C4C-C3C-CAC-CBC
18	d	404	CLA	C2C-C3C-CAC-CBC
18	d	404	CLA	C4C-C3C-CAC-CBC
18	A	404	CLA	O1A-CGA-O2A-C1
18	B	608	CLA	O1A-CGA-O2A-C1
18	C	505	CLA	O1A-CGA-O2A-C1
18	a	403	CLA	O1A-CGA-O2A-C1
18	b	612	CLA	O1A-CGA-O2A-C1
18	c	503	CLA	O1A-CGA-O2A-C1
18	B	617	CLA	O1D-CGD-O2D-CED
18	C	511	CLA	O1D-CGD-O2D-CED

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Mol	Chain	Res	Type	Atoms
18	b	615	CLA	O1D-CGD-O2D-CED
18	c	511	CLA	O1D-CGD-O2D-CED
18	B	607	CLA	CBD-CGD-O2D-CED
18	C	515	CLA	CBD-CGD-O2D-CED
19	A	407	PHO	C8-C10-C11-C12
19	a	409	PHO	C8-C10-C11-C12
18	b	609	CLA	O1D-CGD-O2D-CED
23	C	502	LMG	O9-C10-O7-C8
23	c	502	LMG	O9-C10-O7-C8
24	C	513	DGD	O1B-C1B-O2G-C2G
18	A	406	CLA	C3-C5-C6-C7
18	B	602	CLA	C3-C5-C6-C7
18	B	603	CLA	C3-C5-C6-C7
18	B	606	CLA	C3-C5-C6-C7
18	D	406	CLA	C3-C5-C6-C7
18	a	404	CLA	C3-C5-C6-C7
18	b	607	CLA	C3-C5-C6-C7
18	b	611	CLA	C3-C5-C6-C7
18	b	619	CLA	C3-C5-C6-C7
18	c	516	CLA	C3-C5-C6-C7
18	d	404	CLA	C3-C5-C6-C7
18	C	504	CLA	CBA-CGA-O2A-C1
18	c	507	CLA	CBA-CGA-O2A-C1
18	C	516	CLA	C5-C6-C7-C8
18	c	505	CLA	C5-C6-C7-C8
23	C	502	LMG	C11-C10-O7-C8
23	c	502	LMG	C11-C10-O7-C8
18	b	608	CLA	CBD-CGD-O2D-CED
18	b	617	CLA	CBD-CGD-O2D-CED
18	B	607	CLA	O1A-CGA-O2A-C1
18	B	608	CLA	C4-C3-C5-C6
18	B	617	CLA	C4-C3-C5-C6
18	b	612	CLA	C4-C3-C5-C6
18	b	613	CLA	C4-C3-C5-C6
26	D	407	PL9	C20-C19-C21-C22
26	d	405	PL9	C20-C19-C21-C22
18	B	608	CLA	C2-C3-C5-C6
18	B	617	CLA	C2-C3-C5-C6
18	b	607	CLA	C2-C3-C5-C6
18	b	612	CLA	C2-C3-C5-C6
18	b	613	CLA	C2-C3-C5-C6
18	B	609	CLA	C2A-CAA-CBA-CGA

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Mol	Chain	Res	Type	Atoms
18	B	618	CLA	C2A-CAA-CBA-CGA
18	C	508	CLA	C2A-CAA-CBA-CGA
18	b	604	CLA	C2A-CAA-CBA-CGA
18	b	614	CLA	C2A-CAA-CBA-CGA
18	c	516	CLA	C2A-CAA-CBA-CGA
18	b	608	CLA	O1A-CGA-O2A-C1
18	C	508	CLA	C3-C5-C6-C7
18	A	404	CLA	CBA-CGA-O2A-C1
18	B	601	CLA	CBA-CGA-O2A-C1
18	B	608	CLA	CBA-CGA-O2A-C1
18	C	505	CLA	CBA-CGA-O2A-C1
18	H	101	CLA	CBA-CGA-O2A-C1
18	a	403	CLA	CBA-CGA-O2A-C1
18	b	603	CLA	CBA-CGA-O2A-C1
18	b	612	CLA	CBA-CGA-O2A-C1
18	c	503	CLA	CBA-CGA-O2A-C1
18	B	611	CLA	O1D-CGD-O2D-CED
18	C	506	CLA	O1D-CGD-O2D-CED
18	c	510	CLA	O1D-CGD-O2D-CED
18	d	408	CLA	CBD-CGD-O2D-CED
19	d	401	PHO	O1D-CGD-O2D-CED
24	c	517	DGD	O1B-C1B-O2G-C2G
26	D	407	PL9	C42-C43-C44-C46
18	B	601	CLA	O1A-CGA-O2A-C1
18	C	504	CLA	O1A-CGA-O2A-C1
18	C	508	CLA	O1A-CGA-O2A-C1
18	b	605	CLA	O1A-CGA-O2A-C1
18	c	507	CLA	O1A-CGA-O2A-C1
22	L	101	LHG	C31-C32-C33-C34
19	D	402	PHO	O1D-CGD-O2D-CED
20	B	612	BCR	C15-C16-C17-C18
20	b	610	BCR	C15-C16-C17-C18
18	c	509	CLA	CBD-CGD-O2D-CED
22	D	404	LHG	O2-C2-C3-O3
22	d	406	LHG	O2-C2-C3-O3
18	C	510	CLA	C3-C5-C6-C7
18	c	513	CLA	C3-C5-C6-C7
18	B	607	CLA	CBA-CGA-O2A-C1
18	C	507	CLA	CBA-CGA-O2A-C1
18	b	605	CLA	CBA-CGA-O2A-C1
18	b	608	CLA	CBA-CGA-O2A-C1
18	c	508	CLA	CBA-CGA-O2A-C1

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Mol	Chain	Res	Type	Atoms
18	c	516	CLA	O1A-CGA-O2A-C1
18	c	513	CLA	O1D-CGD-O2D-CED
22	l	101	LHG	C31-C32-C33-C34
24	C	513	DGD	C5B-C6B-C7B-C8B
18	H	101	CLA	O1A-CGA-O2A-C1
18	b	603	CLA	O1A-CGA-O2A-C1
21	A	409	SQD	C34-C35-C36-C37
21	a	406	SQD	C34-C35-C36-C37
22	l	101	LHG	C29-C30-C31-C32
22	L	101	LHG	C29-C30-C31-C32
24	C	513	DGD	CCA-CDA-CEA-CFA
24	b	621	DGD	C9A-CAA-CBA-CCA
18	C	508	CLA	CBA-CGA-O2A-C1
18	c	516	CLA	CBA-CGA-O2A-C1
23	C	502	LMG	O6-C5-C6-O5
23	c	502	LMG	O6-C5-C6-O5
24	B	620	DGD	C9A-CAA-CBA-CCA
24	c	517	DGD	CCA-CDA-CEA-CFA
18	C	507	CLA	O1A-CGA-O2A-C1
27	F	101	HEM	C2A-CAA-CBA-CGA
27	f	101	HEM	C2A-CAA-CBA-CGA
23	B	604	LMG	C12-C13-C14-C15
23	b	618	LMG	C12-C13-C14-C15
23	b	618	LMG	C35-C36-C37-C38
24	B	620	DGD	CAB-CBB-CCB-CDB
24	b	621	DGD	CAB-CBB-CCB-CDB
18	H	101	CLA	C4-C3-C5-C6
18	b	603	CLA	C4-C3-C5-C6
19	D	402	PHO	C4-C3-C5-C6
19	d	401	PHO	C4-C3-C5-C6
18	H	101	CLA	C2-C3-C5-C6
18	b	603	CLA	C2-C3-C5-C6
19	D	402	PHO	C2-C3-C5-C6
19	d	401	PHO	C2-C3-C5-C6
18	B	605	CLA	C2A-CAA-CBA-CGA
18	c	508	CLA	O1A-CGA-O2A-C1
23	c	502	LMG	O6-C1-O1-C7
18	c	509	CLA	C3-C5-C6-C7
23	B	604	LMG	C35-C36-C37-C38
18	b	614	CLA	CBD-CGD-O2D-CED
18	B	619	CLA	O1D-CGD-O2D-CED
18	C	510	CLA	O1D-CGD-O2D-CED

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Mol	Chain	Res	Type	Atoms
18	b	613	CLA	C3-C5-C6-C7
18	C	512	CLA	CBA-CGA-O2A-C1
18	C	514	CLA	CBA-CGA-O2A-C1
18	C	515	CLA	CBA-CGA-O2A-C1
18	c	506	CLA	CBA-CGA-O2A-C1
18	c	512	CLA	CBA-CGA-O2A-C1
18	c	516	CLA	CBD-CGD-O2D-CED
24	c	517	DGD	C5B-C6B-C7B-C8B
20	B	612	BCR	C19-C20-C21-C22
20	H	102	BCR	C13-C14-C15-C16
20	b	610	BCR	C19-C20-C21-C22
21	a	406	SQD	C14-C15-C16-C17
18	C	512	CLA	C13-C15-C16-C17
18	c	506	CLA	C13-C15-C16-C17
21	A	409	SQD	C14-C15-C16-C17
24	c	517	DGD	CAA-CBA-CCA-CDA
18	a	407	CLA	C15-C16-C17-C18
18	c	504	CLA	C10-C11-C12-C13
18	c	505	CLA	C10-C11-C12-C13
18	c	512	CLA	C8-C10-C11-C12
22	A	410	LHG	C7-C8-C9-C10
18	C	507	CLA	C3-C5-C6-C7
18	c	508	CLA	C3-C5-C6-C7
24	C	503	DGD	C2E-C1E-O5D-C6D
24	c	514	DGD	C2E-C1E-O5D-C6D
24	C	513	DGD	CAA-CBA-CCA-CDA
26	d	405	PL9	C18-C19-C21-C22
18	B	602	CLA	C6-C7-C8-C9
18	B	602	CLA	C11-C12-C13-C14
18	B	603	CLA	C6-C7-C8-C9
18	B	606	CLA	C14-C13-C15-C16
18	B	614	CLA	C6-C7-C8-C9
18	B	615	CLA	C14-C13-C15-C16
18	B	618	CLA	C6-C7-C8-C9
18	B	619	CLA	C11-C10-C8-C9
18	C	505	CLA	C11-C12-C13-C14
18	C	506	CLA	C6-C7-C8-C9
18	C	508	CLA	C14-C13-C15-C16
18	C	509	CLA	C11-C12-C13-C14
18	D	406	CLA	C6-C7-C8-C9
18	D	406	CLA	C11-C10-C8-C9
18	b	601	CLA	C14-C13-C15-C16

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Mol	Chain	Res	Type	Atoms
18	b	603	CLA	C6-C7-C8-C9
18	b	607	CLA	C6-C7-C8-C9
18	b	607	CLA	C11-C12-C13-C14
18	b	611	CLA	C14-C13-C15-C16
18	b	614	CLA	C6-C7-C8-C9
18	b	615	CLA	C11-C10-C8-C9
18	b	615	CLA	C14-C13-C15-C16
18	b	617	CLA	C6-C7-C8-C9
18	b	619	CLA	C6-C7-C8-C9
18	c	503	CLA	C11-C12-C13-C14
18	c	504	CLA	C11-C12-C13-C14
18	c	510	CLA	C6-C7-C8-C9
18	c	512	CLA	C14-C13-C15-C16
18	d	404	CLA	C6-C7-C8-C9
18	C	516	CLA	C10-C11-C12-C13
18	C	517	CLA	C8-C10-C11-C12
18	c	515	CLA	C8-C10-C11-C12
18	b	606	CLA	C2A-CAA-CBA-CGA
20	B	612	BCR	C11-C12-C13-C35
20	B	612	BCR	C37-C22-C23-C24
20	b	610	BCR	C37-C22-C23-C24
20	d	407	BCR	C37-C22-C23-C24
20	B	612	BCR	C21-C22-C23-C24
20	D	403	BCR	C21-C22-C23-C24
20	b	610	BCR	C21-C22-C23-C24
20	d	407	BCR	C21-C22-C23-C24
18	C	505	CLA	C2C-C3C-CAC-CBC
22	D	409	LHG	C23-C24-C25-C26
18	C	514	CLA	O1A-CGA-O2A-C1
18	c	512	CLA	O1A-CGA-O2A-C1
18	c	515	CLA	C15-C16-C17-C18
18	c	504	CLA	O1D-CGD-O2D-CED
22	D	404	LHG	C14-C15-C16-C17
23	C	502	LMG	C30-C31-C32-C33
24	b	621	DGD	C6B-C7B-C8B-C9B
22	d	406	LHG	C14-C15-C16-C17
18	D	405	CLA	O1D-CGD-O2D-CED
18	B	617	CLA	C3-C5-C6-C7
18	C	515	CLA	C3-C5-C6-C7
18	c	509	CLA	CBA-CGA-O2A-C1
18	B	601	CLA	C10-C11-C12-C13
18	B	602	CLA	C10-C11-C12-C13

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Mol	Chain	Res	Type	Atoms
18	B	615	CLA	C15-C16-C17-C18
18	C	509	CLA	C10-C11-C12-C13
18	C	511	CLA	C15-C16-C17-C18
18	C	515	CLA	C5-C6-C7-C8
18	b	604	CLA	C10-C11-C12-C13
22	a	410	LHG	C7-C8-C9-C10
24	C	513	DGD	C1A-C2A-C3A-C4A
18	C	509	CLA	O1D-CGD-O2D-CED
18	A	403	CLA	C15-C16-C17-C18
18	B	605	CLA	C13-C15-C16-C17
18	B	614	CLA	C5-C6-C7-C8
18	C	508	CLA	C10-C11-C12-C13
18	C	514	CLA	C8-C10-C11-C12
18	C	517	CLA	C15-C16-C17-C18
18	b	601	CLA	C15-C16-C17-C18
18	b	605	CLA	C10-C11-C12-C13
18	b	606	CLA	C13-C15-C16-C17
18	b	607	CLA	C8-C10-C11-C12
18	b	607	CLA	C10-C11-C12-C13
18	b	617	CLA	C5-C6-C7-C8
18	c	509	CLA	C5-C6-C7-C8
18	c	510	CLA	C8-C10-C11-C12
18	c	511	CLA	C15-C16-C17-C18
18	c	516	CLA	C10-C11-C12-C13
19	D	402	PHO	C5-C6-C7-C8
19	d	401	PHO	C5-C6-C7-C8
18	B	614	CLA	O1D-CGD-O2D-CED
22	d	403	LHG	C23-C24-C25-C26
18	B	611	CLA	C8-C10-C11-C12
18	B	616	CLA	C10-C11-C12-C13
18	C	506	CLA	C8-C10-C11-C12
18	C	515	CLA	C8-C10-C11-C12
18	b	609	CLA	C8-C10-C11-C12
18	b	617	CLA	C13-C15-C16-C17
18	B	602	CLA	C8-C10-C11-C12
18	B	609	CLA	C10-C11-C12-C13
18	B	614	CLA	C13-C15-C16-C17
18	b	620	CLA	C10-C11-C12-C13
24	c	517	DGD	C1A-C2A-C3A-C4A
27	F	101	HEM	C3D-CAD-CBD-CGD
23	b	618	LMG	C14-C15-C16-C17
18	c	509	CLA	C8-C10-C11-C12

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Mol	Chain	Res	Type	Atoms
18	A	406	CLA	C11-C10-C8-C7
18	B	607	CLA	C12-C13-C15-C16
18	B	609	CLA	C11-C10-C8-C7
18	B	618	CLA	C11-C10-C8-C7
18	C	508	CLA	C6-C7-C8-C10
18	C	516	CLA	C11-C10-C8-C7
18	a	404	CLA	C11-C10-C8-C7
18	b	604	CLA	C11-C10-C8-C7
18	b	608	CLA	C12-C13-C15-C16
18	b	614	CLA	C11-C10-C8-C7
18	c	505	CLA	C11-C10-C8-C7
19	a	409	PHO	C3-C5-C6-C7
18	C	512	CLA	O1A-CGA-O2A-C1
18	C	515	CLA	O1A-CGA-O2A-C1
23	B	604	LMG	C14-C15-C16-C17
20	h	101	BCR	C9-C10-C11-C12
20	h	101	BCR	C15-C16-C17-C18
18	B	608	CLA	C2A-CAA-CBA-CGA
18	b	612	CLA	C2A-CAA-CBA-CGA
18	C	515	CLA	O1D-CGD-O2D-CED
18	B	605	CLA	C5-C6-C7-C8
18	b	606	CLA	C5-C6-C7-C8
24	B	620	DGD	C6B-C7B-C8B-C9B
24	b	621	DGD	C2B-C3B-C4B-C5B
22	L	101	LHG	O2-C2-C3-O3
22	l	101	LHG	O2-C2-C3-O3
18	B	615	CLA	C13-C15-C16-C17
18	b	601	CLA	C13-C15-C16-C17
18	b	615	CLA	C8-C10-C11-C12
18	c	509	CLA	C15-C16-C17-C18
19	A	407	PHO	C10-C11-C12-C13
18	c	506	CLA	O1A-CGA-O2A-C1
18	c	509	CLA	O1A-CGA-O2A-C1
18	b	611	CLA	C2C-C3C-CAC-CBC
18	B	611	CLA	C10-C11-C12-C13
18	B	614	CLA	C15-C16-C17-C18
18	C	510	CLA	C8-C10-C11-C12
18	C	515	CLA	C15-C16-C17-C18
18	b	601	CLA	C10-C11-C12-C13
18	b	609	CLA	C10-C11-C12-C13
18	b	614	CLA	C5-C6-C7-C8
18	b	617	CLA	C15-C16-C17-C18

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Mol	Chain	Res	Type	Atoms
19	a	409	PHO	C10-C11-C12-C13
27	F	101	HEM	C2D-C3D-CAD-CBD
22	D	409	LHG	C11-C12-C13-C14
18	B	615	CLA	C10-C11-C12-C13
18	B	618	CLA	C5-C6-C7-C8
18	c	513	CLA	C8-C10-C11-C12
22	A	410	LHG	C4-O6-P-O3
22	D	404	LHG	C3-O3-P-O6
22	D	409	LHG	C3-O3-P-O6
22	L	101	LHG	C3-O3-P-O6
22	d	403	LHG	C3-O3-P-O6
22	d	406	LHG	C3-O3-P-O6
22	l	101	LHG	C3-O3-P-O6
19	A	407	PHO	C3-C5-C6-C7
23	c	502	LMG	C30-C31-C32-C33
18	B	607	CLA	O1D-CGD-O2D-CED
18	b	617	CLA	O1D-CGD-O2D-CED
18	B	603	CLA	C4-C3-C5-C6
18	b	619	CLA	C4-C3-C5-C6
24	B	620	DGD	C2B-C3B-C4B-C5B
18	A	404	CLA	C2A-CAA-CBA-CGA
18	a	403	CLA	C2A-CAA-CBA-CGA
18	b	613	CLA	C16-C17-C18-C19
18	B	602	CLA	CBA-CGA-O2A-C1
18	c	511	CLA	CBA-CGA-O2A-C1
24	C	503	DGD	O6D-C5D-C6D-O5D
24	c	514	DGD	O6D-C5D-C6D-O5D
24	C	503	DGD	C4A-C5A-C6A-C7A
24	c	514	DGD	C4A-C5A-C6A-C7A
20	H	102	BCR	C9-C10-C11-C12
18	b	608	CLA	O1D-CGD-O2D-CED
18	C	508	CLA	CBD-CGD-O2D-CED
21	A	409	SQD	C33-C34-C35-C36
21	a	406	SQD	C33-C34-C35-C36
22	D	409	LHG	C24-C25-C26-C27
24	C	503	DGD	C5A-C6A-C7A-C8A
24	c	517	DGD	C6B-C7B-C8B-C9B
18	C	511	CLA	CBA-CGA-O2A-C1
18	b	607	CLA	CBA-CGA-O2A-C1
27	f	101	HEM	C2D-C3D-CAD-CBD
24	C	503	DGD	C4D-C5D-C6D-O5D
21	A	409	SQD	C15-C16-C17-C18

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Mol	Chain	Res	Type	Atoms
21	a	406	SQD	C15-C16-C17-C18
22	d	403	LHG	C25-C26-C27-C28
22	l	101	LHG	C15-C16-C17-C18
24	C	503	DGD	C4B-C5B-C6B-C7B
24	b	621	DGD	CCB-CDB-CEB-CFB
24	c	517	DGD	C3A-C4A-C5A-C6A
18	d	408	CLA	O1D-CGD-O2D-CED
19	A	407	PHO	C13-C15-C16-C17
24	c	517	DGD	C1B-C2B-C3B-C4B
22	d	403	LHG	C24-C25-C26-C27
23	B	604	LMG	C37-C38-C39-C40
23	D	408	LMG	C16-C17-C18-C19
23	d	409	LMG	C16-C17-C18-C19
24	B	620	DGD	CCB-CDB-CEB-CFB
21	A	409	SQD	C32-C33-C34-C35
23	b	618	LMG	C37-C38-C39-C40
27	f	101	HEM	C3D-CAD-CBD-CGD
18	B	606	CLA	C2C-C3C-CAC-CBC
21	a	406	SQD	C26-C27-C28-C29
24	C	503	DGD	C6B-C7B-C8B-C9B
24	C	513	DGD	C6B-C7B-C8B-C9B
22	D	404	LHG	C7-C8-C9-C10
23	d	409	LMG	C28-C29-C30-C31
24	b	621	DGD	C2E-C1E-O5D-C6D
21	A	409	SQD	C25-C26-C27-C28
22	L	101	LHG	C15-C16-C17-C18
24	C	513	DGD	C3A-C4A-C5A-C6A
24	c	514	DGD	C6B-C7B-C8B-C9B
18	B	617	CLA	C16-C17-C18-C19
21	A	409	SQD	C12-C13-C14-C15
21	a	406	SQD	C25-C26-C27-C28
22	D	404	LHG	C28-C29-C30-C31
22	D	409	LHG	C27-C28-C29-C30
24	C	513	DGD	C7A-C8A-C9A-CAA
24	c	514	DGD	C4B-C5B-C6B-C7B
24	c	517	DGD	C7A-C8A-C9A-CAA
18	B	617	CLA	C14-C13-C15-C16
18	C	510	CLA	C11-C12-C13-C14
18	b	613	CLA	C14-C13-C15-C16
18	d	404	CLA	C11-C10-C8-C9
22	d	406	LHG	C7-C8-C9-C10
21	A	409	SQD	C26-C27-C28-C29

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Mol	Chain	Res	Type	Atoms
22	D	409	LHG	C34-C35-C36-C37
22	d	403	LHG	C34-C35-C36-C37
23	C	502	LMG	C39-C40-C41-C42
23	c	502	LMG	C39-C40-C41-C42
24	c	517	DGD	CCB-CDB-CEB-CFB
19	a	409	PHO	C13-C15-C16-C17
18	b	605	CLA	C2A-CAA-CBA-CGA
24	c	514	DGD	C4D-C5D-C6D-O5D
20	D	403	BCR	C37-C22-C23-C24
21	a	406	SQD	C12-C13-C14-C15
22	D	404	LHG	C8-C7-O7-C5
22	d	406	LHG	C8-C7-O7-C5
18	c	503	CLA	C2C-C3C-CAC-CBC
22	L	101	LHG	C11-C10-C9-C8
23	d	409	LMG	C13-C14-C15-C16
23	D	408	LMG	C28-C29-C30-C31
23	c	502	LMG	C28-C29-C30-C31
21	a	406	SQD	C32-C33-C34-C35
22	D	409	LHG	C33-C34-C35-C36
22	d	403	LHG	C33-C34-C35-C36
23	D	408	LMG	C13-C14-C15-C16
24	B	620	DGD	C2A-C3A-C4A-C5A
24	B	620	DGD	C8B-C9B-CAB-CBB
24	b	621	DGD	C2A-C3A-C4A-C5A
24	b	621	DGD	C8B-C9B-CAB-CBB
18	B	618	CLA	C4B-C3B-CAB-CBB
18	D	405	CLA	C4B-C3B-CAB-CBB
18	c	505	CLA	C4B-C3B-CAB-CBB
18	d	408	CLA	C4B-C3B-CAB-CBB
18	A	404	CLA	C16-C17-C18-C19
24	b	621	DGD	O6E-C1E-O5D-C6D
18	b	611	CLA	C5-C6-C7-C8
18	b	614	CLA	C8-C10-C11-C12
26	d	405	PL9	C9-C11-C12-C13
22	l	101	LHG	C11-C10-C9-C8
23	B	604	LMG	C31-C32-C33-C34
23	b	618	LMG	C31-C32-C33-C34
24	b	621	DGD	C4B-C5B-C6B-C7B
24	C	513	DGD	C9B-CAB-CBB-CCB
24	c	514	DGD	C5A-C6A-C7A-C8A
23	c	502	LMG	C4-C5-C6-O5
23	C	502	LMG	C28-C29-C30-C31

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Mol	Chain	Res	Type	Atoms
18	B	606	CLA	C5-C6-C7-C8
18	B	618	CLA	C8-C10-C11-C12
22	D	404	LHG	C26-C27-C28-C29
22	L	101	LHG	C11-C12-C13-C14
23	B	604	LMG	C13-C14-C15-C16
24	B	620	DGD	C4B-C5B-C6B-C7B
18	A	404	CLA	C3A-C2A-CAA-CBA
18	B	605	CLA	C3A-C2A-CAA-CBA
18	B	607	CLA	C3A-C2A-CAA-CBA
18	C	505	CLA	C3A-C2A-CAA-CBA
18	C	510	CLA	C3A-C2A-CAA-CBA
18	C	514	CLA	C3A-C2A-CAA-CBA
18	C	516	CLA	C3A-C2A-CAA-CBA
18	D	406	CLA	C3A-C2A-CAA-CBA
18	a	403	CLA	C3A-C2A-CAA-CBA
18	b	606	CLA	C3A-C2A-CAA-CBA
18	b	608	CLA	C3A-C2A-CAA-CBA
18	c	503	CLA	C3A-C2A-CAA-CBA
18	c	505	CLA	C3A-C2A-CAA-CBA
18	c	512	CLA	C3A-C2A-CAA-CBA
18	c	513	CLA	C3A-C2A-CAA-CBA
23	b	618	LMG	C13-C14-C15-C16
24	c	517	DGD	C8B-C9B-CAB-CBB
23	C	502	LMG	C4-C5-C6-O5
18	B	618	CLA	C16-C17-C18-C20
18	C	511	CLA	C16-C17-C18-C19
18	a	403	CLA	C16-C17-C18-C19
18	c	511	CLA	C16-C17-C18-C19
18	C	505	CLA	C4C-C3C-CAC-CBC
23	D	408	LMG	O1-C7-C8-C9
27	F	101	HEM	C4D-C3D-CAD-CBD
27	f	101	HEM	C4D-C3D-CAD-CBD
23	c	502	LMG	C37-C38-C39-C40
18	c	505	CLA	C15-C16-C17-C18
26	D	407	PL9	C18-C19-C21-C22
18	c	509	CLA	O1D-CGD-O2D-CED
18	b	607	CLA	O1A-CGA-O2A-C1
18	c	511	CLA	O1A-CGA-O2A-C1
18	B	617	CLA	C16-C17-C18-C20
22	a	410	LHG	C25-C26-C27-C28
18	B	618	CLA	C2B-C3B-CAB-CBB
18	D	405	CLA	C2B-C3B-CAB-CBB

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Mol	Chain	Res	Type	Atoms
18	b	614	CLA	C2B-C3B-CAB-CBB
18	c	505	CLA	C2B-C3B-CAB-CBB
18	d	408	CLA	C2B-C3B-CAB-CBB
23	C	502	LMG	C37-C38-C39-C40
24	C	513	DGD	CCB-CDB-CEB-CFB
18	B	602	CLA	O1A-CGA-O2A-C1
18	C	511	CLA	O1A-CGA-O2A-C1
22	D	404	LHG	O9-C7-O7-C5
22	d	406	LHG	O9-C7-O7-C5
22	d	406	LHG	C28-C29-C30-C31
18	B	619	CLA	C10-C11-C12-C13
18	C	511	CLA	C8-C10-C11-C12
18	C	516	CLA	C15-C16-C17-C18
18	b	620	CLA	C13-C15-C16-C17
18	c	511	CLA	C8-C10-C11-C12
18	b	614	CLA	C16-C17-C18-C20
20	A	408	BCR	C23-C24-C25-C26
20	A	408	BCR	C23-C24-C25-C30
20	B	610	BCR	C1-C6-C7-C8
20	B	612	BCR	C23-C24-C25-C26
20	B	613	BCR	C5-C6-C7-C8
20	a	401	BCR	C23-C24-C25-C26
20	a	401	BCR	C23-C24-C25-C30
20	b	602	BCR	C1-C6-C7-C8
20	b	610	BCR	C23-C24-C25-C26
20	b	616	BCR	C5-C6-C7-C8
22	A	410	LHG	C31-C32-C33-C34
24	b	621	DGD	C3A-C4A-C5A-C6A
22	a	410	LHG	C31-C32-C33-C34
22	d	403	LHG	C11-C12-C13-C14
23	B	604	LMG	C16-C17-C18-C19
24	B	620	DGD	C3A-C4A-C5A-C6A
24	C	513	DGD	C8B-C9B-CAB-CBB
24	c	514	DGD	C1B-C2B-C3B-C4B
23	C	502	LMG	C12-C13-C14-C15
23	d	409	LMG	C12-C13-C14-C15
18	C	505	CLA	C4-C3-C5-C6
18	c	503	CLA	C4-C3-C5-C6
18	A	404	CLA	C11-C12-C13-C15
18	B	602	CLA	C11-C12-C13-C15
18	B	614	CLA	C11-C12-C13-C15
18	B	617	CLA	C12-C13-C15-C16

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Mol	Chain	Res	Type	Atoms
18	C	505	CLA	C2-C3-C5-C6
18	C	508	CLA	C12-C13-C15-C16
18	a	403	CLA	C11-C12-C13-C15
18	b	607	CLA	C11-C12-C13-C15
18	b	613	CLA	C12-C13-C15-C16
18	c	503	CLA	C2-C3-C5-C6
18	c	503	CLA	C12-C13-C15-C16
18	c	516	CLA	C12-C13-C15-C16
19	A	407	PHO	C11-C12-C13-C15
19	a	409	PHO	C11-C12-C13-C15
26	d	405	PL9	C13-C14-C16-C17
22	a	410	LHG	C10-C11-C12-C13
23	b	618	LMG	C16-C17-C18-C19
24	B	620	DGD	CDB-CEB-CFB-CGB
24	c	517	DGD	C4A-C5A-C6A-C7A
18	A	403	CLA	C5-C6-C7-C8
18	a	407	CLA	C5-C6-C7-C8
18	b	609	CLA	C15-C16-C17-C18
18	b	615	CLA	C10-C11-C12-C13
18	b	609	CLA	C16-C17-C18-C19
18	C	505	CLA	C2A-CAA-CBA-CGA
18	c	503	CLA	C2A-CAA-CBA-CGA
18	B	608	CLA	C5-C6-C7-C8
18	b	606	CLA	C8-C10-C11-C12
18	b	612	CLA	C5-C6-C7-C8
22	A	410	LHG	C10-C11-C12-C13
22	a	410	LHG	C30-C31-C32-C33
24	b	621	DGD	CDB-CEB-CFB-CGB
24	c	517	DGD	CDB-CEB-CFB-CGB
22	l	101	LHG	C11-C12-C13-C14
26	D	407	PL9	C7-C8-C9-C10
23	D	408	LMG	C12-C13-C14-C15
21	A	409	SQD	C24-C23-O48-C46
21	A	409	SQD	O5-C1-O6-C44
18	B	611	CLA	C15-C16-C17-C18
18	B	619	CLA	C8-C10-C11-C12
18	d	404	CLA	C10-C11-C12-C13
21	a	406	SQD	C9-C10-C11-C12
22	A	410	LHG	C30-C31-C32-C33
22	A	410	LHG	C8-C7-O7-C5
22	a	410	LHG	C8-C7-O7-C5
23	B	604	LMG	C11-C10-O7-C8

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Mol	Chain	Res	Type	Atoms
23	b	618	LMG	C11-C10-O7-C8
23	c	502	LMG	C12-C13-C14-C15
27	F	101	HEM	C4B-C3B-CAB-CBB
18	B	605	CLA	C15-C16-C17-C18
18	B	618	CLA	CBD-CGD-O2D-CED
23	B	604	LMG	O9-C10-O7-C8
23	b	618	LMG	O9-C10-O7-C8
24	c	517	DGD	C9B-CAB-CBB-CCB
23	D	408	LMG	O1-C7-C8-O7
24	C	513	DGD	CBA-CCA-CDA-CEA
24	C	503	DGD	C1B-C2B-C3B-C4B
18	b	619	CLA	C2-C3-C5-C6
26	D	407	PL9	C13-C14-C16-C17
21	A	409	SQD	C9-C10-C11-C12
22	A	410	LHG	C25-C26-C27-C28
18	A	404	CLA	C11-C12-C13-C14
18	B	607	CLA	C14-C13-C15-C16
18	B	619	CLA	C14-C13-C15-C16
18	C	516	CLA	C11-C10-C8-C9
18	D	406	CLA	C14-C13-C15-C16
18	a	403	CLA	C11-C12-C13-C14
18	b	608	CLA	C14-C13-C15-C16
18	c	505	CLA	C11-C10-C8-C9
18	c	513	CLA	C11-C12-C13-C14
18	c	516	CLA	C6-C7-C8-C9
18	c	516	CLA	C11-C10-C8-C9
18	d	404	CLA	C14-C13-C15-C16
18	B	601	CLA	C2A-CAA-CBA-CGA
18	C	507	CLA	C2A-CAA-CBA-CGA
22	d	406	LHG	C26-C27-C28-C29
23	C	502	LMG	C17-C18-C19-C20
18	D	406	CLA	C10-C11-C12-C13
20	b	610	BCR	C11-C12-C13-C14
18	A	404	CLA	C1A-C2A-CAA-CBA
18	A	405	CLA	C1A-C2A-CAA-CBA
18	B	601	CLA	C1A-C2A-CAA-CBA
18	B	607	CLA	C1A-C2A-CAA-CBA
18	B	615	CLA	C1A-C2A-CAA-CBA
18	C	508	CLA	C1A-C2A-CAA-CBA
18	C	514	CLA	C1A-C2A-CAA-CBA
18	C	515	CLA	C1A-C2A-CAA-CBA
18	H	101	CLA	C1A-C2A-CAA-CBA

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Mol	Chain	Res	Type	Atoms
18	a	403	CLA	C1A-C2A-CAA-CBA
18	a	405	CLA	C1A-C2A-CAA-CBA
18	b	601	CLA	C1A-C2A-CAA-CBA
18	b	608	CLA	C1A-C2A-CAA-CBA
18	c	512	CLA	C1A-C2A-CAA-CBA
18	c	516	CLA	C1A-C2A-CAA-CBA
18	B	611	CLA	C16-C17-C18-C19
18	b	613	CLA	C16-C17-C18-C20
22	A	410	LHG	O9-C7-O7-C5
22	a	410	LHG	O9-C7-O7-C5
18	B	602	CLA	C15-C16-C17-C18
18	B	603	CLA	C15-C16-C17-C18
18	B	616	CLA	C13-C15-C16-C17
18	b	607	CLA	C15-C16-C17-C18
18	c	503	CLA	C4C-C3C-CAC-CBC
18	c	516	CLA	O1D-CGD-O2D-CED
24	c	517	DGD	CBA-CCA-CDA-CEA
21	a	406	SQD	C24-C23-O48-C46
22	d	403	LHG	C24-C23-O8-C6
24	C	513	DGD	CDB-CEB-CFB-CGB
23	d	409	LMG	C10-C11-C12-C13
18	b	614	CLA	C16-C17-C18-C19
24	C	513	DGD	C6A-C7A-C8A-C9A
23	B	604	LMG	C19-C20-C21-C22
26	D	407	PL9	C15-C14-C16-C17
22	d	403	LHG	C9-C10-C11-C12
23	b	618	LMG	C32-C33-C34-C35
18	B	618	CLA	C16-C17-C18-C19
18	c	515	CLA	C16-C17-C18-C19
21	A	409	SQD	O6-C44-C45-C46
21	A	409	SQD	C44-C45-C46-O48
21	a	406	SQD	O6-C44-C45-C46
21	a	406	SQD	C44-C45-C46-O48
23	d	409	LMG	O1-C7-C8-C9
24	C	503	DGD	C1G-C2G-C3G-O3G
24	c	514	DGD	C1G-C2G-C3G-O3G
18	A	404	CLA	C10-C11-C12-C13
18	B	605	CLA	C8-C10-C11-C12
21	A	409	SQD	C11-C12-C13-C14
21	a	406	SQD	C11-C12-C13-C14
22	D	404	LHG	C35-C36-C37-C38
22	d	406	LHG	C35-C36-C37-C38

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Mol	Chain	Res	Type	Atoms
23	D	408	LMG	C22-C23-C24-C25
23	d	409	LMG	C22-C23-C24-C25
24	C	503	DGD	C5D-C6D-O5D-C1E
24	C	513	DGD	C5D-C6D-O5D-C1E
24	c	514	DGD	C5D-C6D-O5D-C1E
18	a	403	CLA	C10-C11-C12-C13
23	B	604	LMG	C32-C33-C34-C35
23	B	604	LMG	C39-C40-C41-C42
23	b	618	LMG	C39-C40-C41-C42
21	a	406	SQD	O5-C1-O6-C44
26	D	407	PL9	C12-C13-C14-C15
18	b	611	CLA	C4C-C3C-CAC-CBC
21	a	406	SQD	C35-C36-C37-C38
21	A	409	SQD	C35-C36-C37-C38
18	b	604	CLA	C8-C10-C11-C12
18	b	614	CLA	C4-C3-C5-C6
21	A	409	SQD	O10-C23-O48-C46
18	B	603	CLA	C2-C3-C5-C6
18	D	405	CLA	CBA-CGA-O2A-C1
18	C	511	CLA	C5-C6-C7-C8
18	B	609	CLA	C8-C10-C11-C12
18	b	608	CLA	C10-C11-C12-C13
18	C	507	CLA	C2-C1-O2A-CGA
18	c	508	CLA	C2-C1-O2A-CGA
26	d	405	PL9	C42-C43-C44-C46
23	d	409	LMG	C17-C18-C19-C20
18	B	609	CLA	C13-C15-C16-C17
18	b	604	CLA	C13-C15-C16-C17
21	a	406	SQD	C30-C31-C32-C33
18	d	408	CLA	CBA-CGA-O2A-C1
18	b	615	CLA	C16-C17-C18-C20
18	C	516	CLA	C8-C10-C11-C12
18	H	101	CLA	C5-C6-C7-C8
24	c	517	DGD	C7B-C8B-C9B-CAB
21	a	406	SQD	O10-C23-O48-C46
23	D	408	LMG	C17-C18-C19-C20
18	b	619	CLA	C15-C16-C17-C18
23	C	502	LMG	O1-C7-C8-O7
23	d	409	LMG	O1-C7-C8-O7
18	b	606	CLA	C15-C16-C17-C18
18	c	505	CLA	C8-C10-C11-C12
22	d	403	LHG	O10-C23-O8-C6

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Mol	Chain	Res	Type	Atoms
22	d	403	LHG	C27-C28-C29-C30
23	d	409	LMG	C35-C36-C37-C38
24	C	503	DGD	C8B-C9B-CAB-CBB
24	C	513	DGD	C7B-C8B-C9B-CAB
24	c	514	DGD	C8B-C9B-CAB-CBB
24	c	517	DGD	C6A-C7A-C8A-C9A
18	B	618	CLA	C4-C3-C5-C6
18	c	511	CLA	C4-C3-C5-C6
26	d	405	PL9	C7-C8-C9-C10
26	d	405	PL9	C15-C14-C16-C17
18	B	601	CLA	C6-C7-C8-C10
18	B	611	CLA	C11-C12-C13-C15
18	B	615	CLA	C11-C12-C13-C15
18	B	617	CLA	C11-C10-C8-C7
18	B	618	CLA	C2-C3-C5-C6
18	B	618	CLA	C12-C13-C15-C16
18	C	505	CLA	C12-C13-C15-C16
18	C	506	CLA	C6-C7-C8-C10
18	C	508	CLA	C11-C10-C8-C7
18	C	510	CLA	C12-C13-C15-C16
18	C	511	CLA	C11-C12-C13-C15
18	C	512	CLA	C12-C13-C15-C16
18	C	515	CLA	C12-C13-C15-C16
18	C	516	CLA	C12-C13-C15-C16
18	C	517	CLA	C6-C7-C8-C10
18	D	405	CLA	C6-C7-C8-C10
18	b	601	CLA	C11-C12-C13-C15
18	b	605	CLA	C6-C7-C8-C10
18	b	609	CLA	C11-C12-C13-C15
18	b	613	CLA	C11-C10-C8-C7
18	b	614	CLA	C12-C13-C15-C16
18	b	615	CLA	C11-C12-C13-C15
18	b	617	CLA	C11-C12-C13-C15
18	c	506	CLA	C12-C13-C15-C16
18	c	509	CLA	C12-C13-C15-C16
18	c	510	CLA	C6-C7-C8-C10
18	c	511	CLA	C11-C12-C13-C15
18	c	513	CLA	C12-C13-C15-C16
18	c	515	CLA	C6-C7-C8-C10
18	c	516	CLA	C11-C10-C8-C7
18	d	408	CLA	C6-C7-C8-C10
23	b	618	LMG	C19-C20-C21-C22

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Mol	Chain	Res	Type	Atoms
18	A	406	CLA	C11-C10-C8-C9
18	B	602	CLA	C14-C13-C15-C16
18	B	608	CLA	C14-C13-C15-C16
18	B	609	CLA	C11-C10-C8-C9
18	B	617	CLA	C11-C10-C8-C9
18	B	618	CLA	C11-C10-C8-C9
18	B	618	CLA	C14-C13-C15-C16
18	B	619	CLA	C11-C12-C13-C14
18	C	505	CLA	C14-C13-C15-C16
18	C	508	CLA	C11-C10-C8-C9
18	C	512	CLA	C14-C13-C15-C16
18	C	515	CLA	C14-C13-C15-C16
18	C	516	CLA	C11-C12-C13-C14
18	D	406	CLA	C11-C12-C13-C14
18	a	404	CLA	C11-C10-C8-C9
18	b	601	CLA	C11-C12-C13-C14
18	b	604	CLA	C11-C10-C8-C9
18	b	612	CLA	C14-C13-C15-C16
18	b	614	CLA	C11-C10-C8-C9
18	b	614	CLA	C14-C13-C15-C16
18	b	615	CLA	C11-C12-C13-C14
18	c	503	CLA	C14-C13-C15-C16
18	c	505	CLA	C11-C12-C13-C14
18	c	506	CLA	C14-C13-C15-C16
18	d	404	CLA	C11-C12-C13-C14
22	D	409	LHG	C10-C11-C12-C13
22	L	101	LHG	C16-C17-C18-C19
23	D	408	LMG	C35-C36-C37-C38
23	d	409	LMG	C18-C19-C20-C21
18	C	517	CLA	CBA-CGA-O2A-C1
18	c	515	CLA	CBA-CGA-O2A-C1
18	b	613	CLA	C2A-CAA-CBA-CGA
24	B	620	DGD	CDA-CEA-CFA-CGA
18	C	517	CLA	C16-C17-C18-C19
18	c	515	CLA	C16-C17-C18-C20
21	A	409	SQD	C16-C17-C18-C19
23	B	604	LMG	C33-C34-C35-C36
22	D	409	LHG	C25-C26-C27-C28
23	D	408	LMG	C18-C19-C20-C21
23	D	408	LMG	C10-C11-C12-C13
18	a	407	CLA	C10-C11-C12-C13
18	c	511	CLA	C5-C6-C7-C8

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Mol	Chain	Res	Type	Atoms
18	c	512	CLA	C15-C16-C17-C18
21	A	409	SQD	C28-C29-C30-C31
21	a	406	SQD	C16-C17-C18-C19
18	C	508	CLA	O1D-CGD-O2D-CED
18	B	616	CLA	C4B-C3B-CAB-CBB
18	C	516	CLA	C4B-C3B-CAB-CBB
18	b	614	CLA	C4B-C3B-CAB-CBB
18	b	617	CLA	C4B-C3B-CAB-CBB
18	b	603	CLA	C5-C6-C7-C8
18	b	613	CLA	CBA-CGA-O2A-C1
18	A	403	CLA	C10-C11-C12-C13
24	C	513	DGD	C4A-C5A-C6A-C7A
18	C	511	CLA	C4-C3-C5-C6
18	C	511	CLA	C2-C3-C5-C6
18	b	614	CLA	C2-C3-C5-C6
18	c	511	CLA	C2-C3-C5-C6
26	d	405	PL9	C47-C48-C49-C51
21	A	409	SQD	C30-C31-C32-C33
18	B	606	CLA	C4C-C3C-CAC-CBC
23	C	502	LMG	C18-C19-C20-C21
23	c	502	LMG	C17-C18-C19-C20
23	b	618	LMG	C33-C34-C35-C36
21	A	409	SQD	C10-C11-C12-C13
22	D	404	LHG	C33-C34-C35-C36
18	C	517	CLA	C16-C17-C18-C20
18	B	617	CLA	CBA-CGA-O2A-C1
18	B	607	CLA	C15-C16-C17-C18
22	A	410	LHG	C4-C5-C6-O8
24	C	513	DGD	O1G-C1G-C2G-C3G
24	b	621	DGD	O1G-C1G-C2G-C3G
24	c	517	DGD	O1G-C1G-C2G-C3G
18	b	614	CLA	O1D-CGD-O2D-CED
21	a	406	SQD	C10-C11-C12-C13
18	a	403	CLA	C3-C5-C6-C7
18	b	604	CLA	C2C-C3C-CAC-CBC
18	B	614	CLA	C16-C17-C18-C19
18	B	619	CLA	C16-C17-C18-C20
22	d	406	LHG	C33-C34-C35-C36
18	c	516	CLA	C13-C15-C16-C17
18	d	408	CLA	O1A-CGA-O2A-C1
19	A	407	PHO	C2A-CAA-CBA-CGA
22	D	404	LHG	C18-C19-C20-C21

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Mol	Chain	Res	Type	Atoms
18	D	405	CLA	O1A-CGA-O2A-C1
18	B	611	CLA	C16-C17-C18-C20
18	b	609	CLA	C16-C17-C18-C20
18	b	617	CLA	C16-C17-C18-C19
18	B	616	CLA	C2B-C3B-CAB-CBB
18	C	517	CLA	O1A-CGA-O2A-C1
18	c	515	CLA	O1A-CGA-O2A-C1
23	C	502	LMG	C38-C39-C40-C41
23	c	502	LMG	O1-C7-C8-O7
18	a	403	CLA	C16-C17-C18-C20
18	B	605	CLA	CBD-CGD-O2D-CED
18	A	406	CLA	C2-C1-O2A-CGA
18	B	609	CLA	C2-C1-O2A-CGA
18	a	404	CLA	C2-C1-O2A-CGA
26	D	407	PL9	C47-C48-C49-C51
18	C	508	CLA	C13-C15-C16-C17
18	B	601	CLA	C11-C10-C8-C9
18	B	606	CLA	C11-C12-C13-C14
18	B	615	CLA	C11-C12-C13-C14
18	C	510	CLA	C14-C13-C15-C16
18	D	405	CLA	C14-C13-C15-C16
18	H	101	CLA	C14-C13-C15-C16
18	b	603	CLA	C14-C13-C15-C16
18	b	605	CLA	C11-C10-C8-C9
18	b	607	CLA	C14-C13-C15-C16
18	b	611	CLA	C11-C12-C13-C14
18	b	613	CLA	C11-C10-C8-C9
18	c	509	CLA	C14-C13-C15-C16
18	c	513	CLA	C14-C13-C15-C16
18	d	408	CLA	C14-C13-C15-C16
23	c	502	LMG	C18-C19-C20-C21
22	a	410	LHG	C2-C3-O3-P
19	d	401	PHO	C2C-C3C-CAC-CBC
18	c	508	CLA	C2A-CAA-CBA-CGA
19	a	409	PHO	C2A-CAA-CBA-CGA
18	B	614	CLA	C16-C17-C18-C20
18	b	617	CLA	C16-C17-C18-C20
20	B	610	BCR	C23-C24-C25-C26
20	D	403	BCR	C23-C24-C25-C26
20	H	102	BCR	C5-C6-C7-C8
20	b	602	BCR	C23-C24-C25-C26
20	d	407	BCR	C23-C24-C25-C26

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Mol	Chain	Res	Type	Atoms
20	h	101	BCR	C5-C6-C7-C8
22	D	409	LHG	C32-C33-C34-C35
20	B	612	BCR	C11-C12-C13-C14
18	H	101	CLA	C8-C10-C11-C12
18	A	404	CLA	C16-C17-C18-C20
18	B	619	CLA	C16-C17-C18-C19
18	C	511	CLA	C16-C17-C18-C20
18	b	615	CLA	C16-C17-C18-C19
18	c	505	CLA	C16-C17-C18-C20
24	c	517	DGD	C4B-C5B-C6B-C7B
18	B	601	CLA	C11-C10-C8-C7
18	B	602	CLA	C12-C13-C15-C16
18	B	605	CLA	C6-C7-C8-C10
18	B	606	CLA	C11-C12-C13-C15
18	B	608	CLA	C12-C13-C15-C16
18	B	614	CLA	C6-C7-C8-C10
18	B	615	CLA	C12-C13-C15-C16
18	B	618	CLA	C6-C7-C8-C10
18	B	619	CLA	C11-C12-C13-C15
18	C	516	CLA	C11-C12-C13-C15
18	C	517	CLA	C11-C12-C13-C15
18	D	405	CLA	C12-C13-C15-C16
18	D	406	CLA	C11-C12-C13-C15
18	b	601	CLA	C12-C13-C15-C16
18	b	605	CLA	C11-C10-C8-C7
18	b	606	CLA	C6-C7-C8-C10
18	b	607	CLA	C12-C13-C15-C16
18	b	611	CLA	C11-C12-C13-C15
18	b	612	CLA	C12-C13-C15-C16
18	b	614	CLA	C6-C7-C8-C10
18	b	617	CLA	C6-C7-C8-C10
18	c	505	CLA	C11-C12-C13-C15
18	d	404	CLA	C11-C12-C13-C15
22	d	406	LHG	C25-C26-C27-C28
23	c	502	LMG	C38-C39-C40-C41
18	A	406	CLA	C10-C11-C12-C13
18	c	511	CLA	C16-C17-C18-C20
24	b	621	DGD	C9B-CAB-CBB-CCB
18	a	404	CLA	C10-C11-C12-C13
18	b	608	CLA	C15-C16-C17-C18
18	B	617	CLA	C2A-CAA-CBA-CGA
18	B	608	CLA	C3-C5-C6-C7

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Mol	Chain	Res	Type	Atoms
18	b	612	CLA	C3-C5-C6-C7
23	D	408	LMG	C32-C33-C34-C35
23	d	409	LMG	C32-C33-C34-C35
18	C	514	CLA	C5-C6-C7-C8
18	c	506	CLA	C15-C16-C17-C18
18	B	602	CLA	CBD-CGD-O2D-CED
18	B	603	CLA	CAD-CBD-CGD-O2D
18	B	611	CLA	CAD-CBD-CGD-O2D
18	B	616	CLA	CAD-CBD-CGD-O2D
18	C	509	CLA	CAD-CBD-CGD-O2D
18	b	608	CLA	CAD-CBD-CGD-O2D
18	b	614	CLA	CAD-CBD-CGD-O2D
18	b	619	CLA	CAD-CBD-CGD-O2D
18	b	620	CLA	CAD-CBD-CGD-O2D
18	c	504	CLA	CAD-CBD-CGD-O2D
18	A	406	CLA	C8-C10-C11-C12
18	C	512	CLA	C15-C16-C17-C18
18	a	404	CLA	C8-C10-C11-C12
18	c	512	CLA	C5-C6-C7-C8
21	a	406	SQD	C24-C25-C26-C27
18	d	408	CLA	C4-C3-C5-C6
26	D	407	PL9	C9-C11-C12-C13
22	D	404	LHG	C4-C5-C6-O8
22	d	406	LHG	C4-C5-C6-O8
23	C	502	LMG	O1-C7-C8-C9
23	c	502	LMG	O1-C7-C8-C9
24	B	620	DGD	O1G-C1G-C2G-C3G
18	b	603	CLA	C8-C10-C11-C12
18	b	615	CLA	C13-C15-C16-C17
18	c	504	CLA	C15-C16-C17-C18
27	f	101	HEM	C4B-C3B-CAB-CBB
18	C	514	CLA	C15-C16-C17-C18
24	C	513	DGD	CDA-CEA-CFA-CGA
18	A	405	CLA	CHA-CBD-CGD-O1D
18	A	405	CLA	CHA-CBD-CGD-O2D
18	A	406	CLA	CHA-CBD-CGD-O1D
18	C	507	CLA	CHA-CBD-CGD-O1D
18	C	507	CLA	CHA-CBD-CGD-O2D
18	C	508	CLA	CHA-CBD-CGD-O1D
18	C	515	CLA	CHA-CBD-CGD-O1D
18	C	515	CLA	CHA-CBD-CGD-O2D
18	a	404	CLA	CHA-CBD-CGD-O1D

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Mol	Chain	Res	Type	Atoms
18	a	404	CLA	CHA-CBD-CGD-O2D
18	a	405	CLA	CHA-CBD-CGD-O1D
18	a	405	CLA	CHA-CBD-CGD-O2D
18	c	504	CLA	CHA-CBD-CGD-O1D
18	c	508	CLA	CHA-CBD-CGD-O1D
18	c	508	CLA	CHA-CBD-CGD-O2D
18	c	509	CLA	CHA-CBD-CGD-O1D
18	c	516	CLA	CHA-CBD-CGD-O1D
18	c	516	CLA	CHA-CBD-CGD-O2D
18	d	408	CLA	CHA-CBD-CGD-O1D
18	b	606	CLA	CBD-CGD-O2D-CED
18	b	613	CLA	O1A-CGA-O2A-C1
22	d	406	LHG	C18-C19-C20-C21
21	A	409	SQD	O6-C44-C45-O47
22	D	404	LHG	O7-C5-C6-O8
22	d	406	LHG	O7-C5-C6-O8
24	C	503	DGD	O2G-C2G-C3G-O3G
24	b	621	DGD	O1G-C1G-C2G-O2G
24	c	514	DGD	O2G-C2G-C3G-O3G
18	B	617	CLA	O1A-CGA-O2A-C1
24	c	517	DGD	CBB-CCB-CDB-CEB
18	B	609	CLA	C2C-C3C-CAC-CBC
24	c	517	DGD	CDA-CEA-CFA-CGA
18	C	509	CLA	C15-C16-C17-C18
18	B	611	CLA	C6-C7-C8-C9
18	B	616	CLA	C14-C13-C15-C16
18	b	609	CLA	C6-C7-C8-C9
18	b	620	CLA	C14-C13-C15-C16
18	B	619	CLA	C13-C15-C16-C17
18	H	101	CLA	C15-C16-C17-C18
18	d	408	CLA	C15-C16-C17-C18
23	B	604	LMG	C21-C22-C23-C24
18	B	618	CLA	C3-C5-C6-C7
18	a	403	CLA	C2-C1-O2A-CGA
23	D	408	LMG	C31-C32-C33-C34
20	H	102	BCR	C15-C16-C17-C18
18	D	405	CLA	C4-C3-C5-C6
18	d	408	CLA	C5-C6-C7-C8
18	c	505	CLA	C3-C5-C6-C7
22	A	410	LHG	C2-C3-O3-P
21	A	409	SQD	C11-C10-C9-C8
18	B	607	CLA	C4B-C3B-CAB-CBB

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Mol	Chain	Res	Type	Atoms
18	C	506	CLA	C4B-C3B-CAB-CBB
18	b	608	CLA	C4B-C3B-CAB-CBB
18	c	510	CLA	C4B-C3B-CAB-CBB
22	A	410	LHG	C4-O6-P-O4
22	D	409	LHG	C3-O3-P-O5
22	d	403	LHG	C3-O3-P-O5
18	C	516	CLA	C16-C17-C18-C20
18	A	403	CLA	C2C-C3C-CAC-CBC
18	B	617	CLA	C13-C15-C16-C17
18	b	614	CLA	C3-C5-C6-C7
24	c	517	DGD	CAB-CBB-CCB-CDB
18	A	405	CLA	CAD-CBD-CGD-O1D
18	B	605	CLA	CAD-CBD-CGD-O1D
18	B	608	CLA	CAD-CBD-CGD-O1D
18	C	507	CLA	CAD-CBD-CGD-O1D
18	C	508	CLA	CAD-CBD-CGD-O1D
18	C	517	CLA	CAD-CBD-CGD-O1D
18	a	404	CLA	CAD-CBD-CGD-O1D
18	a	405	CLA	CAD-CBD-CGD-O1D
18	b	606	CLA	CAD-CBD-CGD-O1D
18	c	508	CLA	CAD-CBD-CGD-O1D
18	c	516	CLA	CAD-CBD-CGD-O1D
21	A	409	SQD	O5-C5-C6-S
21	a	406	SQD	O5-C5-C6-S
18	D	405	CLA	C5-C6-C7-C8
23	b	618	LMG	C17-C18-C19-C20
18	b	603	CLA	C15-C16-C17-C18
22	A	410	LHG	C32-C33-C34-C35
22	D	404	LHG	C25-C26-C27-C28
22	d	403	LHG	C32-C33-C34-C35
18	b	620	CLA	C16-C17-C18-C20
18	B	602	CLA	C6-C7-C8-C10
18	B	611	CLA	C6-C7-C8-C10
18	B	616	CLA	C12-C13-C15-C16
18	C	505	CLA	C11-C12-C13-C15
18	C	509	CLA	C11-C12-C13-C15
18	C	514	CLA	C6-C7-C8-C10
18	b	607	CLA	C6-C7-C8-C10
18	b	609	CLA	C6-C7-C8-C10
18	b	620	CLA	C12-C13-C15-C16
18	c	503	CLA	C11-C12-C13-C15
18	c	504	CLA	C11-C12-C13-C15

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Mol	Chain	Res	Type	Atoms
18	c	505	CLA	C12-C13-C15-C16
18	c	512	CLA	C6-C7-C8-C10
18	c	515	CLA	C11-C12-C13-C15
18	d	408	CLA	C12-C13-C15-C16
19	A	407	PHO	C11-C10-C8-C7
19	a	409	PHO	C11-C10-C8-C7
23	b	618	LMG	C21-C22-C23-C24
24	B	620	DGD	C9B-CAB-CBB-CCB
23	B	604	LMG	C28-C29-C30-C31
18	C	506	CLA	C13-C15-C16-C17
18	c	510	CLA	C13-C15-C16-C17
23	b	618	LMG	C28-C29-C30-C31
18	C	512	CLA	C8-C10-C11-C12
21	a	406	SQD	C28-C29-C30-C31
23	C	502	LMG	C31-C32-C33-C34
21	a	406	SQD	O6-C44-C45-O47
24	B	620	DGD	O1G-C1G-C2G-O2G
24	C	513	DGD	O1G-C1G-C2G-O2G
24	c	517	DGD	O1G-C1G-C2G-O2G
23	B	604	LMG	C17-C18-C19-C20
18	b	603	CLA	O2A-C1-C2-C3
23	d	409	LMG	C33-C34-C35-C36
24	c	517	DGD	C5D-C6D-O5D-C1E
18	c	505	CLA	C16-C17-C18-C19
22	a	410	LHG	C32-C33-C34-C35
22	l	101	LHG	C16-C17-C18-C19
18	C	509	CLA	C8-C10-C11-C12
18	B	619	CLA	C4-C3-C5-C6
18	b	615	CLA	C4-C3-C5-C6
23	d	409	LMG	C31-C32-C33-C34
18	C	508	CLA	C6-C7-C8-C9
18	C	516	CLA	C14-C13-C15-C16
18	B	602	CLA	O1D-CGD-O2D-CED
23	D	408	LMG	C33-C34-C35-C36
18	c	503	CLA	C16-C17-C18-C20
23	D	408	LMG	C19-C20-C21-C22
20	B	610	BCR	C10-C11-C12-C13
20	B	613	BCR	C10-C11-C12-C13
20	H	102	BCR	C10-C11-C12-C13
20	b	602	BCR	C10-C11-C12-C13
20	b	616	BCR	C10-C11-C12-C13
20	h	101	BCR	C10-C11-C12-C13

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Mol	Chain	Res	Type	Atoms
18	a	407	CLA	C2C-C3C-CAC-CBC
18	D	405	CLA	C15-C16-C17-C18
18	C	505	CLA	C16-C17-C18-C20
18	C	516	CLA	C2C-C3C-CAC-CBC
21	A	409	SQD	C24-C25-C26-C27
24	C	513	DGD	CAB-CBB-CCB-CDB
18	B	606	CLA	C2B-C3B-CAB-CBB
18	C	516	CLA	C2B-C3B-CAB-CBB
18	b	611	CLA	C2B-C3B-CAB-CBB
18	b	617	CLA	C2B-C3B-CAB-CBB
19	a	409	PHO	C4-C3-C5-C6
22	D	409	LHG	C9-C10-C11-C12
22	d	403	LHG	C10-C11-C12-C13
18	A	405	CLA	C1-C2-C3-C4
18	C	504	CLA	C1-C2-C3-C4
18	a	405	CLA	C1-C2-C3-C4
18	c	507	CLA	C1-C2-C3-C4
22	A	410	LHG	C4-C5-O7-C7
22	a	410	LHG	C4-C5-O7-C7
18	B	607	CLA	C10-C11-C12-C13
18	A	404	CLA	C2-C1-O2A-CGA
18	B	608	CLA	C2-C1-O2A-CGA
18	B	611	CLA	C2-C1-O2A-CGA
18	D	406	CLA	C2-C1-O2A-CGA
18	b	604	CLA	C2-C1-O2A-CGA
18	b	609	CLA	C2-C1-O2A-CGA
18	b	612	CLA	C2-C1-O2A-CGA
18	d	404	CLA	C2-C1-O2A-CGA
18	A	404	CLA	C3-C5-C6-C7
23	C	502	LMG	C10-C11-C12-C13
18	B	605	CLA	O1D-CGD-O2D-CED
18	b	606	CLA	O1D-CGD-O2D-CED
18	c	506	CLA	C8-C10-C11-C12
18	B	616	CLA	C4-C3-C5-C6
19	A	407	PHO	C4-C3-C5-C6
18	C	516	CLA	C3-C5-C6-C7
20	B	612	BCR	C23-C24-C25-C30
20	a	401	BCR	C5-C6-C7-C8
20	b	610	BCR	C23-C24-C25-C30
18	D	405	CLA	C2-C3-C5-C6
18	d	408	CLA	C2-C3-C5-C6
21	a	406	SQD	C11-C10-C9-C8

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Mol	Chain	Res	Type	Atoms
24	b	621	DGD	O2G-C1B-C2B-C3B
18	b	611	CLA	C16-C17-C18-C20
18	B	606	CLA	C2A-CAA-CBA-CGA
18	b	611	CLA	C2A-CAA-CBA-CGA
24	B	620	DGD	C2E-C1E-O5D-C6D
22	d	406	LHG	C16-C17-C18-C19
22	A	410	LHG	O7-C5-C6-O8
22	L	101	LHG	C17-C18-C19-C20
18	b	607	CLA	CBD-CGD-O2D-CED
23	d	409	LMG	C34-C35-C36-C37
22	d	406	LHG	C12-C13-C14-C15
22	d	406	LHG	C29-C30-C31-C32
18	B	616	CLA	CBA-CGA-O2A-C1
18	b	620	CLA	C4-C3-C5-C6
18	D	406	CLA	C12-C13-C15-C16
18	d	404	CLA	C12-C13-C15-C16
22	D	404	LHG	C29-C30-C31-C32
18	C	514	CLA	C6-C7-C8-C9
18	C	515	CLA	C6-C7-C8-C9
18	D	405	CLA	C6-C7-C8-C9
18	c	505	CLA	C14-C13-C15-C16
18	d	408	CLA	C6-C7-C8-C9
19	a	409	PHO	C11-C10-C8-C9
18	b	613	CLA	C13-C15-C16-C17
20	D	403	BCR	C9-C10-C11-C12
20	d	407	BCR	C9-C10-C11-C12
18	C	516	CLA	C16-C17-C18-C19
23	b	618	LMG	C34-C35-C36-C37
23	c	502	LMG	C31-C32-C33-C34
24	c	517	DGD	C3B-C4B-C5B-C6B
22	D	404	LHG	C16-C17-C18-C19
18	A	406	CLA	C5-C6-C7-C8
24	C	503	DGD	C2A-C3A-C4A-C5A
22	d	403	LHG	C1-C2-C3-O3
18	B	606	CLA	C16-C17-C18-C20
18	B	611	CLA	CBA-CGA-O2A-C1
18	C	516	CLA	CBA-CGA-O2A-C1
18	b	609	CLA	CBA-CGA-O2A-C1
18	b	620	CLA	CBA-CGA-O2A-C1
18	C	516	CLA	O1A-CGA-O2A-C1
23	d	409	LMG	C19-C20-C21-C22
18	b	607	CLA	O1D-CGD-O2D-CED

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Mol	Chain	Res	Type	Atoms
23	D	408	LMG	C34-C35-C36-C37
18	B	606	CLA	C4B-C3B-CAB-CBB
18	C	504	CLA	C4B-C3B-CAB-CBB
18	c	507	CLA	C4B-C3B-CAB-CBB
18	b	615	CLA	C2A-CAA-CBA-CGA
24	B	620	DGD	O6E-C1E-O5D-C6D
20	B	613	BCR	C15-C16-C17-C18
20	B	613	BCR	C19-C20-C21-C22
20	b	616	BCR	C19-C20-C21-C22
18	a	404	CLA	C5-C6-C7-C8
18	B	616	CLA	O1A-CGA-O2A-C1
18	A	403	CLA	C4C-C3C-CAC-CBC
18	B	615	CLA	C3-C5-C6-C7
21	a	406	SQD	C19-C20-C21-C22
22	D	404	LHG	C12-C13-C14-C15
19	A	407	PHO	C2-C3-C5-C6
19	a	409	PHO	C2-C3-C5-C6
18	A	403	CLA	C13-C15-C16-C17
18	B	605	CLA	C2-C1-O2A-CGA
18	b	606	CLA	C2-C1-O2A-CGA
18	c	515	CLA	C2-C1-O2A-CGA
18	A	406	CLA	C11-C12-C13-C14
18	a	404	CLA	C11-C12-C13-C14
18	C	508	CLA	C8-C10-C11-C12
18	D	405	CLA	C10-C11-C12-C13
18	B	619	CLA	C2A-CAA-CBA-CGA
21	A	409	SQD	C19-C20-C21-C22
24	B	620	DGD	O2G-C1B-C2B-C3B
18	c	509	CLA	C6-C7-C8-C9
19	A	407	PHO	C6-C7-C8-C9
19	D	402	PHO	C6-C7-C8-C9
19	a	409	PHO	C6-C7-C8-C9
18	B	616	CLA	C16-C17-C18-C20
24	b	621	DGD	C5B-C6B-C7B-C8B
18	B	607	CLA	C2A-CAA-CBA-CGA
18	b	608	CLA	C2A-CAA-CBA-CGA
18	B	611	CLA	O1A-CGA-O2A-C1
18	b	620	CLA	C16-C17-C18-C19
18	H	101	CLA	O2A-C1-C2-C3
18	B	609	CLA	C5-C6-C7-C8
18	a	407	CLA	C4C-C3C-CAC-CBC
18	D	405	CLA	C8-C10-C11-C12

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Mol	Chain	Res	Type	Atoms
18	a	407	CLA	C13-C15-C16-C17
18	c	504	CLA	C4-C3-C5-C6
26	d	405	PL9	C30-C29-C31-C32
18	C	509	CLA	C1A-C2A-CAA-CBA
18	c	504	CLA	C1A-C2A-CAA-CBA
18	B	605	CLA	C11-C10-C8-C7
18	B	606	CLA	C6-C7-C8-C10
18	b	611	CLA	C6-C7-C8-C10
18	c	512	CLA	C12-C13-C15-C16
18	d	408	CLA	C8-C10-C11-C12
18	b	620	CLA	O1A-CGA-O2A-C1
20	D	403	BCR	C19-C20-C21-C22
20	b	602	BCR	C19-C20-C21-C22
22	L	101	LHG	C4-O6-P-O3
22	l	101	LHG	C4-O6-P-O3
18	b	609	CLA	O1A-CGA-O2A-C1
18	d	408	CLA	C10-C11-C12-C13
18	c	504	CLA	C8-C10-C11-C12
18	c	516	CLA	C8-C10-C11-C12
18	b	612	CLA	C15-C16-C17-C18
18	C	509	CLA	C13-C15-C16-C17
23	c	502	LMG	C10-C11-C12-C13
18	B	607	CLA	C2B-C3B-CAB-CBB
18	B	614	CLA	C2B-C3B-CAB-CBB
18	C	506	CLA	C2B-C3B-CAB-CBB
18	b	608	CLA	C2B-C3B-CAB-CBB
18	c	510	CLA	C2B-C3B-CAB-CBB
22	d	403	LHG	O2-C2-C3-O3
18	C	512	CLA	C10-C11-C12-C13
19	a	409	PHO	C2C-C3C-CAC-CBC
23	B	604	LMG	C34-C35-C36-C37
20	B	610	BCR	C19-C20-C21-C22
20	B	612	BCR	C9-C10-C11-C12
24	C	513	DGD	C4B-C5B-C6B-C7B
18	A	406	CLA	C11-C12-C13-C15
18	C	511	CLA	C13-C15-C16-C17
18	c	511	CLA	C13-C15-C16-C17
18	A	406	CLA	CBA-CGA-O2A-C1
22	D	409	LHG	C1-C2-C3-O3
18	B	618	CLA	O1D-CGD-O2D-CED
18	C	514	CLA	C4-C3-C5-C6
18	a	407	CLA	C4-C3-C5-C6

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Mol	Chain	Res	Type	Atoms
18	c	512	CLA	C4-C3-C5-C6
18	C	517	CLA	C2-C1-O2A-CGA
18	B	619	CLA	C2-C3-C5-C6
18	b	615	CLA	C2-C3-C5-C6
18	b	620	CLA	C2-C3-C5-C6
18	c	504	CLA	C2-C3-C5-C6
18	b	605	CLA	C13-C15-C16-C17
18	C	511	CLA	CAA-CBA-CGA-O2A
18	a	404	CLA	C11-C12-C13-C15
18	b	608	CLA	C11-C12-C13-C14
18	a	404	CLA	CBA-CGA-O2A-C1
18	A	406	CLA	O1A-CGA-O2A-C1
18	a	404	CLA	O1A-CGA-O2A-C1
24	c	514	DGD	C2A-C3A-C4A-C5A
24	b	621	DGD	CDA-CEA-CFA-CGA
18	b	604	CLA	C5-C6-C7-C8
18	b	611	CLA	C16-C17-C18-C19
27	F	101	HEM	CAD-CBD-CGD-O2D
19	A	407	PHO	C2C-C3C-CAC-CBC
20	A	408	BCR	C5-C6-C7-C8
20	B	610	BCR	C23-C24-C25-C30
20	B	613	BCR	C1-C6-C7-C8
20	b	602	BCR	C23-C24-C25-C30
20	b	616	BCR	C1-C6-C7-C8
18	c	511	CLA	CAA-CBA-CGA-O2A
18	B	601	CLA	C13-C15-C16-C17
18	c	504	CLA	C13-C15-C16-C17
20	b	610	BCR	C9-C10-C11-C12
20	b	616	BCR	C15-C16-C17-C18
26	D	407	PL9	C30-C29-C31-C32
18	B	608	CLA	C15-C16-C17-C18
18	B	616	CLA	C2-C3-C5-C6
18	C	508	CLA	C2-C3-C5-C6
27	F	101	HEM	CAD-CBD-CGD-O1D
23	D	408	LMG	C8-C7-O1-C1
26	D	407	PL9	C37-C38-C39-C41
18	c	512	CLA	C16-C17-C18-C19
18	b	601	CLA	C3-C5-C6-C7
18	c	510	CLA	C2C-C3C-CAC-CBC
27	f	101	HEM	CAD-CBD-CGD-O2D
18	A	403	CLA	C2A-CAA-CBA-CGA
18	c	506	CLA	C10-C11-C12-C13

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Mol	Chain	Res	Type	Atoms
18	B	614	CLA	C4B-C3B-CAB-CBB
18	b	611	CLA	C4B-C3B-CAB-CBB
18	A	403	CLA	C4-C3-C5-C6
18	a	404	CLA	C4-C3-C5-C6
18	c	512	CLA	C2-C3-C5-C6
18	C	515	CLA	C16-C17-C18-C20
18	B	606	CLA	C16-C17-C18-C19
19	a	409	PHO	C16-C17-C18-C19
23	C	502	LMG	C13-C14-C15-C16
27	F	101	HEM	CAA-CBA-CGA-O2A
24	B	620	DGD	CAA-CBA-CCA-CDA
27	f	101	HEM	CAA-CBA-CGA-O2A
22	a	410	LHG	C4-O6-P-O3
18	C	514	CLA	C2-C3-C5-C6
23	c	502	LMG	C13-C14-C15-C16
18	B	611	CLA	C11-C12-C13-C14
18	B	616	CLA	C6-C7-C8-C9
18	C	517	CLA	C11-C12-C13-C14
18	b	609	CLA	C11-C12-C13-C14
18	c	511	CLA	C11-C12-C13-C14
18	c	512	CLA	C6-C7-C8-C9
18	c	515	CLA	C11-C12-C13-C14
19	A	407	PHO	C11-C10-C8-C9
19	d	401	PHO	C6-C7-C8-C9
18	C	509	CLA	C3A-C2A-CAA-CBA
18	c	504	CLA	C3A-C2A-CAA-CBA
24	B	620	DGD	C3B-C4B-C5B-C6B
18	D	406	CLA	CAA-CBA-CGA-O2A
24	C	513	DGD	C3B-C4B-C5B-C6B
27	f	101	HEM	CAD-CBD-CGD-O1D
18	B	601	CLA	CAD-CBD-CGD-O2D
18	B	607	CLA	CAD-CBD-CGD-O2D
18	B	614	CLA	CAD-CBD-CGD-O2D
18	C	504	CLA	CAD-CBD-CGD-O2D
18	C	511	CLA	CAD-CBD-CGD-O2D
18	b	605	CLA	CAD-CBD-CGD-O2D
18	b	609	CLA	CAD-CBD-CGD-O2D
18	b	615	CLA	CAD-CBD-CGD-O2D
18	b	617	CLA	CAD-CBD-CGD-O2D
18	c	507	CLA	CAD-CBD-CGD-O2D
18	c	511	CLA	CAD-CBD-CGD-O2D
18	d	408	CLA	CAD-CBD-CGD-O2D

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Mol	Chain	Res	Type	Atoms
19	D	402	PHO	CAD-CBD-CGD-O2D
19	d	401	PHO	CAD-CBD-CGD-O2D
18	c	509	CLA	C2A-CAA-CBA-CGA
18	A	406	CLA	C4-C3-C5-C6
18	C	509	CLA	C2-C3-C5-C6
18	d	404	CLA	CAA-CBA-CGA-O2A
27	F	101	HEM	CAA-CBA-CGA-O1A
18	B	601	CLA	O2A-C1-C2-C3
18	D	406	CLA	O2A-C1-C2-C3
18	b	605	CLA	O2A-C1-C2-C3
19	A	407	PHO	O2A-C1-C2-C3
19	a	409	PHO	O2A-C1-C2-C3
18	b	607	CLA	C2A-CAA-CBA-CGA
18	C	516	CLA	CAA-CBA-CGA-O2A
18	A	404	CLA	CHA-CBD-CGD-O1D
18	A	404	CLA	CHA-CBD-CGD-O2D
18	A	406	CLA	CHA-CBD-CGD-O2D
18	B	603	CLA	CHA-CBD-CGD-O2D
18	B	617	CLA	CHA-CBD-CGD-O1D
18	C	508	CLA	CHA-CBD-CGD-O2D
18	a	403	CLA	CHA-CBD-CGD-O1D
18	a	403	CLA	CHA-CBD-CGD-O2D
18	b	619	CLA	CHA-CBD-CGD-O2D
18	c	506	CLA	CHA-CBD-CGD-O2D
18	c	509	CLA	CHA-CBD-CGD-O2D
18	d	408	CLA	CHA-CBD-CGD-O2D
18	H	101	CLA	C3-C5-C6-C7
22	l	101	LHG	O7-C7-C8-C9
22	L	101	LHG	O7-C7-C8-C9
18	C	515	CLA	C2A-CAA-CBA-CGA
18	a	407	CLA	C2A-CAA-CBA-CGA
19	A	407	PHO	CHA-CBD-CGD-O1D
18	B	601	CLA	CBD-CGD-O2D-CED
18	B	619	CLA	C11-C10-C8-C7
18	H	101	CLA	C6-C7-C8-C10
18	b	603	CLA	C6-C7-C8-C10
18	b	606	CLA	C11-C10-C8-C7
18	c	510	CLA	C11-C10-C8-C7
18	C	512	CLA	C16-C17-C18-C20
18	c	506	CLA	C16-C17-C18-C20
27	f	101	HEM	CAA-CBA-CGA-O1A
19	A	407	PHO	C11-C12-C13-C14

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Mol	Chain	Res	Type	Atoms
19	a	409	PHO	C11-C12-C13-C14
20	A	408	BCR	C19-C20-C21-C22
18	C	515	CLA	C16-C17-C18-C19
24	c	514	DGD	C4E-C5E-C6E-O5E
24	c	514	DGD	C2B-C3B-C4B-C5B
24	C	513	DGD	C2A-C3A-C4A-C5A
20	D	403	BCR	C36-C18-C19-C20
18	c	516	CLA	C5-C6-C7-C8
20	D	403	BCR	C17-C18-C19-C20
20	h	101	BCR	C21-C22-C23-C24
18	B	606	CLA	C1A-C2A-CAA-CBA
18	C	506	CLA	C1A-C2A-CAA-CBA
18	b	611	CLA	C1A-C2A-CAA-CBA
18	c	513	CLA	C15-C16-C17-C18
18	c	504	CLA	C2-C1-O2A-CGA
24	B	620	DGD	C5B-C6B-C7B-C8B
24	c	514	DGD	C3A-C4A-C5A-C6A
18	D	406	CLA	CAA-CBA-CGA-O1A
18	B	602	CLA	C2A-CAA-CBA-CGA
18	a	403	CLA	CBD-CGD-O2D-CED
19	A	407	PHO	C16-C17-C18-C19
18	C	516	CLA	CAA-CBA-CGA-O1A
18	c	510	CLA	C4C-C3C-CAC-CBC
18	C	508	CLA	C4-C3-C5-C6
18	C	509	CLA	C4-C3-C5-C6
18	c	505	CLA	CAA-CBA-CGA-O2A
18	b	607	CLA	C13-C15-C16-C17
18	b	609	CLA	C5-C6-C7-C8
18	B	611	CLA	C5-C6-C7-C8
18	B	603	CLA	C4B-C3B-CAB-CBB
22	A	410	LHG	C3-O3-P-O4
22	L	101	LHG	C4-O6-P-O5
22	a	410	LHG	C4-O6-P-O5
22	l	101	LHG	C4-O6-P-O5
24	b	621	DGD	C3B-C4B-C5B-C6B
22	d	406	LHG	O8-C23-C24-C25
18	C	510	CLA	C15-C16-C17-C18
22	l	101	LHG	O9-C7-C8-C9
23	D	408	LMG	O7-C10-C11-C12
23	d	409	LMG	O7-C10-C11-C12
18	H	101	CLA	C10-C11-C12-C13
18	B	602	CLA	C13-C15-C16-C17

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Mol	Chain	Res	Type	Atoms
18	A	404	CLA	CAD-CBD-CGD-O1D
18	A	406	CLA	CAD-CBD-CGD-O1D
18	B	614	CLA	CAD-CBD-CGD-O1D
18	B	618	CLA	CAD-CBD-CGD-O1D
18	a	403	CLA	CAD-CBD-CGD-O1D
18	b	603	CLA	C3-C5-C6-C7
18	b	612	CLA	CAD-CBD-CGD-O1D
18	b	614	CLA	CAD-CBD-CGD-O1D
18	b	617	CLA	CAD-CBD-CGD-O1D
18	c	515	CLA	CAD-CBD-CGD-O1D
18	d	404	CLA	CAA-CBA-CGA-O1A
22	L	101	LHG	O9-C7-C8-C9
18	D	406	CLA	C15-C16-C17-C18
18	d	404	CLA	C15-C16-C17-C18
18	C	505	CLA	C6-C7-C8-C9
18	C	511	CLA	C11-C12-C13-C14
18	b	608	CLA	C11-C10-C8-C9
18	c	503	CLA	C6-C7-C8-C9
18	B	603	CLA	C13-C15-C16-C17
18	C	505	CLA	C13-C15-C16-C17
18	c	503	CLA	C13-C15-C16-C17
18	C	506	CLA	C16-C17-C18-C19
18	c	510	CLA	C16-C17-C18-C19
22	D	404	LHG	O8-C23-C24-C25
18	C	517	CLA	C13-C15-C16-C17
18	C	506	CLA	C2C-C3C-CAC-CBC
18	b	608	CLA	C5-C6-C7-C8
18	C	517	CLA	CAA-CBA-CGA-O2A
24	C	503	DGD	O2G-C1B-C2B-C3B
24	c	514	DGD	O2G-C1B-C2B-C3B
18	b	619	CLA	C13-C15-C16-C17
22	l	101	LHG	C17-C18-C19-C20
18	B	606	CLA	C3A-C2A-CAA-CBA
18	B	606	CLA	C12-C13-C15-C16
18	B	608	CLA	C3A-C2A-CAA-CBA
18	B	611	CLA	C11-C10-C8-C7
18	C	506	CLA	C11-C10-C8-C7
18	C	506	CLA	C11-C12-C13-C15
18	C	514	CLA	C12-C13-C15-C16
18	D	406	CLA	C6-C7-C8-C10
18	b	608	CLA	C11-C10-C8-C7
18	b	609	CLA	C11-C10-C8-C7

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Mol	Chain	Res	Type	Atoms
18	b	611	CLA	C3A-C2A-CAA-CBA
18	b	611	CLA	C12-C13-C15-C16
18	b	612	CLA	C3A-C2A-CAA-CBA
18	c	510	CLA	C11-C12-C13-C15
18	d	404	CLA	C6-C7-C8-C10
20	H	102	BCR	C21-C22-C23-C24
20	a	401	BCR	C21-C22-C23-C24
18	c	505	CLA	CAA-CBA-CGA-O1A
20	a	401	BCR	C19-C20-C21-C22
18	B	616	CLA	C16-C17-C18-C19
18	b	603	CLA	C10-C11-C12-C13
18	c	515	CLA	C13-C15-C16-C17
18	B	617	CLA	C10-C11-C12-C13
18	B	601	CLA	CAA-CBA-CGA-O2A
18	C	507	CLA	CAA-CBA-CGA-O2A
23	C	502	LMG	O8-C28-C29-C30
22	D	404	LHG	O10-C23-C24-C25
18	C	514	CLA	C10-C11-C12-C13
22	D	409	LHG	C28-C29-C30-C31
18	b	605	CLA	CAA-CBA-CGA-O2A
18	c	515	CLA	CAA-CBA-CGA-O2A

There are no ring outliers.

114 monomers are involved in 895 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
26	d	405	PL9	11	0
20	B	613	BCR	9	0
27	F	101	HEM	3	0
18	B	609	CLA	18	0
24	C	513	DGD	6	0
18	a	403	CLA	8	0
18	a	405	CLA	6	0
18	b	608	CLA	14	0
16	A	401	OEX	1	0
23	b	618	LMG	10	0
27	f	101	HEM	2	0
18	b	604	CLA	17	0
18	b	609	CLA	6	0
18	c	513	CLA	10	0
18	B	603	CLA	10	0
18	c	512	CLA	13	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
24	C	503	DGD	12	0
18	b	612	CLA	10	0
18	H	101	CLA	17	0
22	l	101	LHG	9	0
18	c	511	CLA	16	0
18	b	606	CLA	12	0
18	b	603	CLA	14	0
18	C	514	CLA	14	0
18	C	506	CLA	7	0
18	B	616	CLA	8	0
23	D	408	LMG	4	0
26	D	407	PL9	7	0
18	c	503	CLA	12	0
18	b	613	CLA	14	0
23	C	502	LMG	12	0
18	B	618	CLA	15	0
18	c	505	CLA	25	0
24	c	517	DGD	5	0
18	B	605	CLA	13	0
18	C	516	CLA	20	0
20	B	612	BCR	3	0
18	C	509	CLA	15	0
18	c	515	CLA	15	0
18	B	611	CLA	5	0
19	D	402	PHO	8	0
18	B	608	CLA	9	0
23	B	604	LMG	9	0
18	b	601	CLA	6	0
18	A	404	CLA	10	0
20	b	602	BCR	6	0
24	c	514	DGD	10	0
18	C	504	CLA	7	0
18	D	405	CLA	9	0
18	c	507	CLA	6	0
18	b	617	CLA	7	0
18	B	614	CLA	8	0
18	b	614	CLA	16	0
18	B	607	CLA	12	0
18	b	607	CLA	11	0
18	B	601	CLA	18	0
18	B	619	CLA	13	0
18	b	619	CLA	12	0

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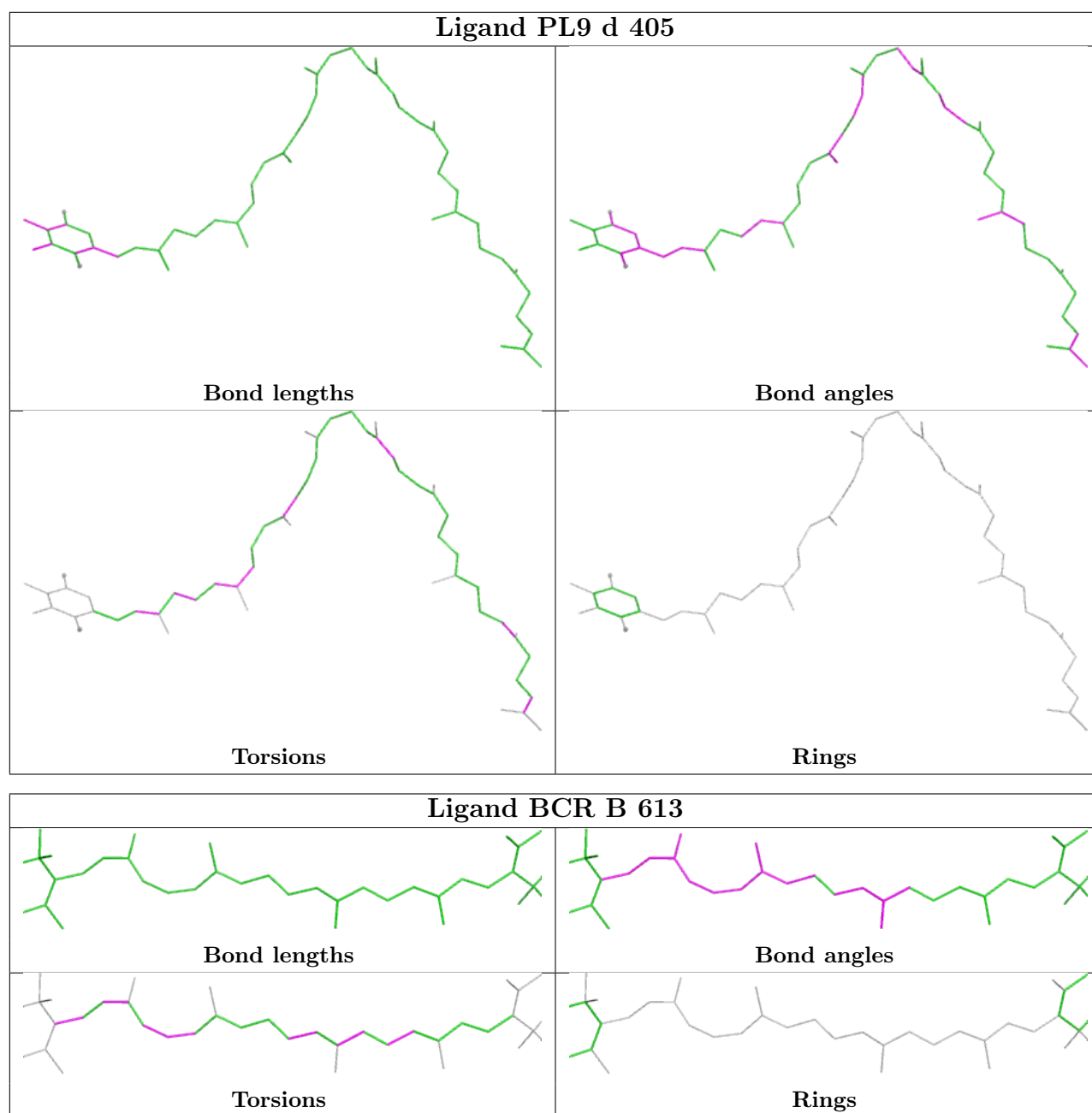
Mol	Chain	Res	Type	Clashes	Symm-Clashes
19	a	409	PHO	9	0
18	c	510	CLA	4	0
18	a	407	CLA	14	0
21	A	409	SQD	4	0
18	b	620	CLA	12	0
20	b	610	BCR	4	0
18	B	606	CLA	8	0
22	D	409	LHG	9	0
22	A	410	LHG	4	0
18	B	615	CLA	7	0
18	C	507	CLA	3	0
19	d	401	PHO	11	0
18	C	508	CLA	6	0
18	c	516	CLA	5	0
22	d	403	LHG	7	0
22	a	410	LHG	4	0
16	a	402	OEX	1	0
18	a	404	CLA	13	0
18	C	512	CLA	14	0
18	b	611	CLA	8	0
24	B	620	DGD	14	0
18	b	615	CLA	12	0
19	A	407	PHO	9	0
23	d	409	LMG	3	0
20	a	401	BCR	7	0
18	C	510	CLA	10	0
18	D	406	CLA	10	0
18	B	617	CLA	13	0
20	B	610	BCR	6	0
20	D	403	BCR	6	0
22	D	404	LHG	12	0
18	C	515	CLA	14	0
20	d	407	BCR	4	0
18	b	605	CLA	17	0
18	c	508	CLA	4	0
20	H	102	BCR	9	0
18	C	505	CLA	10	0
18	B	602	CLA	9	0
22	d	406	LHG	13	0
23	c	502	LMG	14	0
18	A	406	CLA	13	0
20	A	408	BCR	7	0

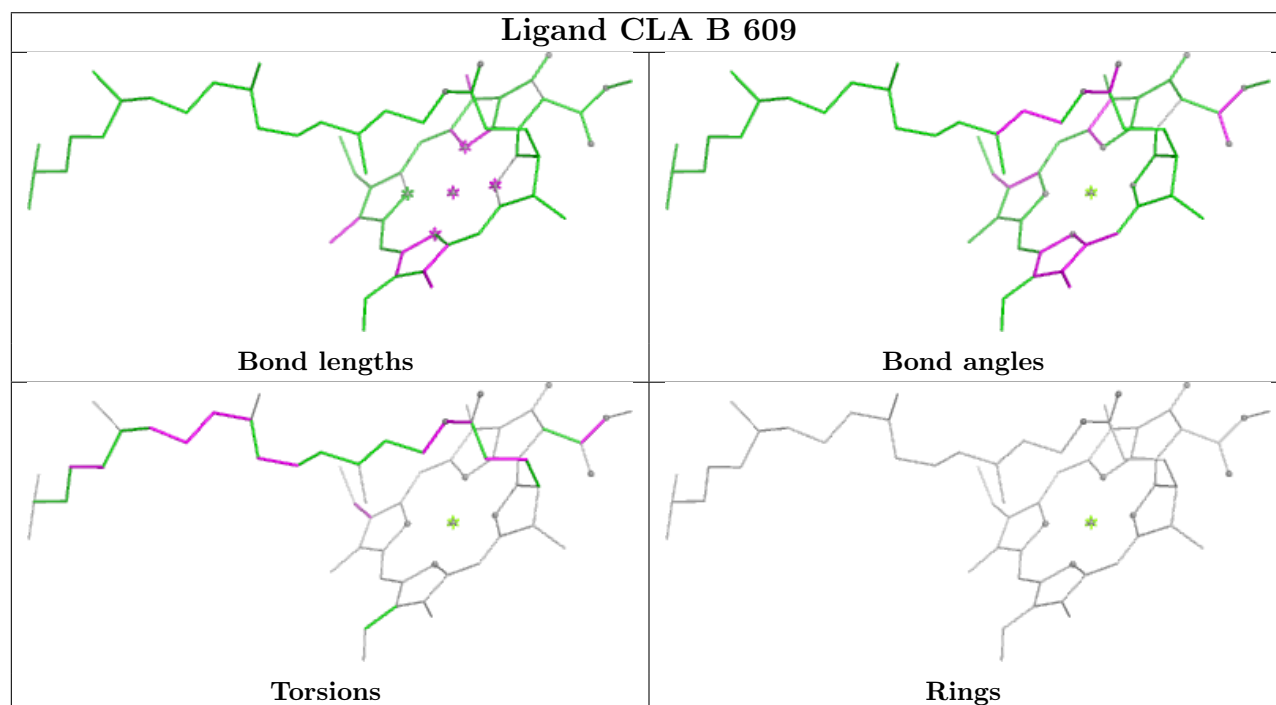
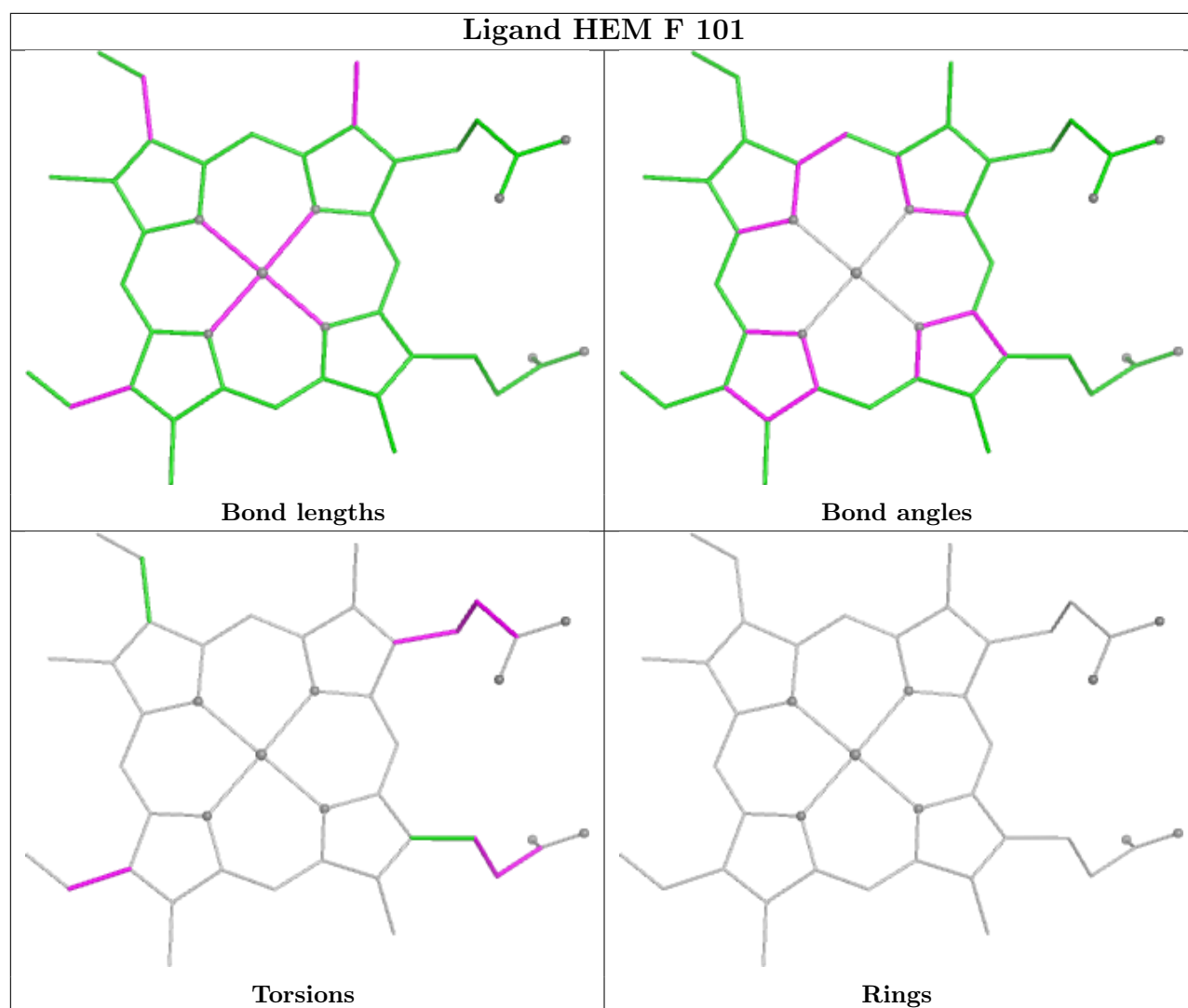
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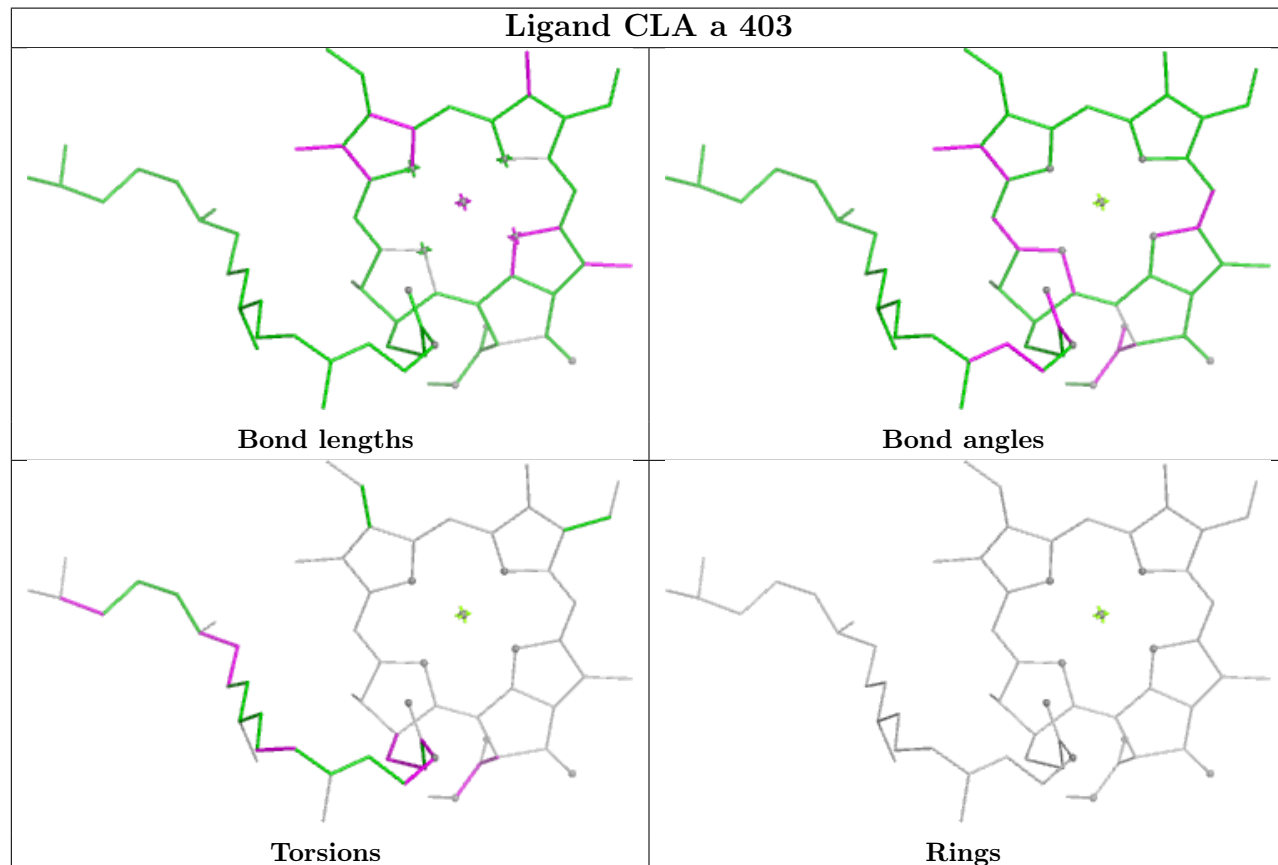
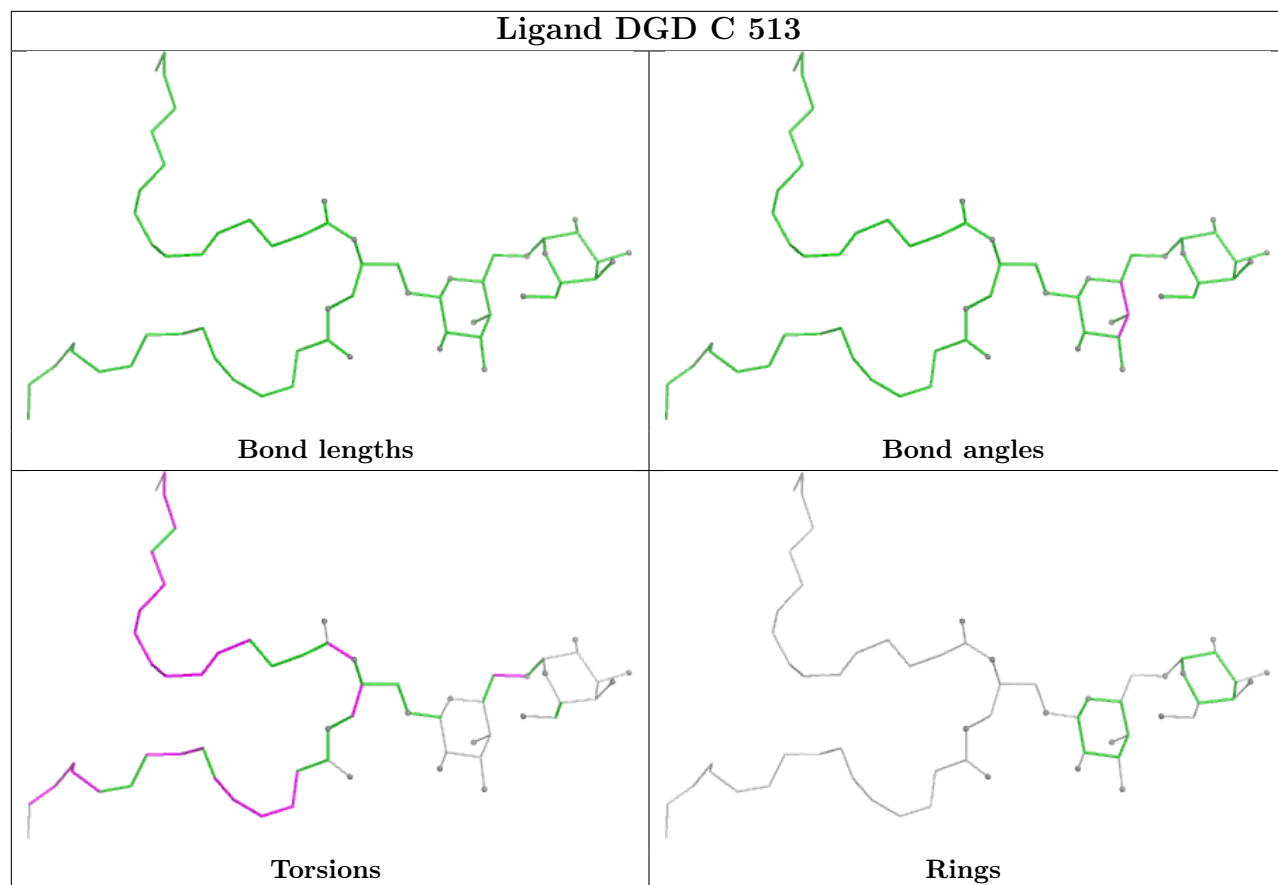
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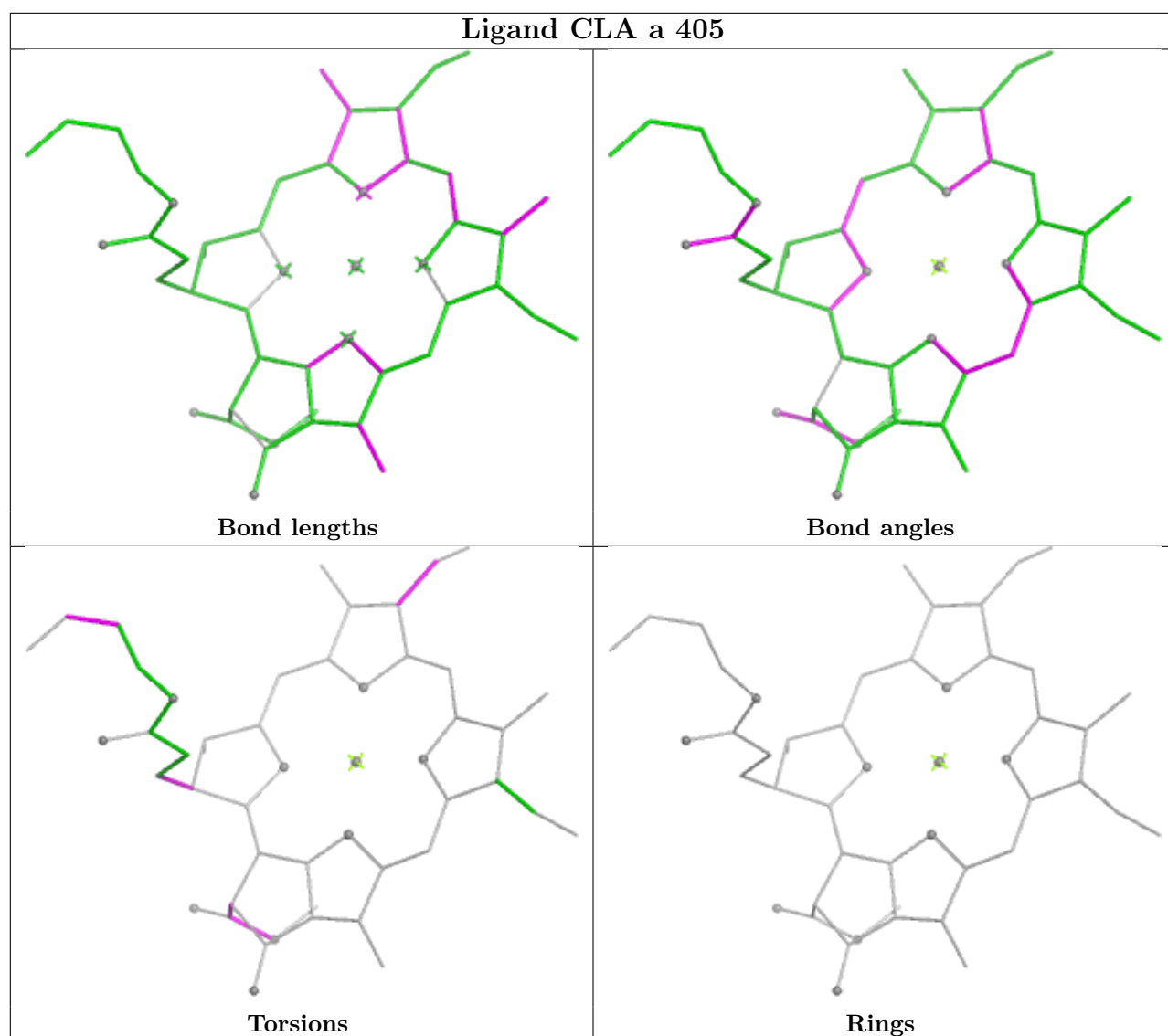
Mol	Chain	Res	Type	Clashes	Symm-Clashes
24	b	621	DGD	11	0
22	L	101	LHG	9	0
18	c	506	CLA	14	0
18	c	504	CLA	16	0
20	b	616	BCR	9	0
21	a	406	SQD	5	0
18	c	509	CLA	12	0
18	C	511	CLA	17	0
18	A	403	CLA	15	0
20	h	101	BCR	7	0
18	C	517	CLA	16	0
18	A	405	CLA	4	0
18	d	408	CLA	11	0
18	d	404	CLA	11	0

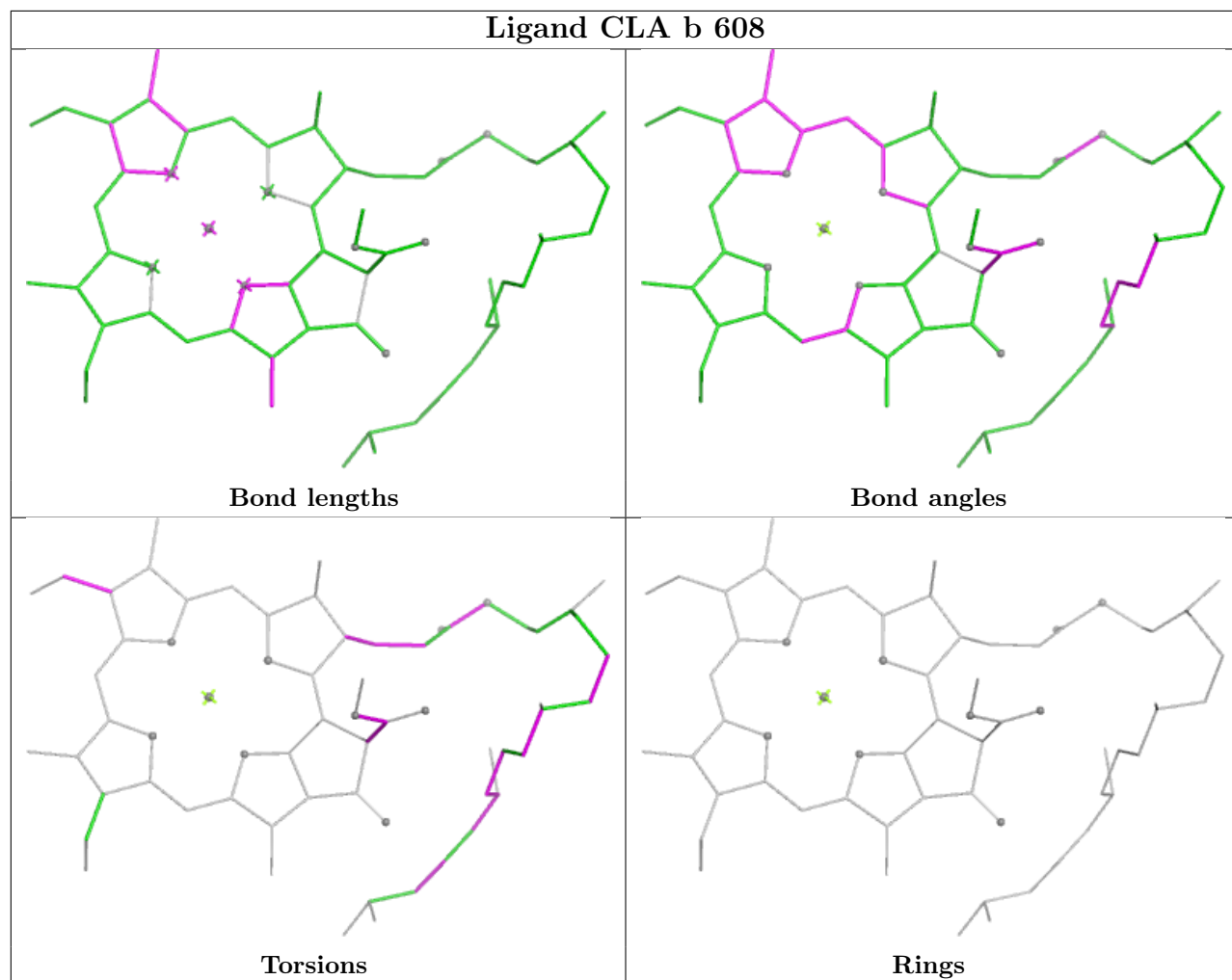
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. 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.

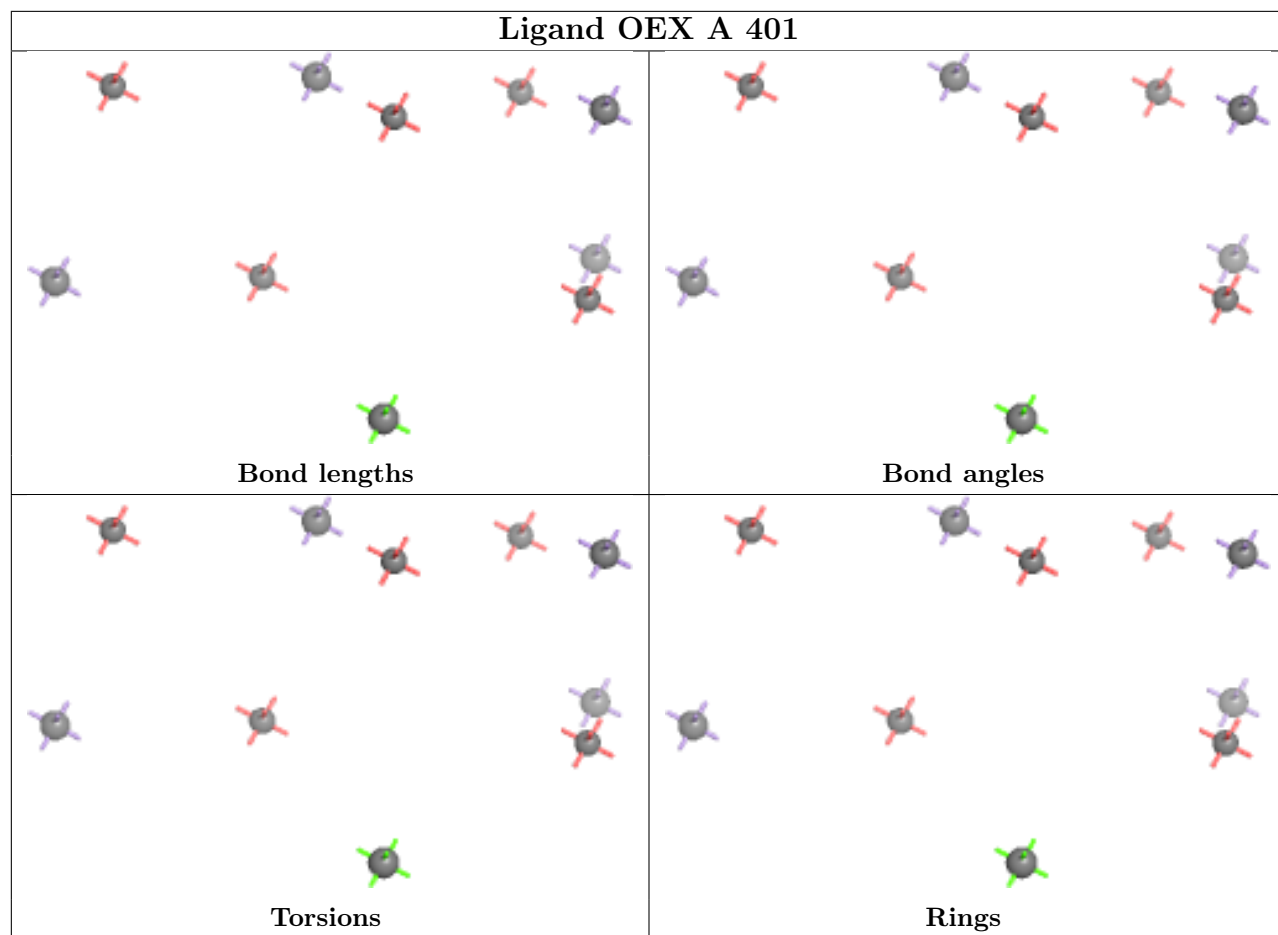


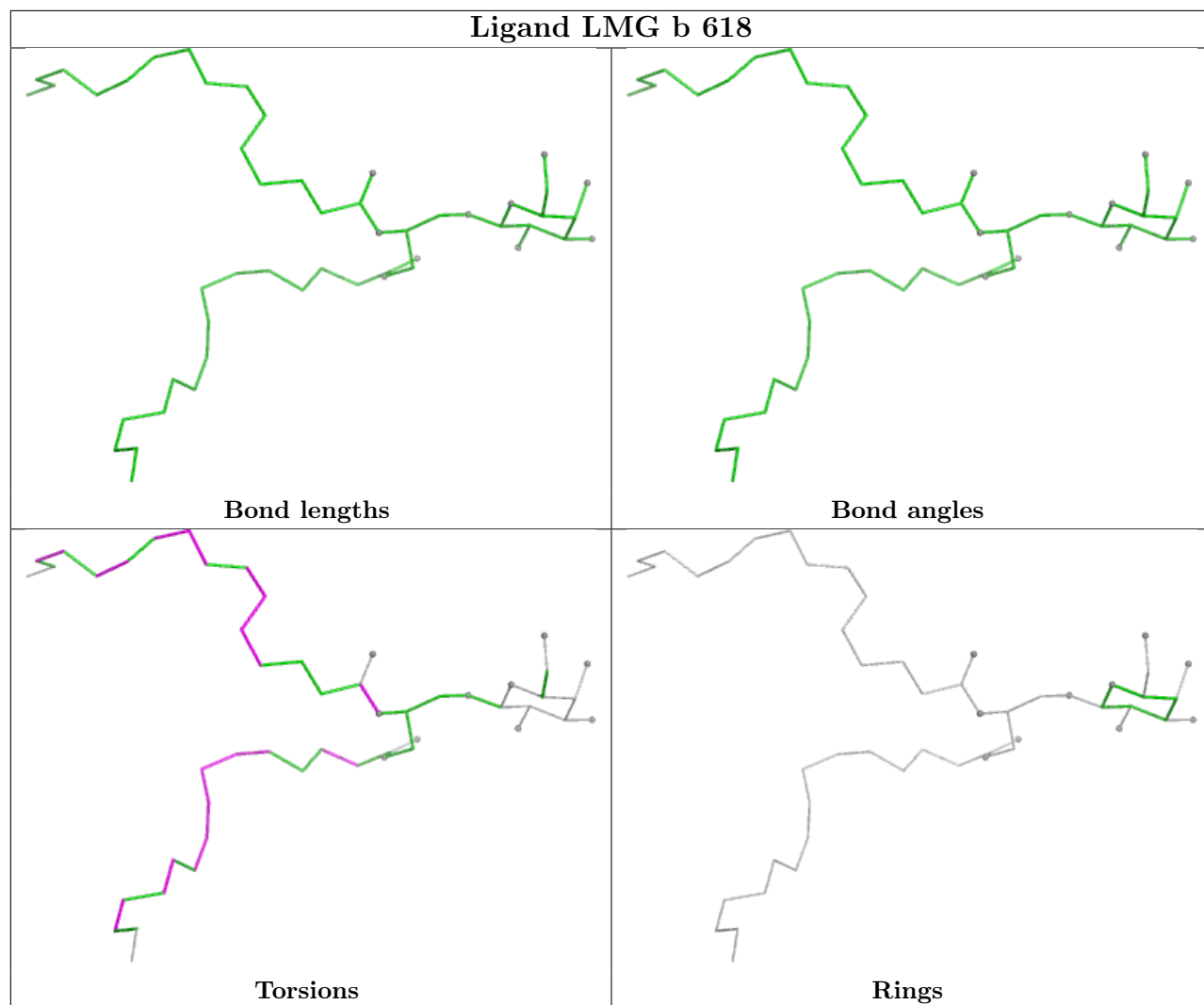


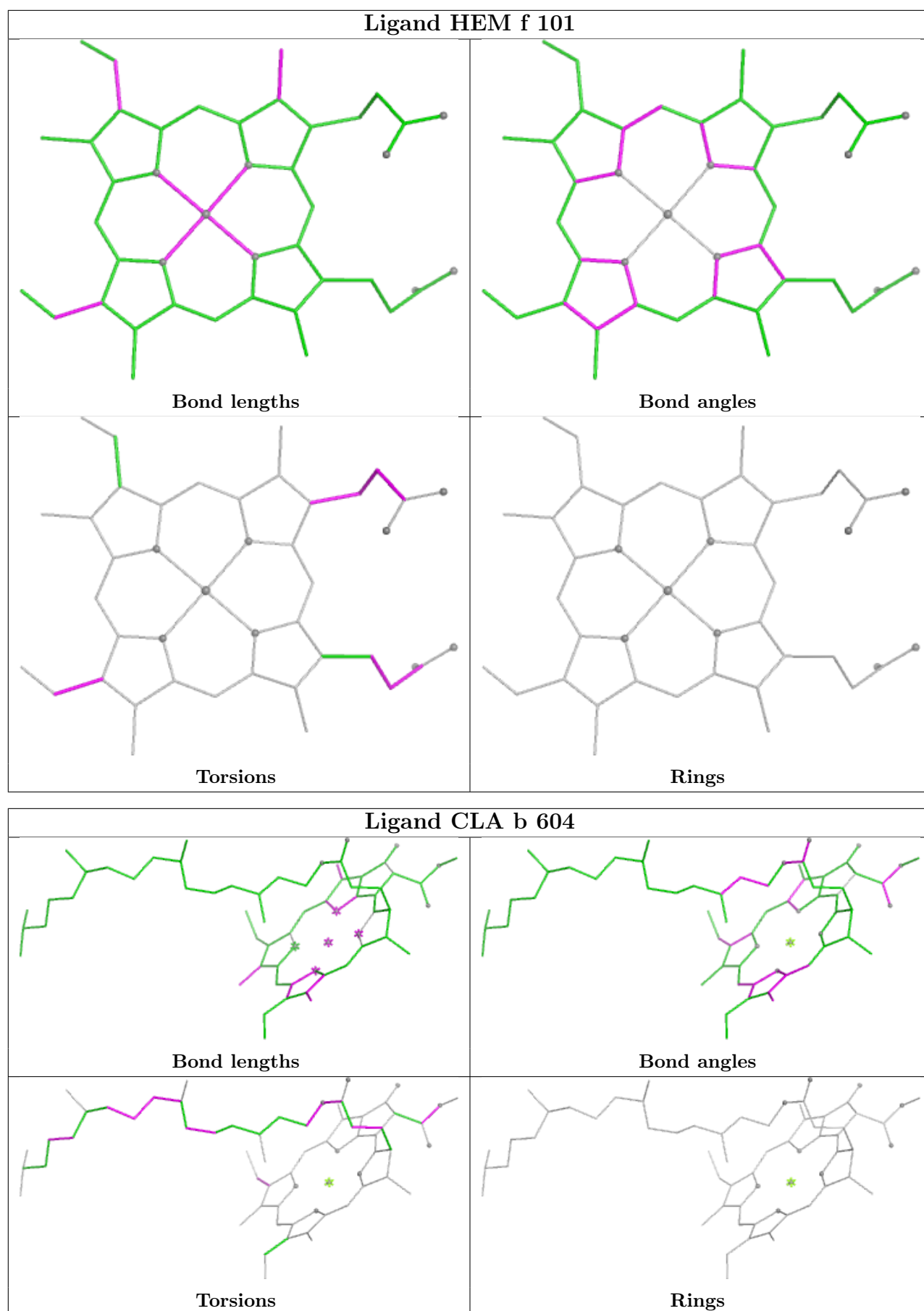


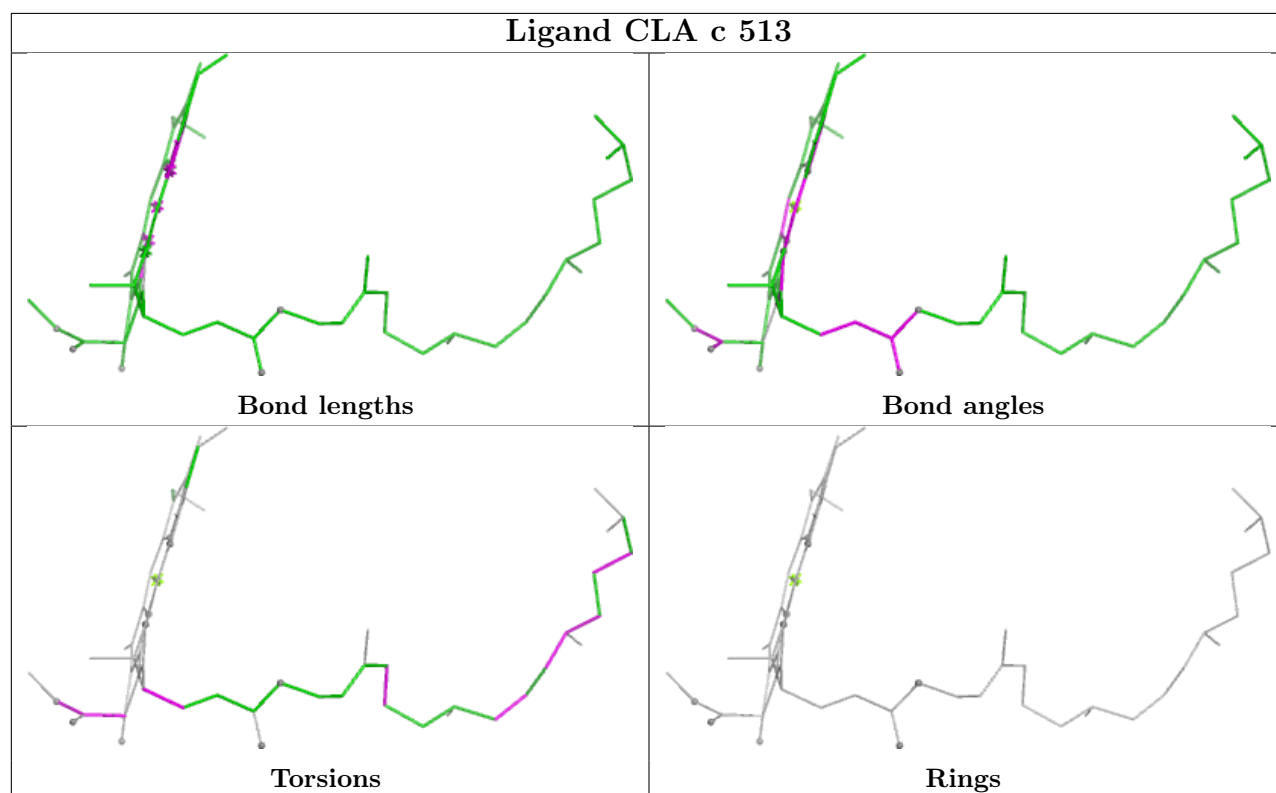
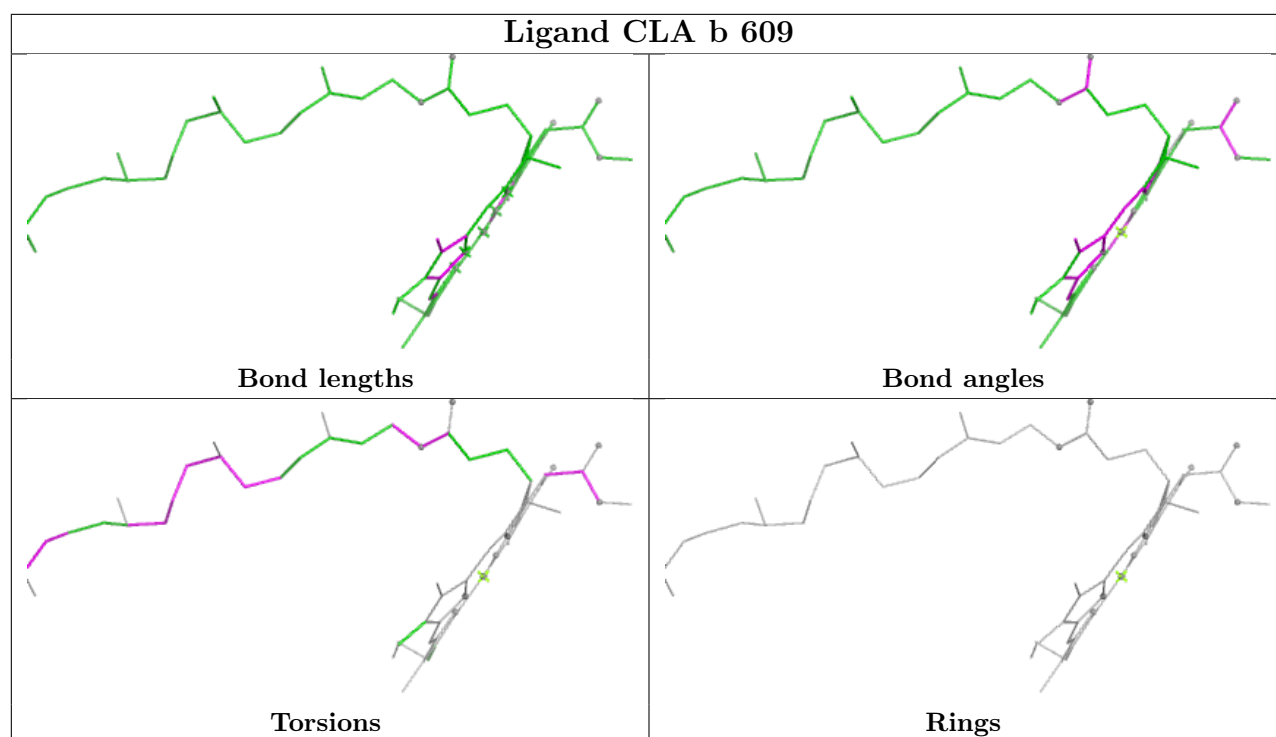


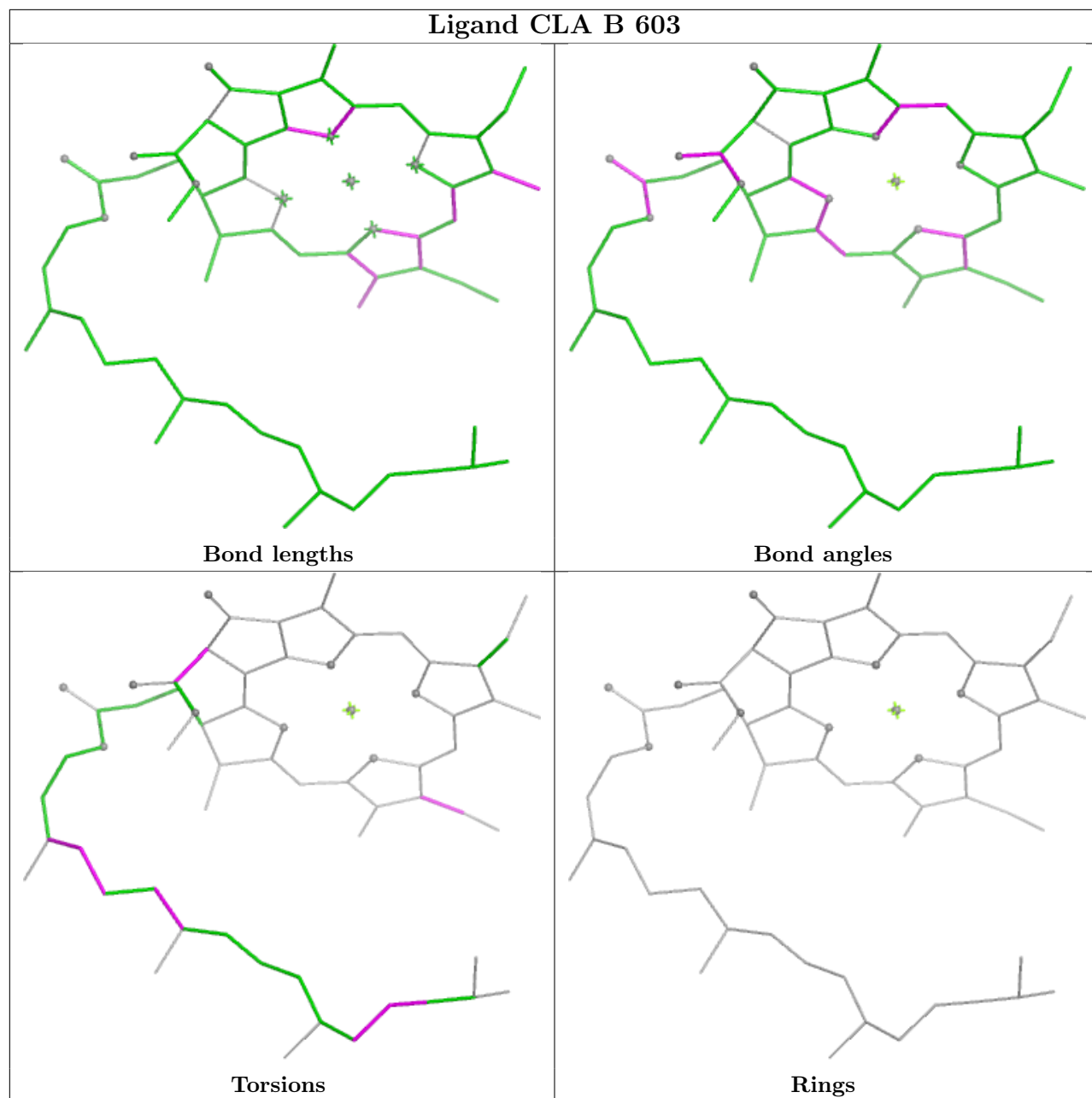


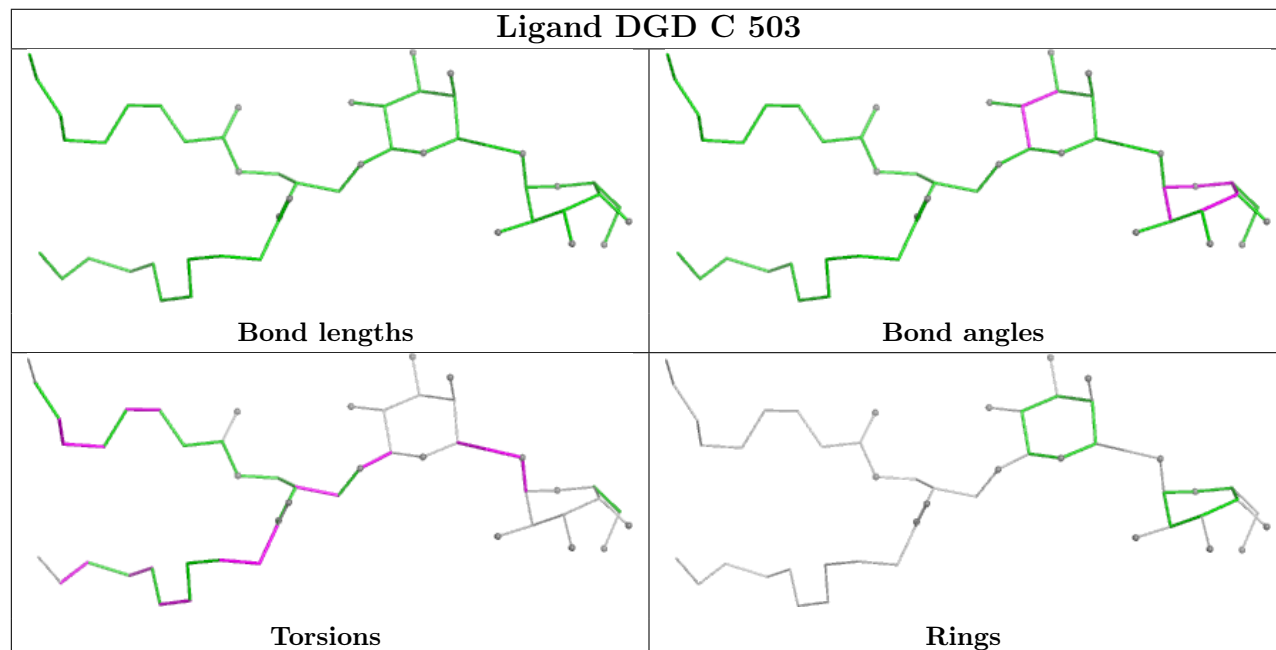
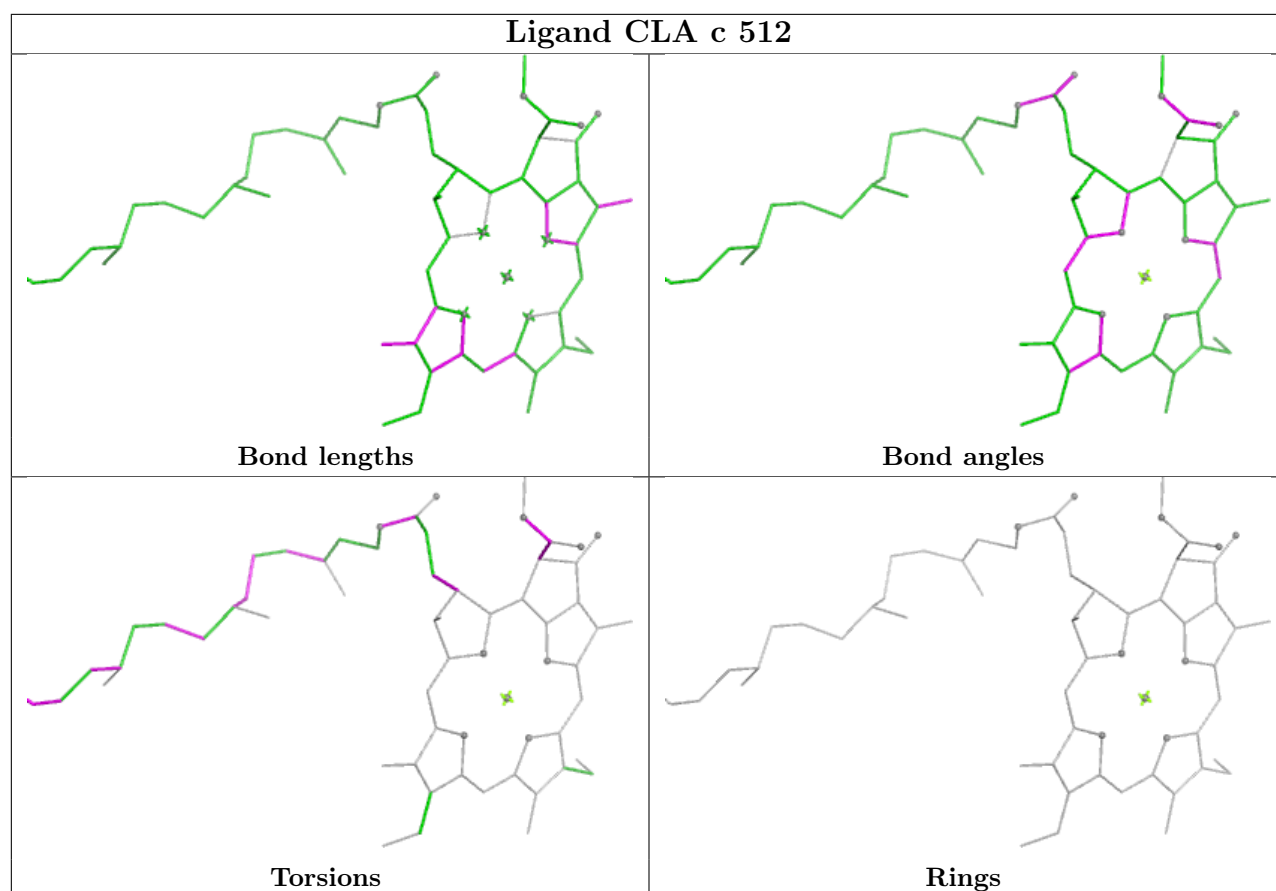


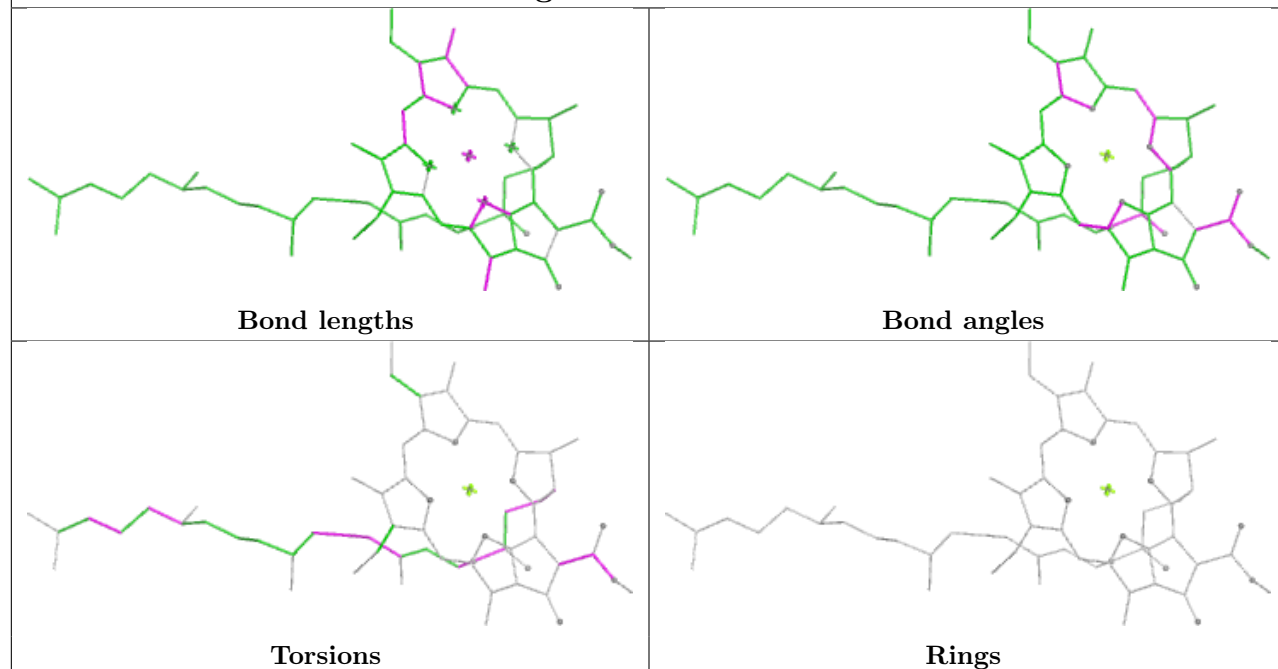
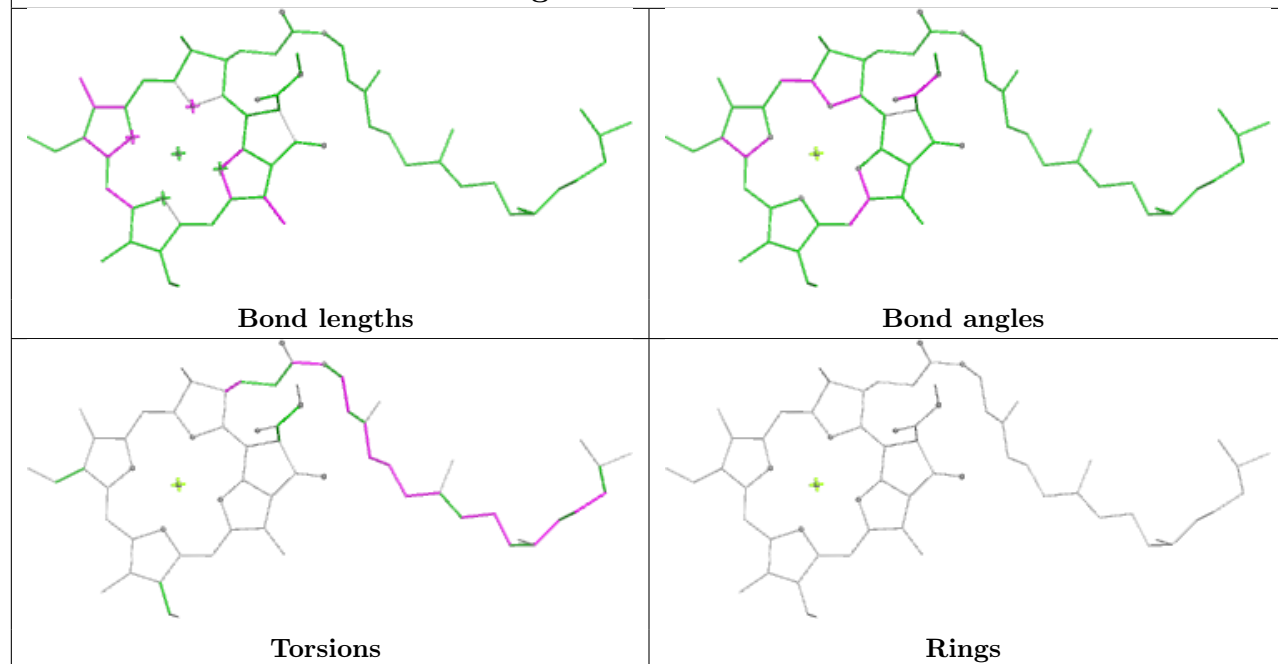


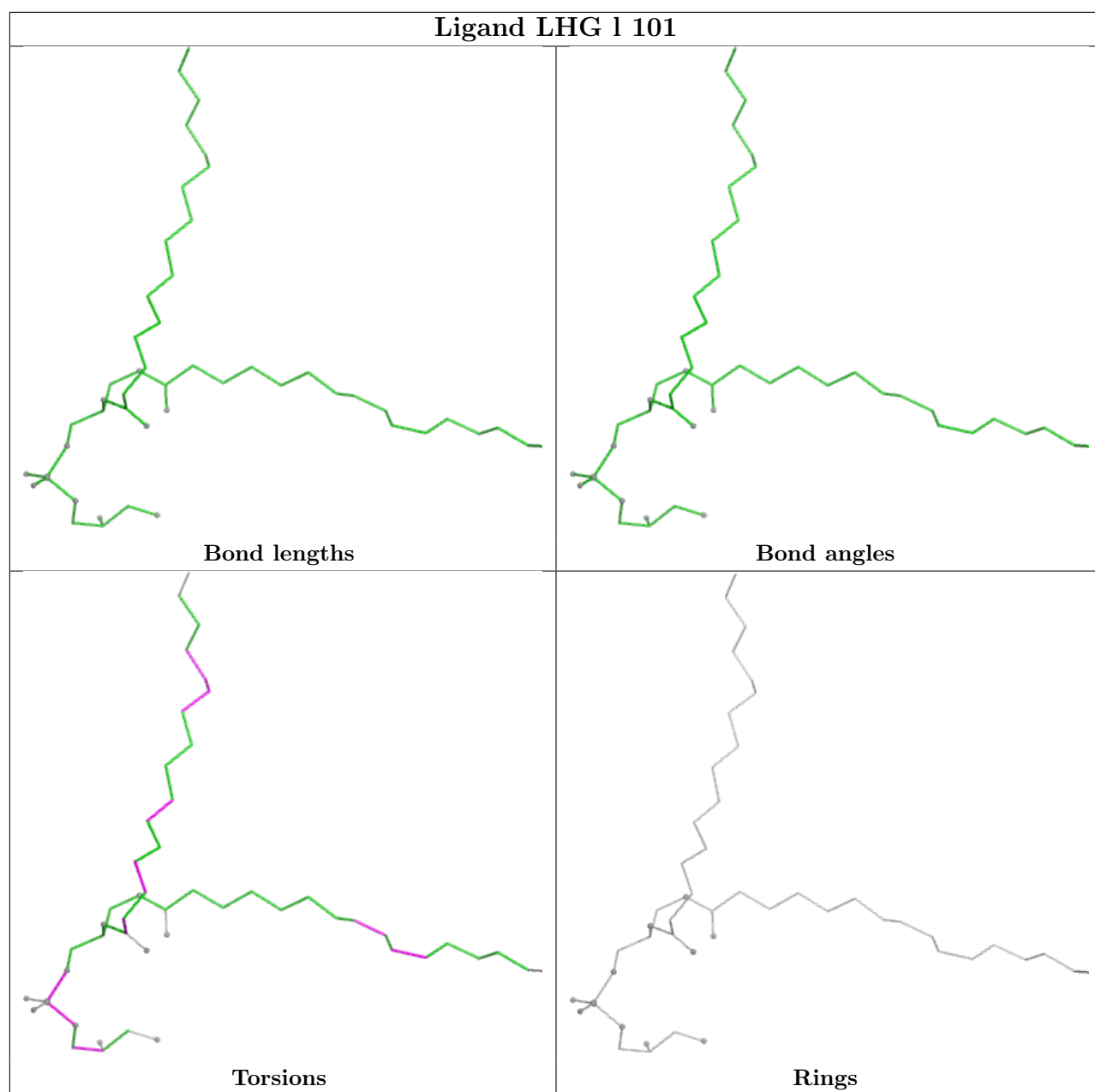


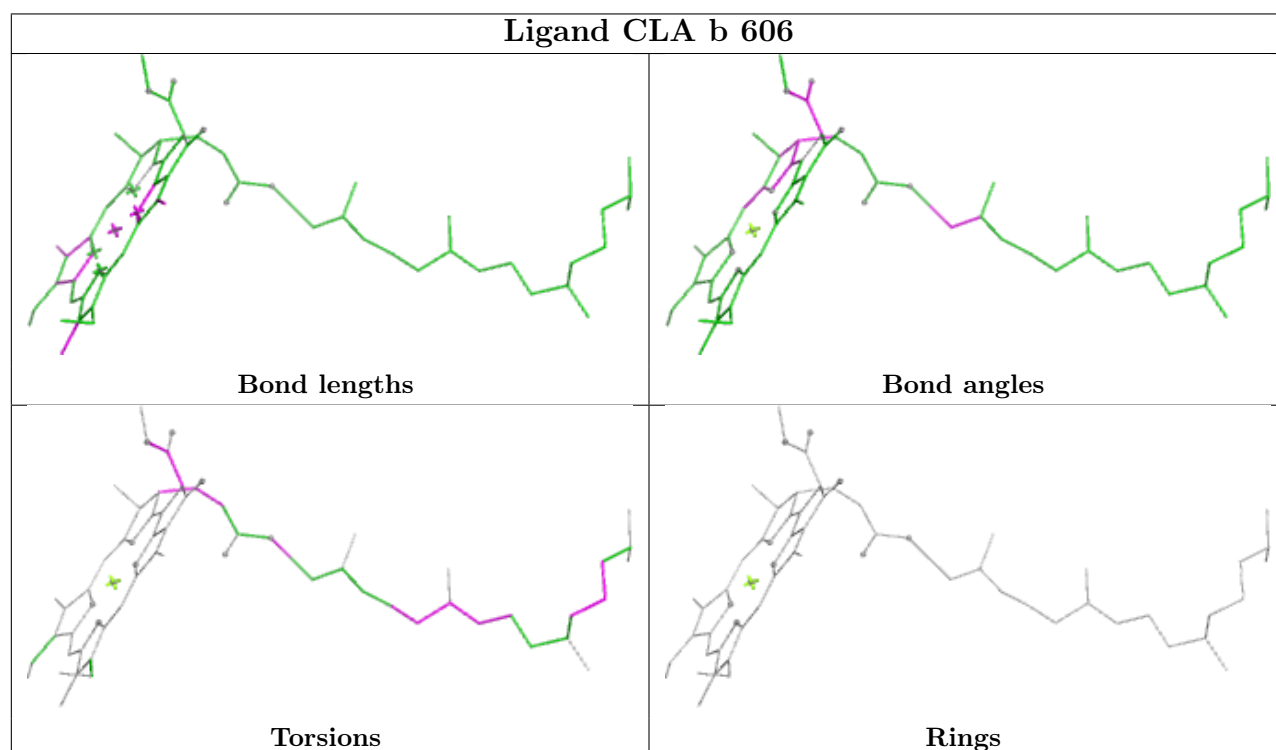
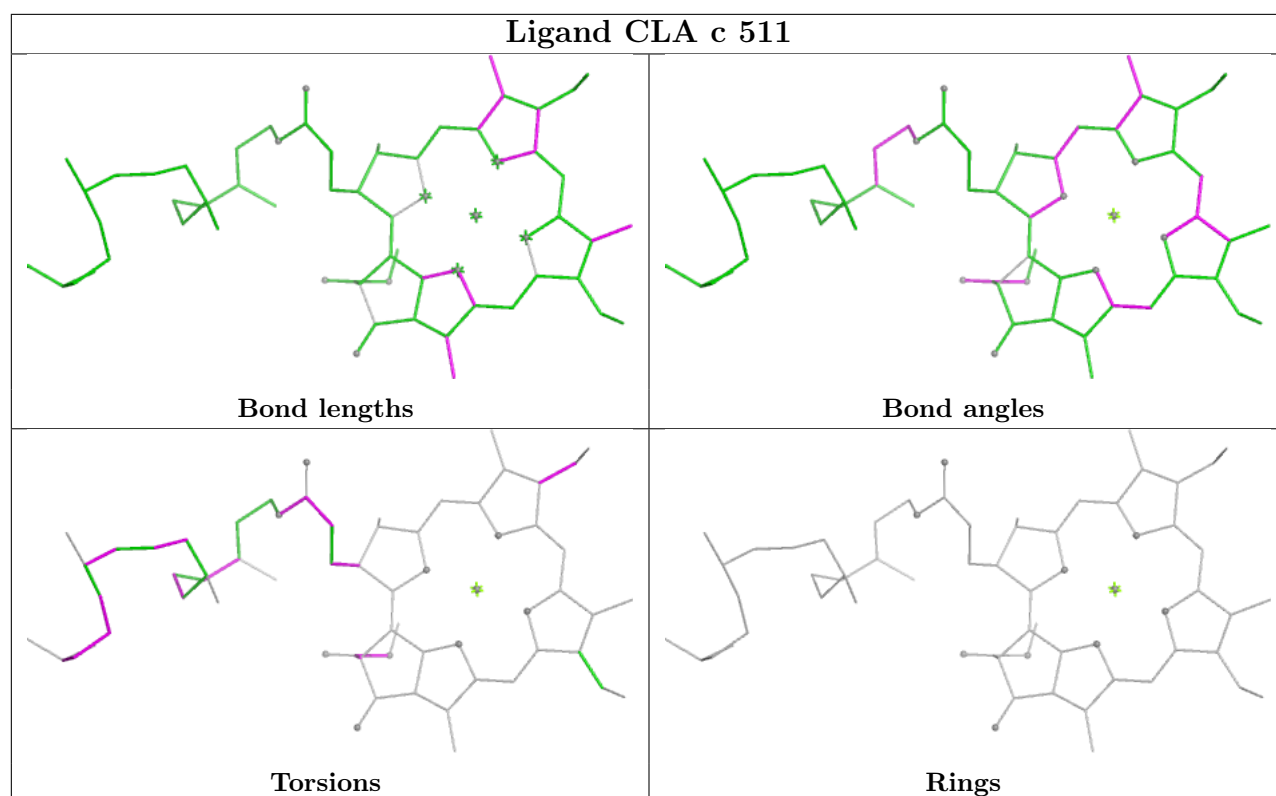


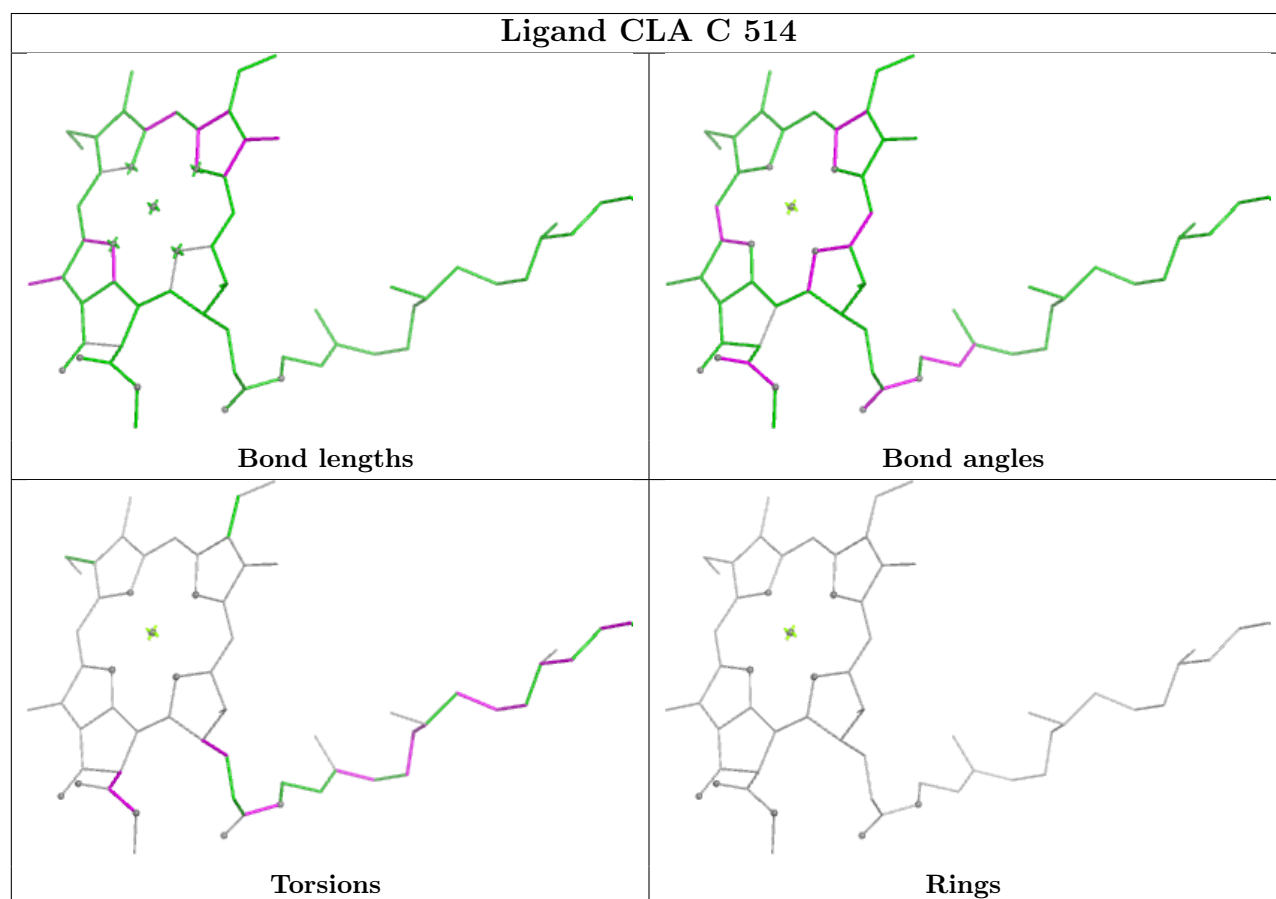
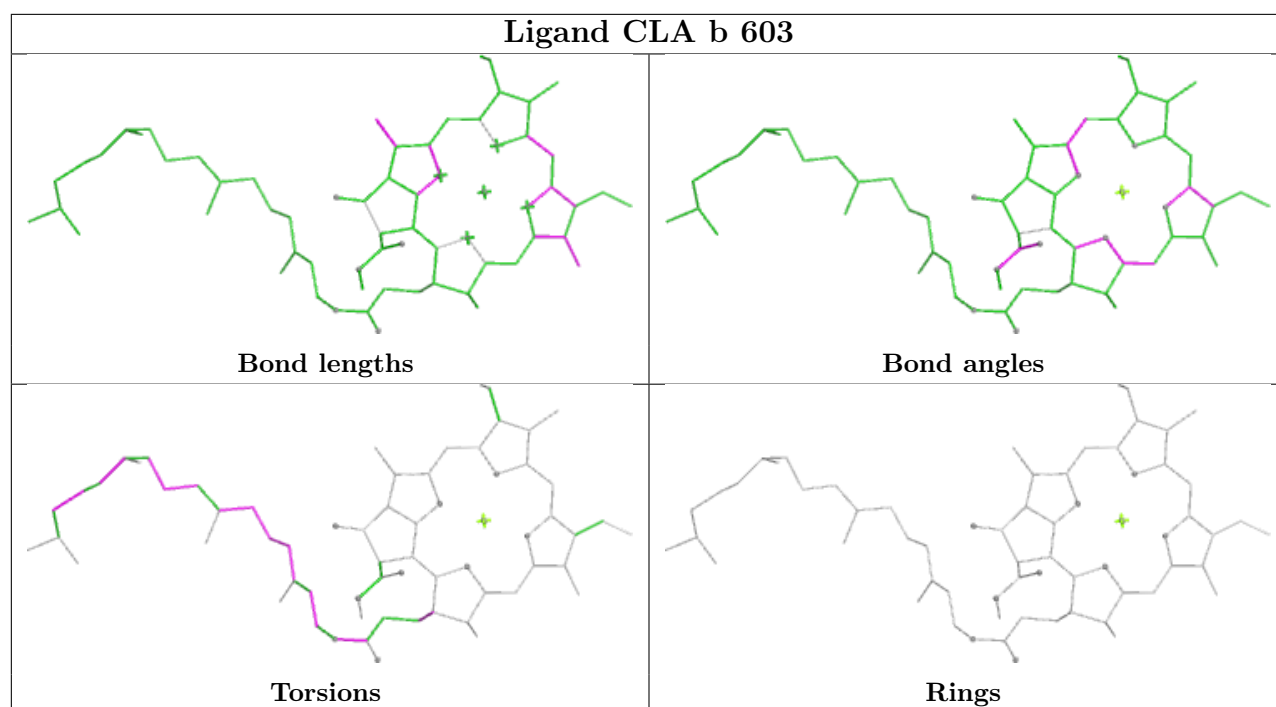


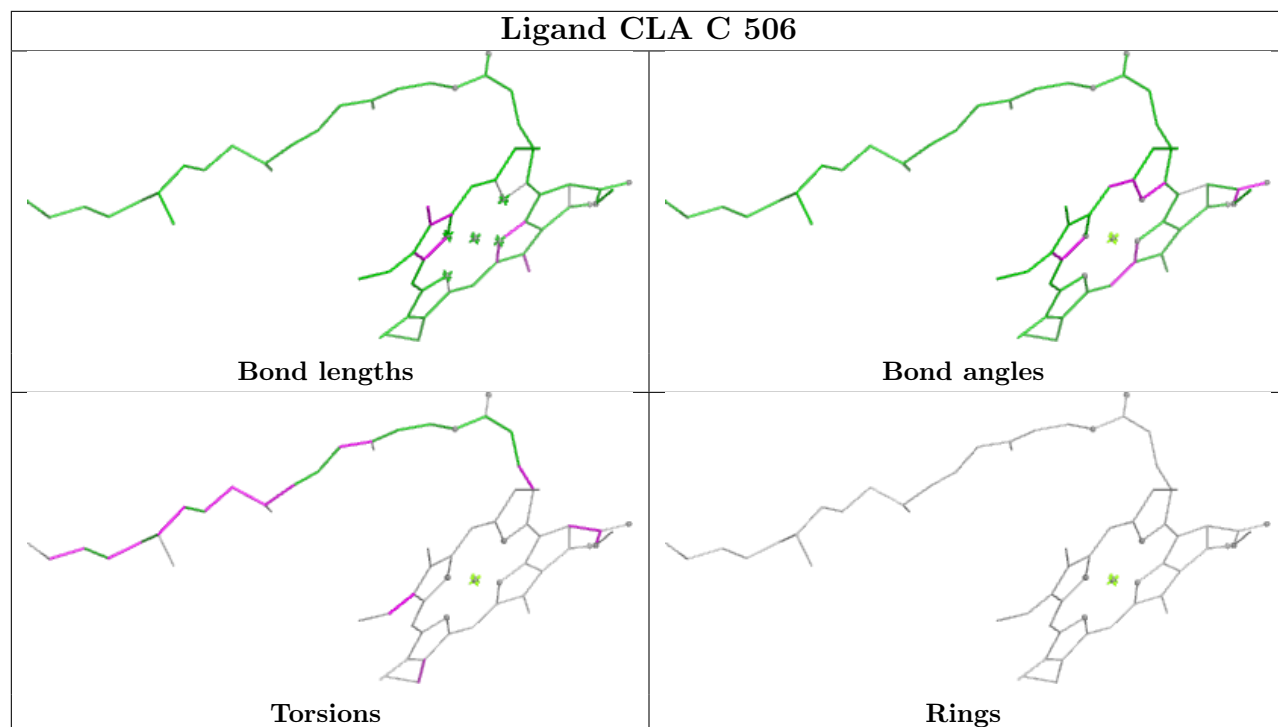


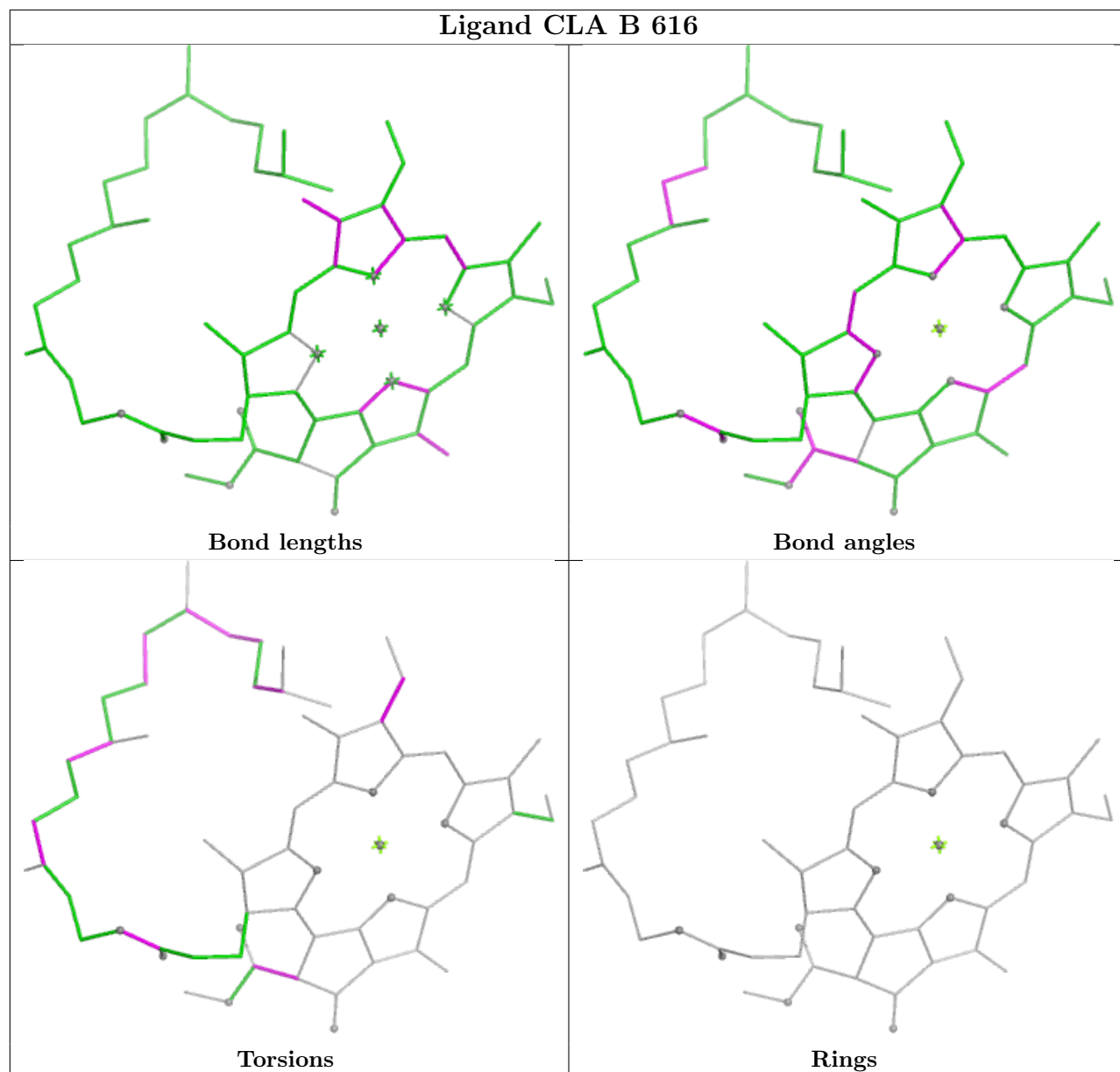
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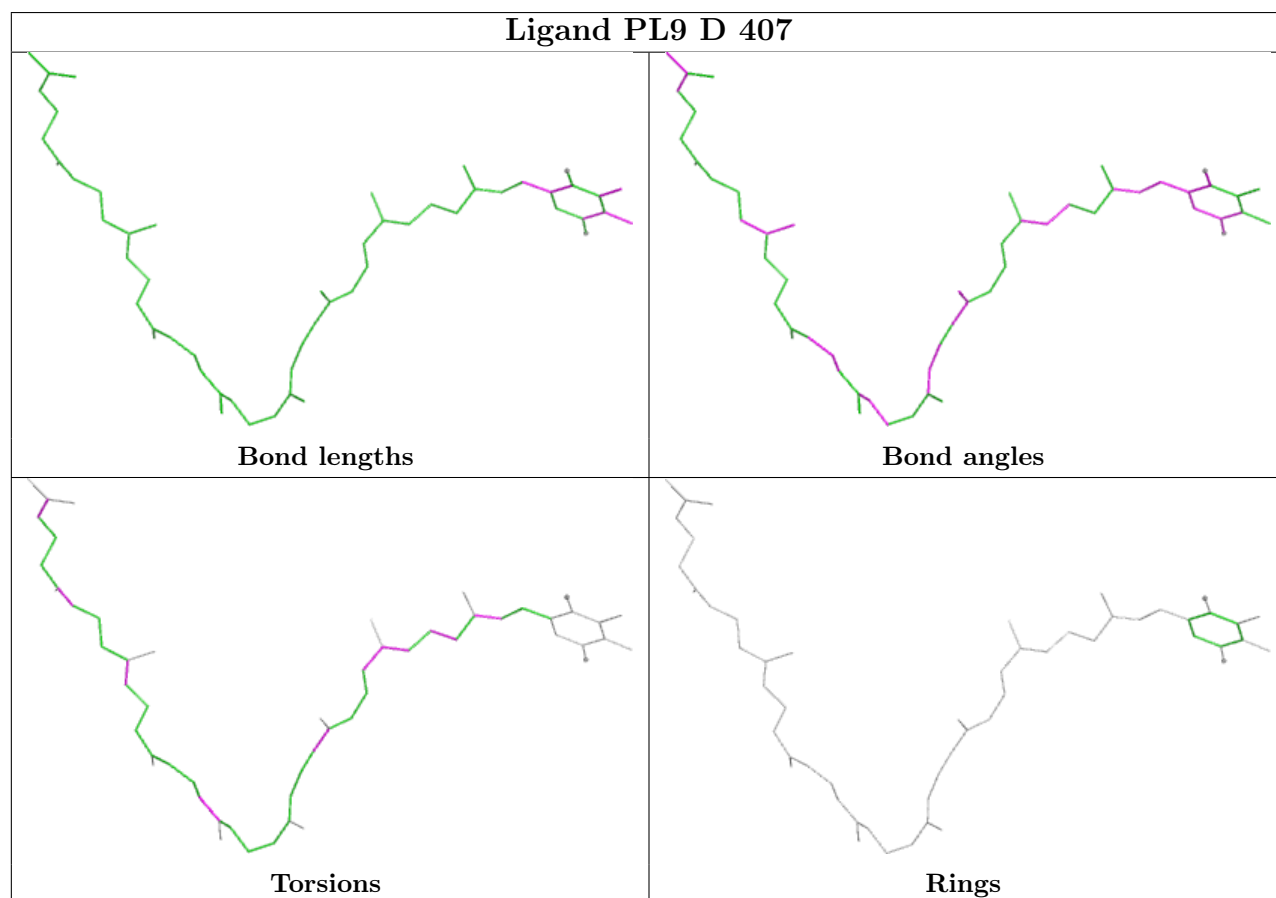
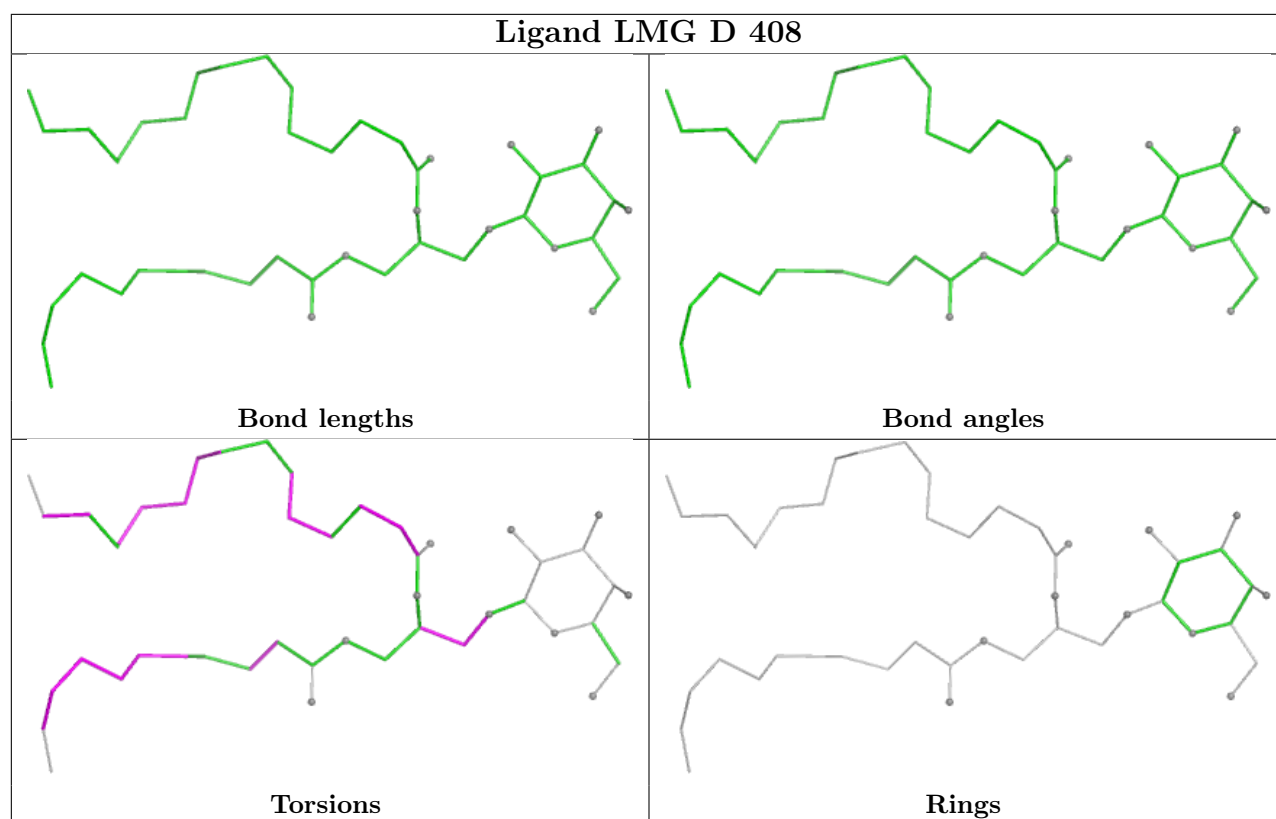


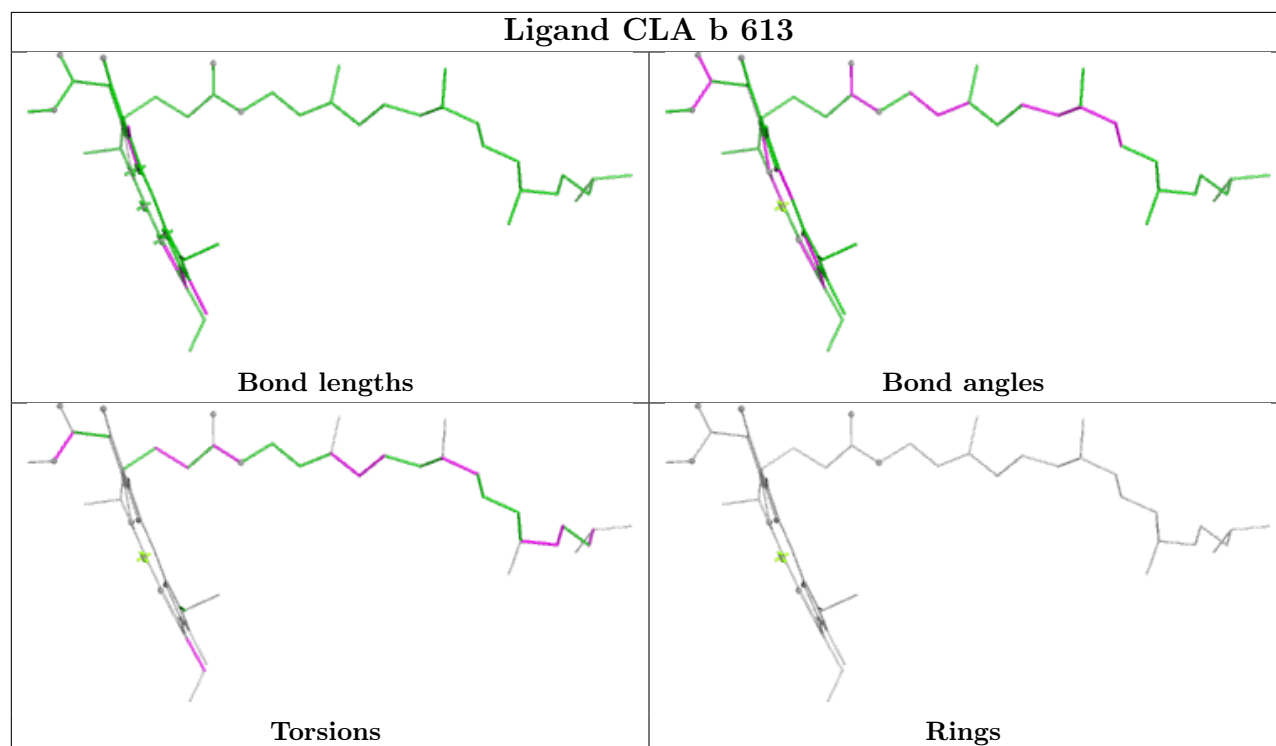
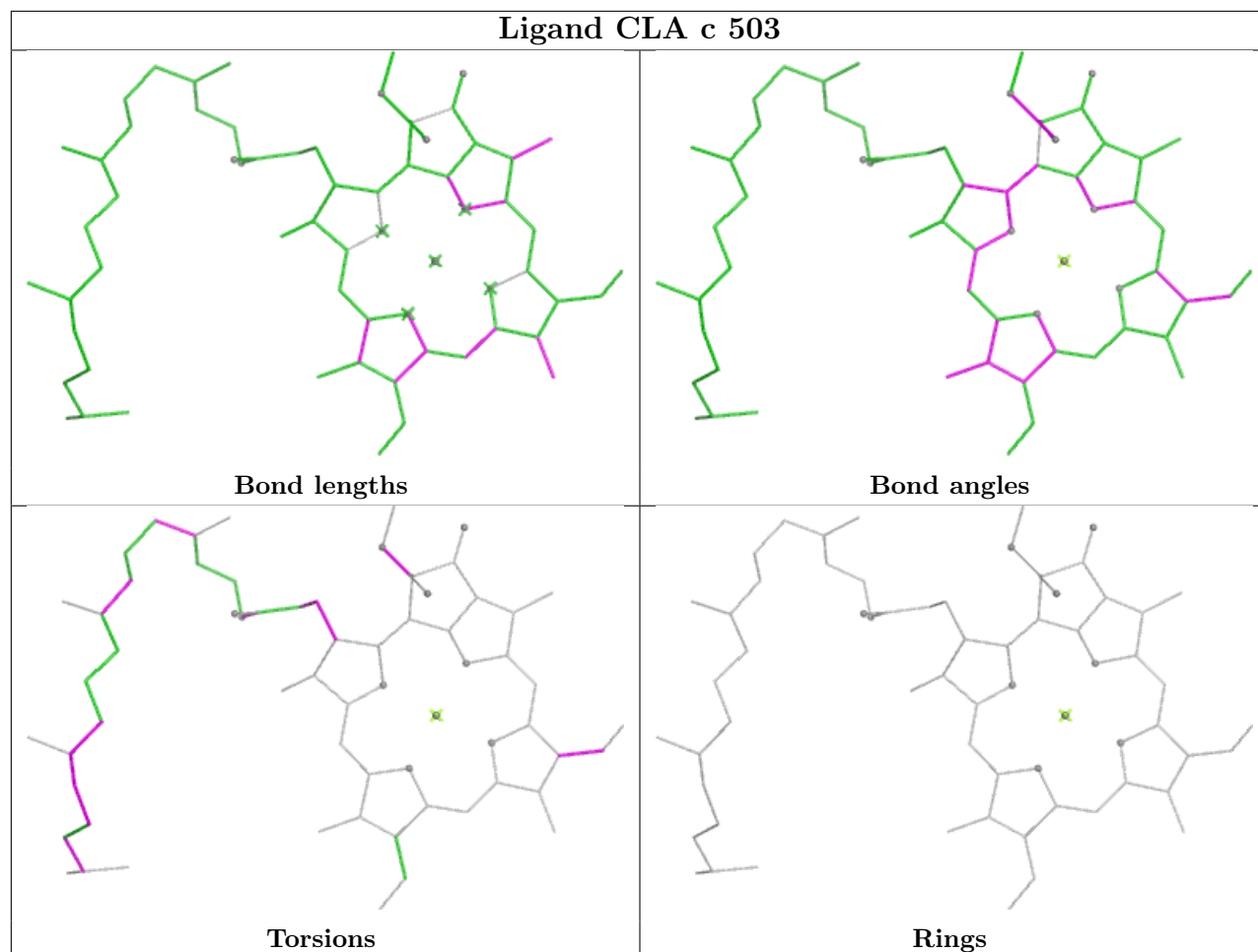


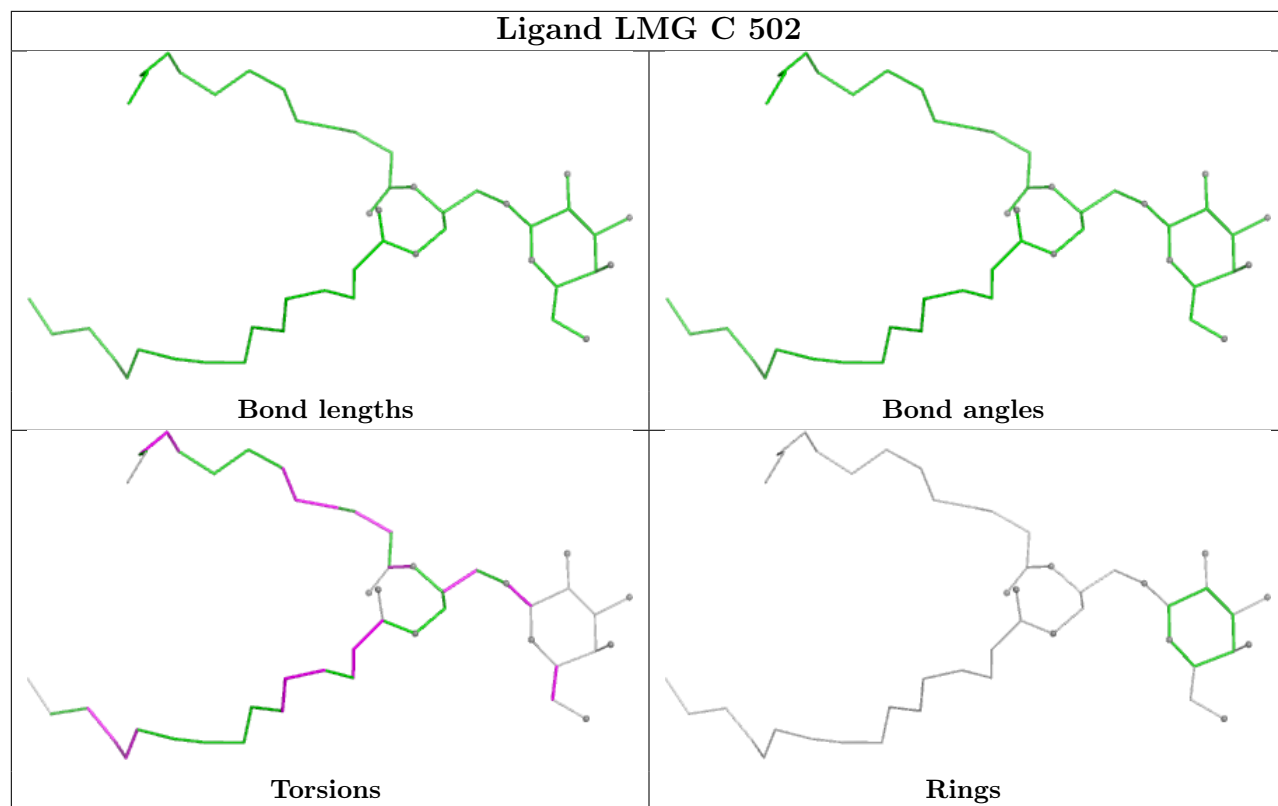


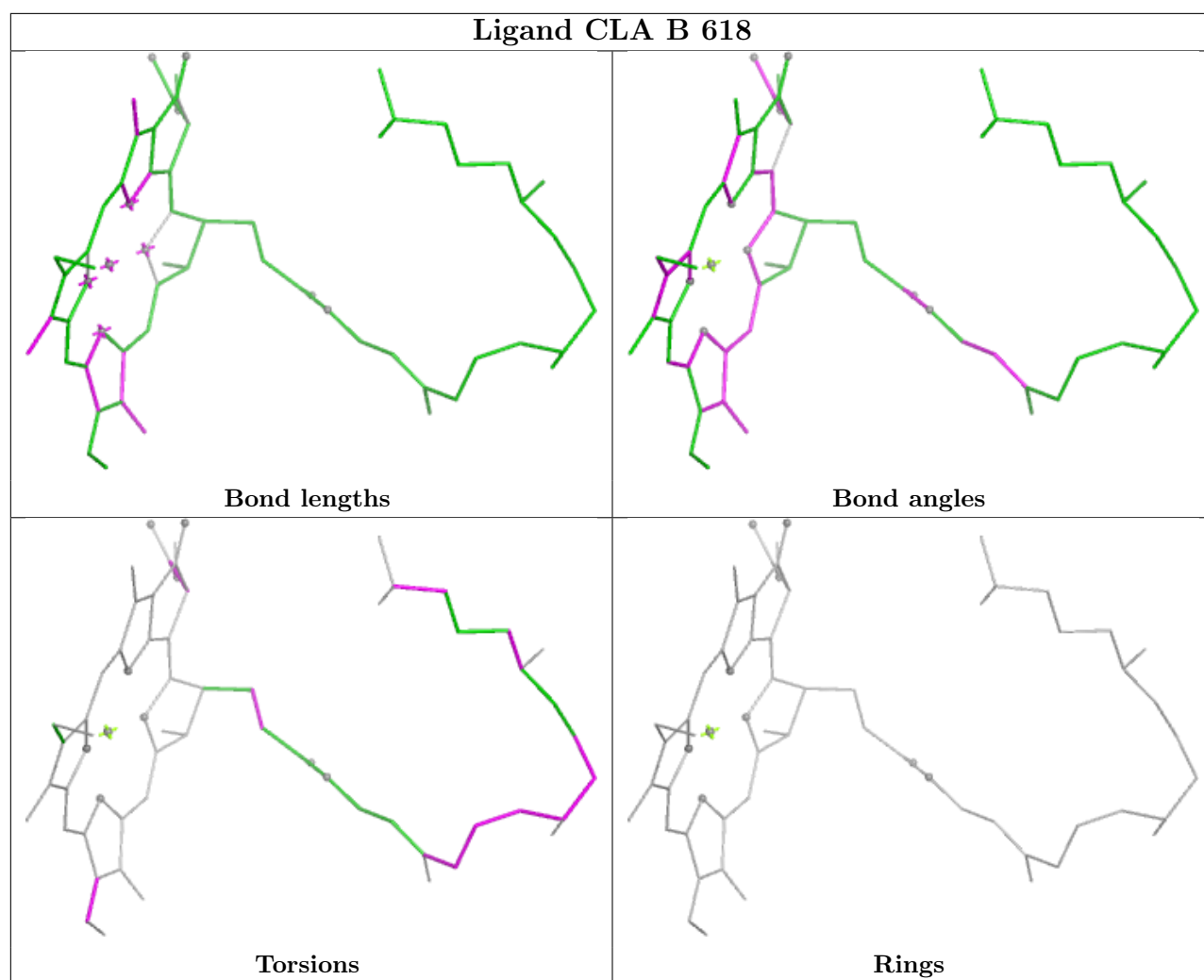


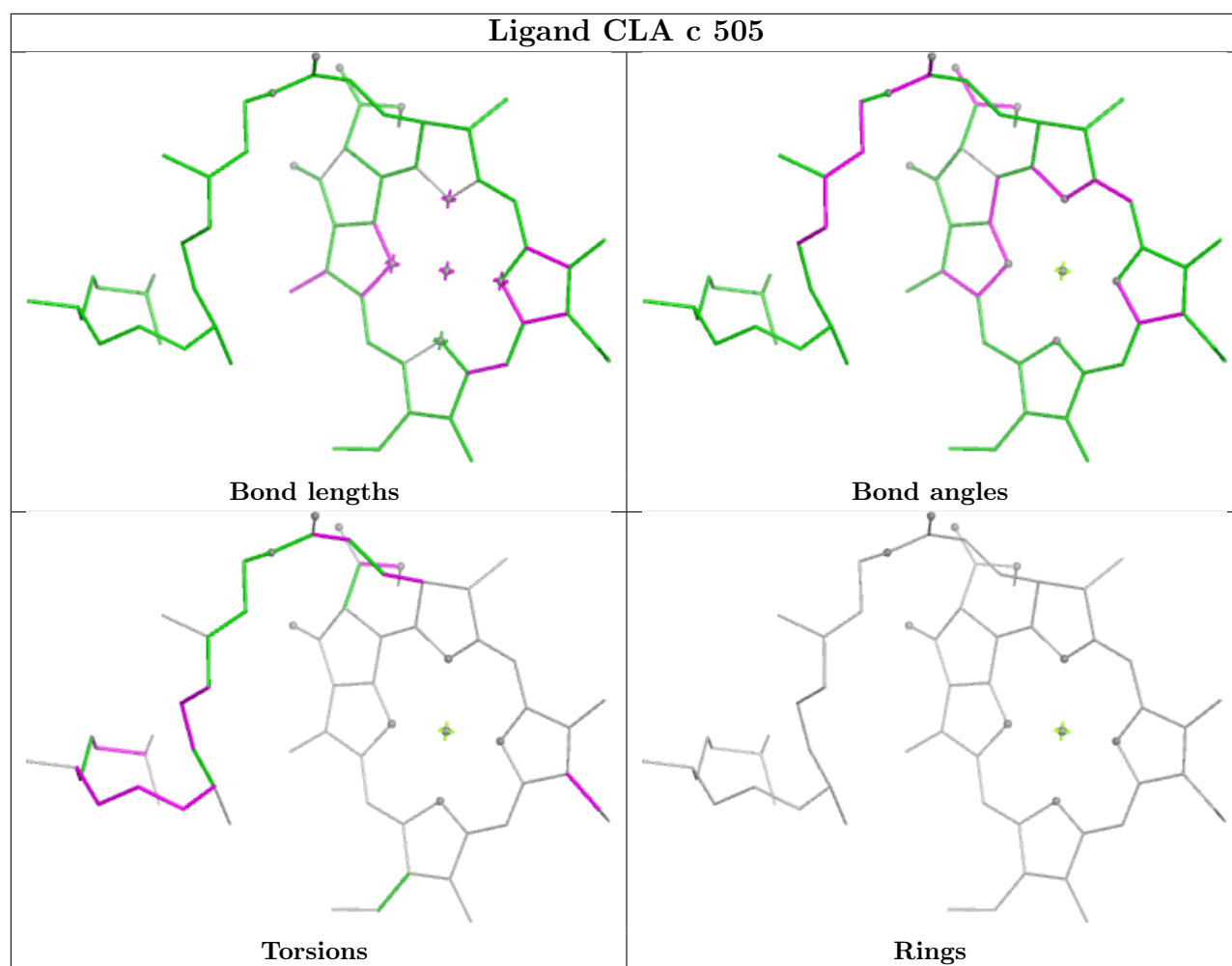


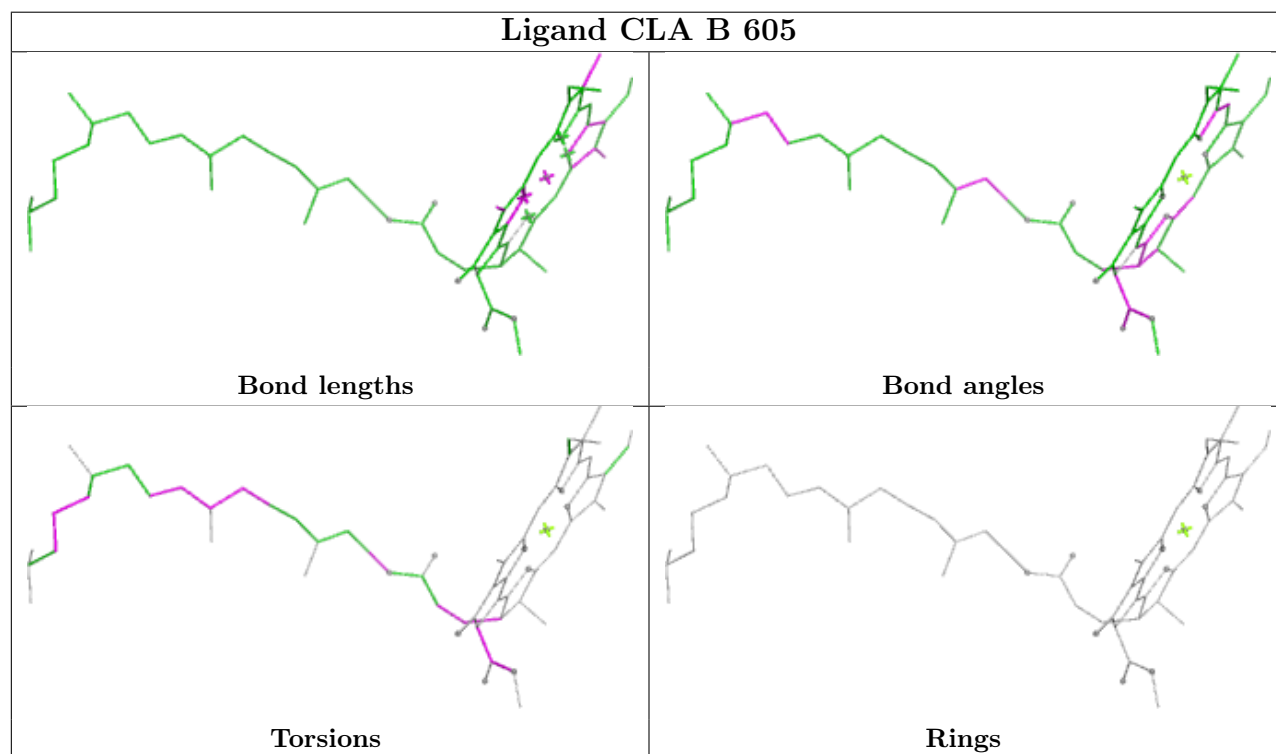
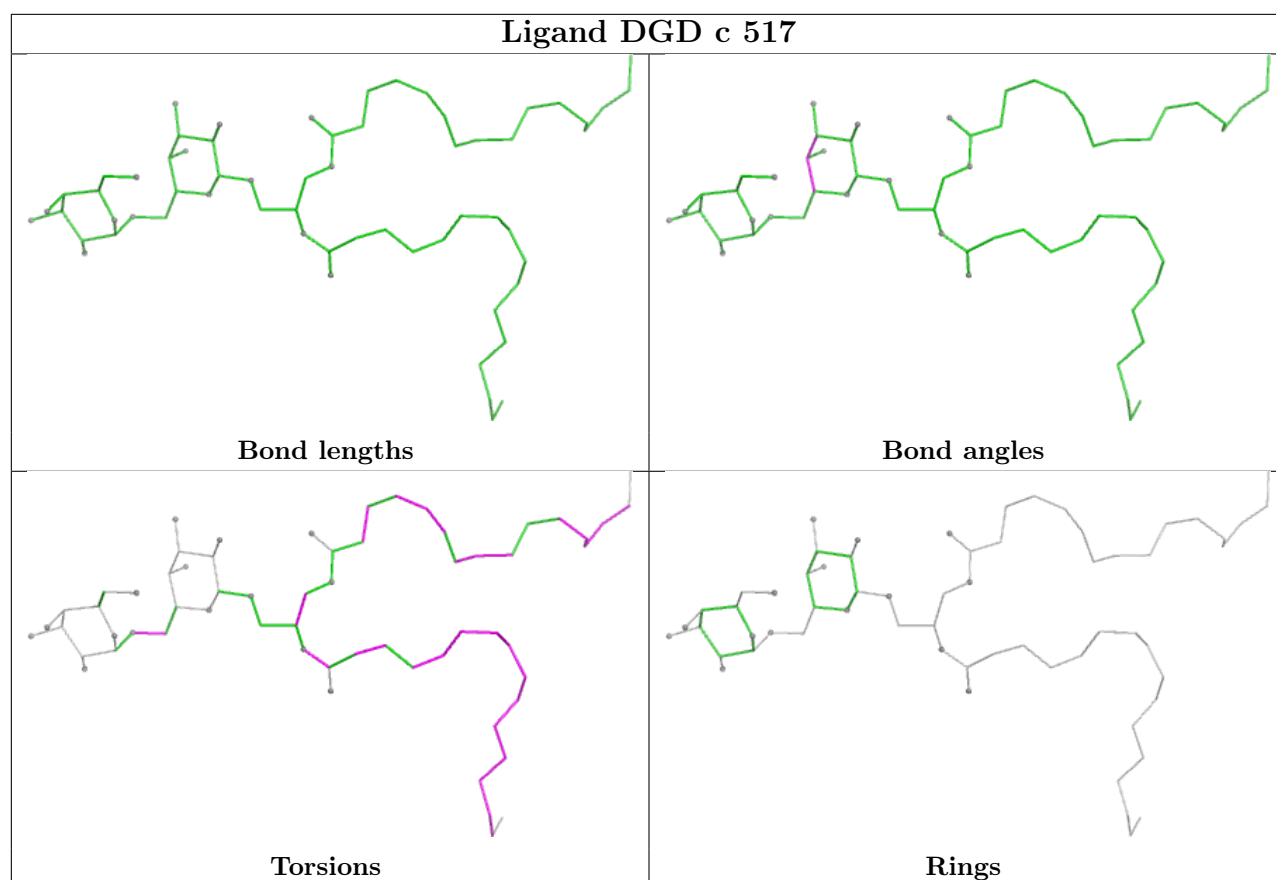


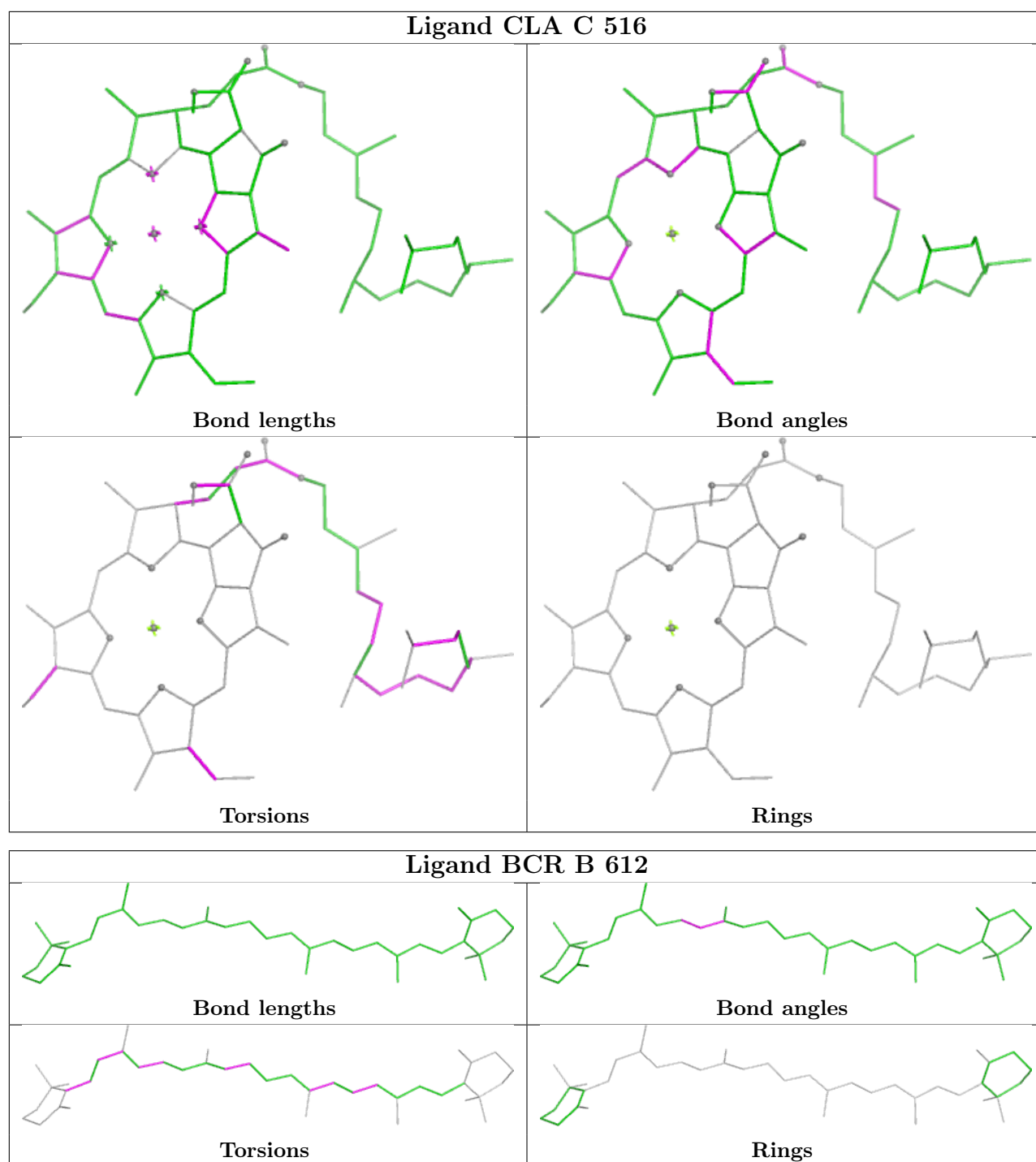


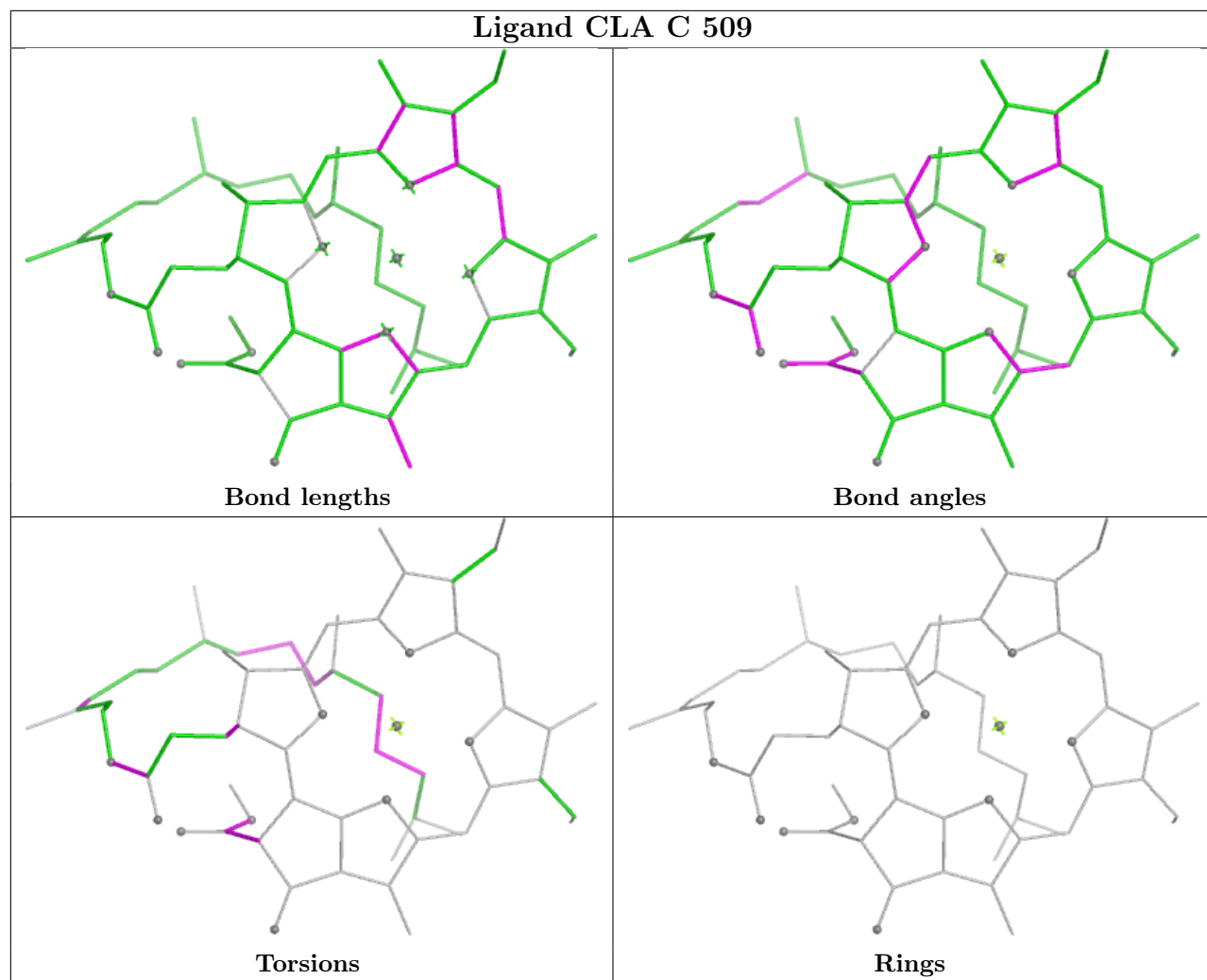


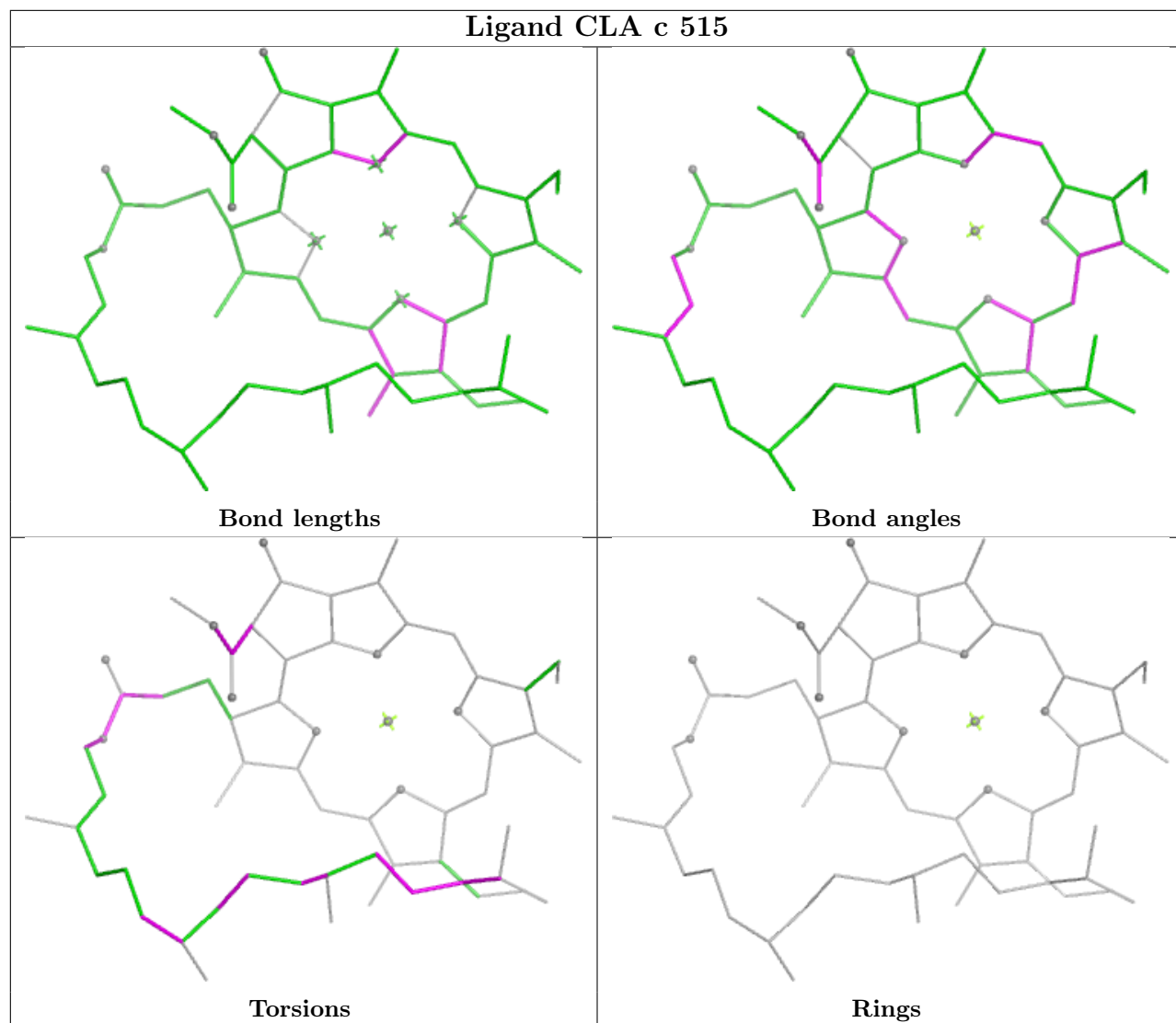


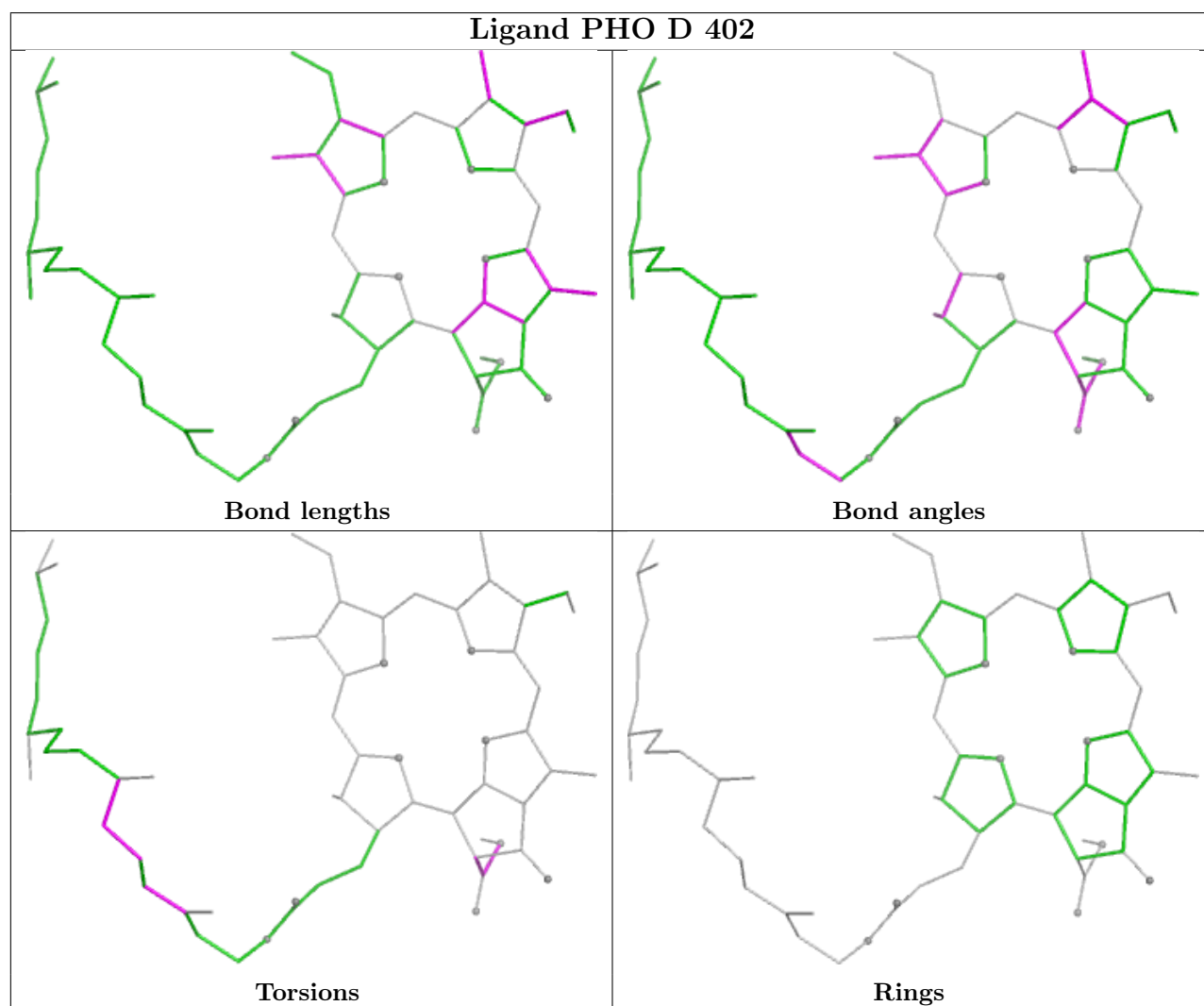
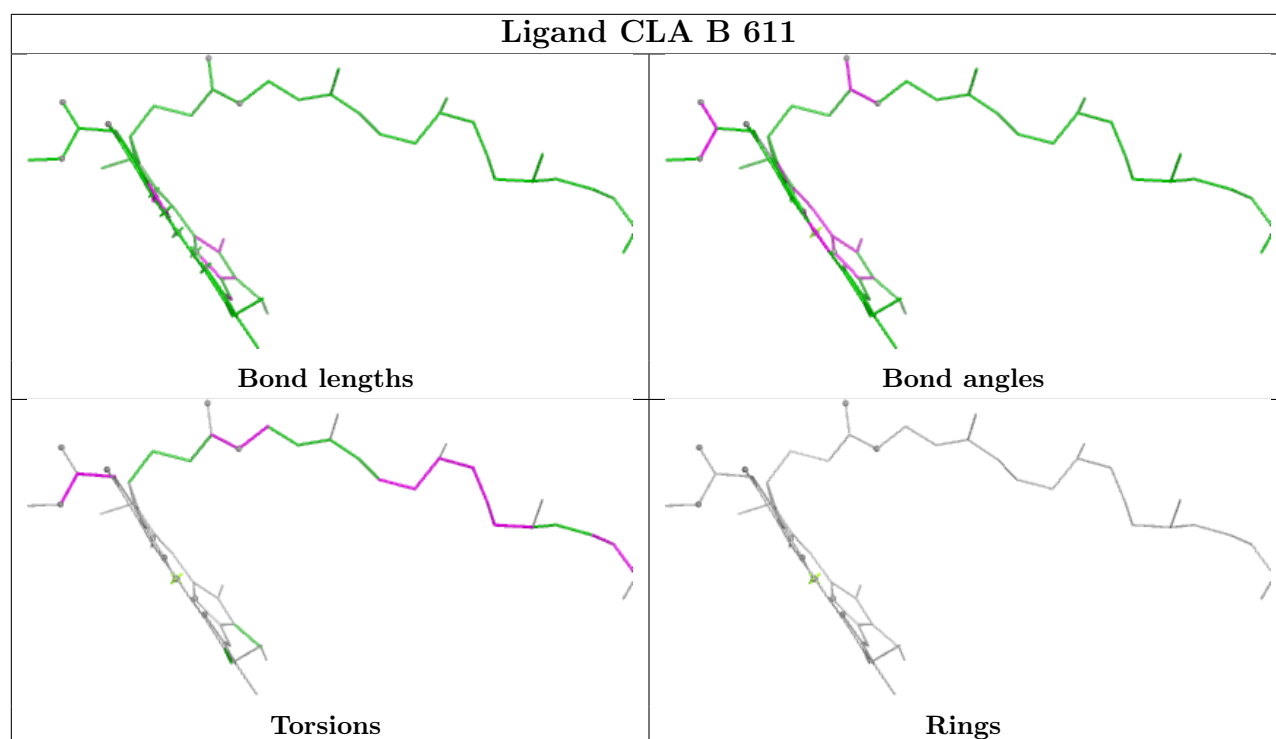


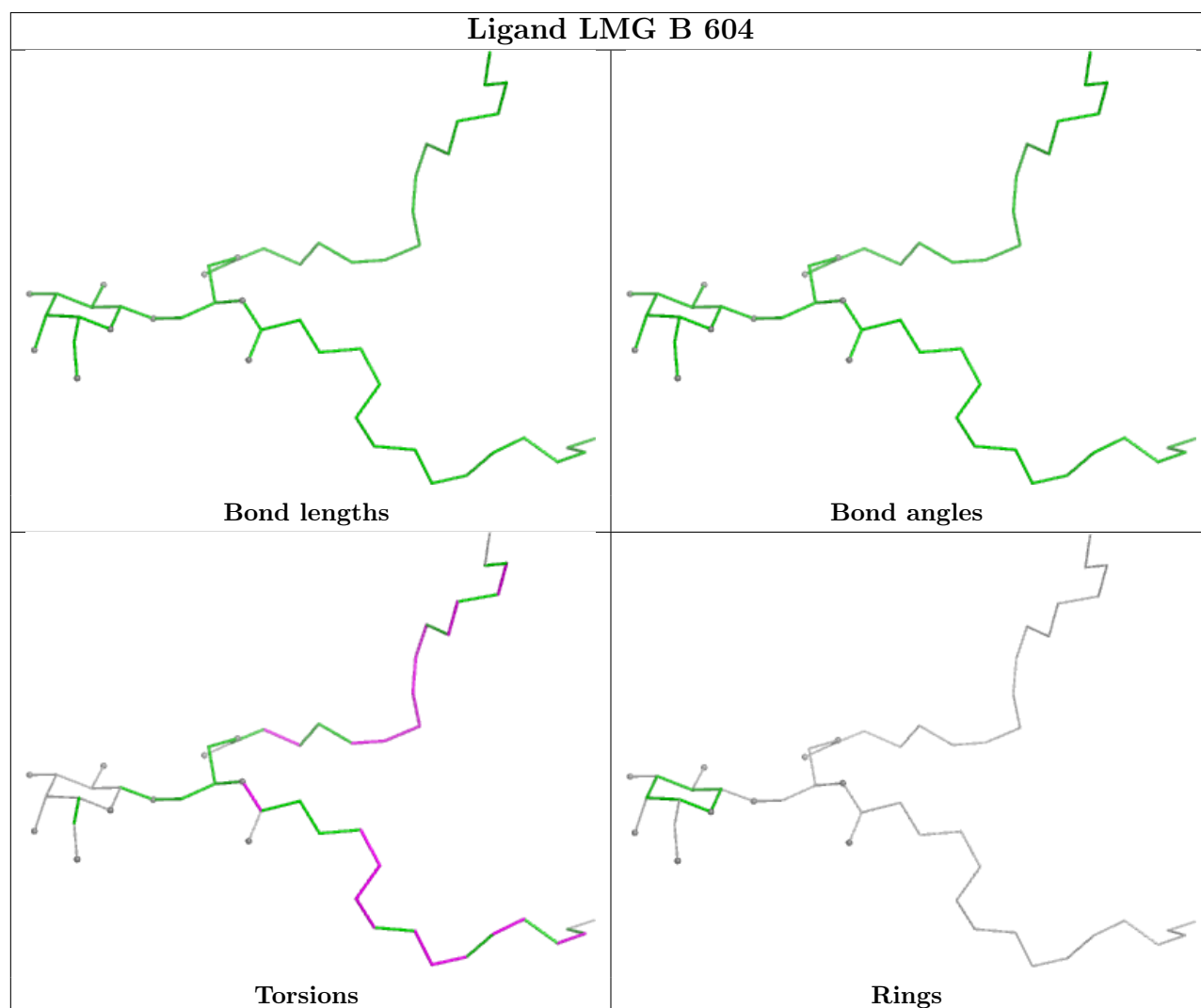
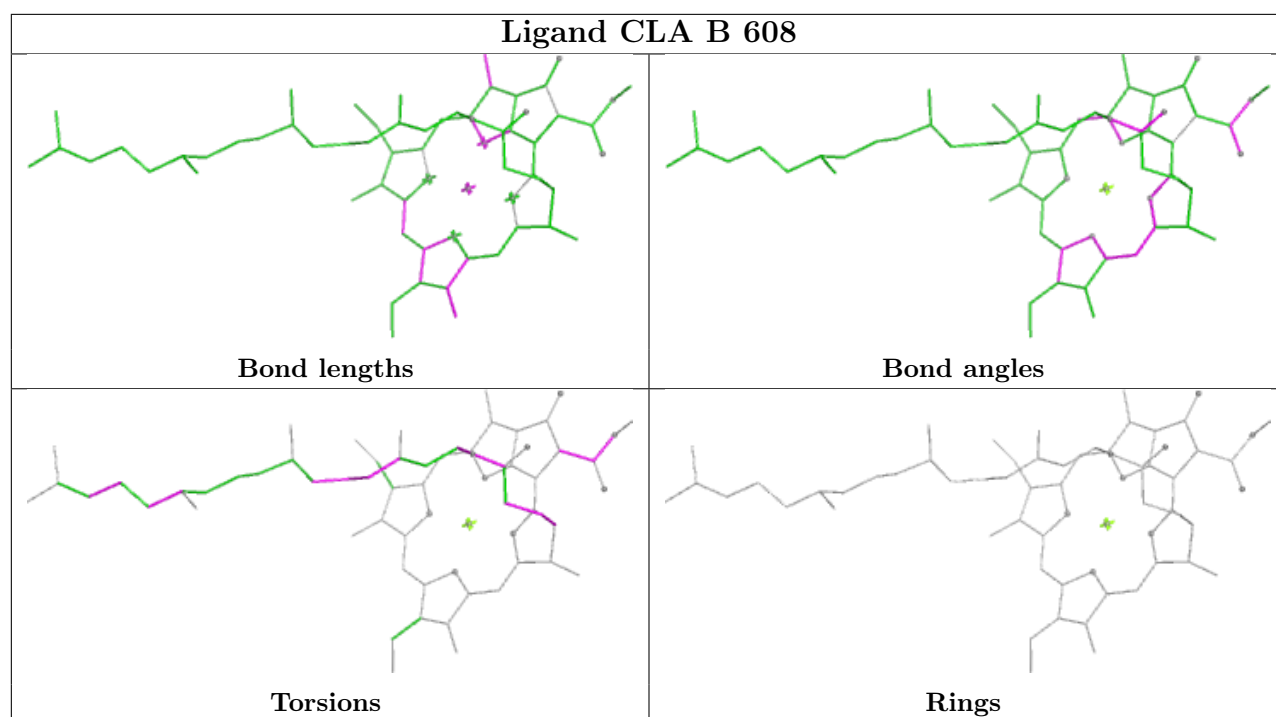


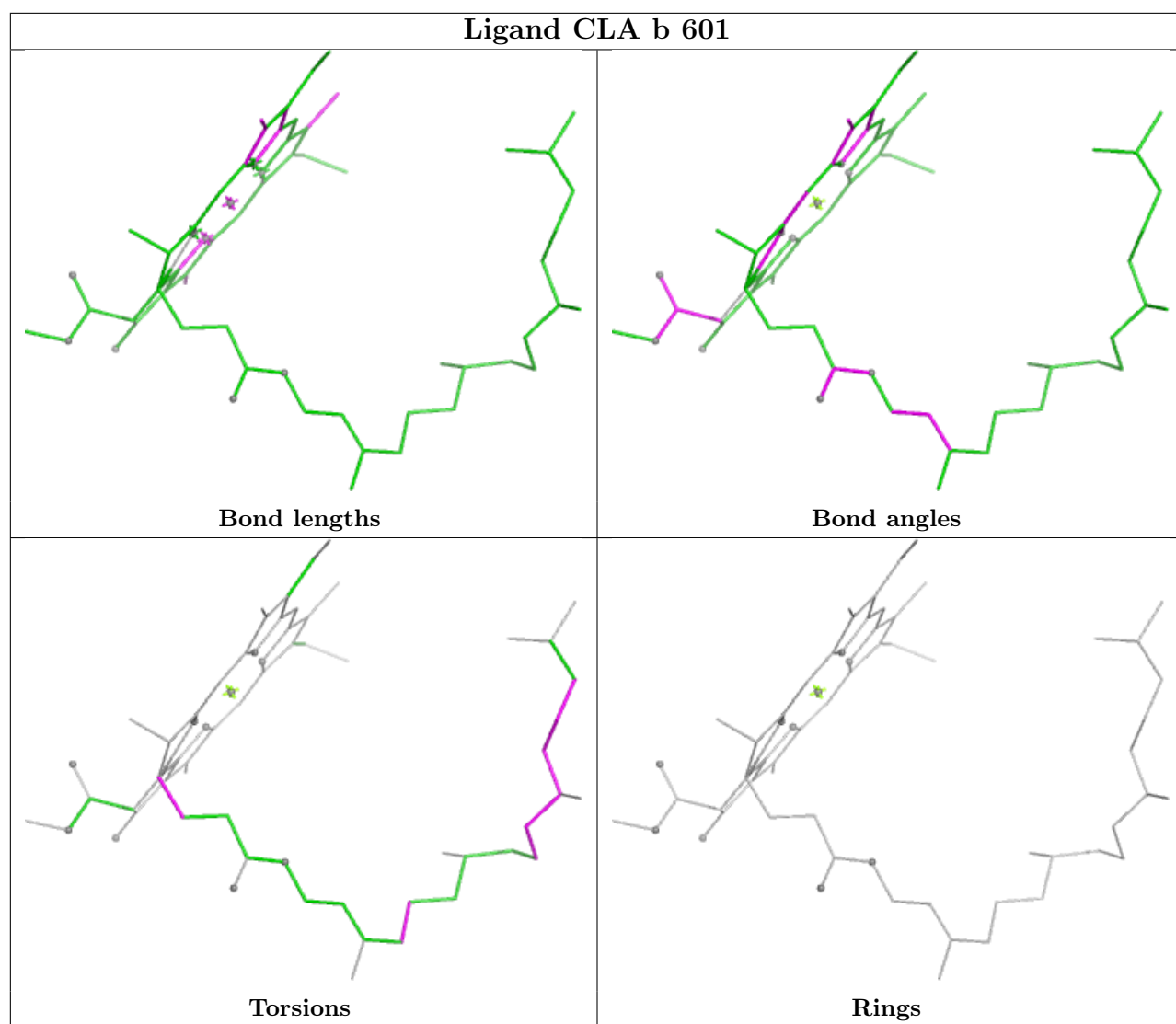


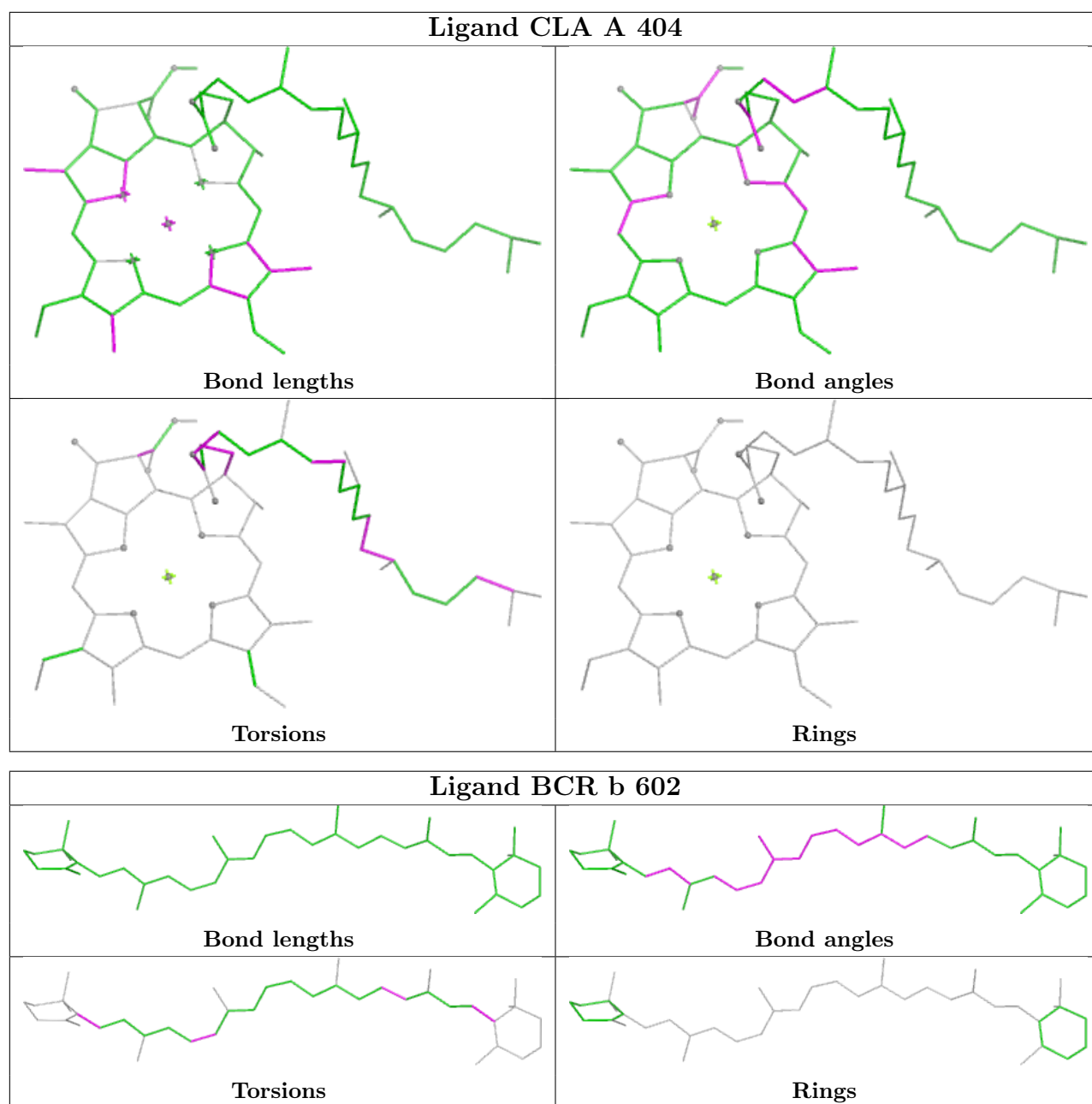


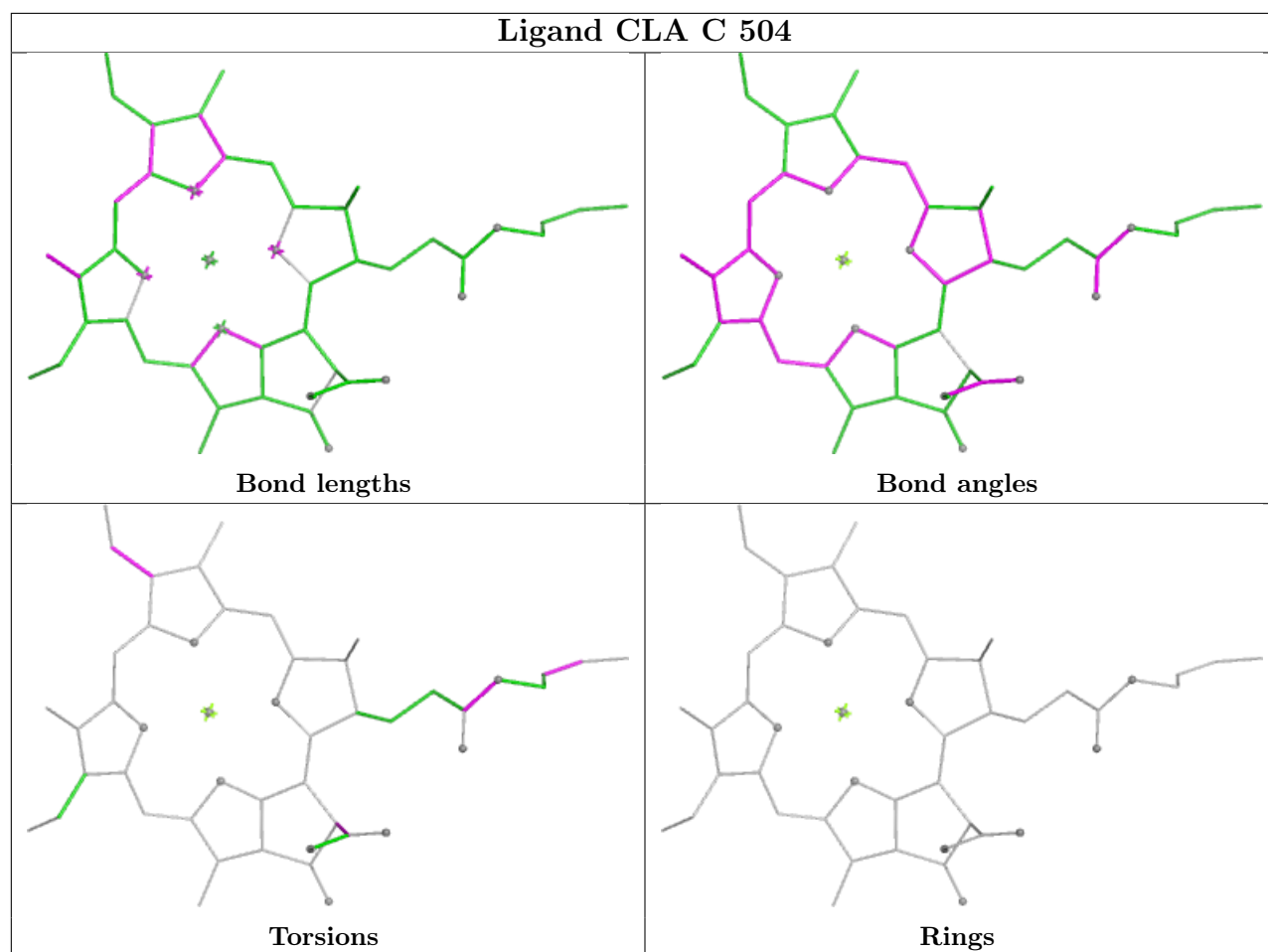
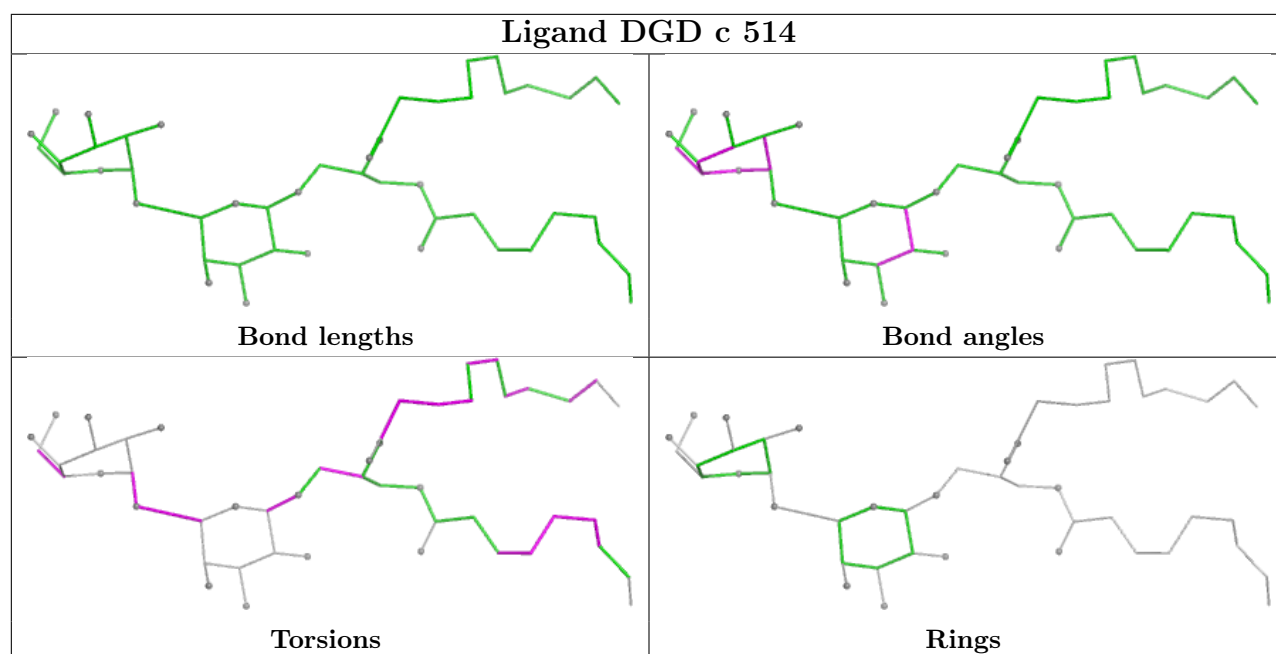


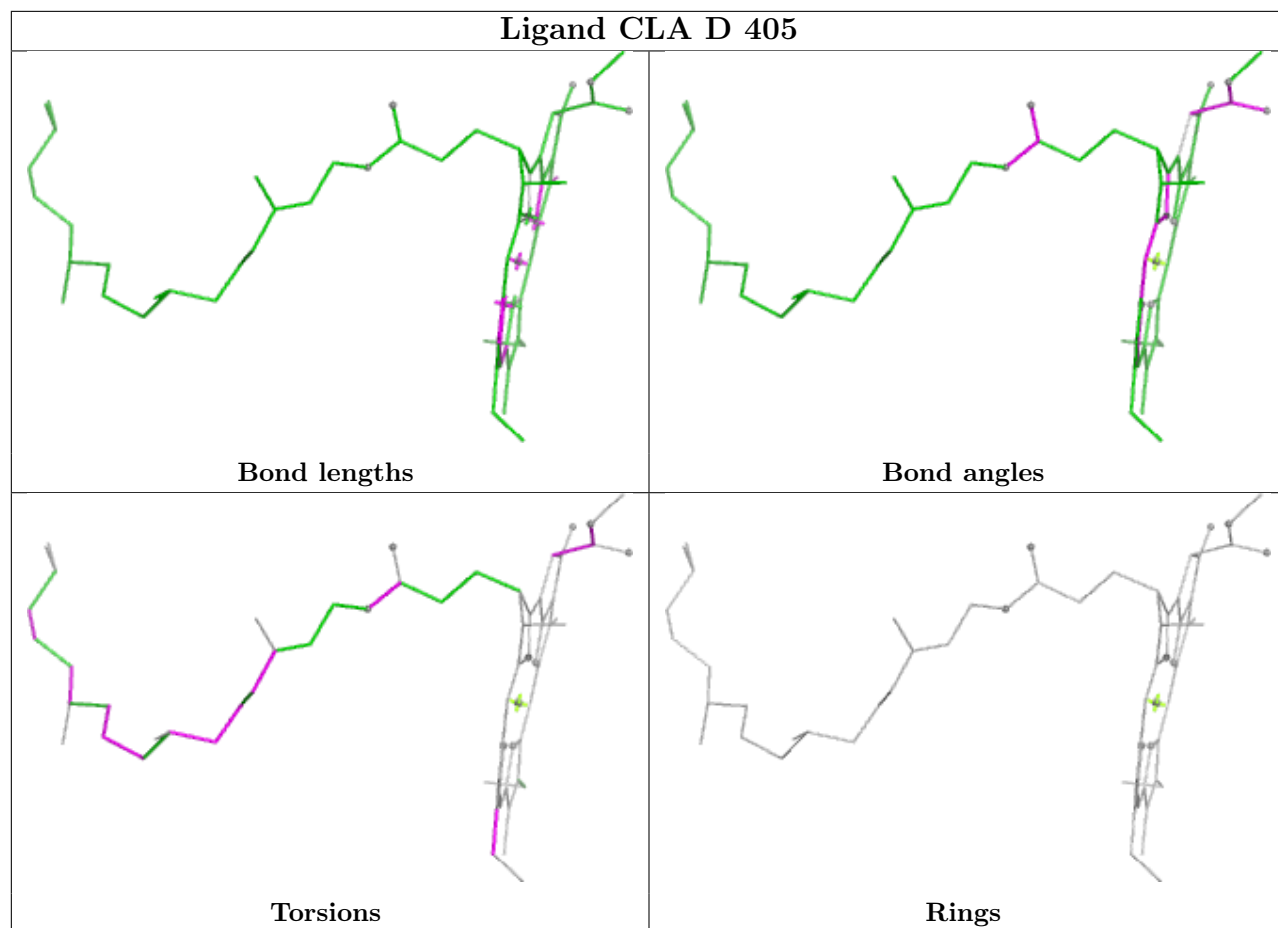


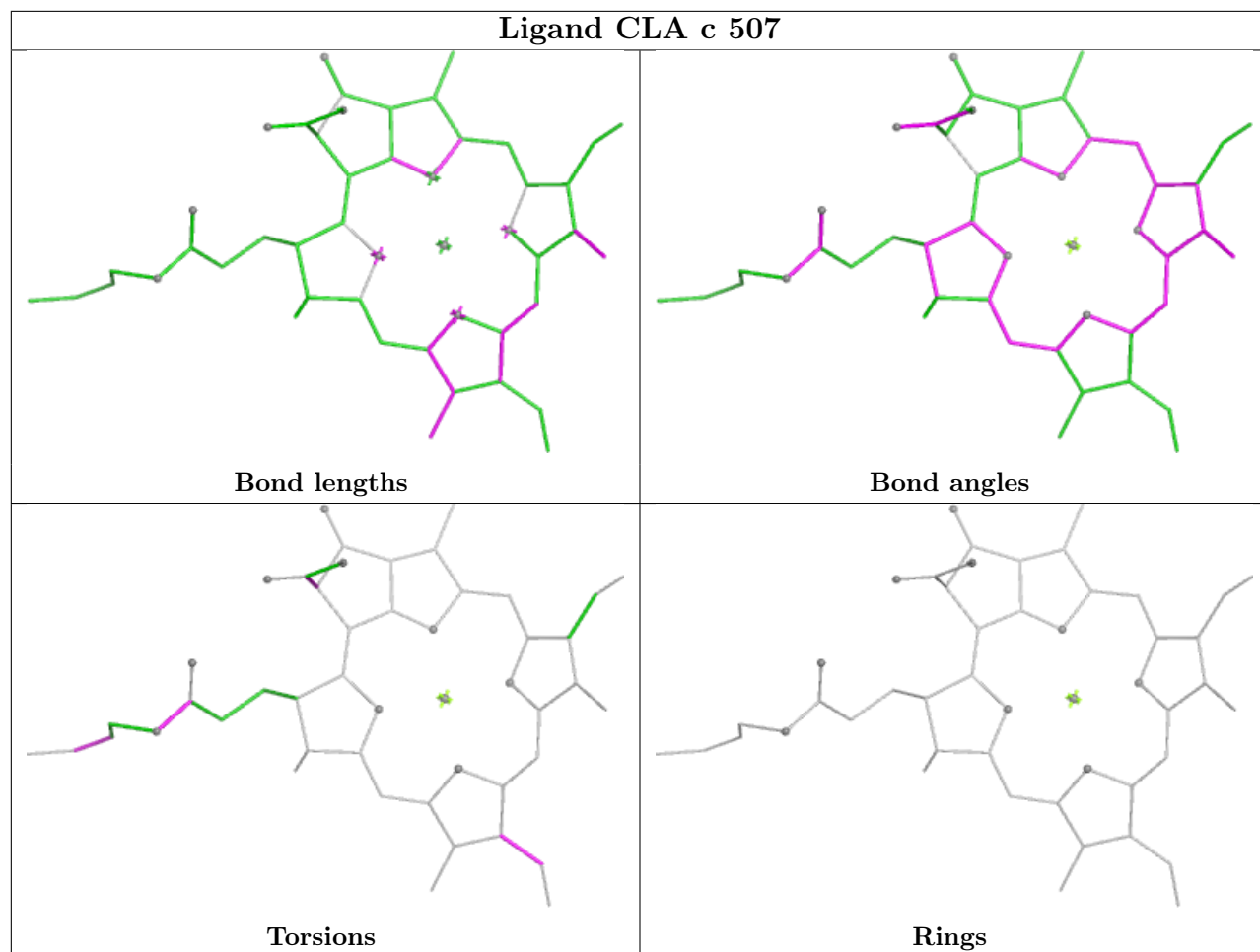


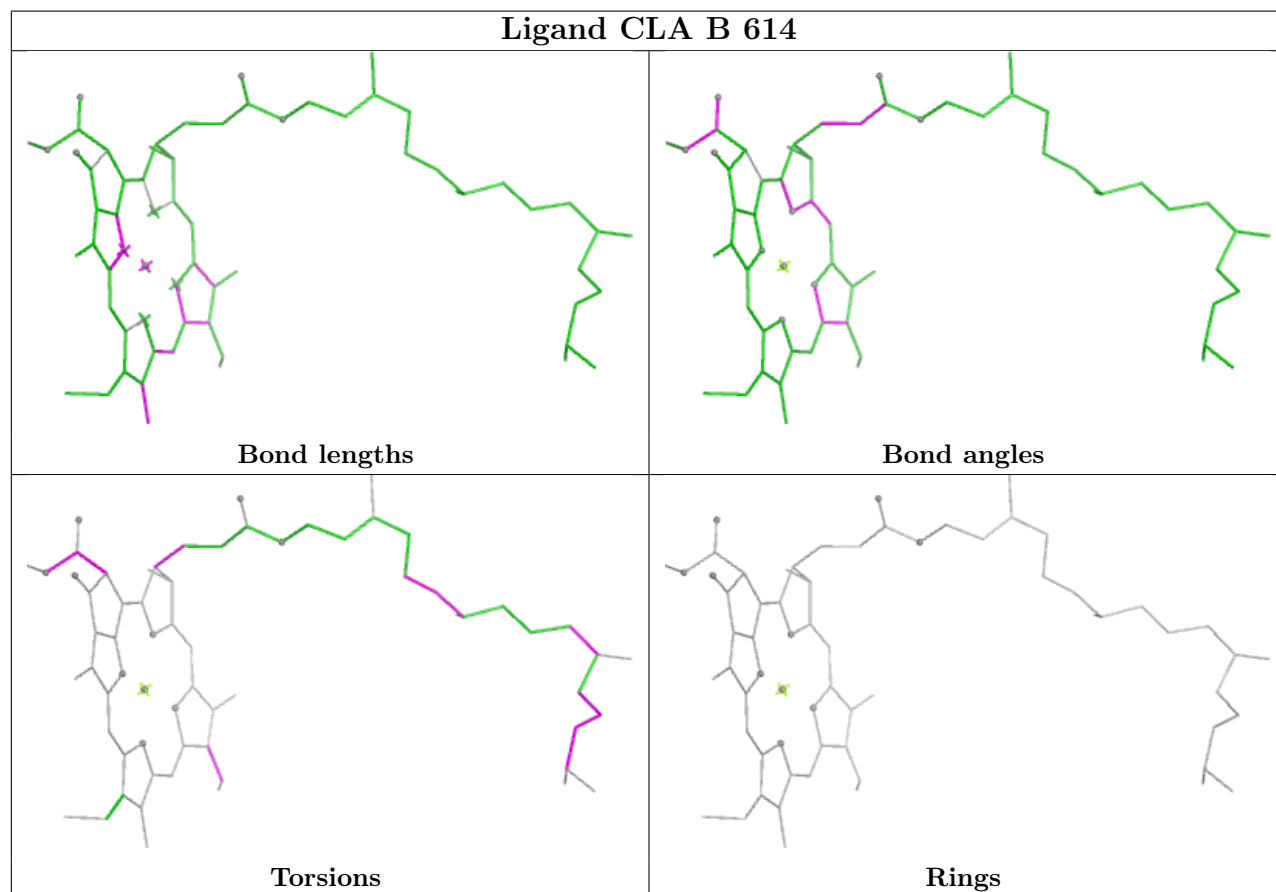
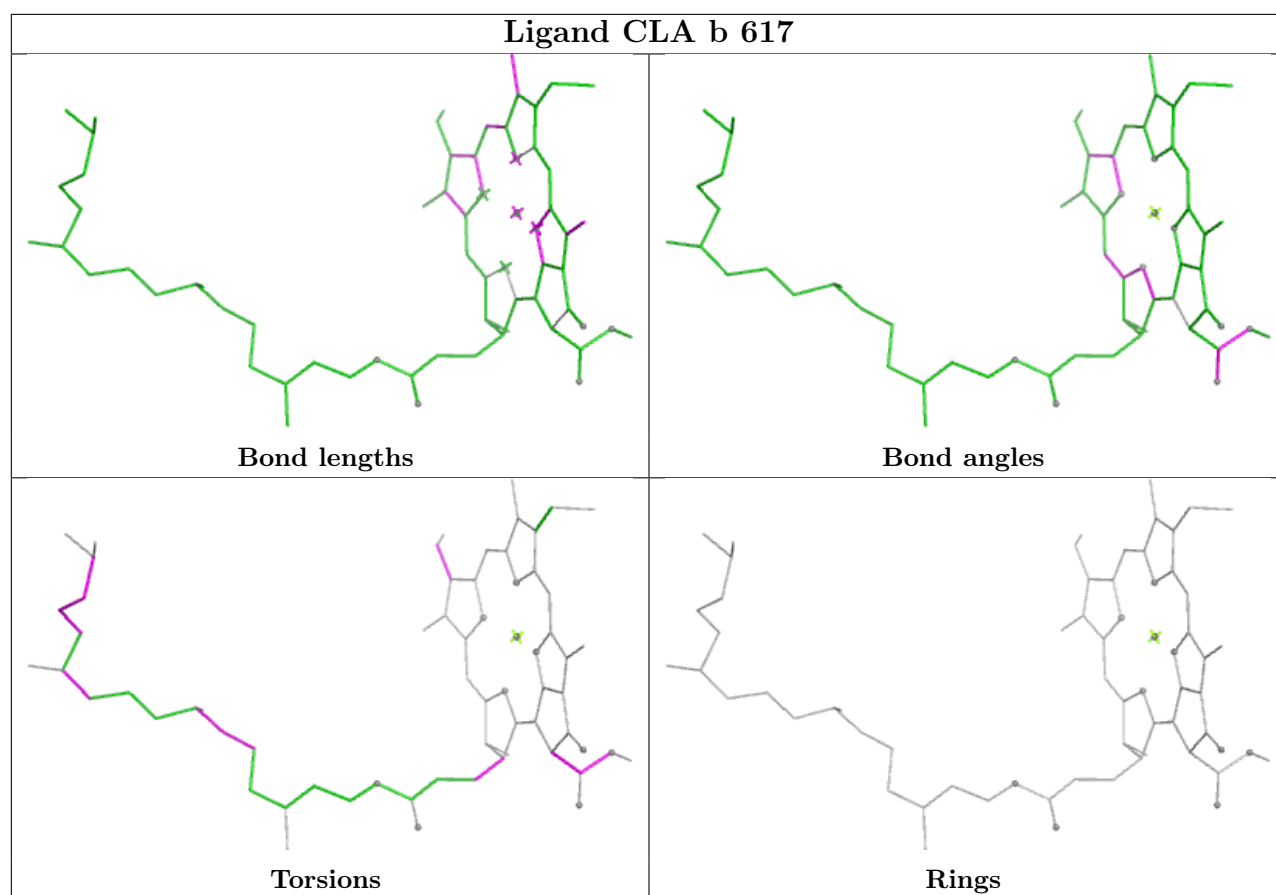


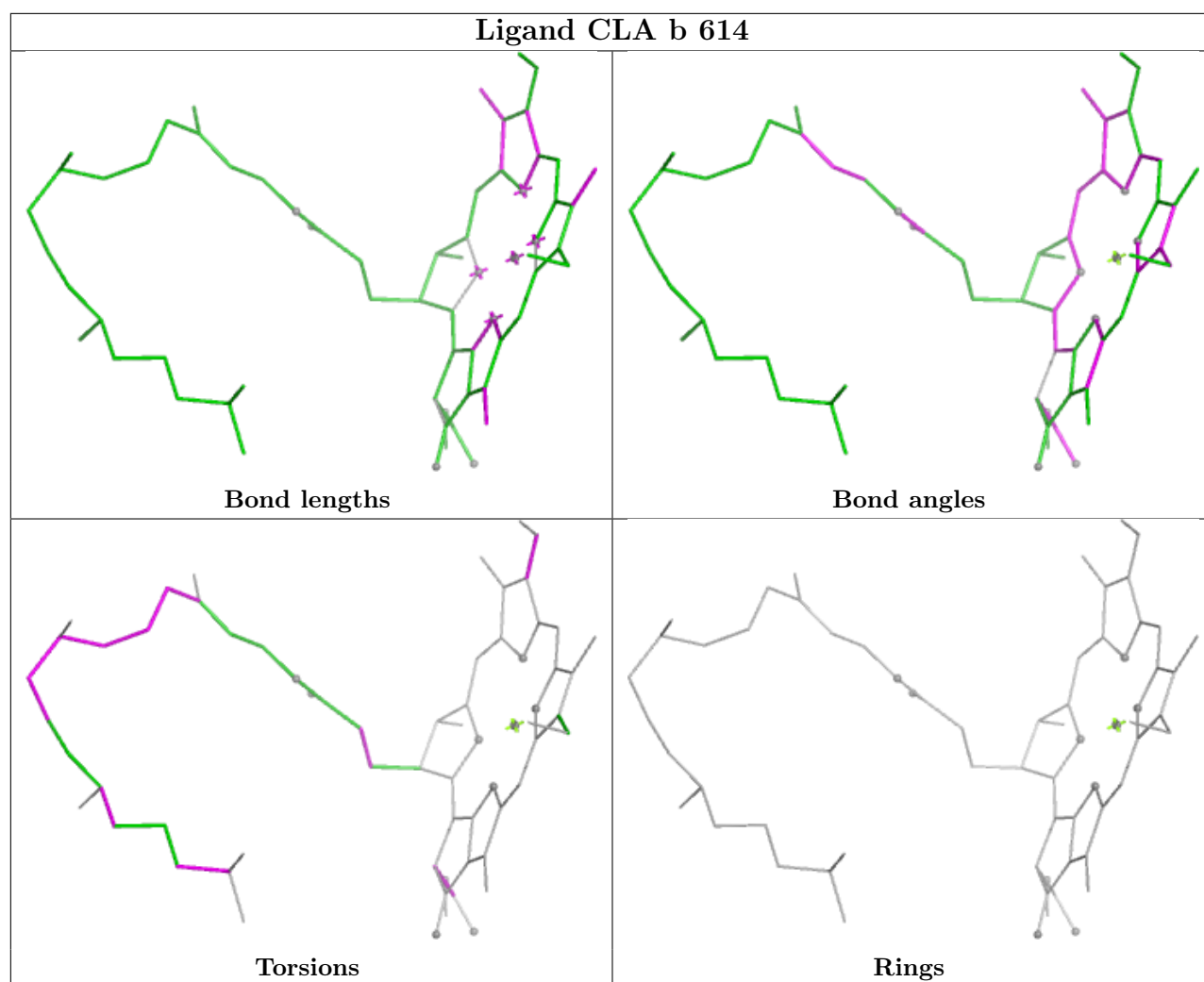


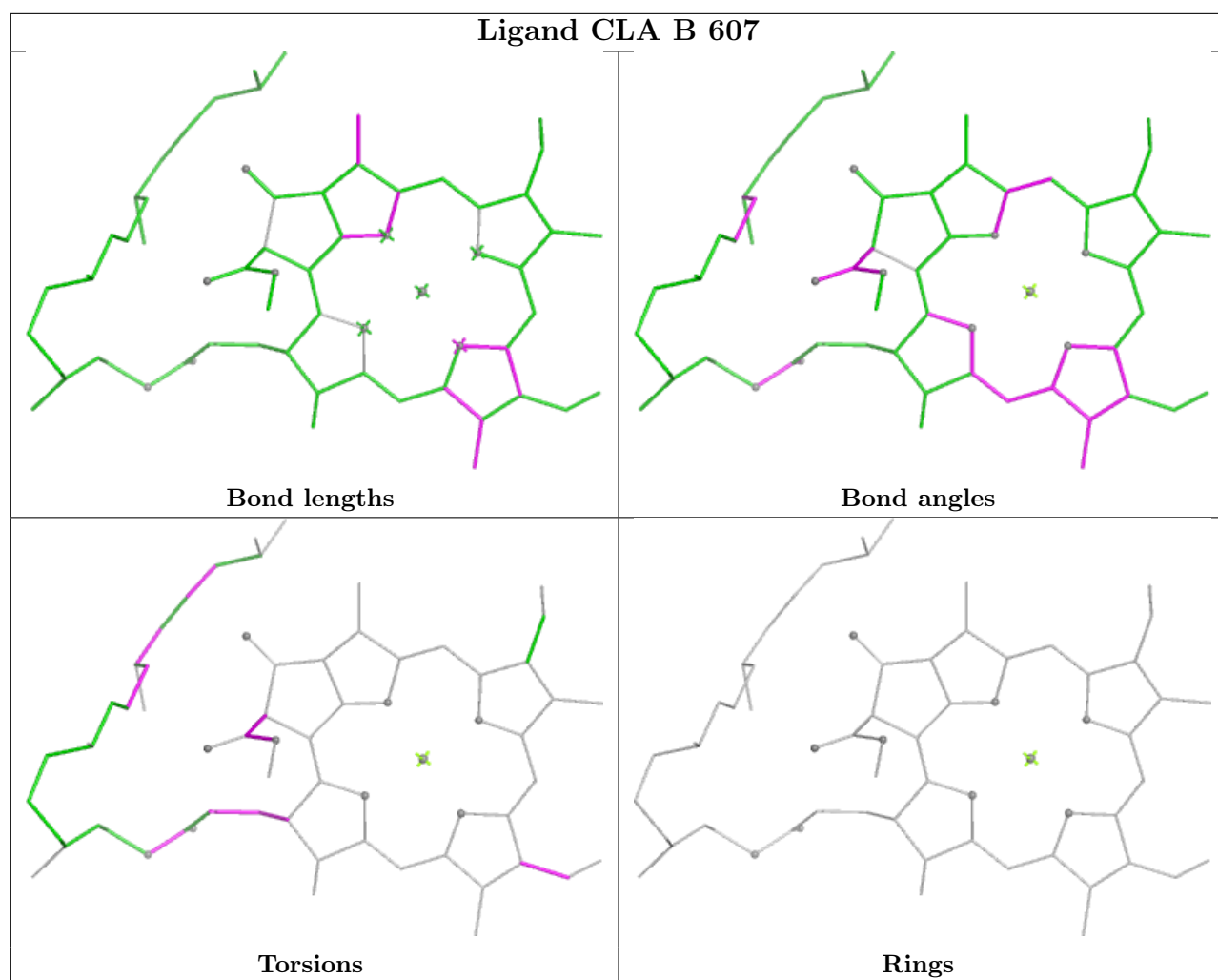


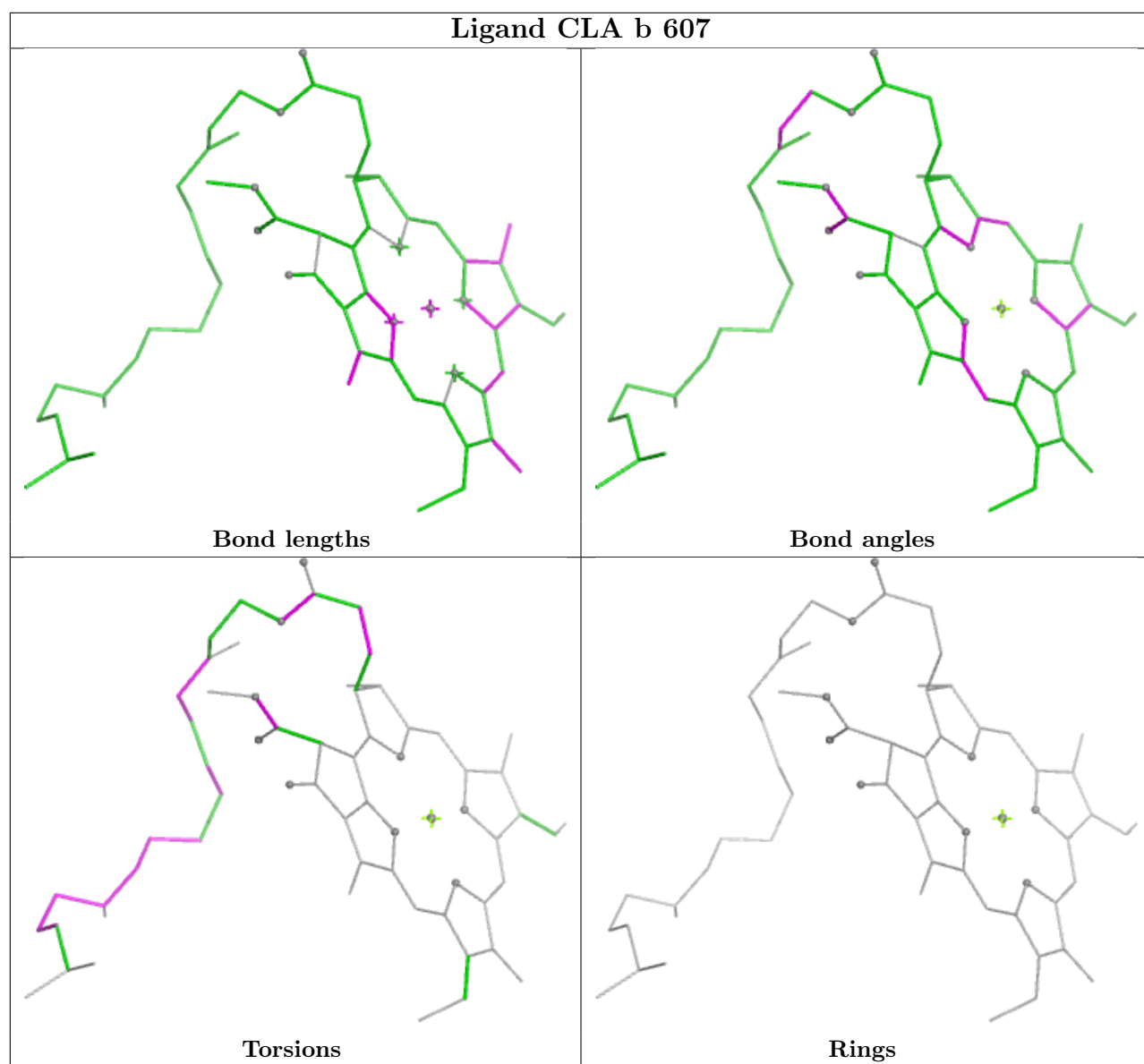




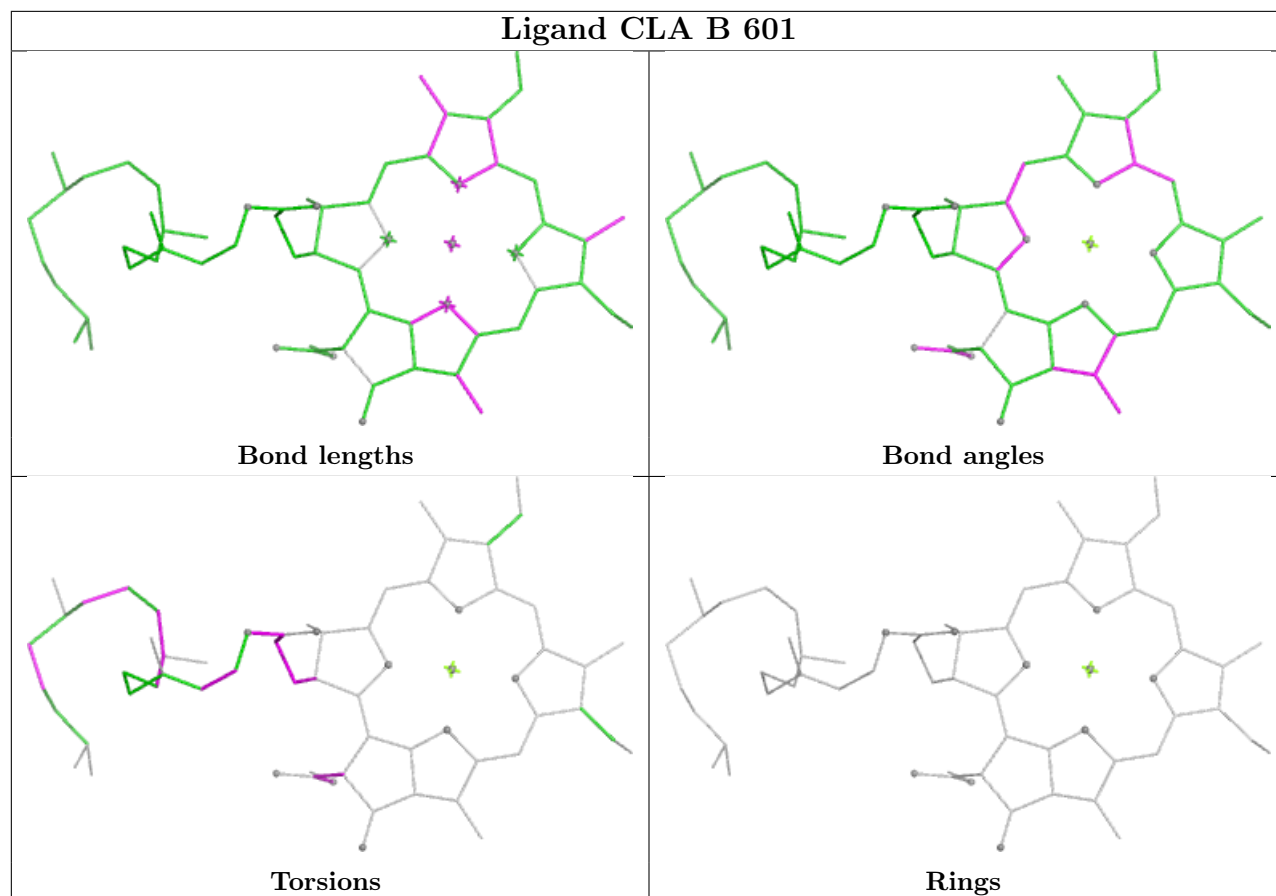




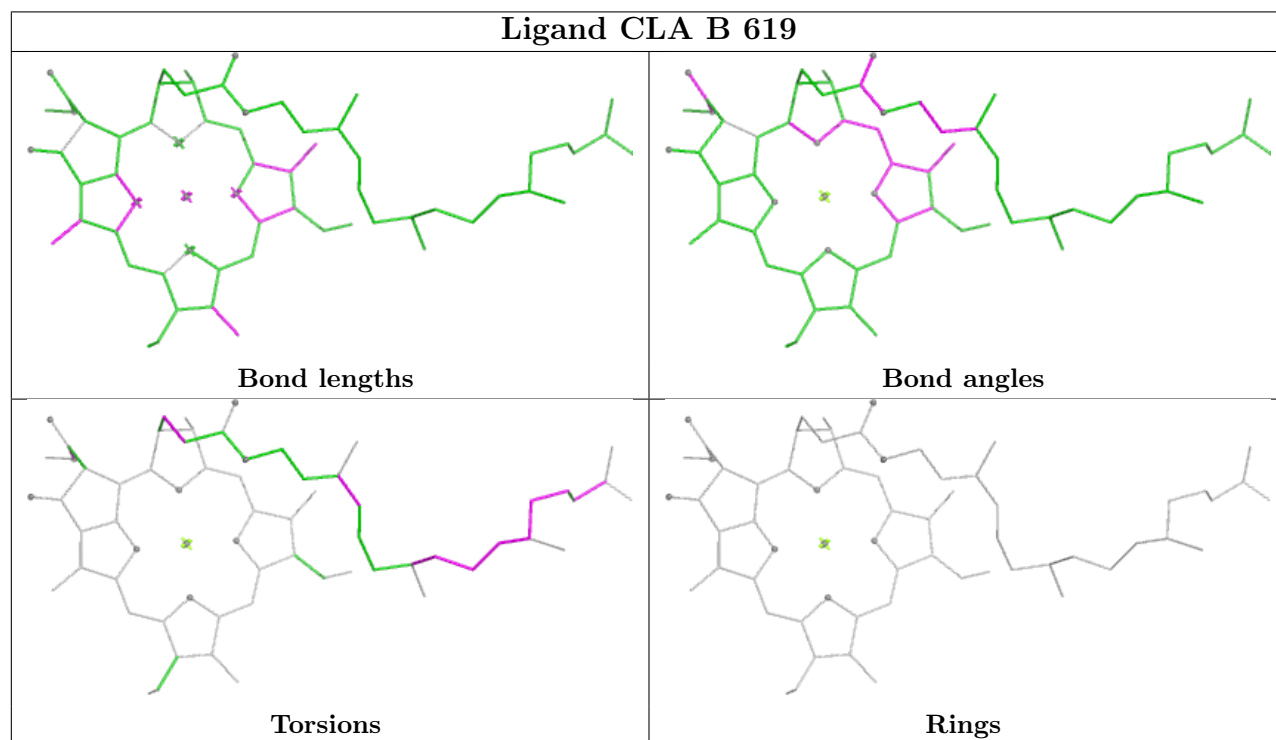




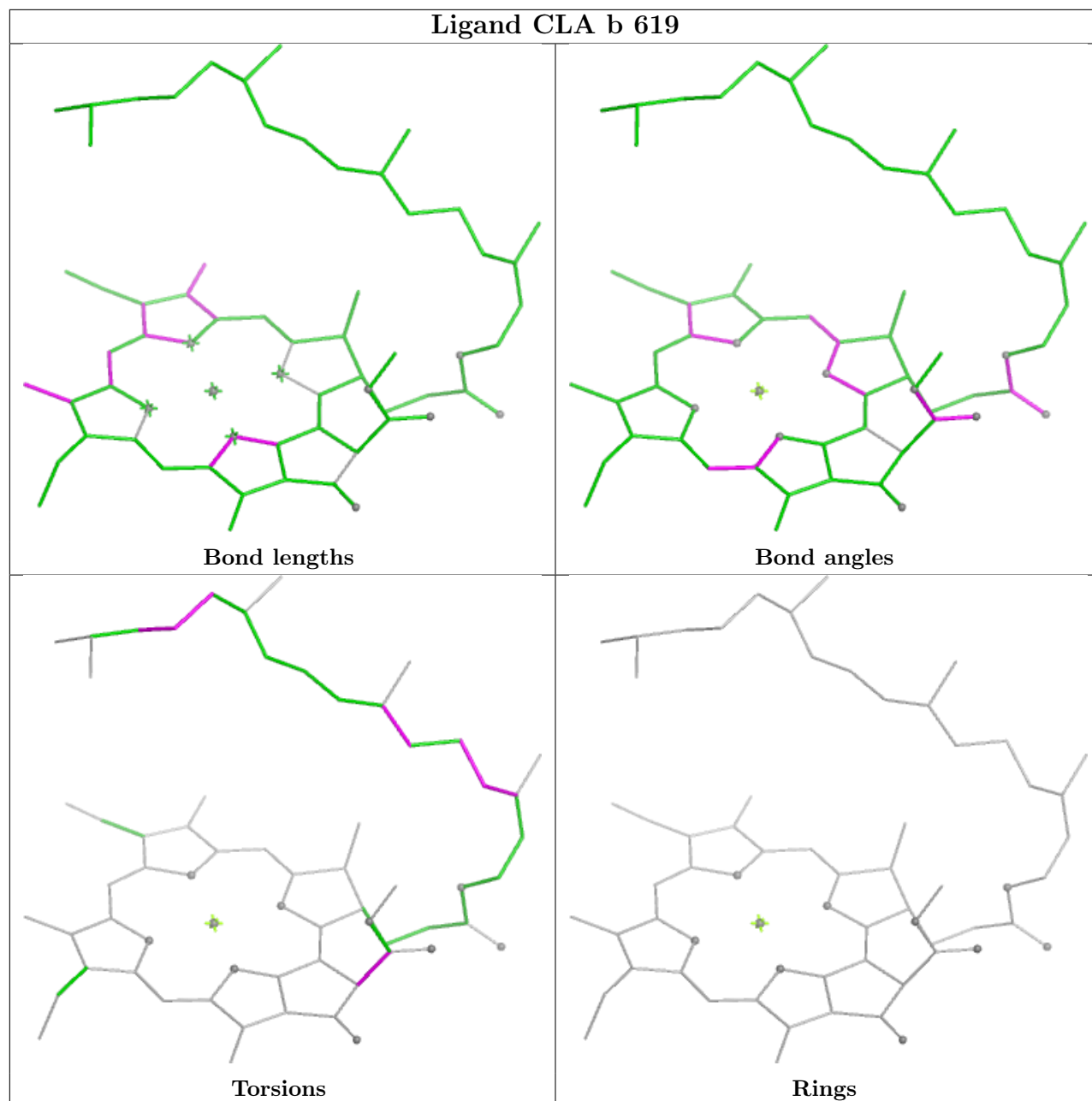
Ligand CLA B 601

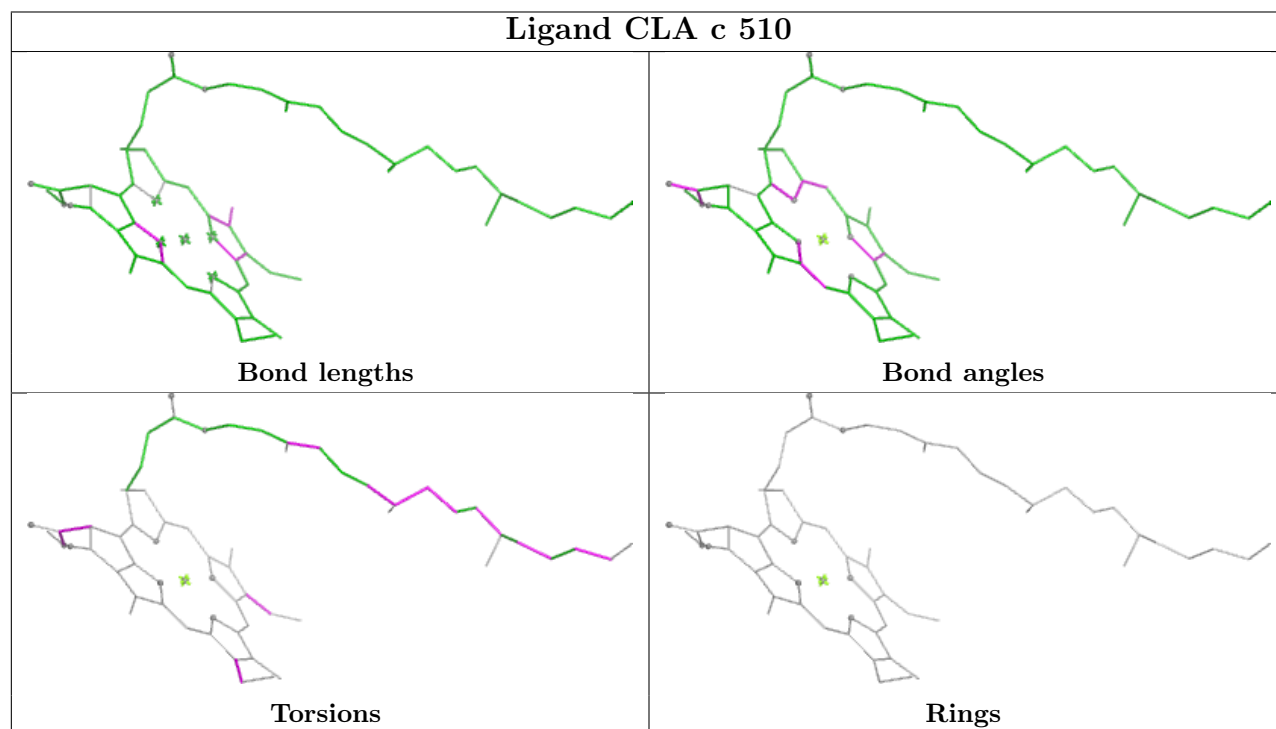
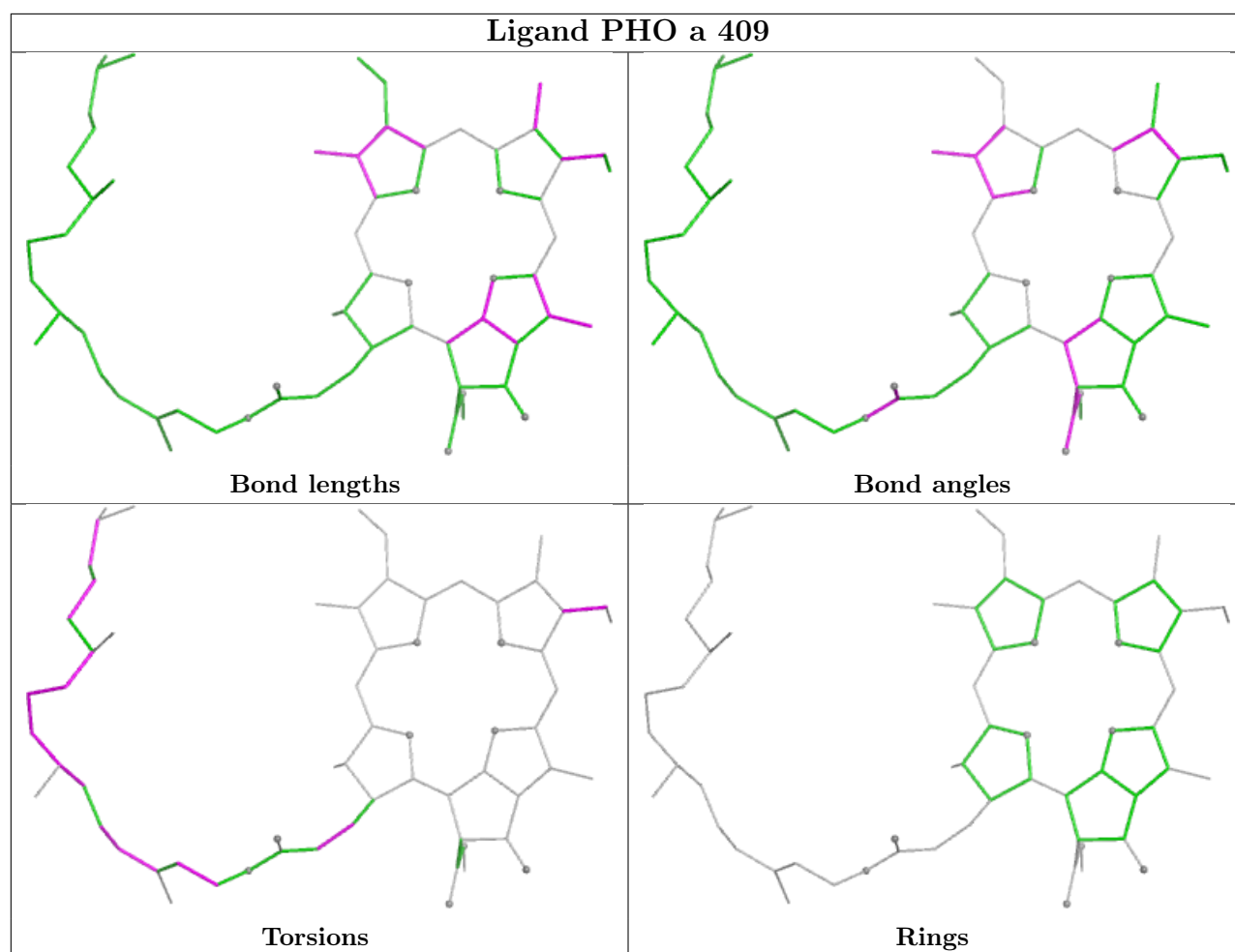


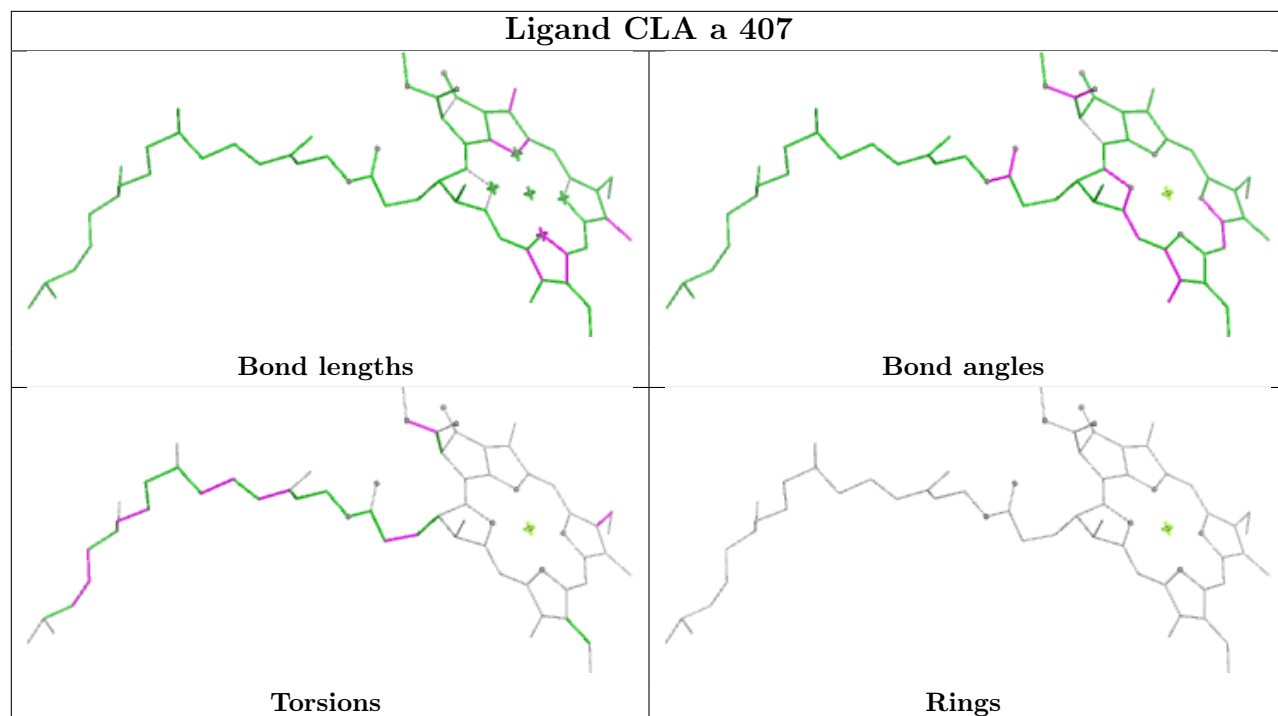
Ligand CLA B 619

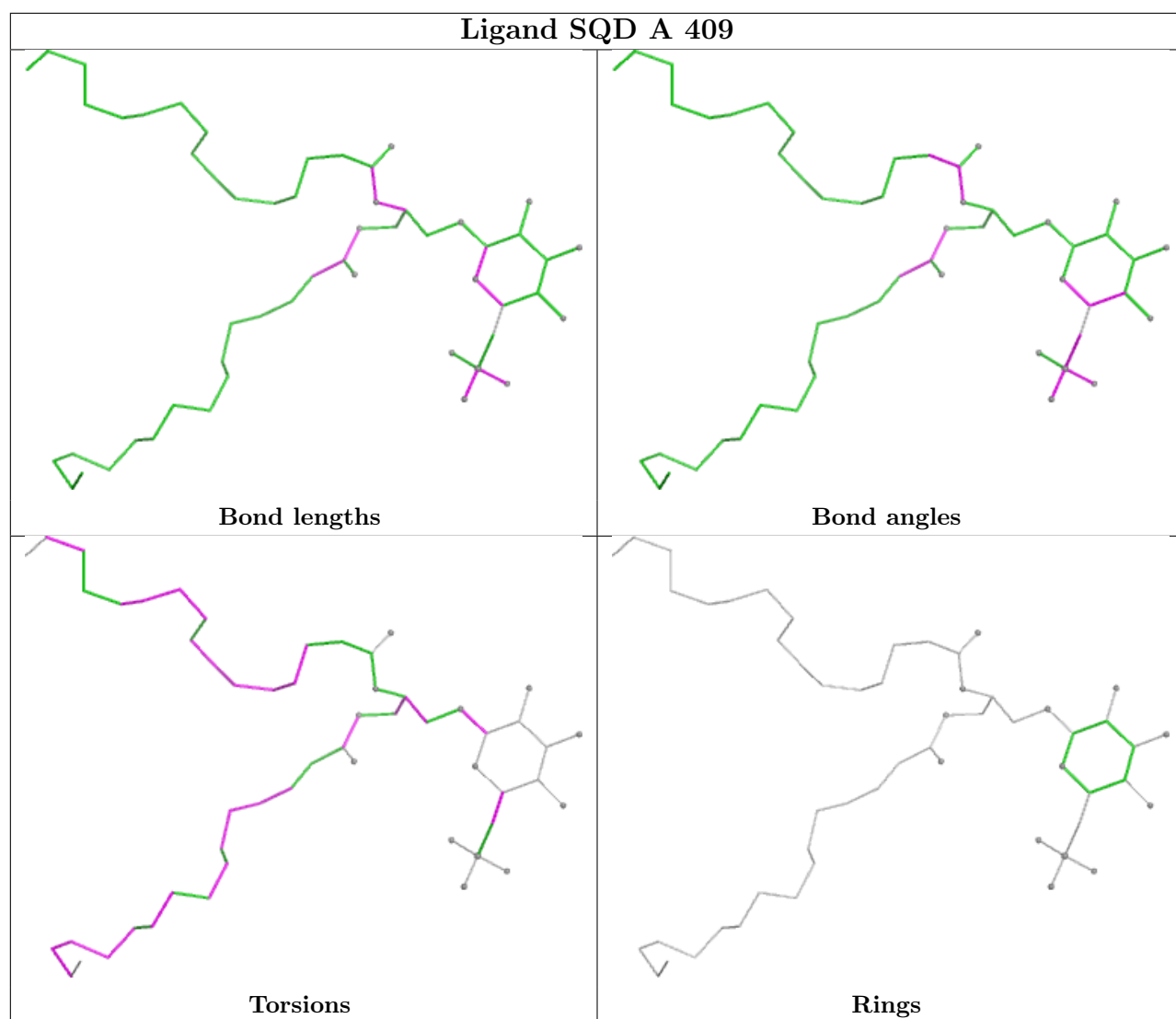


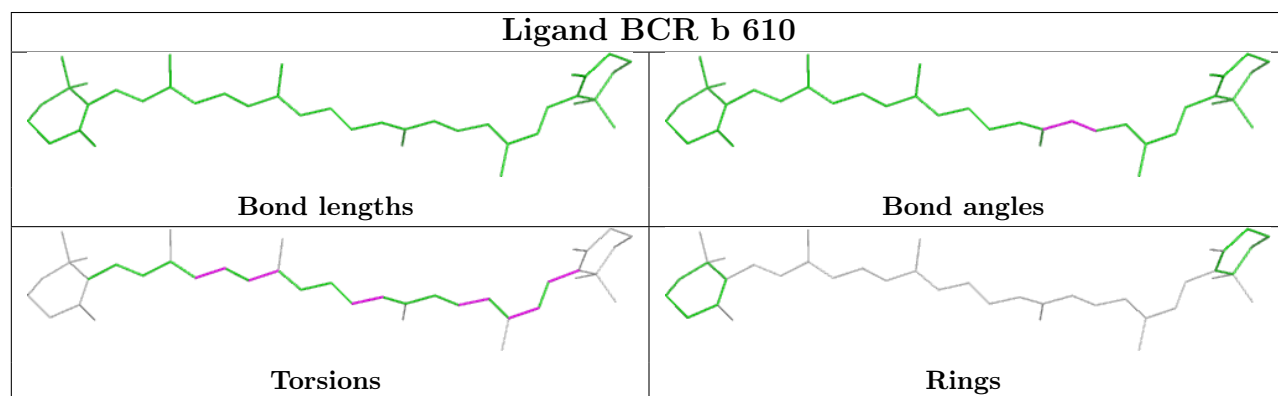
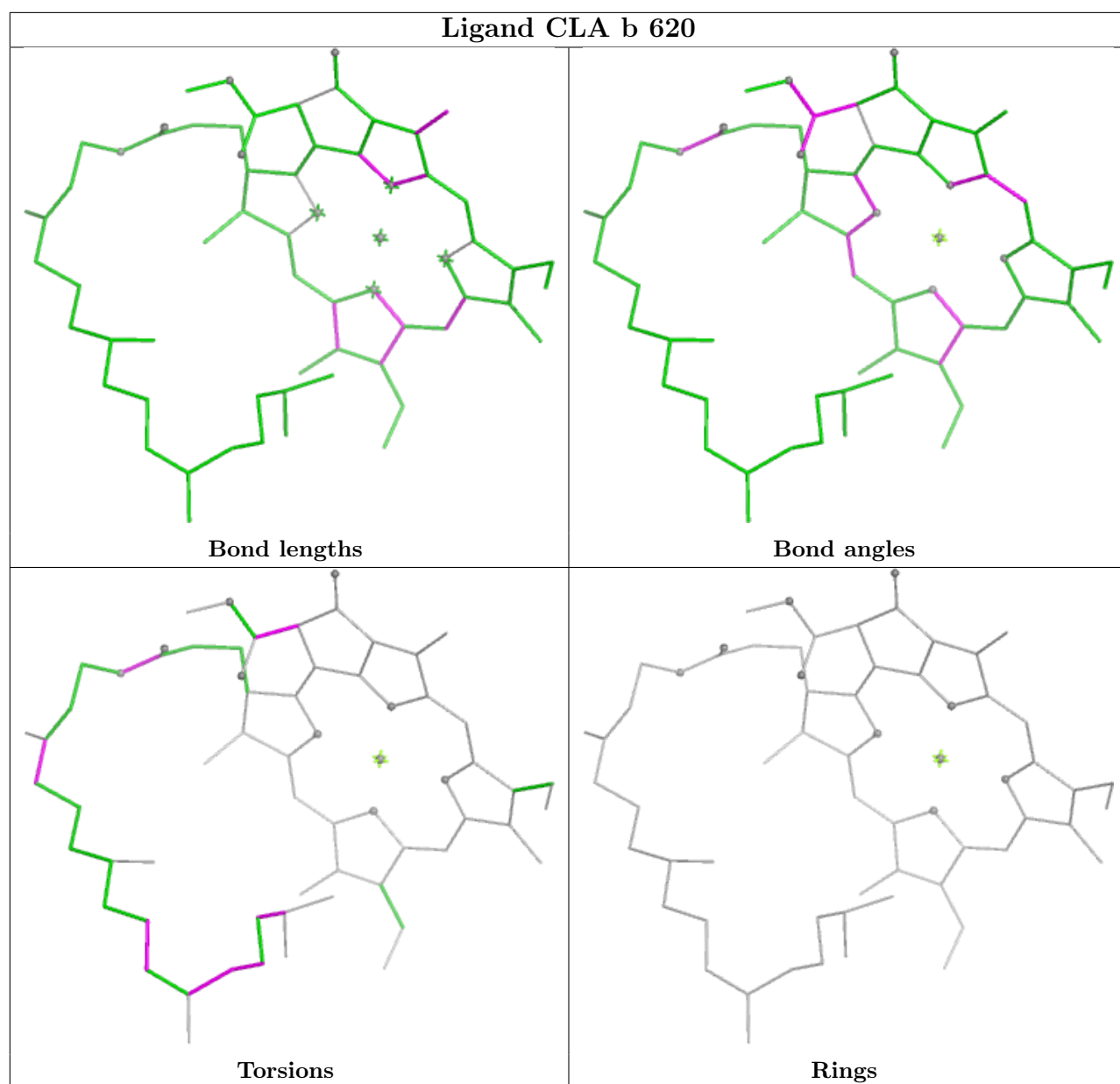
Ligand CLA b 619

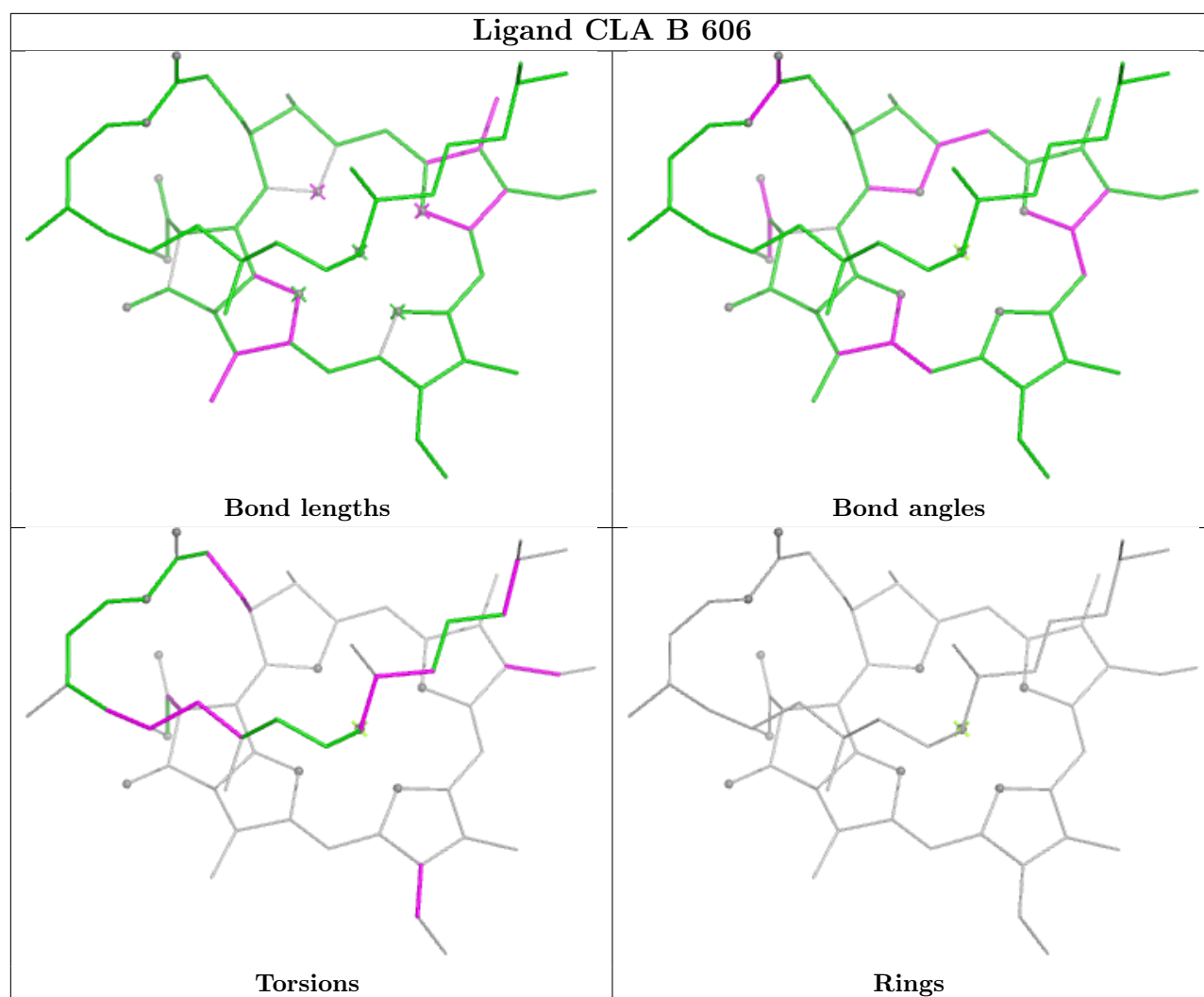


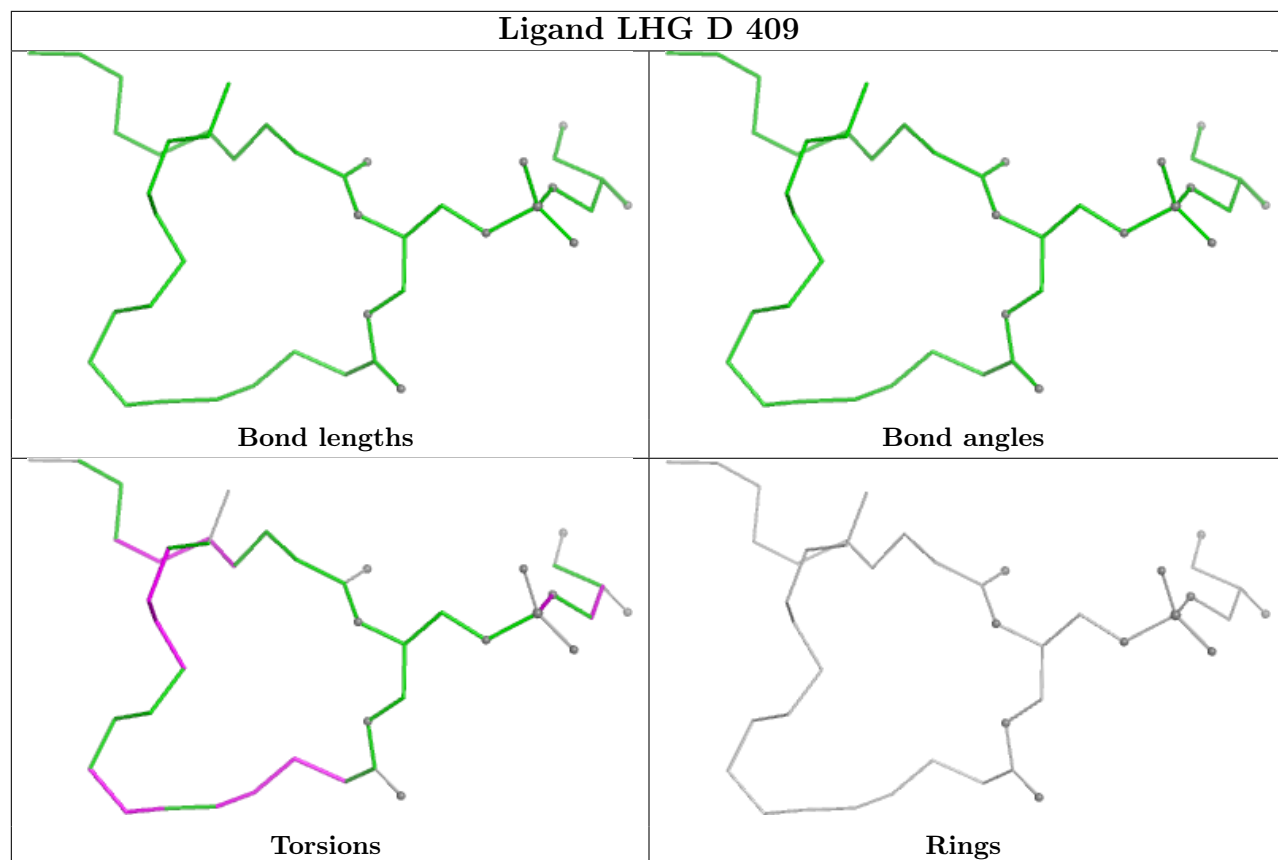


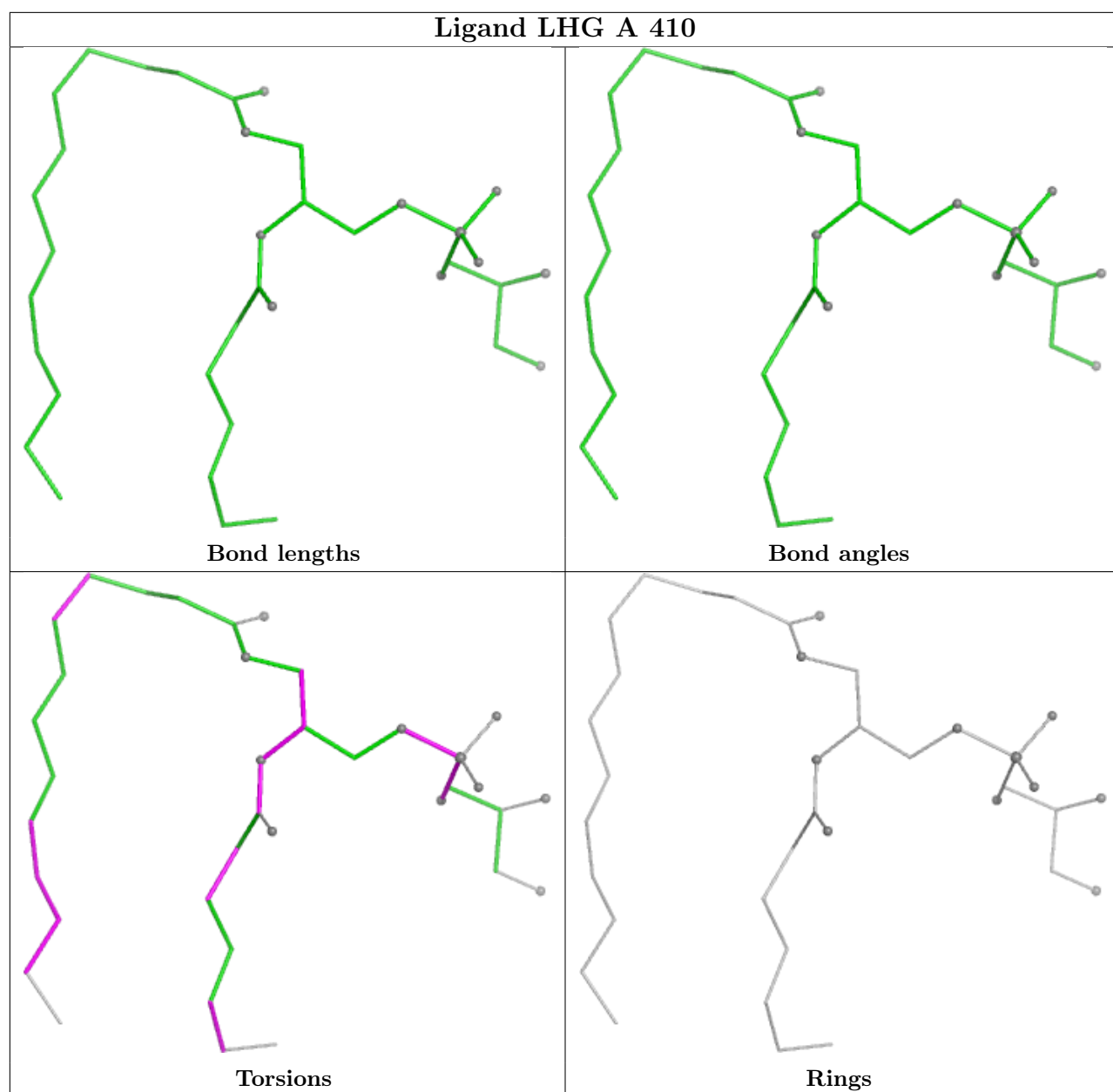


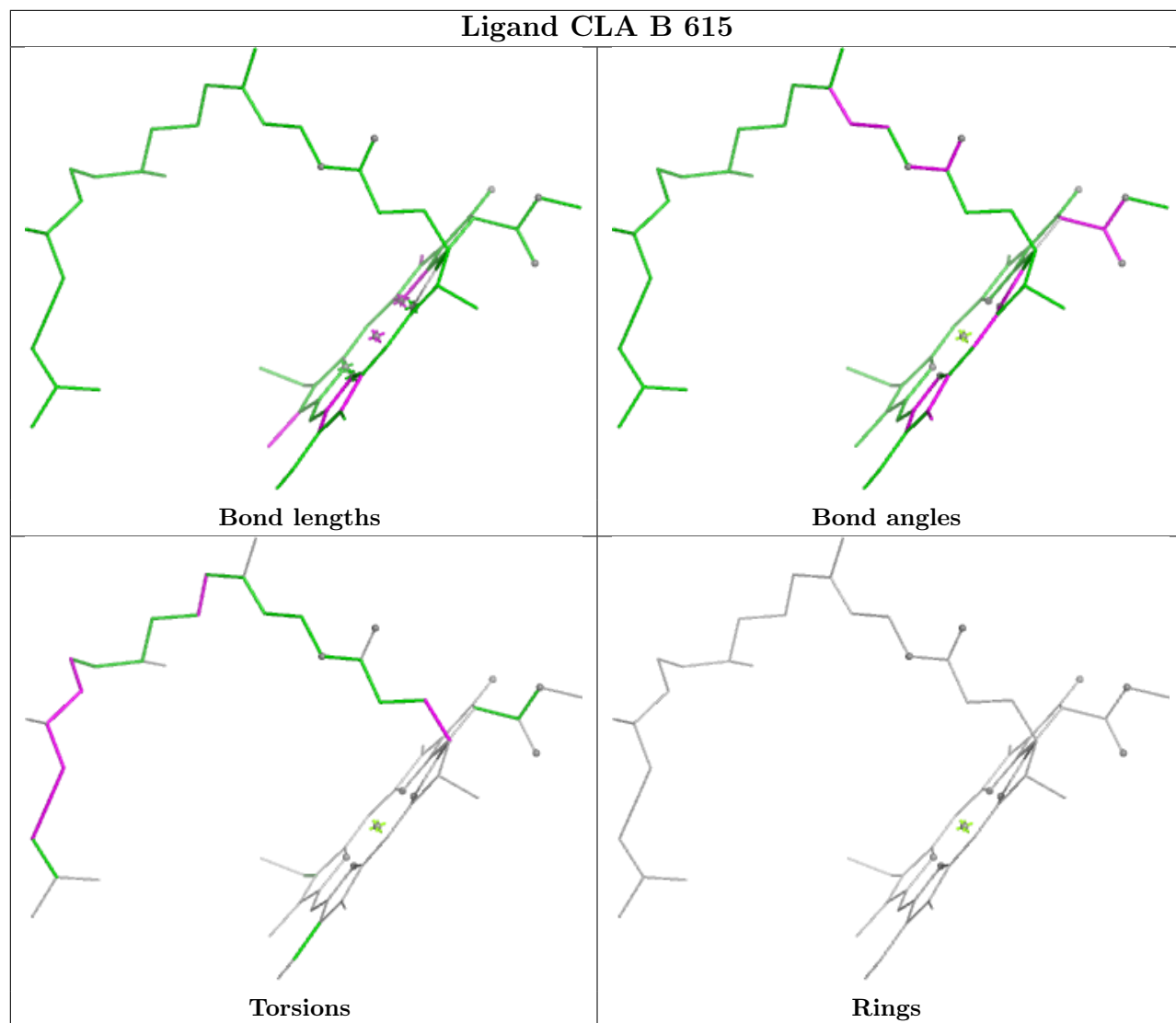


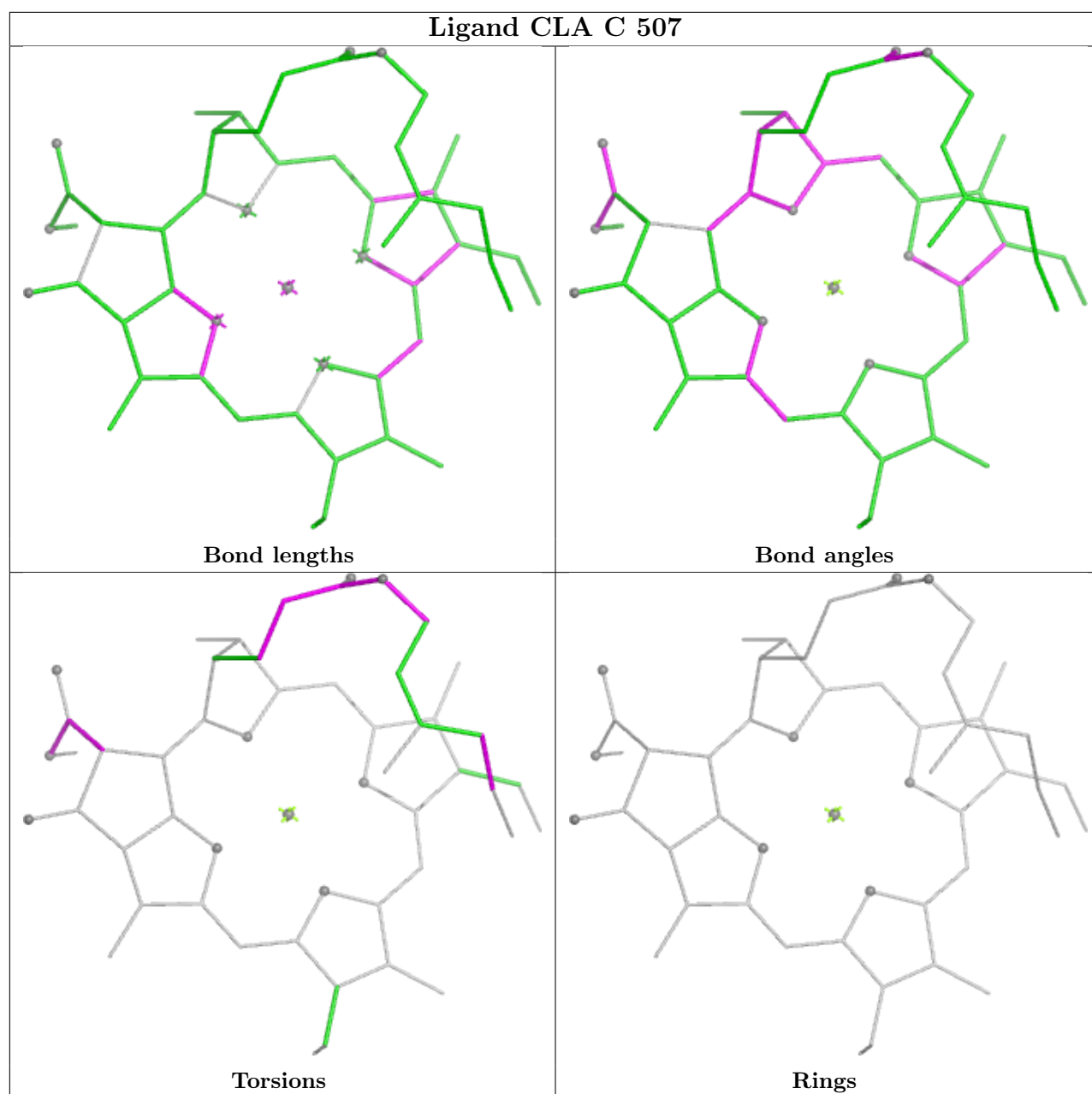


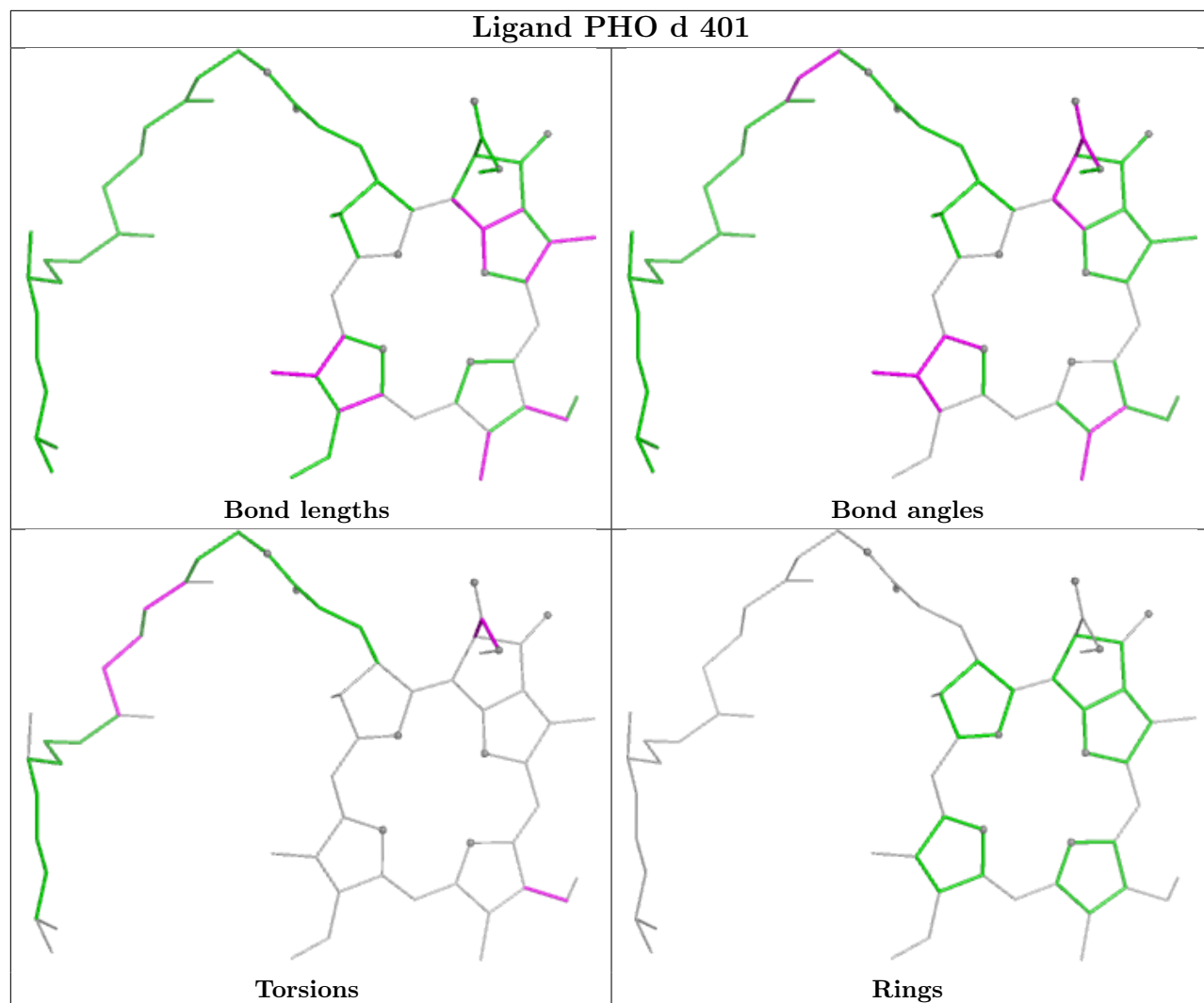




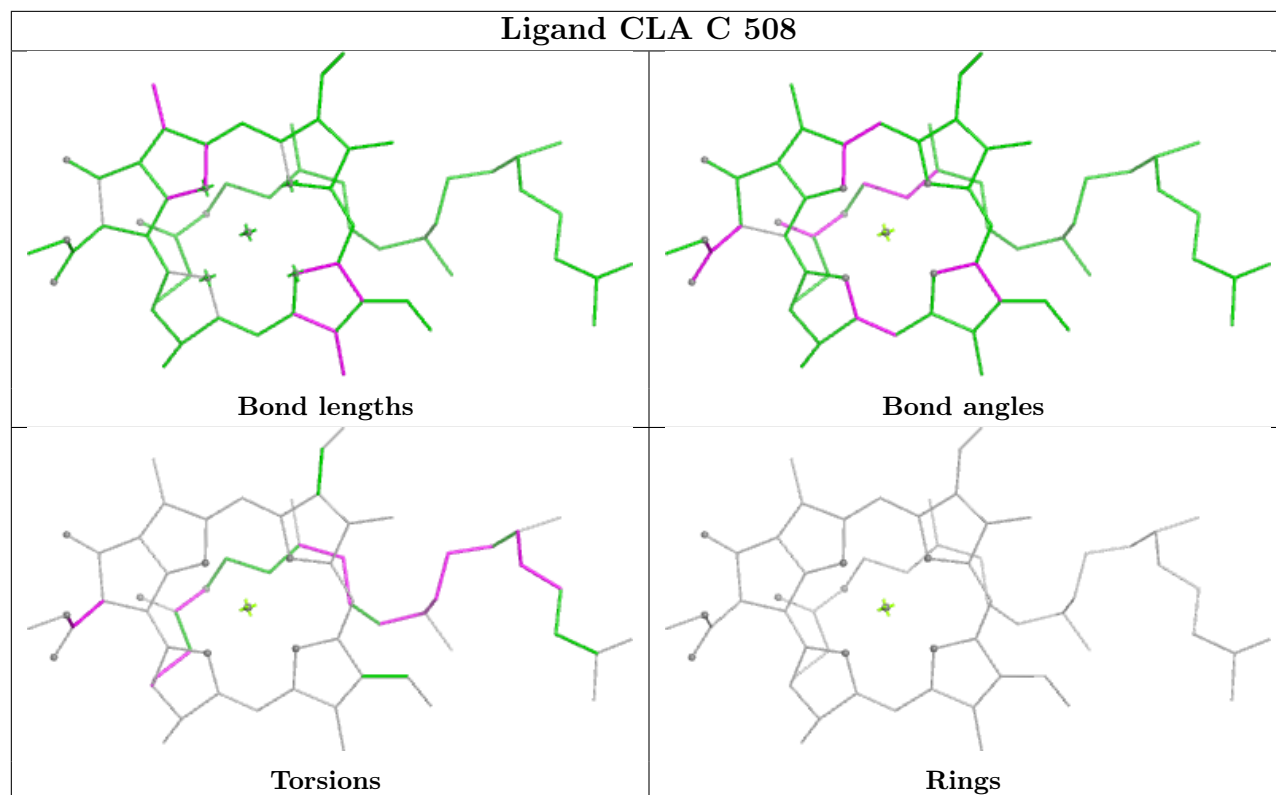




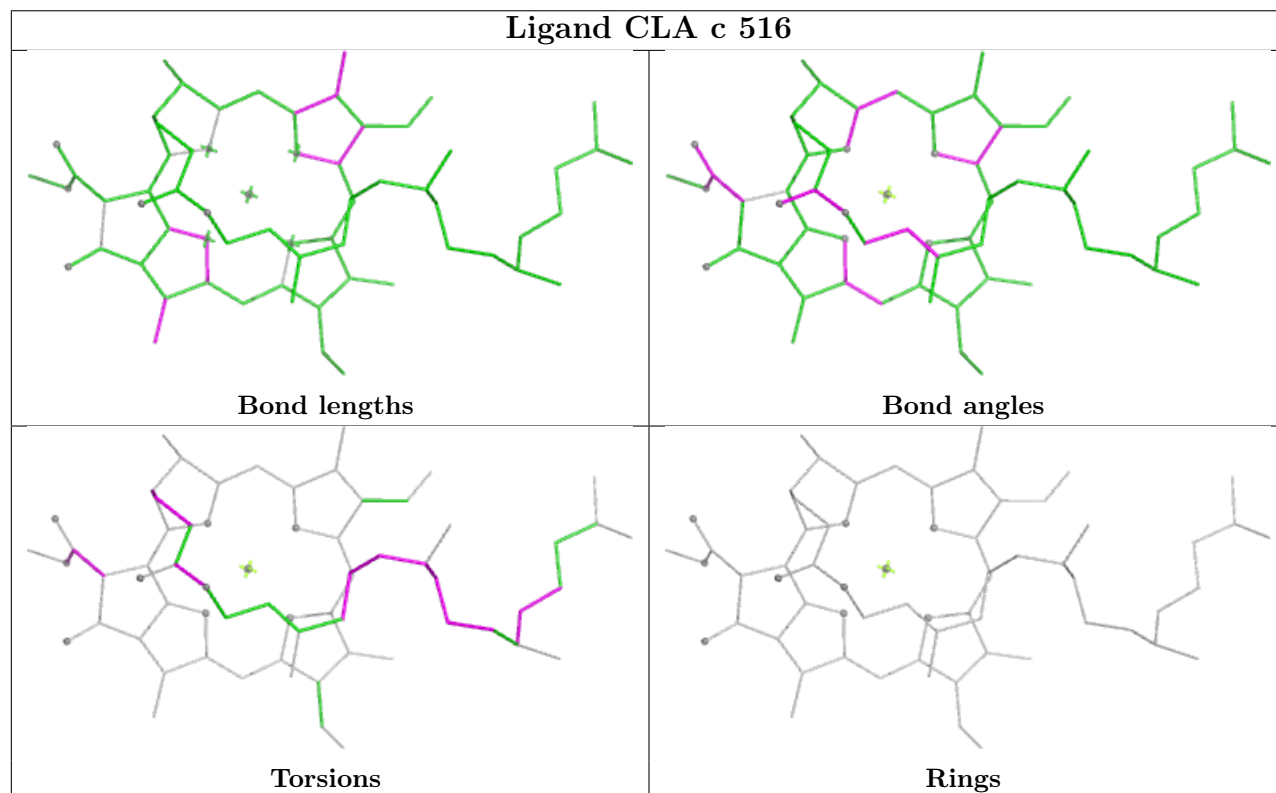


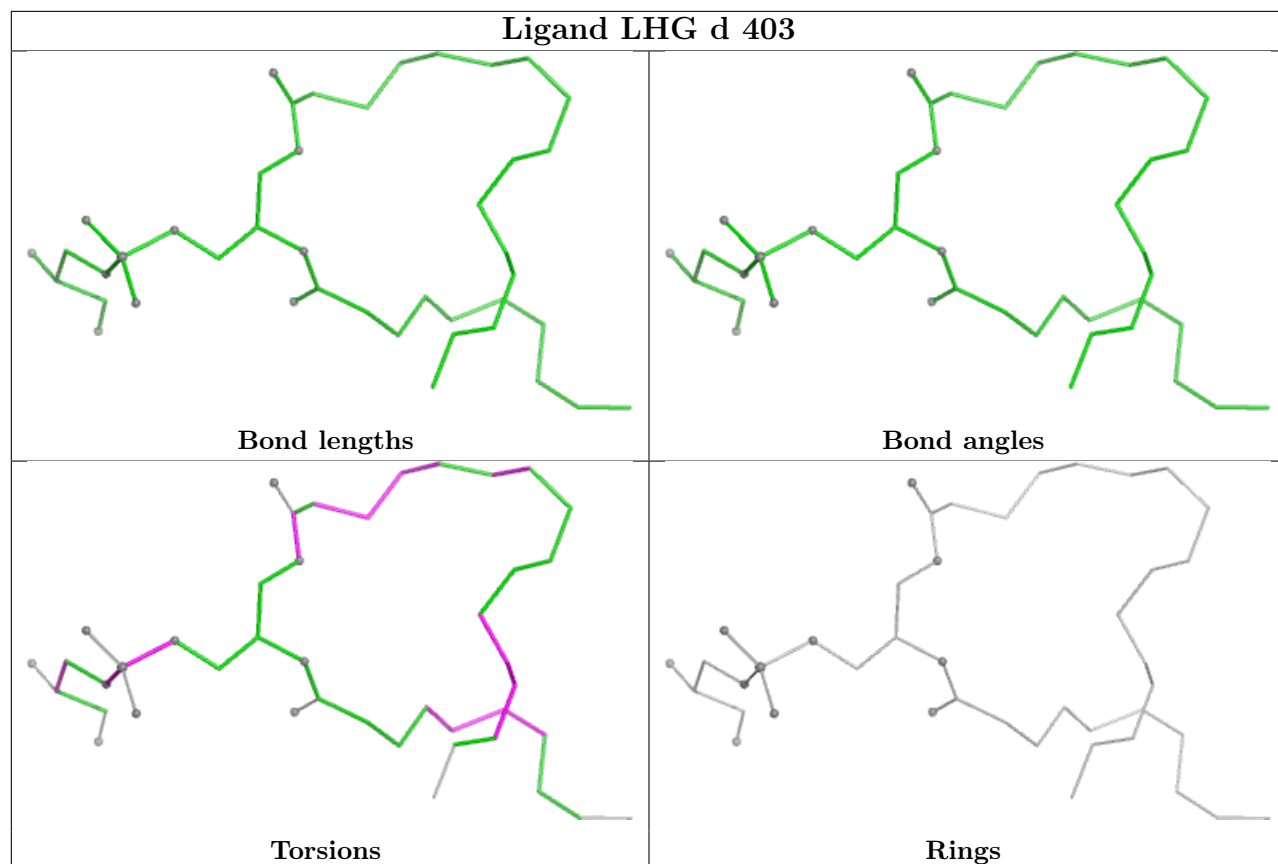


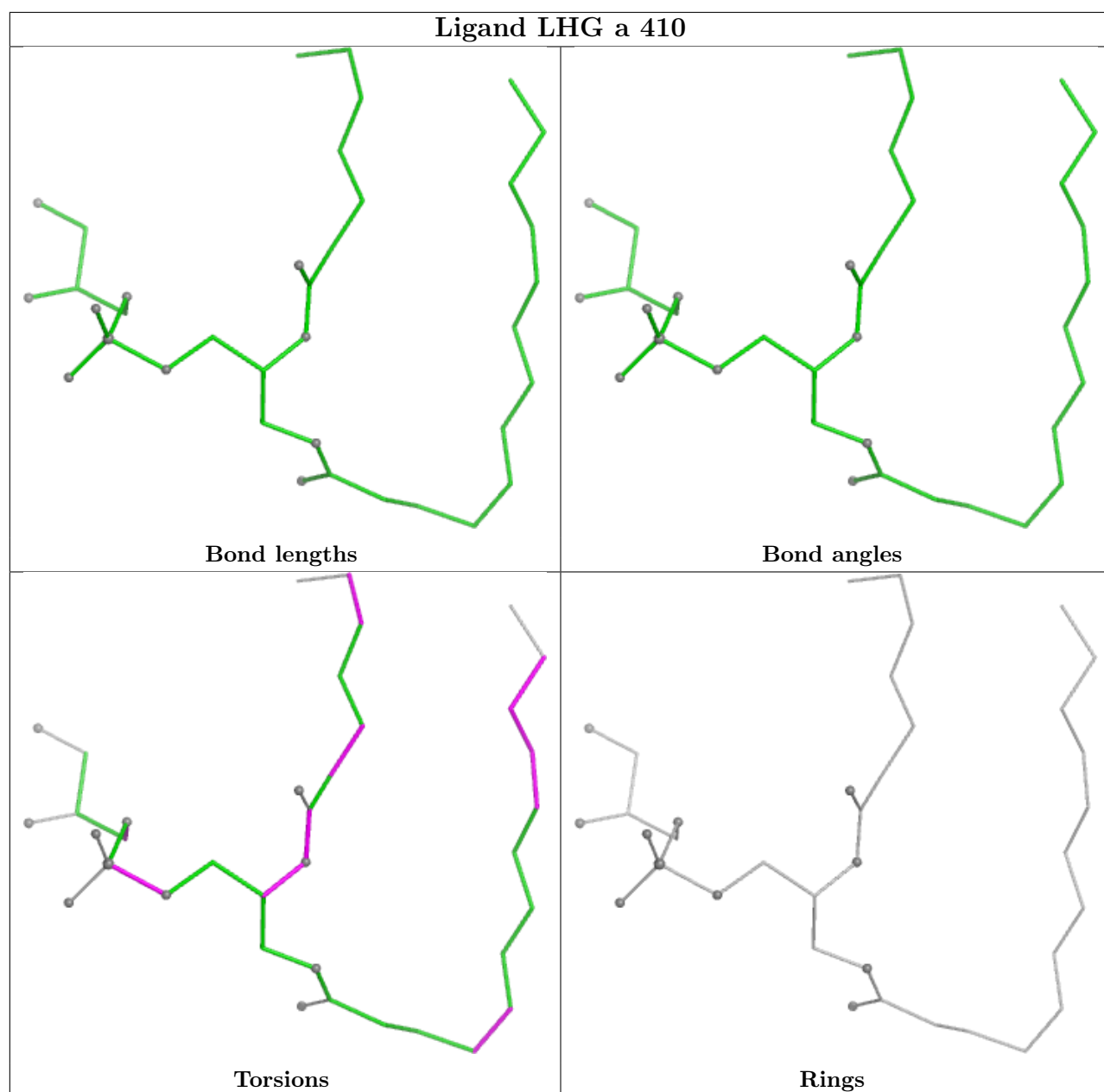
Ligand CLA C 508

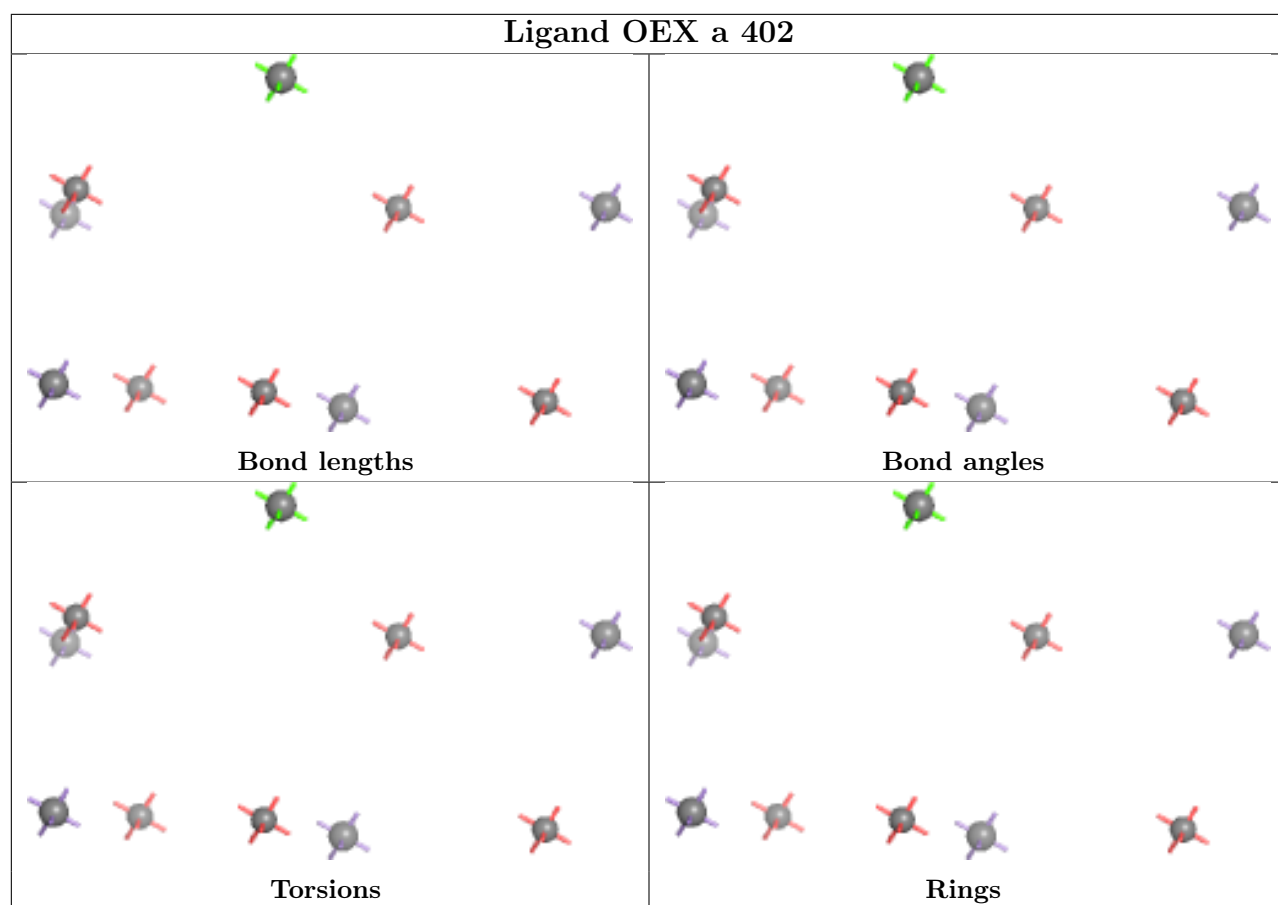


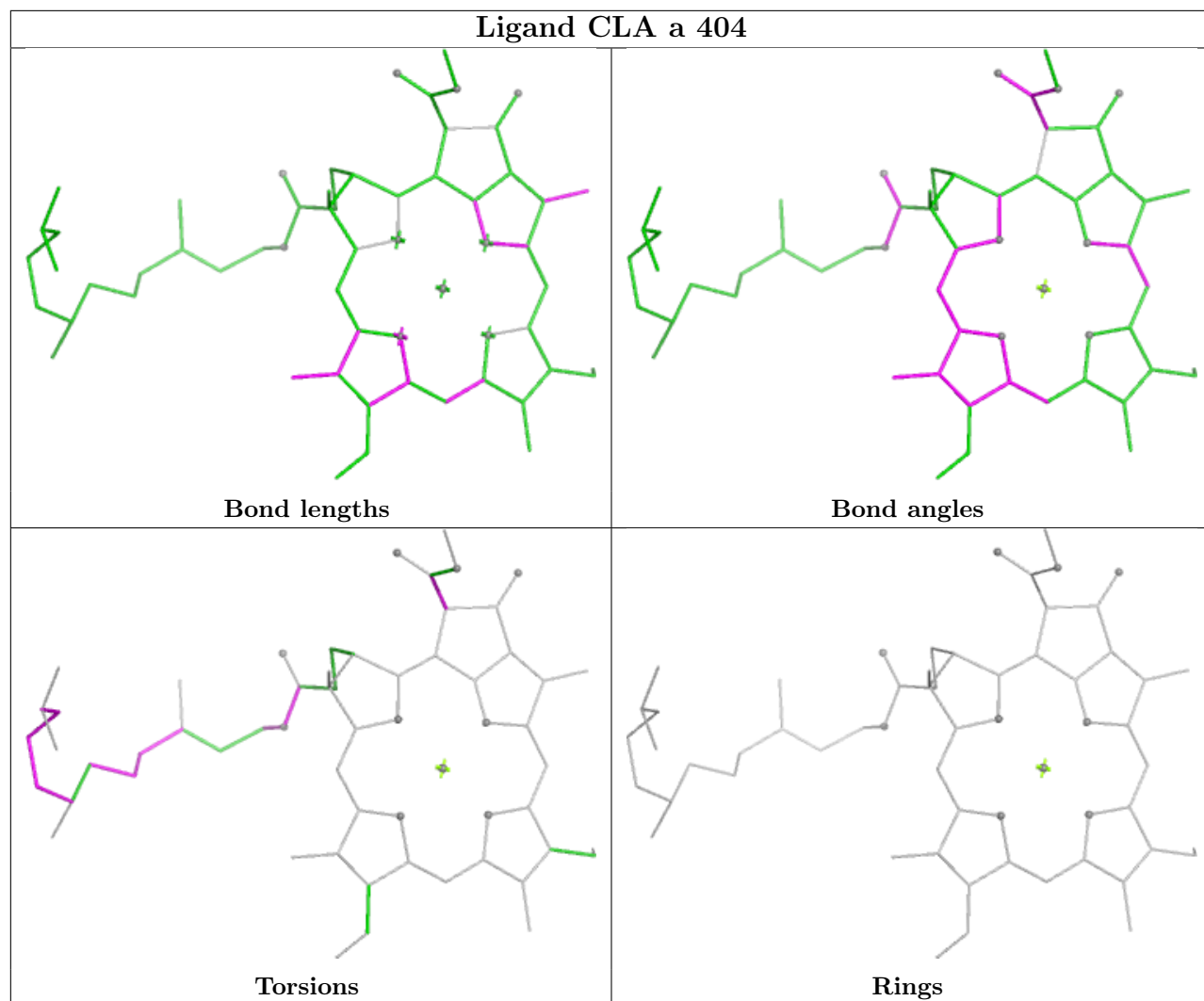
Ligand CLA c 516

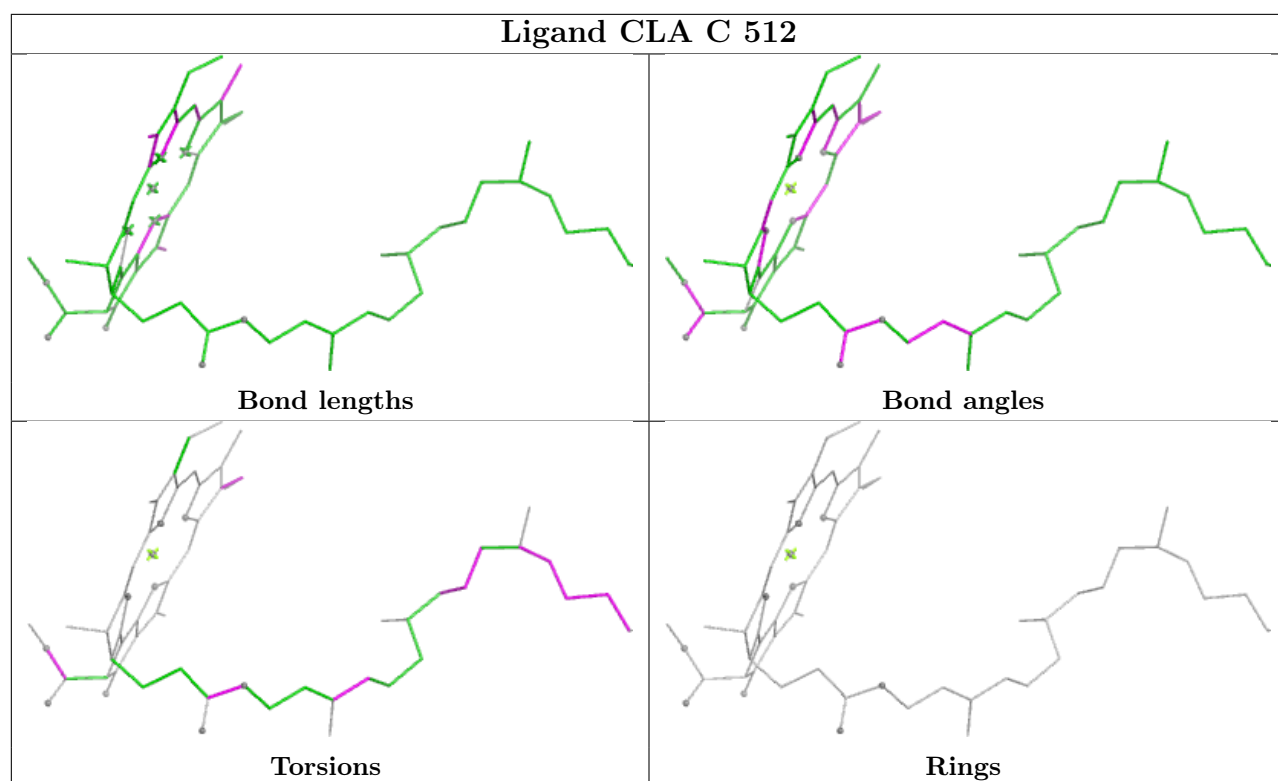




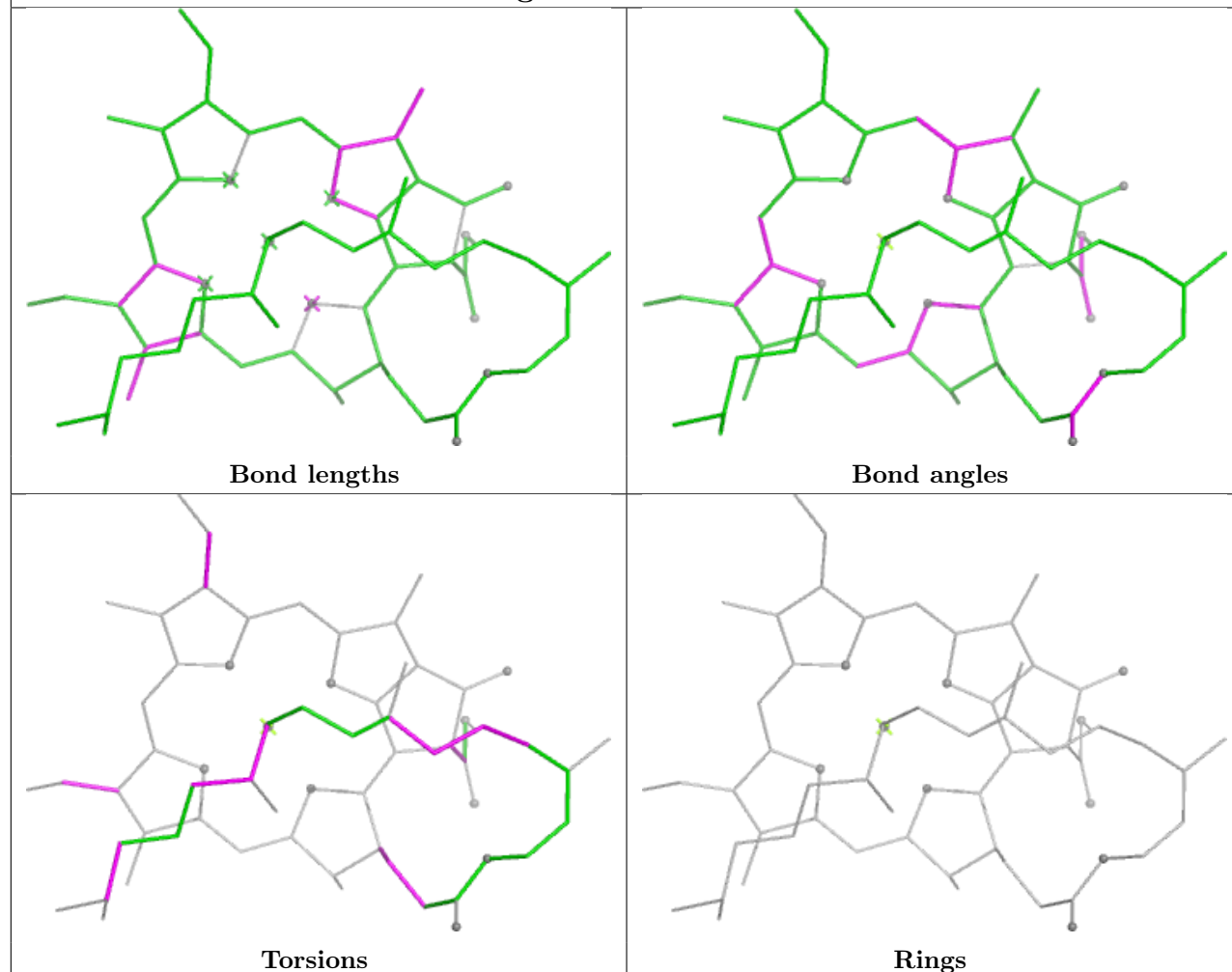




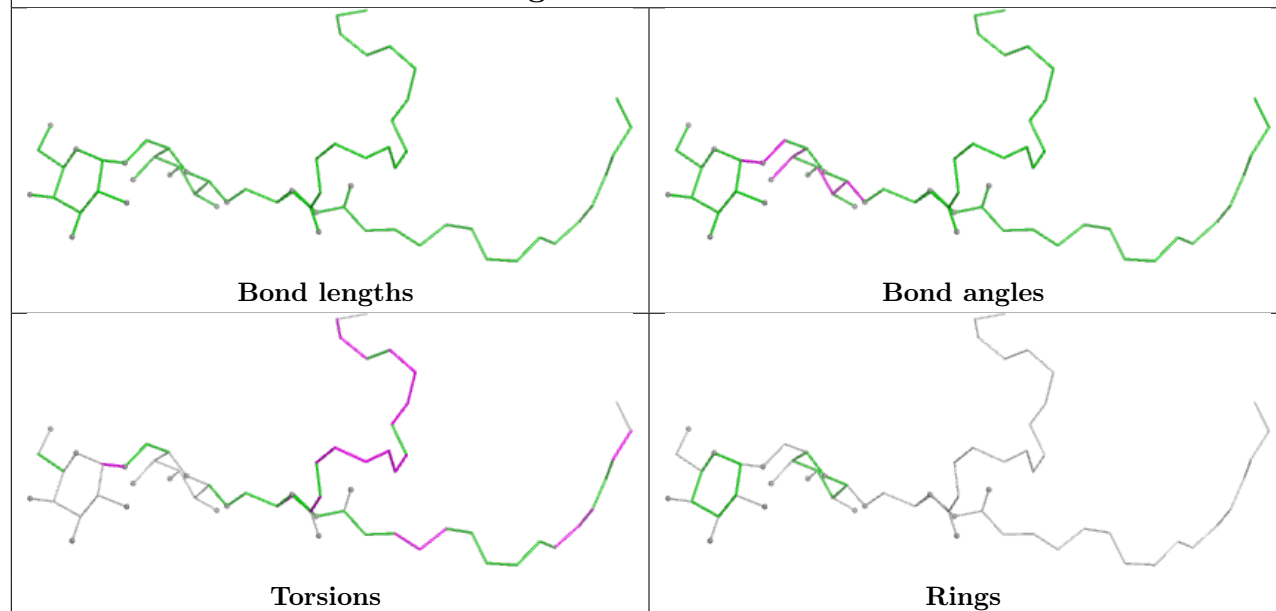


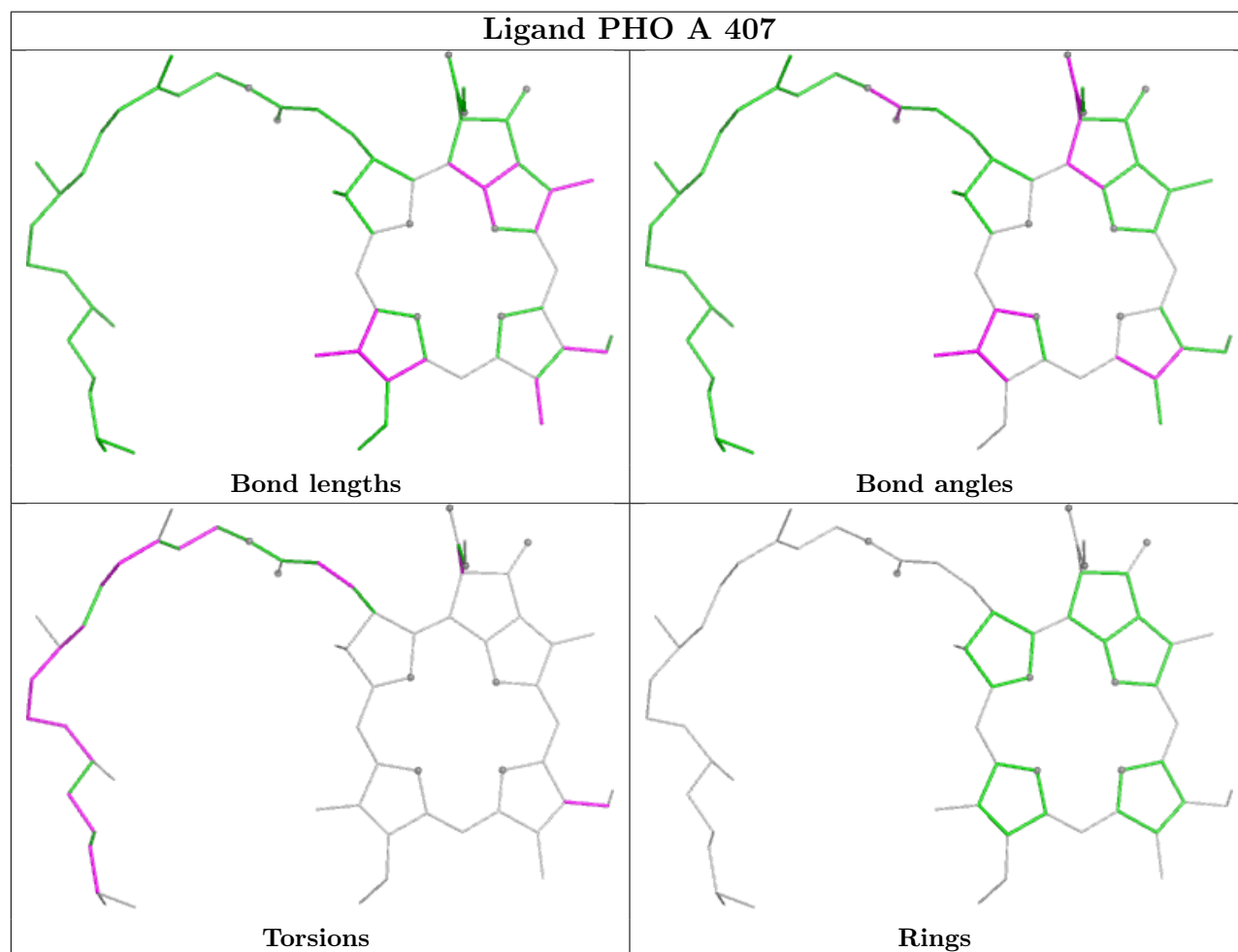
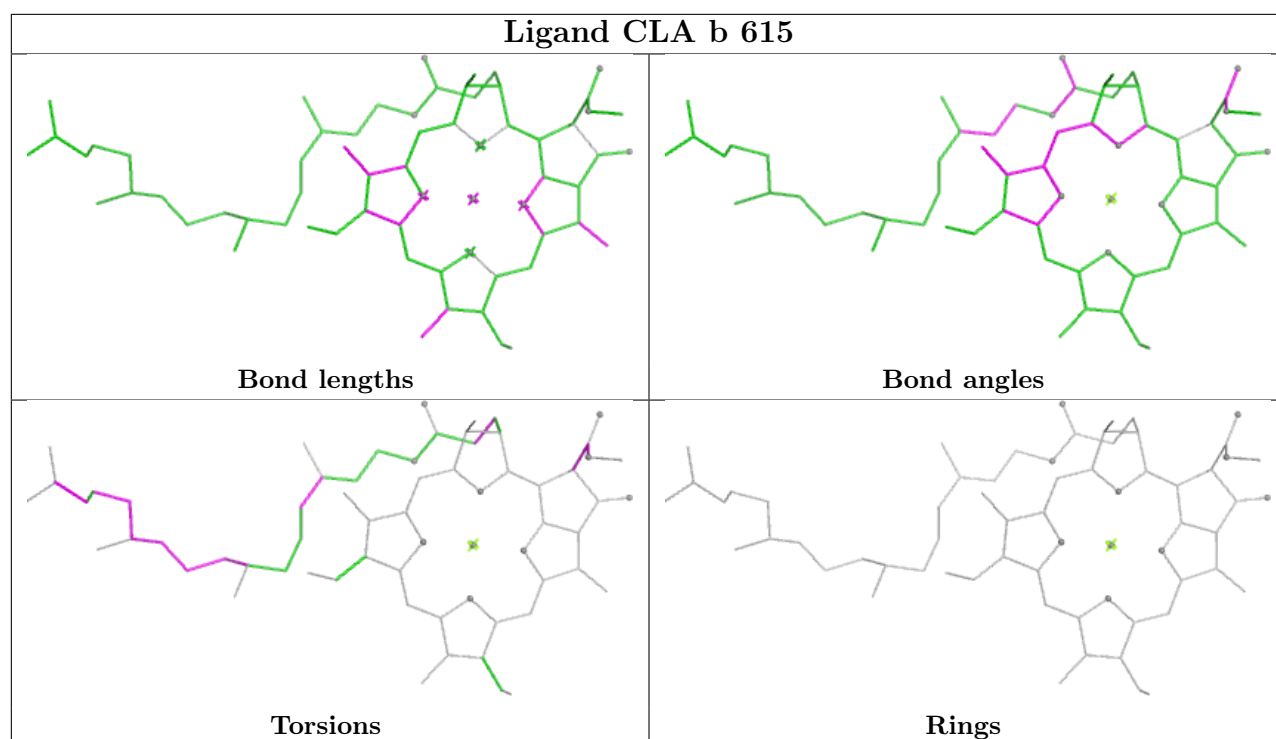


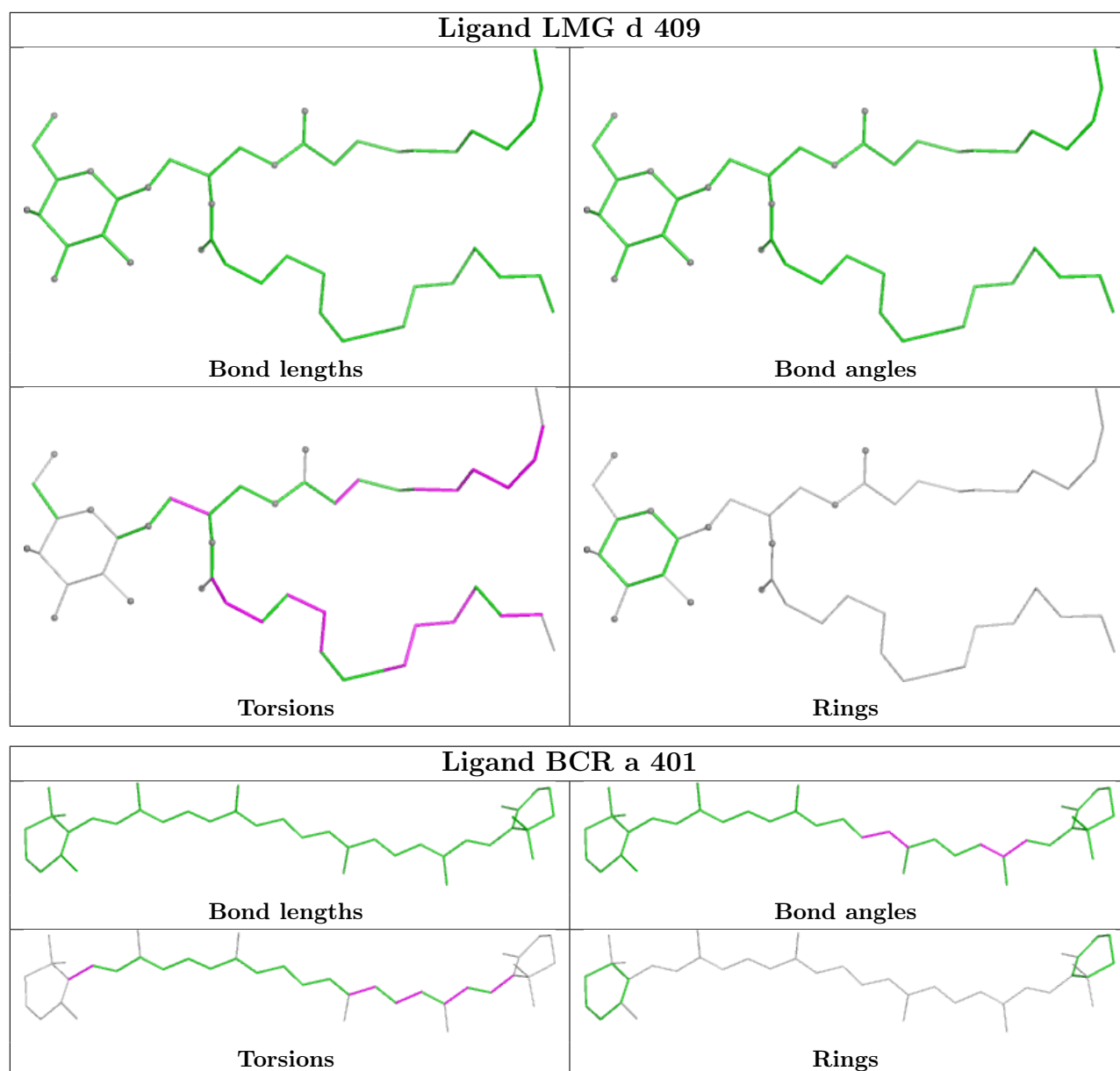
Ligand CLA b 611

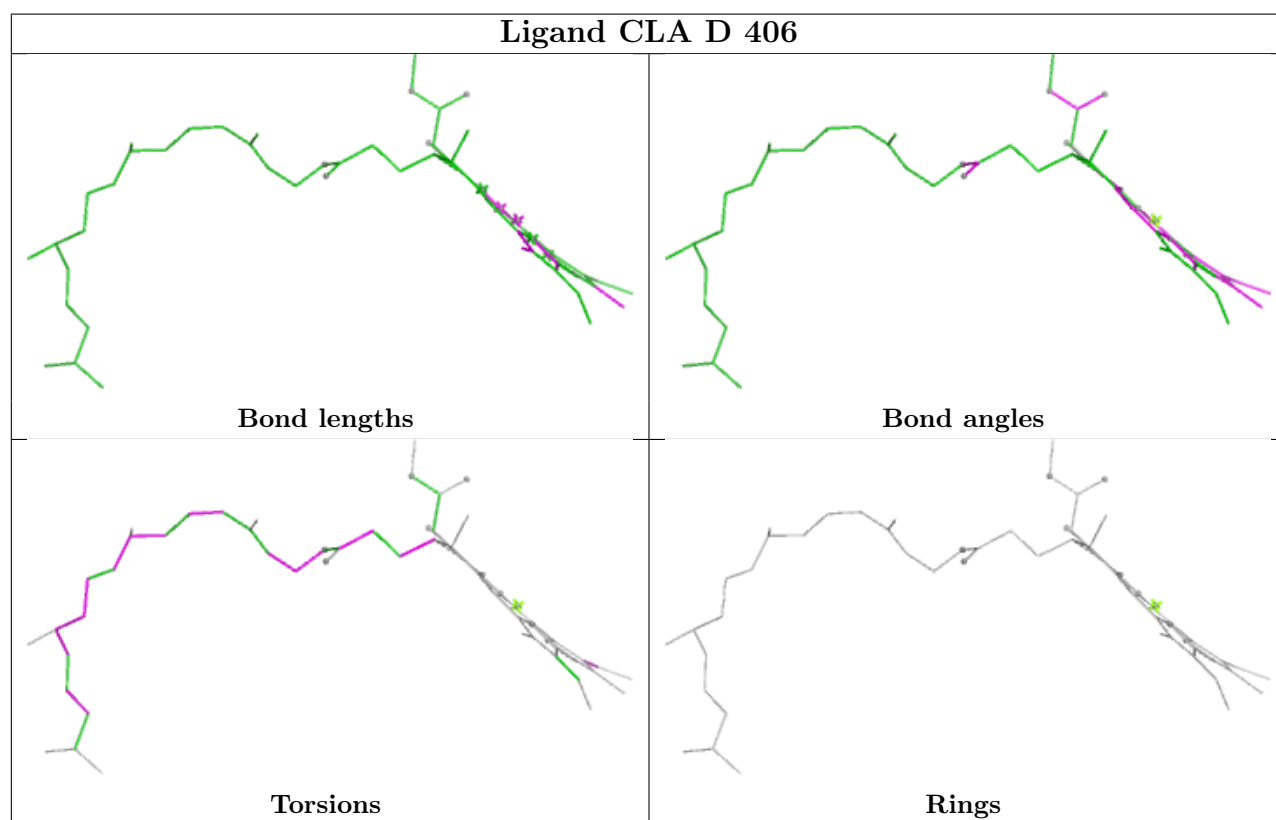
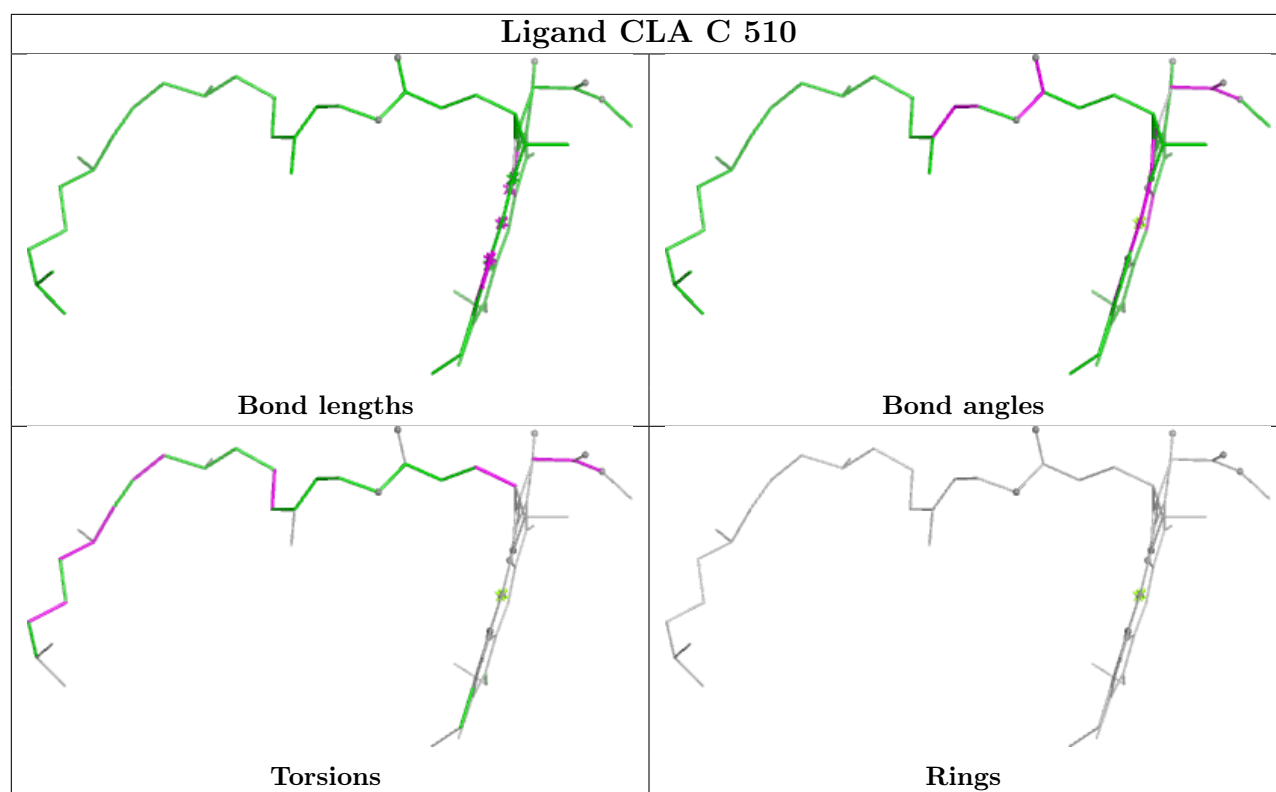


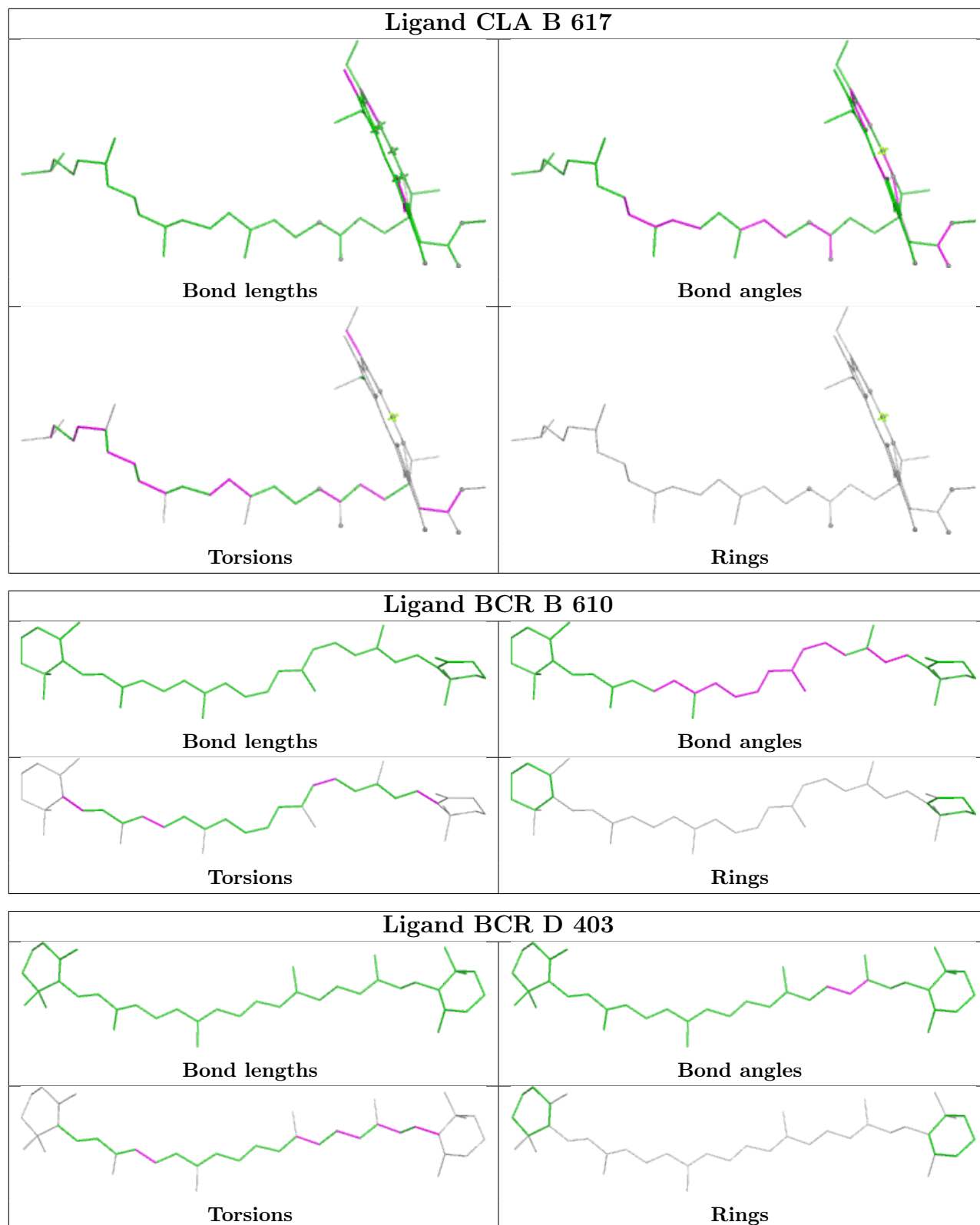
Ligand DGD B 620

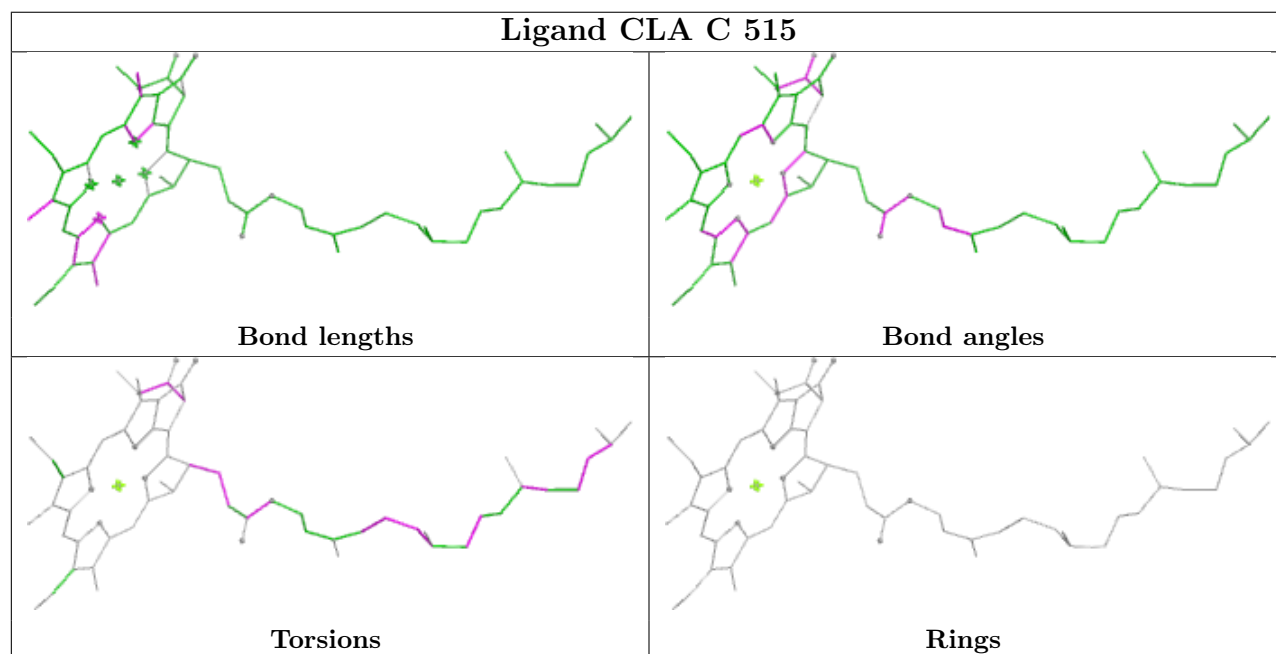
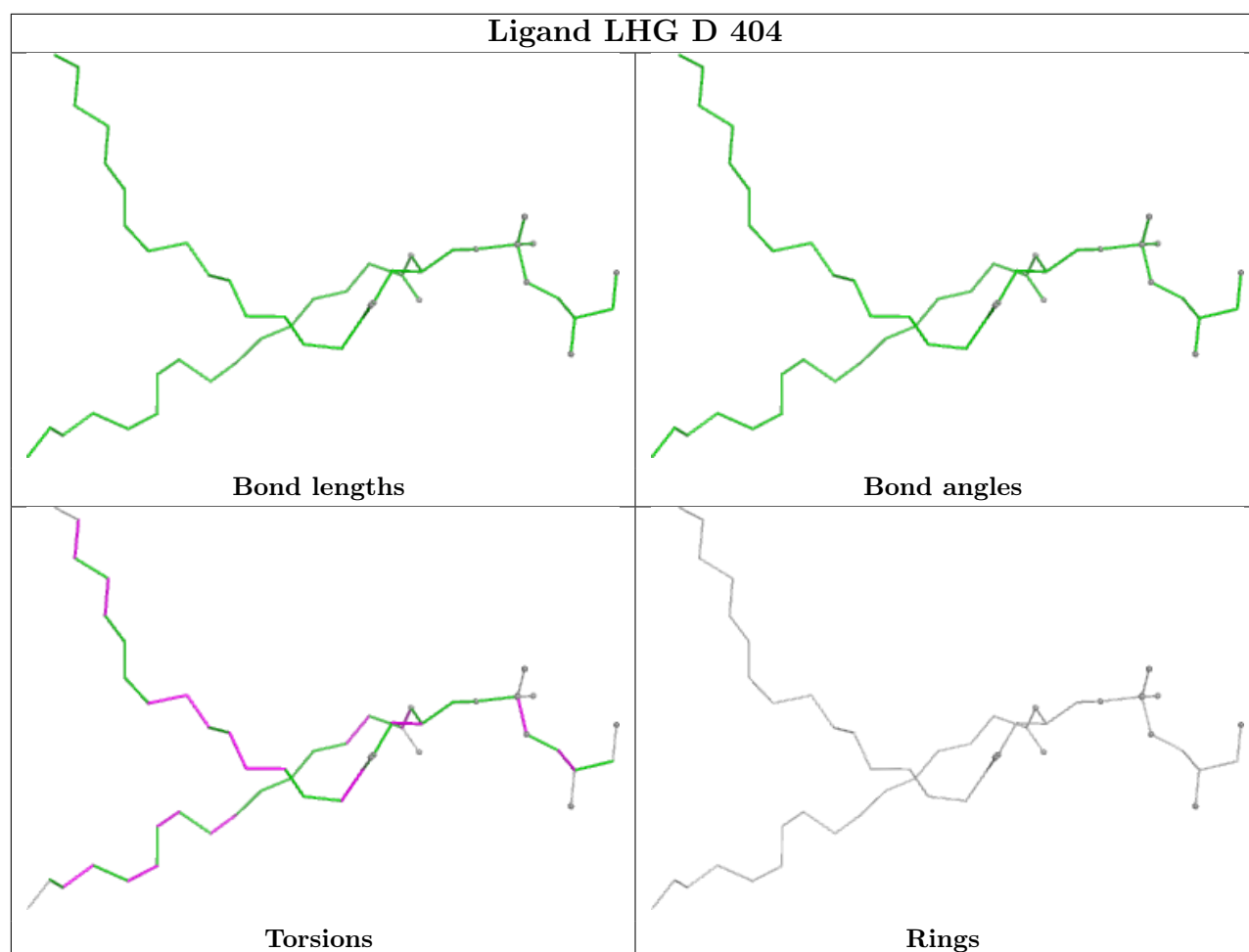


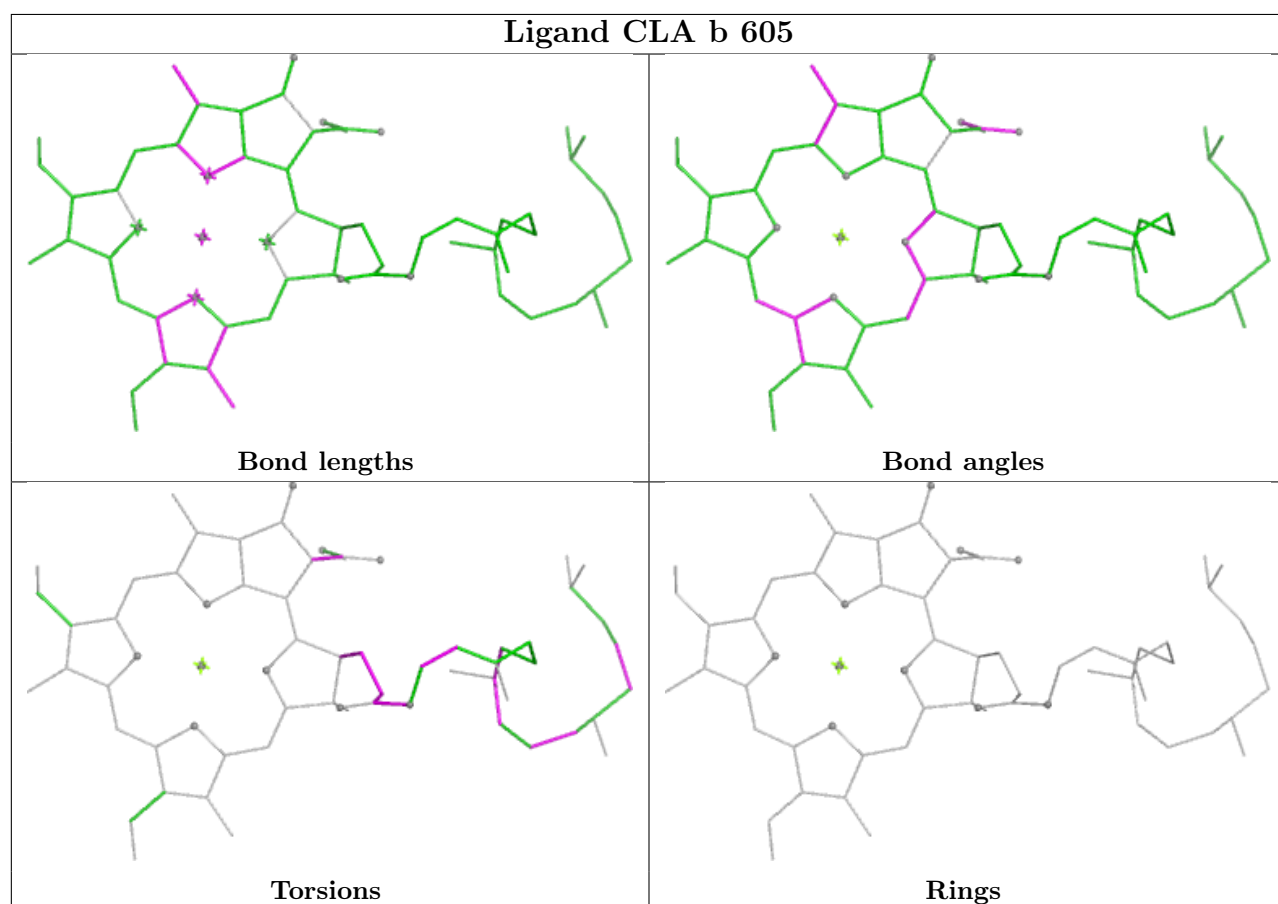
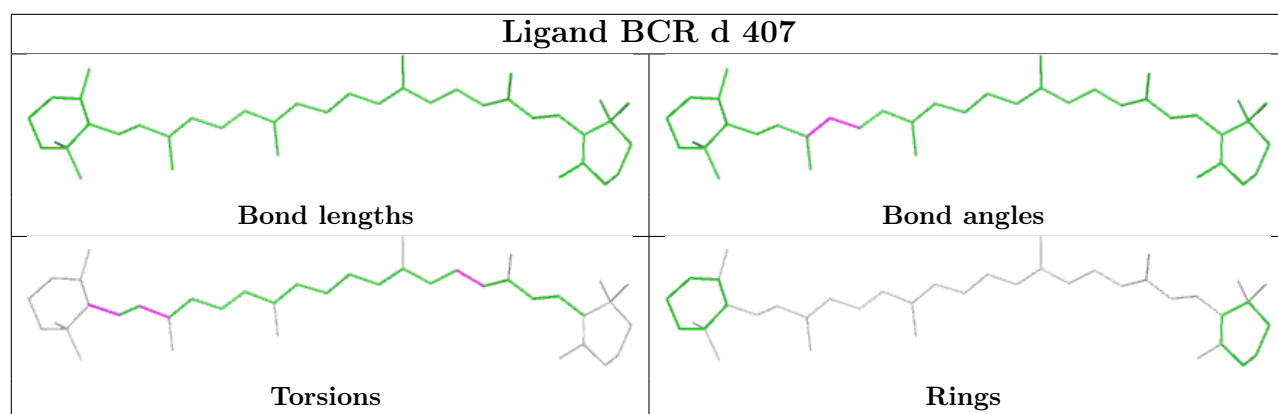


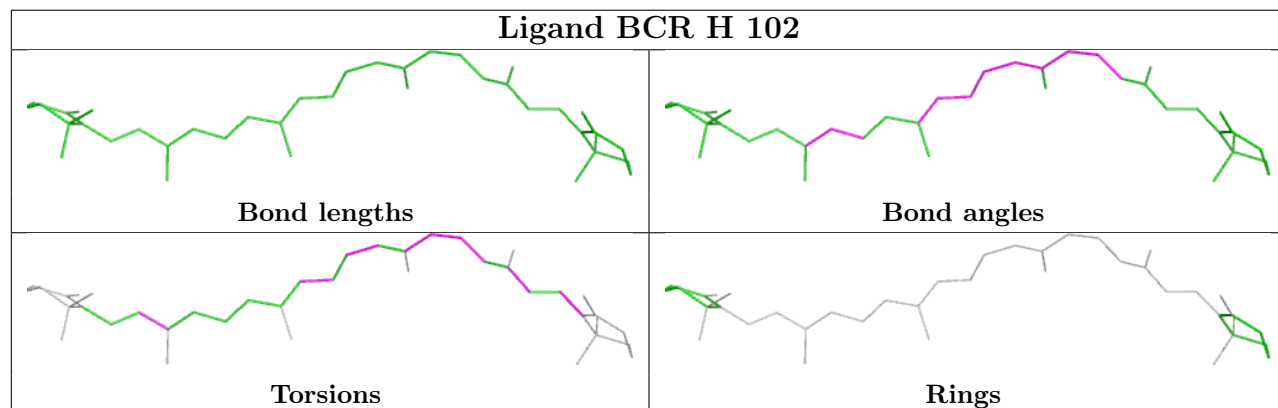
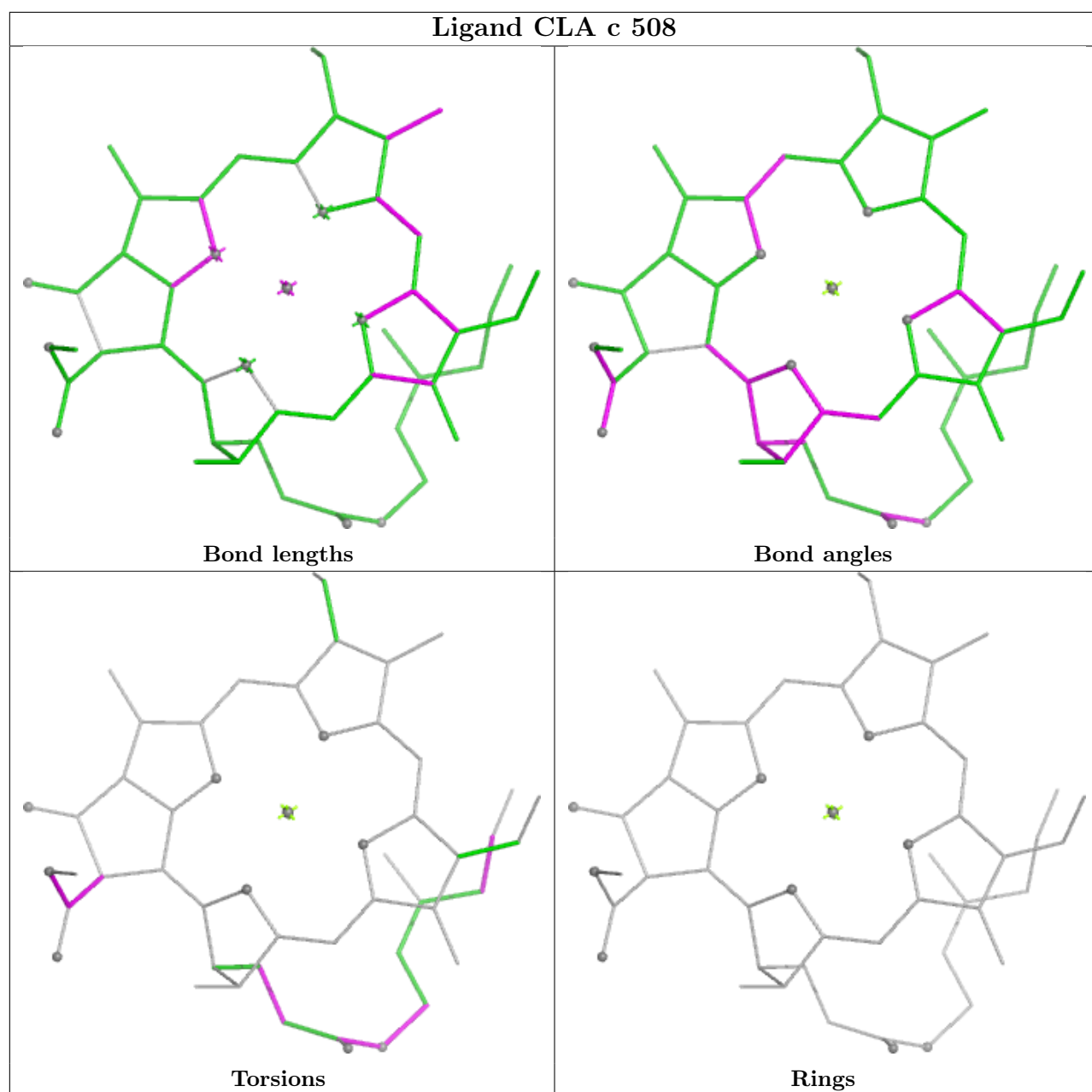


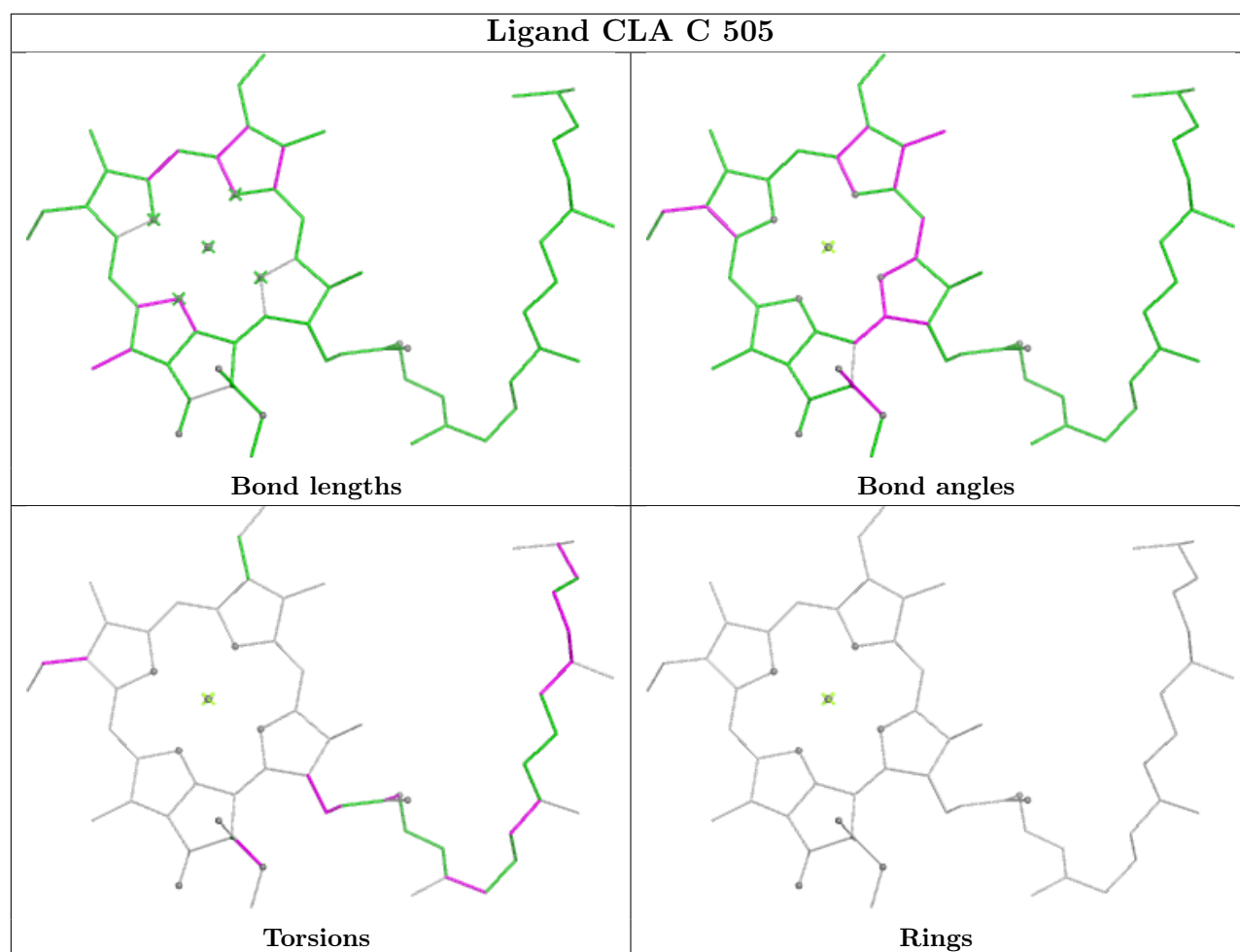


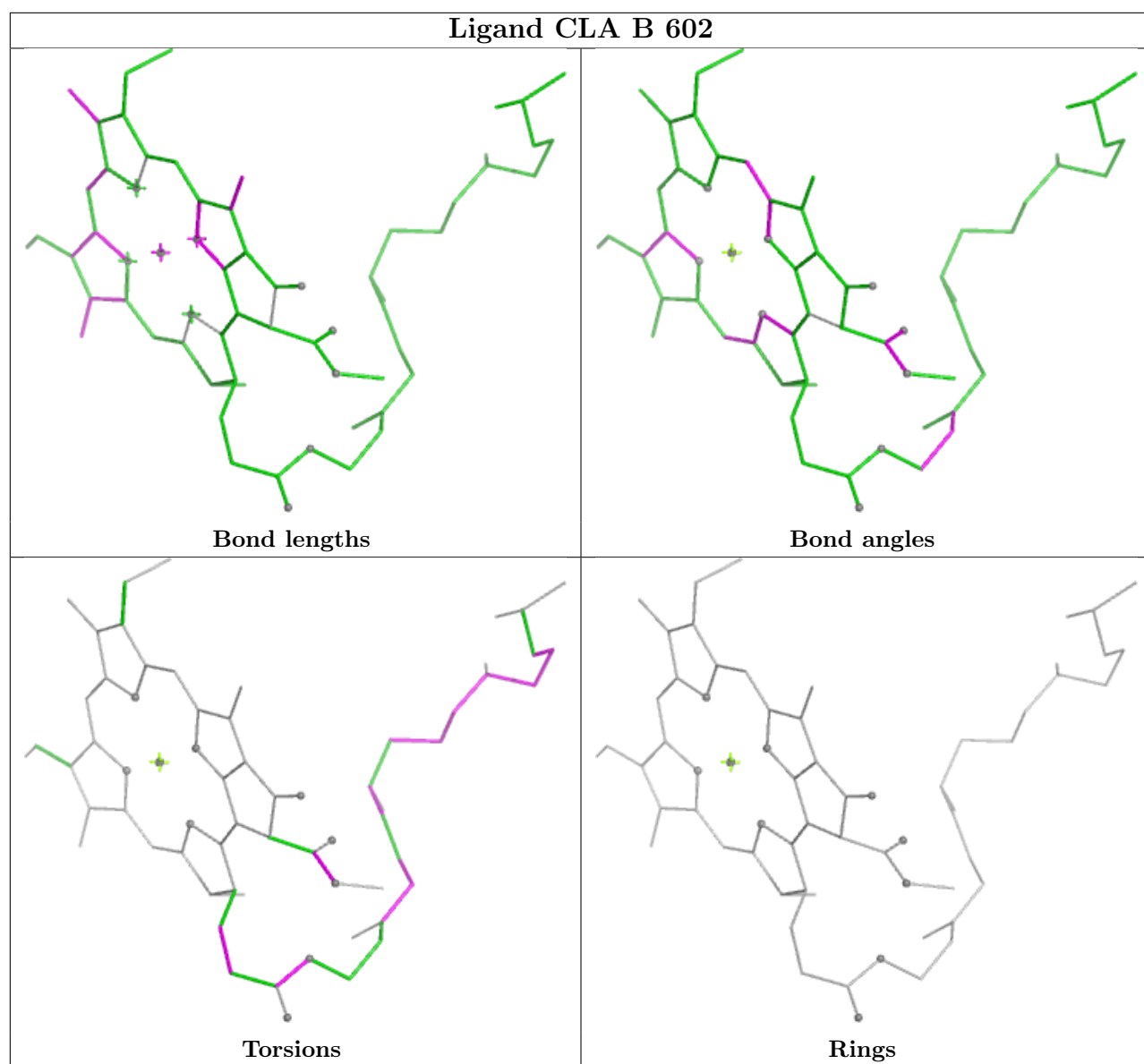


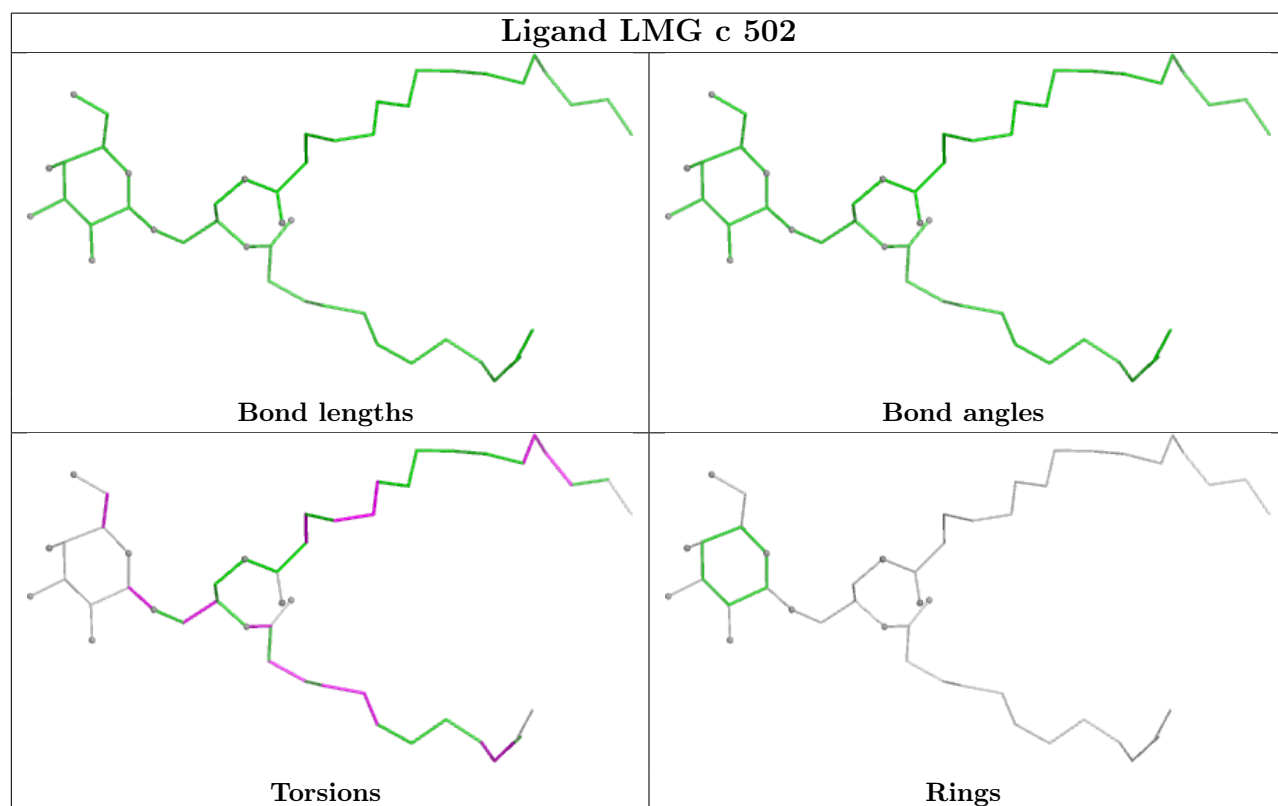
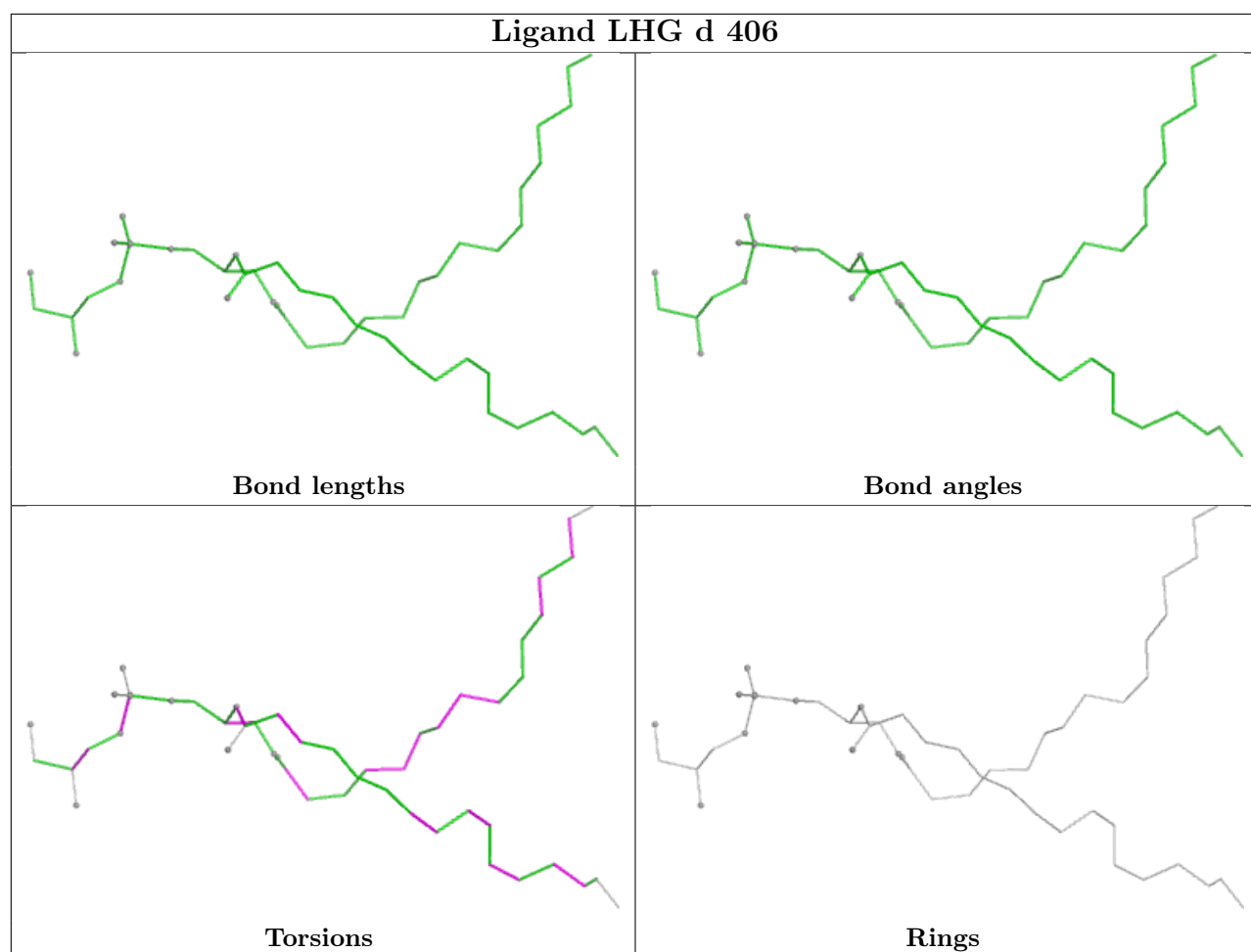


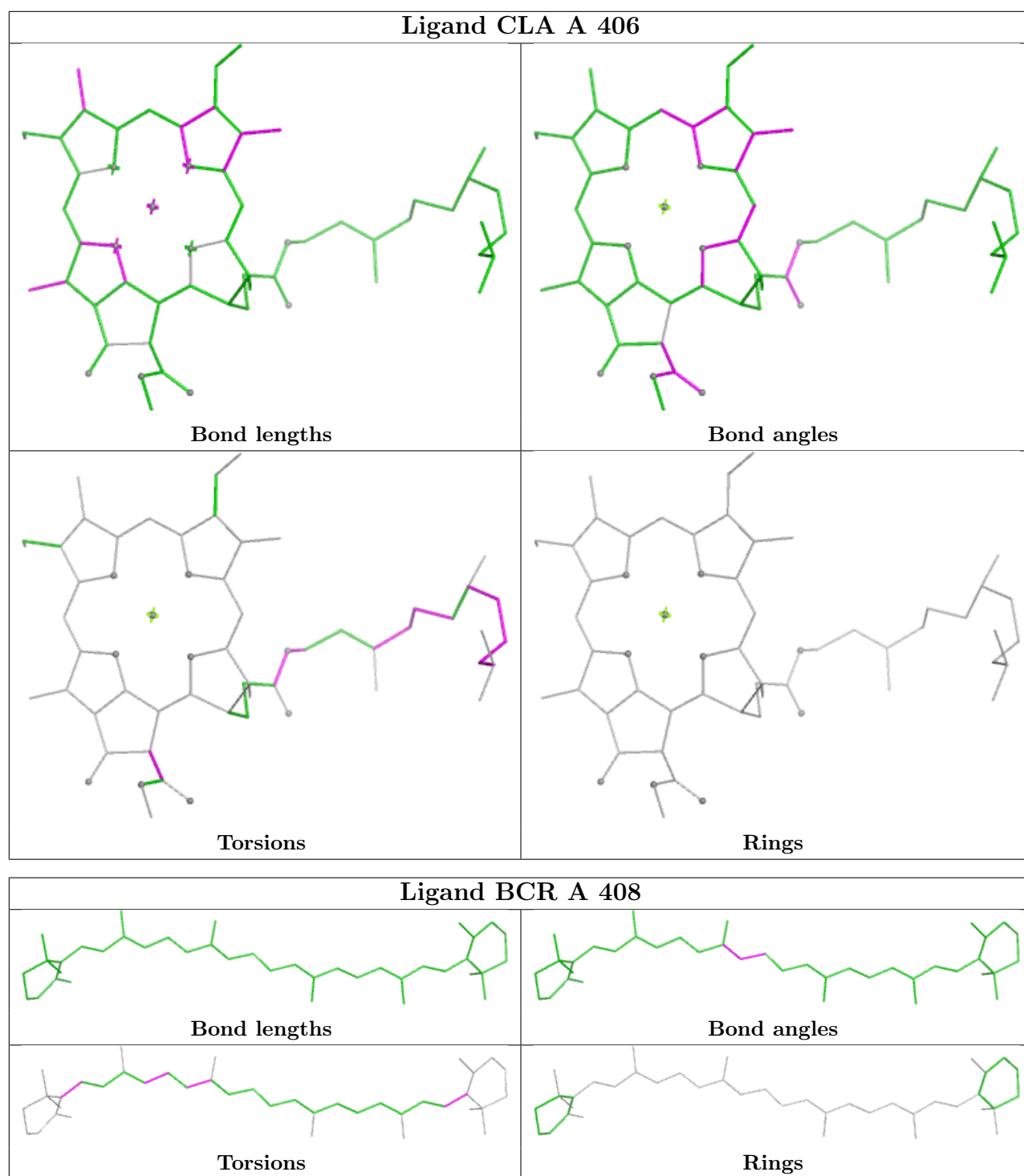


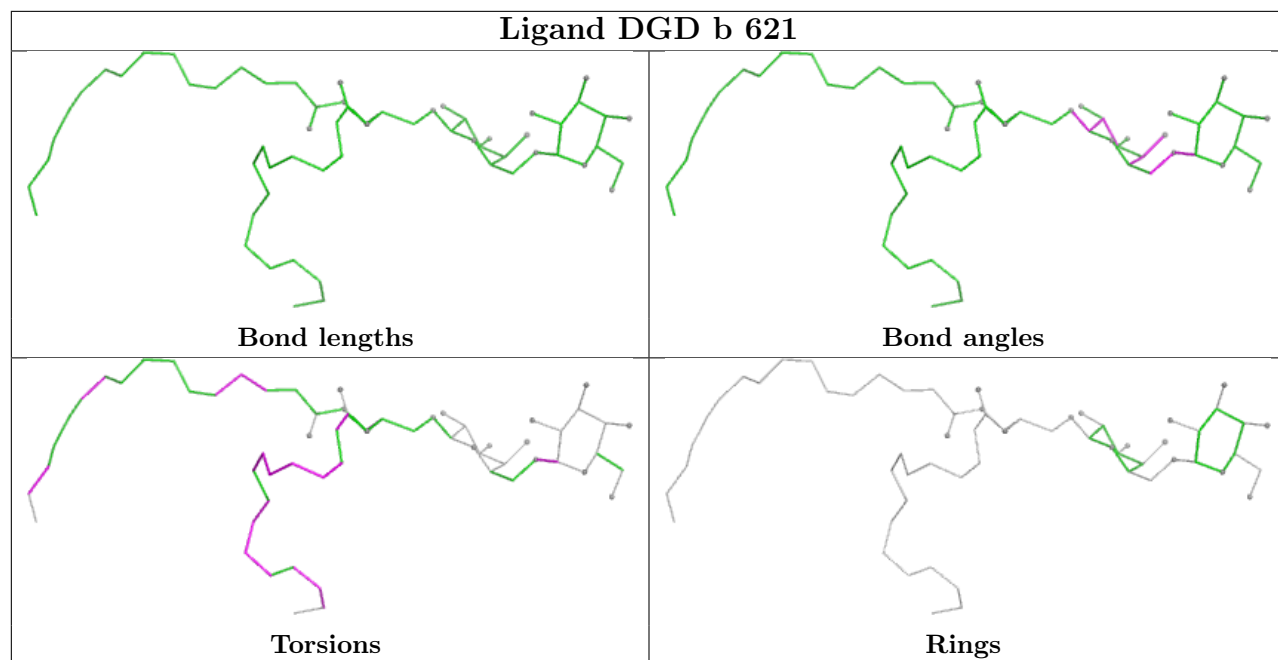


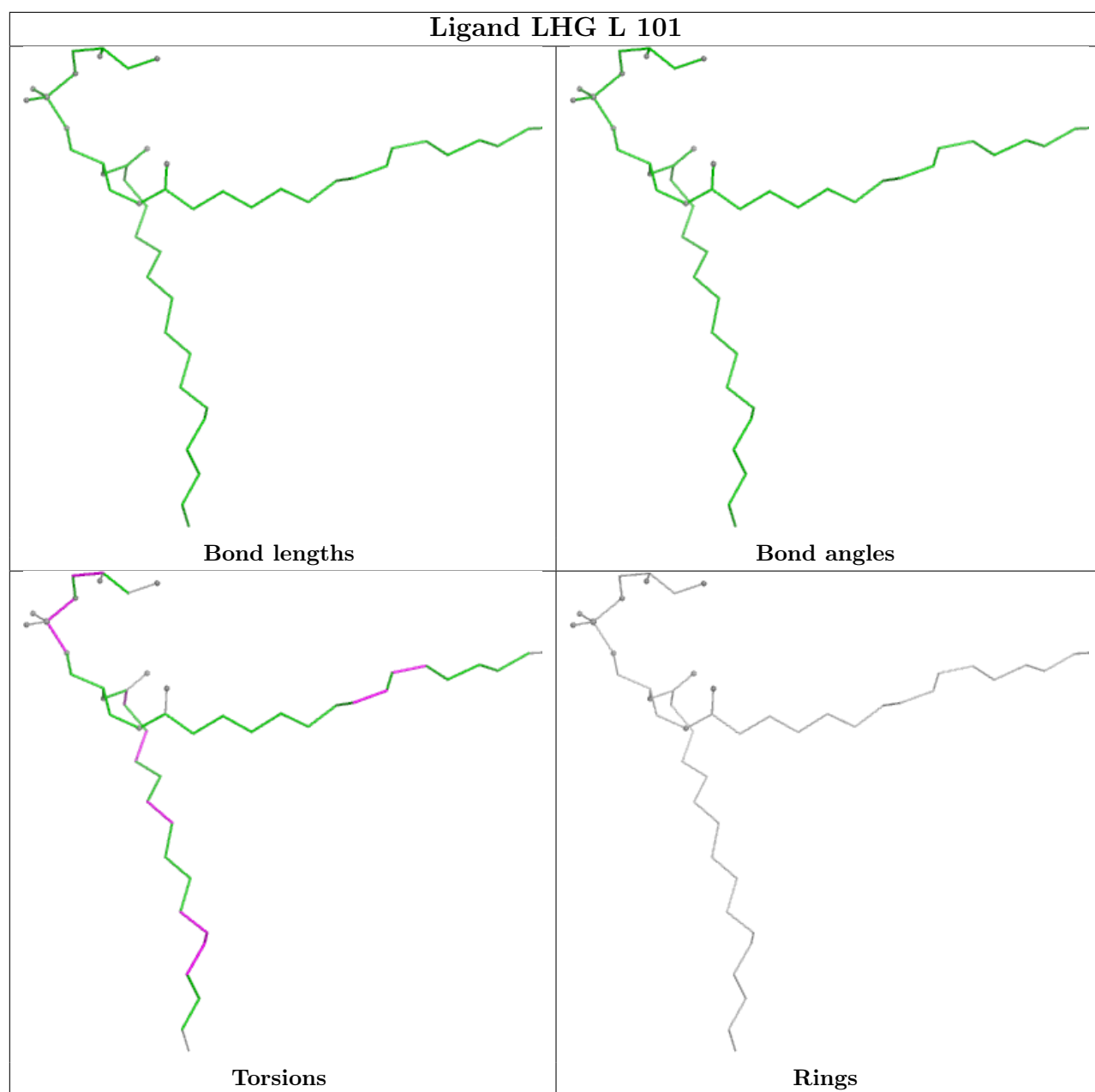


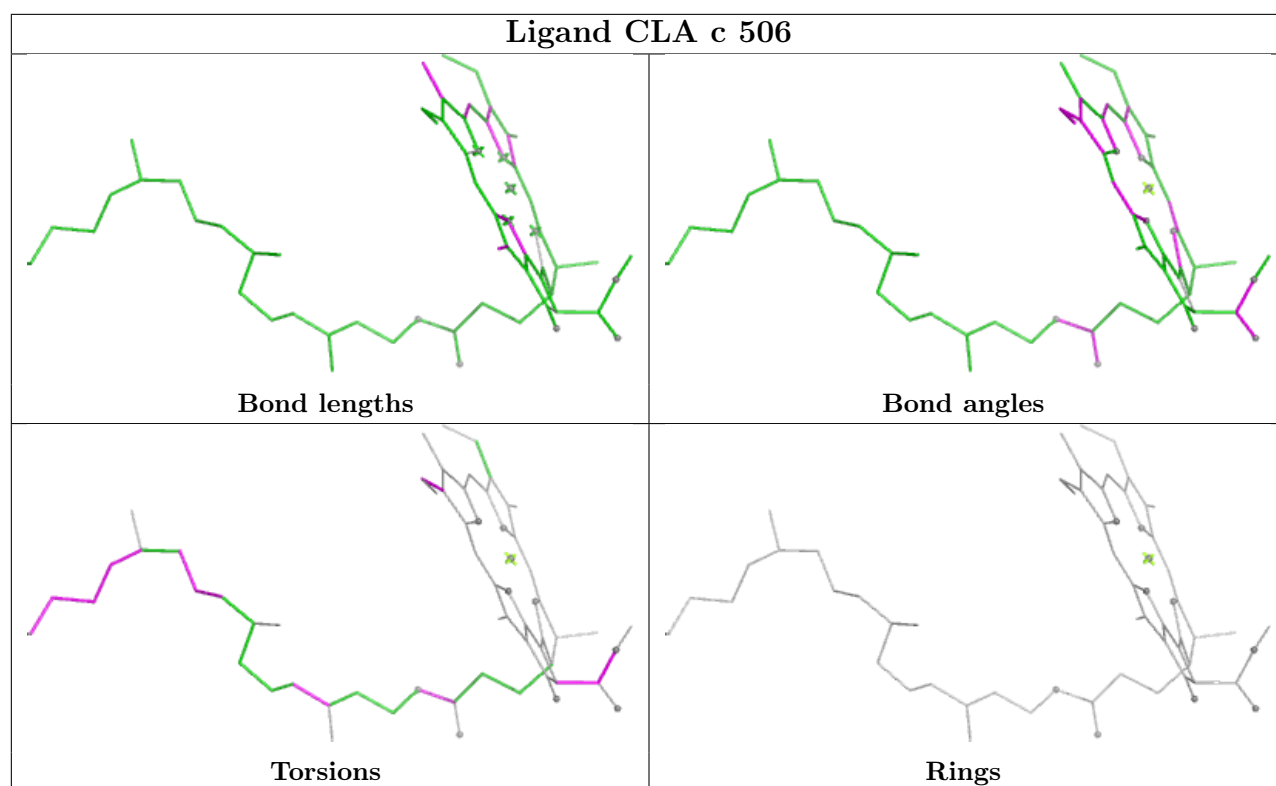


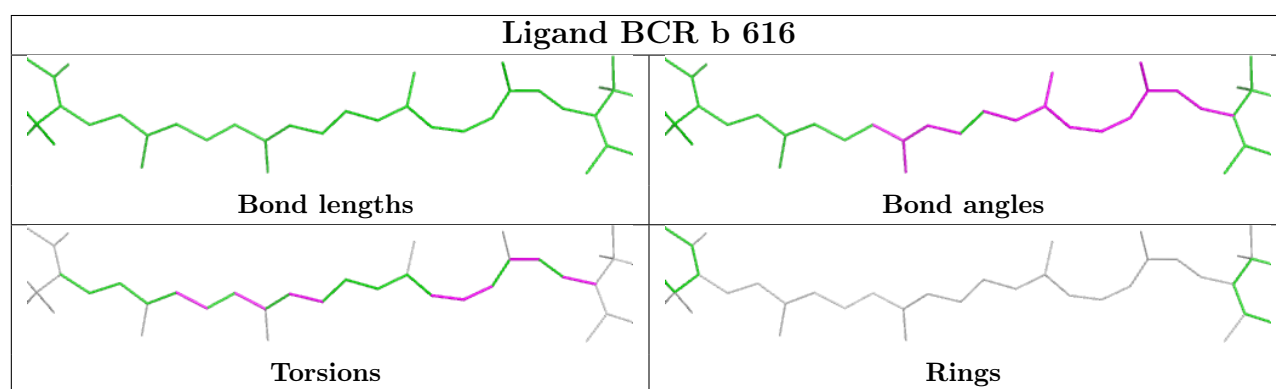
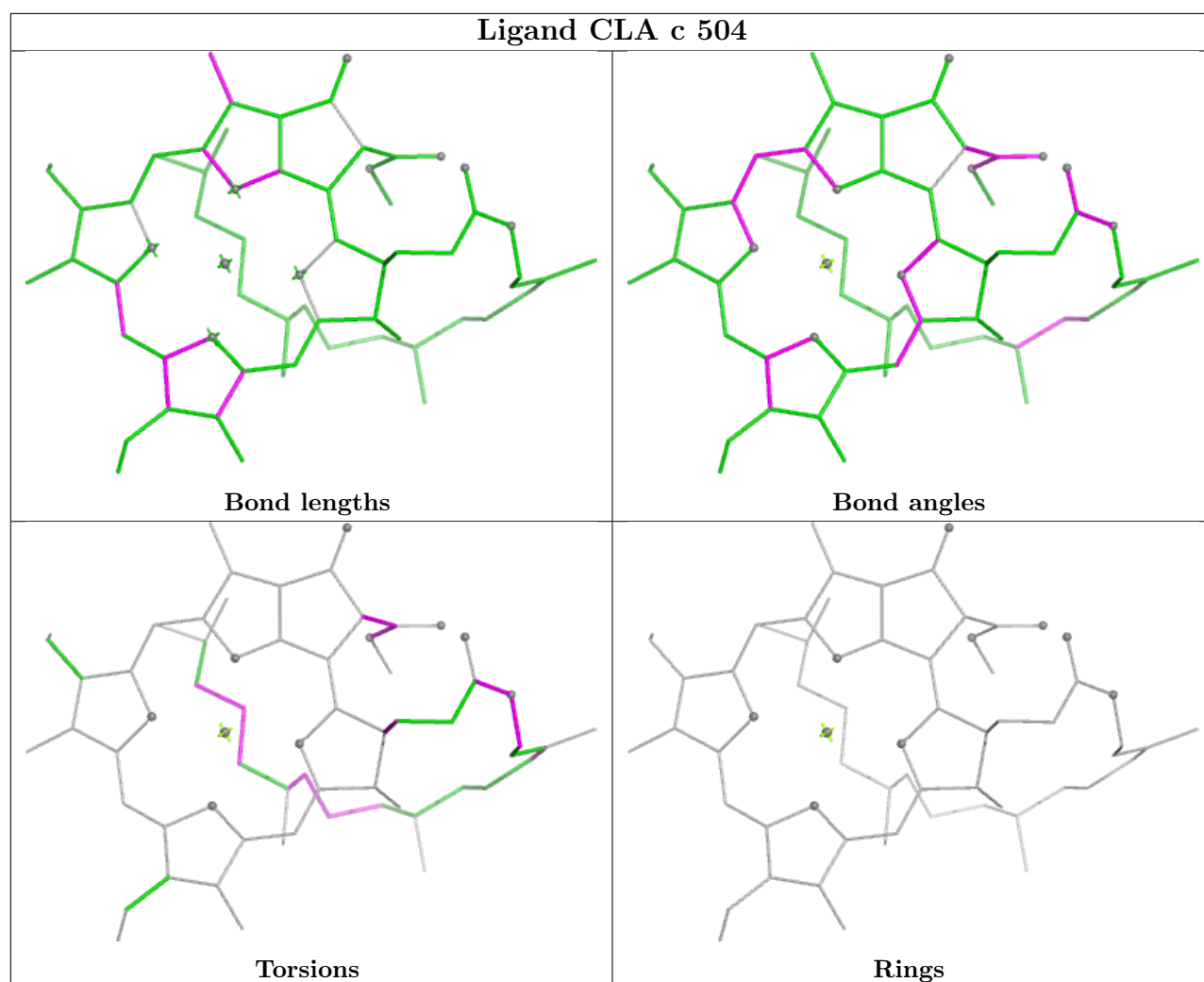


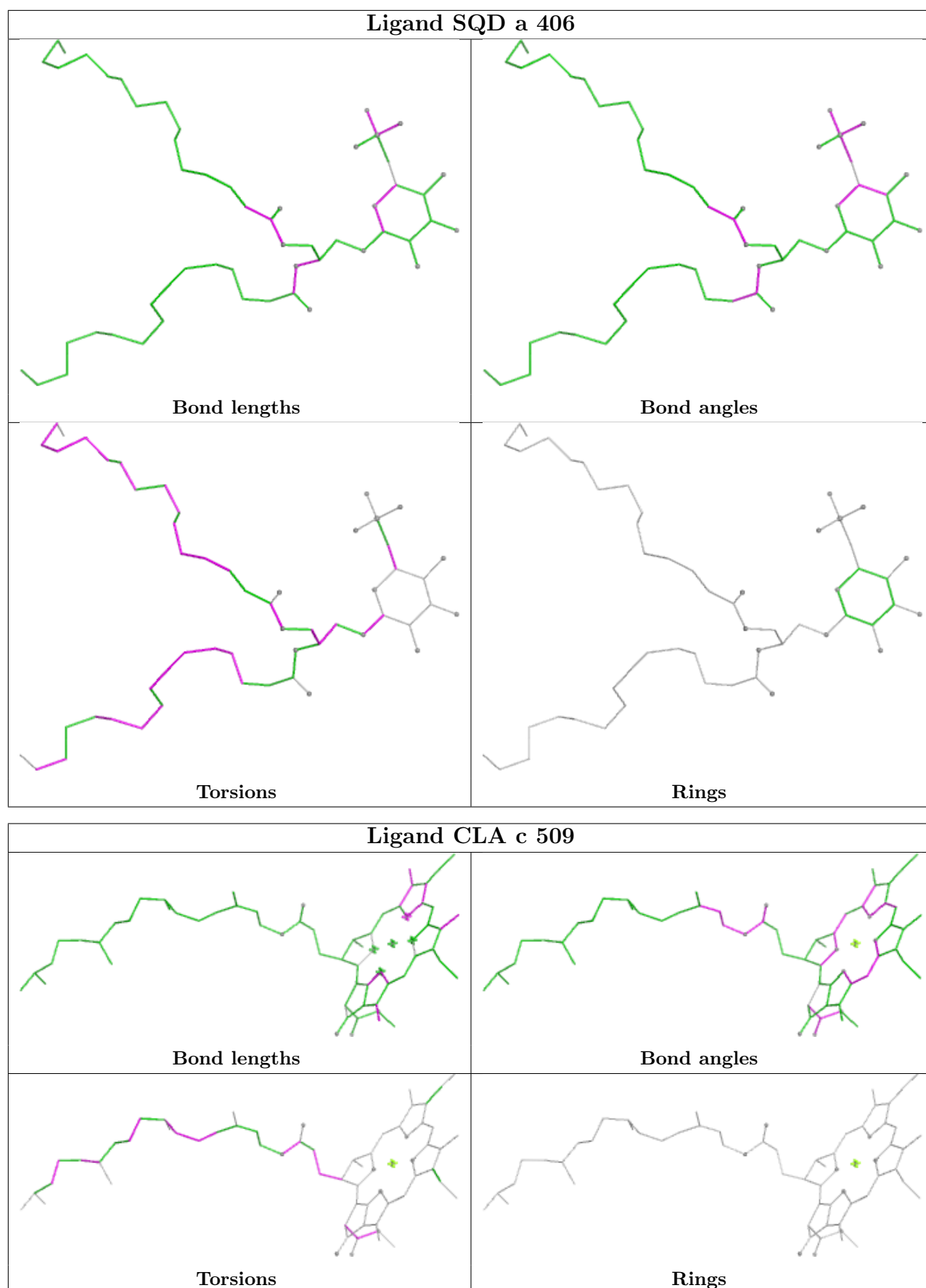


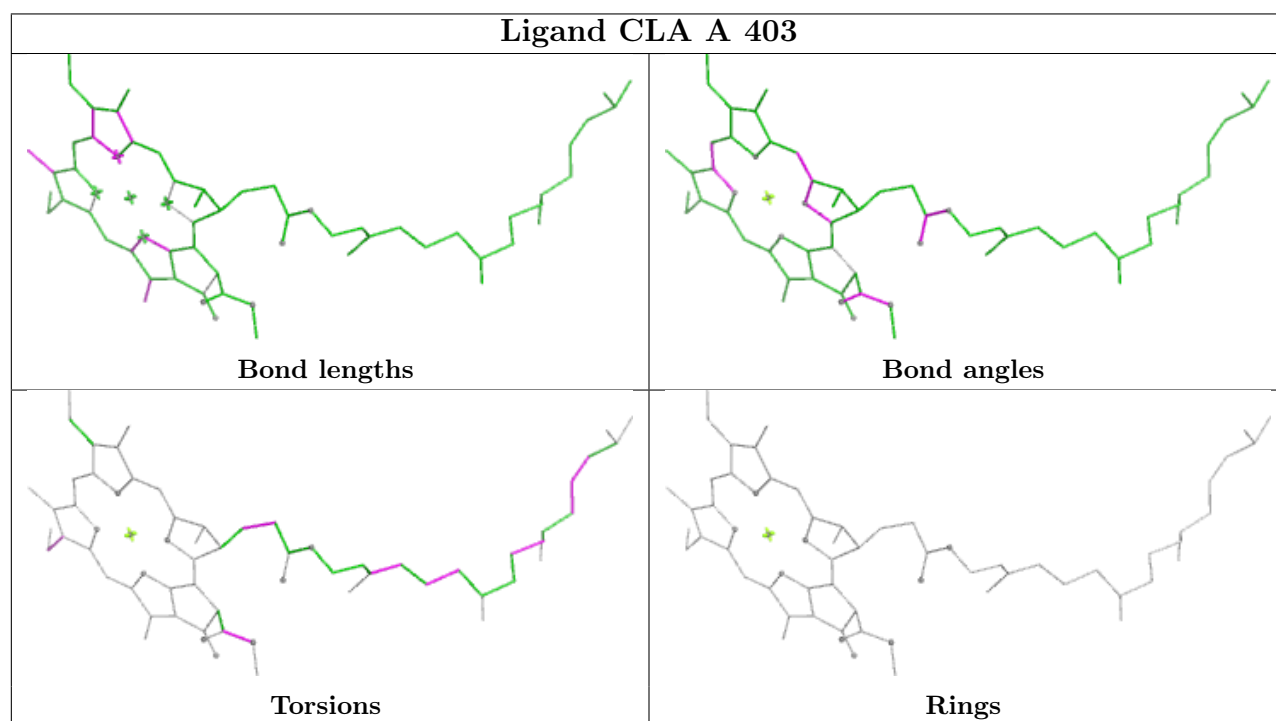
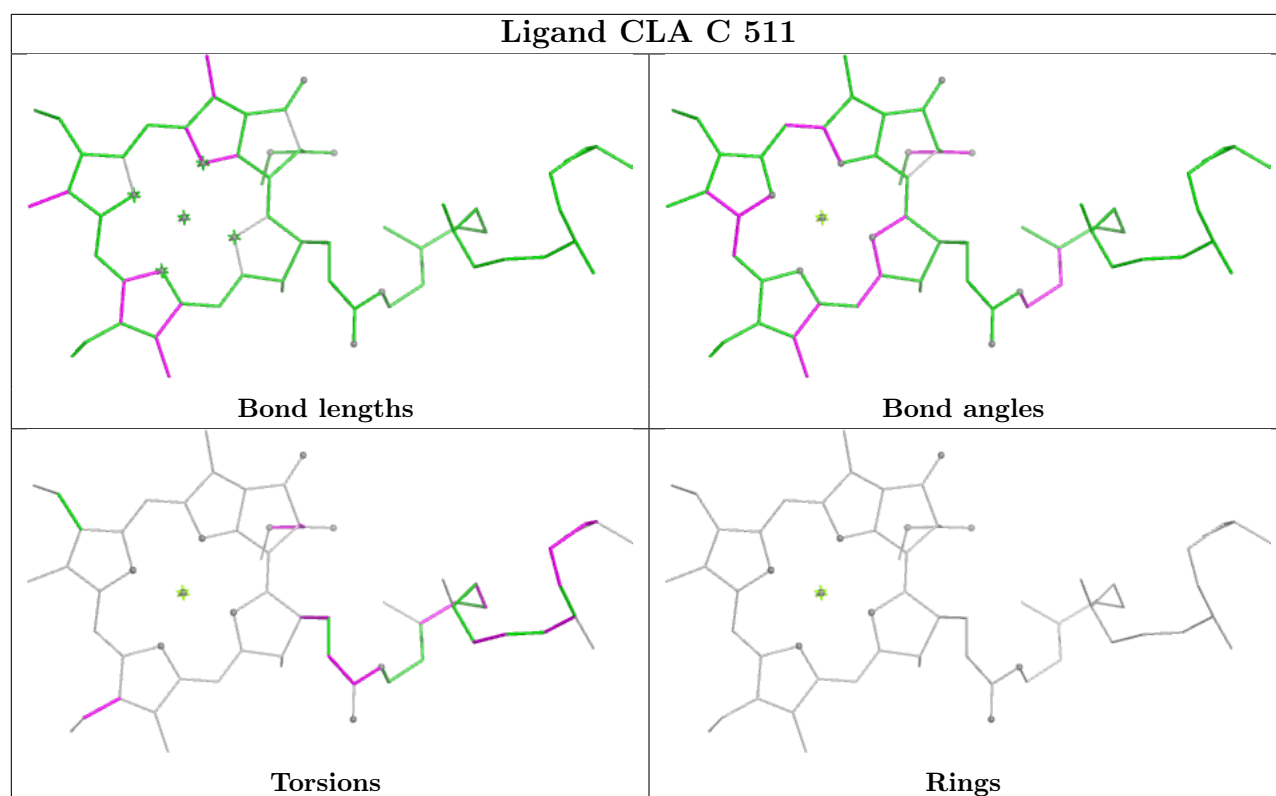


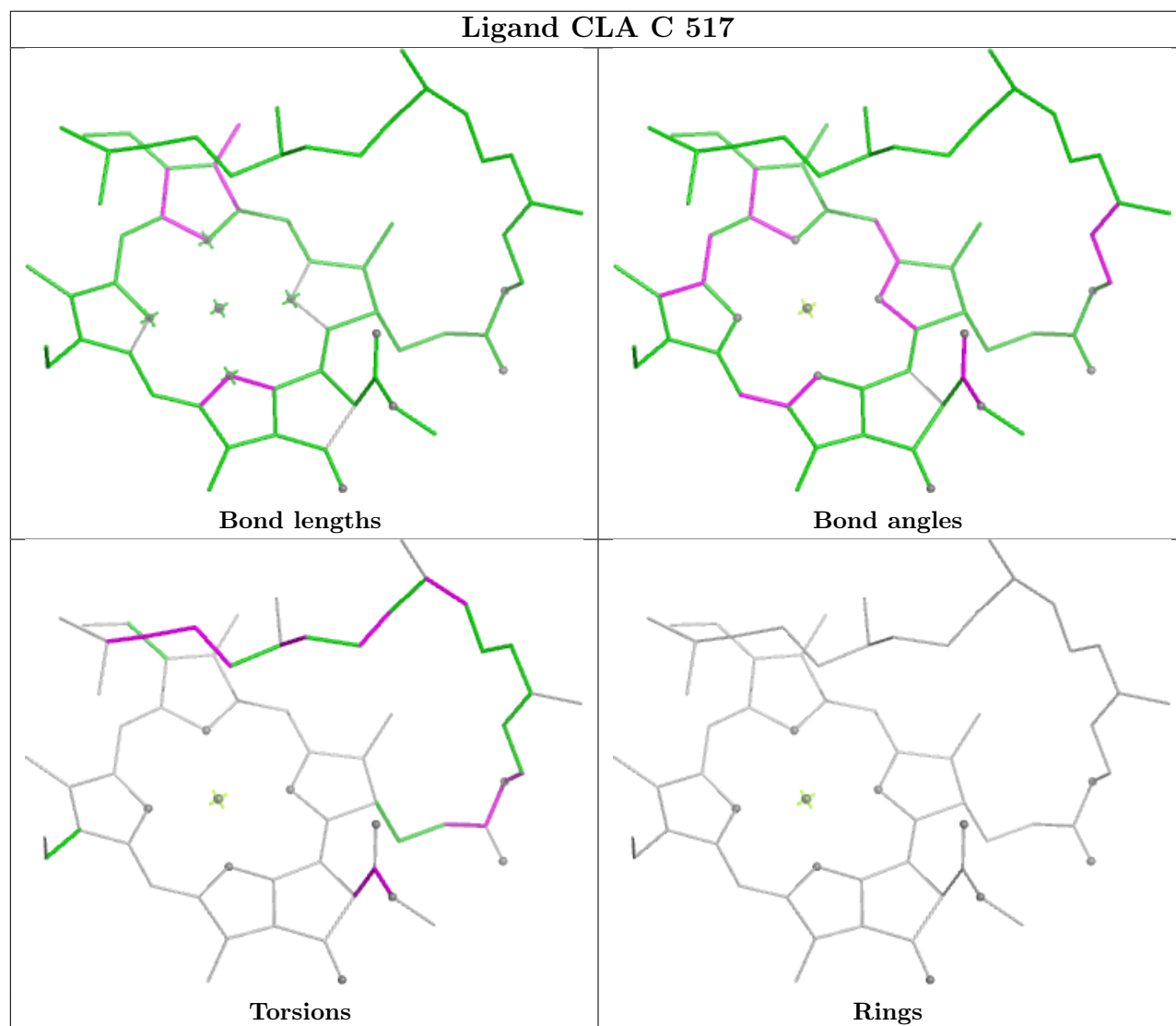
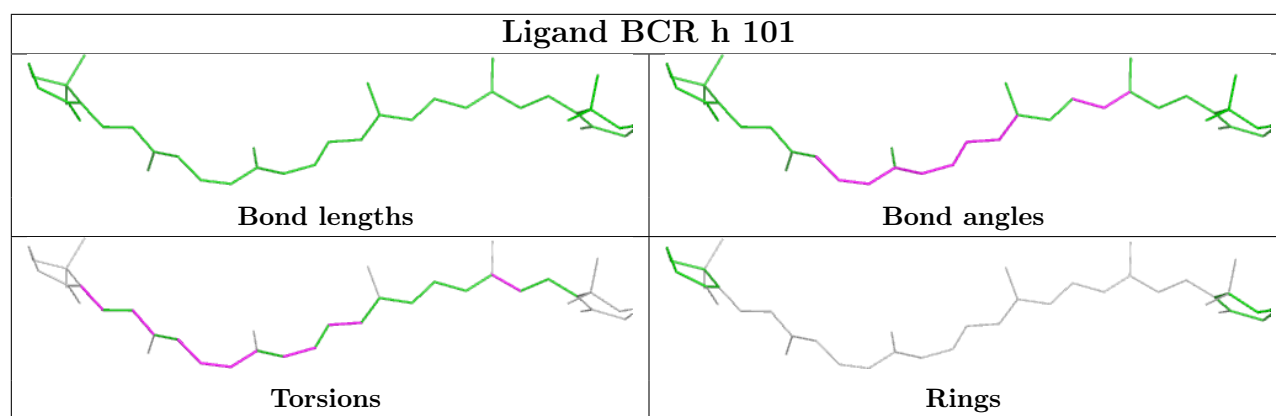


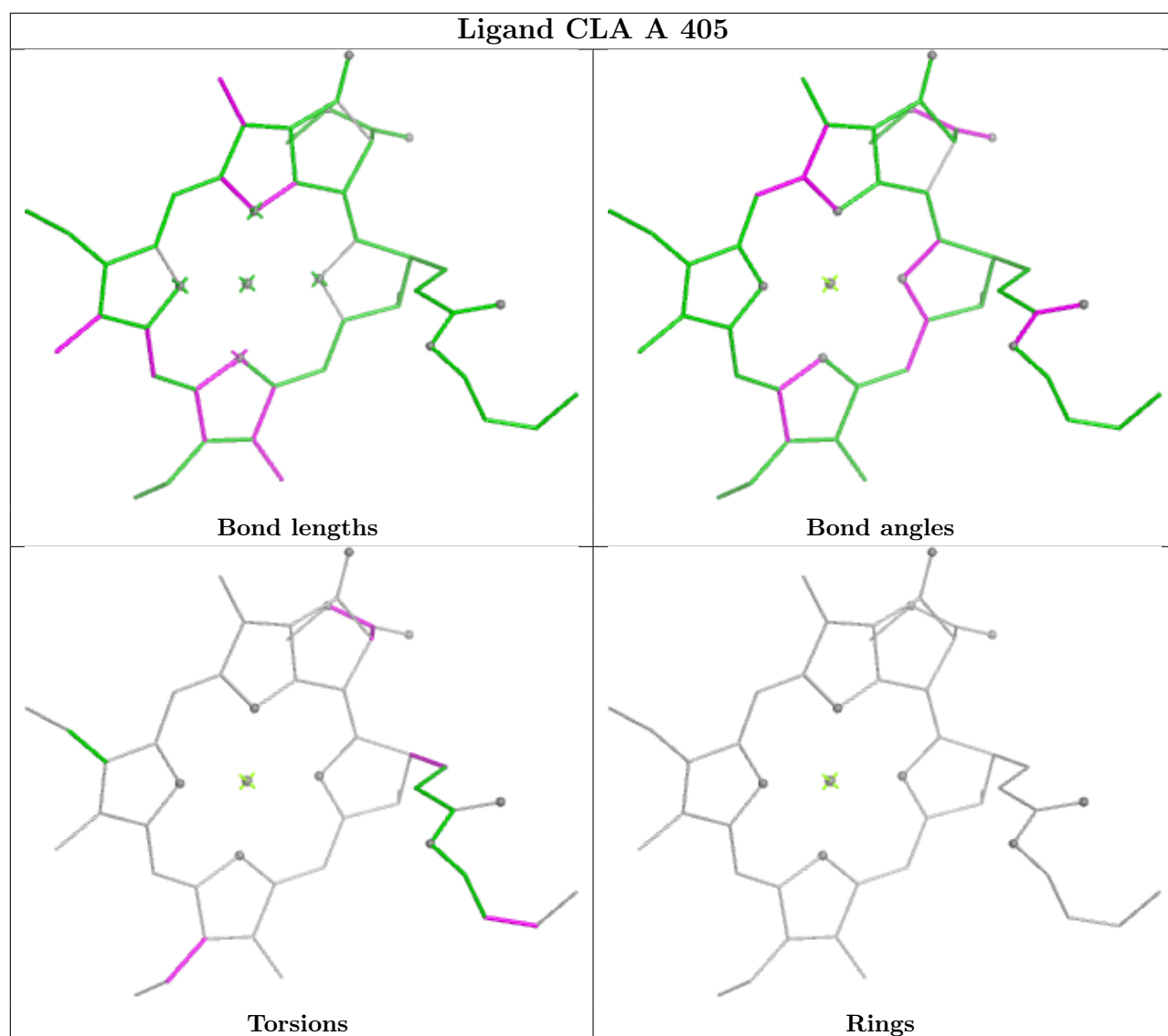


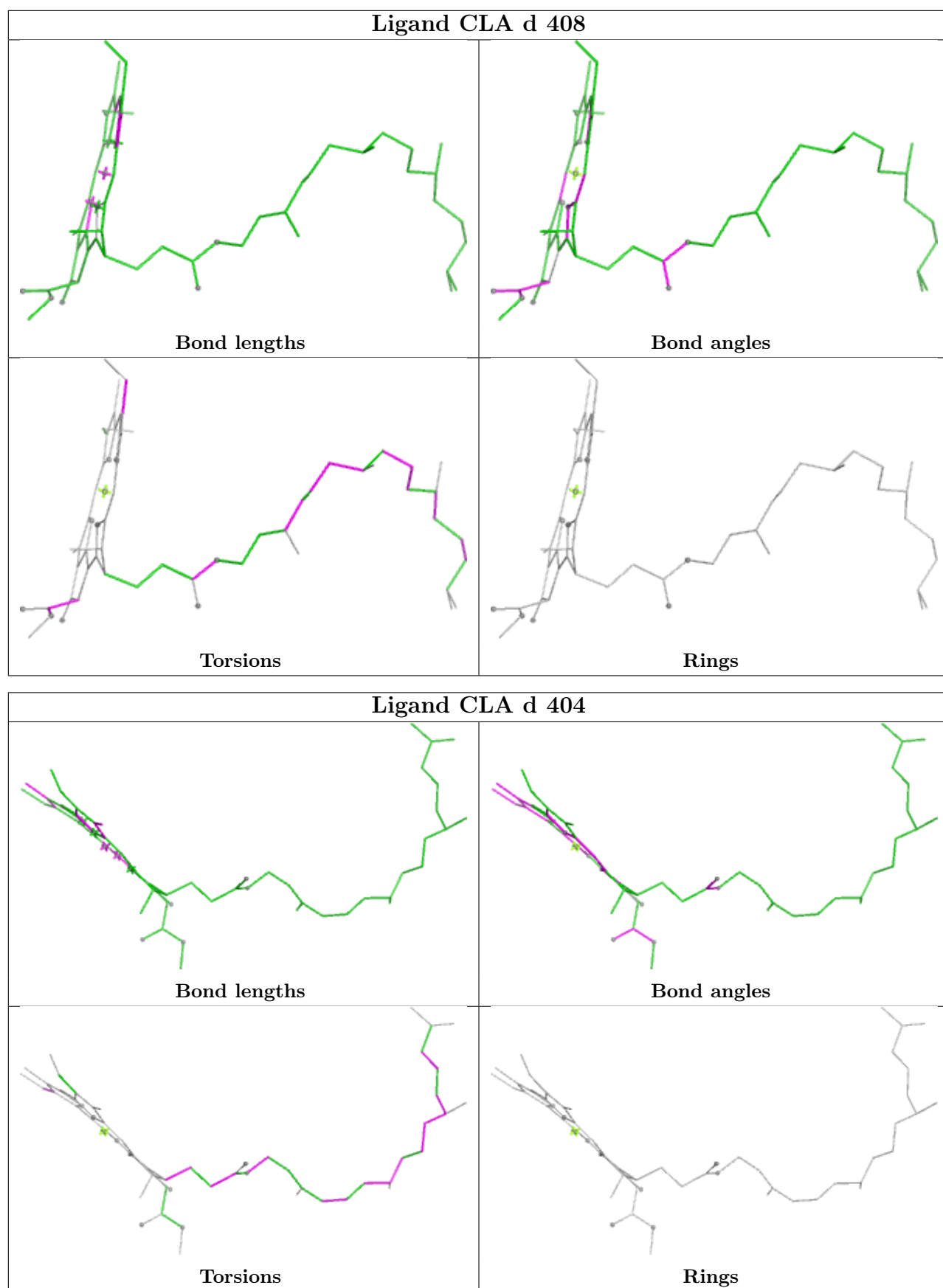












5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

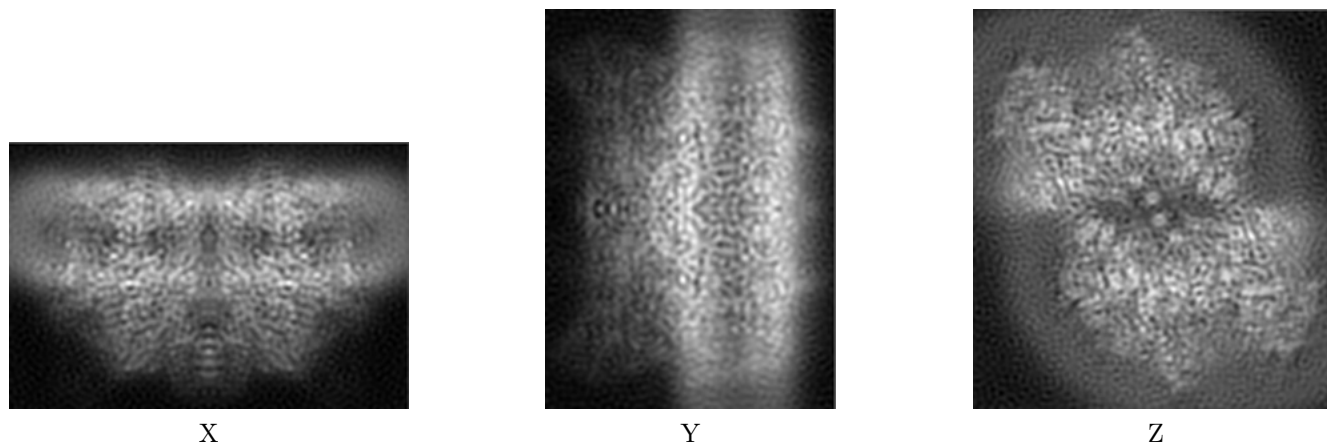
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-58358. These allow visual inspection of the internal detail of the map and identification of artifacts.

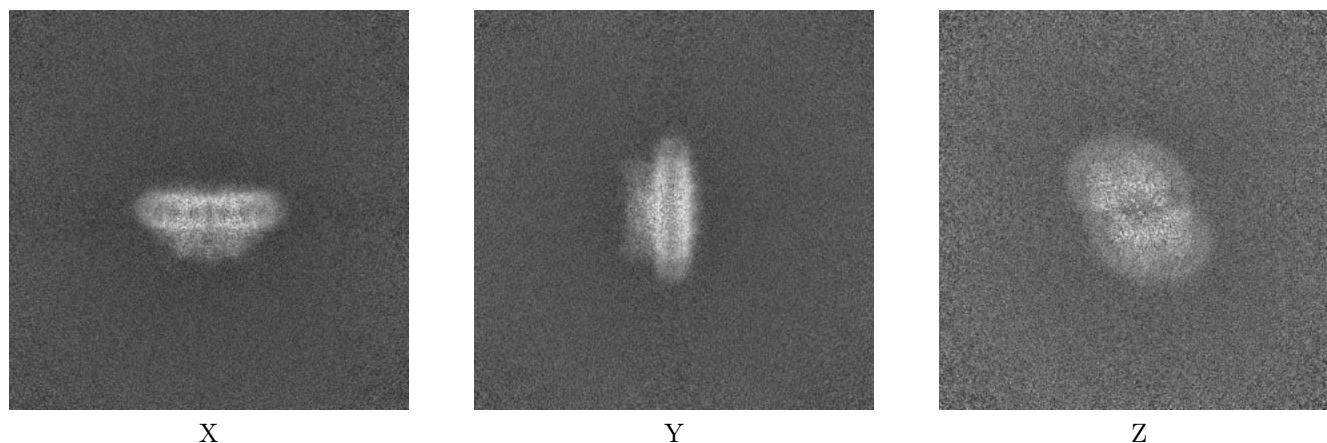
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

6.1.1 Primary map



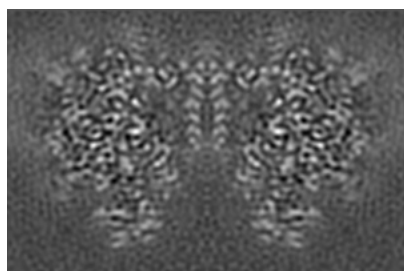
6.1.2 Raw map



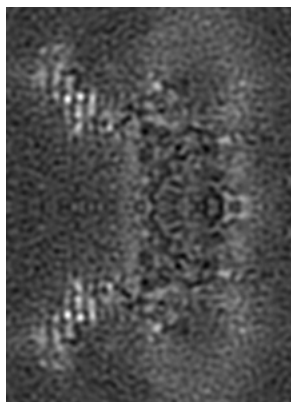
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

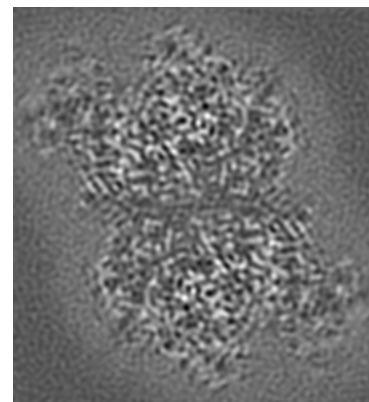
6.2.1 Primary map



X Index: 107

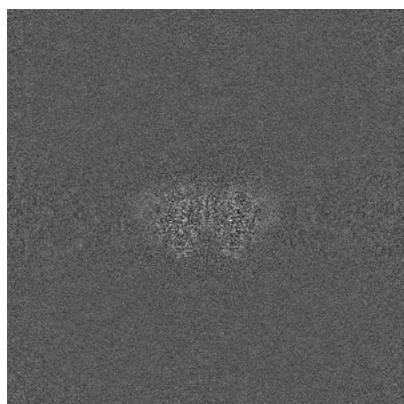


Y Index: 117

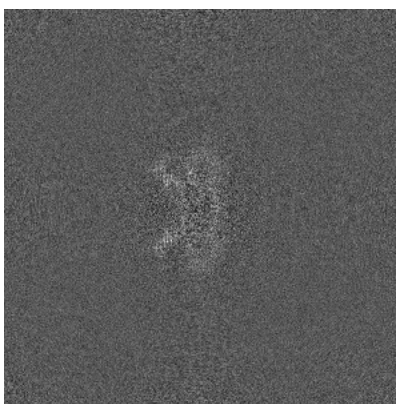


Z Index: 78

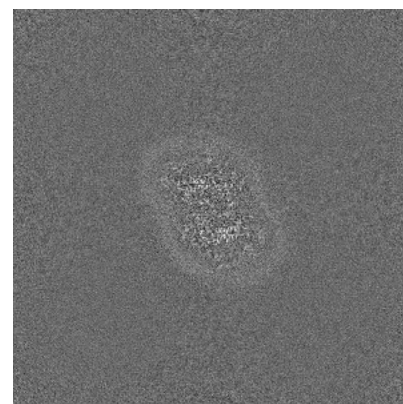
6.2.2 Raw map



X Index: 360



Y Index: 360

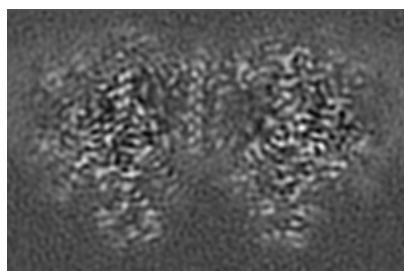


Z Index: 360

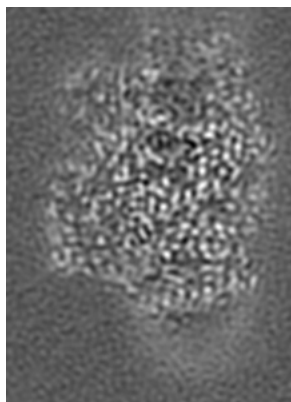
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

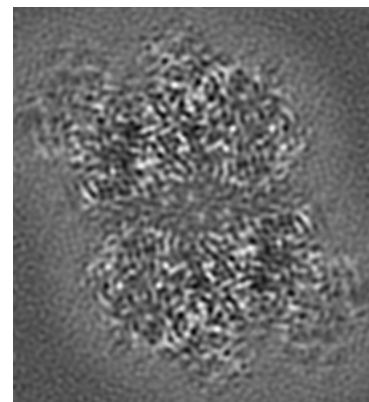
6.3.1 Primary map



X Index: 109

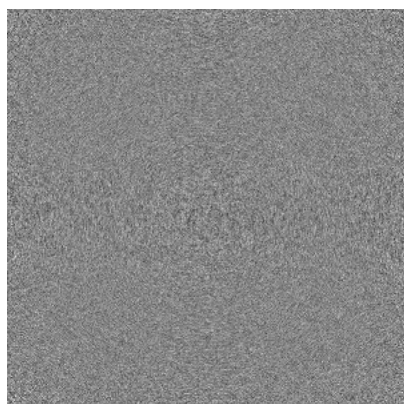


Y Index: 76

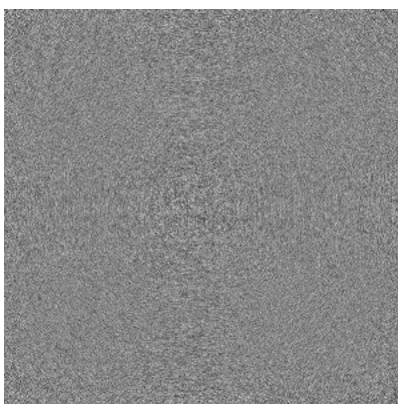


Z Index: 81

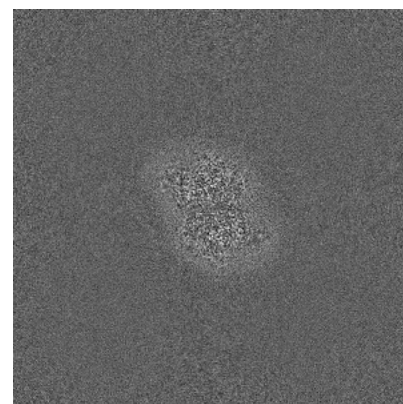
6.3.2 Raw map



X Index: 0



Y Index: 0

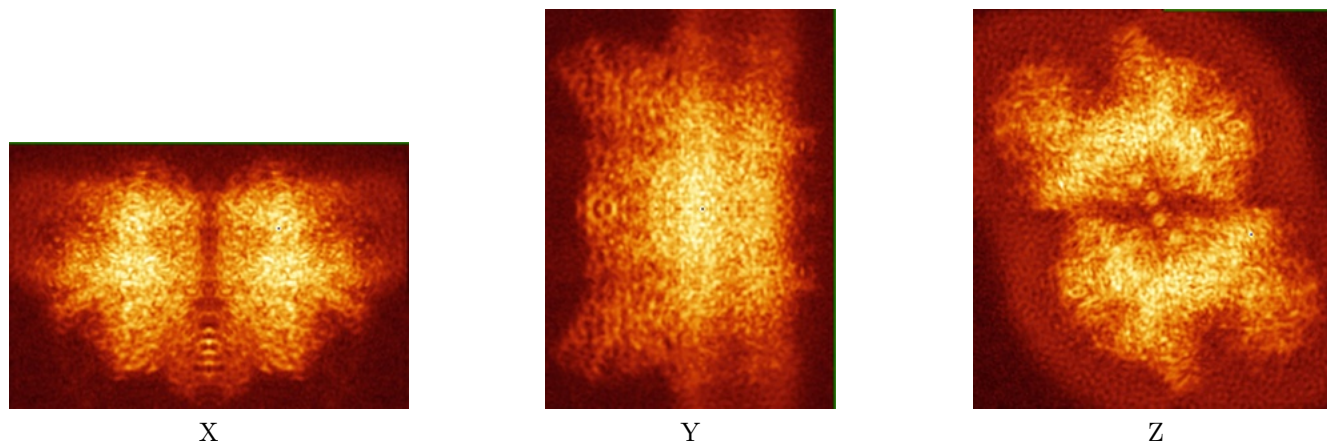


Z Index: 333

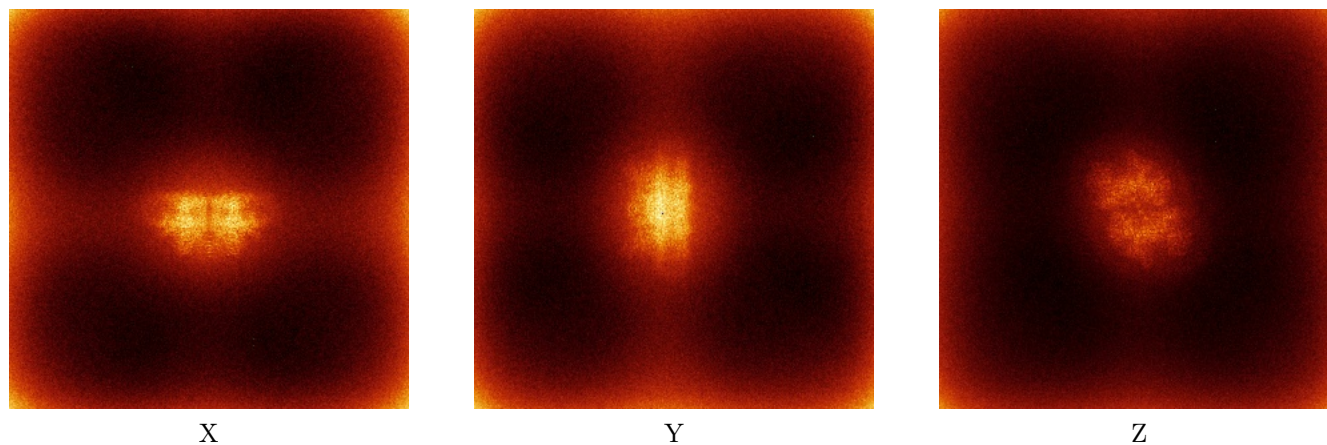
The images above show the largest variance slices of the map in three orthogonal directions.

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

6.4.1 Primary map



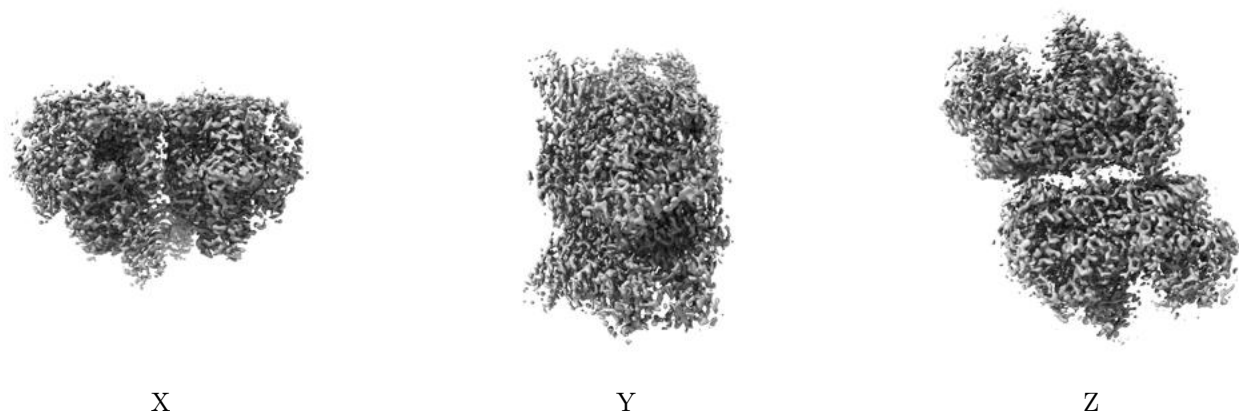
6.4.2 Raw map



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.

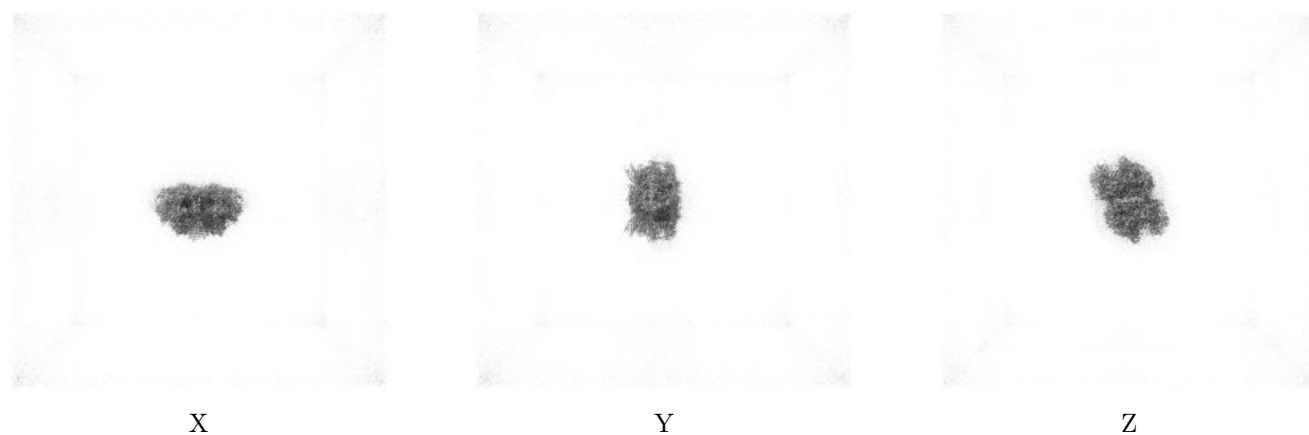
6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 2.216. 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.

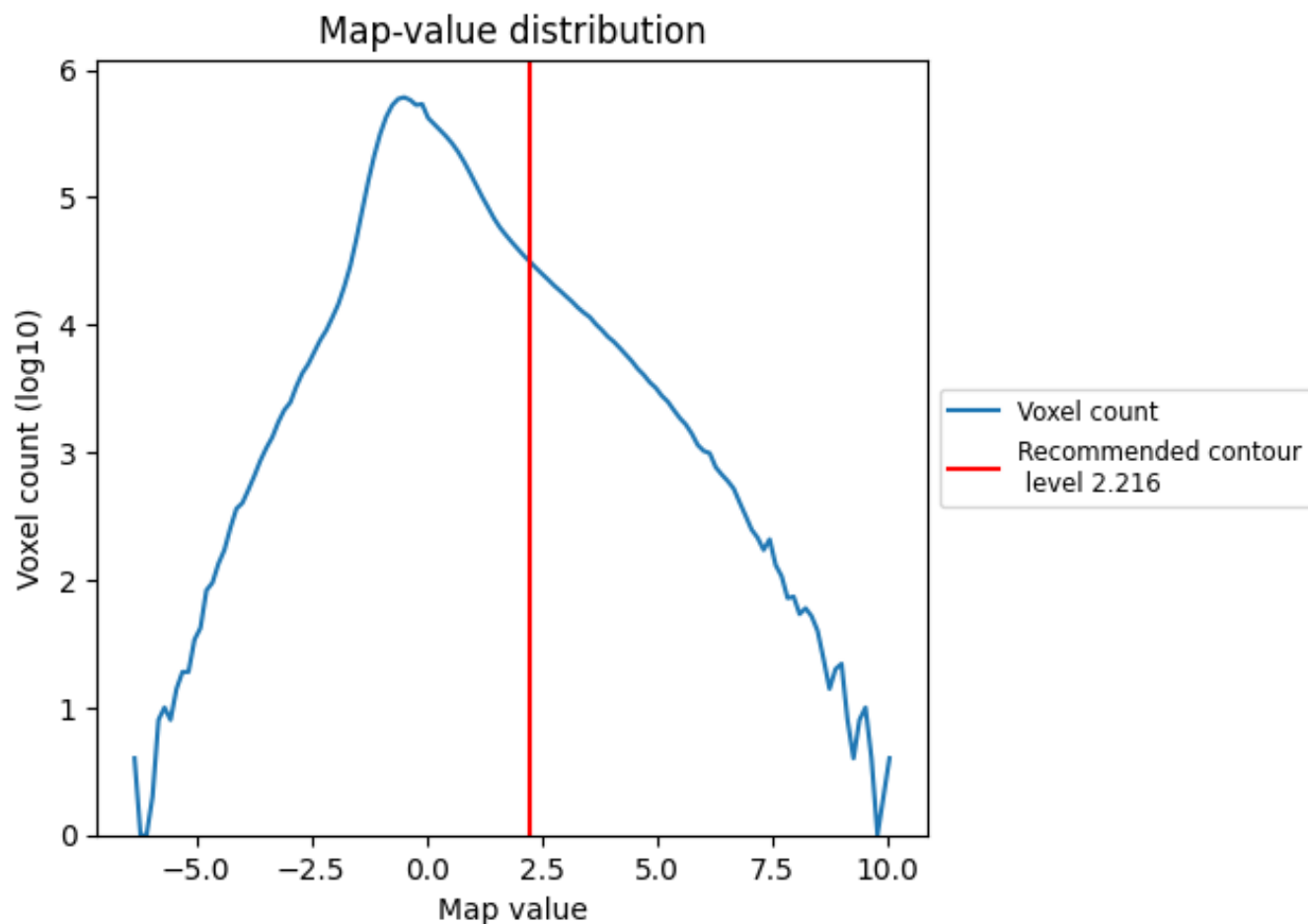
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

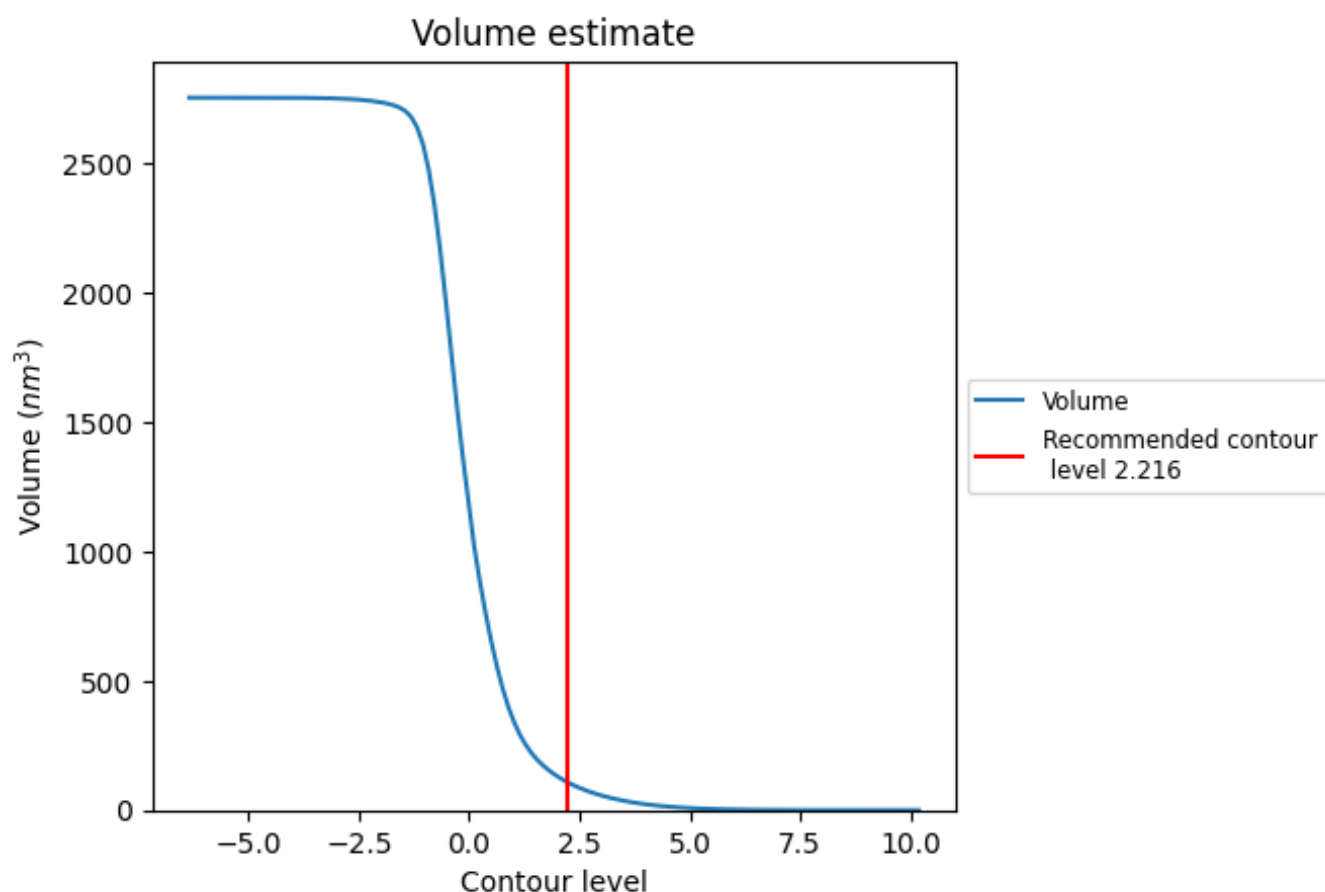
This section contains the results of statistical analysis of the map.

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 109 nm³; this corresponds to an approximate mass of 98 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.

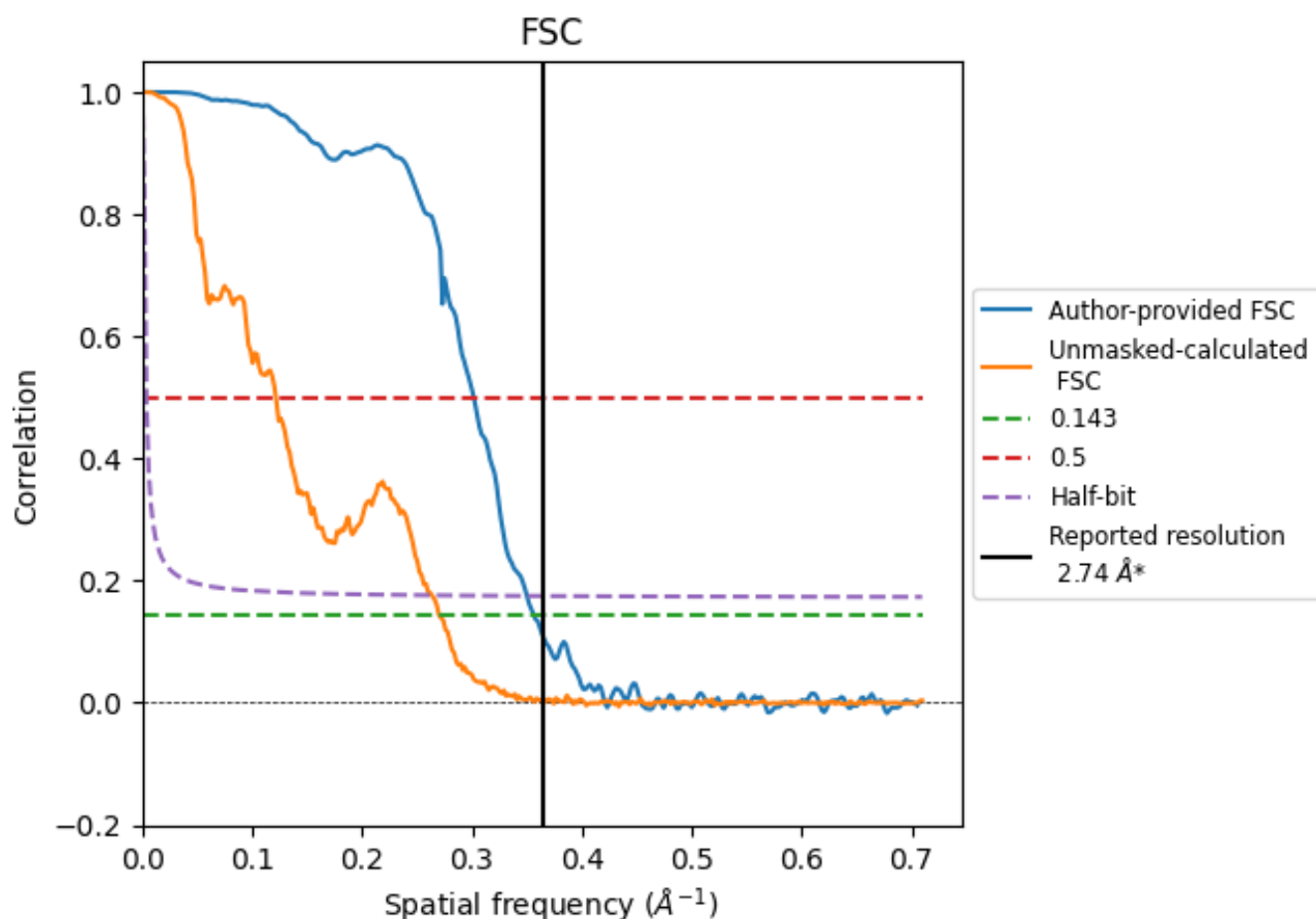
7.3 Rotationally averaged power spectrum [i](#)

This section was not generated. The rotationally averaged power spectrum is only generated for cubic maps.

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 0.365 $\text{\AA}^{-1}$

8.2 Resolution estimates [i](#)

Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	2.74	-	-
Author-provided FSC curve	2.81	3.31	2.86
Unmasked-calculated*	3.70	8.22	3.79

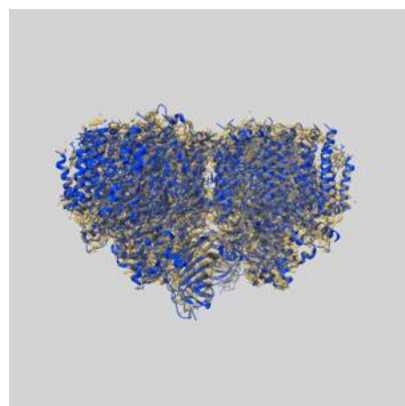
*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from deposited half-maps intersecting FSC 0.143 CUT-OFF 3.70 differs from the reported value 2.74 by more than 10 %

9 Map-model fit [i](#)

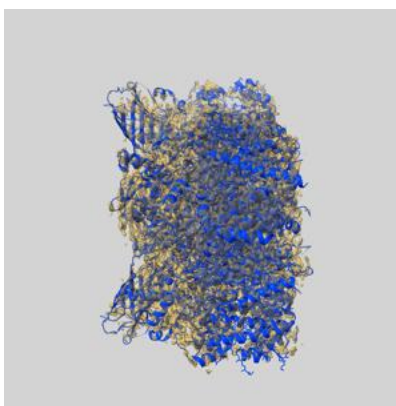
This section contains information regarding the fit between EMDB map EMD-58358 and PDB model 31FD. Per-residue inclusion information can be found in section 3 on page 20.

9.1 Map-model overlays

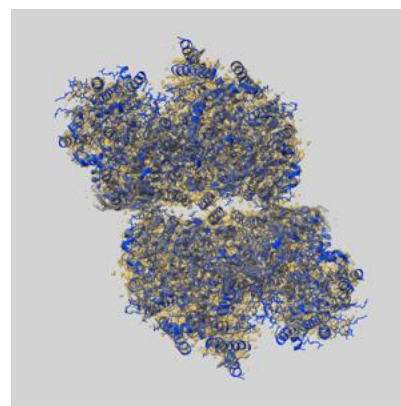
9.1.1 Map-model overlay [i](#)



X

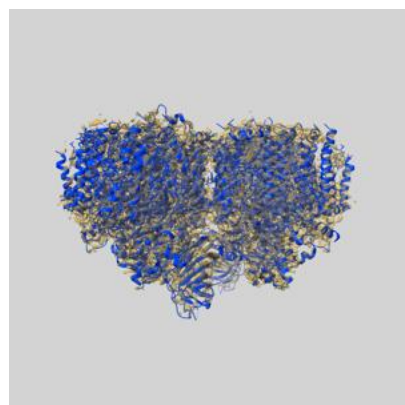


Y

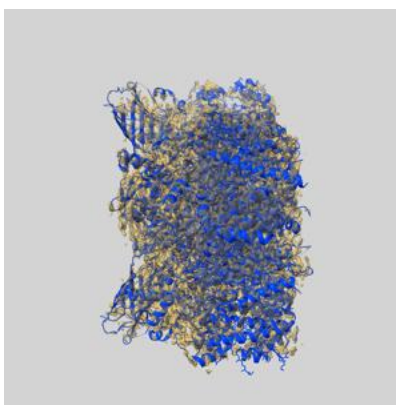


Z

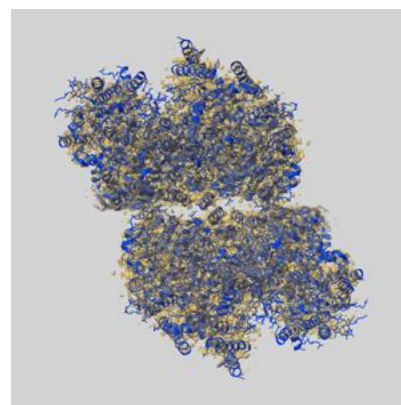
9.1.2 Map-model assembly overlay [i](#)



X



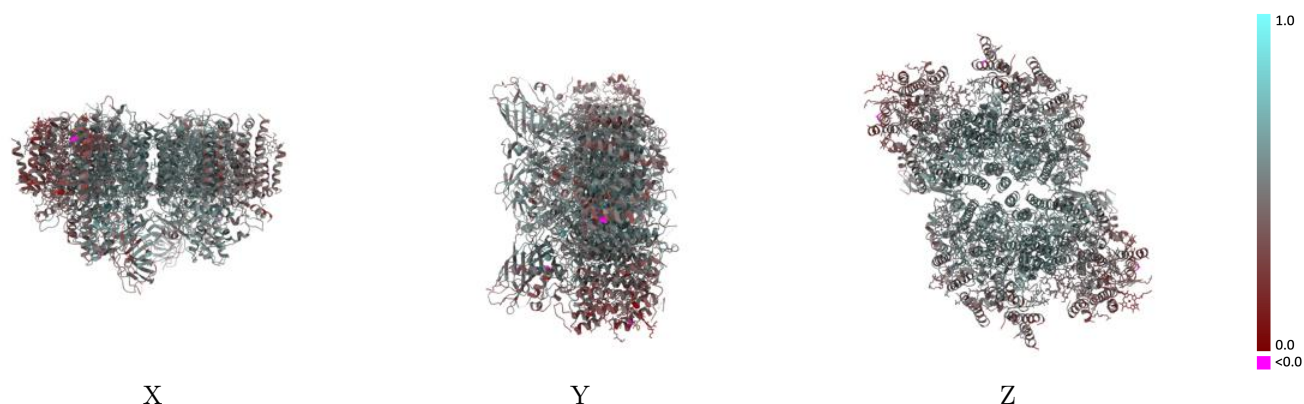
Y



Z

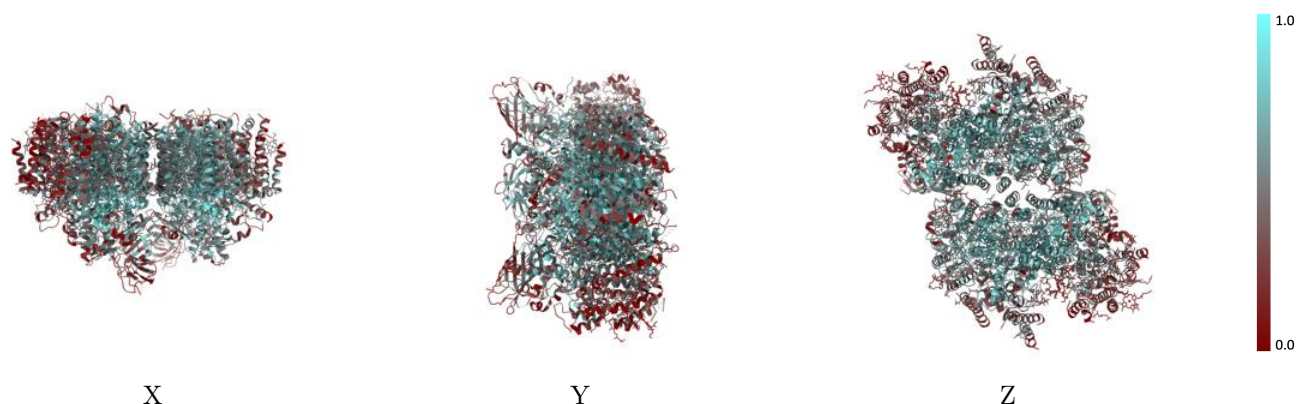
The images above show the 3D surface view of the map at the recommended contour level 2.216 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



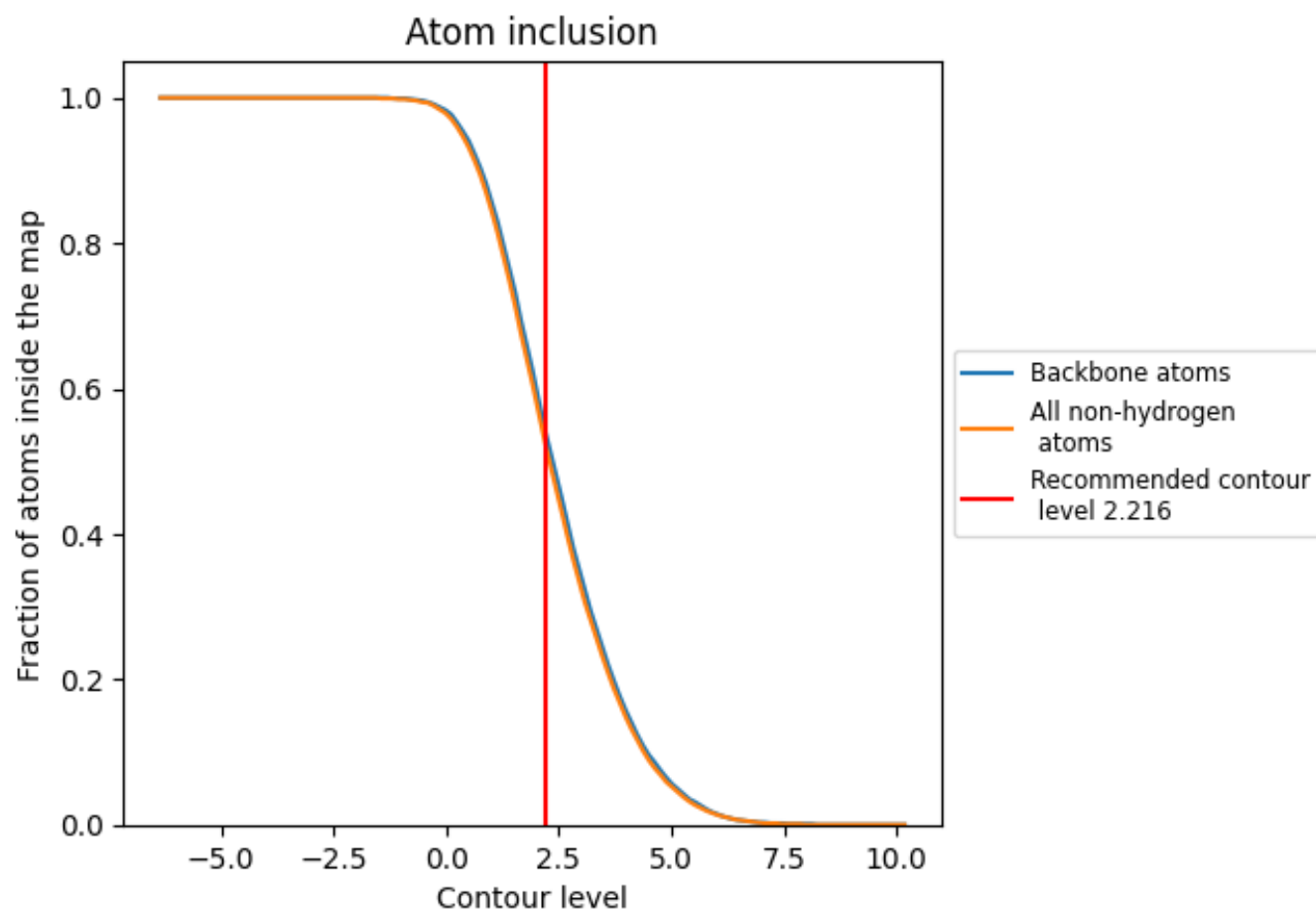
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (2.216).

9.4 Atom inclusion [i](#)



At the recommended contour level, 54% of all backbone atoms, 52% 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 (2.216) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.5200	 0.4890
A	 0.6720	 0.5470
B	 0.6150	 0.5300
C	 0.3660	 0.3980
D	 0.6820	 0.5360
E	 0.3350	 0.4060
F	 0.3750	 0.3730
H	 0.3970	 0.4580
I	 0.4530	 0.4810
K	 0.1070	 0.3610
L	 0.5880	 0.5810
M	 0.4940	 0.5510
O	 0.3300	 0.4610
T	 0.5380	 0.5670
U	 0.3880	 0.4660
X	 0.2400	 0.3900
a	 0.6720	 0.5460
b	 0.6140	 0.5280
c	 0.3620	 0.3950
d	 0.6760	 0.5300
e	 0.3410	 0.4020
f	 0.3630	 0.3720
h	 0.3830	 0.4530
i	 0.4490	 0.4930
k	 0.1070	 0.3600
l	 0.5790	 0.5750
m	 0.4850	 0.5580
o	 0.3320	 0.4670
t	 0.5380	 0.5670
u	 0.3990	 0.4650
x	 0.2280	 0.3800

