



Full wwPDB EM Validation Report ⓘ

Sep 28, 2026 – 12:36 PM JST

PDB ID : 9XK4 / pdb_00009xk4
EMDB ID : EMD-66947
Title : In situ C2S2M2L4-type PSII-LHCII supercomplex, core, protomer 2
Authors : Li, J.; Elias, E.; Zhang, K.; Croce, R.; Zhu, J.
Deposited on : 2025-11-05
Resolution : 2.78 Å(reported)

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

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

A user guide is available at

<https://www.wwpdb.org/validation/2017/EMValidationReportHelp>

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

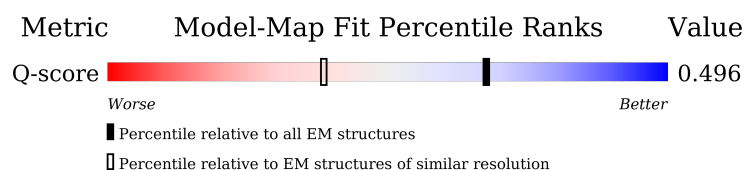
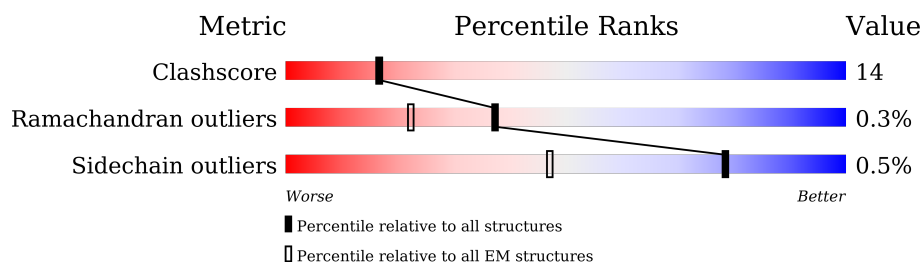
EMDB validation analysis : 0.0.1.dev133
Mogul : 1.8.5 (274361), CSD as541be (2020)
MolProbity : 4-5-2 with Phenix2.2
Buster-report : wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics : 20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics : 202505.v01 (Using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

1 Overall quality at a glance

The following experimental techniques were used to determine the structure:
ELECTRON MICROSCOPY

The reported resolution of this entry is 2.78 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	10754 (2.28 - 3.28)

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	1a	333	64% 35% .
2	1b	503	71% 28%
3	1c	450	74% 26%
4	1d	341	66% 34% .

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Mol	Chain	Length	Quality of chain
5	1e	75	
6	1f	31	
7	1h	60	
8	1i	34	
9	1j	35	
10	1k	37	
11	1l	37	
12	1m	34	
13	1o	248	
14	1p	186	
15	1t	32	
16	1u	27	
17	1v	105	
18	1w	44	
19	1x	39	
20	1y	36	
21	1z	62	

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
26	CLA	1a	408	X	-	-	-
26	CLA	1b	601	X	-	-	-
26	CLA	1b	602	X	-	-	-
26	CLA	1b	603	X	-	-	-
26	CLA	1b	605	X	-	-	-
26	CLA	1b	607	X	-	-	-
26	CLA	1b	608	X	-	-	-
26	CLA	1b	609	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
26	CLA	1b	610	X	-	-	-
26	CLA	1b	611	X	-	-	-
26	CLA	1b	612	X	-	-	-
26	CLA	1b	613	X	-	-	-
26	CLA	1b	614	X	-	-	-
26	CLA	1b	615	X	-	-	-
26	CLA	1c	502	X	-	-	-
26	CLA	1c	503	X	-	-	-
26	CLA	1c	504	X	-	-	-
26	CLA	1c	505	X	-	-	-
26	CLA	1c	507	X	-	-	-
26	CLA	1c	508	X	-	-	-
26	CLA	1c	509	X	-	-	-
26	CLA	1c	511	X	-	-	-
26	CLA	1c	513	X	-	-	-
26	CLA	1c	514	X	-	-	-
26	CLA	1d	403	X	-	-	-
26	CLA	1d	406	X	-	-	-
26	CLA	1d	407	X	-	-	-
30	PL9	1a	413	-	-	X	-

2 Entry composition

There are 35 unique types of molecules in this entry. The entry contains 25527 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	1a	333	Total	C	N	O	S	0	0
			2606	1703	429	461	13		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
2	1b	503	Total	C	N	O	S	0	0
			3945	2577	663	693	12		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
3	1c	450	Total	C	N	O	S	0	0
			3498	2304	583	601	10		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
4	1d	341	Total	C	N	O	S	0	0
			2716	1794	444	466	12		

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

Mol	Chain	Residues	Atoms				AltConf	Trace
5	1e	75	Total	C	N	O	0	0
			614	400	100	114		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
6	1f	30	Total	C	N	O	S	0	0
			241	162	41	37	1		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
7	1h	60	Total	C	N	O	S	0	0
			454	299	73	79	3		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
8	1i	34	Total	C	N	O	S	0	0
			277	190	43	43	1		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
9	1j	35	Total	C	N	O	S	0	0
			255	172	39	44			

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

Mol	Chain	Residues	Atoms					AltConf	Trace
10	1k	37	Total	C	N	O	S	0	0
			305	214	44	46	1		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
11	1l	35	Total	C	N	O	S	0	0
			295	196	46	53			

- Molecule 12 is a protein called Photosystem II reaction center protein M.

Mol	Chain	Residues	Atoms					AltConf	Trace
12	1m	33	Total	C	N	O	S	0	0
			251	173	37	41			

- Molecule 13 is a protein called 33 kDa subunit of oxygen evolving system of photosystem II.

Mol	Chain	Residues	Atoms					AltConf	Trace
13	1o	237	Total	C	N	O	S	0	0
			1795	1136	294	360	5		

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
1o	248	SER	-	insertion	UNP Q943W1

- Molecule 14 is a protein called 23 kDa subunit of oxygen evolving system of photosystem II.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	1p	186	Total	C	N	O	S	0	0
			1422	901	236	284	1		

- Molecule 15 is a protein called Photosystem II reaction center protein T.

Mol	Chain	Residues	Atoms					AltConf	Trace
15	1t	31	Total	C	N	O	S	0	0
			252	176	35	40	1		

- Molecule 16 is a protein called Os02g0581100 protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
16	1u	27	Total	C	N	O	S	0	0
			208	130	39	36	3		

- Molecule 17 is a protein called Photosystem II 10 kDa polypeptide, chloroplastic.

Mol	Chain	Residues	Atoms				AltConf	Trace
17	1v	99	Total	C	N	O	0	0
			683	437	113	133		

- Molecule 18 is a protein called Photosystem II reaction center W protein, chloroplastic.

Mol	Chain	Residues	Atoms					AltConf	Trace
18	1w	44	Total	C	N	O	S	0	0
			333	219	51	62	1		

- Molecule 19 is a protein called Os07g0673550 protein.

Mol	Chain	Residues	Atoms				AltConf	Trace
19	1x	38	Total	C	N	O	0	0
			272	179	45	48		

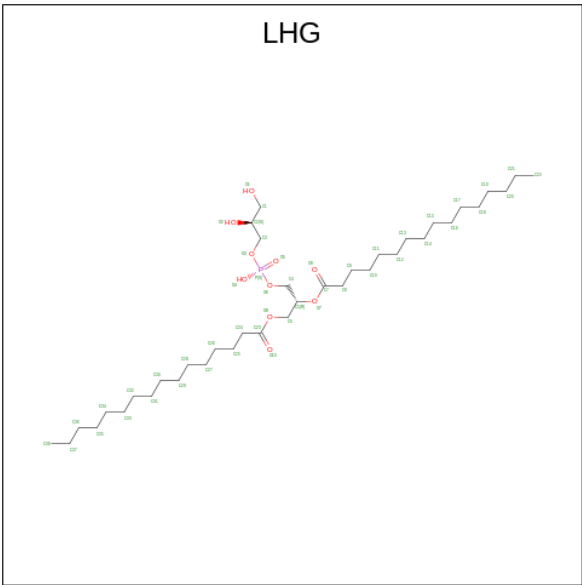
- Molecule 20 is a protein called Os08g0119800 protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
20	1y	34	Total	C	N	O	S	0	0
			268	175	50	42	1		

- Molecule 21 is a protein called Photosystem II reaction center protein Z.

Mol	Chain	Residues	Atoms					AltConf	Trace
21	1z	62	Total	C	N	O	S	0	0
			466	313	70	82	1		

- Molecule 22 is 1,2-DIPALMITOYL-PHOSPHATIDYL-GLYCEROLE (CCD ID: LHG) (formula: C₃₈H₇₅O₁₀P) (labeled as "Ligand of Interest" by depositor).



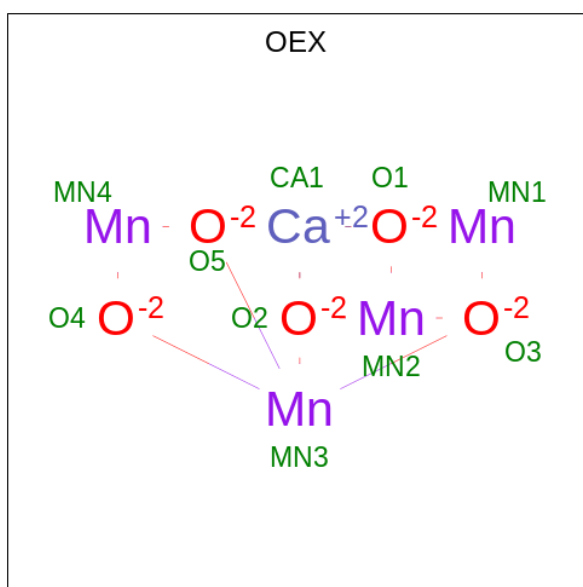
Mol	Chain	Residues	Atoms				AltConf
22	1a	1	Total	C	O	P	0
			32	21	10	1	
22	1a	1	Total	C	O	P	0
			41	30	10	1	
22	1b	1	Total	C	O	P	0
			27	18	8	1	
22	1b	1	Total	C	O	P	0
			36	25	10	1	
22	1b	1	Total	C	O	P	0
			45	34	10	1	
22	1b	1	Total	C	O	P	0
			49	38	10	1	
22	1c	1	Total	C	O	P	0
			29	20	8	1	

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Mol	Chain	Residues	Atoms				AltConf
22	1c	1	Total	C	O	P	0
			42	31	10	1	
22	1d	1	Total	C	O	P	0
			39	28	10	1	
22	1d	1	Total	C	O	P	0
			38	27	10	1	
22	1e	1	Total	C	O	P	0
			42	31	10	1	
22	1j	1	Total	C	O	P	0
			41	30	10	1	
22	1v	1	Total	C	O	P	0
			41	30	10	1	
22	1w	1	Total	C	O	P	0
			35	26	8	1	
22	1w	1	Total	C	O	P	0
			42	31	10	1	
22	1w	1	Total	C	O	P	0
			37	27	9	1	

- Molecule 23 is CA-MN4-O5 CLUSTER (CCD ID: OEX) (formula: CaMn_4O_5) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms				AltConf
23	1a	1	Total	Ca	Mn	O	0
			10	1	4	5	

- Molecule 24 is FE (II) ION (CCD ID: FE2) (formula: Fe) (labeled as "Ligand of Interest")

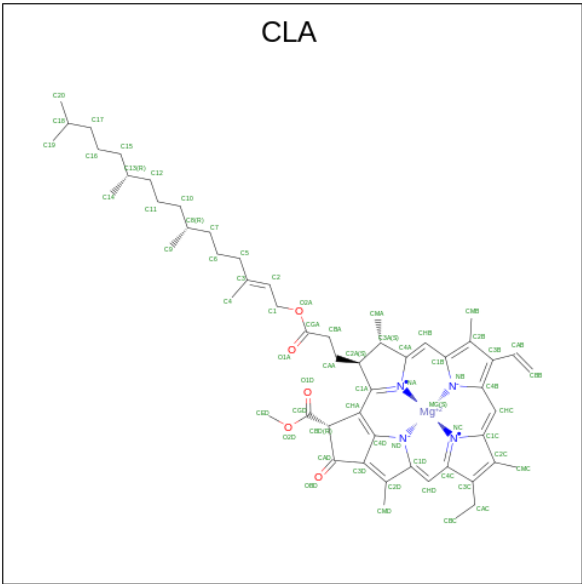
by depositor).

Mol	Chain	Residues	Atoms		AltConf
24	1a	1	Total	Fe	0
			1	1	

- Molecule 25 is CHLORIDE ION (CCD ID: CL) (formula: Cl) (labeled as "Ligand of Interest" by depositor).

Mol	Chain	Residues	Atoms		AltConf
25	1a	1	Total	Cl	0
			1	1	
25	1c	1	Total	Cl	0
			1	1	

- Molecule 26 is CHLOROPHYLL A (CCD ID: CLA) (formula: C₅₅H₇₂MgN₄O₅) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms					AltConf
26	1a	1	Total	C	Mg	N	O	0
			52	42	1	4	5	
26	1a	1	Total	C	Mg	N	O	0
			50	40	1	4	5	
26	1a	1	Total	C	Mg	N	O	0
			60	50	1	4	5	
26	1b	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
26	1b	1	Total	C	Mg	N	O	0
			56	46	1	4	5	

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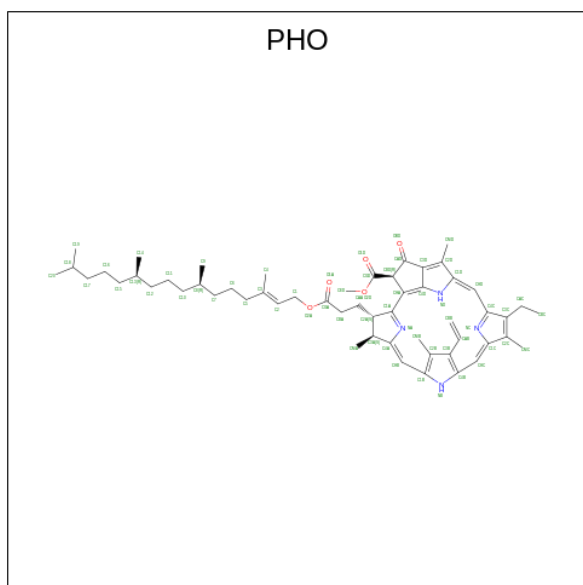
Mol	Chain	Residues	Atoms					AltConf
26	1b	1	Total 65	C 55	Mg 1	N 4	O 5	0
26	1b	1	Total 42	C 34	Mg 1	N 4	O 3	0
26	1b	1	Total 58	C 48	Mg 1	N 4	O 5	0
26	1b	1	Total 50	C 40	Mg 1	N 4	O 5	0
26	1b	1	Total 59	C 49	Mg 1	N 4	O 5	0
26	1b	1	Total 65	C 55	Mg 1	N 4	O 5	0
26	1b	1	Total 61	C 51	Mg 1	N 4	O 5	0
26	1b	1	Total 65	C 55	Mg 1	N 4	O 5	0
26	1b	1	Total 65	C 55	Mg 1	N 4	O 5	0
26	1b	1	Total 58	C 48	Mg 1	N 4	O 5	0
26	1b	1	Total 60	C 50	Mg 1	N 4	O 5	0
26	1b	1	Total 65	C 55	Mg 1	N 4	O 5	0
26	1b	1	Total 61	C 51	Mg 1	N 4	O 5	0
26	1b	1	Total 45	C 35	Mg 1	N 4	O 5	0
26	1c	1	Total 65	C 55	Mg 1	N 4	O 5	0
26	1c	1	Total 60	C 50	Mg 1	N 4	O 5	0
26	1c	1	Total 65	C 55	Mg 1	N 4	O 5	0
26	1c	1	Total 55	C 45	Mg 1	N 4	O 5	0
26	1c	1	Total 52	C 42	Mg 1	N 4	O 5	0
26	1c	1	Total 55	C 45	Mg 1	N 4	O 5	0
26	1c	1	Total 65	C 55	Mg 1	N 4	O 5	0

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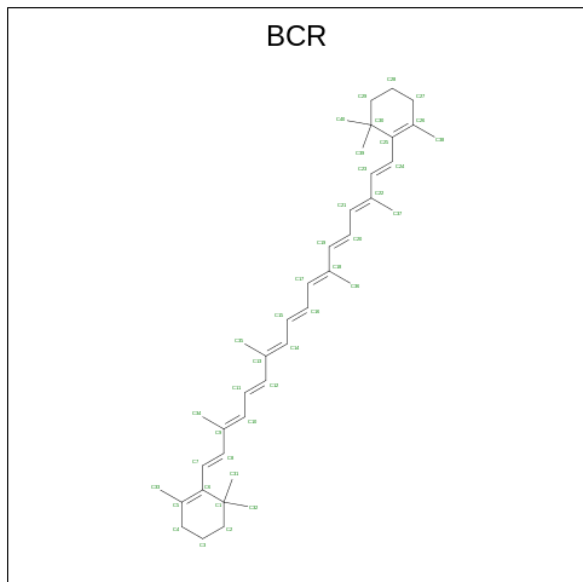
Mol	Chain	Residues	Atoms					AltConf
26	1c	1	Total	C	Mg	N	O	0
			59	49	1	4	5	
26	1c	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
26	1c	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
26	1c	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
26	1c	1	Total	C	Mg	N	O	0
			61	51	1	4	5	
26	1c	1	Total	C	Mg	N	O	0
			59	49	1	4	5	
26	1d	1	Total	C	Mg	N	O	0
			59	49	1	4	5	
26	1d	1	Total	C	Mg	N	O	0
			60	50	1	4	5	
26	1d	1	Total	C	Mg	N	O	0
			55	45	1	4	5	

- Molecule 27 is PHEOPHYTIN A (CCD ID: PHO) (formula: $C_{55}H_{74}N_4O_5$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms				AltConf
27	1a	1	Total	C	N	O	0
			40	33	4	3	
27	1d	1	Total	C	N	O	0
			64	55	4	5	

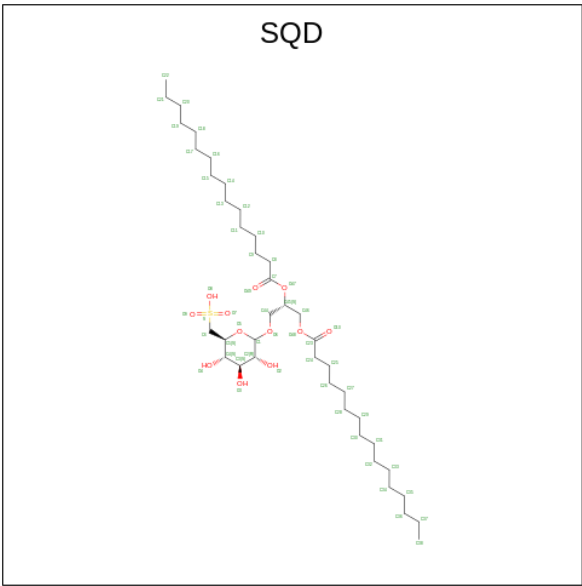
- Molecule 28 is BETA-CAROTENE (CCD ID: BCR) (formula: $C_{40}H_{56}$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms	AltConf
28	1a	1	Total C 40 40	0
28	1b	1	Total C 40 40	0
28	1b	1	Total C 40 40	0
28	1b	1	Total C 40 40	0
28	1c	1	Total C 40 40	0
28	1d	1	Total C 40 40	0
28	1h	1	Total C 40 40	0
28	1i	1	Total C 40 40	0
28	1j	1	Total C 40 40	0
28	1k	1	Total C 40 40	0
28	1t	1	Total C 40 40	0

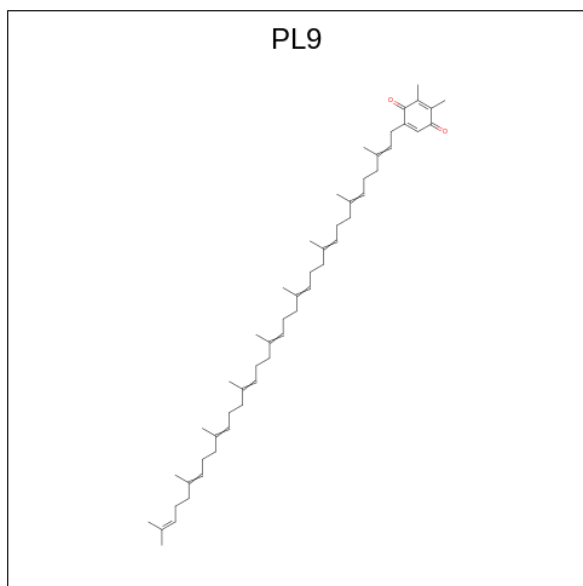
- Molecule 29 is 1,2-DI-O-ACYL-3-O-[6-DEOXY-6-SULFO-ALPHA-D-GLUCOPYRANOSYL]-SN-GLYCEROL (CCD ID: SQD) (formula: $C_{41}H_{78}O_{12}S$) (labeled as "Ligand of Interest")

by depositor).



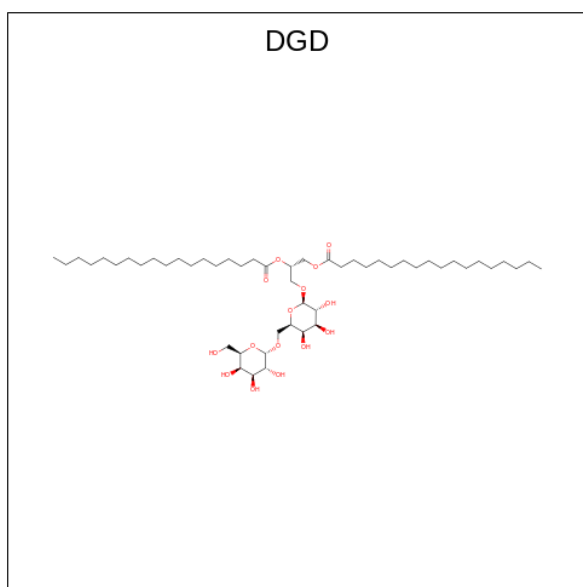
Mol	Chain	Residues	Atoms				AltConf
29	1a	1	Total	C	O	S	0
			50	37	12	1	
29	1a	1	Total	C	O	S	0
			54	41	12	1	
29	1a	1	Total	C	O	S	0
			46	33	12	1	
29	1b	1	Total	C	O	S	0
			53	40	12	1	
29	1b	1	Total	C	O	S	0
			54	41	12	1	
29	1b	1	Total	C	O	S	0
			48	35	12	1	
29	1c	1	Total	C	O	S	0
			54	41	12	1	
29	1c	1	Total	C	O	S	0
			44	31	12	1	
29	1d	1	Total	C	O	S	0
			48	35	12	1	
29	1d	1	Total	C	O	S	0
			39	26	12	1	
29	1i	1	Total	C	O	S	0
			40	27	12	1	
29	1l	1	Total	C	O	S	0
			42	29	12	1	
29	1w	1	Total	C	O	S	0
			40	27	12	1	

- Molecule 30 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: $C_{53}H_{80}O_2$) (labeled as "Ligand of Interest" by depositor).



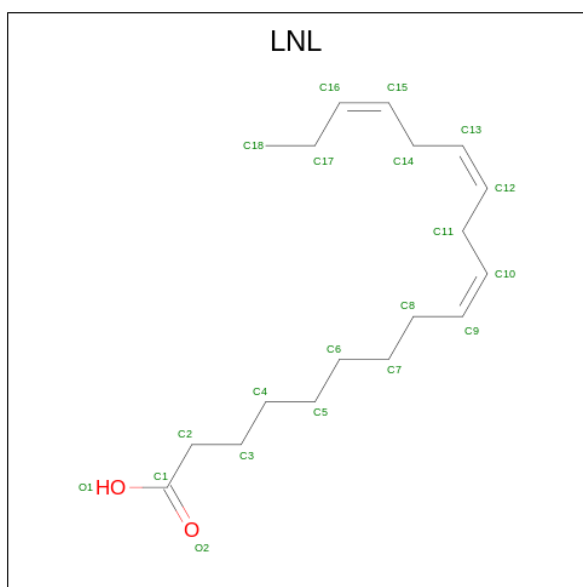
Mol	Chain	Residues	Atoms			AltConf
30	1a	1	Total	C	O	0
			55	53	2	
30	1d	1	Total	C	O	0
			55	53	2	
30	1e	1	Total	C	O	0
			21	19	2	
30	1h	1	Total	C	O	0
			55	53	2	

- Molecule 31 is DIGALACTOSYL DIACYL GLYCEROL (DGDG) (CCD ID: DGD) (formula: $C_{51}H_{96}O_{15}$) (labeled as "Ligand of Interest" by depositor).



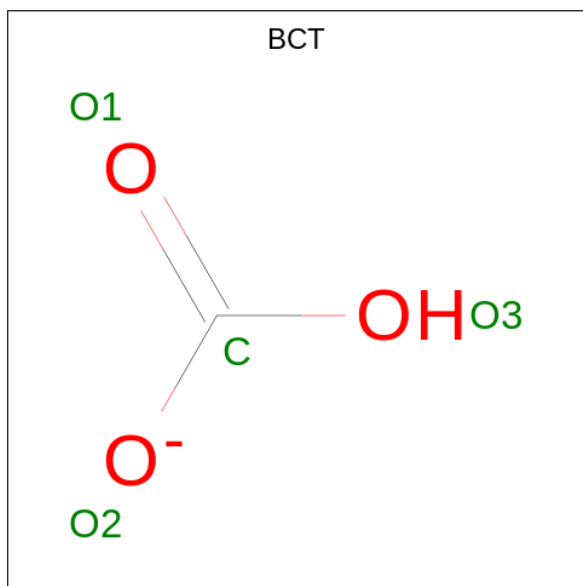
Mol	Chain	Residues	Atoms			AltConf
31	1b	1	Total	C	O	0
			55	40	15	
31	1b	1	Total	C	O	0
			62	47	15	
31	1c	1	Total	C	O	0
			47	32	15	
31	1c	1	Total	C	O	0
			52	37	15	
31	1c	1	Total	C	O	0
			57	42	15	

- Molecule 32 is ALPHA-LINOLENIC ACID (CCD ID: LNL) (formula: C₁₈H₃₀O₂) (labeled as "Ligand of Interest" by depositor).



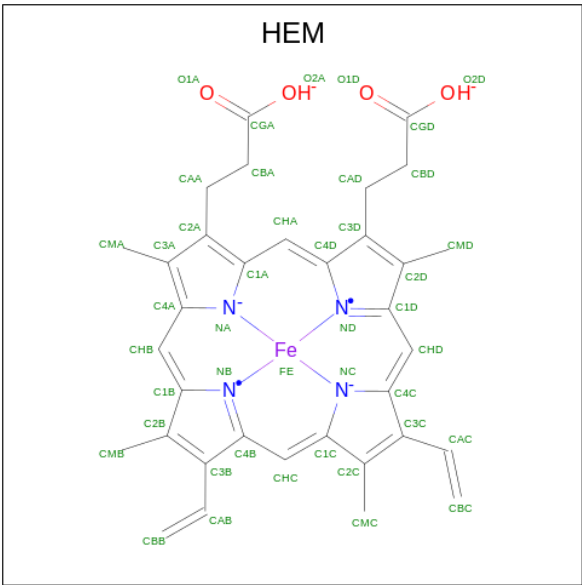
Mol	Chain	Residues	Atoms			AltConf
32	1c	1	Total	C	O	0
			17	15	2	

- Molecule 33 is BICARBONATE ION (CCD ID: BCT) (formula: CHO_3) (labeled as "Ligand of Interest" by depositor).



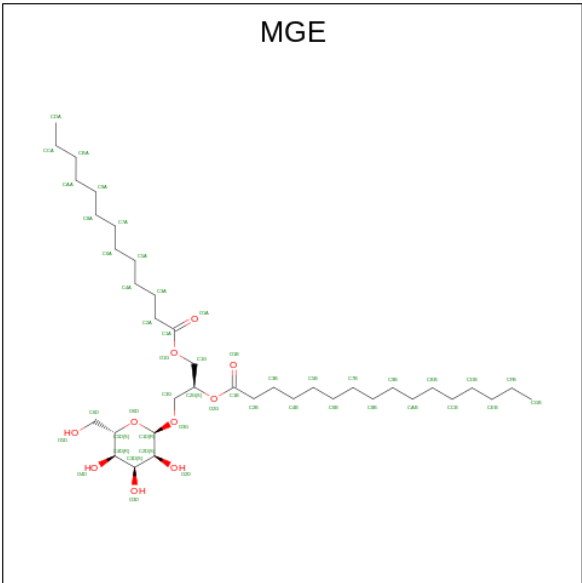
Mol	Chain	Residues	Atoms			AltConf
33	1d	1	Total	C	O	0
			4	1	3	

- Molecule 34 is PROTOPORPHYRIN IX CONTAINING FE (CCD ID: HEM) (formula: $\text{C}_{34}\text{H}_{32}\text{FeN}_4\text{O}_4$) (labeled as "Ligand of Interest" by depositor).



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

- Molecule 35 is (1S)-2-(ALPHA-L-ALLOPYRANOSYLOXY)-1-[(TRIDECANOYLOXY)METHYL]ETHYL PALMITATE (CCD ID: MGE) (formula: C₃₈H₇₂O₁₀) (labeled as "Ligand of Interest" by depositor).

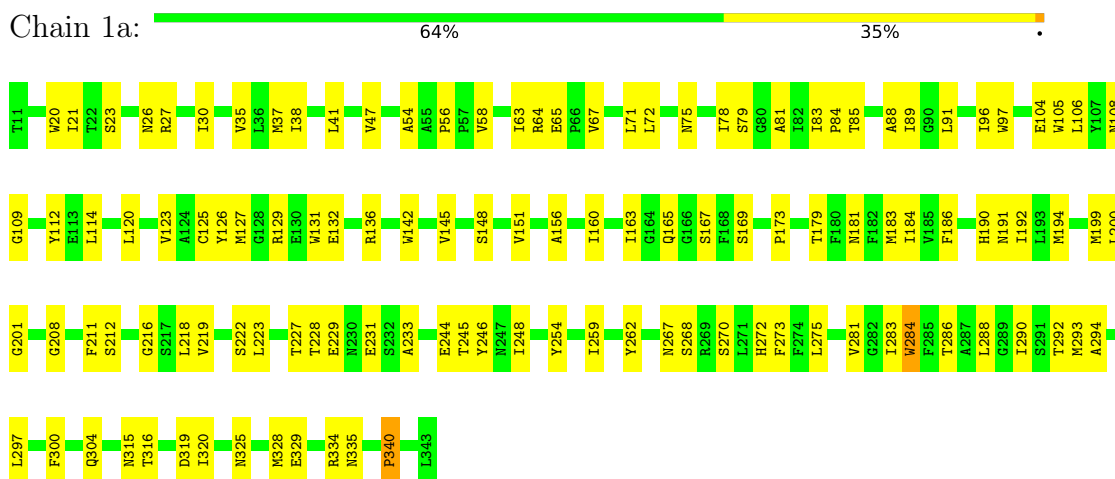


Mol	Chain	Residues	Atoms			AltConf
35	1k	1	Total	C	O	0
			36	26	10	

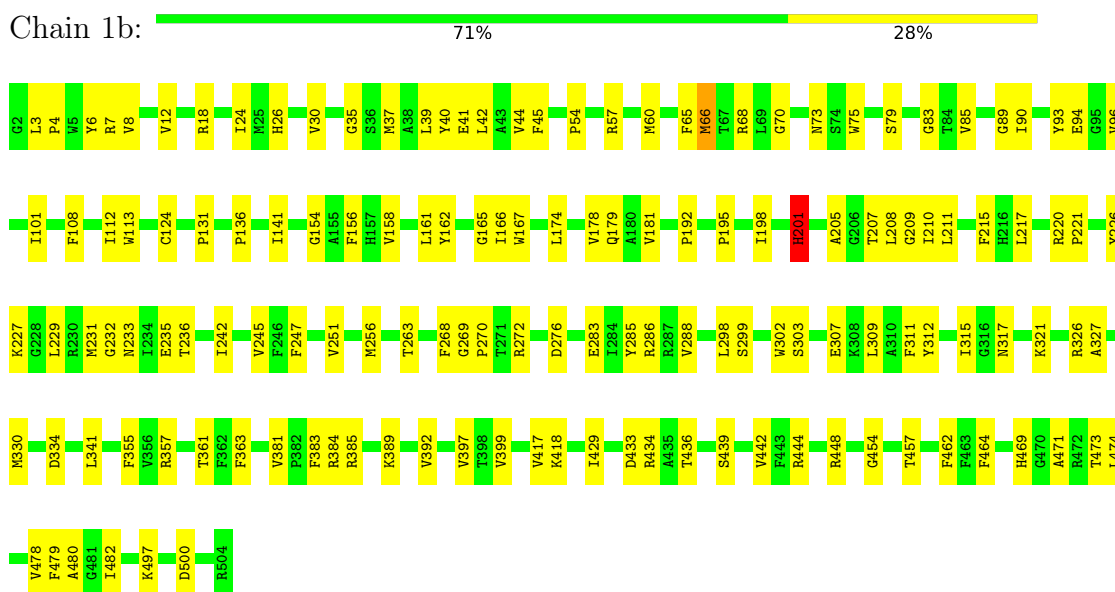
3 Residue-property plots

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 2: Photosystem II CP47 reaction center protein



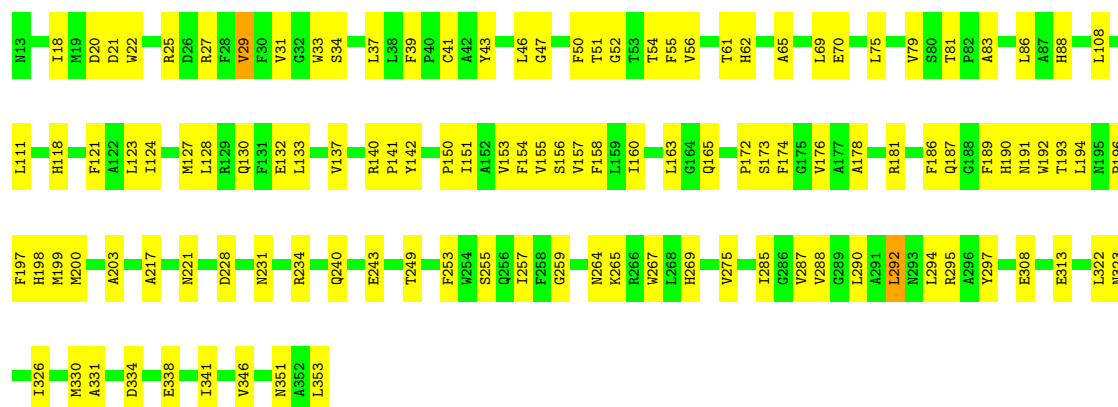
• Molecule 3: Photosystem II CP43 reaction center protein

Chain 1c:  74% 26%



• Molecule 4: Photosystem II D2 protein

Chain 1d:  66% 34%



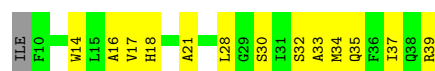
• Molecule 5: Cytochrome b559 subunit alpha

Chain 1e:  67% 33%



• Molecule 6: Cytochrome b559 subunit beta

Chain 1f:  55% 42%



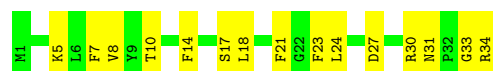
• Molecule 7: Photosystem II reaction center protein H

Chain 1h:  82% 17%



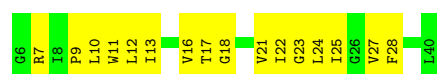
- Molecule 8: Photosystem II reaction center protein I

Chain 1i: 56% 44%



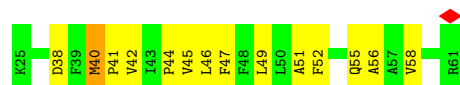
- Molecule 9: Photosystem II reaction center protein J

Chain 1j: 54% 46%



- Molecule 10: Photosystem II reaction center protein K

Chain 1k: 62% 35%



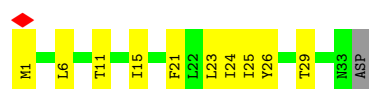
- Molecule 11: Photosystem II reaction center protein L

Chain 1l: 62% 32% 5%



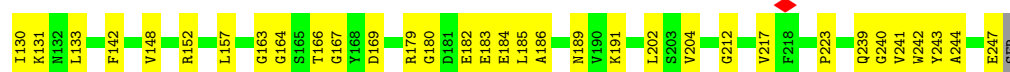
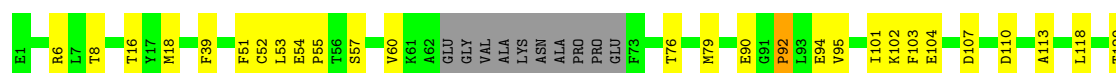
- Molecule 12: Photosystem II reaction center protein M

Chain 1m: 68% 29%

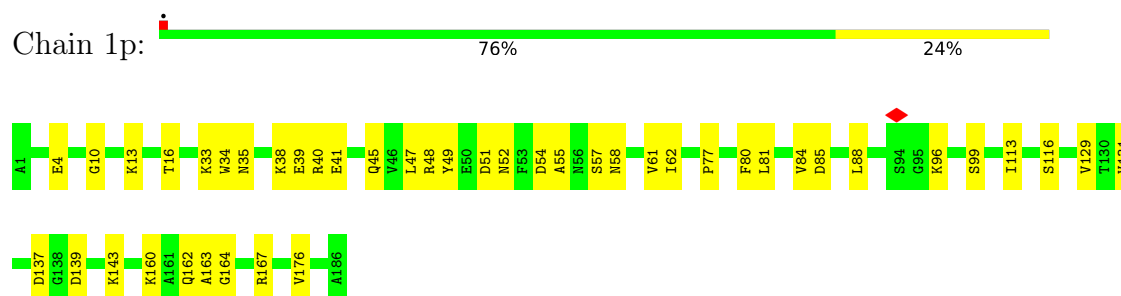


- Molecule 13: 33 kDa subunit of oxygen evolving system of photosystem II

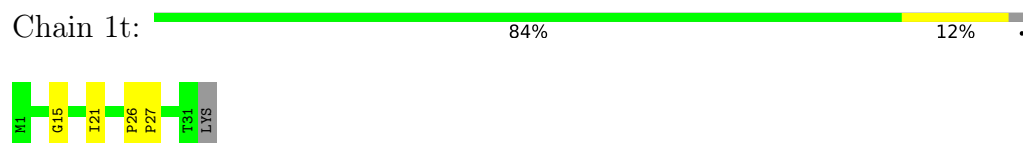
Chain 1o: 71% 24%



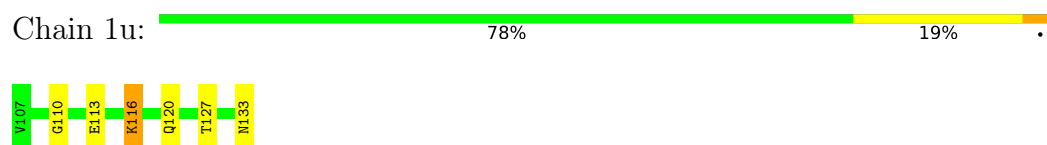
- Molecule 14: 23 kDa subunit of oxygen evolving system of photosystem II



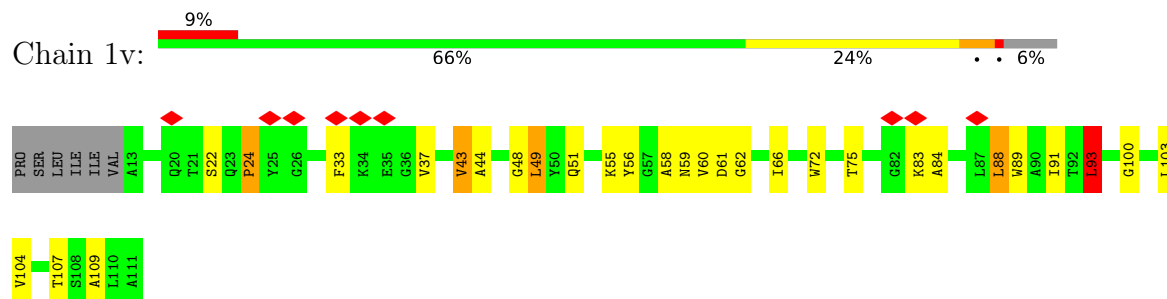
- Molecule 15: Photosystem II reaction center protein T



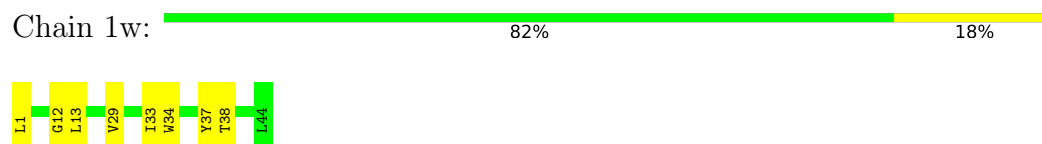
- Molecule 16: Os02g0581100 protein



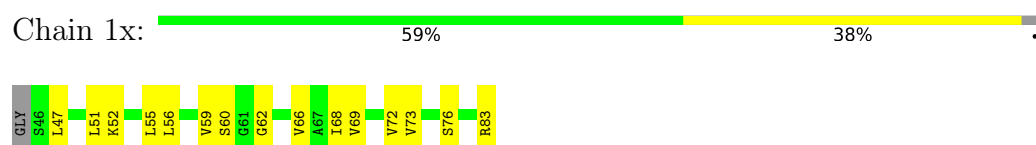
- Molecule 17: Photosystem II 10 kDa polypeptide, chloroplastic



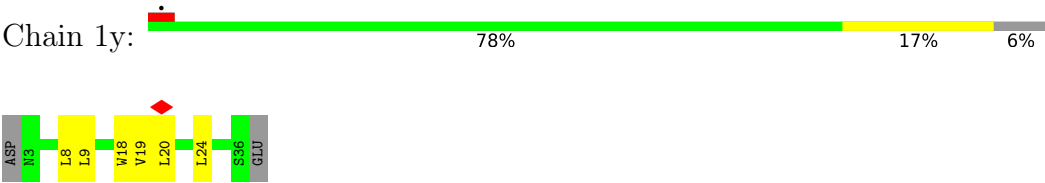
- Molecule 18: Photosystem II reaction center W protein, chloroplastic



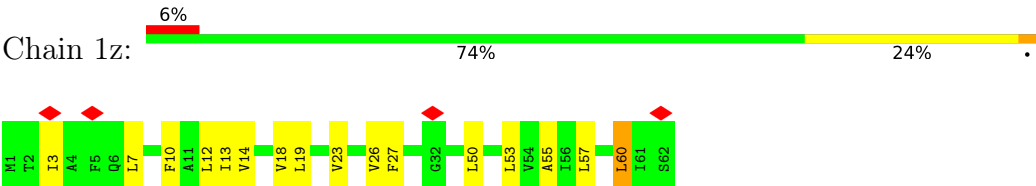
- Molecule 19: Os07g0673550 protein



• Molecule 20: Os08g0119800 protein



• Molecule 21: Photosystem II reaction center protein Z



4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	173752	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	TFS KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	1.375	Depositor
Minimum defocus (nm)	1400	Depositor
Maximum defocus (nm)	2200	Depositor
Magnification	Not provided	
Image detector	GATAN K3 (6k x 4k)	Depositor
Maximum map value	0.451	Depositor
Minimum map value	-0.243	Depositor
Average map value	0.000	Depositor
Map value standard deviation	0.007	Depositor
Recommended contour level	0.02	Depositor
Map size ($\text{\AA}$)	419.84, 419.84, 419.84	wwPDB
Map dimensions	512, 512, 512	wwPDB
Map angles ($^\circ$)	90.0, 90.0, 90.0	wwPDB
Pixel spacing ($\text{\AA}$)	0.82, 0.82, 0.82	Depositor

5 Model quality

5.1 Standard geometry

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

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	1a	0.31	0/2687	0.58	2/3665 (0.1%)
2	1b	0.26	0/4077	0.52	3/5551 (0.1%)
3	1c	0.25	0/3615	0.50	0/4922
4	1d	0.29	0/2809	0.58	2/3829 (0.1%)
5	1e	0.24	0/632	0.52	0/860
6	1f	0.22	0/248	0.46	0/335
7	1h	0.26	0/464	0.62	0/630
8	1i	0.26	0/285	0.60	0/385
9	1j	0.30	0/261	0.71	1/353 (0.3%)
10	1k	0.25	0/317	0.51	0/433
11	1l	0.29	0/303	0.61	0/412
12	1m	0.32	0/255	0.64	0/350
13	1o	0.24	0/1829	0.52	0/2470
14	1p	0.19	0/1452	0.43	0/1961
15	1t	0.17	0/260	0.37	0/354
16	1u	0.21	0/211	0.63	1/281 (0.4%)
17	1v	0.28	0/697	0.68	2/952 (0.2%)
18	1w	0.23	0/339	0.57	0/462
19	1x	0.23	0/275	0.48	0/375
20	1y	0.25	0/273	0.56	0/373
21	1z	0.23	0/476	0.51	0/652
All	All	0.26	0/21765	0.54	11/29605 (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	1a	0	1
2	1b	0	1

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Mol	Chain	#Chirality outliers	#Planarity outliers
13	1o	0	1
All	All	0	3

There are no bond length outliers.

All (11) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	1b	201	HIS	CB-CA-C	7.84	122.24	109.07
2	1b	201	HIS	CA-CB-CG	7.61	121.41	113.80
2	1b	192	PRO	CA-N-CD	-7.53	101.46	112.00
1	1a	320	ILE	N-CA-C	-6.73	107.32	113.71
1	1a	284	TRP	CA-CB-CG	5.79	124.59	113.60
9	1j	9	PRO	CA-N-CD	-5.64	104.10	112.00
16	1u	116	LYS	CA-CB-CG	5.54	125.19	114.10
17	1v	93	LEU	N-CA-C	-5.38	105.31	111.07
17	1v	88	LEU	CA-CB-CG	5.26	134.71	116.30
4	1d	29	VAL	CA-C-N	5.14	129.58	121.56
4	1d	29	VAL	C-N-CA	5.14	129.58	121.56

There are no chirality outliers.

All (3) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	1a	340	PRO	Peptide
2	1b	201	HIS	Sidechain
13	1o	92	PRO	Peptide

5.2 Too-close contacts [i](#)

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	1a	2606	0	2517	114	0
2	1b	3945	0	3810	112	0
3	1c	3498	0	3421	94	0
4	1d	2716	0	2604	109	0
5	1e	614	0	592	28	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
6	1f	241	0	246	13	0
7	1h	454	0	473	10	0
8	1i	277	0	289	14	0
9	1j	255	0	265	12	0
10	1k	305	0	311	13	0
11	1l	295	0	284	11	0
12	1m	251	0	274	8	0
13	1o	1795	0	1783	39	0
14	1p	1422	0	1384	31	0
15	1t	252	0	267	4	0
16	1u	208	0	221	6	0
17	1v	683	0	648	27	0
18	1w	333	0	332	9	0
19	1x	272	0	300	10	0
20	1y	268	0	290	4	0
21	1z	466	0	494	13	0
22	1a	73	0	86	13	0
22	1b	157	0	204	14	0
22	1c	71	0	86	5	0
22	1d	77	0	97	4	0
22	1e	42	0	57	4	0
22	1j	41	0	52	2	0
22	1v	41	0	52	3	0
22	1w	114	0	147	8	0
23	1a	10	0	0	0	0
24	1a	1	0	0	0	0
25	1a	1	0	0	1	0
25	1c	1	0	0	0	0
26	1a	162	0	141	6	0
26	1b	940	0	935	45	0
26	1c	751	0	731	44	0
26	1d	174	0	166	11	0
27	1a	40	0	31	1	0
27	1d	64	0	74	6	0
28	1a	40	0	56	5	0
28	1b	120	0	168	16	0
28	1c	40	0	56	6	0
28	1d	40	0	56	1	0
28	1h	40	0	56	3	0
28	1i	40	0	56	7	0
28	1j	40	0	56	5	0
28	1k	40	0	56	4	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
28	1t	40	0	56	5	0
29	1a	150	0	201	9	0
29	1b	155	0	211	18	0
29	1c	98	0	130	8	0
29	1d	87	0	105	6	0
29	1i	40	0	44	3	0
29	1l	42	0	48	4	0
29	1w	40	0	44	3	0
30	1a	55	0	80	21	0
30	1d	55	0	80	7	0
30	1e	21	0	23	9	0
30	1h	55	0	80	4	0
31	1b	117	0	150	8	0
31	1c	156	0	186	8	0
32	1c	17	0	22	4	0
33	1d	4	0	0	0	0
34	1f	43	0	30	6	0
35	1k	36	0	42	5	0
All	All	25527	0	25756	719	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 14.

All (719) 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)
30:1a:413:PL9:H312	27:1d:404:PHO:H2	1.55	0.88
30:1a:413:PL9:H503	4:1d:39:PHE:HB2	1.67	0.76
2:1b:141:ILE:HG13	2:1b:217:LEU:HD21	1.70	0.72
13:1o:130:ILE:HD11	13:1o:133:LEU:HD22	1.71	0.71
1:1a:186:PHE:HB3	1:1a:192:ILE:HD11	1.71	0.71
30:1a:413:PL9:H472	4:1d:39:PHE:HD2	1.56	0.70
1:1a:259:ILE:HD12	30:1a:413:PL9:H253	1.74	0.70
4:1d:52:GLY:HA2	4:1d:56:VAL:HB	1.74	0.70
4:1d:173:SER:HB2	4:1d:178:ALA:HB1	1.72	0.70
2:1b:205:ALA:O	2:1b:209:GLY:N	2.27	0.68
3:1c:181:TYR:HA	3:1c:198:LYS:HE3	1.76	0.68
1:1a:27:ARG:HD2	3:1c:473:ASN:HD22	1.58	0.67
29:1a:411:SQD:H191	28:1t:101:BCR:HC42	1.76	0.66
2:1b:165:GLY:HA3	2:1b:179:GLN:O	1.95	0.66
2:1b:201:HIS:HB2	26:1b:602:CLA:C4B	2.26	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1a:184:ILE:HG21	4:1d:322:LEU:HD13	1.78	0.65
26:1c:505:CLA:H42	31:1c:519:DGD:HB32	1.79	0.65
1:1a:316:THR:H	1:1a:319:ASP:HB2	1.62	0.64
2:1b:497:LYS:HA	4:1d:25:ARG:HA	1.79	0.64
26:1d:403:CLA:H52	30:1d:410:PL9:H151	1.79	0.64
2:1b:42:LEU:HD13	2:1b:94:GLU:HG3	1.80	0.63
3:1c:53:HIS:CE1	26:1c:510:CLA:NC	2.66	0.63
1:1a:156:ALA:HA	1:1a:160:ILE:HB	1.81	0.63
14:1p:57:SER:HA	14:1p:162:GLN:O	1.99	0.63
3:1c:227:VAL:HG11	28:1i:101:BCR:H291	1.81	0.63
3:1c:361:LEU:O	3:1c:370:ARG:NH2	2.33	0.62
29:1c:516:SQD:H242	29:1c:516:SQD:H101	1.82	0.62
16:1u:113:GLU:HA	16:1u:116:LYS:HG2	1.82	0.62
1:1a:272:HIS:HA	1:1a:275:LEU:HD12	1.82	0.62
2:1b:269:GLY:O	2:1b:448:ARG:NH1	2.31	0.62
4:1d:69:LEU:HD11	5:1e:43:ALA:HB1	1.82	0.62
1:1a:192:ILE:HG23	1:1a:293:MET:HE1	1.80	0.62
1:1a:211:PHE:CE1	30:1a:413:PL9:H13	2.34	0.62
2:1b:89:GLY:HA3	22:1b:625:LHG:HC12	1.82	0.62
4:1d:18:ILE:HG22	19:1x:76:SER:HB2	1.80	0.62
1:1a:334:ARG:NH2	4:1d:313:GLU:OE2	2.33	0.61
2:1b:384:ARG:NH2	14:1p:139:ASP:OD2	2.33	0.61
30:1a:413:PL9:H202	27:1d:404:PHO:HED2	1.82	0.61
16:1u:110:GLY:HA3	16:1u:133:ASN:HB2	1.82	0.61
1:1a:325:ASN:HA	1:1a:328:MET:HE2	1.82	0.61
28:1c:515:BCR:H391	10:1k:51:ALA:HB2	1.83	0.61
29:1a:410:SQD:O9	4:1d:231:ASN:ND2	2.30	0.61
2:1b:124:CYS:HA	2:1b:131:PRO:HA	1.83	0.61
13:1o:57:SER:OG	13:1o:239:GLN:OE1	2.19	0.61
26:1b:611:CLA:H201	26:1b:613:CLA:HMA3	1.82	0.61
9:1j:10:LEU:HA	9:1j:13:ILE:HD12	1.82	0.61
26:1b:601:CLA:HAB	28:1h:102:BCR:H383	1.83	0.60
4:1d:287:VAL:HA	4:1d:290:LEU:HD12	1.83	0.60
3:1c:178:LYS:HA	3:1c:182:PHE:HB2	1.83	0.60
2:1b:233:ASN:HB3	2:1b:236:THR:HG23	1.84	0.60
9:1j:23:GLY:HA2	22:1j:102:LHG:H322	1.83	0.60
22:1b:628:LHG:H141	11:1l:24:LEU:HD12	1.84	0.60
1:1a:216:GLY:HA2	4:1d:269:HIS:HB3	1.84	0.59
13:1o:60:VAL:HB	13:1o:118:LEU:HD21	1.84	0.59
1:1a:64:ARG:O	13:1o:152:ARG:NH2	2.34	0.59
1:1a:27:ARG:NH2	15:1t:21:ILE:O	2.36	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:1a:413:PL9:H472	4:1d:39:PHE:CD2	2.36	0.59
3:1c:402:GLY:HA3	3:1c:420:VAL:HG22	1.85	0.59
2:1b:39:LEU:HD13	22:1b:626:LHG:H272	1.84	0.59
14:1p:85:ASP:HA	14:1p:88:LEU:HD23	1.85	0.59
28:1b:619:BCR:H323	22:1b:625:LHG:H252	1.84	0.59
3:1c:120:ILE:HG21	28:1k:102:BCR:H10C	1.83	0.59
4:1d:22:TRP:O	4:1d:27:ARG:NH2	2.36	0.59
28:1h:102:BCR:H321	28:1h:102:BCR:HC8	1.84	0.59
31:1b:627:DGD:HAN1	4:1d:155:VAL:HG21	1.83	0.58
3:1c:42:LEU:HD22	3:1c:48:LYS:HB3	1.83	0.58
3:1c:342:MET:HE2	3:1c:352:GLY:HA2	1.83	0.58
26:1a:406:CLA:HAB	26:1d:406:CLA:H71	1.85	0.58
5:1e:20:TRP:HH2	30:1e:101:PL9:H13	1.67	0.58
2:1b:220:ARG:HG3	7:1h:32:LYS:HG2	1.85	0.58
2:1b:385:ARG:NH1	13:1o:164:GLY:O	2.36	0.58
1:1a:27:ARG:NH2	4:1d:259:GLY:O	2.35	0.58
30:1e:101:PL9:H102	34:1f:101:HEM:HMD3	1.86	0.58
2:1b:478:VAL:HG23	4:1d:140:ARG:HG3	1.84	0.58
4:1d:158:PHE:CE2	4:1d:172:PRO:HB2	2.39	0.58
2:1b:263:THR:OG1	2:1b:448:ARG:NH2	2.37	0.57
28:1b:617:BCR:H12C	29:1b:621:SQD:H221	1.85	0.57
22:1c:522:LHG:HC91	22:1w:104:LHG:HC92	1.85	0.57
2:1b:327:ALA:O	2:1b:444:ARG:NH1	2.37	0.57
4:1d:128:LEU:HD22	29:1d:405:SQD:H301	1.86	0.57
4:1d:192:TRP:CE2	4:1d:198:HIS:HB2	2.40	0.57
1:1a:290:ILE:HG21	26:1a:405:CLA:HED3	1.86	0.57
1:1a:219:VAL:HG13	1:1a:246:TYR:CD2	2.40	0.57
26:1c:508:CLA:H142	28:1i:101:BCR:H362	1.87	0.57
30:1e:101:PL9:H111	34:1f:101:HEM:CBC	2.35	0.56
2:1b:471:ALA:HB1	4:1d:141:PRO:HG2	1.86	0.56
3:1c:318:LEU:HG	3:1c:328:VAL:HG21	1.87	0.56
26:1b:607:CLA:H91	29:1b:621:SQD:H371	1.87	0.56
26:1b:608:CLA:H51	29:1d:405:SQD:H341	1.86	0.56
3:1c:67:MET:HG2	10:1k:41:PRO:HB3	1.88	0.56
3:1c:269:GLU:OE2	3:1c:444:HIS:ND1	2.38	0.56
2:1b:39:LEU:HD22	22:1b:626:LHG:H251	1.88	0.56
4:1d:234:ARG:NH2	17:1v:22:SER:OG	2.38	0.56
22:1w:103:LHG:H152	22:1w:103:LHG:H271	1.86	0.56
4:1d:52:GLY:HA3	4:1d:79:VAL:HG12	1.86	0.56
1:1a:316:THR:HG23	4:1d:65:ALA:HB3	1.88	0.56
2:1b:41:GLU:HA	2:1b:44:VAL:HG22	1.86	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:1c:213:LEU:O	3:1c:223:TRP:NE1	2.35	0.56
3:1c:370:ARG:O	3:1c:379:ARG:NH2	2.39	0.56
4:1d:193:THR:HG23	26:1d:406:CLA:HBC2	1.88	0.56
13:1o:157:LEU:HD21	13:1o:166:THR:HB	1.88	0.56
4:1d:189:PHE:HZ	4:1d:331:ALA:HB2	1.70	0.56
29:1b:620:SQD:H342	29:1b:620:SQD:H182	1.88	0.56
4:1d:190:HIS:HA	4:1d:295:ARG:HD2	1.88	0.56
1:1a:64:ARG:NH1	13:1o:113:ALA:O	2.39	0.56
26:1b:615:CLA:H92	26:1b:616:CLA:HBB1	1.88	0.56
22:1d:402:LHG:HC92	30:1d:410:PL9:H111	1.87	0.55
29:1c:516:SQD:H82	10:1k:38:ASP:HB3	1.87	0.55
4:1d:160:ILE:HG21	4:1d:288:VAL:HG22	1.87	0.55
14:1p:163:ALA:HB2	14:1p:176:VAL:HG21	1.88	0.55
13:1o:166:THR:OG1	14:1p:137:ASP:OD1	2.23	0.55
14:1p:34:TRP:HB3	14:1p:49:TYR:HB3	1.88	0.55
26:1c:507:CLA:HBB2	26:1c:508:CLA:H52	1.88	0.55
5:1e:20:TRP:CH2	30:1e:101:PL9:H13	2.40	0.55
1:1a:27:ARG:O	3:1c:473:ASN:ND2	2.39	0.55
3:1c:91:HIS:O	3:1c:94:THR:OG1	2.24	0.55
4:1d:108:LEU:HD23	5:1e:66:ILE:HD13	1.89	0.55
4:1d:181:ARG:HD2	4:1d:330:MET:HE2	1.88	0.55
14:1p:113:ILE:HA	14:1p:131:VAL:HG12	1.88	0.55
1:1a:281:VAL:HA	1:1a:284:TRP:CD1	2.42	0.55
10:1k:44:PRO:O	10:1k:47:PHE:HB2	2.07	0.55
26:1b:603:CLA:H143	26:1b:608:CLA:HAC1	1.88	0.55
28:1c:515:BCR:H311	21:1z:13:ILE:HD11	1.88	0.55
2:1b:469:HIS:O	2:1b:473:THR:OG1	2.21	0.54
26:1c:503:CLA:H61	26:1c:513:CLA:H42	1.89	0.54
3:1c:61:VAL:HG13	3:1c:118:HIS:HD2	1.72	0.54
3:1c:164:HIS:ND1	26:1c:508:CLA:OBD	2.41	0.54
4:1d:197:PHE:HA	4:1d:200:MET:HE3	1.88	0.54
22:1a:414:LHG:HC81	22:1a:414:LHG:H252	1.89	0.54
2:1b:454:GLY:HA2	29:1b:621:SQD:H331	1.89	0.54
29:1c:516:SQD:H211	29:1c:516:SQD:H311	1.89	0.54
14:1p:51:ASP:OD1	14:1p:51:ASP:N	2.37	0.54
1:1a:218:LEU:O	1:1a:222:SER:OG	2.26	0.54
3:1c:56:HIS:HE1	26:1c:511:CLA:NB	2.00	0.54
4:1d:50:PHE:O	4:1d:54:THR:OG1	2.23	0.54
5:1e:23:HIS:HA	5:1e:26:THR:HB	1.89	0.54
3:1c:297:TYR:O	3:1c:423:ARG:NH2	2.39	0.54
29:1c:516:SQD:H261	22:1j:102:LHG:HC92	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:1d:127:MET:HE2	4:1d:151:ILE:HD12	1.89	0.54
1:1a:201:GLY:HA3	1:1a:286:THR:HB	1.90	0.54
2:1b:283:GLU:OE1	2:1b:286:ARG:NH2	2.34	0.53
4:1d:56:VAL:HG21	4:1d:111:LEU:HD22	1.89	0.53
4:1d:154:PHE:O	4:1d:158:PHE:HB2	2.08	0.53
1:1a:340:PRO:HG2	4:1d:353:LEU:HB2	1.90	0.53
3:1c:444:HIS:HE1	26:1c:509:CLA:NA	2.06	0.53
4:1d:308:GLU:OE1	12:1m:1:MET:N	2.40	0.53
2:1b:474:LEU:HD13	29:1d:405:SQD:H251	1.91	0.53
2:1b:482:ILE:HG12	4:1d:140:ARG:HH21	1.74	0.53
6:1f:28:LEU:HD22	9:1j:24:LEU:HD21	1.90	0.53
1:1a:85:THR:HA	1:1a:109:GLY:HA3	1.90	0.53
1:1a:145:VAL:O	1:1a:148:SER:OG	2.26	0.53
13:1o:148:VAL:HG11	13:1o:223:PRO:HD2	1.91	0.53
2:1b:26:HIS:O	2:1b:30:VAL:HG23	2.09	0.53
4:1d:186:PHE:HE2	4:1d:290:LEU:HD13	1.74	0.53
5:1e:12:ASP:O	9:1j:7:ARG:NH2	2.42	0.53
5:1e:14:ILE:HD11	30:1e:101:PL9:H103	1.90	0.53
13:1o:60:VAL:HG23	13:1o:76:THR:HG21	1.91	0.53
26:1b:607:CLA:HBC3	28:1b:618:BCR:HC8	1.91	0.53
10:1k:52:PHE:O	10:1k:56:ALA:N	2.40	0.53
5:1e:27:ILE:HD11	34:1f:101:HEM:HBC2	1.90	0.53
1:1a:223:LEU:HB2	4:1d:140:ARG:HH22	1.74	0.53
1:1a:167:SER:HB2	3:1c:357:ARG:HB3	1.90	0.52
1:1a:227:THR:OG1	1:1a:228:THR:N	2.41	0.52
30:1a:413:PL9:H43	6:1f:16:ALA:HA	1.91	0.52
2:1b:479:PHE:O	22:1d:401:LHG:O1	2.26	0.52
4:1d:123:LEU:HD13	4:1d:151:ILE:HG12	1.91	0.52
4:1d:240:GLN:HA	17:1v:56:TYR:CE2	2.44	0.52
1:1a:104:GLU:OE1	1:1a:108:ASN:ND2	2.43	0.52
1:1a:219:VAL:HG13	1:1a:246:TYR:HD2	1.73	0.52
2:1b:113:TRP:HB2	28:1b:619:BCR:H21C	1.91	0.52
3:1c:452:ALA:O	8:1i:34:ARG:NH1	2.43	0.52
4:1d:150:PRO:HB3	26:1d:406:CLA:H41	1.92	0.52
1:1a:35:VAL:HG11	8:1i:18:LEU:HB3	1.92	0.52
28:1b:617:BCR:HC32	29:1b:621:SQD:H142	1.91	0.52
1:1a:216:GLY:H	1:1a:219:VAL:HG23	1.74	0.52
30:1a:413:PL9:H512	4:1d:31:VAL:HG11	1.91	0.52
4:1d:187:GLN:NE2	4:1d:323:ASN:OD1	2.41	0.52
1:1a:181:ASN:ND2	25:1a:404:CL:CL	2.74	0.52
8:1i:31:ASN:ND2	8:1i:33:GLY:O	2.43	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1a:37:MET:HB3	1:1a:125:CYS:HB2	1.92	0.52
2:1b:381:VAL:HG22	2:1b:418:LYS:HG2	1.91	0.52
2:1b:327:ALA:HB1	29:1b:621:SQD:H461	1.92	0.51
28:1j:101:BCR:H373	10:1k:49:LEU:HD22	1.91	0.51
13:1o:94:GLU:HB3	13:1o:102:LYS:HB3	1.92	0.51
22:1a:414:LHG:H131	22:1a:414:LHG:H281	1.92	0.51
2:1b:311:PHE:O	2:1b:317:ASN:ND2	2.44	0.51
5:1e:55:TYR:O	5:1e:60:ARG:NH1	2.43	0.51
2:1b:247:PHE:HB2	26:1b:608:CLA:HBC1	1.92	0.51
3:1c:447:ARG:HG2	26:1c:509:CLA:HED1	1.92	0.51
30:1a:413:PL9:C20	27:1d:404:PHO:HED2	2.40	0.51
5:1e:24:SER:HB2	17:1v:93:LEU:HD22	1.91	0.51
4:1d:41:CYS:HA	4:1d:118:HIS:HD1	1.75	0.51
14:1p:35:ASN:ND2	14:1p:52:ASN:OD1	2.43	0.51
30:1a:413:PL9:H353	4:1d:43:TYR:HA	1.93	0.51
2:1b:226:TYR:HA	2:1b:231:MET:HB2	1.92	0.51
2:1b:315:ILE:HG12	2:1b:321:LYS:HG3	1.93	0.51
26:1b:605:CLA:HAB	22:1b:625:LHG:H271	1.92	0.51
26:1b:614:CLA:H42	29:1l:101:SQD:H272	1.92	0.51
4:1d:192:TRP:CD1	4:1d:290:LEU:HD11	2.45	0.51
26:1d:407:CLA:HHC	26:1d:407:CLA:HBB1	1.93	0.51
1:1a:65:GLU:OE2	1:1a:335:ASN:ND2	2.42	0.51
26:1b:601:CLA:C4C	30:1h:101:PL9:H412	2.39	0.51
3:1c:28:GLN:OE1	4:1d:234:ARG:NH1	2.44	0.51
4:1d:61:THR:HA	4:1d:83:ALA:HB2	1.93	0.51
17:1v:24:PRO:HB3	17:1v:61:ASP:HB2	1.93	0.51
28:1b:617:BCR:H383	29:1b:620:SQD:H122	1.93	0.51
1:1a:123:VAL:HB	1:1a:151:VAL:HG22	1.92	0.50
2:1b:35:GLY:HA3	2:1b:101:ILE:HG13	1.92	0.50
2:1b:263:THR:OG1	2:1b:263:THR:O	2.26	0.50
3:1c:186:TYR:HA	3:1c:196:VAL:HA	1.93	0.50
29:1b:620:SQD:H271	29:1l:101:SQD:H121	1.92	0.50
22:1b:628:LHG:H201	11:1l:27:VAL:HG21	1.91	0.50
26:1c:511:CLA:HMA3	26:1c:511:CLA:H122	1.93	0.50
27:1d:404:PHO:HBB	26:1d:406:CLA:H142	1.94	0.50
9:1j:13:ILE:O	9:1j:17:THR:OG1	2.23	0.50
1:1a:20:TRP:CD1	29:1a:412:SQD:HO3	2.30	0.50
2:1b:399:VAL:HG23	2:1b:417:VAL:HG22	1.93	0.50
26:1c:511:CLA:HED2	26:1c:511:CLA:H72	1.94	0.50
4:1d:140:ARG:HD2	4:1d:142:TYR:HE2	1.76	0.50
11:1l:13:LEU:HD23	12:1m:26:TYR:HB2	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:1v:43:VAL:HG12	17:1v:44:ALA:H	1.75	0.50
15:1t:15:GLY:HA2	28:1t:101:BCR:H12C	1.92	0.50
19:1x:47:LEU:HB3	19:1x:52:LYS:HE2	1.94	0.50
29:1a:411:SQD:H162	29:1a:411:SQD:H281	1.93	0.50
2:1b:326:ARG:HD3	2:1b:442:VAL:HB	1.94	0.50
4:1d:21:ASP:OD2	19:1x:83:ARG:NH1	2.42	0.50
22:1d:402:LHG:O9	11:1l:20:TRP:NE1	2.45	0.50
13:1o:179:ARG:NH1	13:1o:182:GLU:OE2	2.45	0.50
17:1v:100:GLY:HA2	17:1v:103:LEU:HD12	1.93	0.50
2:1b:94:GLU:HG2	22:1b:626:LHG:HC82	1.93	0.50
26:1c:507:CLA:H8	22:1w:103:LHG:H221	1.94	0.50
14:1p:41:GLU:OE1	14:1p:48:ARG:NH1	2.45	0.50
22:1a:401:LHG:O2	3:1c:447:ARG:NH1	2.44	0.50
2:1b:276:ASP:OD1	2:1b:361:THR:OG1	2.27	0.50
3:1c:225:VAL:HG13	3:1c:289:PHE:HA	1.94	0.49
3:1c:376:ASP:HB3	3:1c:379:ARG:HB2	1.94	0.49
26:1c:506:CLA:HMD3	26:1c:508:CLA:HAB	1.94	0.49
22:1w:103:LHG:H302	22:1w:104:LHG:H211	1.94	0.49
13:1o:90:GLU:HB2	13:1o:107:ASP:HB3	1.93	0.49
19:1x:47:LEU:HD13	19:1x:51:LEU:HG	1.93	0.49
2:1b:75:TRP:HB3	31:1b:623:DGD:HD5	1.93	0.49
2:1b:457:THR:HG21	29:1b:621:SQD:H372	1.95	0.49
22:1c:522:LHG:HC82	22:1w:104:LHG:HC42	1.93	0.49
7:1h:45:VAL:O	7:1h:49:LEU:HD12	2.12	0.49
10:1k:46:LEU:HA	10:1k:49:LEU:HD12	1.95	0.49
1:1a:96:ILE:HG12	1:1a:105:TRP:CE2	2.47	0.49
3:1c:42:LEU:O	3:1c:44:ASN:N	2.46	0.49
4:1d:198:HIS:HE1	26:1d:406:CLA:C1C	2.25	0.49
4:1d:341:ILE:HD13	14:1p:39:GLU:HG2	1.95	0.49
29:1l:101:SQD:H252	12:1m:24:ILE:HG21	1.94	0.49
3:1c:39:ASN:ND2	26:1c:511:CLA:O1A	2.39	0.49
1:1a:229:GLU:O	2:1b:7:ARG:NH2	2.45	0.49
29:1a:410:SQD:H311	35:1k:101:MGE:H6B1	1.93	0.49
1:1a:283:ILE:HA	1:1a:286:THR:HG22	1.94	0.49
2:1b:457:THR:HG23	4:1d:285:ILE:HG12	1.93	0.49
4:1d:275:VAL:HG22	30:1d:410:PL9:H222	1.95	0.49
11:1l:28:LEU:HD23	11:1l:31:LEU:HD23	1.94	0.49
2:1b:73:ASN:HB3	2:1b:85:VAL:HG11	1.95	0.49
1:1a:108:ASN:ND2	13:1o:79:MET:O	2.45	0.49
2:1b:232:GLY:O	7:1h:30:TYR:OH	2.31	0.49
3:1c:246:PHE:HD2	32:1c:523:LNL:H9	1.78	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:1c:509:CLA:HBC3	26:1c:511:CLA:H92	1.94	0.49
4:1d:191:ASN:OD1	4:1d:194:LEU:HB3	2.13	0.49
28:1i:101:BCR:H363	22:1w:104:LHG:H222	1.94	0.49
1:1a:179:THR:O	1:1a:183:MET:HG3	2.12	0.49
2:1b:54:PRO:HD2	2:1b:57:ARG:HG3	1.94	0.49
31:1b:627:DGD:O3E	7:1h:72:MET:SD	2.70	0.49
2:1b:136:PRO:HB2	7:1h:32:LYS:HD3	1.95	0.48
2:1b:211:LEU:O	2:1b:215:PHE:N	2.41	0.48
2:1b:321:LYS:NZ	2:1b:363:PHE:O	2.45	0.48
3:1c:216:SER:O	3:1c:218:PHE:N	2.46	0.48
11:1l:18:LEU:HD11	12:1m:23:LEU:HD23	1.95	0.48
2:1b:37:MET:O	2:1b:41:GLU:HG3	2.12	0.48
3:1c:180:LEU:HD21	3:1c:202:LEU:HD21	1.95	0.48
28:1j:101:BCR:H15C	10:1k:46:LEU:HB3	1.94	0.48
18:1w:34:TRP:CD1	22:1w:104:LHG:HC61	2.48	0.48
1:1a:84:PRO:HB2	1:1a:169:SER:HA	1.96	0.48
2:1b:256:MET:O	2:1b:448:ARG:NE	2.34	0.48
29:1l:101:SQD:H81	29:1l:101:SQD:H45	1.60	0.48
19:1x:56:LEU:O	19:1x:60:SER:OG	2.25	0.48
1:1a:288:LEU:O	1:1a:292:THR:HG23	2.14	0.48
2:1b:385:ARG:NH2	13:1o:167:GLY:O	2.34	0.48
13:1o:39:PHE:HD1	13:1o:204:VAL:HG11	1.78	0.48
2:1b:40:TYR:OH	26:1b:607:CLA:OBD	2.26	0.48
31:1b:627:DGD:O5D	31:1b:627:DGD:O4D	2.29	0.48
26:1c:512:CLA:HBA1	28:1c:515:BCR:H271	1.95	0.48
1:1a:58:VAL:HB	1:1a:83:ILE:HB	1.96	0.48
1:1a:142:TRP:HB2	4:1d:221:ASN:HD21	1.78	0.48
30:1a:413:PL9:H352	4:1d:46:LEU:HD12	1.96	0.48
2:1b:201:HIS:HB2	26:1b:602:CLA:C1B	2.44	0.48
3:1c:236:GLY:HA3	28:1i:101:BCR:H402	1.95	0.48
4:1d:153:VAL:O	4:1d:157:VAL:HG12	2.14	0.48
13:1o:95:VAL:HG22	13:1o:101:ILE:HG22	1.96	0.48
2:1b:389:LYS:HD3	14:1p:41:GLU:HG2	1.96	0.48
28:1b:617:BCR:H19C	29:1b:620:SQD:H192	1.95	0.48
4:1d:295:ARG:HG3	4:1d:297:TYR:HB2	1.96	0.48
26:1c:507:CLA:HAC2	32:1c:523:LNL:H141	1.96	0.48
13:1o:242:TRP:HE1	13:1o:244:ALA:HB2	1.79	0.48
18:1w:13:LEU:N	29:1w:101:SQD:O9	2.47	0.48
2:1b:242:ILE:HA	2:1b:245:VAL:HG22	1.96	0.47
3:1c:185:ILE:HG22	3:1c:230:LEU:HD11	1.96	0.47
5:1e:35:TRP:HA	6:1f:33:ALA:HB2	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:1v:72:TRP:HB3	17:1v:75:THR:HB	1.96	0.47
1:1a:56:PRO:HD2	1:1a:106:LEU:HD22	1.96	0.47
1:1a:165:GLN:NE2	1:1a:294:ALA:O	2.47	0.47
29:1a:410:SQD:O7	35:1k:101:MGE:O3D	2.31	0.47
2:1b:270:PRO:HG3	2:1b:312:TYR:HD1	1.79	0.47
11:1l:8:GLU:N	11:1l:8:GLU:OE1	2.46	0.47
3:1c:310:SER:HB3	3:1c:355:THR:HG22	1.96	0.47
1:1a:89:ILE:HD11	1:1a:108:ASN:HB3	1.96	0.47
1:1a:129:ARG:HA	1:1a:132:GLU:HB2	1.95	0.47
26:1a:405:CLA:H2	27:1a:407:PHO:C4B	2.44	0.47
2:1b:242:ILE:HG23	2:1b:462:PHE:HD2	1.79	0.47
28:1b:617:BCR:HC22	29:1b:621:SQD:H82	1.96	0.47
4:1d:292:LEU:HB2	4:1d:294:LEU:HD12	1.95	0.47
5:1e:40:THR:HG22	17:1v:107:THR:HG21	1.95	0.47
8:1i:21:PHE:HA	8:1i:24:LEU:HB2	1.95	0.47
1:1a:97:TRP:NE1	29:1w:101:SQD:O3	2.44	0.47
26:1b:603:CLA:H2	26:1b:605:CLA:H91	1.96	0.47
3:1c:262:ARG:NH1	18:1w:37:TYR:OH	2.47	0.47
8:1i:10:THR:O	8:1i:14:PHE:HB2	2.14	0.47
8:1i:14:PHE:CD1	18:1w:33:ILE:HD11	2.50	0.47
1:1a:142:TRP:HZ2	3:1c:447:ARG:HB2	1.78	0.47
2:1b:6:TYR:OH	22:1b:628:LHG:O5	2.30	0.47
26:1b:602:CLA:H42	31:1b:627:DGD:HB22	1.94	0.47
3:1c:117:LEU:O	3:1c:121:SER:OG	2.25	0.47
5:1e:36:LEU:HD11	17:1v:103:LEU:HD13	1.94	0.47
13:1o:217:VAL:HB	13:1o:241:VAL:HG12	1.96	0.47
14:1p:47:LEU:HB3	14:1p:61:VAL:HB	1.96	0.47
1:1a:131:TRP:HZ2	3:1c:449:ARG:HG2	1.79	0.47
1:1a:160:ILE:HD13	3:1c:431:PHE:HZ	1.80	0.47
2:1b:12:VAL:HG12	2:1b:18:ARG:HB3	1.95	0.47
26:1b:608:CLA:HBA1	29:1b:622:SQD:H252	1.96	0.47
3:1c:66:ALA:HA	10:1k:40:MET:HE3	1.97	0.47
3:1c:330:SER:O	13:1o:131:LYS:NZ	2.47	0.47
5:1e:22:ILE:HG23	20:1y:19:VAL:HG12	1.96	0.47
17:1v:33:PHE:HA	17:1v:37:VAL:HA	1.97	0.47
30:1e:101:PL9:H102	34:1f:101:HEM:CMD	2.44	0.47
6:1f:21:ALA:HB1	34:1f:101:HEM:HAC	1.96	0.47
13:1o:16:THR:HG22	13:1o:18:MET:H	1.79	0.47
14:1p:39:GLU:O	14:1p:40:ARG:NH1	2.42	0.47
1:1a:30:ILE:HG23	1:1a:38:ILE:HD12	1.97	0.47
3:1c:316:THR:O	3:1c:320:ARG:HG3	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:1d:410:PL9:H362	11:1l:31:LEU:HD13	1.96	0.47
9:1j:21:VAL:O	9:1j:25:ILE:HG12	2.15	0.47
1:1a:37:MET:HE3	1:1a:41:LEU:HD12	1.97	0.47
2:1b:90:ILE:HD13	31:1b:623:DGD:HA21	1.95	0.47
29:1b:622:SQD:H241	29:1b:622:SQD:H461	1.65	0.47
3:1c:144:PHE:O	3:1c:148:GLY:N	2.45	0.47
5:1e:42:LEU:HD12	20:1y:8:LEU:HD13	1.96	0.47
26:1b:614:CLA:H62	26:1b:614:CLA:H41	1.64	0.46
1:1a:47:VAL:HG21	1:1a:114:LEU:HD22	1.97	0.46
1:1a:71:LEU:HA	1:1a:75:ASN:HB3	1.96	0.46
2:1b:341:LEU:HD12	2:1b:429:ILE:HG22	1.96	0.46
26:1c:507:CLA:HBB1	26:1c:508:CLA:H102	1.97	0.46
4:1d:20:ASP:OD1	4:1d:33:TRP:NE1	2.44	0.46
4:1d:130:GLN:NE2	27:1d:404:PHO:OBD	2.48	0.46
1:1a:304:GLN:HE22	14:1p:33:LYS:HD3	1.80	0.46
2:1b:79:SER:OG	2:1b:83:GLY:O	2.32	0.46
3:1c:341:LEU:HD11	3:1c:380:LEU:HD23	1.97	0.46
26:1c:507:CLA:H92	26:1c:507:CLA:H61	1.80	0.46
1:1a:84:PRO:HA	1:1a:112:TYR:CG	2.50	0.46
1:1a:273:PHE:CZ	22:1a:401:LHG:HC92	2.50	0.46
1:1a:334:ARG:O	4:1d:351:ASN:ND2	2.40	0.46
3:1c:282:PHE:HE1	26:1c:502:CLA:H112	1.81	0.46
3:1c:362:ARG:O	31:1c:518:DGD:O3E	2.33	0.46
4:1d:326:ILE:O	4:1d:330:MET:HB3	2.16	0.46
5:1e:19:TYR:OH	30:1e:101:PL9:H101	2.16	0.46
13:1o:169:ASP:OD1	13:1o:169:ASP:N	2.47	0.46
3:1c:251:HIS:HE1	26:1c:507:CLA:NA	2.13	0.46
26:1c:513:CLA:HMB2	22:1c:521:LHG:H261	1.98	0.46
2:1b:66:MET:HE3	2:1b:93:TYR:HD1	1.80	0.46
30:1h:101:PL9:H451	30:1h:101:PL9:H472	1.57	0.46
11:1l:21:GLY:O	11:1l:25:ILE:HG12	2.15	0.46
17:1v:33:PHE:HZ	17:1v:49:LEU:HD21	1.81	0.46
2:1b:6:TYR:CD1	2:1b:7:ARG:HG3	2.51	0.46
3:1c:406:SER:HA	3:1c:420:VAL:HG23	1.98	0.46
3:1c:437:PHE:HA	26:1c:509:CLA:HMC2	1.97	0.46
14:1p:45:GLN:HA	14:1p:62:ILE:HA	1.97	0.46
2:1b:41:GLU:O	2:1b:45:PHE:N	2.49	0.46
4:1d:34:SER:OG	4:1d:132:GLU:OE1	2.30	0.46
10:1k:55:GLN:HA	10:1k:58:VAL:HG12	1.97	0.46
13:1o:6:ARG:HH22	13:1o:241:VAL:HG11	1.81	0.46
20:1y:20:LEU:HA	20:1y:24:LEU:HD13	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1a:54:ALA:HA	1:1a:72:LEU:HD22	1.98	0.46
1:1a:244:GLU:OE1	4:1d:265:LYS:NZ	2.46	0.46
2:1b:70:GLY:HA2	2:1b:178:VAL:HG11	1.98	0.46
5:1e:69:ARG:N	16:1u:133:ASN:O	2.44	0.46
30:1a:413:PL9:H222	30:1a:413:PL9:H201	1.58	0.46
22:1a:414:LHG:H121	35:1k:101:MGE:H4A2	1.98	0.46
2:1b:201:HIS:HB2	26:1b:602:CLA:NB	2.31	0.46
3:1c:216:SER:O	3:1c:216:SER:OG	2.25	0.46
26:1c:508:CLA:H41	26:1c:508:CLA:H62	1.65	0.46
14:1p:55:ALA:O	14:1p:58:ASN:ND2	2.42	0.46
21:1z:53:LEU:O	21:1z:57:LEU:HG	2.16	0.46
1:1a:81:ALA:HB1	1:1a:173:PRO:HB2	1.97	0.45
1:1a:91:LEU:HD11	1:1a:163:ILE:HA	1.97	0.45
2:1b:57:ARG:NH2	2:1b:334:ASP:OD2	2.32	0.45
3:1c:53:HIS:HD2	26:1c:510:CLA:NA	2.08	0.45
3:1c:461:ARG:NH2	4:1d:243:GLU:O	2.49	0.45
5:1e:25:ILE:CG2	17:1v:93:LEU:HA	2.46	0.45
6:1f:39:ARG:O	14:1p:13:LYS:NZ	2.47	0.45
30:1h:101:PL9:H351	30:1h:101:PL9:H371	1.70	0.45
28:1t:101:BCR:H403	28:1t:101:BCR:H24C	1.79	0.45
21:1z:10:PHE:O	21:1z:14:VAL:HG23	2.16	0.45
21:1z:57:LEU:HA	21:1z:60:LEU:HB2	1.98	0.45
1:1a:208:GLY:O	1:1a:212:SER:OG	2.33	0.45
7:1h:27:ASN:C	7:1h:27:ASN:HD22	2.24	0.45
28:1j:101:BCR:H24C	28:1j:101:BCR:H371	1.53	0.45
17:1v:66:ILE:HG23	22:1v:201:LHG:HC82	1.98	0.45
18:1w:34:TRP:O	18:1w:38:THR:OG1	2.30	0.45
19:1x:69:VAL:O	19:1x:73:VAL:HG23	2.17	0.45
1:1a:267:ASN:HB2	17:1v:60:VAL:HG21	1.99	0.45
26:1a:408:CLA:H3A	29:1w:101:SQD:H241	1.99	0.45
2:1b:96:VAL:HG21	26:1b:605:CLA:HMA3	1.98	0.45
2:1b:227:LYS:O	29:1b:622:SQD:O3	2.25	0.45
2:1b:247:PHE:O	2:1b:251:VAL:HG23	2.16	0.45
26:1b:612:CLA:H61	26:1b:612:CLA:H41	1.57	0.45
9:1j:10:LEU:HD22	22:1v:201:LHG:H241	1.97	0.45
1:1a:23:SER:OG	1:1a:26:ASN:OD1	2.33	0.45
1:1a:268:SER:O	1:1a:272:HIS:ND1	2.49	0.45
2:1b:154:GLY:HA2	2:1b:158:VAL:HB	1.99	0.45
3:1c:130:ILE:HG22	21:1z:27:PHE:HD2	1.81	0.45
29:1d:411:SQD:O3	6:1f:35:GLN:NE2	2.36	0.45
8:1i:17:SER:HB2	18:1w:33:ILE:HD13	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:1c:504:CLA:H172	26:1c:511:CLA:HBB2	1.98	0.45
9:1j:18:GLY:O	9:1j:22:ILE:HG13	2.17	0.45
1:1a:334:ARG:HG3	13:1o:157:LEU:HB2	1.98	0.45
26:1b:610:CLA:HBD	26:1b:610:CLA:H143	1.99	0.45
3:1c:285:ILE:HG21	26:1c:502:CLA:H61	1.99	0.45
13:1o:163:GLY:HA2	13:1o:191:LYS:HG3	1.98	0.45
2:1b:136:PRO:HB3	2:1b:221:PRO:HG2	1.98	0.45
2:1b:272:ARG:NH1	4:1d:165:GLN:OE1	2.46	0.45
2:1b:285:TYR:HA	2:1b:288:VAL:HG12	1.99	0.45
29:1b:621:SQD:H212	22:1b:628:LHG:H362	1.98	0.45
3:1c:250:TRP:O	3:1c:254:THR:OG1	2.34	0.45
3:1c:366:LEU:HD12	3:1c:369:LEU:HD12	1.98	0.45
29:1c:516:SQD:H132	10:1k:42:VAL:HG21	1.99	0.45
6:1f:39:ARG:NH2	14:1p:16:THR:OG1	2.50	0.45
14:1p:160:LYS:HZ3	14:1p:162:GLN:HG2	1.81	0.45
1:1a:106:LEU:HD11	28:1a:409:BCR:H402	1.98	0.45
1:1a:286:THR:OG1	26:1a:405:CLA:O1D	2.26	0.45
26:1c:507:CLA:HHD	32:1c:523:LNL:H141	1.98	0.45
1:1a:315:ASN:OD1	14:1p:52:ASN:ND2	2.41	0.45
2:1b:166:ILE:HG12	2:1b:181:VAL:HG21	1.98	0.45
29:1b:620:SQD:H111	29:1b:620:SQD:H81	1.81	0.45
29:1c:516:SQD:H262	31:1c:519:DGD:HG31	1.99	0.45
12:1m:21:PHE:O	12:1m:25:ILE:HG12	2.17	0.45
13:1o:55:PRO:HA	13:1o:240:GLY:HA3	1.99	0.45
13:1o:212:GLY:HA3	13:1o:247:GLU:HB3	1.99	0.45
2:1b:156:PHE:HD1	2:1b:161:LEU:HD23	1.80	0.44
3:1c:154:ARG:HB3	3:1c:256:PRO:HG2	1.99	0.44
14:1p:96:LYS:HA	14:1p:96:LYS:HD3	1.72	0.44
19:1x:62:GLY:O	19:1x:66:VAL:HG12	2.17	0.44
21:1z:3:ILE:O	21:1z:7:LEU:HD13	2.17	0.44
1:1a:246:TYR:HE1	1:1a:248:ILE:HB	1.82	0.44
22:1a:414:LHG:H131	22:1a:414:LHG:H102	1.40	0.44
3:1c:318:LEU:HD13	3:1c:351:PHE:HE1	1.83	0.44
13:1o:180:GLY:O	13:1o:189:ASN:ND2	2.50	0.44
1:1a:120:LEU:HA	1:1a:123:VAL:HG22	2.00	0.44
2:1b:469:HIS:HE1	26:1b:611:CLA:NA	2.15	0.44
9:1j:23:GLY:O	9:1j:27:VAL:HG23	2.18	0.44
14:1p:54:ASP:OD2	14:1p:167:ARG:NH1	2.51	0.44
2:1b:221:PRO:HG3	26:1b:609:CLA:HED3	1.98	0.44
26:1b:611:CLA:HAB	26:1b:613:CLA:HBB	2.00	0.44
28:1c:515:BCR:H24C	28:1c:515:BCR:H371	1.81	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:1f:30:SER:O	6:1f:34:MET:HG2	2.17	0.44
1:1a:259:ILE:HG23	30:1a:413:PL9:H253	1.99	0.44
2:1b:108:PHE:O	2:1b:112:ILE:HG13	2.18	0.44
2:1b:464:PHE:HD2	26:1b:611:CLA:HAC2	1.81	0.44
4:1d:228:ASP:N	17:1v:48:GLY:O	2.51	0.44
5:1e:51:ARG:NH1	14:1p:4:GLU:O	2.51	0.44
17:1v:100:GLY:O	17:1v:104:VAL:HG23	2.18	0.44
1:1a:127:MET:SD	1:1a:148:SER:HB3	2.58	0.44
1:1a:231:GLU:O	2:1b:7:ARG:NH1	2.51	0.44
2:1b:307:GLU:O	2:1b:311:PHE:HB2	2.17	0.44
7:1h:48:ALA:O	7:1h:52:VAL:HG23	2.18	0.44
30:1h:101:PL9:H23	30:1h:101:PL9:H272	1.70	0.44
2:1b:174:LEU:HD21	2:1b:309:LEU:HB2	1.99	0.44
4:1d:186:PHE:CE2	4:1d:290:LEU:HD13	2.51	0.44
1:1a:218:LEU:HD21	1:1a:254:TYR:HD2	1.83	0.44
1:1a:245:THR:OG1	1:1a:246:TYR:N	2.51	0.44
22:1a:414:LHG:H161	22:1a:414:LHG:H331	2.00	0.44
2:1b:357:ARG:NH2	4:1d:338:GLU:OE1	2.49	0.44
3:1c:352:GLY:O	3:1c:355:THR:OG1	2.36	0.44
17:1v:58:ALA:HB1	17:1v:62:GLY:HA3	2.00	0.44
1:1a:183:MET:HB3	26:1a:405:CLA:CHD	2.48	0.44
3:1c:56:HIS:HE1	26:1c:511:CLA:C4B	2.30	0.44
3:1c:273:SER:HA	3:1c:276:LEU:HD12	2.00	0.44
5:1e:25:ILE:HD11	20:1y:18:TRP:CD1	2.52	0.44
8:1i:27:ASP:HA	8:1i:30:ARG:HG2	1.99	0.44
2:1b:24:ILE:HG12	26:1b:615:CLA:HED2	2.00	0.43
2:1b:57:ARG:HD2	2:1b:330:MET:HE2	1.99	0.43
3:1c:350:ILE:HG21	3:1c:359:TRP:HB2	2.00	0.43
4:1d:79:VAL:HG22	4:1d:174:PHE:HB2	2.00	0.43
28:1k:102:BCR:H24C	28:1k:102:BCR:H371	1.81	0.43
13:1o:51:PHE:HE1	13:1o:53:LEU:HG	1.84	0.43
21:1z:14:VAL:O	21:1z:18:VAL:HG12	2.18	0.43
1:1a:192:ILE:HD12	1:1a:192:ILE:H	1.82	0.43
1:1a:300:PHE:HE2	31:1c:520:DGD:HA62	1.82	0.43
30:1a:413:PL9:H361	30:1a:413:PL9:H322	1.70	0.43
2:1b:41:GLU:HB3	2:1b:60:MET:SD	2.58	0.43
26:1b:607:CLA:H42	29:1b:621:SQD:H102	1.99	0.43
4:1d:75:LEU:HA	4:1d:176:VAL:HB	2.00	0.43
13:1o:54:GLU:OE2	18:1w:1:LEU:N	2.36	0.43
2:1b:299:SER:O	2:1b:303:SER:OG	2.31	0.43
26:1b:609:CLA:C3D	7:1h:43:MET:HB2	2.49	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:1d:181:ARG:NH1	4:1d:334:ASP:OD2	2.50	0.43
12:1m:25:ILE:O	12:1m:29:THR:OG1	2.32	0.43
17:1v:84:ALA:O	17:1v:88:LEU:HD12	2.18	0.43
1:1a:288:LEU:HD13	3:1c:432:VAL:HG22	2.00	0.43
3:1c:118:HIS:HE1	26:1c:504:CLA:C4A	2.31	0.43
4:1d:133:LEU:O	4:1d:137:VAL:HG22	2.18	0.43
4:1d:234:ARG:O	17:1v:59:ASN:ND2	2.32	0.43
29:1d:405:SQD:H462	29:1d:405:SQD:H271	2.00	0.43
26:1d:406:CLA:H41	26:1d:406:CLA:H62	1.80	0.43
28:1j:101:BCR:HC31	21:1z:13:ILE:HD13	1.99	0.43
19:1x:55:LEU:O	19:1x:59:VAL:HG23	2.18	0.43
22:1b:628:LHG:H172	30:1d:410:PL9:H201	1.99	0.43
4:1d:217:ALA:O	4:1d:221:ASN:HB2	2.18	0.43
2:1b:162:TYR:HE1	22:1b:624:LHG:HC42	1.83	0.43
2:1b:392:VAL:HG13	2:1b:397:VAL:HB	1.99	0.43
26:1b:611:CLA:H152	28:1b:618:BCR:H342	2.01	0.43
3:1c:53:HIS:HD2	26:1c:510:CLA:C4A	2.32	0.43
3:1c:71:GLU:HB3	3:1c:89:LEU:HG	2.00	0.43
4:1d:21:ASP:OD1	19:1x:83:ARG:NH2	2.46	0.43
28:1j:101:BCR:H282	22:1v:201:LHG:H261	2.00	0.43
13:1o:52:CYS:N	13:1o:243:TYR:O	2.50	0.43
1:1a:218:LEU:HD23	1:1a:218:LEU:HA	1.90	0.43
1:1a:229:GLU:HG2	2:1b:480:ALA:HB2	2.01	0.43
29:1a:410:SQD:O4	17:1v:61:ASP:OD2	2.36	0.43
22:1a:414:LHG:H111	35:1k:101:MGE:H2A2	2.01	0.43
28:1b:618:BCR:H11C	28:1b:618:BCR:H341	1.88	0.43
3:1c:130:ILE:HD11	28:1c:515:BCR:H21C	1.99	0.43
3:1c:150:VAL:HG12	3:1c:152:LYS:H	1.83	0.43
26:1c:505:CLA:C1D	31:1c:519:DGD:HB21	2.48	0.43
15:1t:26:PRO:HA	15:1t:27:PRO:HD3	1.91	0.43
21:1z:19:LEU:HD12	21:1z:19:LEU:HA	1.85	0.43
2:1b:497:LYS:HB3	2:1b:500:ASP:HB3	2.00	0.43
28:1b:618:BCR:H292	31:1b:623:DGD:HBW1	2.01	0.43
22:1c:522:LHG:H223	32:1c:523:LNL:H82	2.00	0.43
13:1o:185:LEU:O	13:1o:189:ASN:N	2.47	0.43
30:1a:413:PL9:C43	6:1f:16:ALA:HA	2.48	0.43
2:1b:298:LEU:O	2:1b:302:TRP:HB2	2.19	0.43
28:1k:102:BCR:H323	21:1z:55:ALA:HA	2.00	0.43
1:1a:199:MET:HE1	4:1d:75:LEU:HD13	1.99	0.43
1:1a:233:ALA:HB2	22:1d:401:LHG:HC11	2.01	0.43
3:1c:165:LEU:HG	26:1c:508:CLA:HED1	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:1c:504:CLA:H143	26:1c:504:CLA:H161	1.76	0.43
4:1d:37:LEU:HD11	4:1d:121:PHE:HB3	2.00	0.43
8:1i:23:PHE:HB3	28:1i:101:BCR:HC22	2.01	0.43
1:1a:231:GLU:HA	2:1b:4:PRO:HD3	2.00	0.42
26:1b:608:CLA:H62	29:1b:622:SQD:H301	2.00	0.42
4:1d:264:ASN:HB3	4:1d:267:TRP:HB3	2.01	0.42
26:1d:403:CLA:HHC	26:1d:403:CLA:HBB1	2.01	0.42
5:1e:24:SER:OG	17:1v:89:TRP:NE1	2.45	0.42
22:1e:102:LHG:H331	22:1e:102:LHG:H301	1.92	0.42
28:1t:101:BCR:H15C	28:1t:101:BCR:H351	1.79	0.42
1:1a:190:HIS:HB3	1:1a:293:MET:HB3	2.01	0.42
1:1a:219:VAL:HG21	4:1d:269:HIS:CG	2.55	0.42
3:1c:131:TYR:O	3:1c:136:GLY:N	2.48	0.42
3:1c:215:LYS:HB3	3:1c:223:TRP:HA	2.00	0.42
4:1d:86:LEU:HD21	4:1d:108:LEU:HD22	1.99	0.42
1:1a:136:ARG:NH1	8:1i:27:ASP:OD1	2.42	0.42
1:1a:297:LEU:HB2	3:1c:428:THR:HG21	2.00	0.42
28:1a:409:BCR:H311	28:1a:409:BCR:HC7	1.81	0.42
26:1b:611:CLA:H101	26:1b:613:CLA:H51	2.02	0.42
26:1b:611:CLA:H141	22:1b:628:LHG:H382	2.02	0.42
28:1b:618:BCR:H392	28:1b:618:BCR:H24C	1.82	0.42
4:1d:157:VAL:HG22	4:1d:172:PRO:HG3	2.01	0.42
4:1d:196:PRO:HA	4:1d:199:MET:HE2	2.01	0.42
5:1e:77:ASP:O	5:1e:81:ARG:HG2	2.19	0.42
7:1h:71:LEU:HB3	7:1h:72:MET:HE2	2.00	0.42
18:1w:29:VAL:O	18:1w:33:ILE:HD12	2.19	0.42
30:1a:413:PL9:HC8	30:1a:413:PL9:H121	1.77	0.42
22:1a:414:LHG:HC82	22:1a:414:LHG:HC5	1.73	0.42
5:1e:14:ILE:HD11	30:1e:101:PL9:C10	2.49	0.42
9:1j:12:LEU:O	9:1j:16:VAL:HG23	2.19	0.42
1:1a:79:SER:O	1:1a:79:SER:OG	2.31	0.42
2:1b:208:LEU:HD13	26:1b:601:CLA:H192	2.00	0.42
1:1a:262:TYR:CD2	22:1e:102:LHG:HC62	2.55	0.42
2:1b:433:ASP:OD2	2:1b:436:THR:OG1	2.30	0.42
28:1b:617:BCR:H15C	28:1b:617:BCR:H351	1.89	0.42
26:1c:507:CLA:HMC1	26:1c:508:CLA:H101	2.00	0.42
14:1p:80:PHE:CE1	14:1p:84:VAL:HG21	2.54	0.42
1:1a:160:ILE:HD13	3:1c:431:PHE:CZ	2.54	0.42
30:1a:413:PL9:HC8	30:1a:413:PL9:HC2	1.69	0.42
22:1a:414:LHG:HC2	17:1v:61:ASP:HB3	2.02	0.42
2:1b:355:PHE:CE1	16:1u:120:GLN:HG3	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:1b:613:CLA:H41	26:1b:613:CLA:H62	1.79	0.42
26:1c:502:CLA:H102	28:1i:101:BCR:H17C	2.01	0.42
4:1d:55:PHE:O	5:1e:49:SER:OG	2.26	0.42
26:1b:601:CLA:H3A	26:1b:601:CLA:HBA1	1.76	0.42
3:1c:40:ALA:HB2	26:1c:509:CLA:H2A	2.00	0.42
3:1c:221:GLU:OE2	18:1w:12:GLY:N	2.53	0.42
4:1d:88:HIS:NE2	4:1d:165:GLN:O	2.44	0.42
28:1d:409:BCR:H392	28:1d:409:BCR:H24C	1.74	0.42
13:1o:129:THR:HG21	13:1o:148:VAL:HA	2.01	0.42
1:1a:97:TRP:CZ3	8:1i:8:VAL:HG11	2.55	0.42
1:1a:281:VAL:HG12	29:1a:410:SQD:H223	2.02	0.42
26:1b:610:CLA:H141	26:1b:612:CLA:HBD	2.01	0.42
28:1b:617:BCR:HC21	12:1m:6:LEU:HD22	2.01	0.42
3:1c:230:LEU:HD23	3:1c:230:LEU:HA	1.94	0.42
28:1c:515:BCR:H24C	28:1c:515:BCR:H392	1.78	0.42
14:1p:10:GLY:HA2	17:1v:109:ALA:HB3	2.02	0.42
1:1a:259:ILE:HG13	30:1a:413:PL9:H203	2.02	0.42
22:1a:414:LHG:H121	22:1e:102:LHG:H101	2.01	0.42
28:1b:619:BCR:H403	28:1b:619:BCR:H23C	2.01	0.42
22:1b:628:LHG:H151	30:1d:410:PL9:H302	2.02	0.42
3:1c:71:GLU:OE1	3:1c:88:LEU:HB2	2.20	0.42
26:1c:511:CLA:H201	10:1k:45:VAL:HG22	2.02	0.42
4:1d:203:ALA:HB2	30:1d:410:PL9:H353	2.01	0.42
8:1i:7:PHE:HD2	29:1i:102:SQD:H112	1.85	0.42
26:1b:615:CLA:H92	26:1b:615:CLA:H62	1.83	0.41
28:1b:617:BCR:H11C	28:1b:617:BCR:H341	1.92	0.41
3:1c:163:ILE:O	3:1c:167:LEU:HG	2.20	0.41
26:1c:506:CLA:CMD	26:1c:508:CLA:HAB	2.49	0.41
26:1c:507:CLA:H93	22:1w:104:LHG:H181	2.01	0.41
4:1d:27:ARG:HG3	4:1d:29:VAL:H	1.85	0.41
4:1d:88:HIS:CD2	4:1d:163:LEU:HA	2.55	0.41
5:1e:13:ILE:HG21	34:1f:101:HEM:HAD2	2.02	0.41
7:1h:41:PRO:O	7:1h:45:VAL:HG23	2.19	0.41
15:1t:21:ILE:HD12	28:1t:101:BCR:H313	2.02	0.41
16:1u:127:THR:O	16:1u:127:THR:OG1	2.34	0.41
28:1a:409:BCR:H363	29:1i:102:SQD:H292	2.02	0.41
2:1b:68:ARG:HA	2:1b:167:TRP:HB2	2.02	0.41
3:1c:237:HIS:HE1	26:1c:502:CLA:NA	2.18	0.41
22:1e:102:LHG:HC82	17:1v:66:ILE:HD11	2.02	0.41
28:1k:102:BCR:H321	28:1k:102:BCR:HC7	1.85	0.41
14:1p:143:LYS:HD3	14:1p:164:GLY:HA2	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1a:200:LEU:HD12	29:1a:410:SQD:H222	2.01	0.41
3:1c:286:ALA:O	3:1c:290:VAL:HG23	2.20	0.41
3:1c:338:GLY:HA3	3:1c:342:MET:HB3	2.02	0.41
4:1d:186:PHE:CD2	26:1d:406:CLA:HMD3	2.56	0.41
1:1a:78:ILE:HG12	11:1l:34:ASN:ND2	2.35	0.41
30:1a:413:PL9:H353	4:1d:43:TYR:CA	2.50	0.41
2:1b:195:PRO:HA	2:1b:198:ILE:HD12	2.01	0.41
26:1b:608:CLA:HAB	4:1d:124:ILE:HA	2.02	0.41
4:1d:156:SER:HA	4:1d:160:ILE:HB	2.01	0.41
14:1p:77:PRO:HB2	14:1p:116:SER:HB2	2.02	0.41
14:1p:81:LEU:HD13	14:1p:129:VAL:HG11	2.02	0.41
1:1a:67:VAL:HG22	4:1d:313:GLU:HB3	2.01	0.41
1:1a:97:TRP:CD1	8:1i:5:LYS:HE2	2.56	0.41
2:1b:3:LEU:HD13	2:1b:8:VAL:HA	2.03	0.41
2:1b:65:PHE:HE1	26:1b:604:CLA:HED3	1.85	0.41
29:1c:516:SQD:H342	31:1c:519:DGD:HB61	2.03	0.41
4:1d:192:TRP:NE1	4:1d:290:LEU:HD11	2.35	0.41
21:1z:12:LEU:HA	21:1z:50:LEU:HD13	2.01	0.41
2:1b:227:LYS:HA	2:1b:227:LYS:HD2	1.87	0.41
26:1b:601:CLA:H11	26:1b:601:CLA:H51	1.80	0.41
30:1a:413:PL9:H122	30:1a:413:PL9:H161	1.75	0.41
9:1j:11:TRP:HB2	10:1k:56:ALA:HB1	2.02	0.41
1:1a:27:ARG:NH1	4:1d:255:SER:O	2.52	0.41
22:1a:414:LHG:HC91	35:1k:101:MGE:H2A2	2.03	0.41
2:1b:207:THR:O	2:1b:211:LEU:HD12	2.20	0.41
2:1b:479:PHE:HA	4:1d:140:ARG:HD3	2.01	0.41
4:1d:70:GLU:OE2	5:1e:55:TYR:OH	2.25	0.41
13:1o:182:GLU:HG2	13:1o:184:GLU:H	1.85	0.41
17:1v:55:LYS:HG3	17:1v:56:TYR:CD1	2.56	0.41
1:1a:21:ILE:HD11	28:1a:409:BCR:HC21	2.03	0.41
1:1a:184:ILE:HG23	1:1a:328:MET:SD	2.61	0.41
1:1a:191:ASN:OD1	1:1a:194:MET:HG2	2.20	0.41
1:1a:267:ASN:OD1	1:1a:270:SER:N	2.43	0.41
2:1b:235:GLU:HG2	26:1b:612:CLA:HBC1	2.03	0.41
2:1b:383:PHE:H	4:1d:346:VAL:HA	1.85	0.41
26:1b:608:CLA:H111	26:1b:608:CLA:H91	1.84	0.41
3:1c:38:GLY:HA3	26:1c:512:CLA:HMD2	2.01	0.41
29:1c:516:SQD:H45	29:1c:516:SQD:H81	1.93	0.41
31:1c:519:DGD:HA71	31:1c:520:DGD:HB61	2.02	0.41
31:1c:520:DGD:HA61	31:1c:520:DGD:HA32	1.95	0.41
4:1d:47:GLY:O	4:1d:51:THR:OG1	2.25	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:1d:253:PHE:O	4:1d:257:ILE:HB	2.21	0.41
28:1h:102:BCR:HC7	28:1h:102:BCR:H331	1.76	0.41
8:1i:5:LYS:HA	8:1i:8:VAL:HG12	2.03	0.41
14:1p:99:SER:O	14:1p:99:SER:OG	2.38	0.41
21:1z:23:VAL:HA	21:1z:26:VAL:HG22	2.02	0.41
2:1b:207:THR:HA	2:1b:210:ILE:HD12	2.03	0.41
4:1d:88:HIS:HD2	4:1d:163:LEU:HA	1.86	0.41
12:1m:11:THR:O	12:1m:15:ILE:HG12	2.21	0.41
1:1a:126:TYR:HE1	4:1d:257:ILE:HG23	1.86	0.40
28:1a:409:BCR:H11C	28:1a:409:BCR:H341	1.92	0.40
22:1a:414:LHG:H301	22:1a:414:LHG:H272	1.32	0.40
2:1b:268:PHE:HB3	2:1b:448:ARG:HB2	2.02	0.40
2:1b:434:ARG:NH2	2:1b:439:SER:O	2.55	0.40
27:1d:404:PHO:NC	27:1d:404:PHO:ND	2.69	0.40
5:1e:71:ASP:OD2	16:1u:133:ASN:ND2	2.55	0.40
6:1f:32:SER:HA	6:1f:35:GLN:HG2	2.03	0.40
6:1f:34:MET:HA	6:1f:37:ILE:HG13	2.03	0.40
13:1o:110:ASP:OD1	13:1o:110:ASP:N	2.45	0.40
1:1a:329:GLU:HG2	3:1c:412:THR:HG21	2.02	0.40
26:1b:611:CLA:HAB	26:1b:613:CLA:HMA1	2.04	0.40
31:1b:623:DGD:HB82	31:1b:623:DGD:HBE1	1.91	0.40
3:1c:155:ASN:O	3:1c:159:THR:HG23	2.20	0.40
26:1c:507:CLA:H61	26:1c:507:CLA:H2	1.68	0.40
4:1d:62:HIS:NE2	4:1d:81:THR:OG1	2.42	0.40
4:1d:198:HIS:HE1	26:1d:406:CLA:NC	2.15	0.40
29:1d:411:SQD:O3	9:1j:28:PHE:O	2.30	0.40
28:1i:101:BCR:H351	28:1i:101:BCR:H15C	1.85	0.40
13:1o:92:PRO:HD2	13:1o:104:GLU:HB2	2.03	0.40
1:1a:88:ALA:HA	3:1c:356:MET:HB3	2.03	0.40
1:1a:120:LEU:HA	1:1a:120:LEU:HD23	1.84	0.40
26:1b:607:CLA:H62	26:1b:607:CLA:H93	1.85	0.40
3:1c:464:GLU:OE2	4:1d:249:THR:OG1	2.39	0.40
30:1e:101:PL9:C52	6:1f:17:VAL:HG22	2.52	0.40
11:1l:30:VAL:O	11:1l:34:ASN:ND2	2.49	0.40
17:1v:88:LEU:HA	17:1v:91:ILE:HG22	2.04	0.40
19:1x:68:ILE:O	19:1x:72:VAL:HG23	2.20	0.40
3:1c:56:HIS:CD2	26:1c:511:CLA:ND	2.79	0.40
3:1c:135:LEU:HD13	21:1z:27:PHE:HD1	1.87	0.40
3:1c:461:ARG:HD3	3:1c:461:ARG:HA	1.96	0.40
22:1c:522:LHG:H182	22:1c:522:LHG:H211	1.91	0.40
5:1e:25:ILE:HG23	17:1v:93:LEU:HD13	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:1f:14:TRP:O	6:1f:18:HIS:ND1	2.51	0.40
13:1o:142:PHE:HB3	13:1o:202:LEU:O	2.22	0.40
13:1o:183:GLU:HA	13:1o:186:ALA:HB2	2.01	0.40
3:1c:342:MET:HE1	3:1c:356:MET:HE2	2.04	0.40
29:1i:102:SQD:H271	29:1i:102:SQD:H242	1.97	0.40
13:1o:103:PHE:HB3	13:1o:142:PHE:HZ	1.86	0.40
14:1p:38:LYS:HE2	14:1p:38:LYS:HB2	1.81	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	1a	331/333 (99%)	313 (95%)	18 (5%)	0	100	100
2	1b	501/503 (100%)	486 (97%)	15 (3%)	0	100	100
3	1c	448/450 (100%)	428 (96%)	17 (4%)	3 (1%)	18	44
4	1d	339/341 (99%)	316 (93%)	23 (7%)	0	100	100
5	1e	73/75 (97%)	68 (93%)	5 (7%)	0	100	100
6	1f	28/31 (90%)	27 (96%)	1 (4%)	0	100	100
7	1h	58/60 (97%)	57 (98%)	1 (2%)	0	100	100
8	1i	32/34 (94%)	30 (94%)	2 (6%)	0	100	100
9	1j	33/35 (94%)	33 (100%)	0	0	100	100
10	1k	35/37 (95%)	34 (97%)	0	1 (3%)	3	11
11	1l	33/37 (89%)	33 (100%)	0	0	100	100
12	1m	31/34 (91%)	31 (100%)	0	0	100	100
13	1o	233/248 (94%)	208 (89%)	25 (11%)	0	100	100
14	1p	184/186 (99%)	170 (92%)	14 (8%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
15	1t	29/32 (91%)	29 (100%)	0	0	100	100
16	1u	25/27 (93%)	22 (88%)	3 (12%)	0	100	100
17	1v	97/105 (92%)	81 (84%)	12 (12%)	4 (4%)	2	6
18	1w	42/44 (96%)	40 (95%)	2 (5%)	0	100	100
19	1x	36/39 (92%)	34 (94%)	2 (6%)	0	100	100
20	1y	32/36 (89%)	32 (100%)	0	0	100	100
21	1z	60/62 (97%)	58 (97%)	2 (3%)	0	100	100
All	All	2680/2749 (98%)	2530 (94%)	142 (5%)	8 (0%)	37	63

All (8) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
3	1c	43	ILE
3	1c	384	ILE
10	1k	40	MET
17	1v	43	VAL
17	1v	51	GLN
17	1v	83	LYS
3	1c	472	LEU
17	1v	24	PRO

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	1a	270/270 (100%)	269 (100%)	1 (0%)	84	93
2	1b	402/402 (100%)	400 (100%)	2 (0%)	81	92
3	1c	349/350 (100%)	348 (100%)	1 (0%)	86	94
4	1d	275/275 (100%)	274 (100%)	1 (0%)	84	93
5	1e	68/68 (100%)	68 (100%)	0	100	100
6	1f	25/26 (96%)	25 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
7	1h	49/49 (100%)	48 (98%)	1 (2%)	48	77
8	1i	31/31 (100%)	31 (100%)	0	100	100
9	1j	26/26 (100%)	26 (100%)	0	100	100
10	1k	32/32 (100%)	32 (100%)	0	100	100
11	1l	33/35 (94%)	33 (100%)	0	100	100
12	1m	27/30 (90%)	27 (100%)	0	100	100
13	1o	196/204 (96%)	195 (100%)	1 (0%)	81	92
14	1p	149/149 (100%)	149 (100%)	0	100	100
15	1t	28/29 (97%)	28 (100%)	0	100	100
16	1u	23/23 (100%)	23 (100%)	0	100	100
17	1v	62/77 (80%)	60 (97%)	2 (3%)	34	67
18	1w	35/38 (92%)	35 (100%)	0	100	100
19	1x	32/32 (100%)	32 (100%)	0	100	100
20	1y	28/30 (93%)	27 (96%)	1 (4%)	31	63
21	1z	54/54 (100%)	53 (98%)	1 (2%)	50	78
All	All	2194/2230 (98%)	2183 (100%)	11 (0%)	78	92

All (11) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	1a	63	ILE
2	1b	66	MET
2	1b	229	LEU
3	1c	469	MET
4	1d	292	LEU
7	1h	27	ASN
13	1o	8	THR
17	1v	49	LEU
17	1v	93	LEU
20	1y	9	LEU
21	1z	60	LEU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (27) such sidechains are listed below:

Mol	Chain	Res	Type
1	1a	165	GLN

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Mol	Chain	Res	Type
1	1a	230	ASN
1	1a	234	ASN
1	1a	298	ASN
1	1a	304	GLN
1	1a	310	GLN
2	1b	73	ASN
2	1b	201	HIS
2	1b	274	GLN
3	1c	28	GLN
4	1d	84	ASN
4	1d	99	GLN
4	1d	187	GLN
4	1d	221	ASN
4	1d	302	GLN
4	1d	323	ASN
5	1e	61	GLN
6	1f	38	GLN
11	1l	7	ASN
11	1l	34	ASN
13	1o	13	GLN
13	1o	117	GLN
14	1p	35	ASN
14	1p	56	ASN
16	1u	132	HIS
16	1u	133	ASN
21	1z	58	ASN

5.3.3 RNA ⓘ

There are no RNA molecules in this entry.

5.4 Non-standard residues in protein, DNA, RNA chains ⓘ

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

5.5 Carbohydrates ⓘ

There are no oligosaccharides in this entry.

5.6 Ligand geometry

Of 94 ligands modelled in this entry, 3 are monoatomic - leaving 91 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	CLA	1b	606	2	54,58,73	2.41	19 (35%)	65,95,113	3.24	31 (47%)
28	BCR	1b	619	-	41,41,41	1.65	8 (19%)	56,56,56	1.81	16 (28%)
26	CLA	1b	608	2	69,73,73	2.04	16 (23%)	83,113,113	2.67	28 (33%)
31	DGD	1c	518	-	48,48,67	0.99	2 (4%)	62,62,81	1.20	7 (11%)
28	BCR	1b	618	-	41,41,41	1.69	8 (19%)	56,56,56	1.73	15 (26%)
22	LHG	1d	402	-	37,37,48	0.33	0	40,43,54	0.38	0
22	LHG	1c	521	-	28,28,48	0.37	0	31,33,54	0.44	0
28	BCR	1j	101	-	41,41,41	1.79	8 (19%)	56,56,56	2.11	15 (26%)
26	CLA	1b	614	2	69,73,73	2.13	20 (28%)	83,113,113	2.83	30 (36%)
26	CLA	1b	612	-	62,66,73	2.16	19 (30%)	74,104,113	2.98	33 (44%)
27	PHO	1d	404	-	58,69,69	0.82	2 (3%)	56,99,99	1.06	5 (8%)
31	DGD	1b	627	-	63,63,67	0.85	2 (3%)	77,77,81	0.91	2 (2%)
33	BCT	1d	408	24	2,3,3	0.98	0	2,3,3	0.37	0
28	BCR	1b	617	-	41,41,41	1.67	12 (29%)	56,56,56	1.58	12 (21%)
22	LHG	1w	102	-	34,34,48	0.33	0	37,39,54	0.40	0
29	SQD	1l	101	-	41,42,54	0.44	1 (2%)	50,53,65	0.76	2 (4%)
26	CLA	1a	406	-	54,58,73	2.42	19 (35%)	65,95,113	3.26	31 (47%)
30	PL9	1a	413	-	55,55,55	0.58	1 (1%)	68,69,69	1.85	20 (29%)
29	SQD	1a	412	-	45,46,54	0.41	1 (2%)	54,57,65	0.52	1 (1%)
26	CLA	1b	613	2	64,68,73	2.28	21 (32%)	77,107,113	3.29	31 (40%)
26	CLA	1c	509	3	63,67,73	2.11	17 (26%)	75,105,113	2.95	31 (41%)
31	DGD	1c	519	-	53,53,67	0.92	2 (3%)	67,67,81	1.05	5 (7%)
22	LHG	1e	102	-	41,41,48	0.29	0	44,47,54	0.39	0
26	CLA	1b	610	-	69,73,73	2.13	20 (28%)	83,113,113	2.93	29 (34%)
26	CLA	1c	511	3	69,73,73	2.12	19 (27%)	83,113,113	2.87	27 (32%)
31	DGD	1c	520	-	58,58,67	0.90	2 (3%)	72,72,81	0.91	3 (4%)
28	BCR	1d	409	-	41,41,41	1.80	10 (24%)	56,56,56	1.89	17 (30%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
22	LHG	1a	401	-	31,31,48	0.34	0	34,37,54	0.48	0
30	PL9	1h	101	-	55,55,55	0.66	1 (1%)	68,69,69	0.86	4 (5%)
28	BCR	1a	409	-	41,41,41	1.73	8 (19%)	56,56,56	1.65	13 (23%)
22	LHG	1w	104	-	36,36,48	0.46	0	38,41,54	0.37	0
26	CLA	1c	510	3	49,53,73	2.55	20 (40%)	59,89,113	3.32	27 (45%)
26	CLA	1a	405	1	56,60,73	2.29	18 (32%)	67,97,113	3.14	31 (46%)
30	PL9	1d	410	-	55,55,55	0.78	1 (1%)	68,69,69	0.53	1 (1%)
22	LHG	1j	102	-	40,40,48	0.29	0	43,46,54	0.78	1 (2%)
26	CLA	1c	513	-	65,69,73	2.11	18 (27%)	78,108,113	3.02	30 (38%)
22	LHG	1d	401	-	38,38,48	0.30	0	41,44,54	0.42	0
34	HEM	1f	101	6	50,50,50	1.57	7 (14%)	66,82,82	1.64	11 (16%)
26	CLA	1c	503	-	64,68,73	2.12	19 (29%)	77,107,113	2.97	30 (38%)
26	CLA	1c	502	3	69,73,73	2.13	19 (27%)	83,113,113	2.87	29 (34%)
23	OEX	1a	402	3,1	0,14,14	-	-	-	-	-
26	CLA	1c	504	3	69,73,73	2.07	20 (28%)	83,113,113	2.91	31 (37%)
26	CLA	1b	611	2	69,73,73	2.01	17 (24%)	83,113,113	2.70	29 (34%)
26	CLA	1b	604	2	46,50,73	2.48	18 (39%)	55,85,113	3.42	29 (52%)
29	SQD	1d	405	-	47,48,54	0.42	1 (2%)	56,59,65	0.65	2 (3%)
31	DGD	1b	623	-	56,56,67	0.90	2 (3%)	70,70,81	0.95	3 (4%)
26	CLA	1c	506	3	56,60,73	2.32	20 (35%)	67,97,113	3.14	31 (46%)
22	LHG	1c	522	-	41,41,48	0.29	0	44,47,54	0.39	0
26	CLA	1a	408	1	64,68,73	2.16	19 (29%)	77,107,113	2.93	30 (38%)
22	LHG	1b	628	-	48,48,48	0.27	0	51,54,54	0.32	0
29	SQD	1i	102	-	39,40,54	0.44	1 (2%)	48,51,65	0.39	0
29	SQD	1d	411	-	38,39,54	0.48	1 (2%)	47,50,65	0.65	2 (4%)
32	LNL	1c	523	-	16,16,19	0.61	0	15,16,19	0.63	0
22	LHG	1w	103	-	41,41,48	0.30	0	44,47,54	0.33	0
35	MGE	1k	101	-	36,36,48	0.29	0	44,44,56	0.59	0
27	PHO	1a	407	-	34,45,69	1.05	2 (5%)	28,70,99	1.48	5 (17%)
22	LHG	1v	201	-	40,40,48	0.29	0	43,46,54	0.39	0
30	PL9	1e	101	-	21,21,55	0.87	1 (4%)	27,28,69	1.82	7 (25%)
26	CLA	1d	403	-	63,67,73	2.23	19 (30%)	75,105,113	3.13	30 (40%)
29	SQD	1a	411	-	53,54,54	0.39	1 (1%)	62,65,65	0.47	1 (1%)
28	BCR	1c	515	-	41,41,41	1.72	8 (19%)	56,56,56	1.68	17 (30%)
26	CLA	1d	406	4	64,68,73	2.15	18 (28%)	77,107,113	2.94	32 (41%)
26	CLA	1b	602	2	60,64,73	2.19	16 (26%)	72,102,113	3.07	30 (41%)
26	CLA	1b	601	-	69,73,73	2.16	19 (27%)	83,113,113	2.81	27 (32%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
26	CLA	1b	605	2	62,66,73	2.21	18 (29%)	74,104,113	3.21	32 (43%)
29	SQD	1b	620	-	52,53,54	0.39	1 (1%)	61,64,65	0.64	1 (1%)
28	BCR	1h	102	-	41,41,41	1.79	10 (24%)	56,56,56	2.06	17 (30%)
26	CLA	1b	603	-	69,73,73	2.07	18 (26%)	83,113,113	2.63	25 (30%)
26	CLA	1c	505	-	59,63,73	2.25	20 (33%)	71,101,113	2.99	29 (40%)
29	SQD	1b	621	-	53,54,54	0.39	1 (1%)	62,65,65	0.88	3 (4%)
26	CLA	1c	508	-	69,73,73	2.14	20 (28%)	83,113,113	2.90	30 (36%)
29	SQD	1a	410	-	49,50,54	0.40	1 (2%)	58,61,65	0.93	3 (5%)
29	SQD	1b	622	-	47,48,54	0.42	1 (2%)	56,59,65	0.58	2 (3%)
29	SQD	1w	101	-	39,40,54	0.43	1 (2%)	48,51,65	0.71	1 (2%)
22	LHG	1b	624	-	26,26,48	0.38	0	29,31,54	0.92	2 (6%)
28	BCR	1k	102	-	41,41,41	1.81	8 (19%)	56,56,56	1.83	13 (23%)
26	CLA	1b	607	-	63,67,73	2.16	19 (30%)	75,105,113	2.92	32 (42%)
26	CLA	1c	507	3	59,63,73	2.27	18 (30%)	71,101,113	2.92	27 (38%)
22	LHG	1b	625	-	35,35,48	0.31	0	38,41,54	0.53	0
26	CLA	1b	609	2	65,69,73	2.12	18 (27%)	78,108,113	2.99	30 (38%)
29	SQD	1c	517	-	43,44,54	0.44	1 (2%)	52,55,65	0.48	0
26	CLA	1c	512	3	49,53,73	2.49	20 (40%)	59,89,113	3.40	28 (47%)
28	BCR	1i	101	-	41,41,41	1.70	8 (19%)	56,56,56	1.61	11 (19%)
26	CLA	1b	615	-	65,69,73	2.16	18 (27%)	78,108,113	3.03	29 (37%)
22	LHG	1a	414	-	40,40,48	1.01	2 (5%)	43,46,54	1.10	3 (6%)
29	SQD	1c	516	-	53,54,54	0.39	1 (1%)	62,65,65	0.88	4 (6%)
22	LHG	1b	626	-	44,44,48	0.29	0	47,50,54	0.34	0
26	CLA	1d	407	4	59,63,73	2.28	20 (33%)	71,101,113	3.11	30 (42%)
26	CLA	1c	514	3	63,67,73	2.23	20 (31%)	75,105,113	3.04	30 (40%)
28	BCR	1t	101	-	41,41,41	1.68	9 (21%)	56,56,56	1.83	15 (26%)
26	CLA	1b	616	-	49,53,73	2.49	19 (38%)	59,89,113	3.29	26 (44%)

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	CLA	1b	606	2	-	4/21/97/115	-
28	BCR	1b	619	-	-	2/29/63/63	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
26	CLA	1b	608	2	1/1/15/20	4/39/115/115	-
31	DGD	1c	518	-	-	8/36/76/95	0/2/2/2
28	BCR	1b	618	-	-	4/29/63/63	0/2/2/2
22	LHG	1d	402	-	-	3/42/42/53	-
22	LHG	1c	521	-	-	4/32/32/53	-
28	BCR	1j	101	-	-	5/29/63/63	0/2/2/2
26	CLA	1b	614	2	1/1/15/20	14/39/115/115	-
26	CLA	1b	612	-	1/1/13/20	18/31/107/115	-
27	PHO	1d	404	-	-	3/37/103/103	0/5/6/6
31	DGD	1b	627	-	-	9/51/91/95	0/2/2/2
28	BCR	1b	617	-	-	2/29/63/63	0/2/2/2
22	LHG	1w	102	-	-	10/38/38/53	-
29	SQD	1l	101	-	-	4/37/57/69	0/1/1/1
26	CLA	1a	406	-	-	3/21/97/115	-
30	PL9	1a	413	-	-	16/53/73/73	0/1/1/1
29	SQD	1a	412	-	-	3/41/61/69	0/1/1/1
26	CLA	1b	613	2	1/1/14/20	7/33/109/115	-
26	CLA	1c	509	3	1/1/13/20	6/32/108/115	-
31	DGD	1c	519	-	-	14/41/81/95	0/2/2/2
22	LHG	1e	102	-	-	10/46/46/53	-
26	CLA	1b	610	-	1/1/15/20	13/39/115/115	-
26	CLA	1c	511	3	1/1/15/20	12/39/115/115	-
31	DGD	1c	520	-	-	8/46/86/95	0/2/2/2
28	BCR	1d	409	-	-	4/29/63/63	0/2/2/2
22	LHG	1a	401	-	-	4/36/36/53	-
30	PL9	1h	101	-	-	13/53/73/73	0/1/1/1
28	BCR	1a	409	-	-	1/29/63/63	0/2/2/2
22	LHG	1w	104	-	-	10/40/40/53	-
26	CLA	1c	510	3	-	7/15/91/115	-
26	CLA	1a	405	1	-	6/24/100/115	-
30	PL9	1d	410	-	-	3/53/73/73	0/1/1/1
22	LHG	1j	102	-	-	14/45/45/53	-
26	CLA	1c	513	-	1/1/14/20	11/35/111/115	-
22	LHG	1d	401	-	-	10/43/43/53	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
34	HEM	1f	101	6	-	8/14/54/54	-
26	CLA	1c	503	-	1/1/14/20	11/33/109/115	-
26	CLA	1c	502	3	1/1/15/20	8/39/115/115	-
26	CLA	1c	504	3	1/1/15/20	15/39/115/115	-
26	CLA	1b	611	2	1/1/15/20	11/39/115/115	-
26	CLA	1b	604	2	-	1/12/88/115	-
29	SQD	1d	405	-	-	3/43/63/69	0/1/1/1
31	DGD	1b	623	-	-	10/44/84/95	0/2/2/2
26	CLA	1c	506	3	-	10/24/100/115	-
26	CLA	1a	408	1	1/1/14/20	5/33/109/115	-
22	LHG	1c	522	-	-	9/46/46/53	-
22	LHG	1b	628	-	-	3/53/53/53	-
29	SQD	1i	102	-	-	3/35/55/69	0/1/1/1
29	SQD	1d	411	-	-	0/34/54/69	0/1/1/1
32	LNL	1c	523	-	-	2/14/14/17	-
22	LHG	1w	103	-	-	7/46/46/53	-
35	MGE	1k	101	-	-	11/31/51/63	0/1/1/1
27	PHO	1a	407	-	-	1/8/74/103	0/5/6/6
22	LHG	1v	201	-	-	8/45/45/53	-
30	PL9	1e	101	-	-	4/13/33/73	0/1/1/1
26	CLA	1d	403	-	1/1/13/20	10/32/108/115	-
29	SQD	1a	411	-	-	8/49/69/69	0/1/1/1
28	BCR	1c	515	-	-	1/29/63/63	0/2/2/2
26	CLA	1d	406	4	1/1/14/20	7/33/109/115	-
26	CLA	1b	602	2	1/1/13/20	8/29/105/115	-
26	CLA	1b	601	-	1/1/15/20	6/39/115/115	-
26	CLA	1b	605	2	1/1/13/20	9/31/107/115	-
29	SQD	1b	620	-	-	10/48/68/69	0/1/1/1
28	BCR	1h	102	-	-	3/29/63/63	0/2/2/2
26	CLA	1b	603	-	1/1/15/20	9/39/115/115	-
26	CLA	1c	505	-	1/1/13/20	8/27/103/115	-
29	SQD	1b	621	-	-	7/49/69/69	0/1/1/1
26	CLA	1c	508	-	1/1/15/20	9/39/115/115	-
29	SQD	1a	410	-	-	9/45/65/69	0/1/1/1
29	SQD	1b	622	-	-	13/43/63/69	0/1/1/1

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
29	SQD	1w	101	-	-	5/35/55/69	0/1/1/1
22	LHG	1b	624	-	-	4/30/30/53	-
28	BCR	1k	102	-	-	5/29/63/63	0/2/2/2
26	CLA	1b	607	-	1/1/13/20	10/32/108/115	-
26	CLA	1c	507	3	1/1/13/20	14/27/103/115	-
22	LHG	1b	625	-	-	7/40/40/53	-
26	CLA	1b	609	2	1/1/14/20	10/35/111/115	-
29	SQD	1c	517	-	-	2/39/59/69	0/1/1/1
26	CLA	1c	512	3	-	3/15/91/115	-
28	BCR	1i	101	-	-	1/29/63/63	0/2/2/2
26	CLA	1b	615	-	1/1/14/20	10/35/111/115	-
22	LHG	1a	414	-	-	29/45/45/53	-
29	SQD	1c	516	-	-	3/49/69/69	0/1/1/1
26	CLA	1d	407	4	1/1/13/20	9/27/103/115	-
22	LHG	1b	626	-	-	7/49/49/53	-
26	CLA	1c	514	3	1/1/13/20	7/32/108/115	-
28	BCR	1t	101	-	-	2/29/63/63	0/2/2/2
26	CLA	1b	616	-	-	8/15/91/115	-

All (795) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
26	1b	601	CLA	C1D-ND	8.88	1.48	1.37
26	1c	510	CLA	C1D-ND	8.86	1.48	1.37
26	1b	602	CLA	C1D-ND	8.77	1.48	1.37
26	1b	606	CLA	C1D-ND	8.66	1.48	1.37
26	1a	406	CLA	C1D-ND	8.63	1.48	1.37
26	1c	508	CLA	C1D-ND	8.61	1.48	1.37
26	1b	613	CLA	C1D-ND	8.60	1.48	1.37
26	1b	615	CLA	C1D-ND	8.59	1.48	1.37
26	1d	403	CLA	C1D-ND	8.55	1.48	1.37
26	1d	407	CLA	C1D-ND	8.54	1.48	1.37
26	1b	610	CLA	C1D-ND	8.53	1.48	1.37
26	1b	616	CLA	C1D-ND	8.53	1.48	1.37
26	1c	502	CLA	C1D-ND	8.52	1.48	1.37
26	1b	605	CLA	C1D-ND	8.50	1.48	1.37
26	1b	604	CLA	C1D-ND	8.46	1.48	1.37
26	1a	405	CLA	C1D-ND	8.41	1.48	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
26	1c	504	CLA	C1D-ND	8.41	1.48	1.37
26	1c	512	CLA	C1D-ND	8.34	1.48	1.37
26	1b	614	CLA	C1D-ND	8.29	1.48	1.37
26	1c	503	CLA	C1D-ND	8.27	1.48	1.37
26	1c	514	CLA	C1D-ND	8.27	1.47	1.37
26	1c	507	CLA	C1D-ND	8.26	1.47	1.37
26	1d	406	CLA	C1D-ND	8.18	1.47	1.37
26	1b	607	CLA	C1D-ND	8.16	1.47	1.37
26	1b	609	CLA	C1D-ND	8.15	1.47	1.37
26	1a	408	CLA	C1D-ND	8.12	1.47	1.37
26	1c	511	CLA	C1D-ND	8.09	1.47	1.37
26	1b	611	CLA	C1D-ND	8.02	1.47	1.37
26	1c	505	CLA	C1D-ND	8.00	1.47	1.37
26	1c	506	CLA	C1D-ND	7.99	1.47	1.37
26	1c	513	CLA	C1D-ND	7.91	1.47	1.37
26	1b	603	CLA	C1D-ND	7.84	1.47	1.37
26	1c	509	CLA	C1D-ND	7.68	1.47	1.37
26	1b	612	CLA	C1D-ND	7.44	1.46	1.37
26	1b	608	CLA	C1D-ND	7.41	1.46	1.37
34	1f	101	HEM	FE-NB	5.25	2.11	1.94
26	1b	605	CLA	O2D-CGD	5.24	1.46	1.33
28	1k	102	BCR	C21-C22	5.22	1.42	1.35
26	1b	609	CLA	O2D-CGD	5.19	1.45	1.33
26	1b	601	CLA	O2D-CGD	5.17	1.45	1.33
26	1b	607	CLA	O2D-CGD	5.15	1.45	1.33
26	1b	616	CLA	O2D-CGD	5.13	1.45	1.33
26	1c	514	CLA	O2D-CGD	5.13	1.45	1.33
26	1c	512	CLA	O2D-CGD	5.13	1.45	1.33
26	1a	406	CLA	O2D-CGD	5.12	1.45	1.33
26	1c	505	CLA	O2D-CGD	5.11	1.45	1.33
26	1c	508	CLA	O2D-CGD	5.09	1.45	1.33
26	1c	511	CLA	O2D-CGD	5.09	1.45	1.33
26	1b	603	CLA	O2D-CGD	5.09	1.45	1.33
26	1b	608	CLA	O2D-CGD	5.07	1.45	1.33
26	1d	403	CLA	O2D-CGD	5.06	1.45	1.33
26	1b	606	CLA	O2D-CGD	5.05	1.45	1.33
26	1b	614	CLA	O2D-CGD	5.05	1.45	1.33
26	1a	408	CLA	O2D-CGD	5.04	1.45	1.33
26	1c	502	CLA	O2D-CGD	5.04	1.45	1.33
26	1b	613	CLA	O2D-CGD	5.04	1.45	1.33
26	1c	506	CLA	O2D-CGD	5.04	1.45	1.33
26	1b	604	CLA	O2D-CGD	5.03	1.45	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
26	1c	507	CLA	O2D-CGD	5.02	1.45	1.33
26	1c	510	CLA	O2D-CGD	5.02	1.45	1.33
26	1c	513	CLA	O2D-CGD	5.01	1.45	1.33
26	1b	612	CLA	O2D-CGD	5.00	1.45	1.33
26	1c	504	CLA	O2D-CGD	4.98	1.45	1.33
30	1d	410	PL9	C3-C4	-4.98	1.41	1.49
26	1d	406	CLA	O2D-CGD	4.94	1.45	1.33
26	1b	613	CLA	CHB-C1B	4.87	1.50	1.39
26	1b	610	CLA	O2D-CGD	4.86	1.45	1.33
26	1d	407	CLA	O2D-CGD	4.86	1.45	1.33
26	1c	506	CLA	C3D-C4D	-4.85	1.33	1.44
26	1b	603	CLA	C3D-C4D	-4.85	1.33	1.44
26	1b	602	CLA	O2D-CGD	4.83	1.45	1.33
26	1b	615	CLA	O2D-CGD	4.83	1.45	1.33
26	1c	511	CLA	CHC-C1C	4.80	1.48	1.38
26	1b	608	CLA	C3D-C4D	-4.79	1.33	1.44
26	1a	405	CLA	O2D-CGD	4.77	1.44	1.33
26	1a	405	CLA	C3D-C4D	-4.73	1.33	1.44
26	1b	604	CLA	C3D-C4D	-4.73	1.33	1.44
26	1b	611	CLA	O2D-CGD	4.71	1.44	1.33
26	1b	612	CLA	C3D-C4D	-4.70	1.33	1.44
26	1c	509	CLA	O2D-CGD	4.69	1.44	1.33
26	1b	610	CLA	C3C-C2C	4.67	1.46	1.36
26	1c	503	CLA	O2D-CGD	4.67	1.44	1.33
26	1b	602	CLA	C3D-C4D	-4.67	1.33	1.44
26	1b	605	CLA	C3D-C4D	-4.66	1.33	1.44
26	1b	614	CLA	C3D-C4D	-4.60	1.33	1.44
26	1d	406	CLA	C3D-C4D	-4.60	1.33	1.44
26	1b	612	CLA	CHC-C1C	4.58	1.47	1.38
26	1b	607	CLA	C3D-C4D	-4.56	1.33	1.44
26	1b	616	CLA	C3D-C4D	-4.53	1.34	1.44
26	1c	507	CLA	C3C-C2C	4.53	1.46	1.36
26	1c	510	CLA	CHB-C1B	4.53	1.49	1.39
26	1b	601	CLA	C3C-C2C	4.51	1.46	1.36
26	1b	606	CLA	C3D-C4D	-4.51	1.34	1.44
26	1c	506	CLA	C3C-C2C	4.51	1.46	1.36
26	1c	508	CLA	CHC-C1C	4.51	1.47	1.38
26	1c	514	CLA	C3D-C4D	-4.51	1.34	1.44
26	1a	406	CLA	CHC-C1C	4.51	1.47	1.38
26	1a	408	CLA	C3D-C4D	-4.51	1.34	1.44
26	1c	511	CLA	C3D-C4D	-4.50	1.34	1.44
26	1c	512	CLA	O2A-CGA	4.49	1.45	1.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
26	1c	514	CLA	C3C-C2C	4.48	1.46	1.36
26	1c	508	CLA	C3C-C2C	4.48	1.46	1.36
26	1a	406	CLA	C3C-C2C	4.48	1.46	1.36
26	1b	613	CLA	CHC-C1C	4.48	1.47	1.38
26	1c	502	CLA	C3D-C4D	-4.47	1.34	1.44
26	1c	512	CLA	C3D-C4D	-4.47	1.34	1.44
26	1c	507	CLA	C3D-C4D	-4.47	1.34	1.44
26	1c	508	CLA	C3D-C4D	-4.47	1.34	1.44
26	1b	614	CLA	CHC-C1C	4.47	1.47	1.38
26	1d	403	CLA	C3D-C4D	-4.47	1.34	1.44
26	1c	502	CLA	C3C-C2C	4.47	1.46	1.36
26	1c	504	CLA	C3D-C4D	-4.46	1.34	1.44
26	1d	406	CLA	CHC-C1C	4.45	1.47	1.38
26	1c	502	CLA	CHC-C1C	4.44	1.47	1.38
26	1b	610	CLA	C3D-C4D	-4.44	1.34	1.44
26	1a	405	CLA	CHC-C1C	4.44	1.47	1.38
26	1c	503	CLA	C3D-C4D	-4.44	1.34	1.44
26	1b	616	CLA	O2A-CGA	4.44	1.45	1.30
26	1c	505	CLA	C3C-C2C	4.44	1.46	1.36
26	1b	601	CLA	C3D-C4D	-4.43	1.34	1.44
26	1c	505	CLA	C3D-C4D	-4.43	1.34	1.44
26	1b	614	CLA	C3C-C2C	4.43	1.46	1.36
26	1a	408	CLA	CHC-C1C	4.42	1.47	1.38
26	1c	514	CLA	CHC-C1C	4.42	1.47	1.38
26	1d	407	CLA	C3D-C4D	-4.42	1.34	1.44
26	1c	510	CLA	O2A-CGA	4.42	1.45	1.30
26	1b	615	CLA	C3D-C4D	-4.41	1.34	1.44
26	1b	604	CLA	C3C-C2C	4.40	1.46	1.36
26	1d	407	CLA	C3C-C2C	4.40	1.46	1.36
26	1b	606	CLA	C3C-C2C	4.39	1.46	1.36
26	1c	511	CLA	C3C-C2C	4.38	1.46	1.36
26	1c	509	CLA	C3D-C4D	-4.38	1.34	1.44
26	1c	502	CLA	O2A-CGA	4.38	1.46	1.33
26	1b	609	CLA	C3D-C4D	-4.37	1.34	1.44
26	1a	406	CLA	C3D-C4D	-4.37	1.34	1.44
26	1b	603	CLA	O2A-CGA	4.36	1.46	1.33
26	1c	504	CLA	C3C-C2C	4.35	1.46	1.36
26	1d	403	CLA	C3C-C2C	4.35	1.46	1.36
26	1a	405	CLA	O2A-CGA	4.34	1.46	1.33
26	1c	514	CLA	O2A-CGA	4.34	1.46	1.33
30	1h	101	PL9	C3-C4	-4.34	1.42	1.49
26	1c	510	CLA	C3D-C4D	-4.33	1.34	1.44

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
26	1c	510	CLA	C3C-C2C	4.33	1.45	1.36
26	1b	611	CLA	C3D-C4D	-4.33	1.34	1.44
26	1c	505	CLA	O2A-CGA	4.32	1.46	1.33
31	1c	518	DGD	O1G-C1A	4.32	1.46	1.33
26	1b	608	CLA	C3C-C2C	4.31	1.45	1.36
26	1c	512	CLA	C3C-C2C	4.31	1.45	1.36
26	1c	509	CLA	C3C-C2C	4.30	1.45	1.36
26	1d	403	CLA	CHC-C1C	4.30	1.47	1.38
26	1b	603	CLA	C3C-C2C	4.29	1.45	1.36
28	1j	101	BCR	C21-C22	4.28	1.41	1.35
26	1d	407	CLA	O2A-CGA	4.28	1.45	1.33
26	1b	606	CLA	CHC-C1C	4.27	1.47	1.38
26	1b	605	CLA	C3C-C2C	4.27	1.45	1.36
26	1c	513	CLA	C3D-C4D	-4.27	1.34	1.44
28	1h	102	BCR	C14-C13	4.26	1.41	1.35
26	1a	408	CLA	O2A-CGA	4.26	1.45	1.33
26	1c	506	CLA	CHC-C1C	4.26	1.47	1.38
26	1b	607	CLA	O2A-CGA	4.26	1.45	1.33
28	1d	409	BCR	C10-C9	4.26	1.41	1.35
26	1d	406	CLA	O2A-CGA	4.25	1.45	1.33
26	1b	615	CLA	O2A-CGA	4.25	1.45	1.33
26	1b	607	CLA	C3C-C2C	4.24	1.45	1.36
26	1c	508	CLA	O2A-CGA	4.24	1.45	1.33
26	1b	609	CLA	C3C-C2C	4.24	1.45	1.36
26	1b	601	CLA	O2A-CGA	4.24	1.45	1.33
26	1b	615	CLA	CHC-C1C	4.24	1.47	1.38
26	1c	505	CLA	CHC-C1C	4.24	1.47	1.38
26	1c	513	CLA	O2A-CGA	4.23	1.45	1.33
28	1h	102	BCR	C17-C18	4.23	1.41	1.35
26	1b	616	CLA	C3C-C2C	4.23	1.45	1.36
22	1a	414	LHG	O8-C23	4.23	1.45	1.33
26	1b	609	CLA	O2A-CGA	4.23	1.45	1.33
26	1b	613	CLA	C4B-NB	-4.22	1.32	1.37
31	1b	623	DGD	O1G-C1A	4.21	1.45	1.33
26	1c	512	CLA	CHC-C1C	4.21	1.47	1.38
26	1b	613	CLA	C3D-C4D	-4.21	1.34	1.44
26	1b	605	CLA	O2A-CGA	4.20	1.45	1.33
26	1b	610	CLA	O2A-CGA	4.20	1.45	1.33
26	1b	614	CLA	O2A-CGA	4.19	1.45	1.33
31	1b	627	DGD	O1G-C1A	4.19	1.45	1.33
26	1c	513	CLA	CHC-C1C	4.18	1.47	1.38
26	1c	509	CLA	O2A-CGA	4.18	1.45	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
28	1h	102	BCR	C21-C22	4.18	1.41	1.35
26	1a	406	CLA	O2A-CGA	4.18	1.45	1.33
26	1b	612	CLA	O2A-CGA	4.18	1.45	1.33
26	1d	407	CLA	CHC-C1C	4.17	1.47	1.38
28	1j	101	BCR	C17-C18	4.17	1.41	1.35
31	1c	520	DGD	O1G-C1A	4.17	1.45	1.33
26	1c	507	CLA	O2A-CGA	4.17	1.45	1.33
28	1d	409	BCR	C21-C22	4.16	1.41	1.35
26	1b	613	CLA	O2A-CGA	4.16	1.45	1.33
26	1c	511	CLA	O2A-CGA	4.16	1.45	1.33
31	1c	519	DGD	O2G-C1B	4.16	1.46	1.34
26	1c	504	CLA	O2A-CGA	4.15	1.45	1.33
28	1j	101	BCR	C14-C13	4.15	1.41	1.35
26	1b	611	CLA	O2A-CGA	4.15	1.45	1.33
26	1d	403	CLA	O2A-CGA	4.14	1.45	1.33
31	1c	520	DGD	O2G-C1B	4.14	1.46	1.34
26	1a	408	CLA	C3C-C2C	4.14	1.45	1.36
26	1b	613	CLA	C3C-C2C	4.13	1.45	1.36
26	1c	513	CLA	C3C-C2C	4.13	1.45	1.36
26	1b	612	CLA	CHB-C1B	4.12	1.48	1.39
28	1d	409	BCR	C17-C18	4.12	1.41	1.35
26	1b	606	CLA	O2A-CGA	4.12	1.45	1.33
26	1c	503	CLA	O2A-CGA	4.11	1.45	1.33
26	1b	601	CLA	CHC-C1C	4.11	1.46	1.38
26	1c	510	CLA	CHC-C1C	4.10	1.46	1.38
26	1b	616	CLA	CHC-C1C	4.10	1.46	1.38
34	1f	101	HEM	FE-NC	4.09	2.09	1.95
26	1b	608	CLA	O2A-CGA	4.08	1.45	1.33
26	1b	615	CLA	C3C-C2C	4.08	1.45	1.36
26	1b	602	CLA	C3C-C2C	4.05	1.45	1.36
26	1c	503	CLA	C3C-C2C	4.04	1.45	1.36
26	1c	511	CLA	CHB-C1B	4.04	1.48	1.39
26	1b	608	CLA	CHC-C1C	4.04	1.46	1.38
26	1c	506	CLA	O2A-CGA	4.03	1.45	1.33
26	1b	610	CLA	CHC-C1C	4.02	1.46	1.38
31	1c	518	DGD	O2G-C1B	4.00	1.45	1.34
26	1b	603	CLA	CHC-C1C	4.00	1.46	1.38
26	1c	504	CLA	CHC-C1C	3.98	1.46	1.38
28	1h	102	BCR	C10-C9	3.98	1.41	1.35
31	1b	627	DGD	O2G-C1B	3.97	1.45	1.34
31	1b	623	DGD	O2G-C1B	3.96	1.45	1.34
31	1c	519	DGD	O1G-C1A	3.95	1.44	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
22	1a	414	LHG	O7-C7	3.94	1.45	1.34
26	1b	602	CLA	O2A-CGA	3.94	1.44	1.33
26	1b	611	CLA	C3C-C2C	3.94	1.45	1.36
26	1b	604	CLA	CHC-C1C	3.93	1.46	1.38
26	1b	609	CLA	CHB-C1B	3.90	1.48	1.39
26	1b	611	CLA	CHC-C1C	3.90	1.46	1.38
28	1d	409	BCR	C14-C13	3.88	1.40	1.35
26	1c	507	CLA	CHC-C1C	3.87	1.46	1.38
26	1a	405	CLA	C3C-C2C	3.86	1.44	1.36
26	1c	503	CLA	CHC-C1C	3.86	1.46	1.38
28	1j	101	BCR	C10-C9	3.84	1.40	1.35
26	1b	605	CLA	CHC-C1C	3.81	1.46	1.38
26	1c	512	CLA	CHB-C1B	3.81	1.47	1.39
26	1c	509	CLA	CHC-C1C	3.80	1.46	1.38
26	1b	607	CLA	CHC-C1C	3.78	1.46	1.38
26	1b	601	CLA	OBD-CAD	3.76	1.29	1.22
26	1d	403	CLA	OBD-CAD	3.76	1.29	1.22
28	1k	102	BCR	C17-C18	3.76	1.40	1.35
26	1b	603	CLA	C1B-NB	-3.73	1.33	1.37
26	1b	609	CLA	CHC-C1C	3.73	1.46	1.38
26	1d	403	CLA	CHB-C1B	3.73	1.47	1.39
26	1b	608	CLA	OBD-CAD	3.72	1.28	1.22
26	1b	610	CLA	CHB-C1B	3.72	1.47	1.39
26	1b	606	CLA	OBD-CAD	3.72	1.28	1.22
26	1b	604	CLA	CHB-C1B	3.72	1.47	1.39
26	1c	503	CLA	CHB-C1B	3.71	1.47	1.39
26	1d	406	CLA	OBD-CAD	3.71	1.28	1.22
26	1b	615	CLA	CHB-C1B	3.71	1.47	1.39
26	1a	406	CLA	OBD-CAD	3.69	1.28	1.22
26	1c	507	CLA	OBD-CAD	3.69	1.28	1.22
26	1d	407	CLA	OBD-CAD	3.68	1.28	1.22
26	1c	511	CLA	OBD-CAD	3.67	1.28	1.22
28	1c	515	BCR	C14-C13	3.67	1.40	1.35
28	1b	617	BCR	C23-C22	-3.67	1.38	1.45
26	1b	611	CLA	CHB-C1B	3.66	1.47	1.39
26	1c	508	CLA	OBD-CAD	3.65	1.28	1.22
26	1b	605	CLA	CHB-C1B	3.65	1.47	1.39
26	1c	503	CLA	OBD-CAD	3.65	1.28	1.22
26	1d	406	CLA	C3C-C2C	3.65	1.44	1.36
26	1b	616	CLA	CHB-C1B	3.65	1.47	1.39
26	1b	612	CLA	OBD-CAD	3.65	1.28	1.22
26	1c	514	CLA	OBD-CAD	3.65	1.28	1.22

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
26	1b	612	CLA	C3C-C2C	3.64	1.44	1.36
26	1c	513	CLA	OBD-CAD	3.64	1.28	1.22
28	1k	102	BCR	C14-C13	3.64	1.40	1.35
26	1a	406	CLA	CHB-C1B	3.62	1.47	1.39
26	1b	605	CLA	OBD-CAD	3.60	1.28	1.22
26	1b	615	CLA	OBD-CAD	3.59	1.28	1.22
28	1k	102	BCR	C10-C9	3.59	1.40	1.35
28	1a	409	BCR	C17-C18	3.59	1.40	1.35
26	1b	609	CLA	OBD-CAD	3.59	1.28	1.22
26	1c	510	CLA	OBD-CAD	3.59	1.28	1.22
26	1c	512	CLA	OBD-CAD	3.58	1.28	1.22
26	1a	405	CLA	CHB-C1B	3.58	1.47	1.39
26	1c	502	CLA	OBD-CAD	3.57	1.28	1.22
26	1b	604	CLA	OBD-CAD	3.57	1.28	1.22
28	1c	515	BCR	C10-C9	3.57	1.40	1.35
28	1c	515	BCR	C17-C18	3.57	1.40	1.35
26	1d	406	CLA	CHB-C1B	3.57	1.47	1.39
26	1a	408	CLA	OBD-CAD	3.56	1.28	1.22
28	1a	409	BCR	C14-C13	3.55	1.40	1.35
28	1b	617	BCR	C8-C9	-3.54	1.38	1.45
26	1b	613	CLA	OBD-CAD	3.54	1.28	1.22
26	1a	408	CLA	CHB-C1B	3.53	1.47	1.39
26	1b	608	CLA	C1B-NB	-3.52	1.33	1.37
26	1c	511	CLA	CHC-C4B	3.52	1.47	1.39
26	1b	602	CLA	CHC-C1C	3.52	1.45	1.38
26	1b	607	CLA	CHB-C1B	3.52	1.47	1.39
26	1c	514	CLA	CHB-C1B	3.51	1.47	1.39
26	1c	509	CLA	C4B-NB	-3.51	1.33	1.37
28	1a	409	BCR	C10-C9	3.50	1.40	1.35
26	1c	513	CLA	CHB-C1B	3.50	1.47	1.39
26	1c	504	CLA	CHB-C1B	3.49	1.47	1.39
26	1b	613	CLA	MG-NA	-3.48	1.98	2.06
28	1i	101	BCR	C14-C13	3.47	1.40	1.35
26	1c	505	CLA	OBD-CAD	3.47	1.28	1.22
26	1b	610	CLA	C4B-NB	-3.47	1.33	1.37
26	1c	509	CLA	OBD-CAD	3.47	1.28	1.22
26	1b	602	CLA	CHB-C1B	3.46	1.47	1.39
26	1c	505	CLA	CHB-C1B	3.46	1.47	1.39
26	1b	611	CLA	OBD-CAD	3.45	1.28	1.22
26	1b	607	CLA	OBD-CAD	3.45	1.28	1.22
28	1b	618	BCR	C10-C9	3.44	1.40	1.35
26	1b	602	CLA	OBD-CAD	3.44	1.28	1.22

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
26	1d	406	CLA	CHC-C4B	3.44	1.47	1.39
28	1b	618	BCR	C21-C22	3.43	1.40	1.35
26	1c	502	CLA	CHB-C1B	3.43	1.47	1.39
26	1c	502	CLA	CHC-C4B	3.43	1.47	1.39
26	1c	506	CLA	OBD-CAD	3.42	1.28	1.22
26	1b	614	CLA	CHB-C1B	3.42	1.47	1.39
26	1c	509	CLA	CHB-C1B	3.41	1.47	1.39
26	1b	610	CLA	OBD-CAD	3.41	1.28	1.22
34	1f	101	HEM	C1B-NB	-3.41	1.34	1.40
34	1f	101	HEM	C4D-ND	-3.41	1.34	1.40
28	1a	409	BCR	C21-C22	3.41	1.40	1.35
28	1i	101	BCR	C10-C9	3.40	1.40	1.35
26	1b	612	CLA	CHC-C4B	3.40	1.47	1.39
28	1t	101	BCR	C21-C22	3.40	1.40	1.35
26	1b	603	CLA	CHB-C1B	3.40	1.47	1.39
26	1b	601	CLA	CHB-C1B	3.40	1.47	1.39
26	1b	606	CLA	CHD-C1D	3.39	1.45	1.38
26	1a	405	CLA	CHC-C4B	3.39	1.47	1.39
26	1c	508	CLA	C4B-NB	-3.39	1.33	1.37
26	1c	507	CLA	CHB-C1B	3.39	1.47	1.39
26	1b	608	CLA	CHB-C1B	3.38	1.47	1.39
28	1c	515	BCR	C23-C22	-3.38	1.38	1.45
26	1d	407	CLA	CHB-C1B	3.38	1.47	1.39
26	1a	408	CLA	CHC-C4B	3.37	1.47	1.39
26	1b	601	CLA	CHD-C4C	3.37	1.46	1.39
26	1c	514	CLA	CHC-C4B	3.37	1.47	1.39
26	1c	504	CLA	OBD-CAD	3.36	1.28	1.22
28	1b	618	BCR	C17-C18	3.36	1.40	1.35
28	1i	101	BCR	C23-C22	-3.36	1.38	1.45
26	1c	507	CLA	CHD-C1D	3.35	1.44	1.38
26	1b	601	CLA	CHD-C1D	3.35	1.44	1.38
26	1c	507	CLA	CHD-C4C	3.35	1.46	1.39
28	1i	101	BCR	C17-C18	3.34	1.40	1.35
26	1b	606	CLA	CHB-C1B	3.34	1.46	1.39
26	1c	506	CLA	CHC-C4B	3.33	1.46	1.39
28	1b	619	BCR	C8-C9	-3.31	1.38	1.45
26	1c	514	CLA	CHD-C4C	3.31	1.46	1.39
26	1c	506	CLA	CHD-C1D	3.30	1.44	1.38
28	1b	619	BCR	C14-C13	3.30	1.40	1.35
26	1c	508	CLA	CHB-C1B	3.29	1.46	1.39
26	1a	406	CLA	CHC-C4B	3.29	1.46	1.39
28	1c	515	BCR	C21-C22	3.29	1.40	1.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
26	1b	614	CLA	CHD-C1D	3.29	1.44	1.38
28	1i	101	BCR	C8-C9	-3.27	1.38	1.45
26	1b	602	CLA	CHD-C1D	3.27	1.44	1.38
26	1c	503	CLA	C4B-NB	-3.26	1.33	1.37
26	1b	602	CLA	MG-NA	-3.25	1.98	2.06
26	1b	603	CLA	OBD-CAD	3.25	1.28	1.22
26	1b	607	CLA	CHD-C1D	3.24	1.44	1.38
26	1c	506	CLA	CHB-C1B	3.24	1.46	1.39
28	1b	619	BCR	C17-C18	3.24	1.40	1.35
26	1d	403	CLA	CHC-C4B	3.24	1.46	1.39
28	1t	101	BCR	C14-C13	3.23	1.40	1.35
26	1c	508	CLA	CHC-C4B	3.23	1.46	1.39
28	1b	618	BCR	C14-C13	3.23	1.40	1.35
26	1b	606	CLA	CHD-C4C	3.23	1.46	1.39
26	1b	612	CLA	C4B-NB	-3.23	1.33	1.37
28	1t	101	BCR	C10-C9	3.23	1.40	1.35
26	1b	616	CLA	CHD-C1D	3.23	1.44	1.38
26	1b	616	CLA	CHD-C4C	3.22	1.46	1.39
26	1b	614	CLA	CHD-C4C	3.22	1.46	1.39
26	1b	616	CLA	C4B-NB	-3.21	1.33	1.37
26	1c	502	CLA	CHD-C1D	3.20	1.44	1.38
28	1t	101	BCR	C23-C22	-3.20	1.39	1.45
26	1b	614	CLA	CHC-C4B	3.20	1.46	1.39
26	1c	507	CLA	C3D-C2D	3.20	1.47	1.39
26	1b	604	CLA	CHD-C1D	3.19	1.44	1.38
26	1c	508	CLA	CHD-C4C	3.18	1.46	1.39
26	1b	601	CLA	CHC-C4B	3.18	1.46	1.39
26	1b	602	CLA	C3D-C2D	3.17	1.47	1.39
26	1b	608	CLA	CHD-C1D	3.17	1.44	1.38
26	1c	512	CLA	C4B-NB	-3.16	1.33	1.37
28	1b	619	BCR	C21-C22	3.16	1.40	1.35
26	1c	508	CLA	CHD-C1D	3.16	1.44	1.38
28	1b	618	BCR	C23-C22	-3.16	1.39	1.45
26	1b	605	CLA	CHD-C4C	3.15	1.46	1.39
26	1d	407	CLA	CHC-C4B	3.15	1.46	1.39
26	1a	406	CLA	CHD-C4C	3.15	1.46	1.39
26	1c	510	CLA	CHC-C4B	3.15	1.46	1.39
27	1a	407	PHO	C4D-CHA	3.14	1.44	1.39
26	1b	614	CLA	OBD-CAD	3.14	1.27	1.22
26	1c	509	CLA	C1B-NB	-3.14	1.33	1.37
26	1c	513	CLA	C4B-NB	-3.14	1.33	1.37
26	1c	505	CLA	CHC-C4B	3.14	1.46	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
28	1b	619	BCR	C10-C9	3.14	1.39	1.35
26	1c	502	CLA	CHD-C4C	3.13	1.46	1.39
26	1c	509	CLA	C3D-C2D	3.13	1.47	1.39
26	1c	505	CLA	CHD-C4C	3.12	1.46	1.39
28	1a	409	BCR	C23-C22	-3.12	1.39	1.45
26	1b	606	CLA	CHC-C4B	3.11	1.46	1.39
26	1d	407	CLA	CHD-C1D	3.10	1.44	1.38
26	1d	403	CLA	CHD-C4C	3.10	1.46	1.39
28	1a	409	BCR	C8-C9	-3.09	1.39	1.45
26	1b	610	CLA	CHD-C1D	3.09	1.44	1.38
28	1b	617	BCR	C12-C13	-3.08	1.39	1.45
26	1c	510	CLA	C4B-NB	-3.07	1.34	1.37
26	1b	607	CLA	CHD-C4C	3.07	1.46	1.39
28	1b	618	BCR	C8-C9	-3.06	1.39	1.45
26	1c	506	CLA	CHD-C4C	3.06	1.46	1.39
26	1b	615	CLA	CHC-C4B	3.05	1.46	1.39
26	1c	507	CLA	C1B-NB	-3.05	1.34	1.37
26	1d	407	CLA	CHD-C4C	3.05	1.46	1.39
26	1b	614	CLA	C4B-NB	-3.04	1.34	1.37
28	1b	617	BCR	C19-C18	-3.04	1.39	1.45
26	1b	601	CLA	C3D-C2D	3.03	1.47	1.39
26	1b	603	CLA	CHD-C1D	3.03	1.44	1.38
26	1b	602	CLA	CHD-C4C	3.03	1.46	1.39
28	1i	101	BCR	C21-C22	3.02	1.39	1.35
26	1b	616	CLA	C3D-C2D	3.02	1.47	1.39
26	1b	614	CLA	C3D-C2D	3.02	1.47	1.39
28	1j	101	BCR	C8-C9	-3.02	1.39	1.45
26	1c	505	CLA	C3D-C2D	3.02	1.47	1.39
26	1d	403	CLA	CHD-C1D	3.01	1.44	1.38
26	1a	406	CLA	CHD-C1D	3.01	1.44	1.38
26	1c	504	CLA	CHD-C1D	3.00	1.44	1.38
26	1c	504	CLA	CHD-C4C	3.00	1.46	1.39
26	1d	406	CLA	CHD-C4C	3.00	1.46	1.39
28	1k	102	BCR	C23-C22	-3.00	1.39	1.45
26	1d	403	CLA	MG-NA	-2.99	1.99	2.06
28	1t	101	BCR	C17-C18	2.99	1.39	1.35
26	1d	407	CLA	C3B-C4B	2.99	1.49	1.42
26	1c	504	CLA	CHC-C4B	2.99	1.46	1.39
26	1c	513	CLA	C3D-C2D	2.98	1.47	1.39
26	1b	608	CLA	CHC-C4B	2.98	1.46	1.39
28	1k	102	BCR	C8-C9	-2.98	1.39	1.45
28	1t	101	BCR	C8-C9	-2.97	1.39	1.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
26	1b	607	CLA	C4B-NB	-2.97	1.34	1.37
26	1c	514	CLA	CHD-C1D	2.97	1.44	1.38
26	1b	604	CLA	CHD-C4C	2.97	1.46	1.39
26	1a	408	CLA	C3D-C2D	2.96	1.47	1.39
26	1b	615	CLA	CHD-C4C	2.96	1.46	1.39
26	1b	603	CLA	CHD-C4C	2.96	1.46	1.39
26	1b	614	CLA	C1B-NB	-2.96	1.34	1.37
26	1c	503	CLA	CHD-C1D	2.95	1.44	1.38
26	1b	610	CLA	CHD-C4C	2.95	1.46	1.39
26	1a	405	CLA	C3B-C4B	2.95	1.49	1.42
26	1c	513	CLA	C1B-NB	-2.94	1.34	1.37
26	1c	502	CLA	C3D-C2D	2.94	1.47	1.39
26	1b	615	CLA	CHD-C1D	2.94	1.44	1.38
26	1b	611	CLA	C3D-C2D	2.94	1.47	1.39
26	1a	408	CLA	CHD-C1D	2.93	1.44	1.38
26	1b	611	CLA	C1B-NB	-2.93	1.34	1.37
26	1b	616	CLA	CHC-C4B	2.93	1.46	1.39
26	1c	512	CLA	CHC-C4B	2.92	1.46	1.39
26	1c	512	CLA	CHD-C1D	2.92	1.44	1.38
26	1b	605	CLA	CHD-C1D	2.92	1.44	1.38
26	1b	613	CLA	CHC-C4B	2.91	1.45	1.39
26	1a	408	CLA	CHD-C4C	2.91	1.45	1.39
26	1b	607	CLA	C3D-C2D	2.91	1.47	1.39
26	1d	406	CLA	CHD-C1D	2.91	1.44	1.38
26	1b	615	CLA	C4B-NB	-2.91	1.34	1.37
26	1c	506	CLA	C4B-NB	-2.91	1.34	1.37
26	1c	512	CLA	CHD-C4C	2.91	1.45	1.39
26	1a	406	CLA	C3D-C2D	2.90	1.47	1.39
26	1b	601	CLA	C4B-NB	-2.90	1.34	1.37
26	1b	609	CLA	C3D-C2D	2.89	1.47	1.39
26	1b	609	CLA	CHD-C1D	2.89	1.44	1.38
26	1c	510	CLA	CHD-C1D	2.89	1.44	1.38
26	1b	611	CLA	CHD-C4C	2.89	1.45	1.39
26	1b	604	CLA	C4B-NB	-2.89	1.34	1.37
26	1c	505	CLA	CHD-C1D	2.88	1.44	1.38
26	1a	408	CLA	C3B-C4B	2.88	1.49	1.42
26	1b	609	CLA	CHC-C4B	2.88	1.45	1.39
26	1d	406	CLA	C3B-C4B	2.88	1.49	1.42
28	1b	619	BCR	C12-C13	-2.88	1.39	1.45
26	1c	513	CLA	MG-NA	-2.88	1.99	2.06
28	1b	619	BCR	C23-C22	-2.87	1.39	1.45
26	1b	606	CLA	C3B-C4B	2.87	1.49	1.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
26	1d	407	CLA	C3D-C2D	2.87	1.47	1.39
26	1b	612	CLA	C1B-NB	-2.86	1.34	1.37
26	1c	502	CLA	C3B-C4B	2.86	1.49	1.42
26	1b	610	CLA	CHC-C4B	2.86	1.45	1.39
26	1b	616	CLA	OBD-CAD	2.86	1.27	1.22
27	1a	407	PHO	C2A-C3A	-2.86	1.52	1.54
26	1a	406	CLA	C4B-NB	-2.86	1.34	1.37
26	1c	514	CLA	C4B-NB	-2.86	1.34	1.37
26	1d	403	CLA	C3B-C4B	2.85	1.49	1.42
26	1b	605	CLA	CHC-C4B	2.85	1.45	1.39
26	1c	513	CLA	CHC-C4B	2.85	1.45	1.39
26	1b	610	CLA	C1B-NB	-2.85	1.34	1.37
26	1b	616	CLA	MG-NA	-2.85	1.99	2.06
26	1a	405	CLA	C3D-C2D	2.85	1.46	1.39
26	1b	611	CLA	CHD-C1D	2.85	1.43	1.38
26	1d	403	CLA	C1D-C2D	2.85	1.50	1.45
26	1c	508	CLA	C3D-C2D	2.84	1.46	1.39
26	1c	510	CLA	CHD-C4C	2.84	1.45	1.39
26	1b	608	CLA	CHD-C4C	2.84	1.45	1.39
26	1c	503	CLA	CHD-C4C	2.84	1.45	1.39
28	1b	617	BCR	C14-C13	2.84	1.39	1.35
26	1b	612	CLA	MG-NA	-2.83	1.99	2.06
26	1b	614	CLA	C1D-C2D	2.83	1.50	1.45
26	1d	403	CLA	C3D-C2D	2.83	1.46	1.39
26	1c	514	CLA	C3D-C2D	2.83	1.46	1.39
26	1b	603	CLA	C3D-C2D	2.83	1.46	1.39
26	1b	610	CLA	C3D-C2D	2.82	1.46	1.39
26	1b	604	CLA	CHC-C4B	2.82	1.45	1.39
26	1c	509	CLA	MG-NA	-2.82	1.99	2.06
26	1c	513	CLA	CHD-C4C	2.82	1.45	1.39
26	1b	606	CLA	C3D-C2D	2.82	1.46	1.39
28	1h	102	BCR	C8-C9	-2.82	1.39	1.45
26	1c	511	CLA	CHD-C4C	2.82	1.45	1.39
26	1b	605	CLA	C4B-NB	-2.81	1.34	1.37
28	1c	515	BCR	C8-C9	-2.81	1.39	1.45
26	1b	615	CLA	MG-NA	-2.81	1.99	2.06
26	1d	406	CLA	C1B-NB	-2.80	1.34	1.37
26	1b	603	CLA	C4B-NB	-2.80	1.34	1.37
26	1c	514	CLA	C3B-C4B	2.80	1.49	1.42
26	1b	610	CLA	MG-NA	-2.79	1.99	2.06
28	1i	101	BCR	C12-C13	-2.79	1.40	1.45
26	1b	605	CLA	MG-NA	-2.78	1.99	2.06

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
26	1b	609	CLA	MG-NA	-2.78	1.99	2.06
26	1c	506	CLA	C3B-C4B	2.78	1.49	1.42
26	1c	504	CLA	C4B-NB	-2.77	1.34	1.37
26	1a	405	CLA	C4B-NB	-2.77	1.34	1.37
26	1c	505	CLA	C1B-NB	-2.77	1.34	1.37
28	1a	409	BCR	C19-C18	-2.77	1.40	1.45
26	1b	615	CLA	C3D-C2D	2.77	1.46	1.39
26	1c	507	CLA	C4B-NB	-2.76	1.34	1.37
26	1c	506	CLA	C1B-NB	-2.76	1.34	1.37
26	1c	508	CLA	MG-NA	-2.76	1.99	2.06
26	1c	507	CLA	C1D-C2D	2.76	1.50	1.45
28	1t	101	BCR	C12-C13	-2.76	1.40	1.45
26	1d	407	CLA	C4B-NB	-2.76	1.34	1.37
26	1b	611	CLA	C4B-NB	-2.76	1.34	1.37
28	1h	102	BCR	C23-C22	-2.75	1.40	1.45
26	1b	603	CLA	CHC-C4B	2.75	1.45	1.39
26	1b	609	CLA	CHD-C4C	2.75	1.45	1.39
28	1b	617	BCR	C17-C18	2.75	1.39	1.35
26	1b	608	CLA	C3D-C2D	2.75	1.46	1.39
27	1d	404	PHO	C4D-CHA	2.74	1.44	1.39
26	1a	406	CLA	C1D-C2D	2.74	1.50	1.45
26	1c	511	CLA	C3B-C4B	2.74	1.49	1.42
26	1c	505	CLA	C3B-C4B	2.74	1.49	1.42
27	1d	404	PHO	C3A-C2A	-2.74	1.52	1.54
26	1b	607	CLA	C1B-NB	-2.73	1.34	1.37
26	1b	607	CLA	MG-NA	-2.73	1.99	2.06
28	1i	101	BCR	C19-C18	-2.72	1.40	1.45
26	1c	509	CLA	CHD-C1D	2.72	1.43	1.38
26	1c	510	CLA	C1B-C2B	2.72	1.49	1.43
26	1b	604	CLA	MG-NA	-2.71	1.99	2.06
26	1c	503	CLA	C3D-C2D	2.71	1.46	1.39
26	1c	508	CLA	C1B-NB	-2.71	1.34	1.37
28	1d	409	BCR	C8-C9	-2.71	1.40	1.45
26	1c	512	CLA	C3D-C2D	2.71	1.46	1.39
26	1d	407	CLA	MG-NA	-2.70	1.99	2.06
28	1k	102	BCR	C19-C18	-2.70	1.40	1.45
26	1c	504	CLA	C3D-C2D	2.70	1.46	1.39
26	1b	603	CLA	MG-NA	-2.70	1.99	2.06
26	1c	505	CLA	C4B-NB	-2.70	1.34	1.37
26	1b	611	CLA	CHC-C4B	2.70	1.45	1.39
26	1a	406	CLA	MG-NA	-2.70	1.99	2.06
26	1c	511	CLA	CHD-C1D	2.70	1.43	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
26	1c	511	CLA	C3D-C2D	2.70	1.46	1.39
26	1a	405	CLA	CHD-C1D	2.69	1.43	1.38
26	1c	502	CLA	C1D-C2D	2.69	1.50	1.45
26	1c	511	CLA	C1B-NB	-2.69	1.34	1.37
26	1c	513	CLA	CHD-C1D	2.69	1.43	1.38
26	1b	609	CLA	C1B-C2B	2.69	1.49	1.43
26	1a	406	CLA	C3B-C4B	2.69	1.49	1.42
26	1c	507	CLA	CHC-C4B	2.69	1.45	1.39
28	1b	618	BCR	C12-C13	-2.69	1.40	1.45
26	1b	616	CLA	C1D-C2D	2.68	1.50	1.45
26	1c	503	CLA	MG-NA	-2.68	1.99	2.06
26	1b	614	CLA	C3B-C4B	2.68	1.49	1.42
26	1c	514	CLA	MG-NA	-2.68	1.99	2.06
26	1b	609	CLA	C4B-NB	-2.68	1.34	1.37
28	1b	617	BCR	C21-C22	2.68	1.39	1.35
26	1a	408	CLA	MG-NA	-2.68	1.99	2.06
26	1c	510	CLA	C3D-C2D	2.68	1.46	1.39
26	1c	511	CLA	MG-NA	-2.68	1.99	2.06
26	1b	613	CLA	C3B-C4B	2.67	1.49	1.42
26	1b	605	CLA	C1D-C2D	2.67	1.50	1.45
28	1c	515	BCR	C12-C13	-2.67	1.40	1.45
26	1b	601	CLA	C3B-C4B	2.67	1.49	1.42
26	1b	606	CLA	C1D-C2D	2.67	1.50	1.45
26	1a	405	CLA	MG-NA	-2.66	1.99	2.06
26	1c	514	CLA	C1D-C2D	2.66	1.50	1.45
26	1c	502	CLA	C4B-NB	-2.66	1.34	1.37
26	1c	503	CLA	CHC-C4B	2.66	1.45	1.39
26	1c	512	CLA	C1B-C2B	2.65	1.49	1.43
26	1b	615	CLA	C1D-C2D	2.65	1.50	1.45
26	1c	510	CLA	C1D-C2D	2.65	1.50	1.45
26	1c	509	CLA	CHC-C4B	2.64	1.45	1.39
26	1b	608	CLA	C3B-C4B	2.64	1.48	1.42
26	1c	504	CLA	C3B-C4B	2.64	1.48	1.42
26	1b	606	CLA	C1B-NB	-2.63	1.34	1.37
26	1b	604	CLA	C1B-NB	-2.63	1.34	1.37
26	1b	616	CLA	C1B-NB	-2.63	1.34	1.37
28	1b	618	BCR	C19-C18	-2.63	1.40	1.45
26	1c	505	CLA	MG-NA	-2.62	2.00	2.06
28	1b	619	BCR	C19-C18	-2.62	1.40	1.45
26	1c	512	CLA	C1B-NB	-2.62	1.34	1.37
26	1c	503	CLA	C1B-NB	-2.62	1.34	1.37
26	1a	405	CLA	C1B-NB	-2.62	1.34	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
26	1b	613	CLA	C1B-C2B	2.62	1.49	1.43
26	1b	601	CLA	C1D-C2D	2.62	1.50	1.45
28	1d	409	BCR	C23-C22	-2.61	1.40	1.45
28	1t	101	BCR	C19-C18	-2.61	1.40	1.45
26	1b	602	CLA	C1D-C2D	2.61	1.50	1.45
26	1d	407	CLA	C1D-C2D	2.61	1.50	1.45
26	1b	606	CLA	C4B-NB	-2.61	1.34	1.37
26	1c	509	CLA	CHD-C4C	2.61	1.45	1.39
26	1b	607	CLA	CHC-C4B	2.61	1.45	1.39
26	1b	614	CLA	MG-NA	-2.61	2.00	2.06
26	1c	508	CLA	C1D-C2D	2.61	1.50	1.45
26	1c	507	CLA	MG-NA	-2.60	2.00	2.06
28	1c	515	BCR	C19-C18	-2.60	1.40	1.45
26	1b	616	CLA	C1B-C2B	2.60	1.49	1.43
26	1d	406	CLA	MG-NA	-2.60	2.00	2.06
26	1a	406	CLA	C1B-NB	-2.60	1.34	1.37
26	1b	605	CLA	C3D-C2D	2.60	1.46	1.39
26	1c	512	CLA	C1D-C2D	2.59	1.50	1.45
26	1a	405	CLA	CHD-C4C	2.58	1.45	1.39
26	1b	610	CLA	C3B-C4B	2.58	1.48	1.42
26	1b	611	CLA	MG-NA	-2.58	2.00	2.06
26	1b	610	CLA	C1D-C2D	2.58	1.50	1.45
26	1b	605	CLA	C1B-C2B	2.57	1.49	1.43
26	1c	502	CLA	MG-NA	-2.57	2.00	2.06
26	1a	408	CLA	C4B-NB	-2.57	1.34	1.37
26	1b	602	CLA	CHC-C4B	2.57	1.45	1.39
26	1b	613	CLA	C4D-ND	2.57	1.41	1.37
28	1k	102	BCR	C12-C13	-2.56	1.40	1.45
26	1d	406	CLA	C3D-C2D	2.56	1.46	1.39
26	1d	403	CLA	C1B-C2B	2.56	1.49	1.43
26	1b	613	CLA	C1B-NB	-2.56	1.34	1.37
26	1b	604	CLA	C3D-C2D	2.56	1.46	1.39
26	1b	607	CLA	C1D-C2D	2.55	1.50	1.45
26	1b	609	CLA	C3B-C4B	2.55	1.48	1.42
26	1d	406	CLA	C4B-NB	-2.54	1.34	1.37
26	1b	608	CLA	C4B-NB	-2.54	1.34	1.37
26	1c	506	CLA	C1D-C2D	2.54	1.50	1.45
26	1b	615	CLA	C1B-NB	-2.54	1.34	1.37
28	1a	409	BCR	C12-C13	-2.54	1.40	1.45
26	1b	613	CLA	C3D-C2D	2.53	1.46	1.39
26	1c	503	CLA	C1B-C2B	2.53	1.49	1.43
26	1c	514	CLA	C1B-NB	-2.53	1.34	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
26	1a	405	CLA	C1D-C2D	2.53	1.50	1.45
30	1e	101	PL9	C6-C5	2.52	1.48	1.35
26	1c	513	CLA	C1B-C2B	2.52	1.49	1.43
26	1b	605	CLA	C1B-NB	-2.52	1.34	1.37
26	1a	408	CLA	C1B-NB	-2.52	1.34	1.37
26	1b	615	CLA	C3B-C4B	2.52	1.48	1.42
34	1f	101	HEM	C1C-C2C	-2.51	1.40	1.45
28	1j	101	BCR	C23-C22	-2.51	1.40	1.45
26	1b	615	CLA	C1B-C2B	2.50	1.49	1.43
26	1b	612	CLA	CHD-C4C	2.50	1.44	1.39
26	1b	612	CLA	C3B-C4B	2.49	1.48	1.42
26	1b	605	CLA	C3B-C4B	2.49	1.48	1.42
26	1c	513	CLA	C3B-C4B	2.49	1.48	1.42
26	1d	403	CLA	C4B-NB	-2.49	1.34	1.37
30	1a	413	PL9	C6-C5	2.48	1.48	1.35
26	1d	407	CLA	C1B-NB	-2.48	1.34	1.37
26	1b	601	CLA	C1B-NB	-2.48	1.34	1.37
26	1b	603	CLA	C3B-C4B	2.47	1.48	1.42
26	1b	602	CLA	C1B-C2B	2.47	1.49	1.43
26	1c	512	CLA	MG-NA	-2.47	2.00	2.06
26	1c	505	CLA	C1D-C2D	2.46	1.50	1.45
26	1c	502	CLA	C1B-NB	-2.46	1.34	1.37
26	1c	506	CLA	C3D-C2D	2.45	1.45	1.39
26	1b	604	CLA	C1B-C2B	2.45	1.49	1.43
34	1f	101	HEM	FE-ND	-2.45	1.87	1.94
28	1b	617	BCR	C10-C9	2.45	1.39	1.35
26	1c	504	CLA	C1B-C2B	2.44	1.49	1.43
26	1b	612	CLA	C1C-C2C	2.44	1.49	1.44
26	1b	606	CLA	MG-NA	-2.44	2.00	2.06
26	1b	604	CLA	C3B-C4B	2.44	1.48	1.42
26	1b	608	CLA	MG-NA	-2.43	2.00	2.06
26	1c	511	CLA	C4B-NB	-2.43	1.34	1.37
26	1c	506	CLA	MG-NA	-2.42	2.00	2.06
26	1c	511	CLA	C1B-C2B	2.42	1.48	1.43
26	1c	511	CLA	C1D-C2D	2.40	1.50	1.45
26	1c	510	CLA	MG-NA	-2.40	2.00	2.06
26	1d	406	CLA	C1D-C2D	2.40	1.50	1.45
26	1c	504	CLA	MG-NA	-2.39	2.00	2.06
26	1d	403	CLA	C1B-NB	-2.39	1.34	1.37
26	1a	408	CLA	C1C-C2C	2.39	1.49	1.44
28	1j	101	BCR	C12-C13	-2.38	1.40	1.45
26	1c	514	CLA	C1B-C2B	2.38	1.48	1.43

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
26	1d	403	CLA	C1C-C2C	2.37	1.49	1.44
26	1b	609	CLA	C1B-NB	-2.37	1.34	1.37
26	1a	405	CLA	OBD-CAD	2.37	1.26	1.22
26	1b	610	CLA	C4C-C3C	2.35	1.49	1.45
26	1b	607	CLA	C3B-C4B	2.34	1.48	1.42
26	1b	601	CLA	MG-NA	-2.34	2.00	2.06
26	1c	507	CLA	C4C-C3C	2.34	1.49	1.45
26	1c	504	CLA	C1D-C2D	2.33	1.49	1.45
26	1b	609	CLA	C1D-C2D	2.33	1.49	1.45
26	1b	612	CLA	C3D-C2D	2.33	1.45	1.39
26	1c	510	CLA	C4C-C3C	2.32	1.49	1.45
26	1b	612	CLA	CHD-C1D	2.32	1.42	1.38
26	1c	510	CLA	C3B-C4B	2.32	1.48	1.42
26	1c	504	CLA	C1B-NB	-2.32	1.34	1.37
26	1b	604	CLA	C1D-C2D	2.31	1.49	1.45
26	1c	507	CLA	C3B-C4B	2.31	1.48	1.42
26	1c	508	CLA	C1B-C2B	2.30	1.48	1.43
26	1a	406	CLA	C1B-C2B	2.30	1.48	1.43
26	1b	611	CLA	C3B-C4B	2.30	1.48	1.42
26	1b	606	CLA	C1B-C2B	2.30	1.48	1.43
26	1b	613	CLA	CHD-C4C	2.29	1.44	1.39
26	1a	408	CLA	C1D-C2D	2.29	1.49	1.45
26	1d	407	CLA	C1B-C2B	2.28	1.48	1.43
26	1b	601	CLA	C1B-C2B	2.27	1.48	1.43
26	1b	613	CLA	MG-NB	-2.27	2.01	2.05
26	1b	613	CLA	C1D-C2D	2.25	1.49	1.45
26	1c	509	CLA	C3B-C4B	2.25	1.48	1.42
26	1c	504	CLA	C4C-C3C	2.24	1.48	1.45
26	1c	503	CLA	C1D-C2D	2.23	1.49	1.45
28	1d	409	BCR	C12-C13	-2.23	1.41	1.45
26	1c	512	CLA	C3B-C4B	2.23	1.48	1.42
26	1c	513	CLA	C1D-C2D	2.23	1.49	1.45
28	1h	102	BCR	C19-C18	-2.21	1.41	1.45
28	1d	409	BCR	C19-C18	-2.21	1.41	1.45
26	1b	602	CLA	C3B-C4B	2.21	1.47	1.42
26	1b	612	CLA	C1B-C2B	2.20	1.48	1.43
28	1j	101	BCR	C19-C18	-2.20	1.41	1.45
26	1b	607	CLA	C1B-C2B	2.19	1.48	1.43
26	1b	612	CLA	MG-NB	-2.19	2.01	2.05
26	1a	408	CLA	C1B-C2B	2.19	1.48	1.43
26	1b	610	CLA	C1B-C2B	2.19	1.48	1.43
26	1a	406	CLA	C1C-C2C	2.19	1.48	1.44

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
26	1c	509	CLA	C1B-C2B	2.18	1.48	1.43
26	1b	611	CLA	C1D-C2D	2.18	1.49	1.45
26	1c	514	CLA	C1C-C2C	2.18	1.48	1.44
26	1c	502	CLA	C1C-C2C	2.18	1.48	1.44
26	1b	614	CLA	C1B-C2B	2.18	1.48	1.43
26	1c	511	CLA	C1C-C2C	2.17	1.48	1.44
28	1h	102	BCR	C12-C13	-2.17	1.41	1.45
26	1c	503	CLA	C3B-C4B	2.16	1.47	1.42
29	1d	405	SQD	O8-S	2.16	1.55	1.47
26	1b	603	CLA	C1D-C2D	2.16	1.49	1.45
26	1b	601	CLA	C4C-C3C	2.16	1.48	1.45
26	1b	604	CLA	C4C-C3C	2.16	1.48	1.45
26	1c	502	CLA	C1B-C2B	2.16	1.48	1.43
26	1c	506	CLA	C1B-C2B	2.15	1.48	1.43
29	1b	621	SQD	O8-S	2.15	1.55	1.47
28	1b	617	BCR	C15-C14	-2.15	1.36	1.43
29	1a	411	SQD	O8-S	2.14	1.55	1.47
29	1b	620	SQD	O8-S	2.14	1.55	1.47
29	1b	622	SQD	O8-S	2.14	1.55	1.47
28	1d	409	BCR	C2-C3	-2.13	1.47	1.52
29	1l	101	SQD	O8-S	2.13	1.55	1.47
26	1b	614	CLA	C1C-C2C	2.13	1.48	1.44
29	1c	516	SQD	O8-S	2.13	1.55	1.47
26	1b	616	CLA	C3B-C4B	2.13	1.47	1.42
26	1c	510	CLA	C1B-NB	-2.13	1.35	1.37
26	1c	504	CLA	C1C-C2C	2.13	1.48	1.44
28	1b	617	BCR	C16-C17	-2.12	1.36	1.43
28	1t	101	BCR	C29-C28	-2.12	1.47	1.52
26	1c	512	CLA	C1C-C2C	2.12	1.48	1.44
26	1b	614	CLA	C4C-C3C	2.11	1.48	1.45
26	1b	607	CLA	C4C-C3C	2.11	1.48	1.45
29	1a	412	SQD	O8-S	2.11	1.55	1.47
29	1i	102	SQD	O8-S	2.10	1.55	1.47
26	1d	407	CLA	C4C-C3C	2.10	1.48	1.45
29	1a	410	SQD	O8-S	2.09	1.55	1.47
26	1b	616	CLA	C4C-C3C	2.09	1.48	1.45
34	1f	101	HEM	C3C-C4C	-2.09	1.42	1.46
26	1c	508	CLA	C4C-C3C	2.08	1.48	1.45
29	1d	411	SQD	O8-S	2.08	1.55	1.47
26	1d	406	CLA	C1B-C2B	2.08	1.48	1.43
26	1c	510	CLA	C1C-C2C	2.08	1.48	1.44
29	1c	517	SQD	O8-S	2.07	1.55	1.47

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
26	1c	506	CLA	C4C-C3C	2.07	1.48	1.45
26	1c	506	CLA	CHB-C4A	-2.06	1.32	1.37
26	1b	606	CLA	C4C-C3C	2.06	1.48	1.45
26	1c	512	CLA	C4C-C3C	2.06	1.48	1.45
28	1h	102	BCR	C2-C3	-2.06	1.47	1.52
26	1b	603	CLA	MG-NB	-2.06	2.01	2.05
26	1c	514	CLA	C4C-C3C	2.05	1.48	1.45
29	1w	101	SQD	O8-S	2.05	1.54	1.47
26	1c	505	CLA	C1C-C2C	2.05	1.48	1.44
26	1d	407	CLA	C1C-C2C	2.04	1.48	1.44
26	1c	505	CLA	C1B-C2B	2.04	1.48	1.43
26	1c	505	CLA	C4C-C3C	2.04	1.48	1.45
26	1c	508	CLA	C3B-C4B	2.03	1.47	1.42
26	1c	503	CLA	C4C-C3C	2.03	1.48	1.45
28	1h	102	BCR	C29-C28	-2.03	1.47	1.52
26	1b	613	CLA	C4D-CHA	2.02	1.45	1.38
28	1d	409	BCR	C8-C7	2.01	1.39	1.33
26	1a	405	CLA	C1B-C2B	2.01	1.48	1.43
28	1b	617	BCR	C20-C21	-2.01	1.37	1.43
26	1c	508	CLA	C1C-C2C	2.01	1.48	1.44
26	1b	613	CLA	CHD-C1D	2.01	1.42	1.38
26	1b	610	CLA	C3B-C2B	2.01	1.48	1.41
28	1b	617	BCR	C11-C10	-2.01	1.37	1.43

All (1297) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
26	1d	403	CLA	C1D-ND-C4D	-10.31	99.01	106.33
26	1b	613	CLA	C1D-ND-C4D	-10.30	99.02	106.33
26	1b	605	CLA	C1D-ND-C4D	-10.01	99.23	106.33
26	1c	514	CLA	C1D-ND-C4D	-9.83	99.36	106.33
26	1c	510	CLA	C2C-C1C-NC	9.68	119.04	109.97
26	1b	606	CLA	C2B-C1B-NB	9.61	116.68	110.23
26	1c	511	CLA	C1D-ND-C4D	-9.61	99.51	106.33
26	1b	612	CLA	C1D-ND-C4D	-9.58	99.53	106.33
26	1c	510	CLA	C1D-ND-C4D	-9.57	99.54	106.33
26	1a	406	CLA	C1D-ND-C4D	-9.55	99.55	106.33
26	1c	502	CLA	C1D-ND-C4D	-9.53	99.56	106.33
26	1b	613	CLA	C2C-C1C-NC	9.49	118.86	109.97
26	1c	505	CLA	C1D-ND-C4D	-9.40	99.66	106.33
26	1d	406	CLA	C1D-ND-C4D	-9.35	99.69	106.33
26	1b	602	CLA	C2C-C1C-NC	9.35	118.73	109.97

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
26	1b	615	CLA	C1D-ND-C4D	-9.30	99.73	106.33
26	1a	405	CLA	C1D-ND-C4D	-9.27	99.75	106.33
26	1a	408	CLA	C1D-ND-C4D	-9.25	99.76	106.33
26	1b	614	CLA	C2B-C1B-NB	9.19	116.40	110.23
26	1b	609	CLA	C2C-C1C-NC	9.17	118.56	109.97
26	1b	609	CLA	C1D-ND-C4D	-9.14	99.84	106.33
26	1d	407	CLA	C1D-ND-C4D	-9.12	99.85	106.33
26	1b	605	CLA	CMD-C2D-C1D	9.10	140.75	124.71
26	1c	508	CLA	C1D-ND-C4D	-9.09	99.88	106.33
26	1c	513	CLA	C1D-ND-C4D	-9.08	99.88	106.33
26	1b	610	CLA	C2C-C1C-NC	9.08	118.48	109.97
26	1c	512	CLA	C1D-ND-C4D	-9.07	99.89	106.33
26	1b	601	CLA	C2B-C1B-NB	8.99	116.26	110.23
26	1c	507	CLA	C2C-C1C-NC	8.99	118.39	109.97
26	1b	607	CLA	C2C-C1C-NC	8.93	118.34	109.97
26	1c	508	CLA	C2B-C1B-NB	8.91	116.20	110.23
26	1b	616	CLA	C1D-ND-C4D	-8.91	100.01	106.33
26	1b	611	CLA	C1D-ND-C4D	-8.88	100.02	106.33
26	1b	606	CLA	C1D-ND-C4D	-8.87	100.03	106.33
26	1b	610	CLA	C1D-ND-C4D	-8.84	100.06	106.33
26	1c	506	CLA	CMD-C2D-C1D	8.83	140.28	124.71
26	1c	513	CLA	C2B-C1B-NB	8.83	116.15	110.23
26	1c	504	CLA	C2B-C1B-NB	8.83	116.15	110.23
26	1c	503	CLA	C2C-C1C-NC	8.83	118.24	109.97
26	1c	502	CLA	C2B-C1B-NB	8.81	116.14	110.23
26	1b	602	CLA	C1D-ND-C4D	-8.80	100.08	106.33
26	1d	407	CLA	C2B-C1B-NB	8.80	116.13	110.23
26	1b	614	CLA	C1D-ND-C4D	-8.77	100.11	106.33
26	1c	506	CLA	C2B-C1B-NB	8.74	116.09	110.23
26	1a	406	CLA	C2B-C1B-NB	8.74	116.09	110.23
26	1b	601	CLA	C1D-ND-C4D	-8.69	100.16	106.33
26	1b	613	CLA	C4A-NA-C1A	8.61	110.58	106.71
26	1c	512	CLA	C2C-C1C-NC	8.60	118.03	109.97
26	1b	601	CLA	C2C-C1C-NC	8.57	118.00	109.97
26	1c	514	CLA	C2B-C1B-NB	8.57	115.98	110.23
26	1b	604	CLA	C1D-ND-C4D	-8.56	100.26	106.33
26	1c	503	CLA	C1D-ND-C4D	-8.55	100.26	106.33
26	1c	504	CLA	C1D-ND-C4D	-8.55	100.26	106.33
26	1c	504	CLA	C2C-C1C-NC	8.53	117.96	109.97
26	1c	509	CLA	C1D-ND-C4D	-8.52	100.28	106.33
26	1c	509	CLA	C2B-C1B-NB	8.52	115.94	110.23
26	1d	407	CLA	C2C-C1C-NC	8.51	117.94	109.97

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
26	1d	406	CLA	CMD-C2D-C1D	8.51	139.71	124.71
26	1a	408	CLA	C2B-C1B-NB	8.49	115.92	110.23
26	1b	604	CLA	C2C-C1C-NC	8.49	117.92	109.97
26	1c	513	CLA	C2C-C1C-NC	8.43	117.87	109.97
26	1c	512	CLA	CMD-C2D-C1D	8.43	139.58	124.71
26	1b	610	CLA	C2B-C1B-NB	8.40	115.86	110.23
26	1b	606	CLA	CMD-C2D-C1D	8.38	139.48	124.71
26	1d	403	CLA	C2B-C1B-NB	8.37	115.84	110.23
26	1d	403	CLA	CMD-C2D-C1D	8.37	139.46	124.71
26	1c	505	CLA	C2B-C1B-NB	8.36	115.84	110.23
26	1b	603	CLA	C2C-C1C-NC	8.33	117.77	109.97
26	1c	510	CLA	CMD-C2D-C1D	8.32	139.37	124.71
26	1c	512	CLA	C2B-C1B-NB	8.31	115.80	110.23
26	1b	607	CLA	C1D-ND-C4D	-8.30	100.44	106.33
26	1b	608	CLA	C2C-C1C-NC	8.29	117.73	109.97
26	1b	616	CLA	C2C-C1C-NC	8.25	117.70	109.97
26	1a	405	CLA	C2B-C1B-NB	8.24	115.76	110.23
26	1b	604	CLA	CMD-C2D-C1D	8.24	139.24	124.71
26	1c	506	CLA	C1D-ND-C4D	-8.20	100.51	106.33
26	1b	610	CLA	CMD-C2D-C1D	8.20	139.16	124.71
26	1c	511	CLA	C2C-C1C-NC	8.19	117.64	109.97
26	1b	608	CLA	C1D-ND-C4D	-8.18	100.53	106.33
26	1b	614	CLA	CMD-C2D-C1D	8.17	139.11	124.71
26	1a	405	CLA	CMD-C2D-C1D	8.17	139.10	124.71
26	1b	615	CLA	C2C-C1C-NC	8.15	117.61	109.97
26	1b	615	CLA	CMD-C2D-C1D	8.13	139.04	124.71
26	1b	605	CLA	C2C-C1C-NC	8.12	117.58	109.97
26	1b	613	CLA	CMD-C2D-C1D	8.12	139.02	124.71
26	1c	508	CLA	CMD-C2D-C1D	8.11	139.00	124.71
26	1c	504	CLA	CMD-C2D-C1D	8.11	139.00	124.71
26	1c	507	CLA	C1D-ND-C4D	-8.09	100.59	106.33
26	1c	506	CLA	C2C-C1C-NC	8.09	117.55	109.97
26	1b	605	CLA	C2B-C1B-NB	8.07	115.64	110.23
26	1b	615	CLA	C2B-C1B-NB	8.06	115.64	110.23
26	1c	509	CLA	C2C-C1C-NC	8.04	117.50	109.97
26	1d	407	CLA	CMD-C2D-C1D	8.03	138.86	124.71
26	1b	616	CLA	C2B-C1B-NB	8.01	115.60	110.23
26	1c	508	CLA	C2C-C1C-NC	8.01	117.48	109.97
26	1a	406	CLA	CMD-C2D-C1D	7.98	138.78	124.71
26	1c	505	CLA	C2C-C1C-NC	7.98	117.45	109.97
26	1b	611	CLA	C2C-C1C-NC	7.96	117.42	109.97
26	1c	511	CLA	CMD-C2D-C1D	7.91	138.65	124.71

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
26	1d	406	CLA	C2B-C1B-NB	7.90	115.53	110.23
26	1c	514	CLA	CMD-C2D-C1D	7.89	138.61	124.71
26	1b	616	CLA	CMD-C2D-C1D	7.87	138.58	124.71
26	1c	502	CLA	CMD-C2D-C1D	7.86	138.57	124.71
26	1b	603	CLA	C1D-ND-C4D	-7.81	100.79	106.33
26	1c	503	CLA	CMD-C2D-C1D	7.79	138.44	124.71
26	1c	507	CLA	CMD-C2D-C1D	7.78	138.42	124.71
26	1c	502	CLA	C2C-C1C-NC	7.76	117.24	109.97
26	1b	607	CLA	CMD-C2D-C1D	7.75	138.38	124.71
26	1a	408	CLA	C2C-C1C-NC	7.72	117.21	109.97
26	1b	608	CLA	C2B-C1B-NB	7.68	115.38	110.23
26	1b	614	CLA	C2C-C1C-NC	7.68	117.16	109.97
26	1b	601	CLA	CMD-C2D-C1D	7.67	138.24	124.71
26	1d	403	CLA	C2C-C1C-NC	7.66	117.15	109.97
26	1a	406	CLA	C2C-C1C-NC	7.66	117.14	109.97
26	1b	602	CLA	CMD-C2D-C1D	7.62	138.14	124.71
26	1b	603	CLA	CMD-C2D-C1D	7.61	138.12	124.71
26	1c	507	CLA	C2B-C1B-NB	7.56	115.30	110.23
26	1c	514	CLA	C2C-C1C-NC	7.53	117.03	109.97
26	1b	609	CLA	CMD-C2D-C1D	7.52	137.97	124.71
26	1b	607	CLA	C2B-C1B-NB	7.52	115.27	110.23
26	1b	613	CLA	C3C-C4C-NC	7.39	118.86	110.57
26	1b	606	CLA	C2C-C1C-NC	7.34	116.85	109.97
26	1b	604	CLA	C2B-C1B-NB	7.26	115.10	110.23
26	1b	612	CLA	C2C-C1C-NC	7.25	116.77	109.97
26	1b	611	CLA	CMD-C2D-C1D	7.18	137.37	124.71
26	1d	406	CLA	C2C-C1C-NC	7.12	116.64	109.97
26	1b	609	CLA	C2B-C1B-NB	7.10	114.99	110.23
26	1c	503	CLA	C2B-C1B-NB	7.10	114.99	110.23
26	1b	613	CLA	CHD-C4C-C3C	-7.04	114.49	124.84
26	1c	513	CLA	CMD-C2D-C1D	6.98	137.02	124.71
26	1a	405	CLA	C2C-C1C-NC	6.97	116.50	109.97
26	1c	505	CLA	CMD-C2D-C1D	6.89	136.85	124.71
26	1c	511	CLA	C2B-C1B-NB	6.87	114.84	110.23
26	1a	408	CLA	CMD-C2D-C1D	6.84	136.78	124.71
26	1b	612	CLA	C3C-C4C-NC	6.78	118.18	110.57
26	1b	608	CLA	CMD-C2D-C1D	6.70	136.51	124.71
26	1b	609	CLA	C3C-C4C-NC	6.69	118.07	110.57
26	1c	509	CLA	C3C-C4C-NC	6.68	118.06	110.57
26	1b	602	CLA	C2B-C1B-NB	6.66	114.70	110.23
26	1c	511	CLA	C3C-C4C-NC	6.66	118.03	110.57
26	1b	602	CLA	CHD-C4C-C3C	-6.63	115.10	124.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
26	1b	612	CLA	CMD-C2D-C1D	6.63	136.39	124.71
26	1c	510	CLA	C3C-C4C-NC	6.61	117.99	110.57
26	1a	405	CLA	C3C-C4C-NC	6.61	117.98	110.57
26	1b	603	CLA	C2B-C1B-NB	6.58	114.64	110.23
26	1b	611	CLA	C2B-C1B-NB	6.57	114.64	110.23
26	1b	610	CLA	C3C-C4C-NC	6.53	117.89	110.57
26	1b	602	CLA	C3C-C4C-NC	6.51	117.87	110.57
26	1b	612	CLA	CHD-C4C-C3C	-6.50	115.29	124.84
26	1d	403	CLA	CHD-C4C-C3C	-6.42	115.40	124.84
26	1a	405	CLA	CHD-C4C-C3C	-6.39	115.45	124.84
26	1a	408	CLA	C3C-C4C-NC	6.34	117.68	110.57
26	1c	504	CLA	C3C-C4C-NC	6.32	117.66	110.57
26	1c	511	CLA	CHD-C4C-C3C	-6.32	115.55	124.84
26	1c	508	CLA	C3B-C2B-C1B	-6.32	99.54	107.16
26	1c	503	CLA	C3C-C4C-NC	6.28	117.61	110.57
26	1b	610	CLA	O2D-CGD-CBD	6.26	122.40	111.27
26	1a	408	CLA	CHD-C4C-C3C	-6.20	115.72	124.84
26	1c	512	CLA	C3C-C4C-NC	6.20	117.53	110.57
26	1b	615	CLA	C3C-C4C-NC	6.20	117.52	110.57
26	1b	611	CLA	C3C-C4C-NC	6.17	117.50	110.57
26	1b	609	CLA	CHD-C4C-C3C	-6.15	115.80	124.84
26	1b	608	CLA	C3C-C4C-NC	6.13	117.45	110.57
26	1c	513	CLA	CHD-C4C-C3C	-6.13	115.83	124.84
26	1b	615	CLA	CHD-C4C-C3C	-6.10	115.88	124.84
26	1c	509	CLA	CHD-C4C-C3C	-6.08	115.91	124.84
26	1d	407	CLA	C3C-C4C-NC	6.06	117.37	110.57
26	1b	603	CLA	C3C-C4C-NC	6.06	117.36	110.57
26	1b	604	CLA	C3C-C4C-NC	6.03	117.33	110.57
26	1b	611	CLA	CHD-C4C-C3C	-6.02	115.99	124.84
26	1c	504	CLA	CHD-C4C-C3C	-5.96	116.08	124.84
26	1d	406	CLA	C3C-C4C-NC	5.93	117.23	110.57
26	1c	513	CLA	C3C-C4C-NC	5.92	117.21	110.57
26	1b	612	CLA	C2B-C1B-NB	5.91	114.19	110.23
26	1c	508	CLA	C3C-C4C-NC	5.89	117.18	110.57
26	1c	509	CLA	O2D-CGD-CBD	5.87	121.70	111.27
26	1a	406	CLA	C3C-C4C-NC	5.84	117.12	110.57
26	1a	406	CLA	CHD-C4C-C3C	-5.84	116.26	124.84
26	1c	512	CLA	CHD-C4C-C3C	-5.84	116.26	124.84
26	1c	503	CLA	CHD-C4C-C3C	-5.83	116.27	124.84
26	1b	605	CLA	CHD-C4C-C3C	-5.82	116.28	124.84
26	1c	509	CLA	CMD-C2D-C1D	5.80	134.93	124.71
28	1j	101	BCR	C16-C15-C14	5.78	135.31	123.47

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
26	1c	502	CLA	C3C-C4C-NC	5.74	117.00	110.57
26	1d	406	CLA	CHD-C4C-C3C	-5.72	116.43	124.84
26	1b	613	CLA	C2B-C1B-NB	5.71	114.06	110.23
26	1c	506	CLA	C3C-C4C-NC	5.68	116.94	110.57
26	1b	610	CLA	CHD-C4C-C3C	-5.68	116.49	124.84
26	1d	407	CLA	CHD-C4C-C3C	-5.68	116.50	124.84
26	1b	601	CLA	C3C-C4C-NC	5.66	116.92	110.57
26	1b	613	CLA	CHC-C4B-NB	-5.66	118.27	124.26
26	1b	602	CLA	O2D-CGD-CBD	5.65	121.31	111.27
26	1d	403	CLA	C1C-C2C-C3C	-5.65	101.02	106.96
26	1c	505	CLA	C3C-C4C-NC	5.63	116.88	110.57
26	1b	608	CLA	CHD-C4C-C3C	-5.62	116.58	124.84
26	1b	604	CLA	O2D-CGD-CBD	5.61	121.24	111.27
26	1b	607	CLA	C3C-C4C-NC	5.60	116.86	110.57
26	1c	514	CLA	C3C-C4C-NC	5.60	116.85	110.57
26	1b	616	CLA	C3C-C4C-NC	5.57	116.82	110.57
26	1c	502	CLA	CHD-C4C-C3C	-5.57	116.65	124.84
26	1c	510	CLA	CHD-C4C-C3C	-5.56	116.67	124.84
26	1c	507	CLA	C3C-C4C-NC	5.56	116.81	110.57
26	1b	603	CLA	CHD-C4C-C3C	-5.53	116.71	124.84
26	1b	614	CLA	C3C-C4C-NC	5.52	116.76	110.57
26	1c	513	CLA	O2D-CGD-CBD	5.51	121.06	111.27
26	1b	616	CLA	C3B-C2B-C1B	-5.51	100.51	107.16
26	1c	508	CLA	CHD-C4C-C3C	-5.49	116.77	124.84
26	1b	605	CLA	CHD-C1D-ND	-5.49	119.41	124.45
26	1c	506	CLA	C3B-C2B-C1B	-5.45	100.58	107.16
26	1c	513	CLA	C3B-C2B-C1B	-5.44	100.60	107.16
26	1b	614	CLA	C3B-C2B-C1B	-5.40	100.64	107.16
26	1a	406	CLA	O2D-CGD-CBD	5.39	120.85	111.27
26	1a	406	CLA	C3B-C2B-C1B	-5.37	100.68	107.16
26	1b	601	CLA	C3B-C2B-C1B	-5.35	100.70	107.16
28	1j	101	BCR	C23-C22-C21	5.34	127.14	118.94
26	1b	606	CLA	C3B-C2B-C1B	-5.34	100.72	107.16
26	1b	604	CLA	CHD-C4C-C3C	-5.33	117.00	124.84
26	1b	612	CLA	C4D-CHA-C1A	-5.33	114.76	121.25
26	1c	512	CLA	C3B-C2B-C1B	-5.33	100.73	107.16
26	1b	607	CLA	CHD-C4C-C3C	-5.32	117.02	124.84
26	1b	616	CLA	O2D-CGD-CBD	5.32	120.72	111.27
26	1d	403	CLA	CHD-C1D-ND	-5.32	119.57	124.45
26	1b	616	CLA	CHD-C4C-C3C	-5.31	117.04	124.84
26	1c	503	CLA	O2D-CGD-CBD	5.30	120.68	111.27
26	1d	403	CLA	C3C-C4C-NC	5.29	116.50	110.57

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
26	1b	605	CLA	C1C-C2C-C3C	-5.27	101.41	106.96
26	1c	514	CLA	CHD-C4C-C3C	-5.27	117.10	124.84
26	1b	613	CLA	C1D-CHD-C4C	-5.26	114.70	126.06
26	1c	514	CLA	C3B-C2B-C1B	-5.26	100.82	107.16
26	1b	615	CLA	O2D-CGD-CBD	5.25	120.59	111.27
26	1c	505	CLA	CHD-C4C-C3C	-5.24	117.13	124.84
26	1c	507	CLA	CHD-C4C-C3C	-5.23	117.15	124.84
26	1b	614	CLA	CHD-C4C-C3C	-5.22	117.17	124.84
26	1b	606	CLA	C3C-C4C-NC	5.21	116.41	110.57
28	1j	101	BCR	C24-C23-C22	-5.20	118.37	126.23
26	1c	504	CLA	C3B-C2B-C1B	-5.20	100.88	107.16
26	1b	615	CLA	C3B-C2B-C1B	-5.20	100.89	107.16
26	1c	502	CLA	O2D-CGD-CBD	5.18	120.46	111.27
30	1e	101	PL9	C7-C8-C9	-5.15	118.22	126.79
26	1d	406	CLA	O2D-CGD-CBD	5.12	120.36	111.27
27	1d	404	PHO	C4D-CHA-CBD	-5.12	106.20	108.52
26	1a	408	CLA	O2D-CGD-CBD	5.11	120.35	111.27
26	1b	606	CLA	CHD-C4C-C3C	-5.09	117.36	124.84
26	1c	502	CLA	C3B-C2B-C1B	-5.09	101.02	107.16
26	1b	610	CLA	C3B-C2B-C1B	-5.09	101.02	107.16
26	1b	601	CLA	O2D-CGD-CBD	5.07	120.27	111.27
26	1c	506	CLA	C4D-CHA-C1A	-5.06	115.09	121.25
26	1c	513	CLA	C1C-C2C-C3C	-5.06	101.64	106.96
26	1d	403	CLA	C3B-C2B-C1B	-5.05	101.07	107.16
26	1c	506	CLA	O2D-CGD-CBD	5.02	120.19	111.27
26	1d	407	CLA	C3B-C2B-C1B	-4.99	101.14	107.16
26	1c	506	CLA	CHD-C4C-C3C	-4.98	117.52	124.84
28	1b	619	BCR	C37-C22-C21	-4.98	115.94	122.92
26	1a	408	CLA	C3B-C2B-C1B	-4.98	101.15	107.16
28	1k	102	BCR	C20-C21-C22	4.97	134.40	127.31
26	1c	510	CLA	C1C-C2C-C3C	-4.96	101.74	106.96
26	1d	403	CLA	C3D-C4D-ND	4.95	118.25	110.24
26	1b	602	CLA	C1C-C2C-C3C	-4.94	101.76	106.96
26	1c	505	CLA	O2D-CGD-CBD	4.94	120.05	111.27
26	1a	405	CLA	C3B-C2B-C1B	-4.93	101.21	107.16
26	1b	604	CLA	C4D-CHA-C1A	-4.89	115.29	121.25
26	1b	612	CLA	O2D-CGD-CBD	4.87	119.92	111.27
26	1c	514	CLA	C3D-C4D-ND	4.86	118.11	110.24
26	1b	605	CLA	C3B-C2B-C1B	-4.86	101.30	107.16
28	1j	101	BCR	C37-C22-C21	-4.86	116.12	122.92
28	1k	102	BCR	C15-C16-C17	4.86	133.42	123.47
26	1c	509	CLA	C3B-C2B-C1B	-4.85	101.30	107.16

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
26	1b	605	CLA	C3D-C4D-ND	4.84	118.06	110.24
26	1b	613	CLA	CHC-C1C-C2C	-4.82	113.33	126.73
26	1a	405	CLA	C3D-C2D-C1D	-4.81	99.27	105.83
26	1b	613	CLA	C3B-C2B-C1B	-4.79	101.38	107.16
26	1b	612	CLA	CMC-C2C-C1C	4.79	132.33	125.04
26	1c	509	CLA	C3B-C4B-NB	4.76	114.94	110.52
26	1b	614	CLA	CHD-C1D-ND	-4.75	120.09	124.45
26	1b	612	CLA	C3D-C4D-ND	4.74	117.91	110.24
26	1d	406	CLA	C3B-C2B-C1B	-4.73	101.45	107.16
26	1b	607	CLA	C1C-C2C-C3C	-4.72	101.99	106.96
26	1c	512	CLA	C1C-C2C-C3C	-4.72	102.00	106.96
28	1k	102	BCR	C21-C20-C19	4.72	137.93	123.22
29	1c	516	SQD	O47-C7-C8	4.71	121.66	111.50
26	1a	405	CLA	CHD-C1D-ND	-4.71	120.12	124.45
26	1c	510	CLA	CMB-C2B-C1B	4.71	132.54	125.37
26	1c	505	CLA	C3D-C4D-ND	4.70	117.85	110.24
26	1c	502	CLA	C3D-C4D-ND	4.69	117.82	110.24
26	1b	608	CLA	C1C-C2C-C3C	-4.69	102.03	106.96
26	1c	511	CLA	C1C-C2C-C3C	-4.69	102.03	106.96
26	1c	504	CLA	O2D-CGD-CBD	4.68	119.59	111.27
26	1b	605	CLA	C3C-C4C-NC	4.68	115.82	110.57
26	1b	606	CLA	O2D-CGD-CBD	4.68	119.58	111.27
26	1c	511	CLA	C3B-C2B-C1B	-4.66	101.53	107.16
26	1c	502	CLA	CHD-C1D-ND	-4.64	120.19	124.45
26	1c	507	CLA	CHD-C1D-ND	-4.64	120.19	124.45
26	1c	503	CLA	C3B-C2B-C1B	-4.64	101.56	107.16
26	1b	614	CLA	O2D-CGD-CBD	4.63	119.50	111.27
29	1b	621	SQD	O47-C7-C8	4.63	121.47	111.50
26	1b	609	CLA	C1C-C2C-C3C	-4.62	102.09	106.96
26	1c	505	CLA	C3B-C2B-C1B	-4.62	101.58	107.16
26	1c	514	CLA	C4D-CHA-C1A	-4.60	115.65	121.25
27	1a	407	PHO	C4D-CHA-CBD	-4.60	106.44	108.52
26	1c	505	CLA	C1C-C2C-C3C	-4.59	102.13	106.96
26	1c	507	CLA	C1C-C2C-C3C	-4.59	102.13	106.96
34	1f	101	HEM	CHD-C1D-ND	4.58	129.39	124.42
26	1c	511	CLA	CHC-C4B-NB	-4.57	119.42	124.26
26	1d	407	CLA	C1C-C2C-C3C	-4.56	102.16	106.96
26	1a	406	CLA	C3D-C4D-ND	4.56	117.61	110.24
26	1c	514	CLA	CHD-C1D-ND	-4.56	120.27	124.45
26	1b	613	CLA	C1C-C2C-C3C	-4.54	102.18	106.96
26	1b	612	CLA	C3B-C2B-C1B	-4.54	101.68	107.16
26	1b	611	CLA	CAC-C3C-C4C	4.53	130.69	124.81

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
26	1b	601	CLA	CHD-C4C-C3C	-4.52	118.19	124.84
34	1f	101	HEM	CHC-C4B-NB	4.51	129.32	124.42
26	1a	408	CLA	C3D-C4D-ND	4.51	117.53	110.24
26	1b	608	CLA	C3D-C4D-ND	4.51	117.53	110.24
26	1c	506	CLA	C1C-C2C-C3C	-4.50	102.22	106.96
26	1b	614	CLA	C3D-C4D-ND	4.49	117.50	110.24
26	1b	616	CLA	CHD-C1D-ND	-4.49	120.33	124.45
26	1b	613	CLA	C2D-C1D-ND	4.48	113.40	110.10
26	1b	605	CLA	CBC-CAC-C3C	-4.47	100.11	112.43
26	1b	604	CLA	C3B-C2B-C1B	-4.46	101.78	107.16
26	1b	606	CLA	CHD-C1D-ND	-4.46	120.36	124.45
26	1c	512	CLA	O2D-CGD-CBD	4.44	119.16	111.27
26	1c	511	CLA	C3D-C4D-ND	4.44	117.42	110.24
26	1c	507	CLA	O2D-CGD-CBD	4.43	119.15	111.27
26	1d	406	CLA	C4D-CHA-C1A	-4.43	115.85	121.25
26	1b	609	CLA	O2D-CGD-CBD	4.42	119.13	111.27
26	1a	406	CLA	C1C-C2C-C3C	-4.42	102.31	106.96
26	1c	502	CLA	C1C-C2C-C3C	-4.42	102.31	106.96
26	1b	616	CLA	C3D-C4D-ND	4.42	117.38	110.24
26	1b	602	CLA	CHD-C1D-ND	-4.41	120.41	124.45
26	1d	403	CLA	C4D-CHA-C1A	-4.41	115.89	121.25
26	1b	606	CLA	C3D-C4D-ND	4.40	117.36	110.24
26	1c	506	CLA	CMD-C2D-C3D	-4.40	117.48	127.61
26	1c	514	CLA	O2D-CGD-CBD	4.39	119.08	111.27
26	1d	406	CLA	CAC-C3C-C4C	4.39	130.51	124.81
26	1c	510	CLA	C2B-C1B-NB	4.39	113.17	110.23
26	1b	608	CLA	O2D-CGD-CBD	4.38	119.06	111.27
29	1a	410	SQD	O47-C7-C8	4.38	120.94	111.50
26	1a	406	CLA	CHD-C1D-ND	-4.38	120.43	124.45
26	1b	609	CLA	C3B-C2B-C1B	-4.37	101.88	107.16
26	1b	607	CLA	C3B-C2B-C1B	-4.37	101.88	107.16
26	1c	508	CLA	C3D-C4D-ND	4.37	117.31	110.24
26	1b	601	CLA	C3D-C4D-ND	4.36	117.29	110.24
26	1b	607	CLA	O2D-CGD-CBD	4.36	119.01	111.27
26	1d	407	CLA	C3D-C4D-ND	4.35	117.28	110.24
26	1c	510	CLA	C3D-C4D-ND	4.35	117.28	110.24
28	1h	102	BCR	C8-C9-C10	4.35	125.61	118.94
26	1d	406	CLA	C3D-C4D-ND	4.35	117.27	110.24
26	1b	612	CLA	C1D-CHD-C4C	-4.34	116.69	126.06
26	1b	605	CLA	O2D-CGD-CBD	4.32	118.94	111.27
26	1b	608	CLA	C4D-CHA-C1A	-4.32	116.00	121.25
26	1c	511	CLA	O2D-CGD-CBD	4.32	118.94	111.27

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
26	1c	507	CLA	C3D-C4D-ND	4.31	117.21	110.24
28	1h	102	BCR	C34-C9-C10	-4.31	116.89	122.92
26	1b	610	CLA	CHC-C4B-NB	-4.31	119.69	124.26
28	1h	102	BCR	C7-C8-C9	4.31	132.74	126.23
26	1d	407	CLA	CHD-C1D-ND	-4.30	120.50	124.45
26	1c	514	CLA	C1C-C2C-C3C	-4.30	102.44	106.96
26	1c	508	CLA	C1C-C2C-C3C	-4.29	102.45	106.96
26	1b	614	CLA	C1C-C2C-C3C	-4.29	102.45	106.96
26	1c	509	CLA	C4C-C3C-C2C	-4.28	100.66	106.90
26	1c	513	CLA	CHB-C1B-NB	-4.28	119.72	124.26
26	1c	505	CLA	CHD-C1D-ND	-4.28	120.52	124.45
26	1a	408	CLA	C1C-C2C-C3C	-4.27	102.46	106.96
28	1h	102	BCR	C37-C22-C21	-4.26	116.95	122.92
26	1c	511	CLA	C4D-CHA-C1A	-4.26	116.06	121.25
26	1b	611	CLA	C3D-C4D-ND	4.26	117.13	110.24
26	1b	610	CLA	C1C-C2C-C3C	-4.26	102.48	106.96
26	1c	508	CLA	O2D-CGD-CBD	4.26	118.84	111.27
28	1t	101	BCR	C16-C15-C14	4.25	132.19	123.47
26	1c	504	CLA	C1C-C2C-C3C	-4.25	102.49	106.96
26	1b	601	CLA	C1C-C2C-C3C	-4.25	102.49	106.96
31	1b	623	DGD	O2G-C1B-C2B	4.24	120.64	111.50
30	1a	413	PL9	C7-C3-C4	4.23	120.31	116.88
31	1c	519	DGD	O2G-C1B-C2B	4.21	120.57	111.50
26	1b	609	CLA	C3D-C2D-C1D	-4.21	100.09	105.83
26	1b	615	CLA	C3D-C4D-ND	4.21	117.05	110.24
26	1b	615	CLA	C3D-C2D-C1D	-4.21	100.09	105.83
26	1c	503	CLA	C1C-C2C-C3C	-4.20	102.54	106.96
26	1c	506	CLA	C3D-C4D-ND	4.20	117.03	110.24
26	1c	512	CLA	C3B-C4B-NB	4.19	114.41	110.52
26	1b	615	CLA	C4A-NA-C1A	4.19	108.59	106.71
26	1a	406	CLA	C3D-C2D-C1D	-4.19	100.12	105.83
26	1b	607	CLA	C3D-C4D-ND	4.18	117.00	110.24
26	1c	513	CLA	C3D-C4D-ND	4.18	117.00	110.24
26	1b	604	CLA	C3D-C4D-ND	4.17	116.99	110.24
26	1b	613	CLA	C3D-C2D-C1D	-4.17	100.14	105.83
26	1b	602	CLA	C3D-C2D-C1D	-4.15	100.16	105.83
26	1c	507	CLA	CHC-C1C-C2C	-4.14	115.23	126.73
26	1c	512	CLA	C3D-C2D-C1D	-4.14	100.18	105.83
26	1c	512	CLA	CHD-C1D-ND	-4.14	120.65	124.45
26	1b	603	CLA	O2D-CGD-CBD	4.13	118.61	111.27
28	1i	101	BCR	C16-C15-C14	4.13	131.93	123.47
26	1a	405	CLA	CHC-C4B-NB	-4.13	119.89	124.26

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
26	1d	403	CLA	O2D-CGD-CBD	4.13	118.60	111.27
26	1b	605	CLA	C3D-C2D-C1D	-4.12	100.21	105.83
26	1c	511	CLA	CMB-C2B-C1B	4.12	131.65	125.37
26	1d	403	CLA	C3D-C2D-C1D	-4.12	100.21	105.83
26	1b	606	CLA	C4D-CHA-C1A	-4.12	116.24	121.25
26	1c	504	CLA	C3D-C2D-C1D	-4.12	100.21	105.83
26	1b	610	CLA	C3D-C4D-ND	4.12	116.90	110.24
26	1d	407	CLA	O2D-CGD-CBD	4.12	118.58	111.27
28	1d	409	BCR	C34-C9-C10	-4.12	117.16	122.92
26	1b	601	CLA	CHD-C1D-ND	-4.12	120.67	124.45
26	1b	609	CLA	C3D-C4D-ND	4.12	116.89	110.24
26	1c	509	CLA	C3D-C4D-ND	4.11	116.89	110.24
28	1b	618	BCR	C37-C22-C21	-4.11	117.16	122.92
26	1c	503	CLA	CHC-C1C-C2C	-4.11	115.31	126.73
26	1b	615	CLA	C1C-C2C-C3C	-4.11	102.64	106.96
26	1b	616	CLA	C1C-C2C-C3C	-4.11	102.64	106.96
26	1b	610	CLA	C3D-C2D-C1D	-4.10	100.23	105.83
26	1a	406	CLA	C4D-CHA-C1A	-4.10	116.26	121.25
26	1a	405	CLA	CAC-C3C-C4C	4.10	130.13	124.81
26	1b	609	CLA	CMB-C2B-C1B	4.10	131.61	125.37
26	1b	607	CLA	CHD-C1D-ND	-4.09	120.70	124.45
26	1a	405	CLA	C3D-C4D-ND	4.08	116.84	110.24
26	1c	508	CLA	CHD-C1D-ND	-4.08	120.70	124.45
26	1c	512	CLA	C3D-C4D-ND	4.07	116.83	110.24
26	1d	407	CLA	CHC-C4B-NB	-4.07	119.95	124.26
26	1c	504	CLA	CHD-C1D-ND	-4.07	120.72	124.45
26	1b	611	CLA	O2D-CGD-CBD	4.07	118.49	111.27
26	1b	616	CLA	C3D-C2D-C1D	-4.06	100.29	105.83
26	1b	607	CLA	C3B-C4B-NB	4.05	114.28	110.52
26	1c	514	CLA	O2A-CGA-CBA	4.05	124.62	111.91
26	1b	607	CLA	CHC-C1C-C2C	-4.05	115.49	126.73
26	1b	609	CLA	CHD-C1D-ND	-4.04	120.74	124.45
26	1c	514	CLA	C3D-C2D-C1D	-4.03	100.33	105.83
26	1c	502	CLA	C3D-C2D-C1D	-4.02	100.34	105.83
26	1b	603	CLA	C1C-C2C-C3C	-4.02	102.73	106.96
26	1c	510	CLA	O2D-CGD-CBD	4.02	118.41	111.27
26	1c	503	CLA	C4A-NA-C1A	4.01	108.51	106.71
26	1c	510	CLA	C4A-NA-C1A	4.01	108.51	106.71
26	1c	508	CLA	CHB-C1B-NB	-4.01	120.02	124.26
26	1b	604	CLA	CHC-C1C-C2C	-4.01	115.61	126.73
26	1b	603	CLA	C3D-C4D-ND	4.00	116.72	110.24
26	1b	613	CLA	C3D-C4D-ND	4.00	116.71	110.24

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
26	1c	510	CLA	CHC-C1C-C2C	-3.99	115.64	126.73
22	1j	102	LHG	O7-C7-C8	3.99	120.11	111.50
26	1c	503	CLA	C3B-C4B-NB	3.99	114.22	110.52
26	1b	610	CLA	CHC-C1C-C2C	-3.99	115.65	126.73
26	1c	503	CLA	C3D-C4D-ND	3.99	116.69	110.24
26	1b	612	CLA	C4-C3-C5	3.99	121.97	115.27
26	1b	602	CLA	C3D-C4D-ND	3.98	116.68	110.24
26	1c	510	CLA	C3D-C2D-C1D	-3.98	100.40	105.83
26	1c	508	CLA	C3D-C2D-C1D	-3.97	100.41	105.83
28	1t	101	BCR	C34-C9-C10	-3.97	117.36	122.92
26	1d	407	CLA	C3D-C2D-C1D	-3.97	100.42	105.83
28	1d	409	BCR	C37-C22-C21	-3.96	117.38	122.92
26	1c	505	CLA	C3D-C2D-C1D	-3.96	100.43	105.83
26	1c	512	CLA	CHB-C1B-NB	-3.95	120.07	124.26
28	1b	618	BCR	C34-C9-C10	-3.95	117.39	122.92
26	1b	609	CLA	C3B-C4B-NB	3.95	114.18	110.52
26	1c	507	CLA	C3D-C2D-C1D	-3.94	100.45	105.83
26	1c	513	CLA	C4D-CHA-C1A	-3.94	116.45	121.25
26	1c	510	CLA	C1D-CHD-C4C	-3.94	117.56	126.06
26	1b	611	CLA	C3D-C2D-C1D	-3.93	100.46	105.83
26	1b	606	CLA	CHC-C4B-NB	-3.93	120.09	124.26
26	1c	504	CLA	C3D-C4D-ND	3.93	116.59	110.24
26	1b	614	CLA	C3D-C2D-C1D	-3.92	100.47	105.83
26	1c	507	CLA	C3B-C2B-C1B	-3.92	102.43	107.16
26	1b	602	CLA	C4-C3-C5	3.91	121.85	115.27
26	1b	611	CLA	CHC-C1C-C2C	-3.91	115.86	126.73
26	1c	510	CLA	C3B-C2B-C1B	-3.91	102.44	107.16
28	1c	515	BCR	C34-C9-C10	-3.91	117.45	122.92
26	1b	604	CLA	C1C-C2C-C3C	-3.90	102.85	106.96
26	1b	615	CLA	C1D-CHD-C4C	-3.90	117.64	126.06
26	1b	610	CLA	C1D-CHD-C4C	-3.90	117.64	126.06
28	1c	515	BCR	C37-C22-C21	-3.90	117.46	122.92
26	1d	406	CLA	CHD-C1D-ND	-3.90	120.87	124.45
28	1b	619	BCR	C34-C9-C10	-3.89	117.47	122.92
31	1c	520	DGD	O2G-C1B-C2B	3.89	119.89	111.50
26	1b	608	CLA	C3B-C2B-C1B	-3.89	102.46	107.16
26	1a	408	CLA	C4D-CHA-C1A	-3.89	116.52	121.25
26	1b	605	CLA	C3B-C4B-NB	3.89	114.12	110.52
26	1c	513	CLA	C3D-C2D-C1D	-3.89	100.53	105.83
26	1b	615	CLA	CHC-C4B-NB	-3.88	120.14	124.26
26	1b	602	CLA	C3B-C2B-C1B	-3.88	102.47	107.16
26	1b	612	CLA	C1C-C2C-C3C	-3.88	102.88	106.96

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
28	1a	409	BCR	C34-C9-C10	-3.87	117.50	122.92
26	1b	609	CLA	CHC-C1C-C2C	-3.87	115.97	126.73
26	1a	408	CLA	C3D-C2D-C1D	-3.87	100.55	105.83
26	1c	509	CLA	C3D-C2D-C1D	-3.87	100.55	105.83
31	1c	518	DGD	O2G-C1B-C2B	3.87	119.84	111.50
26	1c	505	CLA	C4D-CHA-C1A	-3.87	116.54	121.25
26	1c	509	CLA	CHC-C1C-C2C	-3.87	115.99	126.73
26	1c	502	CLA	C4D-CHA-C1A	-3.85	116.56	121.25
30	1a	413	PL9	C7-C8-C9	-3.85	120.39	126.79
26	1b	615	CLA	CHD-C1D-ND	-3.84	120.92	124.45
30	1h	101	PL9	C7-C3-C4	3.84	120.00	116.88
28	1h	102	BCR	C15-C16-C17	3.84	131.34	123.47
26	1c	502	CLA	CHC-C4B-NB	-3.84	120.19	124.26
26	1c	508	CLA	CMB-C2B-C1B	3.84	131.21	125.37
26	1b	615	CLA	CHC-C1C-C2C	-3.84	116.08	126.73
26	1b	603	CLA	C4D-CHA-C1A	-3.83	116.59	121.25
26	1c	509	CLA	C1D-CHD-C4C	-3.83	117.80	126.06
26	1b	601	CLA	C3D-C2D-C1D	-3.83	100.61	105.83
28	1b	617	BCR	C34-C9-C10	-3.83	117.56	122.92
26	1b	616	CLA	CHC-C1C-C2C	-3.82	116.11	126.73
26	1b	603	CLA	CHC-C1C-C2C	-3.81	116.14	126.73
26	1c	513	CLA	CHD-C1D-ND	-3.81	120.95	124.45
26	1b	605	CLA	C4D-CHA-C1A	-3.81	116.61	121.25
26	1b	604	CLA	C3B-C4B-NB	3.81	114.05	110.52
28	1i	101	BCR	C34-C9-C10	-3.80	117.60	122.92
26	1d	403	CLA	CHC-C4B-NB	-3.80	120.24	124.26
26	1b	610	CLA	CHD-C1D-ND	-3.79	120.97	124.45
28	1a	409	BCR	C37-C22-C21	-3.79	117.62	122.92
26	1c	503	CLA	C1D-CHD-C4C	-3.78	117.90	126.06
26	1b	611	CLA	C3B-C4B-NB	3.78	114.02	110.52
26	1c	513	CLA	CHC-C1C-C2C	-3.78	116.24	126.73
28	1d	409	BCR	C38-C26-C25	3.78	128.77	124.53
28	1j	101	BCR	C34-C9-C10	-3.77	117.64	122.92
26	1b	614	CLA	C4D-CHA-C1A	-3.77	116.66	121.25
26	1b	602	CLA	CHC-C1C-C2C	-3.77	116.26	126.73
34	1f	101	HEM	C1B-NB-C4B	3.77	108.96	105.07
30	1e	101	PL9	C15-C14-C16	3.75	120.27	115.98
26	1b	606	CLA	C1C-C2C-C3C	-3.75	103.01	106.96
26	1b	612	CLA	CAC-C3C-C4C	3.75	129.67	124.81
28	1a	409	BCR	C15-C16-C17	3.75	131.15	123.47
26	1b	605	CLA	CMB-C2B-C1B	3.74	131.07	125.37
22	1a	414	LHG	O7-C7-C8	3.74	119.57	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
26	1b	616	CLA	CHB-C1B-NB	-3.73	120.31	124.26
26	1b	605	CLA	CMD-C2D-C3D	-3.73	119.04	127.61
26	1b	607	CLA	C3D-C2D-C1D	-3.72	100.76	105.83
26	1b	611	CLA	CHD-C1D-ND	-3.71	121.04	124.45
31	1b	627	DGD	O2G-C1B-C2B	3.71	119.49	111.50
28	1t	101	BCR	C37-C22-C21	-3.71	117.73	122.92
26	1b	609	CLA	C4A-NA-C1A	3.70	108.37	106.71
28	1b	617	BCR	C37-C22-C21	-3.70	117.74	122.92
26	1b	606	CLA	C3D-C2D-C1D	-3.70	100.78	105.83
26	1a	405	CLA	C4C-C3C-C2C	-3.70	101.51	106.90
26	1c	503	CLA	C3D-C2D-C1D	-3.70	100.79	105.83
26	1b	601	CLA	CHC-C1C-C2C	-3.69	116.47	126.73
26	1c	505	CLA	CHC-C4B-NB	-3.69	120.35	124.26
26	1d	403	CLA	C2D-C1D-ND	3.68	112.82	110.10
26	1b	613	CLA	CHB-C1B-NB	-3.68	120.36	124.26
26	1b	611	CLA	C1D-CHD-C4C	-3.67	118.13	126.06
26	1c	507	CLA	C3B-C4B-NB	3.67	113.92	110.52
26	1c	513	CLA	C3B-C4B-NB	3.67	113.92	110.52
26	1b	605	CLA	CHC-C1C-C2C	-3.67	116.53	126.73
28	1b	619	BCR	C23-C22-C21	3.67	124.57	118.94
26	1c	504	CLA	C3B-C4B-NB	3.67	113.92	110.52
26	1b	606	CLA	CHB-C4A-NA	3.67	129.58	124.51
28	1k	102	BCR	C34-C9-C10	-3.66	117.80	122.92
26	1a	405	CLA	C2D-C1D-ND	3.65	112.79	110.10
26	1c	508	CLA	C4D-CHA-C1A	-3.65	116.81	121.25
26	1b	610	CLA	C4C-C3C-C2C	-3.65	101.58	106.90
29	1w	101	SQD	O8-S-C6	-3.64	99.94	105.74
26	1c	504	CLA	C4D-CHA-C1A	-3.64	116.82	121.25
26	1c	512	CLA	C4D-CHA-C1A	-3.63	116.83	121.25
26	1c	504	CLA	CAC-C3C-C4C	3.63	129.52	124.81
26	1c	511	CLA	C3D-C2D-C1D	-3.63	100.88	105.83
26	1d	406	CLA	CMD-C2D-C3D	-3.62	119.29	127.61
26	1b	610	CLA	C3B-C4B-NB	3.62	113.87	110.52
28	1i	101	BCR	C37-C22-C21	-3.61	117.86	122.92
28	1h	102	BCR	C16-C15-C14	3.61	130.87	123.47
26	1a	408	CLA	CMC-C2C-C1C	3.60	130.53	125.04
26	1b	615	CLA	CMB-C2B-C1B	3.60	130.85	125.37
26	1c	512	CLA	CHC-C1C-C2C	-3.60	116.74	126.73
26	1b	609	CLA	CHB-C1B-NB	-3.59	120.45	124.26
26	1b	611	CLA	C3B-C2B-C1B	-3.59	102.83	107.16
26	1a	405	CLA	O2D-CGD-CBD	3.59	117.65	111.27
26	1b	607	CLA	C4D-CHA-C1A	-3.59	116.89	121.25

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
26	1b	613	CLA	O2D-CGD-CBD	3.58	117.62	111.27
26	1c	513	CLA	C4A-NA-C1A	3.57	108.31	106.71
26	1a	406	CLA	CHC-C4B-NB	-3.57	120.48	124.26
26	1b	604	CLA	CMD-C2D-C3D	-3.57	119.41	127.61
26	1d	407	CLA	CHC-C1C-C2C	-3.57	116.82	126.73
26	1c	508	CLA	CHC-C1C-C2C	-3.57	116.83	126.73
26	1b	604	CLA	O2D-CGD-O1D	-3.56	116.87	123.84
26	1b	616	CLA	CMB-C2B-C1B	3.56	130.79	125.37
26	1b	604	CLA	C1D-CHD-C4C	-3.56	118.38	126.06
26	1a	406	CLA	C2D-C1D-ND	3.56	112.73	110.10
26	1c	514	CLA	C2D-C1D-ND	3.56	112.73	110.10
26	1b	604	CLA	C4C-C3C-C2C	-3.56	101.71	106.90
28	1d	409	BCR	C16-C15-C14	3.56	130.76	123.47
26	1b	611	CLA	C4C-C3C-C2C	-3.55	101.72	106.90
26	1d	406	CLA	C3D-C2D-C1D	-3.54	101.00	105.83
28	1b	618	BCR	C16-C15-C14	3.54	130.73	123.47
26	1d	406	CLA	CMC-C2C-C1C	3.54	130.42	125.04
26	1c	503	CLA	CAC-C3C-C4C	3.53	129.40	124.81
26	1b	611	CLA	C1C-C2C-C3C	-3.53	103.24	106.96
26	1a	408	CLA	CHD-C1D-ND	-3.52	121.22	124.45
28	1t	101	BCR	C35-C13-C14	-3.52	117.99	122.92
26	1c	511	CLA	C1D-CHD-C4C	-3.52	118.46	126.06
26	1c	513	CLA	C2D-C1D-ND	3.52	112.70	110.10
26	1b	608	CLA	CHC-C1C-C2C	-3.52	116.95	126.73
28	1t	101	BCR	C7-C8-C9	3.52	131.55	126.23
26	1c	514	CLA	CHC-C4B-NB	-3.52	120.53	124.26
26	1b	606	CLA	CAC-C3C-C4C	3.52	129.37	124.81
26	1b	603	CLA	C3D-C2D-C1D	-3.51	101.04	105.83
26	1c	506	CLA	CHD-C1D-ND	-3.50	121.23	124.45
26	1c	513	CLA	C1D-CHD-C4C	-3.50	118.51	126.06
26	1b	608	CLA	CHC-C4B-NB	-3.50	120.55	124.26
22	1b	624	LHG	O7-C7-C8	3.50	119.04	111.50
26	1c	505	CLA	C2D-C1D-ND	3.50	112.68	110.10
26	1c	511	CLA	CHC-C1C-C2C	-3.49	117.04	126.73
26	1b	615	CLA	CAC-C3C-C4C	3.49	129.33	124.81
26	1c	511	CLA	CHD-C1D-ND	-3.48	121.26	124.45
26	1b	603	CLA	CHD-C1D-ND	-3.47	121.26	124.45
26	1d	403	CLA	CMC-C2C-C1C	3.47	130.32	125.04
26	1a	408	CLA	C1D-CHD-C4C	-3.47	118.58	126.06
26	1b	606	CLA	C3B-C4B-NB	3.47	113.73	110.52
26	1d	406	CLA	CHC-C4B-NB	-3.46	120.59	124.26
26	1c	509	CLA	CAC-C3C-C4C	3.46	129.30	124.81

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	1f	101	HEM	CHB-C1B-NB	3.46	128.64	124.37
26	1d	406	CLA	C1C-C2C-C3C	-3.46	103.32	106.96
26	1c	504	CLA	CHC-C1C-C2C	-3.46	117.13	126.73
26	1b	606	CLA	CHC-C1C-C2C	-3.46	117.13	126.73
26	1b	615	CLA	CHB-C1B-NB	-3.45	120.60	124.26
26	1b	606	CLA	C1-C2-C3	-3.45	121.17	126.75
26	1b	603	CLA	CAC-C3C-C4C	3.45	129.29	124.81
28	1c	515	BCR	C15-C16-C17	3.45	130.53	123.47
26	1c	508	CLA	C1D-CHD-C4C	-3.44	118.63	126.06
26	1b	603	CLA	C4-C3-C5	3.44	121.06	115.27
26	1a	408	CLA	CHC-C4B-NB	-3.44	120.61	124.26
26	1b	607	CLA	CAC-C3C-C4C	3.43	129.26	124.81
26	1c	513	CLA	CBC-CAC-C3C	-3.43	102.97	112.43
26	1b	609	CLA	C2D-C1D-ND	3.43	112.63	110.10
26	1b	604	CLA	CHC-C4B-NB	-3.43	120.63	124.26
26	1c	509	CLA	CHC-C4B-NB	-3.43	120.63	124.26
26	1b	606	CLA	CMD-C2D-C3D	-3.43	119.73	127.61
26	1d	407	CLA	CHB-C4A-NA	3.43	129.25	124.51
26	1a	405	CLA	C1D-CHD-C4C	-3.42	118.67	126.06
26	1b	603	CLA	C1D-CHD-C4C	-3.42	118.67	126.06
26	1c	504	CLA	C4C-C3C-C2C	-3.42	101.91	106.90
26	1b	615	CLA	C2D-C1D-ND	3.42	112.62	110.10
26	1c	503	CLA	CMB-C2B-C1B	3.42	130.57	125.37
26	1c	510	CLA	CAC-C3C-C4C	3.42	129.24	124.81
26	1b	601	CLA	C4D-CHA-C1A	-3.41	117.09	121.25
26	1c	505	CLA	CHC-C1C-C2C	-3.41	117.26	126.73
26	1c	503	CLA	CHB-C1B-NB	-3.41	120.65	124.26
26	1b	603	CLA	C3B-C4B-NB	3.41	113.67	110.52
26	1a	406	CLA	C1D-CHD-C4C	-3.40	118.72	126.06
26	1c	510	CLA	CHC-C4B-NB	-3.40	120.65	124.26
26	1c	508	CLA	CHB-C4A-NA	3.40	129.22	124.51
26	1b	615	CLA	CHB-C4A-NA	3.40	129.21	124.51
26	1d	407	CLA	C4D-CHA-C1A	-3.40	117.11	121.25
28	1j	101	BCR	C35-C13-C14	-3.40	118.17	122.92
26	1b	613	CLA	C4D-CHA-C1A	-3.39	117.12	121.25
26	1b	609	CLA	C4C-C3C-C2C	-3.37	101.98	106.90
26	1b	603	CLA	C4C-C3C-C2C	-3.37	101.98	106.90
26	1c	512	CLA	CHB-C4A-NA	3.37	129.17	124.51
26	1b	613	CLA	C4-C3-C5	3.37	120.94	115.27
26	1b	609	CLA	CHC-C4B-NB	-3.36	120.70	124.26
26	1b	616	CLA	CAC-C3C-C4C	3.36	129.17	124.81
26	1b	605	CLA	C1-C2-C3	-3.36	120.23	126.04

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
26	1b	601	CLA	C3B-C4B-NB	3.36	113.63	110.52
26	1b	605	CLA	C2D-C1D-ND	3.36	112.58	110.10
26	1b	611	CLA	C2D-C1D-ND	3.36	112.58	110.10
26	1b	613	CLA	CHB-C4A-NA	3.35	129.15	124.51
26	1c	503	CLA	C4C-C3C-C2C	-3.35	102.01	106.90
26	1b	609	CLA	C1D-CHD-C4C	-3.35	118.82	126.06
26	1b	607	CLA	C1D-CHD-C4C	-3.35	118.83	126.06
28	1d	409	BCR	C35-C13-C14	-3.35	118.23	122.92
26	1b	601	CLA	CHC-C4B-NB	-3.35	120.71	124.26
26	1c	510	CLA	CHD-C1D-ND	-3.34	121.38	124.45
26	1b	614	CLA	CHB-C4A-NA	3.34	129.13	124.51
26	1b	605	CLA	CHB-C1B-NB	-3.34	120.72	124.26
26	1c	511	CLA	C1-C2-C3	-3.34	120.27	126.04
26	1b	603	CLA	CHC-C4B-NB	-3.34	120.73	124.26
26	1c	505	CLA	C3B-C4B-NB	3.34	113.61	110.52
26	1c	509	CLA	C2D-C1D-ND	3.33	112.56	110.10
26	1a	408	CLA	C2D-C1D-ND	3.33	112.56	110.10
26	1b	604	CLA	CHB-C1B-NB	-3.32	120.74	124.26
26	1b	615	CLA	C4D-CHA-C1A	-3.32	117.21	121.25
28	1j	101	BCR	C30-C25-C24	3.32	125.17	115.78
26	1c	503	CLA	CHB-C4A-NA	3.32	129.10	124.51
30	1a	413	PL9	C37-C38-C39	-3.32	119.68	127.66
26	1c	502	CLA	C2D-C1D-ND	3.32	112.55	110.10
28	1b	617	BCR	C38-C26-C25	3.31	128.25	124.53
26	1b	605	CLA	C1D-CHD-C4C	-3.31	118.91	126.06
26	1b	616	CLA	C3B-C4B-NB	3.31	113.59	110.52
26	1c	513	CLA	CHC-C4B-NB	-3.31	120.75	124.26
26	1c	505	CLA	CAC-C3C-C4C	3.31	129.10	124.81
26	1a	405	CLA	CMC-C2C-C1C	3.31	130.07	125.04
28	1d	409	BCR	C36-C18-C17	-3.30	118.30	122.92
26	1c	503	CLA	CHD-C1D-ND	-3.30	121.42	124.45
26	1b	603	CLA	O2A-CGA-CBA	3.30	122.26	111.91
26	1b	616	CLA	C1D-CHD-C4C	-3.30	118.94	126.06
28	1h	102	BCR	C1-C6-C7	3.30	125.11	115.78
26	1a	406	CLA	CHC-C1C-C2C	-3.30	117.57	126.73
30	1a	413	PL9	C7-C3-C2	-3.30	118.96	123.30
28	1b	618	BCR	C33-C5-C6	3.29	128.23	124.53
26	1b	609	CLA	C4D-CHA-C1A	-3.29	117.24	121.25
26	1b	602	CLA	CMB-C2B-C1B	3.29	130.38	125.37
30	1a	413	PL9	C15-C14-C16	3.28	120.80	115.27
26	1c	506	CLA	CHC-C1C-C2C	-3.28	117.61	126.73
26	1b	604	CLA	C3D-C2D-C1D	-3.28	101.35	105.83

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
26	1a	408	CLA	CAC-C3C-C4C	3.28	129.07	124.81
26	1d	407	CLA	C1D-CHD-C4C	-3.28	118.97	126.06
28	1j	101	BCR	C12-C13-C14	3.28	123.98	118.94
28	1h	102	BCR	C36-C18-C17	-3.28	118.33	122.92
26	1c	506	CLA	CHB-C4A-NA	3.27	129.03	124.51
26	1b	602	CLA	C3B-C4B-NB	3.27	113.55	110.52
26	1b	604	CLA	CMB-C2B-C1B	3.27	130.34	125.37
26	1d	403	CLA	C1D-CHD-C4C	-3.26	119.02	126.06
28	1d	409	BCR	C15-C16-C17	3.26	130.16	123.47
28	1b	618	BCR	C35-C13-C14	-3.26	118.35	122.92
26	1b	605	CLA	CAA-C2A-C3A	-3.26	103.86	112.78
26	1b	614	CLA	CHC-C1C-C2C	-3.25	117.70	126.73
26	1c	510	CLA	C4D-CHA-C1A	-3.24	117.30	121.25
30	1a	413	PL9	C35-C34-C36	3.24	120.73	115.27
26	1c	503	CLA	C4D-CHA-C1A	-3.24	117.31	121.25
34	1f	101	HEM	CHA-C4D-ND	3.24	128.37	124.37
26	1d	407	CLA	C3B-C4B-NB	3.24	113.52	110.52
26	1b	606	CLA	C4C-C3C-C2C	-3.24	102.18	106.90
26	1c	504	CLA	C1D-CHD-C4C	-3.23	119.09	126.06
28	1b	619	BCR	C16-C15-C14	3.23	130.09	123.47
26	1d	407	CLA	CAC-C3C-C4C	3.23	129.00	124.81
26	1c	506	CLA	CHC-C4B-NB	-3.23	120.84	124.26
26	1b	608	CLA	C1D-CHD-C4C	-3.23	119.10	126.06
31	1c	518	DGD	O1G-C1A-C2A	3.23	122.03	111.91
26	1b	602	CLA	C1D-CHD-C4C	-3.23	119.10	126.06
27	1a	407	PHO	C2B-C1B-NB	-3.22	107.30	109.53
26	1d	403	CLA	CHB-C1B-NB	-3.22	120.85	124.26
26	1c	510	CLA	CMD-C2D-C3D	-3.22	120.21	127.61
26	1b	613	CLA	C4C-C3C-C2C	-3.22	102.21	106.90
26	1c	512	CLA	CMD-C2D-C3D	-3.21	120.23	127.61
26	1c	508	CLA	C4-C3-C5	3.21	120.67	115.27
26	1b	614	CLA	C3B-C4B-NB	3.21	113.49	110.52
26	1c	512	CLA	C1D-CHD-C4C	-3.21	119.14	126.06
26	1b	601	CLA	CAC-C3C-C4C	3.20	128.97	124.81
26	1b	608	CLA	C3B-C4B-NB	3.20	113.49	110.52
26	1c	507	CLA	C1D-CHD-C4C	-3.20	119.15	126.06
26	1b	609	CLA	CHB-C4A-NA	3.20	128.94	124.51
26	1b	616	CLA	C4D-CHA-C1A	-3.20	117.36	121.25
26	1c	502	CLA	CHC-C1C-C2C	-3.20	117.85	126.73
28	1i	101	BCR	C35-C13-C14	-3.19	118.45	122.92
30	1a	413	PL9	C45-C44-C46	3.19	120.63	115.27
28	1t	101	BCR	C1-C6-C5	-3.19	118.12	122.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
26	1c	510	CLA	C2D-C1D-ND	3.18	112.45	110.10
26	1b	614	CLA	CHC-C4B-NB	-3.18	120.89	124.26
26	1b	614	CLA	CAC-C3C-C4C	3.18	128.94	124.81
28	1t	101	BCR	C1-C6-C7	3.18	124.76	115.78
26	1b	604	CLA	CHD-C1D-ND	-3.18	121.54	124.45
26	1d	403	CLA	CMD-C2D-C3D	-3.17	120.32	127.61
28	1b	619	BCR	C30-C25-C24	3.17	124.75	115.78
26	1b	609	CLA	CAC-C3C-C4C	3.17	128.92	124.81
26	1c	504	CLA	CHC-C4B-NB	-3.16	120.91	124.26
26	1c	509	CLA	C4D-CHA-C1A	-3.16	117.40	121.25
26	1b	610	CLA	C4D-CHA-C1A	-3.16	117.40	121.25
28	1b	619	BCR	C35-C13-C14	-3.16	118.50	122.92
29	1l	101	SQD	O47-C7-C8	3.16	118.30	111.50
28	1a	409	BCR	C35-C13-C14	-3.15	118.51	122.92
26	1b	606	CLA	CHB-C1B-NB	-3.15	120.92	124.26
26	1b	606	CLA	O2A-CGA-CBA	3.14	121.78	111.91
28	1h	102	BCR	C35-C13-C14	-3.14	118.52	122.92
26	1b	604	CLA	CAC-C3C-C4C	3.14	128.89	124.81
28	1t	101	BCR	C34-C9-C8	3.14	123.02	118.08
26	1b	614	CLA	CMD-C2D-C3D	-3.14	120.39	127.61
28	1b	618	BCR	C38-C26-C25	3.14	128.05	124.53
26	1a	406	CLA	C1-C2-C3	-3.13	121.68	126.75
26	1c	507	CLA	C1-C2-C3	-3.12	120.64	126.04
26	1c	509	CLA	C1C-C2C-C3C	-3.12	103.68	106.96
26	1a	408	CLA	CHC-C1C-C2C	-3.12	118.08	126.73
26	1d	403	CLA	C3B-C4B-NB	3.11	113.40	110.52
26	1c	507	CLA	CAC-C3C-C4C	3.11	128.85	124.81
26	1c	506	CLA	C2A-C1A-CHA	-3.11	118.42	123.86
26	1d	406	CLA	C1D-CHD-C4C	-3.11	119.35	126.06
26	1c	511	CLA	CMD-C2D-C3D	-3.11	120.46	127.61
26	1b	612	CLA	C4C-C3C-C2C	-3.11	102.37	106.90
26	1c	504	CLA	C1-C2-C3	-3.10	120.67	126.04
26	1c	511	CLA	CHB-C1B-NB	-3.10	120.97	124.26
26	1b	610	CLA	CHB-C4A-NA	3.10	128.80	124.51
26	1c	514	CLA	CHC-C1C-C2C	-3.10	118.12	126.73
26	1d	403	CLA	CHC-C1C-C2C	-3.10	118.12	126.73
30	1a	413	PL9	C25-C24-C26	3.10	120.48	115.27
26	1b	603	CLA	C3B-C2B-C1B	-3.10	103.42	107.16
28	1b	619	BCR	C36-C18-C17	-3.10	118.59	122.92
26	1c	502	CLA	C1D-CHD-C4C	-3.09	119.39	126.06
26	1b	610	CLA	O2D-CGD-O1D	-3.09	117.80	123.84
26	1d	407	CLA	C4C-C3C-C2C	-3.09	102.40	106.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
26	1c	514	CLA	CAC-C3C-C4C	3.09	128.81	124.81
26	1d	403	CLA	CHB-C4A-NA	3.08	128.78	124.51
26	1a	406	CLA	CHB-C1B-NB	-3.08	120.99	124.26
26	1a	405	CLA	C1C-C2C-C3C	-3.08	103.72	106.96
26	1a	405	CLA	CHC-C1C-C2C	-3.08	118.18	126.73
26	1b	616	CLA	C4C-C3C-C2C	-3.08	102.41	106.90
26	1c	507	CLA	C4C-C3C-C2C	-3.08	102.41	106.90
26	1b	604	CLA	CHB-C4A-NA	3.07	128.76	124.51
26	1c	503	CLA	CHC-C4B-NB	-3.07	121.00	124.26
26	1b	601	CLA	C4C-C3C-C2C	-3.07	102.42	106.90
26	1c	508	CLA	CMD-C2D-C3D	-3.06	120.57	127.61
26	1c	514	CLA	C4C-C3C-C2C	-3.06	102.44	106.90
28	1h	102	BCR	C19-C18-C17	3.05	123.63	118.94
26	1b	610	CLA	CHB-C1B-NB	-3.05	121.03	124.26
26	1b	615	CLA	C4C-C3C-C2C	-3.05	102.45	106.90
26	1c	511	CLA	C2D-C1D-ND	3.05	112.35	110.10
26	1c	502	CLA	CAC-C3C-C4C	3.05	128.77	124.81
26	1b	610	CLA	CMD-C2D-C3D	-3.05	120.60	127.61
26	1b	602	CLA	CHB-C4A-NA	3.05	128.73	124.51
26	1a	408	CLA	CHB-C4A-NA	3.04	128.72	124.51
26	1b	610	CLA	C2D-C1D-ND	3.04	112.35	110.10
28	1t	101	BCR	C12-C13-C14	3.04	123.61	118.94
26	1c	512	CLA	C2D-C1D-ND	3.04	112.34	110.10
26	1b	601	CLA	CHB-C4A-NA	3.04	128.71	124.51
26	1b	601	CLA	C1D-CHD-C4C	-3.04	119.51	126.06
28	1t	101	BCR	C38-C26-C25	3.03	127.94	124.53
28	1k	102	BCR	C36-C18-C17	-3.03	118.67	122.92
28	1i	101	BCR	C37-C22-C23	3.03	122.85	118.08
26	1b	612	CLA	CHC-C4B-NB	-3.03	121.05	124.26
26	1c	507	CLA	CHC-C4B-NB	-3.03	121.05	124.26
26	1a	408	CLA	C4C-C3C-C2C	-3.03	102.49	106.90
28	1h	102	BCR	C1-C6-C5	-3.02	118.36	122.61
28	1a	409	BCR	C36-C18-C17	-3.02	118.70	122.92
26	1b	605	CLA	CHC-C4B-NB	-3.01	121.07	124.26
26	1d	406	CLA	C4C-C3C-C2C	-3.01	102.50	106.90
26	1a	406	CLA	CHB-C4A-NA	3.01	128.68	124.51
26	1b	602	CLA	C4C-C3C-C2C	-3.01	102.51	106.90
26	1c	509	CLA	C4A-NA-C1A	3.01	108.06	106.71
26	1c	509	CLA	O2D-CGD-O1D	-3.00	117.97	123.84
26	1d	407	CLA	CMD-C2D-C3D	-3.00	120.71	127.61
26	1a	405	CLA	C4D-CHA-C1A	-3.00	117.60	121.25
26	1b	606	CLA	C1D-CHD-C4C	-3.00	119.59	126.06

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
26	1c	506	CLA	CAC-C3C-C4C	3.00	128.70	124.81
26	1c	506	CLA	C4C-C3C-C2C	-3.00	102.53	106.90
26	1b	602	CLA	C4A-NA-C1A	3.00	108.05	106.71
28	1b	618	BCR	C36-C18-C17	-2.99	118.73	122.92
26	1c	504	CLA	CMD-C2D-C3D	-2.99	120.73	127.61
26	1b	608	CLA	C4C-C3C-C2C	-2.99	102.54	106.90
28	1h	102	BCR	C30-C25-C26	-2.99	118.41	122.61
26	1c	508	CLA	C2D-C1D-ND	2.98	112.30	110.10
26	1d	407	CLA	O2A-CGA-CBA	2.98	121.27	111.91
26	1c	514	CLA	C1D-CHD-C4C	-2.98	119.62	126.06
26	1c	512	CLA	C4C-C3C-C2C	-2.98	102.55	106.90
26	1c	514	CLA	CHB-C1B-NB	-2.98	121.11	124.26
26	1c	503	CLA	CMD-C2D-C3D	-2.98	120.77	127.61
26	1b	611	CLA	C1-C2-C3	-2.98	120.90	126.04
26	1c	509	CLA	CHB-C4A-NA	2.98	128.63	124.51
29	1d	405	SQD	O47-C45-C46	-2.97	97.64	108.40
26	1b	615	CLA	C3B-C4B-NB	2.97	113.27	110.52
26	1b	613	CLA	CMB-C2B-C1B	2.97	129.89	125.37
26	1d	407	CLA	C2D-C1D-ND	2.96	112.29	110.10
26	1c	510	CLA	C4C-C3C-C2C	-2.96	102.58	106.90
26	1b	603	CLA	CMD-C2D-C3D	-2.96	120.80	127.61
26	1b	616	CLA	CHB-C4A-NA	2.96	128.60	124.51
26	1b	607	CLA	CHB-C4A-NA	2.96	128.60	124.51
26	1b	609	CLA	O2A-CGA-CBA	2.96	121.19	111.91
26	1d	407	CLA	CHB-C1B-NB	-2.96	121.13	124.26
26	1b	602	CLA	CHB-C1B-NB	-2.96	121.13	124.26
26	1b	612	CLA	O2A-CGA-CBA	2.96	121.18	111.91
26	1c	510	CLA	CHB-C1B-NB	-2.95	121.13	124.26
26	1c	502	CLA	C4C-C3C-C2C	-2.95	102.59	106.90
26	1b	613	CLA	CMD-C2D-C3D	-2.95	120.82	127.61
26	1b	612	CLA	CHC-C1C-C2C	-2.95	118.53	126.73
26	1c	504	CLA	CHB-C1B-NB	-2.95	121.13	124.26
30	1a	413	PL9	C10-C9-C11	2.95	120.23	115.27
30	1a	413	PL9	C17-C18-C19	-2.95	120.56	127.66
26	1b	607	CLA	CHC-C4B-NB	-2.95	121.14	124.26
26	1c	514	CLA	C3B-C4B-NB	2.94	113.25	110.52
26	1d	403	CLA	CMB-C2B-C1B	2.94	129.85	125.37
26	1c	508	CLA	C4C-C3C-C2C	-2.94	102.61	106.90
26	1b	607	CLA	CMD-C2D-C3D	-2.94	120.85	127.61
26	1b	615	CLA	CMD-C2D-C3D	-2.93	120.86	127.61
26	1b	607	CLA	C4C-C3C-C2C	-2.93	102.62	106.90
28	1d	409	BCR	C30-C25-C26	-2.93	118.49	122.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
28	1d	409	BCR	C12-C13-C14	2.93	123.43	118.94
34	1f	101	HEM	C4C-NC-C1C	2.93	108.22	105.35
28	1c	515	BCR	C36-C18-C17	-2.93	118.82	122.92
26	1d	406	CLA	CHB-C4A-NA	2.93	128.56	124.51
26	1c	502	CLA	C3B-C4B-NB	2.92	113.23	110.52
26	1c	511	CLA	CHB-C4A-NA	2.92	128.55	124.51
26	1c	505	CLA	C4C-C3C-C2C	-2.92	102.64	106.90
26	1c	505	CLA	C1D-CHD-C4C	-2.92	119.76	126.06
26	1b	611	CLA	C4D-CHA-C1A	-2.92	117.70	121.25
26	1c	512	CLA	CAC-C3C-C4C	2.91	128.59	124.81
26	1b	614	CLA	C4C-C3C-C2C	-2.91	102.65	106.90
26	1b	611	CLA	O2A-CGA-CBA	2.91	121.05	111.91
26	1c	512	CLA	C4A-NA-C1A	2.91	108.02	106.71
26	1b	612	CLA	C1-C2-C3	-2.91	121.01	126.04
26	1a	406	CLA	O2A-CGA-CBA	2.91	121.04	111.91
34	1f	101	HEM	CHD-C1D-C2D	-2.91	120.43	124.98
26	1b	602	CLA	CAC-C3C-C4C	2.91	128.58	124.81
26	1b	608	CLA	C1-C2-C3	-2.90	121.02	126.04
26	1c	506	CLA	CMB-C2B-C1B	2.90	129.79	125.37
26	1b	601	CLA	C4-C3-C5	2.90	120.15	115.27
26	1c	505	CLA	C4-C3-C5	2.90	120.15	115.27
26	1c	506	CLA	C4-C3-C5	2.89	120.14	115.27
26	1c	505	CLA	CHB-C4A-NA	2.89	128.51	124.51
26	1c	511	CLA	C4C-C3C-C2C	-2.89	102.68	106.90
26	1d	406	CLA	CHC-C1C-C2C	-2.89	118.71	126.73
26	1a	406	CLA	C4C-C3C-C2C	-2.89	102.69	106.90
28	1a	409	BCR	C37-C22-C23	2.88	122.62	118.08
26	1c	502	CLA	CMC-C2C-C1C	2.88	129.43	125.04
26	1c	502	CLA	CHB-C4A-NA	2.88	128.49	124.51
26	1b	607	CLA	C1-C2-C3	-2.88	121.06	126.04
28	1b	618	BCR	C12-C13-C14	2.88	123.36	118.94
28	1d	409	BCR	C8-C9-C10	2.88	123.36	118.94
31	1c	518	DGD	O3G-C3G-C2G	-2.88	103.96	110.90
26	1b	614	CLA	C1-C2-C3	-2.87	121.07	126.04
31	1c	519	DGD	O1G-C1A-C2A	2.87	120.92	111.91
26	1c	514	CLA	CHB-C4A-NA	2.87	128.48	124.51
26	1a	405	CLA	O2A-CGA-CBA	2.87	120.91	111.91
28	1h	102	BCR	C2-C1-C6	2.87	114.90	110.48
26	1b	602	CLA	CHC-C4B-NB	-2.87	121.22	124.26
28	1h	102	BCR	C30-C25-C24	2.87	123.88	115.78
28	1b	617	BCR	C35-C13-C14	-2.86	118.92	122.92
28	1t	101	BCR	C36-C18-C17	-2.86	118.92	122.92

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
28	1c	515	BCR	C35-C13-C14	-2.86	118.92	122.92
26	1d	403	CLA	O2A-CGA-CBA	2.86	120.88	111.91
31	1b	627	DGD	O1G-C1A-C2A	2.86	120.87	111.91
28	1k	102	BCR	C34-C9-C8	2.85	122.57	118.08
26	1c	504	CLA	C2D-C1D-ND	2.85	112.21	110.10
26	1c	514	CLA	CMD-C2D-C3D	-2.85	121.05	127.61
26	1b	605	CLA	O1D-CGD-CBD	-2.85	118.66	124.48
26	1c	507	CLA	C4D-CHA-C1A	-2.85	117.78	121.25
26	1b	614	CLA	C1D-CHD-C4C	-2.85	119.92	126.06
26	1b	612	CLA	CHB-C1B-NB	-2.84	121.25	124.26
28	1c	515	BCR	C34-C9-C8	2.84	122.55	118.08
26	1c	513	CLA	CMC-C2C-C1C	2.84	129.36	125.04
26	1c	506	CLA	C1D-CHD-C4C	-2.84	119.94	126.06
22	1a	414	LHG	C5-O7-C7	-2.84	110.81	117.79
28	1b	619	BCR	C12-C13-C14	2.84	123.29	118.94
26	1a	406	CLA	CMD-C2D-C3D	-2.83	121.09	127.61
26	1b	608	CLA	CHD-C1D-ND	-2.83	121.85	124.45
26	1c	502	CLA	CMD-C2D-C3D	-2.83	121.09	127.61
30	1h	101	PL9	C42-C41-C39	2.83	122.30	112.98
28	1j	101	BCR	C30-C25-C26	-2.83	118.62	122.61
26	1c	508	CLA	CAC-C3C-C4C	2.83	128.48	124.81
26	1a	408	CLA	O2A-CGA-CBA	2.82	120.77	111.91
26	1a	408	CLA	C1-C2-C3	-2.82	121.16	126.04
26	1b	616	CLA	CMD-C2D-C3D	-2.82	121.12	127.61
26	1c	507	CLA	CMD-C2D-C3D	-2.82	121.12	127.61
26	1c	504	CLA	CHB-C4A-NA	2.82	128.41	124.51
26	1c	504	CLA	CMB-C2B-C1B	2.82	129.66	125.37
26	1c	508	CLA	CHC-C4B-NB	-2.82	121.28	124.26
26	1b	601	CLA	CMD-C2D-C3D	-2.81	121.15	127.61
26	1c	511	CLA	C4A-NA-C1A	2.80	107.97	106.71
30	1a	413	PL9	C30-C29-C31	2.80	119.99	115.27
26	1b	611	CLA	CHC-C4B-NB	-2.80	121.29	124.26
26	1b	608	CLA	CAC-C3C-C4C	2.80	128.45	124.81
28	1b	617	BCR	C33-C5-C6	2.80	127.67	124.53
26	1b	612	CLA	CHB-C4A-NA	2.79	128.38	124.51
26	1a	405	CLA	C6-C5-C3	-2.79	110.06	114.62
28	1j	101	BCR	C20-C21-C22	2.78	131.28	127.31
26	1a	406	CLA	CMB-C2B-C1B	2.78	129.61	125.37
26	1c	514	CLA	O2A-CGA-O1A	-2.78	116.57	123.59
26	1b	605	CLA	CED-O2D-CGD	2.78	122.22	115.94
26	1c	504	CLA	C4-C3-C5	2.78	119.95	115.27
26	1b	616	CLA	C2D-C1D-ND	2.78	112.15	110.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	1a	410	SQD	O47-C7-O49	-2.78	116.99	123.70
26	1b	608	CLA	CMD-C2D-C3D	-2.78	121.22	127.61
26	1b	607	CLA	CMB-C2B-C1B	2.77	129.59	125.37
26	1a	406	CLA	C3B-C4B-NB	2.77	113.09	110.52
28	1c	515	BCR	C38-C26-C25	2.77	127.64	124.53
26	1b	601	CLA	CHB-C1B-NB	-2.77	121.32	124.26
26	1d	406	CLA	O2A-CGA-CBA	2.77	120.60	111.91
28	1d	409	BCR	C33-C5-C6	2.77	127.64	124.53
28	1i	101	BCR	C33-C5-C6	2.77	127.64	124.53
26	1b	611	CLA	C4A-NA-C1A	2.76	107.95	106.71
30	1a	413	PL9	C22-C23-C24	-2.76	121.02	127.66
26	1c	503	CLA	C1-C2-C3	-2.76	121.28	126.04
26	1c	503	CLA	C4-C3-C5	2.75	119.90	115.27
26	1b	602	CLA	O2A-CGA-CBA	2.75	120.55	111.91
28	1b	619	BCR	C34-C9-C8	2.75	122.41	118.08
30	1a	413	PL9	C42-C43-C44	-2.74	121.06	127.66
26	1c	513	CLA	CHB-C4A-NA	2.74	128.30	124.51
26	1b	614	CLA	CHB-C1B-NB	-2.74	121.36	124.26
28	1h	102	BCR	C23-C22-C21	2.73	123.13	118.94
26	1b	612	CLA	CMD-C2D-C3D	-2.73	121.34	127.61
26	1b	608	CLA	C4-C3-C5	2.73	119.86	115.27
26	1b	606	CLA	CMA-C3A-C4A	-2.71	104.48	111.77
28	1b	619	BCR	C30-C25-C26	-2.71	118.79	122.61
27	1d	404	PHO	C2B-C1B-NB	-2.71	107.65	109.53
28	1k	102	BCR	C11-C10-C9	2.71	131.18	127.31
31	1c	518	DGD	C2G-O2G-C1B	-2.71	111.12	117.79
28	1b	617	BCR	C16-C15-C14	2.70	129.01	123.47
26	1b	602	CLA	CMD-C2D-C3D	-2.70	121.39	127.61
30	1d	410	PL9	C7-C3-C4	2.70	119.07	116.88
26	1d	406	CLA	C1-C2-C3	-2.70	121.37	126.04
28	1h	102	BCR	C12-C13-C14	2.70	123.09	118.94
26	1b	614	CLA	C4-C3-C5	2.70	119.81	115.27
26	1b	613	CLA	CHD-C1D-ND	-2.70	121.97	124.45
26	1c	502	CLA	C1-C2-C3	-2.70	121.38	126.04
28	1i	101	BCR	C12-C13-C14	2.70	123.08	118.94
28	1d	409	BCR	C19-C18-C17	2.70	123.08	118.94
30	1e	101	PL9	C12-C13-C14	-2.70	121.17	127.66
26	1c	502	CLA	O2A-CGA-CBA	2.69	120.36	111.91
26	1c	513	CLA	O2D-CGD-O1D	-2.69	118.58	123.84
26	1b	608	CLA	O2A-CGA-CBA	2.69	120.35	111.91
30	1e	101	PL9	C53-C6-C1	2.69	120.48	114.99
26	1c	507	CLA	O2A-CGA-CBA	2.68	120.33	111.91

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
26	1c	509	CLA	CHD-C1D-ND	-2.68	121.99	124.45
30	1a	413	PL9	C53-C6-C1	2.68	120.47	114.99
26	1d	407	CLA	CMB-C2B-C1B	2.68	129.45	125.37
26	1b	610	CLA	O2A-CGA-CBA	2.68	120.31	111.91
28	1b	617	BCR	C24-C25-C26	2.68	127.94	121.46
26	1a	408	CLA	C3B-C4B-NB	2.67	113.00	110.52
28	1j	101	BCR	C36-C18-C17	-2.67	119.18	122.92
26	1c	509	CLA	CMB-C2B-C3B	2.67	133.06	126.59
26	1b	605	CLA	O2A-CGA-CBA	2.66	120.26	111.91
26	1a	405	CLA	CHB-C4A-NA	2.66	128.19	124.51
26	1b	601	CLA	C2D-C1D-ND	2.66	112.06	110.10
26	1c	503	CLA	O2D-CGD-O1D	-2.66	118.64	123.84
28	1a	409	BCR	C38-C26-C25	2.65	127.51	124.53
28	1k	102	BCR	C19-C18-C17	2.65	123.01	118.94
28	1b	619	BCR	C24-C23-C22	-2.65	122.23	126.23
26	1a	405	CLA	C4-C3-C5	2.65	119.72	115.27
26	1c	506	CLA	C3D-C2D-C1D	-2.64	102.23	105.83
26	1c	502	CLA	CHB-C1B-NB	-2.64	121.46	124.26
26	1d	407	CLA	C4-C3-C5	2.64	119.71	115.27
31	1b	623	DGD	O1G-C1A-C2A	2.63	120.17	111.91
26	1b	614	CLA	CMC-C2C-C1C	2.63	129.05	125.04
26	1a	408	CLA	O2D-CGD-O1D	-2.63	118.69	123.84
26	1c	513	CLA	O2A-CGA-CBA	2.63	120.17	111.91
26	1c	511	CLA	CMC-C2C-C1C	2.63	129.05	125.04
22	1a	414	LHG	O8-C23-C24	2.63	120.17	111.91
26	1d	406	CLA	CBC-CAC-C3C	-2.63	105.18	112.43
26	1b	604	CLA	C4A-NA-C1A	2.63	107.89	106.71
26	1b	608	CLA	C3D-C2D-C1D	-2.63	102.25	105.83
26	1b	615	CLA	O2D-CGD-O1D	-2.63	118.70	123.84
26	1c	509	CLA	CHB-C1B-NB	-2.63	121.48	124.26
26	1b	613	CLA	C1-C2-C3	-2.63	121.50	126.04
26	1c	504	CLA	CMC-C2C-C1C	2.62	129.03	125.04
30	1a	413	PL9	C12-C13-C14	-2.62	121.36	127.66
28	1a	409	BCR	C33-C5-C6	2.61	127.46	124.53
26	1b	612	CLA	C3D-C2D-C1D	-2.61	102.26	105.83
26	1a	405	CLA	CMD-C2D-C3D	-2.61	121.61	127.61
26	1c	505	CLA	C1-C2-C3	-2.61	121.53	126.04
26	1b	612	CLA	CAA-C2A-C3A	-2.61	105.64	112.78
26	1c	509	CLA	C1-C2-C3	-2.60	121.54	126.04
28	1b	617	BCR	C36-C18-C17	-2.60	119.28	122.92
30	1h	101	PL9	C41-C42-C43	-2.60	103.33	111.88
26	1c	511	CLA	O2A-CGA-CBA	2.60	120.07	111.91

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
26	1c	504	CLA	O2A-CGA-CBA	2.60	120.06	111.91
26	1b	615	CLA	C4-C3-C5	2.60	119.64	115.27
28	1k	102	BCR	C38-C26-C25	2.59	127.44	124.53
26	1c	513	CLA	C4-C3-C5	2.59	119.63	115.27
30	1a	413	PL9	C32-C33-C34	-2.59	121.42	127.66
31	1c	520	DGD	O1G-C1A-C2A	2.59	120.03	111.91
26	1b	605	CLA	CHB-C4A-NA	2.59	128.09	124.51
26	1d	407	CLA	C1-C2-C3	-2.59	121.57	126.04
26	1c	505	CLA	C2A-C1A-CHA	-2.58	119.34	123.86
26	1b	605	CLA	C2A-C1A-CHA	-2.58	119.34	123.86
26	1c	503	CLA	O2A-CGA-CBA	2.58	120.01	111.91
26	1b	612	CLA	O2D-CGD-O1D	-2.58	118.80	123.84
34	1f	101	HEM	CHD-C4C-NC	2.57	127.22	124.44
26	1c	510	CLA	C3B-C4B-NB	2.57	112.90	110.52
26	1c	514	CLA	CAA-C2A-C3A	-2.57	105.73	112.78
28	1c	515	BCR	C16-C15-C14	2.57	128.74	123.47
26	1b	602	CLA	O1D-CGD-CBD	-2.57	119.22	124.48
26	1b	614	CLA	O2A-CGA-CBA	2.57	119.98	111.91
26	1d	403	CLA	C2A-C1A-CHA	-2.57	119.37	123.86
26	1a	406	CLA	CMC-C2C-C1C	2.56	128.94	125.04
26	1b	601	CLA	O2A-CGA-CBA	2.56	119.94	111.91
26	1b	614	CLA	C2A-C1A-CHA	-2.56	119.38	123.86
26	1b	609	CLA	C1-C2-C3	-2.55	121.62	126.04
28	1j	101	BCR	C16-C17-C18	2.55	130.96	127.31
26	1b	610	CLA	C4-C3-C5	2.55	119.57	115.27
26	1b	612	CLA	CMB-C2B-C1B	2.55	129.26	125.37
26	1c	512	CLA	CHC-C4B-NB	-2.55	121.56	124.26
31	1b	623	DGD	C2G-O2G-C1B	-2.55	111.51	117.79
26	1b	603	CLA	CHB-C4A-NA	2.55	128.03	124.51
28	1k	102	BCR	C35-C13-C14	-2.54	119.36	122.92
26	1a	408	CLA	CHB-C1B-NB	-2.54	121.56	124.26
26	1b	612	CLA	C2D-C1D-ND	2.54	111.98	110.10
26	1b	609	CLA	C4-C3-C5	2.54	119.55	115.27
26	1b	616	CLA	O2D-CGD-O1D	-2.54	118.87	123.84
26	1c	514	CLA	CMC-C2C-C1C	2.54	128.91	125.04
26	1b	607	CLA	CHB-C1B-NB	-2.54	121.57	124.26
28	1d	409	BCR	C29-C30-C25	2.54	114.39	110.48
26	1c	509	CLA	C4-C3-C5	2.54	119.54	115.27
26	1b	601	CLA	C1-C2-C3	-2.54	121.66	126.04
26	1c	505	CLA	CMC-C2C-C1C	2.53	128.90	125.04
26	1c	514	CLA	CMB-C2B-C1B	2.53	129.23	125.37
31	1c	518	DGD	O6D-C5D-C6D	2.53	111.78	106.67

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
30	1a	413	PL9	C40-C39-C41	2.53	119.52	115.27
30	1e	101	PL9	C10-C9-C11	2.53	119.52	115.27
26	1b	616	CLA	CHC-C4B-NB	-2.53	121.58	124.26
28	1b	619	BCR	C15-C16-C17	2.53	128.65	123.47
26	1a	408	CLA	CMB-C2B-C1B	2.52	129.21	125.37
26	1c	503	CLA	C2D-C1D-ND	2.52	111.96	110.10
26	1b	608	CLA	CHB-C4A-NA	2.52	128.00	124.51
26	1b	608	CLA	CMC-C2C-C1C	2.52	128.87	125.04
26	1a	406	CLA	O2D-CGD-O1D	-2.52	118.92	123.84
29	1b	622	SQD	O6-C44-C45	2.52	116.97	110.90
26	1d	403	CLA	CBC-CAC-C3C	-2.52	105.50	112.43
26	1c	508	CLA	O2A-CGA-CBA	2.51	119.80	111.91
28	1i	101	BCR	C34-C9-C8	2.51	122.04	118.08
28	1i	101	BCR	C36-C18-C17	-2.51	119.41	122.92
26	1c	502	CLA	O2D-CGD-O1D	-2.51	118.94	123.84
26	1b	613	CLA	O2A-CGA-CBA	2.51	119.78	111.91
30	1e	101	PL9	C7-C3-C4	2.51	118.91	116.88
26	1c	507	CLA	C2D-C1D-ND	2.50	111.95	110.10
30	1e	101	PL9	C7-C3-C2	-2.50	120.01	123.30
26	1c	512	CLA	CMC-C2C-C1C	2.50	128.85	125.04
26	1b	607	CLA	O2A-CGA-CBA	2.50	119.75	111.91
28	1b	618	BCR	C24-C25-C26	2.50	127.51	121.46
29	1b	620	SQD	O8-S-C6	-2.49	101.77	105.74
26	1b	615	CLA	CMC-C2C-C1C	2.49	128.83	125.04
26	1d	407	CLA	CMC-C2C-C1C	2.49	128.83	125.04
28	1d	409	BCR	C2-C1-C6	2.49	114.31	110.48
26	1b	609	CLA	CMD-C2D-C3D	-2.49	121.89	127.61
28	1b	619	BCR	C19-C18-C17	2.49	122.76	118.94
26	1d	403	CLA	C4-C3-C5	2.49	119.45	115.27
26	1b	610	CLA	CAC-C3C-C4C	2.48	128.03	124.81
26	1b	604	CLA	CBA-CAA-C2A	-2.48	107.95	113.47
26	1c	513	CLA	C4C-C3C-C2C	-2.48	103.29	106.90
29	1a	412	SQD	O8-S-C6	-2.48	101.80	105.74
26	1c	504	CLA	C4A-NA-C1A	2.47	107.82	106.71
28	1d	409	BCR	C24-C25-C26	2.46	127.42	121.46
26	1b	613	CLA	CAC-C3C-C4C	2.46	128.00	124.81
26	1c	506	CLA	C1-C2-C3	-2.45	121.80	126.04
28	1j	101	BCR	C29-C30-C25	2.45	114.25	110.48
26	1b	611	CLA	CHB-C4A-NA	2.45	127.90	124.51
26	1b	602	CLA	CMC-C2C-C1C	2.45	128.76	125.04
26	1a	408	CLA	C4-C3-C5	2.44	119.38	115.27
26	1c	505	CLA	O2A-CGA-CBA	2.44	119.56	111.91

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
28	1c	515	BCR	C2-C1-C6	2.44	114.23	110.48
26	1b	601	CLA	O2D-CGD-O1D	-2.43	119.08	123.84
28	1t	101	BCR	C24-C25-C26	2.43	127.36	121.46
26	1d	406	CLA	C4-C3-C5	2.43	119.36	115.27
26	1c	506	CLA	O2D-CGD-O1D	-2.43	119.09	123.84
28	1b	619	BCR	C29-C30-C25	2.43	114.22	110.48
28	1b	617	BCR	C37-C22-C23	2.43	121.90	118.08
26	1d	406	CLA	O2D-CGD-O1D	-2.43	119.09	123.84
26	1c	506	CLA	CHB-C1B-NB	-2.42	121.69	124.26
26	1c	509	CLA	O2A-CGA-CBA	2.42	119.51	111.91
26	1c	510	CLA	CED-O2D-CGD	2.42	121.41	115.94
26	1b	612	CLA	C4D-C3D-CAD	2.42	110.94	108.10
28	1t	101	BCR	C2-C1-C6	2.42	114.20	110.48
28	1c	515	BCR	C33-C5-C6	2.42	127.24	124.53
26	1c	502	CLA	C2A-C1A-CHA	-2.41	119.64	123.86
28	1b	619	BCR	C33-C5-C6	2.41	127.24	124.53
26	1c	508	CLA	C4A-NA-C1A	2.41	107.79	106.71
26	1b	605	CLA	C4-C3-C5	2.41	119.33	115.27
26	1c	505	CLA	CHB-C1B-NB	-2.41	121.71	124.26
28	1a	409	BCR	C16-C15-C14	2.41	128.41	123.47
26	1b	614	CLA	C2D-C1D-ND	2.40	111.87	110.10
28	1a	409	BCR	C12-C13-C14	2.39	122.61	118.94
26	1b	606	CLA	C2A-C1A-CHA	-2.39	119.69	123.86
26	1c	507	CLA	CHB-C4A-NA	2.39	127.81	124.51
28	1a	409	BCR	C24-C23-C22	2.38	129.83	126.23
29	1b	621	SQD	O8-S-C6	-2.38	101.95	105.74
26	1d	406	CLA	CHB-C1B-NB	-2.38	121.74	124.26
28	1b	617	BCR	C34-C9-C8	2.38	121.82	118.08
26	1b	611	CLA	CMD-C2D-C3D	-2.37	122.16	127.61
26	1b	613	CLA	CHC-C1C-NC	2.37	127.80	124.20
28	1t	101	BCR	C37-C22-C23	2.37	121.81	118.08
28	1k	102	BCR	C33-C5-C6	2.37	127.18	124.53
26	1b	610	CLA	C4A-NA-C1A	2.36	107.77	106.71
26	1c	510	CLA	CMC-C2C-C1C	2.36	128.63	125.04
28	1c	515	BCR	C19-C18-C17	2.36	122.56	118.94
26	1b	606	CLA	CMB-C2B-C1B	2.36	128.96	125.37
26	1b	613	CLA	C3B-C4B-NB	2.35	112.70	110.52
26	1c	505	CLA	O2D-CGD-O1D	-2.35	119.24	123.84
26	1d	406	CLA	C3B-C4B-NB	2.35	112.69	110.52
28	1c	515	BCR	C24-C23-C22	-2.35	122.69	126.23
28	1k	102	BCR	C24-C25-C26	2.34	127.13	121.46
26	1b	612	CLA	C2A-C1A-CHA	-2.34	119.77	123.86

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
26	1c	507	CLA	CED-O2D-CGD	2.34	121.23	115.94
26	1c	506	CLA	CMC-C2C-C1C	2.34	128.60	125.04
26	1b	612	CLA	CAA-CBA-CGA	-2.33	106.43	113.25
26	1b	606	CLA	O2D-CGD-O1D	-2.33	119.28	123.84
28	1b	618	BCR	C19-C18-C17	2.33	122.52	118.94
28	1a	409	BCR	C19-C18-C17	2.33	122.51	118.94
26	1c	508	CLA	O2D-CGD-O1D	-2.32	119.29	123.84
26	1b	610	CLA	O1D-CGD-CBD	-2.32	119.73	124.48
26	1a	406	CLA	CAC-C3C-C4C	2.32	127.82	124.81
26	1d	403	CLA	C1-C2-C3	-2.32	122.03	126.04
26	1d	406	CLA	C2D-C1D-ND	2.32	111.81	110.10
29	1c	516	SQD	O47-C45-C44	-2.32	100.01	108.40
26	1b	607	CLA	C4A-NA-C1A	2.32	107.75	106.71
28	1i	101	BCR	C38-C26-C25	2.31	127.12	124.53
29	1d	411	SQD	O8-S-C6	-2.31	102.07	105.74
26	1a	406	CLA	C5-C3-C4	2.31	119.69	114.60
28	1c	515	BCR	C24-C25-C26	2.30	127.04	121.46
26	1c	512	CLA	CMB-C2B-C1B	2.30	128.88	125.37
28	1b	618	BCR	C34-C9-C8	2.30	121.70	118.08
29	1a	410	SQD	O8-S-C6	-2.29	102.09	105.74
28	1d	409	BCR	C1-C6-C5	-2.29	119.39	122.61
26	1d	407	CLA	C4A-NA-C1A	2.28	107.73	106.71
26	1b	614	CLA	O2D-CGD-O1D	-2.28	119.38	123.84
26	1d	406	CLA	C2A-C1A-CHA	-2.28	119.87	123.86
26	1b	604	CLA	C2A-C1A-CHA	-2.28	119.88	123.86
28	1b	618	BCR	C15-C16-C17	2.28	128.14	123.47
28	1j	101	BCR	C33-C5-C6	2.28	127.08	124.53
26	1c	502	CLA	CMB-C2B-C1B	2.27	128.83	125.37
30	1a	413	PL9	C27-C28-C29	-2.27	122.20	127.66
29	1b	622	SQD	O8-S-C6	-2.26	102.13	105.74
26	1c	508	CLA	CMC-C2C-C1C	2.26	128.48	125.04
26	1b	609	CLA	CMC-C2C-C1C	2.26	128.48	125.04
26	1b	602	CLA	O2D-CGD-O1D	-2.26	119.43	123.84
26	1b	605	CLA	CMC-C2C-C1C	2.25	128.47	125.04
26	1a	405	CLA	CHB-C1B-NB	-2.25	121.87	124.26
26	1b	606	CLA	C2D-C1D-ND	2.25	111.77	110.10
28	1b	618	BCR	C7-C6-C5	2.25	126.92	121.46
29	1d	405	SQD	O8-S-C6	-2.25	102.15	105.74
26	1b	610	CLA	CMB-C2B-C3B	2.25	132.04	126.59
26	1c	513	CLA	CMD-C2D-C3D	-2.25	122.45	127.61
26	1a	405	CLA	C3B-C4B-NB	2.24	112.60	110.52
26	1b	606	CLA	O2A-CGA-O1A	-2.24	117.94	123.59

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	1c	519	DGD	C2G-O2G-C1B	-2.24	112.28	117.79
26	1b	616	CLA	C2A-C1A-CHA	-2.24	119.95	123.86
26	1b	607	CLA	C2D-C1D-ND	2.23	111.75	110.10
26	1b	607	CLA	C4-C3-C5	2.23	119.01	115.27
26	1b	614	CLA	CMB-C2B-C3B	2.22	131.98	126.59
31	1c	518	DGD	O1G-C1A-O1A	-2.22	117.98	123.59
27	1d	404	PHO	CMB-C2B-C3B	2.22	128.84	124.68
29	1l	101	SQD	O8-S-C6	-2.22	102.20	105.74
26	1c	507	CLA	O2D-CGD-O1D	-2.22	119.50	123.84
26	1c	512	CLA	CED-O2D-CGD	2.22	120.96	115.94
26	1a	406	CLA	C2A-C1A-CHA	-2.22	119.98	123.86
29	1c	516	SQD	O47-C7-O49	-2.22	118.34	123.70
26	1b	605	CLA	C4C-C3C-C2C	-2.22	103.67	106.90
28	1c	515	BCR	C12-C13-C14	2.21	122.34	118.94
34	1f	101	HEM	C4D-ND-C1D	2.21	107.36	105.07
26	1c	506	CLA	C4D-C3D-CAD	2.21	110.70	108.10
26	1a	405	CLA	O2A-C1-C2	2.20	114.43	108.64
26	1b	608	CLA	C2A-C1A-CHA	-2.19	120.03	123.86
26	1b	611	CLA	CMB-C2B-C1B	2.19	128.70	125.37
31	1c	519	DGD	O2G-C1B-O1B	-2.18	118.42	123.70
28	1j	101	BCR	C24-C25-C26	-2.18	116.17	121.46
26	1d	406	CLA	CMB-C2B-C1B	2.18	128.69	125.37
26	1b	603	CLA	O2A-CGA-O1A	-2.18	118.09	123.59
30	1a	413	PL9	C35-C34-C33	-2.18	118.09	123.68
28	1b	617	BCR	C30-C25-C24	-2.18	109.61	115.78
26	1b	607	CLA	C2A-C1A-CHA	-2.18	120.05	123.86
26	1c	514	CLA	O2D-CGD-O1D	-2.18	119.58	123.84
26	1c	503	CLA	C6-C5-C3	-2.18	107.75	113.45
30	1h	101	PL9	C7-C3-C2	-2.17	120.44	123.30
26	1c	514	CLA	C2A-C1A-CHA	-2.17	120.06	123.86
26	1c	504	CLA	O2D-CGD-O1D	-2.17	119.59	123.84
26	1c	506	CLA	O2A-CGA-CBA	2.17	118.71	111.91
27	1a	407	PHO	CMB-C2B-C3B	2.17	128.73	124.68
26	1c	506	CLA	C3B-C4B-NB	2.17	112.52	110.52
27	1a	407	PHO	C1C-C2C-C3C	-2.16	106.81	108.61
27	1d	404	PHO	C1C-C2C-C3C	-2.16	106.81	108.61
26	1d	403	CLA	CHD-C4C-NC	2.16	127.61	124.20
26	1b	612	CLA	C4-C3-C2	-2.16	118.14	123.68
26	1c	511	CLA	O2D-CGD-O1D	-2.16	119.62	123.84
26	1b	606	CLA	C5-C3-C4	2.15	119.36	114.60
26	1c	504	CLA	C11-C12-C13	-2.15	108.96	115.92
26	1a	408	CLA	CMD-C2D-C3D	-2.15	122.67	127.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
30	1a	413	PL9	C51-C49-C50	2.15	119.35	114.60
26	1b	602	CLA	C4D-CHA-C1A	-2.15	118.64	121.25
26	1b	603	CLA	CHB-C1B-C2B	-2.14	121.18	127.24
31	1c	518	DGD	C3G-C2G-C1G	-2.14	106.73	111.79
29	1a	411	SQD	O8-S-C6	-2.14	102.33	105.74
28	1k	102	BCR	C15-C14-C13	2.14	130.36	127.31
28	1b	618	BCR	C37-C22-C23	2.14	121.44	118.08
28	1b	617	BCR	C12-C13-C14	2.13	122.22	118.94
26	1b	604	CLA	CAA-C2A-C3A	-2.13	108.93	114.26
26	1c	505	CLA	CMD-C2D-C3D	-2.13	122.71	127.61
26	1b	608	CLA	O2A-CGA-O1A	-2.13	118.21	123.59
26	1c	513	CLA	CMB-C2B-C1B	2.13	128.61	125.37
26	1b	607	CLA	CBC-CAC-C3C	-2.12	106.59	112.43
28	1c	515	BCR	C23-C22-C21	2.12	122.19	118.94
26	1c	507	CLA	CHB-C1B-C2B	-2.12	121.26	127.24
29	1c	516	SQD	O8-S-C6	-2.12	102.37	105.74
28	1b	619	BCR	C24-C25-C26	-2.11	116.34	121.46
34	1f	101	HEM	C4C-CHD-C1D	-2.11	121.50	126.06
27	1a	407	PHO	CAA-C2A-C3A	-2.11	111.17	116.10
26	1b	613	CLA	O2D-CGD-O1D	-2.11	119.71	123.84
22	1b	624	LHG	O7-C7-O9	-2.11	118.61	123.70
28	1a	409	BCR	C7-C6-C5	2.11	126.56	121.46
29	1b	621	SQD	O47-C7-O49	-2.10	118.61	123.70
31	1c	520	DGD	C2G-O2G-C1B	-2.10	112.61	117.79
26	1b	615	CLA	O2A-CGA-CBA	2.10	118.50	111.91
26	1b	613	CLA	C4D-C3D-CAD	2.10	110.57	108.10
26	1b	611	CLA	C4-C3-C5	2.09	118.80	115.27
28	1b	618	BCR	C2-C1-C6	2.09	113.70	110.48
26	1a	408	CLA	C2A-C1A-CHA	-2.09	120.21	123.86
28	1i	101	BCR	C7-C8-C9	2.09	129.39	126.23
26	1c	512	CLA	CAA-C2A-C1A	2.09	118.81	111.97
26	1b	602	CLA	C2A-C1A-CHA	-2.08	120.21	123.86
28	1c	515	BCR	C11-C10-C9	2.08	130.28	127.31
34	1f	101	HEM	C1A-CHA-C4D	-2.08	121.40	126.34
26	1b	607	CLA	C6-C5-C3	-2.08	108.00	113.45
26	1b	611	CLA	O2A-CGA-O1A	-2.08	118.34	123.59
26	1a	406	CLA	O1D-CGD-CBD	-2.08	120.23	124.48
26	1d	406	CLA	C4D-C3D-CAD	2.08	110.54	108.10
26	1b	611	CLA	CMC-C2C-C1C	2.07	128.20	125.04
26	1b	608	CLA	CHB-C1B-C2B	-2.07	121.38	127.24
26	1b	609	CLA	CED-O2D-CGD	2.07	120.62	115.94
28	1t	101	BCR	C2-C3-C4	-2.06	106.78	111.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	1d	411	SQD	O7-S-C6	-2.05	104.50	106.94
31	1c	519	DGD	O1G-C1A-O1A	-2.05	118.42	123.59
26	1d	407	CLA	O2D-CGD-O1D	-2.05	119.83	123.84
28	1d	409	BCR	C27-C26-C25	-2.05	119.76	122.73
26	1b	612	CLA	C4A-NA-C1A	2.05	107.63	106.71
26	1c	509	CLA	O1D-CGD-CBD	-2.05	120.30	124.48
26	1c	508	CLA	C1-C2-C3	-2.04	122.51	126.04
26	1a	405	CLA	C2A-C1A-CHA	-2.04	120.29	123.86
28	1h	102	BCR	C7-C6-C5	-2.04	116.53	121.46
26	1a	405	CLA	CMB-C2B-C1B	2.04	128.47	125.37
26	1d	403	CLA	CED-O2D-CGD	2.04	120.54	115.94
26	1c	509	CLA	O2A-CGA-O1A	-2.04	118.45	123.59
26	1c	508	CLA	C1-O2A-CGA	2.02	121.75	116.44
26	1c	510	CLA	O2D-CGD-O1D	-2.02	119.89	123.84
26	1b	604	CLA	C4D-C3D-CAD	2.02	110.48	108.10
26	1c	509	CLA	C6-C5-C3	-2.02	108.16	113.45
26	1a	405	CLA	C1-C2-C3	-2.02	122.55	126.04
26	1c	506	CLA	CHB-C1B-C2B	-2.02	121.53	127.24
26	1c	513	CLA	O1D-CGD-CBD	-2.02	120.36	124.48
28	1c	515	BCR	C1-C6-C5	-2.01	119.79	122.61
27	1d	404	PHO	CMA-C3A-C4A	-2.01	109.98	114.38
26	1b	607	CLA	O2D-CGD-O1D	-2.00	119.92	123.84

All (27) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
26	1a	408	CLA	C8
26	1b	601	CLA	C8
26	1b	602	CLA	C8
26	1b	603	CLA	C8
26	1b	605	CLA	C8
26	1b	607	CLA	C8
26	1b	608	CLA	C8
26	1b	609	CLA	C8
26	1b	610	CLA	C8
26	1b	611	CLA	C8
26	1b	612	CLA	C8
26	1b	613	CLA	C8
26	1b	614	CLA	C8
26	1b	615	CLA	C8
26	1c	502	CLA	C8
26	1c	503	CLA	C8

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Mol	Chain	Res	Type	Atom
26	1c	504	CLA	C8
26	1c	505	CLA	C8
26	1c	507	CLA	C8
26	1c	508	CLA	C8
26	1c	509	CLA	C8
26	1c	511	CLA	C8
26	1c	513	CLA	C8
26	1c	514	CLA	C8
26	1d	403	CLA	C8
26	1d	406	CLA	C8
26	1d	407	CLA	C8

All (652) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
22	1a	414	LHG	C1-C2-C3-O3
22	1a	414	LHG	C4-O6-P-O3
22	1a	414	LHG	C4-O6-P-O4
22	1a	414	LHG	C4-O6-P-O5
22	1a	414	LHG	O9-C7-O7-C5
22	1a	414	LHG	C8-C7-O7-C5
22	1b	624	LHG	O9-C7-O7-C5
22	1b	624	LHG	C8-C7-O7-C5
22	1b	626	LHG	C4-O6-P-O3
22	1b	626	LHG	C5-C4-O6-P
22	1c	522	LHG	C4-O6-P-O5
22	1c	522	LHG	C5-C4-O6-P
22	1d	401	LHG	C3-O3-P-O5
22	1d	402	LHG	C3-O3-P-O5
22	1j	102	LHG	O9-C7-O7-C5
22	1j	102	LHG	C8-C7-O7-C5
22	1v	201	LHG	C4-O6-P-O3
22	1v	201	LHG	C4-O6-P-O4
22	1v	201	LHG	C4-O6-P-O5
22	1w	102	LHG	C4-O6-P-O3
22	1w	102	LHG	O10-C23-O8-C6
22	1w	102	LHG	C24-C23-O8-C6
22	1w	103	LHG	C3-O3-P-O5
22	1w	104	LHG	C2-C3-O3-P
26	1a	405	CLA	CBD-CGD-O2D-CED
26	1a	406	CLA	CHA-CBD-CGD-O1D
26	1a	406	CLA	CHA-CBD-CGD-O2D

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Mol	Chain	Res	Type	Atoms
26	1b	602	CLA	C2-C3-C5-C6
26	1b	602	CLA	C4-C3-C5-C6
26	1b	605	CLA	C1A-C2A-CAA-CBA
26	1b	605	CLA	CBD-CGD-O2D-CED
26	1b	610	CLA	C6-C7-C8-C9
26	1b	611	CLA	CBD-CGD-O2D-CED
26	1b	612	CLA	C1A-C2A-CAA-CBA
26	1b	612	CLA	CHA-CBD-CGD-O1D
26	1b	612	CLA	CHA-CBD-CGD-O2D
26	1b	612	CLA	CAD-CBD-CGD-O1D
26	1b	613	CLA	C2-C3-C5-C6
26	1b	613	CLA	C4-C3-C5-C6
26	1b	614	CLA	C2-C3-C5-C6
26	1b	614	CLA	C4-C3-C5-C6
26	1b	616	CLA	C4B-C3B-CAB-CBB
26	1b	616	CLA	CHA-CBD-CGD-O1D
26	1b	616	CLA	CHA-CBD-CGD-O2D
26	1c	504	CLA	C2-C3-C5-C6
26	1c	504	CLA	C4-C3-C5-C6
26	1c	505	CLA	C4-C3-C5-C6
26	1c	506	CLA	CHA-CBD-CGD-O1D
26	1c	506	CLA	CHA-CBD-CGD-O2D
26	1c	506	CLA	CAD-CBD-CGD-O1D
26	1c	506	CLA	C3-C5-C6-C7
26	1c	508	CLA	C2-C3-C5-C6
26	1c	508	CLA	C4-C3-C5-C6
26	1c	510	CLA	CAD-CBD-CGD-O1D
26	1c	510	CLA	CBD-CGD-O2D-CED
26	1c	514	CLA	C1A-C2A-CAA-CBA
26	1d	403	CLA	C1A-C2A-CAA-CBA
26	1d	403	CLA	CHA-CBD-CGD-O1D
26	1d	403	CLA	CHA-CBD-CGD-O2D
28	1d	409	BCR	C23-C24-C25-C26
28	1d	409	BCR	C23-C24-C25-C30
28	1k	102	BCR	C17-C18-C19-C20
28	1k	102	BCR	C36-C18-C19-C20
29	1a	410	SQD	O49-C7-O47-C45
29	1a	410	SQD	C8-C7-O47-C45
29	1a	411	SQD	O5-C1-O6-C44
29	1b	620	SQD	C2-C1-O6-C44
29	1b	620	SQD	O5-C1-O6-C44
29	1b	620	SQD	O10-C23-O48-C46

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Mol	Chain	Res	Type	Atoms
29	1b	620	SQD	C24-C23-O48-C46
29	1b	621	SQD	O49-C7-O47-C45
29	1b	621	SQD	C8-C7-O47-C45
29	1b	622	SQD	O5-C1-O6-C44
29	1b	622	SQD	O10-C23-O48-C46
29	1b	622	SQD	C24-C23-O48-C46
29	1c	516	SQD	O49-C7-O47-C45
29	1c	516	SQD	C8-C7-O47-C45
29	1d	405	SQD	C45-C44-O6-C1
29	1d	405	SQD	O10-C23-O48-C46
29	1d	405	SQD	C24-C23-O48-C46
29	1l	101	SQD	C2-C1-O6-C44
29	1l	101	SQD	O5-C1-O6-C44
29	1l	101	SQD	O49-C7-O47-C45
29	1l	101	SQD	C8-C7-O47-C45
29	1w	101	SQD	O10-C23-O48-C46
29	1w	101	SQD	C24-C23-O48-C46
30	1a	413	PL9	C9-C11-C12-C13
30	1a	413	PL9	C20-C19-C21-C22
30	1a	413	PL9	C24-C26-C27-C28
30	1a	413	PL9	C29-C31-C32-C33
30	1a	413	PL9	C44-C46-C47-C48
30	1h	101	PL9	C35-C34-C36-C37
30	1h	101	PL9	C40-C39-C41-C42
30	1h	101	PL9	C43-C44-C46-C47
30	1h	101	PL9	C45-C44-C46-C47
34	1f	101	HEM	C2B-C3B-CAB-CBB
34	1f	101	HEM	C4B-C3B-CAB-CBB
34	1f	101	HEM	C2C-C3C-CAC-CBC
34	1f	101	HEM	C4C-C3C-CAC-CBC
35	1k	101	MGE	C2A-C1A-O1G-C1G
35	1k	101	MGE	O1A-C1A-O1G-C1G
35	1k	101	MGE	O6D-C1D-O3G-C3G
26	1a	405	CLA	O1D-CGD-O2D-CED
26	1b	611	CLA	O1D-CGD-O2D-CED
26	1b	613	CLA	O1D-CGD-O2D-CED
26	1c	510	CLA	O1D-CGD-O2D-CED
26	1b	613	CLA	CBD-CGD-O2D-CED
26	1c	508	CLA	CBD-CGD-O2D-CED
26	1b	612	CLA	O1A-CGA-O2A-C1
26	1b	605	CLA	O1D-CGD-O2D-CED
26	1b	612	CLA	CBA-CGA-O2A-C1

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Mol	Chain	Res	Type	Atoms
26	1b	609	CLA	CBD-CGD-O2D-CED
26	1c	507	CLA	CBD-CGD-O2D-CED
26	1c	506	CLA	O1A-CGA-O2A-C1
26	1c	503	CLA	CBD-CGD-O2D-CED
26	1c	504	CLA	CBD-CGD-O2D-CED
26	1b	605	CLA	C3-C5-C6-C7
26	1b	611	CLA	C3-C5-C6-C7
26	1b	614	CLA	C3-C5-C6-C7
26	1c	503	CLA	C3-C5-C6-C7
26	1c	508	CLA	C3-C5-C6-C7
26	1d	406	CLA	C3-C5-C6-C7
26	1a	405	CLA	C3-C5-C6-C7
26	1c	505	CLA	C2-C3-C5-C6
30	1a	413	PL9	C18-C19-C21-C22
30	1h	101	PL9	C33-C34-C36-C37
30	1h	101	PL9	C38-C39-C41-C42
26	1b	606	CLA	C2A-CAA-CBA-CGA
26	1b	607	CLA	C3-C5-C6-C7
26	1c	511	CLA	C3-C5-C6-C7
26	1b	614	CLA	CBA-CGA-O2A-C1
26	1c	506	CLA	CBA-CGA-O2A-C1
28	1k	102	BCR	C19-C20-C21-C22
26	1b	601	CLA	C3-C5-C6-C7
26	1c	502	CLA	C3-C5-C6-C7
26	1b	602	CLA	CBD-CGD-O2D-CED
26	1b	614	CLA	CBD-CGD-O2D-CED
26	1b	612	CLA	C3-C5-C6-C7
26	1b	614	CLA	O1A-CGA-O2A-C1
26	1b	603	CLA	C4-C3-C5-C6
26	1b	612	CLA	C4-C3-C5-C6
26	1b	603	CLA	C2-C3-C5-C6
26	1b	612	CLA	C2-C3-C5-C6
30	1a	413	PL9	C19-C21-C22-C23
30	1h	101	PL9	C24-C26-C27-C28
26	1c	508	CLA	O1D-CGD-O2D-CED
26	1b	615	CLA	CBD-CGD-O2D-CED
22	1a	414	LHG	C27-C28-C29-C30
22	1a	414	LHG	C10-C11-C12-C13
26	1b	610	CLA	C13-C15-C16-C17
22	1a	414	LHG	O2-C2-C3-O3
29	1b	622	SQD	C2-C1-O6-C44
26	1d	407	CLA	CBD-CGD-O2D-CED

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Mol	Chain	Res	Type	Atoms
28	1b	619	BCR	C37-C22-C23-C24
28	1h	102	BCR	C7-C8-C9-C34
28	1h	102	BCR	C7-C8-C9-C10
31	1c	518	DGD	C2B-C1B-O2G-C2G
26	1b	608	CLA	C5-C6-C7-C8
26	1b	614	CLA	C8-C10-C11-C12
26	1b	615	CLA	C10-C11-C12-C13
31	1c	518	DGD	C1B-C2B-C3B-C4B
26	1b	607	CLA	CBD-CGD-O2D-CED
26	1b	610	CLA	CBD-CGD-O2D-CED
26	1b	610	CLA	C8-C10-C11-C12
26	1b	609	CLA	O1D-CGD-O2D-CED
26	1c	507	CLA	O1D-CGD-O2D-CED
22	1e	102	LHG	C23-C24-C25-C26
22	1w	102	LHG	C7-C8-C9-C10
26	1b	610	CLA	C6-C7-C8-C10
26	1b	612	CLA	C2A-CAA-CBA-CGA
26	1c	502	CLA	C2A-CAA-CBA-CGA
26	1c	514	CLA	C2A-CAA-CBA-CGA
26	1c	513	CLA	C10-C11-C12-C13
31	1c	519	DGD	O6E-C1E-O5D-C6D
30	1a	413	PL9	C14-C16-C17-C18
26	1d	407	CLA	C3-C5-C6-C7
26	1b	612	CLA	C5-C6-C7-C8
26	1c	504	CLA	C13-C15-C16-C17
22	1a	414	LHG	C24-C23-O8-C6
26	1d	407	CLA	C5-C6-C7-C8
22	1d	401	LHG	C3-O3-P-O6
22	1w	104	LHG	C3-O3-P-O6
26	1c	507	CLA	C3-C5-C6-C7
26	1b	607	CLA	CBA-CGA-O2A-C1
26	1b	610	CLA	C15-C16-C17-C18
26	1c	503	CLA	O1D-CGD-O2D-CED
26	1c	504	CLA	O1D-CGD-O2D-CED
31	1c	518	DGD	O1B-C1B-O2G-C2G
30	1e	101	PL9	C12-C11-C9-C10
26	1b	614	CLA	C2A-CAA-CBA-CGA
26	1b	602	CLA	CBA-CGA-O2A-C1
26	1d	407	CLA	CBA-CGA-O2A-C1
29	1b	622	SQD	C29-C30-C31-C32
26	1c	507	CLA	C5-C6-C7-C8
26	1d	403	CLA	C5-C6-C7-C8

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Mol	Chain	Res	Type	Atoms
22	1c	522	LHG	C11-C12-C13-C14
22	1j	102	LHG	C10-C11-C12-C13
31	1b	623	DGD	C2A-C3A-C4A-C5A
35	1k	101	MGE	C3B-C4B-C5B-C6B
29	1a	412	SQD	C13-C14-C15-C16
22	1a	414	LHG	C11-C12-C13-C14
26	1c	514	CLA	C3-C5-C6-C7
31	1c	519	DGD	C2E-C1E-O5D-C6D
26	1c	502	CLA	C5-C6-C7-C8
26	1d	407	CLA	O1A-CGA-O2A-C1
26	1c	511	CLA	C4-C3-C5-C6
26	1c	511	CLA	C2-C3-C5-C6
30	1e	101	PL9	C12-C11-C9-C8
26	1b	614	CLA	C11-C12-C13-C14
22	1v	201	LHG	C7-C8-C9-C10
32	1c	523	LNL	C1-C2-C3-C4
22	1d	401	LHG	C10-C11-C12-C13
26	1c	507	CLA	C2A-CAA-CBA-CGA
22	1b	628	LHG	C11-C10-C9-C8
22	1a	414	LHG	O1-C1-C2-C3
29	1a	411	SQD	C24-C25-C26-C27
31	1b	627	DGD	CAB-CBB-CCB-CDB
31	1c	519	DGD	C4B-C5B-C6B-C7B
26	1b	611	CLA	C4B-C3B-CAB-CBB
26	1c	508	CLA	C4B-C3B-CAB-CBB
29	1b	622	SQD	C24-C25-C26-C27
26	1b	602	CLA	O1A-CGA-O2A-C1
26	1b	607	CLA	O1A-CGA-O2A-C1
22	1a	414	LHG	C24-C25-C26-C27
22	1a	414	LHG	C11-C10-C9-C8
26	1b	616	CLA	C3A-C2A-CAA-CBA
22	1a	414	LHG	O10-C23-O8-C6
26	1c	512	CLA	CBD-CGD-O2D-CED
29	1b	621	SQD	C26-C27-C28-C29
30	1a	413	PL9	C12-C11-C9-C10
26	1c	507	CLA	C2-C3-C5-C6
26	1b	611	CLA	C2B-C3B-CAB-CBB
26	1b	616	CLA	C2B-C3B-CAB-CBB
26	1c	508	CLA	C2B-C3B-CAB-CBB
26	1c	513	CLA	C2B-C3B-CAB-CBB
26	1b	612	CLA	C2-C1-O2A-CGA
22	1a	414	LHG	C28-C29-C30-C31

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Mol	Chain	Res	Type	Atoms
28	1b	617	BCR	C23-C24-C25-C26
28	1b	618	BCR	C1-C6-C7-C8
28	1b	618	BCR	C5-C6-C7-C8
28	1b	618	BCR	C23-C24-C25-C26
28	1b	618	BCR	C23-C24-C25-C30
28	1c	515	BCR	C23-C24-C25-C26
28	1d	409	BCR	C1-C6-C7-C8
28	1k	102	BCR	C23-C24-C25-C26
28	1k	102	BCR	C23-C24-C25-C30
28	1t	101	BCR	C23-C24-C25-C26
22	1j	102	LHG	C27-C28-C29-C30
26	1d	406	CLA	C5-C6-C7-C8
26	1c	507	CLA	C4-C3-C5-C6
30	1a	413	PL9	C12-C11-C9-C8
26	1a	408	CLA	CBA-CGA-O2A-C1
26	1c	513	CLA	CBA-CGA-O2A-C1
29	1b	622	SQD	C9-C10-C11-C12
22	1e	102	LHG	C29-C30-C31-C32
31	1c	519	DGD	C1A-C2A-C3A-C4A
22	1e	102	LHG	C11-C10-C9-C8
22	1d	401	LHG	C26-C27-C28-C29
29	1b	622	SQD	C7-C8-C9-C10
31	1b	623	DGD	C2B-C1B-O2G-C2G
29	1a	411	SQD	C2-C1-O6-C44
29	1b	621	SQD	C2-C1-O6-C44
35	1k	101	MGE	C2D-C1D-O3G-C3G
31	1c	518	DGD	O6E-C5E-C6E-O5E
31	1b	627	DGD	C3B-C4B-C5B-C6B
35	1k	101	MGE	O6D-C5D-C6D-O5D
29	1b	620	SQD	C7-C8-C9-C10
30	1e	101	PL9	C4-C3-C7-C8
22	1a	414	LHG	C31-C32-C33-C34
26	1a	406	CLA	C1A-C2A-CAA-CBA
26	1c	502	CLA	C1A-C2A-CAA-CBA
26	1c	506	CLA	C1A-C2A-CAA-CBA
26	1c	507	CLA	C1A-C2A-CAA-CBA
26	1c	512	CLA	C1A-C2A-CAA-CBA
31	1c	519	DGD	C2B-C3B-C4B-C5B
26	1c	505	CLA	C5-C6-C7-C8
22	1w	103	LHG	C2-C3-O3-P
26	1b	611	CLA	C13-C15-C16-C17
26	1c	513	CLA	C5-C6-C7-C8

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Mol	Chain	Res	Type	Atoms
26	1b	606	CLA	CBA-CGA-O2A-C1
22	1a	414	LHG	C23-C24-C25-C26
22	1j	102	LHG	C4-C5-C6-O8
22	1w	103	LHG	C4-C5-C6-O8
29	1a	410	SQD	C14-C15-C16-C17
31	1c	520	DGD	O1G-C1G-C2G-C3G
26	1d	407	CLA	O1D-CGD-O2D-CED
22	1b	626	LHG	C28-C29-C30-C31
26	1a	408	CLA	O1A-CGA-O2A-C1
26	1b	606	CLA	O1A-CGA-O2A-C1
31	1b	623	DGD	O1G-C1A-C2A-C3A
26	1b	602	CLA	O1D-CGD-O2D-CED
26	1c	509	CLA	C11-C12-C13-C14
31	1b	623	DGD	CBB-CCB-CDB-CEB
22	1w	104	LHG	C11-C12-C13-C14
29	1a	411	SQD	C23-C24-C25-C26
26	1b	614	CLA	O1D-CGD-O2D-CED
30	1a	413	PL9	C30-C29-C31-C32
30	1a	413	PL9	C28-C29-C31-C32
31	1b	623	DGD	C1A-C2A-C3A-C4A
26	1c	504	CLA	CBA-CGA-O2A-C1
31	1b	627	DGD	O6E-C5E-C6E-O5E
26	1c	505	CLA	CBA-CGA-O2A-C1
31	1c	518	DGD	C2A-C1A-O1G-C1G
26	1c	513	CLA	O1A-CGA-O2A-C1
22	1a	414	LHG	O6-C4-C5-O7
22	1b	625	LHG	C7-C8-C9-C10
29	1a	412	SQD	C23-C24-C25-C26
29	1i	102	SQD	C2-C1-O6-C44
27	1d	404	PHO	CHA-CBD-CGD-O1D
27	1d	404	PHO	CHA-CBD-CGD-O2D
26	1b	611	CLA	C4-C3-C5-C6
26	1c	514	CLA	C10-C11-C12-C13
26	1b	612	CLA	C6-C7-C8-C10
26	1b	614	CLA	C11-C12-C13-C15
26	1c	511	CLA	C11-C10-C8-C7
26	1b	615	CLA	C11-C10-C8-C9
26	1c	511	CLA	C11-C10-C8-C9
22	1a	414	LHG	C12-C13-C14-C15
31	1b	627	DGD	C5A-C6A-C7A-C8A
26	1b	607	CLA	C11-C12-C13-C14
22	1w	103	LHG	C14-C15-C16-C17

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Mol	Chain	Res	Type	Atoms
31	1c	519	DGD	CAA-CBA-CCA-CDA
26	1b	611	CLA	CBA-CGA-O2A-C1
29	1b	622	SQD	O47-C7-C8-C9
31	1c	518	DGD	C2A-C3A-C4A-C5A
26	1c	513	CLA	C4B-C3B-CAB-CBB
22	1a	414	LHG	O6-C4-C5-C6
22	1b	624	LHG	C23-C24-C25-C26
26	1b	615	CLA	O1D-CGD-O2D-CED
26	1b	615	CLA	C4-C3-C5-C6
26	1b	611	CLA	C2-C3-C5-C6
31	1b	623	DGD	O1B-C1B-O2G-C2G
26	1c	509	CLA	CBA-CGA-O2A-C1
22	1a	401	LHG	C2-C3-O3-P
22	1c	521	LHG	C5-C4-O6-P
29	1a	411	SQD	C16-C17-C18-C19
26	1b	601	CLA	CBA-CGA-O2A-C1
22	1a	414	LHG	C4-C5-C6-O8
35	1k	101	MGE	O1G-C1G-C2G-C3G
26	1c	504	CLA	O1A-CGA-O2A-C1
26	1b	615	CLA	C2-C3-C5-C6
26	1b	607	CLA	O1D-CGD-O2D-CED
22	1c	521	LHG	C4-O6-P-O3
26	1c	505	CLA	O1A-CGA-O2A-C1
31	1c	518	DGD	O1A-C1A-O1G-C1G
26	1b	603	CLA	CBA-CGA-O2A-C1
26	1b	611	CLA	O1A-CGA-O2A-C1
29	1a	412	SQD	O47-C45-C46-O48
35	1k	101	MGE	O1G-C1G-C2G-O2G
31	1b	627	DGD	O2G-C1B-C2B-C3B
26	1b	610	CLA	C2C-C3C-CAC-CBC
30	1h	101	PL9	C44-C46-C47-C48
26	1d	403	CLA	C3-C5-C6-C7
26	1d	407	CLA	C2-C1-O2A-CGA
26	1b	615	CLA	C5-C6-C7-C8
29	1b	622	SQD	C27-C28-C29-C30
26	1c	511	CLA	C13-C15-C16-C17
22	1d	401	LHG	C2-C3-O3-P
22	1j	102	LHG	C2-C3-O3-P
22	1v	201	LHG	C5-C4-O6-P
22	1v	201	LHG	C11-C12-C13-C14
28	1b	617	BCR	C23-C24-C25-C30
28	1d	409	BCR	C5-C6-C7-C8

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Mol	Chain	Res	Type	Atoms
28	1t	101	BCR	C23-C24-C25-C30
26	1b	611	CLA	C5-C6-C7-C8
31	1b	627	DGD	CCA-CDA-CEA-CFA
22	1j	102	LHG	C23-C24-C25-C26
31	1c	520	DGD	O6D-C5D-C6D-O5D
29	1a	410	SQD	C11-C10-C9-C8
22	1w	102	LHG	O6-C4-C5-C6
30	1h	101	PL9	C25-C24-C26-C27
26	1b	615	CLA	C11-C10-C8-C7
26	1c	502	CLA	C11-C12-C13-C15
28	1j	101	BCR	C11-C10-C9-C34
26	1b	605	CLA	C5-C6-C7-C8
26	1a	408	CLA	CAD-CBD-CGD-O2D
26	1b	603	CLA	CAD-CBD-CGD-O2D
26	1c	504	CLA	CAD-CBD-CGD-O2D
26	1c	506	CLA	CAD-CBD-CGD-O2D
27	1a	407	PHO	CAD-CBD-CGD-O2D
26	1c	506	CLA	C2A-CAA-CBA-CGA
26	1b	610	CLA	C4C-C3C-CAC-CBC
26	1c	512	CLA	O1D-CGD-O2D-CED
26	1b	609	CLA	CHA-CBD-CGD-O1D
26	1c	503	CLA	CHA-CBD-CGD-O1D
26	1c	503	CLA	CHA-CBD-CGD-O2D
26	1c	505	CLA	CHA-CBD-CGD-O1D
26	1c	505	CLA	CHA-CBD-CGD-O2D
26	1c	510	CLA	CHA-CBD-CGD-O1D
26	1c	510	CLA	CHA-CBD-CGD-O2D
26	1b	601	CLA	O1A-CGA-O2A-C1
26	1c	509	CLA	O1A-CGA-O2A-C1
22	1a	414	LHG	C9-C10-C11-C12
22	1a	414	LHG	C30-C31-C32-C33
22	1a	414	LHG	O7-C5-C6-O8
22	1w	103	LHG	O7-C5-C6-O8
26	1d	403	CLA	C8-C10-C11-C12
26	1b	603	CLA	C16-C17-C18-C19
29	1b	620	SQD	C12-C13-C14-C15
26	1b	603	CLA	O1A-CGA-O2A-C1
30	1h	101	PL9	C4-C3-C7-C8
22	1a	414	LHG	C15-C16-C17-C18
26	1a	408	CLA	C1A-C2A-CAA-CBA
26	1b	616	CLA	C1A-C2A-CAA-CBA
22	1c	522	LHG	C4-O6-P-O3

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Mol	Chain	Res	Type	Atoms
29	1b	620	SQD	C11-C10-C9-C8
22	1a	414	LHG	C5-C4-O6-P
22	1b	626	LHG	C4-O6-P-O4
22	1d	401	LHG	C3-O3-P-O4
22	1w	102	LHG	C4-O6-P-O4
22	1w	104	LHG	C3-O3-P-O5
26	1b	607	CLA	C4B-C3B-CAB-CBB
26	1c	503	CLA	C4B-C3B-CAB-CBB
26	1c	507	CLA	C4B-C3B-CAB-CBB
29	1a	410	SQD	C13-C14-C15-C16
26	1b	605	CLA	CAD-CBD-CGD-O1D
26	1b	609	CLA	CAD-CBD-CGD-O1D
26	1b	610	CLA	CAD-CBD-CGD-O1D
26	1c	505	CLA	CAD-CBD-CGD-O1D
26	1c	507	CLA	CAD-CBD-CGD-O1D
29	1a	410	SQD	O5-C5-C6-S
29	1b	621	SQD	C7-C8-C9-C10
26	1b	609	CLA	C11-C12-C13-C15
26	1c	511	CLA	C12-C13-C15-C16
26	1c	513	CLA	C11-C10-C8-C7
26	1b	615	CLA	O1A-CGA-O2A-C1
29	1a	411	SQD	C31-C32-C33-C34
26	1b	610	CLA	O1D-CGD-O2D-CED
22	1c	522	LHG	C12-C13-C14-C15
22	1w	104	LHG	C12-C13-C14-C15
29	1a	410	SQD	O47-C45-C46-O48
26	1b	610	CLA	C5-C6-C7-C8
29	1a	410	SQD	C17-C18-C19-C20
26	1b	615	CLA	CBA-CGA-O2A-C1
26	1c	502	CLA	C11-C12-C13-C14
26	1c	504	CLA	C6-C7-C8-C9
22	1a	401	LHG	C7-C8-C9-C10
26	1c	507	CLA	C6-C7-C8-C9
26	1c	514	CLA	CAA-CBA-CGA-O2A
26	1b	612	CLA	C2B-C3B-CAB-CBB
26	1c	507	CLA	C2B-C3B-CAB-CBB
26	1b	602	CLA	C3-C5-C6-C7
26	1d	406	CLA	C4-C3-C5-C6
22	1v	201	LHG	O7-C7-C8-C9
22	1b	625	LHG	C23-C24-C25-C26
26	1b	602	CLA	CAA-CBA-CGA-O2A
26	1a	405	CLA	C2A-CAA-CBA-CGA

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Mol	Chain	Res	Type	Atoms
26	1a	408	CLA	C2-C1-O2A-CGA
26	1c	504	CLA	C2-C1-O2A-CGA
26	1c	511	CLA	C2-C1-O2A-CGA
26	1d	406	CLA	C2-C1-O2A-CGA
31	1c	519	DGD	C4A-C5A-C6A-C7A
29	1a	410	SQD	C16-C17-C18-C19
26	1b	612	CLA	C10-C11-C12-C13
32	1c	523	LNL	C4-C5-C6-C7
22	1j	102	LHG	O7-C5-C6-O8
31	1c	520	DGD	O1G-C1G-C2G-O2G
22	1b	625	LHG	C3-O3-P-O6
22	1b	625	LHG	C4-O6-P-O3
22	1c	522	LHG	C3-O3-P-O6
22	1d	401	LHG	C4-O6-P-O3
22	1d	402	LHG	C3-O3-P-O6
22	1j	102	LHG	C3-O3-P-O6
22	1j	102	LHG	C4-O6-P-O3
22	1w	102	LHG	C3-O3-P-O6
22	1w	103	LHG	C3-O3-P-O6
31	1c	518	DGD	O1G-C1G-C2G-C3G
31	1c	519	DGD	C1G-C2G-C3G-O3G
31	1c	520	DGD	C2B-C3B-C4B-C5B
26	1b	612	CLA	C6-C7-C8-C9
26	1c	511	CLA	C14-C13-C15-C16
26	1d	403	CLA	C11-C10-C8-C9
29	1b	620	SQD	C25-C26-C27-C28
28	1j	101	BCR	C7-C8-C9-C34
26	1c	507	CLA	C6-C7-C8-C10
29	1b	622	SQD	C11-C10-C9-C8
30	1h	101	PL9	C23-C24-C26-C27
29	1a	411	SQD	C17-C18-C19-C20
26	1c	510	CLA	CAA-CBA-CGA-O2A
22	1b	624	LHG	C24-C25-C26-C27
22	1w	104	LHG	C24-C23-O8-C6
22	1w	102	LHG	O6-C4-C5-O7
29	1b	620	SQD	C11-C12-C13-C14
26	1b	607	CLA	C5-C6-C7-C8
31	1c	520	DGD	C2A-C3A-C4A-C5A
26	1c	502	CLA	C2-C1-O2A-CGA
26	1c	510	CLA	CAA-CBA-CGA-O1A
34	1f	101	HEM	CAD-CBD-CGD-O1D
22	1b	625	LHG	O7-C5-C6-O8

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Mol	Chain	Res	Type	Atoms
26	1b	603	CLA	C2A-CAA-CBA-CGA
31	1c	519	DGD	O2G-C2G-C3G-O3G
29	1b	621	SQD	C15-C16-C17-C18
26	1b	605	CLA	C3A-C2A-CAA-CBA
26	1b	609	CLA	CBA-CGA-O2A-C1
30	1a	413	PL9	C25-C24-C26-C27
30	1a	413	PL9	C4-C3-C7-C8
26	1b	609	CLA	C11-C12-C13-C14
26	1b	610	CLA	C14-C13-C15-C16
26	1d	403	CLA	C6-C7-C8-C9
26	1c	504	CLA	C16-C17-C18-C19
26	1d	406	CLA	C11-C12-C13-C14
34	1f	101	HEM	CAD-CBD-CGD-O2D
28	1j	101	BCR	C35-C13-C14-C15
28	1j	101	BCR	C20-C21-C22-C37
31	1b	627	DGD	O1G-C1G-C2G-C3G
22	1w	104	LHG	C24-C25-C26-C27
34	1f	101	HEM	CAA-CBA-CGA-O1A
22	1b	628	LHG	C17-C18-C19-C20
26	1d	407	CLA	C1A-C2A-CAA-CBA
26	1c	504	CLA	C6-C7-C8-C10
26	1b	609	CLA	O1A-CGA-O2A-C1
22	1j	102	LHG	C12-C13-C14-C15
31	1b	623	DGD	O1A-C1A-C2A-C3A
22	1a	414	LHG	C26-C27-C28-C29
22	1b	626	LHG	O6-C4-C5-O7
34	1f	101	HEM	CAA-CBA-CGA-O2A
26	1c	511	CLA	C5-C6-C7-C8
30	1d	410	PL9	C45-C44-C46-C47
30	1a	413	PL9	C23-C24-C26-C27
26	1b	607	CLA	C2B-C3B-CAB-CBB
26	1c	503	CLA	C2B-C3B-CAB-CBB
31	1c	520	DGD	C2A-C1A-O1G-C1G
29	1c	516	SQD	C28-C29-C30-C31
28	1j	101	BCR	C20-C21-C22-C23
29	1w	101	SQD	O47-C45-C46-O48
31	1b	623	DGD	O1G-C1G-C2G-O2G
26	1c	508	CLA	C2A-CAA-CBA-CGA
31	1b	627	DGD	O6D-C1D-O3G-C3G
30	1a	413	PL9	C34-C36-C37-C38
29	1i	102	SQD	C24-C25-C26-C27
26	1b	603	CLA	C11-C10-C8-C9

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Mol	Chain	Res	Type	Atoms
31	1c	520	DGD	O1A-C1A-O1G-C1G
26	1c	504	CLA	C10-C11-C12-C13
28	1a	409	BCR	C1-C6-C7-C8
28	1i	101	BCR	C1-C6-C7-C8
26	1c	511	CLA	C8-C10-C11-C12
22	1w	103	LHG	C10-C11-C12-C13
26	1c	514	CLA	C11-C12-C13-C14
22	1d	401	LHG	C11-C10-C9-C8
26	1b	616	CLA	CAA-CBA-CGA-O2A
29	1b	622	SQD	O49-C7-C8-C9
22	1j	102	LHG	C26-C27-C28-C29
26	1b	616	CLA	CAA-CBA-CGA-O1A
22	1b	626	LHG	O6-C4-C5-C6
26	1c	509	CLA	C4-C3-C5-C6
26	1d	403	CLA	C11-C10-C8-C7
22	1a	414	LHG	O1-C1-C2-O2
22	1e	102	LHG	C30-C31-C32-C33
22	1c	522	LHG	C24-C25-C26-C27
26	1b	605	CLA	CAA-CBA-CGA-O2A
31	1b	623	DGD	O6D-C5D-C6D-O5D
26	1b	609	CLA	C4-C3-C5-C6
26	1c	502	CLA	C4-C3-C5-C6
26	1c	503	CLA	C4-C3-C5-C6
26	1d	407	CLA	C4-C3-C5-C6
26	1d	406	CLA	C2-C3-C5-C6
30	1d	410	PL9	C43-C44-C46-C47
22	1e	102	LHG	O7-C7-C8-C9
26	1b	601	CLA	C11-C10-C8-C9
26	1c	513	CLA	C11-C10-C8-C9
26	1d	403	CLA	C3A-C2A-CAA-CBA
26	1b	606	CLA	CAD-CBD-CGD-O2D
26	1b	612	CLA	CAD-CBD-CGD-O2D
26	1b	614	CLA	CAD-CBD-CGD-O2D
26	1c	513	CLA	CAD-CBD-CGD-O2D
26	1c	514	CLA	CAD-CBD-CGD-O2D
26	1d	406	CLA	CAD-CBD-CGD-O2D
26	1b	603	CLA	C2-C1-O2A-CGA
22	1e	102	LHG	C4-C5-C6-O8
26	1c	506	CLA	CBD-CGD-O2D-CED
26	1b	614	CLA	CAA-CBA-CGA-O2A
29	1b	622	SQD	C25-C26-C27-C28
31	1b	623	DGD	C2B-C3B-C4B-C5B

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Mol	Chain	Res	Type	Atoms
22	1e	102	LHG	C26-C27-C28-C29
26	1b	609	CLA	CHA-CBD-CGD-O2D
26	1b	613	CLA	CHA-CBD-CGD-O1D
26	1b	613	CLA	CHA-CBD-CGD-O2D
26	1c	507	CLA	CHA-CBD-CGD-O1D
26	1c	509	CLA	CHA-CBD-CGD-O2D
35	1k	101	MGE	O2G-C1B-C2B-C3B
22	1e	102	LHG	C27-C28-C29-C30
22	1c	521	LHG	O7-C5-C6-O8
22	1e	102	LHG	O7-C5-C6-O8
26	1c	503	CLA	O1A-CGA-O2A-C1
22	1a	401	LHG	O7-C7-C8-C9
22	1w	102	LHG	O7-C7-C8-C9
26	1a	405	CLA	CAA-CBA-CGA-O2A
26	1c	503	CLA	C2A-CAA-CBA-CGA
26	1c	503	CLA	CBA-CGA-O2A-C1
22	1j	102	LHG	C11-C10-C9-C8
26	1c	509	CLA	C2-C3-C5-C6
31	1c	519	DGD	O2G-C1B-C2B-C3B
22	1w	104	LHG	C13-C14-C15-C16
29	1b	621	SQD	C11-C12-C13-C14
26	1c	504	CLA	C11-C12-C13-C14
26	1c	513	CLA	CAA-CBA-CGA-O2A
29	1b	620	SQD	C4-C5-C6-S
29	1c	517	SQD	C4-C5-C6-S
30	1d	410	PL9	C11-C12-C13-C14
30	1h	101	PL9	C46-C47-C48-C49
22	1d	401	LHG	C13-C14-C15-C16
22	1w	102	LHG	O9-C7-C8-C9
26	1b	608	CLA	C1A-C2A-CAA-CBA
26	1b	605	CLA	CAA-CBA-CGA-O1A
31	1c	519	DGD	O1G-C1A-C2A-C3A
30	1e	101	PL9	C2-C3-C7-C8
31	1c	519	DGD	O6D-C5D-C6D-O5D
27	1d	404	PHO	C16-C17-C18-C20
31	1b	627	DGD	O1B-C1B-C2B-C3B
22	1d	401	LHG	C5-C4-O6-P
22	1w	104	LHG	C11-C10-C9-C8
22	1e	102	LHG	O9-C7-C8-C9
26	1b	614	CLA	CAA-CBA-CGA-O1A
22	1b	625	LHG	C3-O3-P-O5
22	1b	625	LHG	C4-O6-P-O5

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Mol	Chain	Res	Type	Atoms
22	1c	521	LHG	C4-O6-P-O4
26	1b	612	CLA	C4B-C3B-CAB-CBB
22	1a	401	LHG	O9-C7-C8-C9
26	1c	508	CLA	CAA-CBA-CGA-O2A
28	1h	102	BCR	C23-C24-C25-C30
30	1h	101	PL9	C16-C17-C18-C19
22	1w	104	LHG	C23-C24-C25-C26
26	1b	604	CLA	CAD-CBD-CGD-O1D
26	1b	607	CLA	CAD-CBD-CGD-O1D
26	1c	511	CLA	CAD-CBD-CGD-O1D
29	1i	102	SQD	O5-C5-C6-S
35	1k	101	MGE	C1G-C2G-O2G-C1B
22	1d	402	LHG	O8-C23-C24-C25
22	1c	522	LHG	C18-C19-C20-C21
26	1b	613	CLA	C8-C10-C11-C12
26	1b	601	CLA	C15-C16-C17-C18
22	1j	102	LHG	C28-C29-C30-C31
29	1w	101	SQD	O48-C23-C24-C25
29	1a	411	SQD	C7-C8-C9-C10
26	1a	405	CLA	CAA-CBA-CGA-O1A
26	1b	608	CLA	C4-C3-C5-C6
26	1c	504	CLA	C11-C12-C13-C15
35	1k	101	MGE	O1B-C1B-C2B-C3B
26	1b	608	CLA	CAA-CBA-CGA-O2A
28	1b	619	BCR	C21-C22-C23-C24
29	1w	101	SQD	O10-C23-C24-C25
31	1c	519	DGD	O1B-C1B-C2B-C3B
22	1b	626	LHG	O8-C23-C24-C25
22	1v	201	LHG	C10-C11-C12-C13
22	1b	628	LHG	O7-C7-C8-C9
26	1b	601	CLA	CAA-CBA-CGA-O2A
31	1c	520	DGD	O1G-C1A-C2A-C3A
22	1c	522	LHG	C13-C14-C15-C16
26	1c	513	CLA	CAA-CBA-CGA-O1A
31	1c	519	DGD	O1A-C1A-C2A-C3A
26	1b	610	CLA	C2A-CAA-CBA-CGA
29	1c	517	SQD	O48-C23-C24-C25

There are no ring outliers.

85 monomers are involved in 279 short contacts:

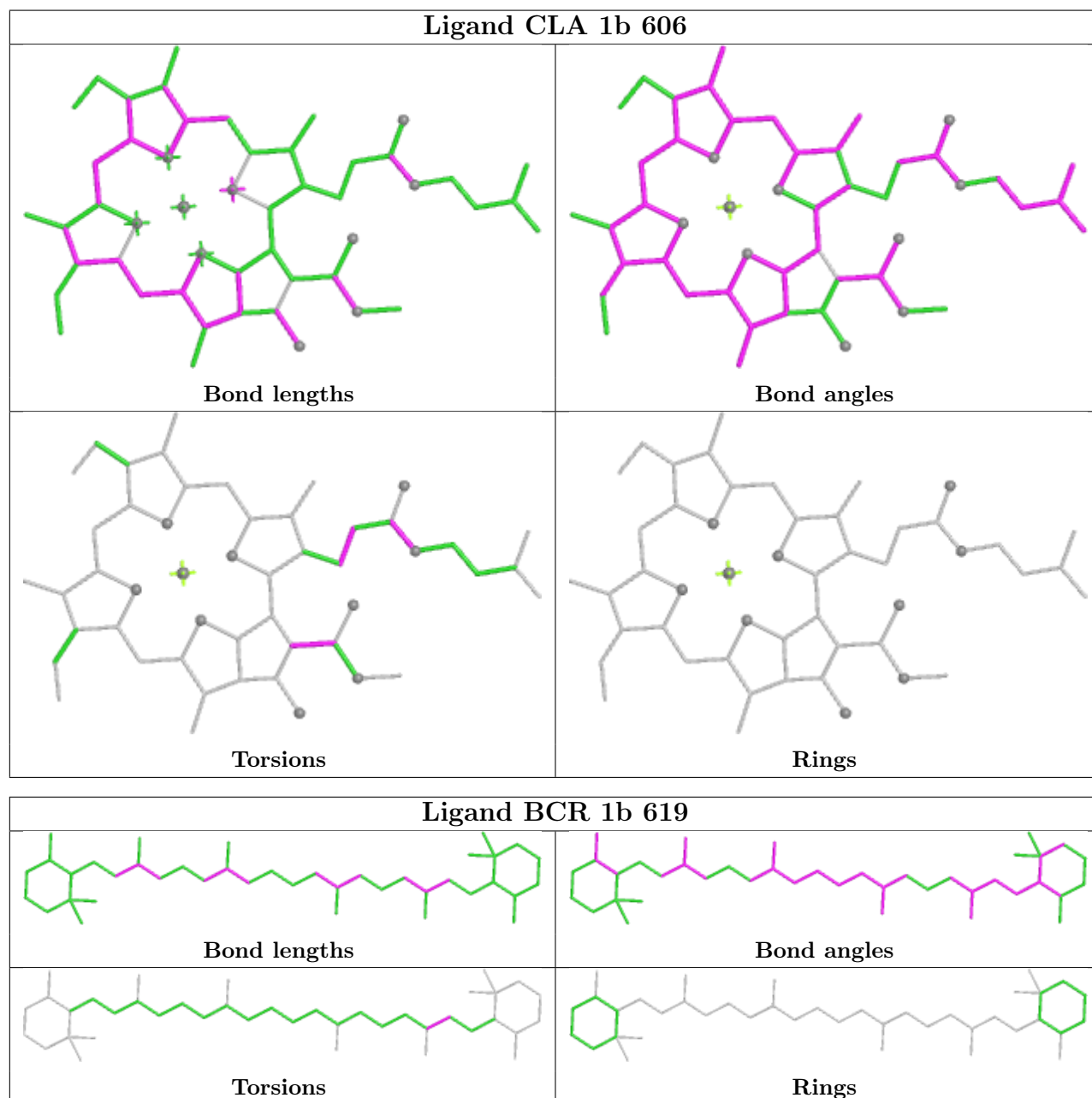
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26	1b	608	CLA	7	0
31	1c	518	DGD	1	0
28	1b	618	BCR	5	0
22	1d	402	LHG	2	0
22	1c	521	LHG	1	0
28	1j	101	BCR	5	0
26	1b	614	CLA	2	0
26	1b	612	CLA	3	0
27	1d	404	PHO	6	0
31	1b	627	DGD	4	0
28	1b	617	BCR	8	0
29	1l	101	SQD	4	0
26	1a	406	CLA	1	0
30	1a	413	PL9	21	0
29	1a	412	SQD	1	0
26	1b	613	CLA	5	0
26	1c	509	CLA	5	0
31	1c	519	DGD	5	0
22	1e	102	LHG	4	0
26	1b	610	CLA	2	0
26	1c	511	CLA	9	0
31	1c	520	DGD	3	0
28	1d	409	BCR	1	0
22	1a	401	LHG	2	0
30	1h	101	PL9	4	0
28	1a	409	BCR	5	0
22	1w	104	LHG	6	0
26	1c	510	CLA	3	0
26	1a	405	CLA	4	0
30	1d	410	PL9	7	0
22	1j	102	LHG	2	0
26	1c	513	CLA	2	0
22	1d	401	LHG	2	0
34	1f	101	HEM	6	0
26	1c	503	CLA	1	0
26	1c	502	CLA	4	0
26	1c	504	CLA	3	0
26	1b	611	CLA	8	0
26	1b	604	CLA	1	0
29	1d	405	SQD	4	0
31	1b	623	DGD	4	0
26	1c	506	CLA	2	0

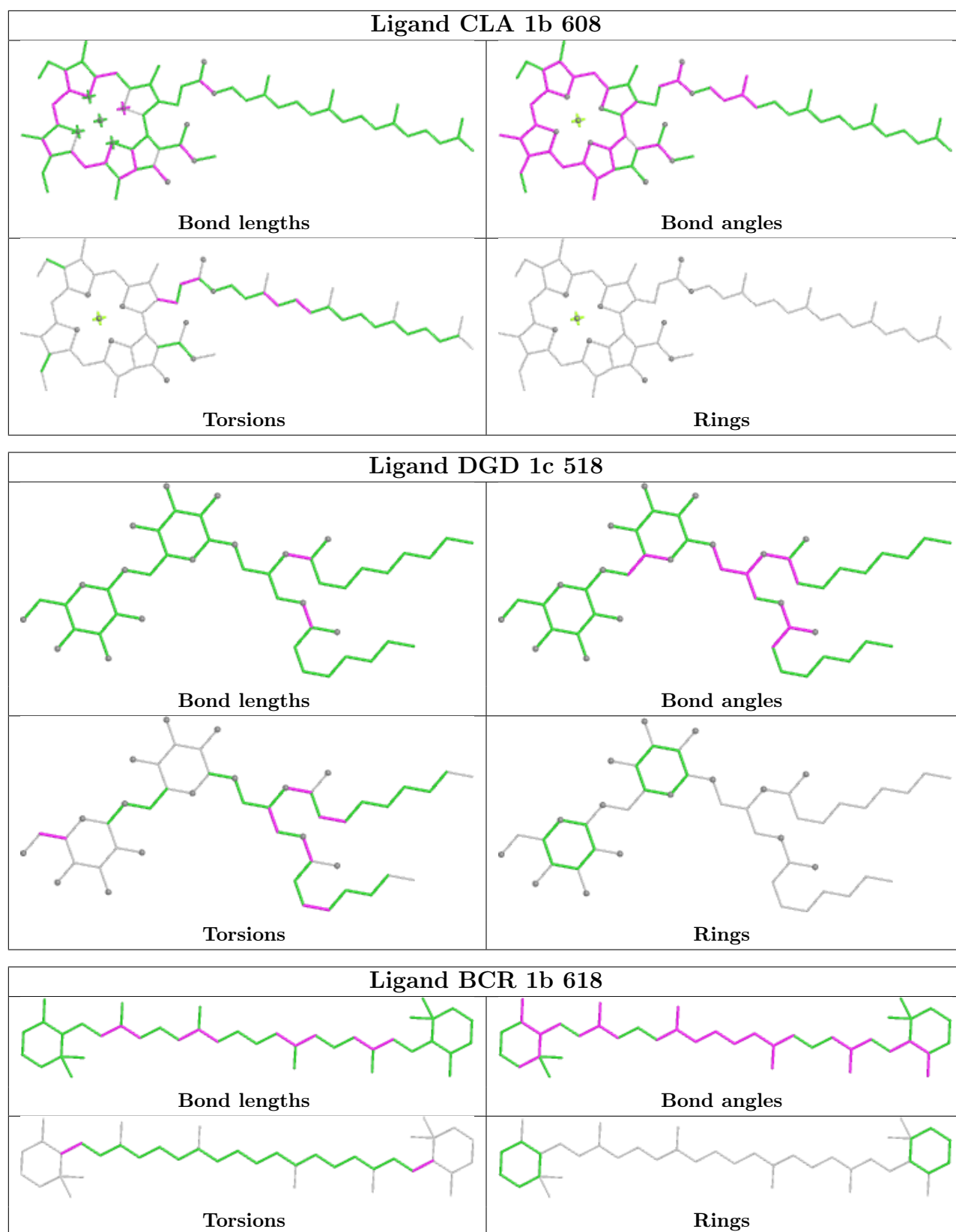
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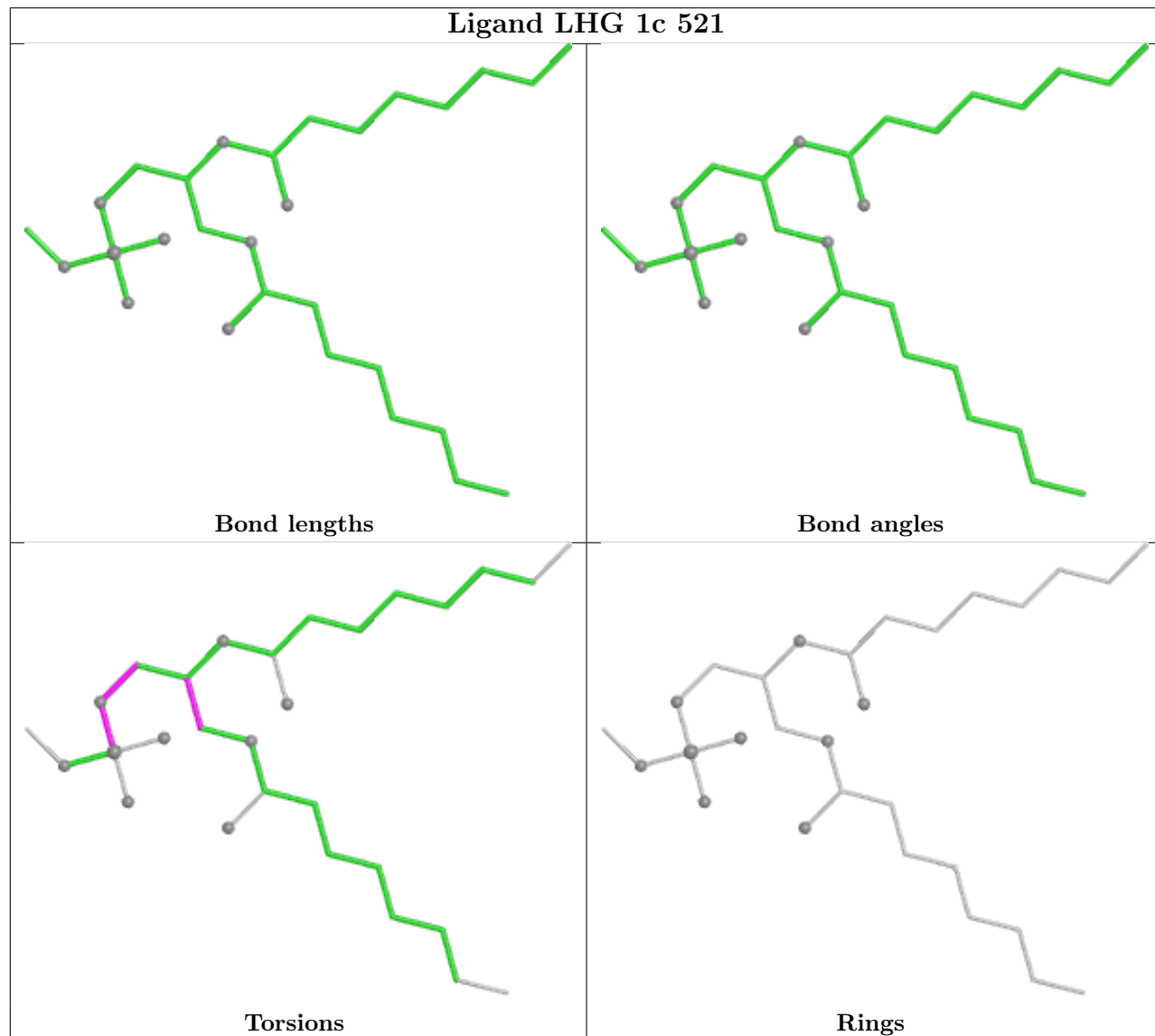
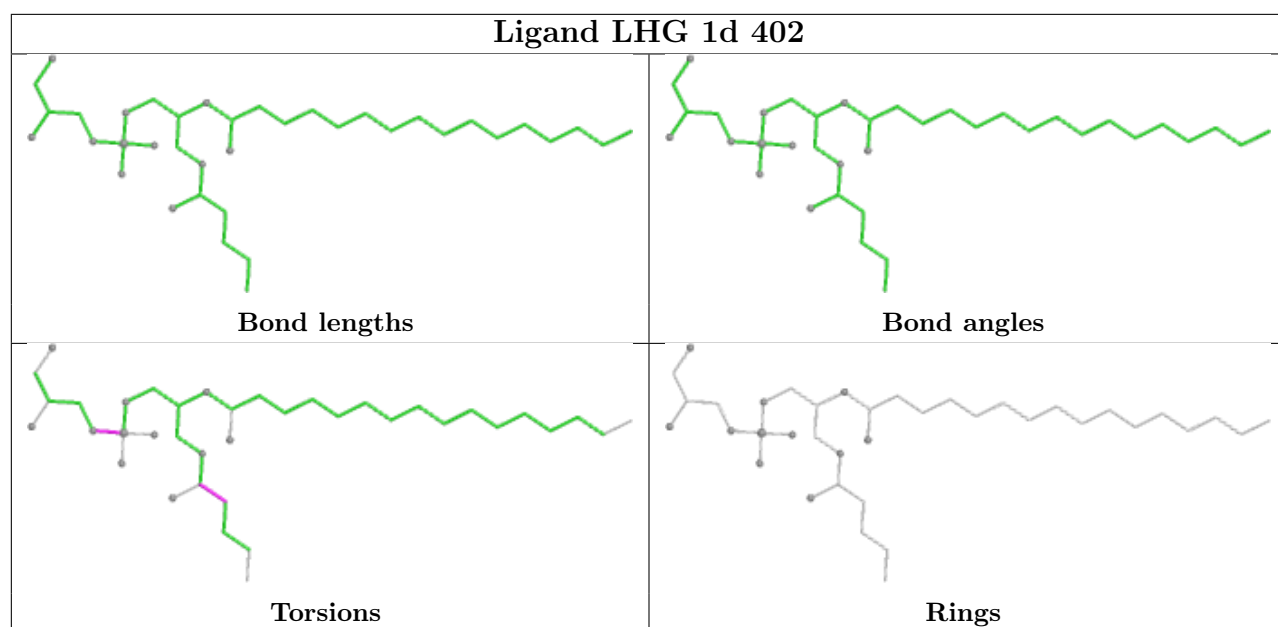
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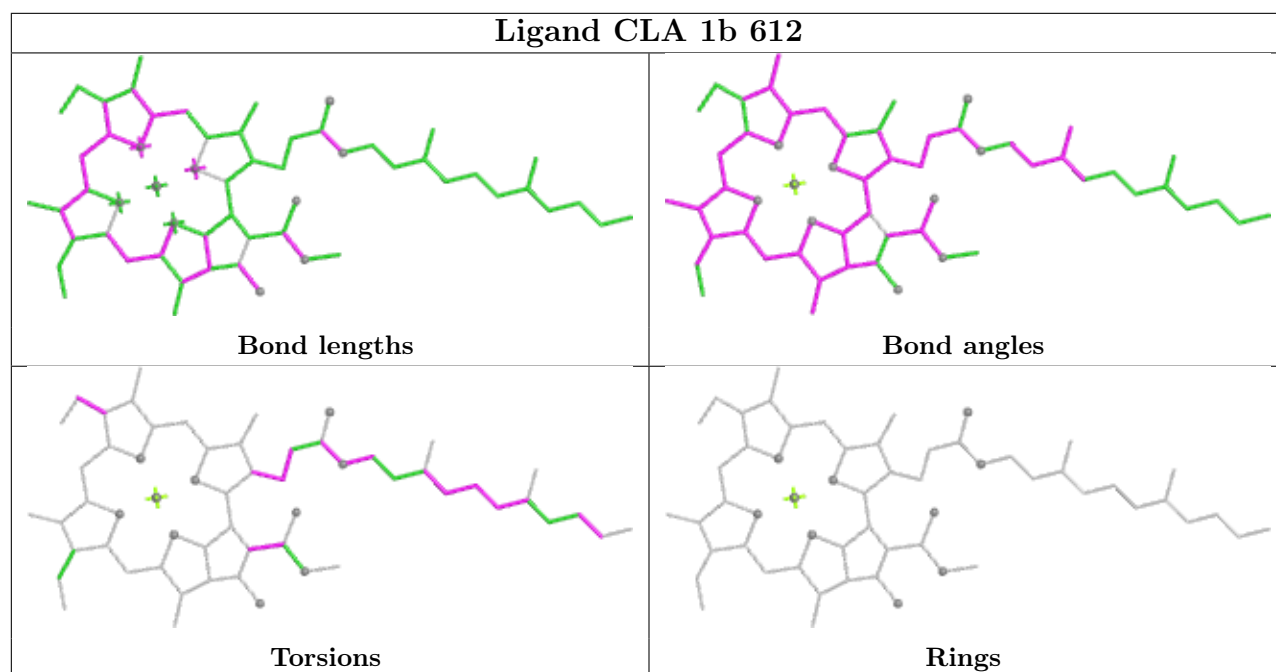
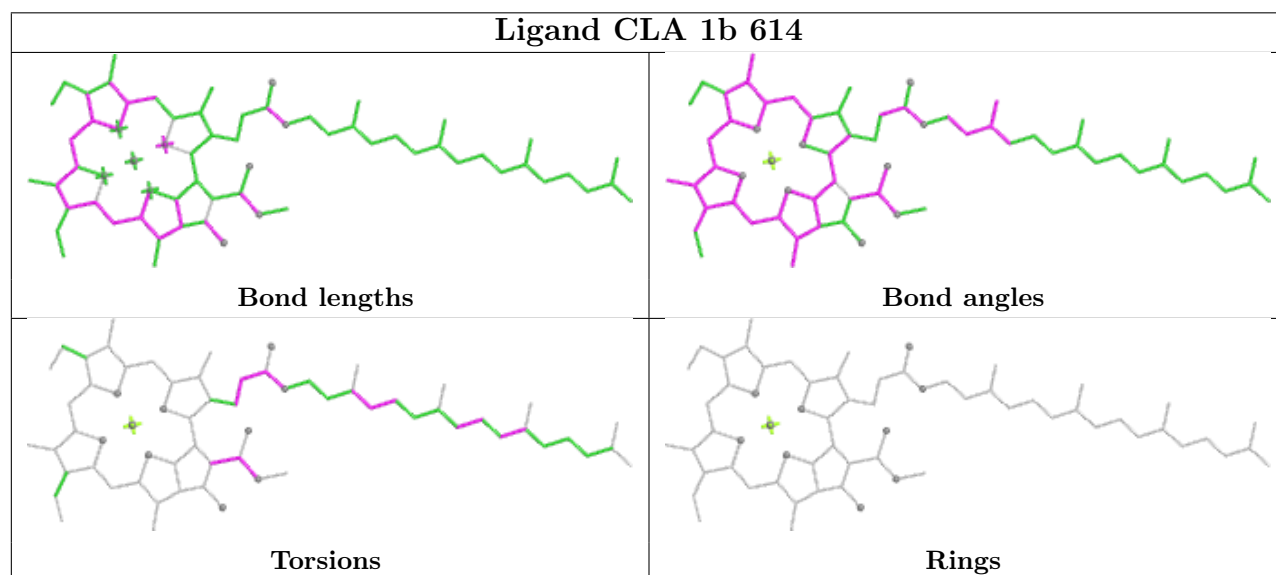
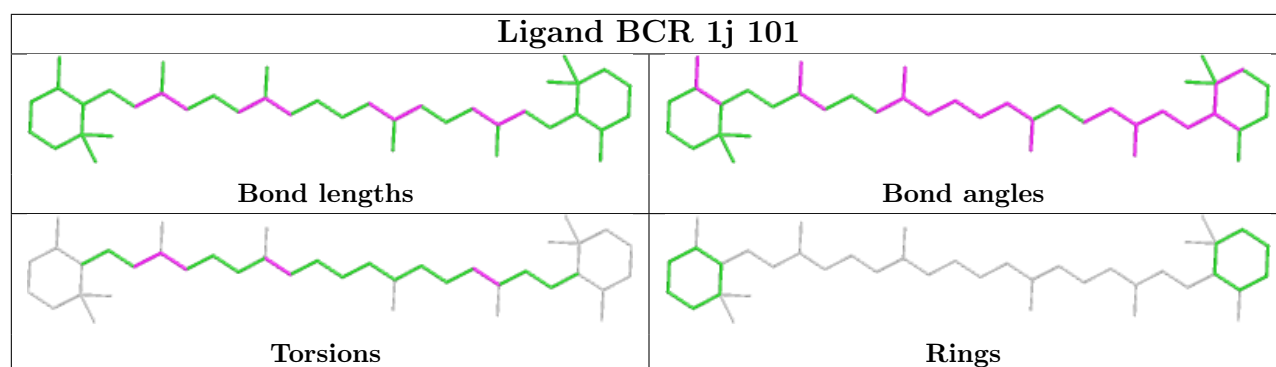
Mol	Chain	Res	Type	Clashes	Symm-Clashes
22	1c	522	LHG	4	0
26	1a	408	CLA	1	0
22	1b	628	LHG	7	0
29	1i	102	SQD	3	0
29	1d	411	SQD	2	0
32	1c	523	LNL	4	0
22	1w	103	LHG	3	0
35	1k	101	MGE	5	0
27	1a	407	PHO	1	0
22	1v	201	LHG	3	0
30	1e	101	PL9	9	0
26	1d	403	CLA	2	0
29	1a	411	SQD	2	0
28	1c	515	BCR	6	0
26	1d	406	CLA	8	0
26	1b	602	CLA	4	0
26	1b	601	CLA	5	0
26	1b	605	CLA	3	0
29	1b	620	SQD	5	0
28	1h	102	BCR	3	0
26	1b	603	CLA	2	0
26	1c	505	CLA	2	0
29	1b	621	SQD	9	0
26	1c	508	CLA	9	0
29	1a	410	SQD	6	0
29	1b	622	SQD	4	0
29	1w	101	SQD	3	0
22	1b	624	LHG	1	0
28	1k	102	BCR	4	0
26	1b	607	CLA	5	0
26	1c	507	CLA	10	0
22	1b	625	LHG	3	0
26	1b	609	CLA	2	0
26	1c	512	CLA	2	0
28	1i	101	BCR	7	0
26	1b	615	CLA	3	0
22	1a	414	LHG	11	0
29	1c	516	SQD	8	0
22	1b	626	LHG	3	0
26	1d	407	CLA	1	0
28	1t	101	BCR	5	0
26	1b	616	CLA	1	0

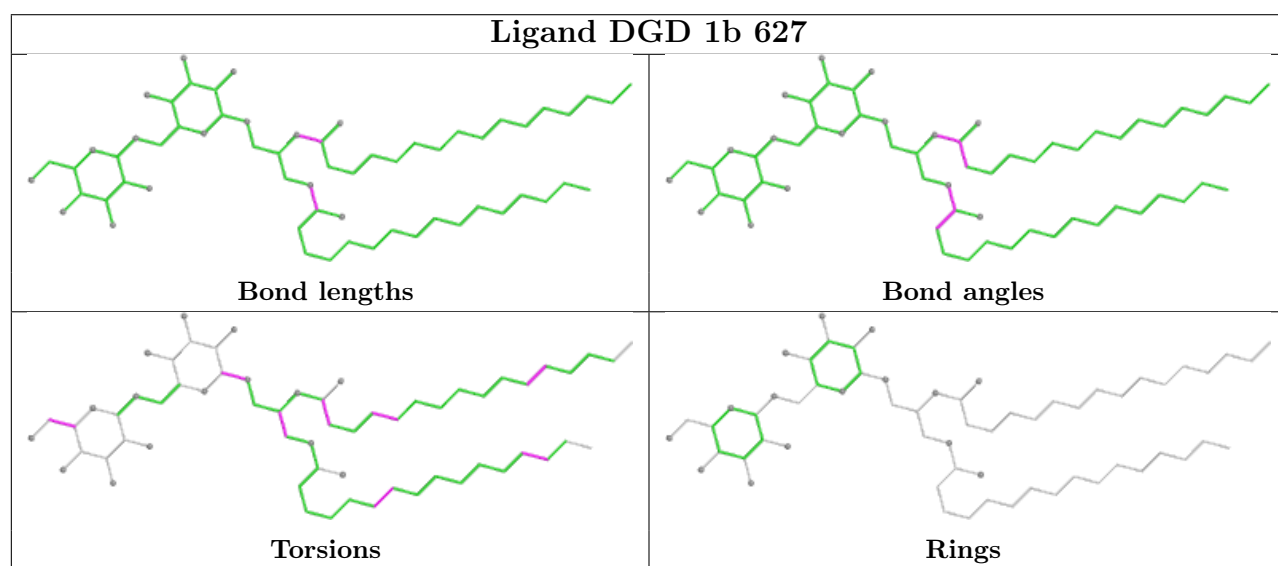
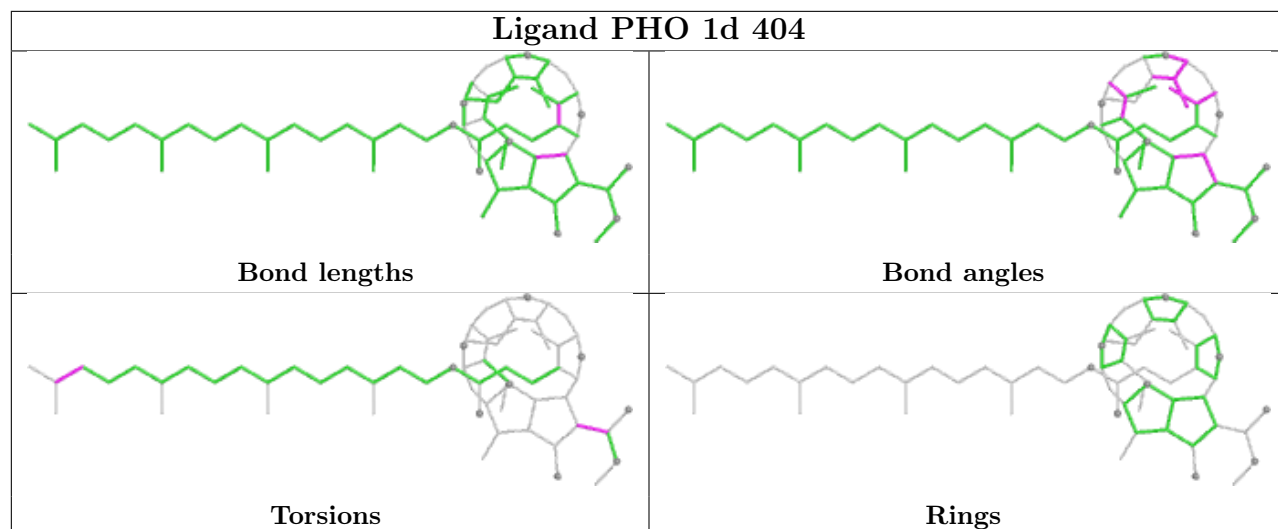
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included.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

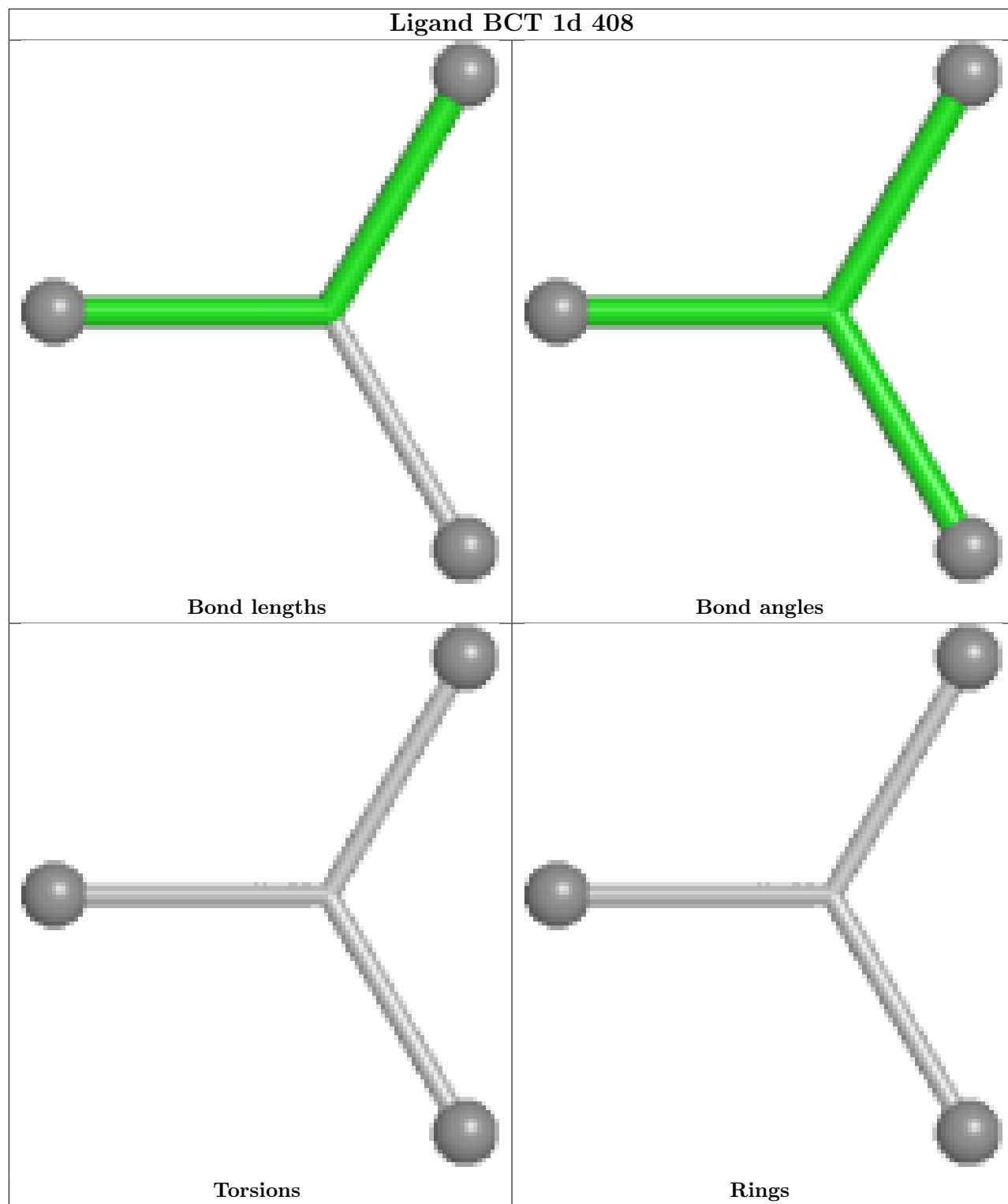


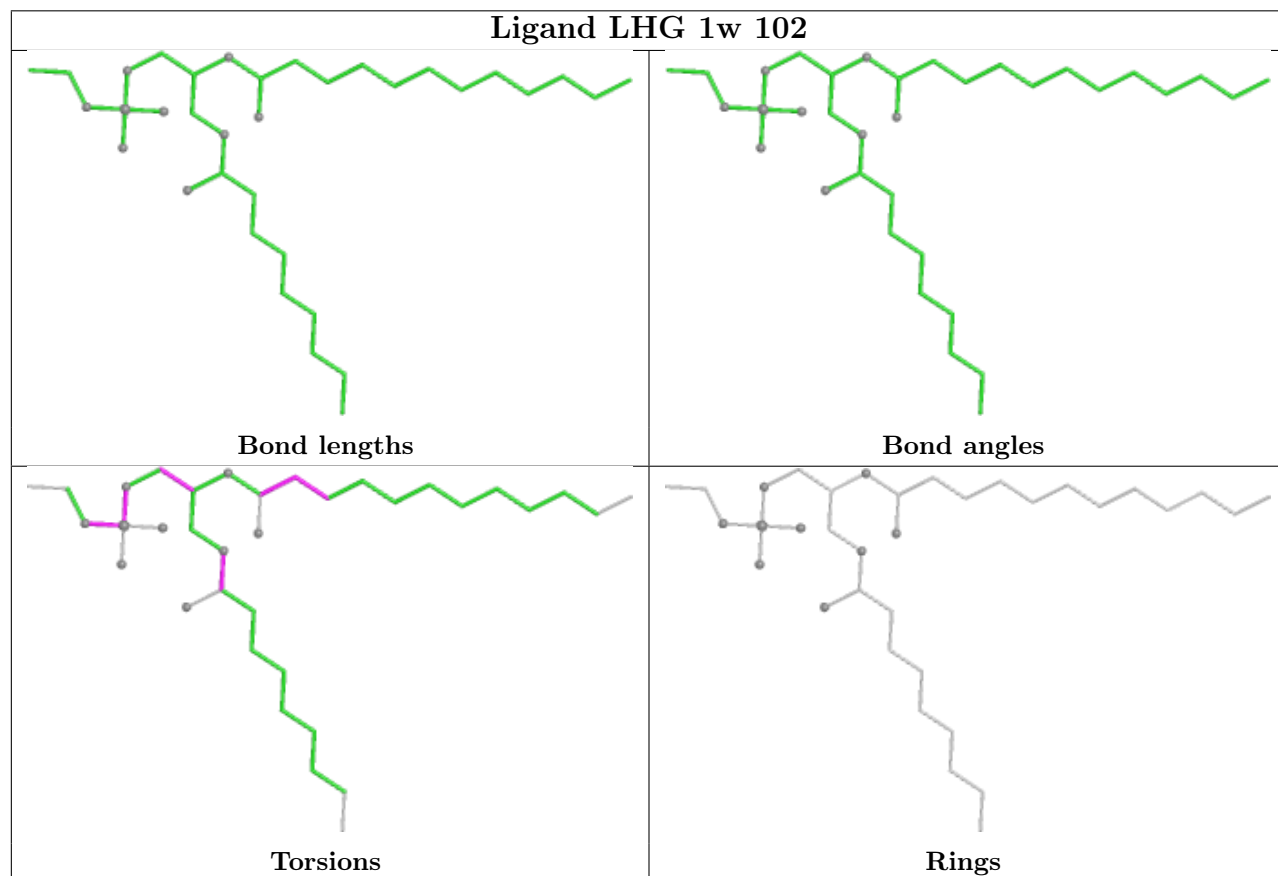
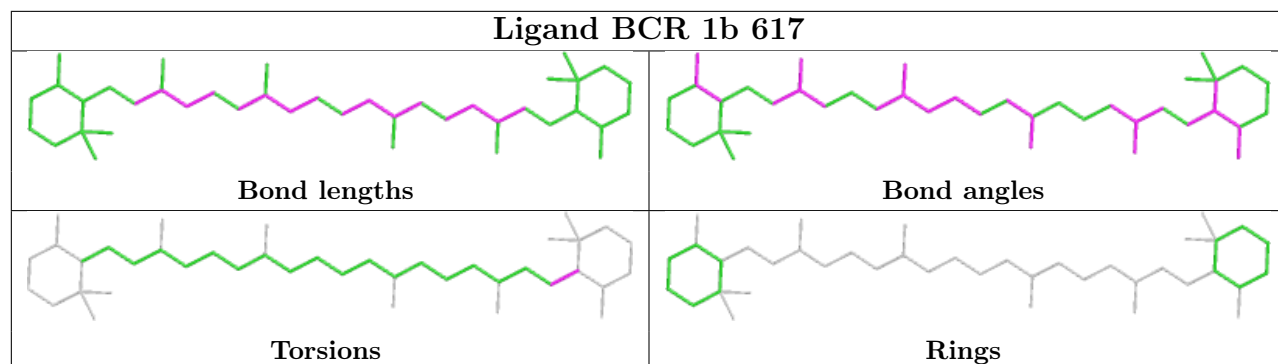


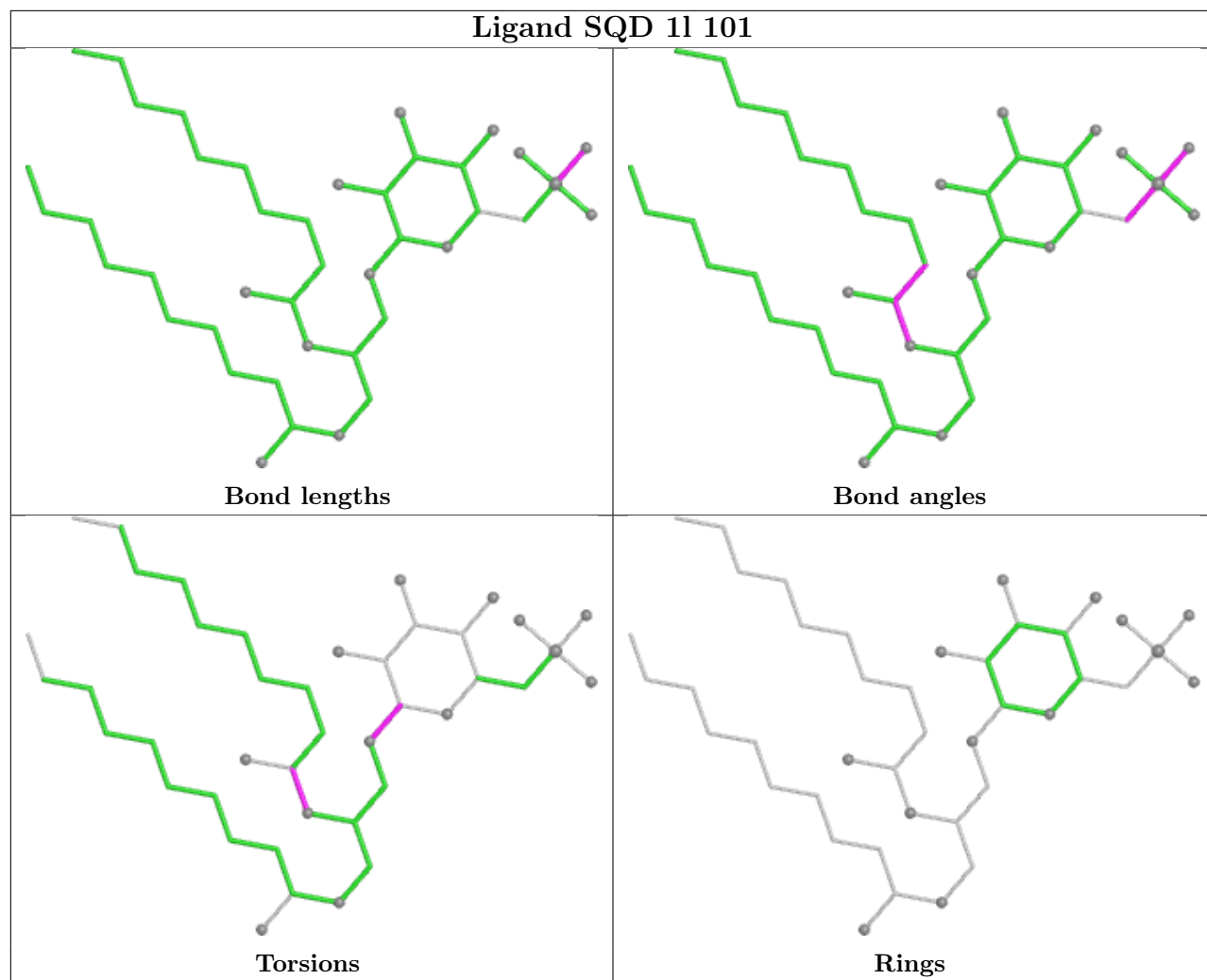


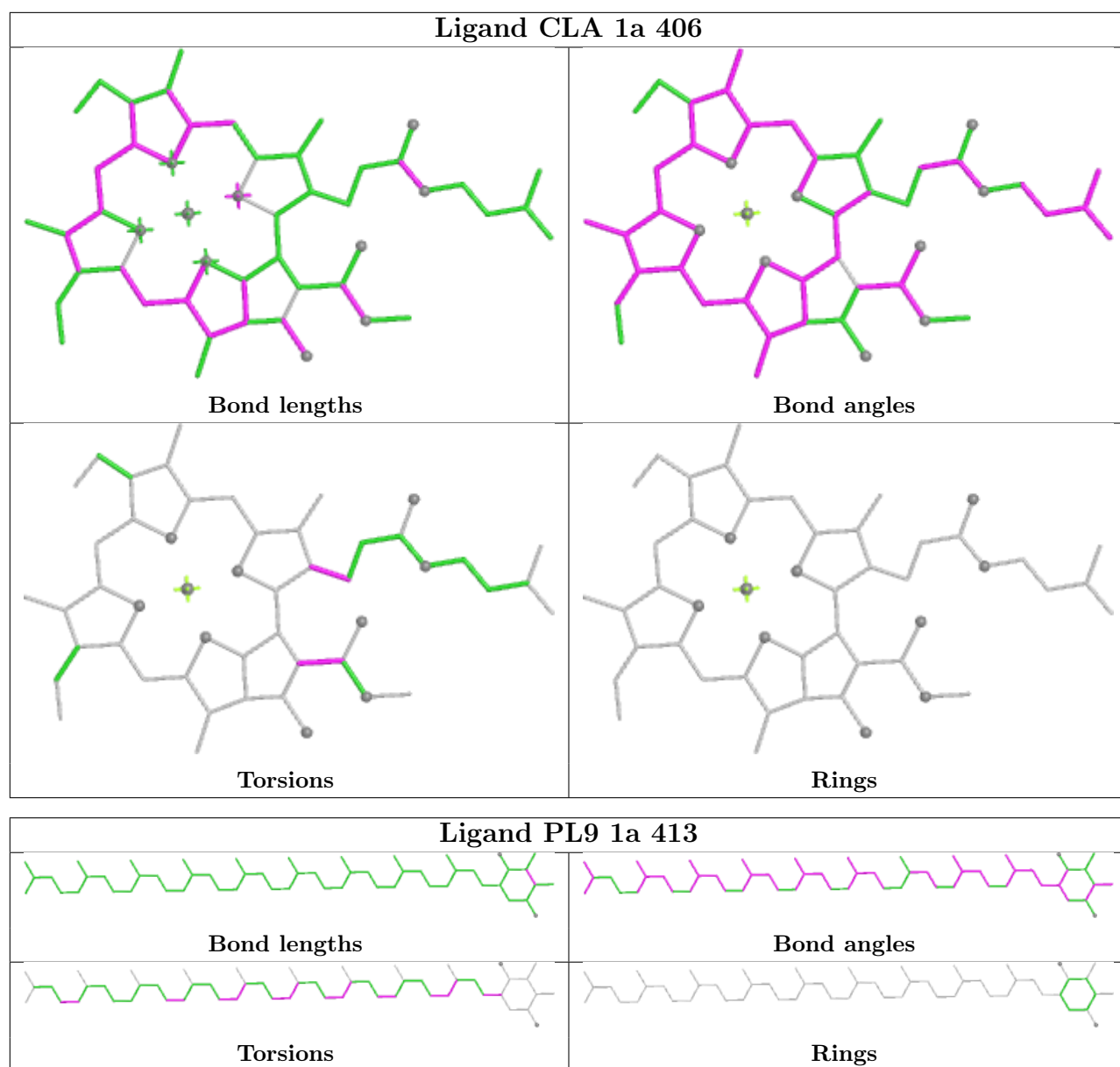


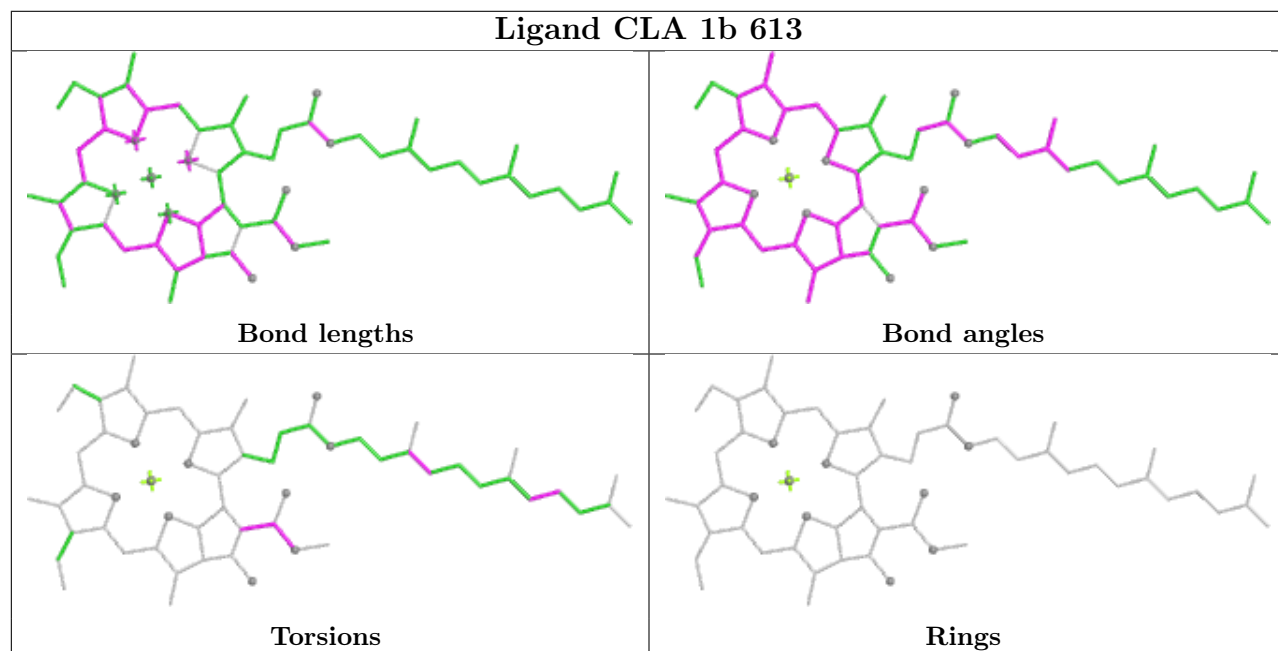
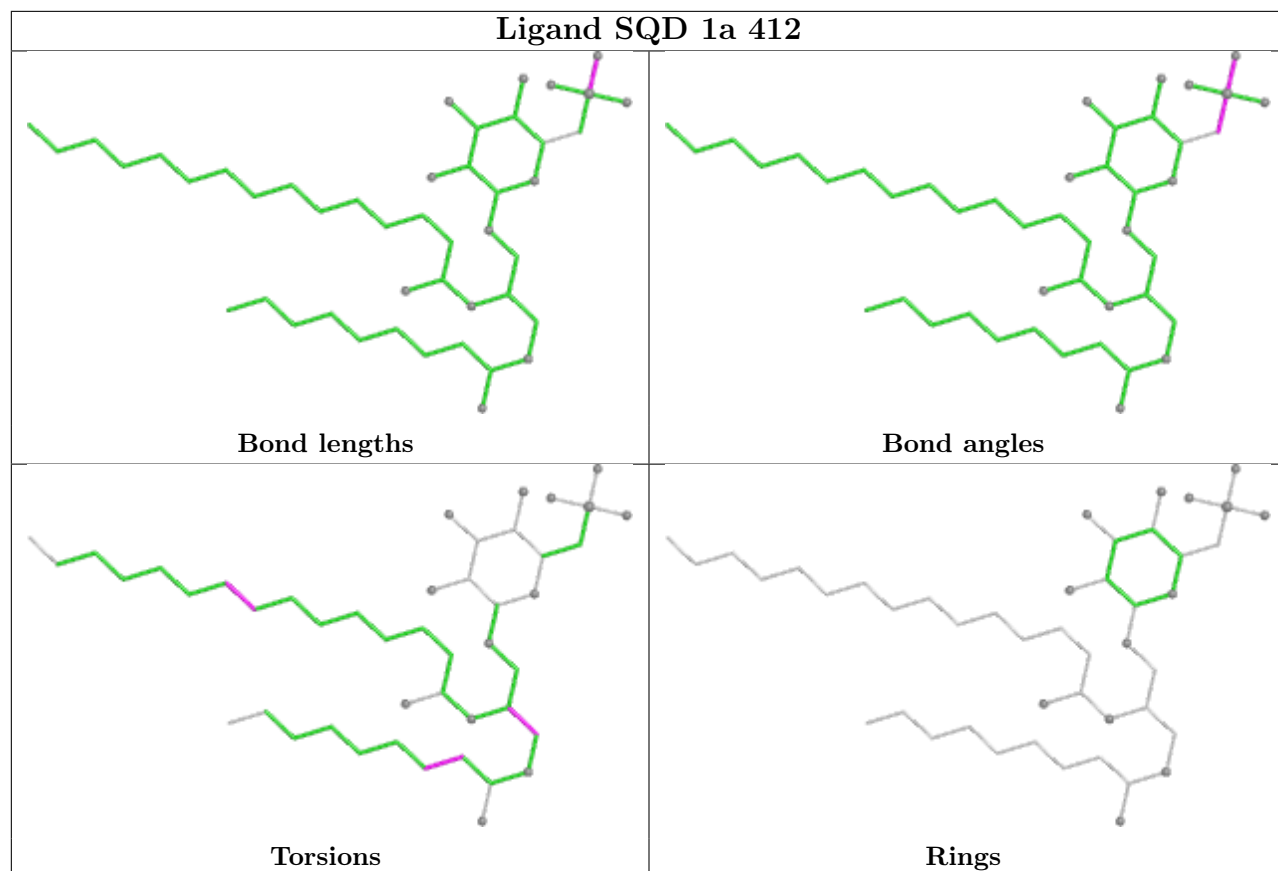


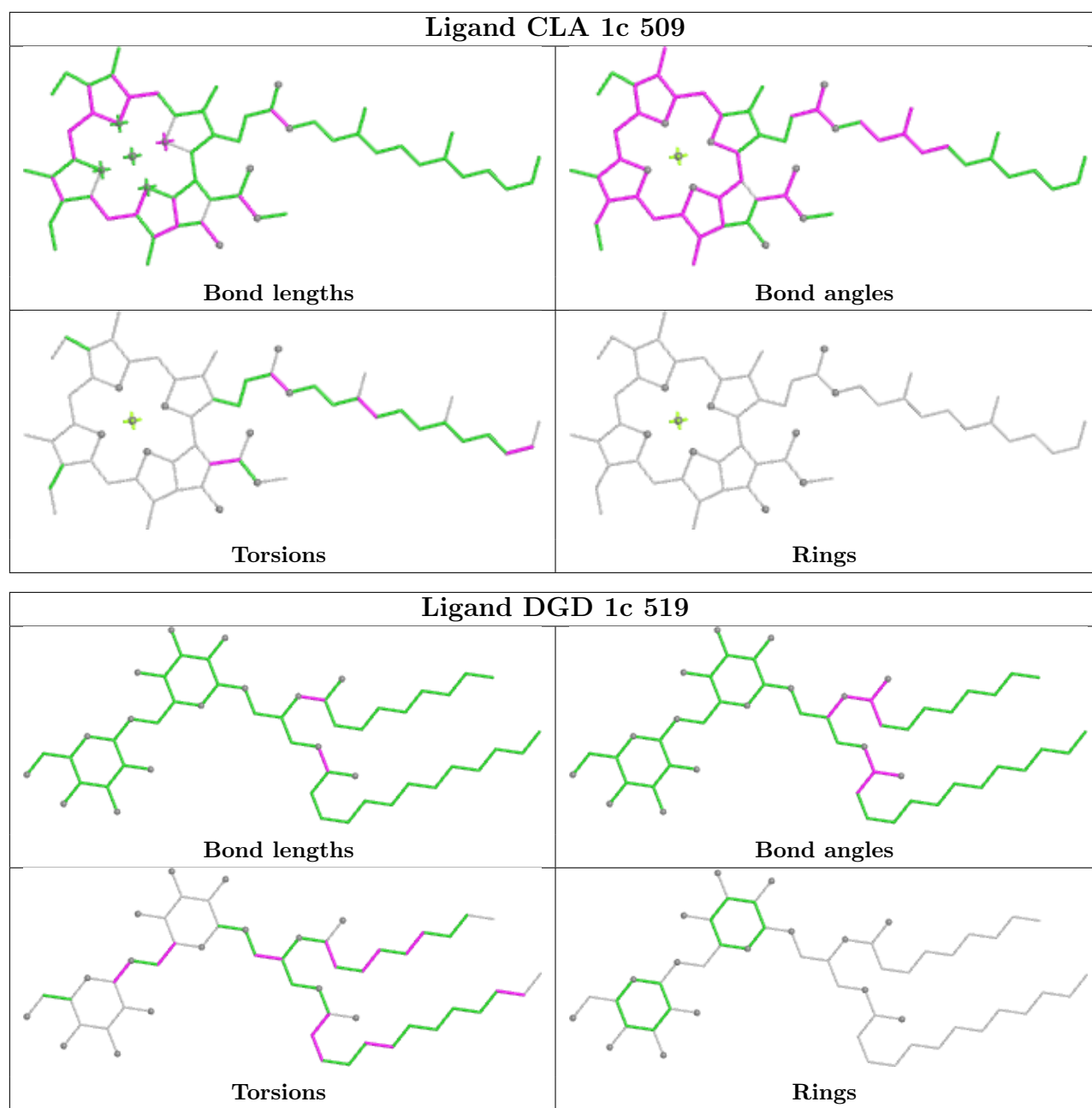


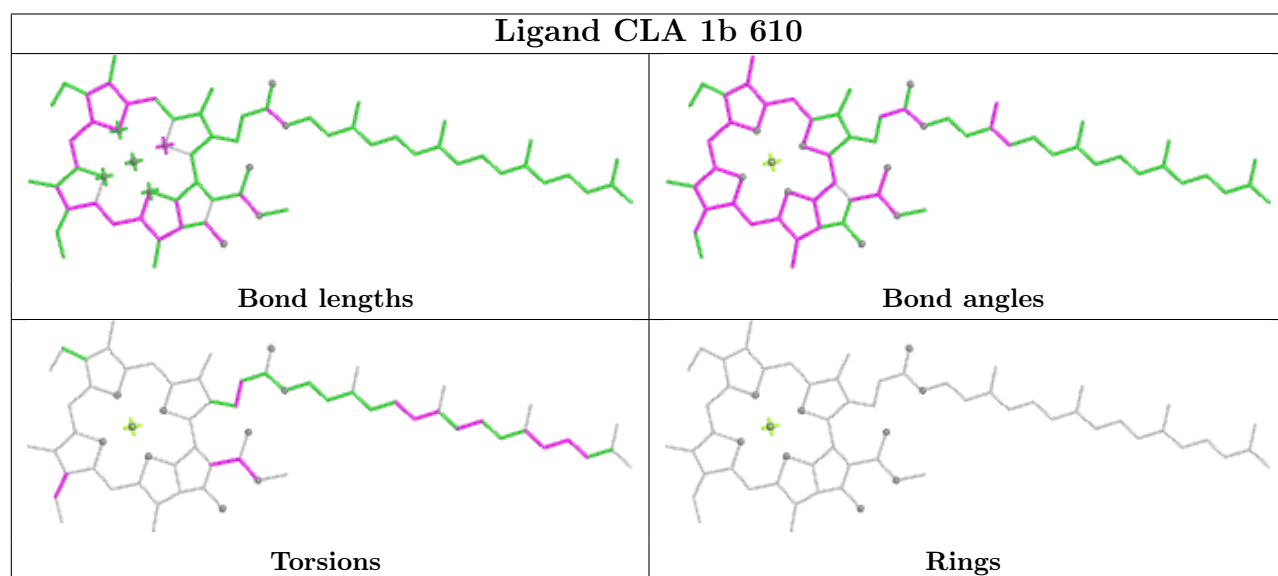
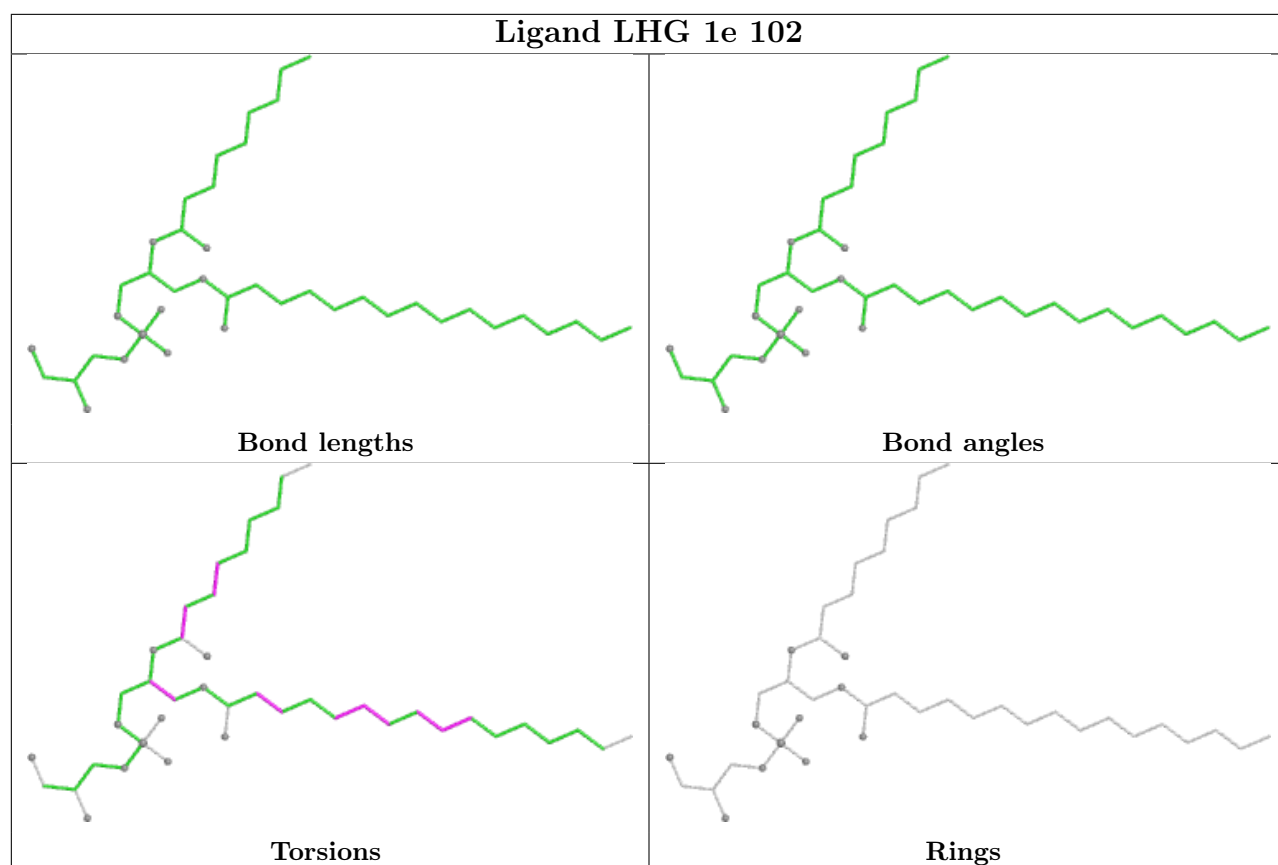


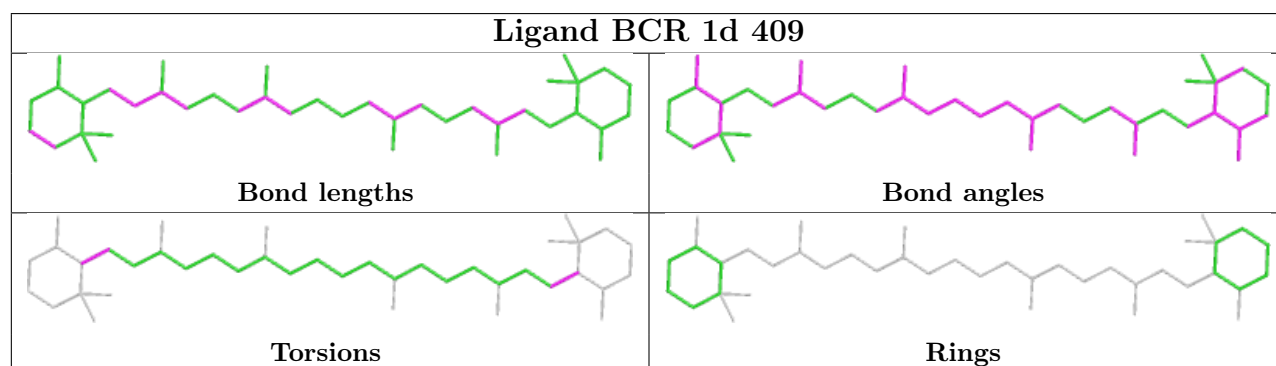
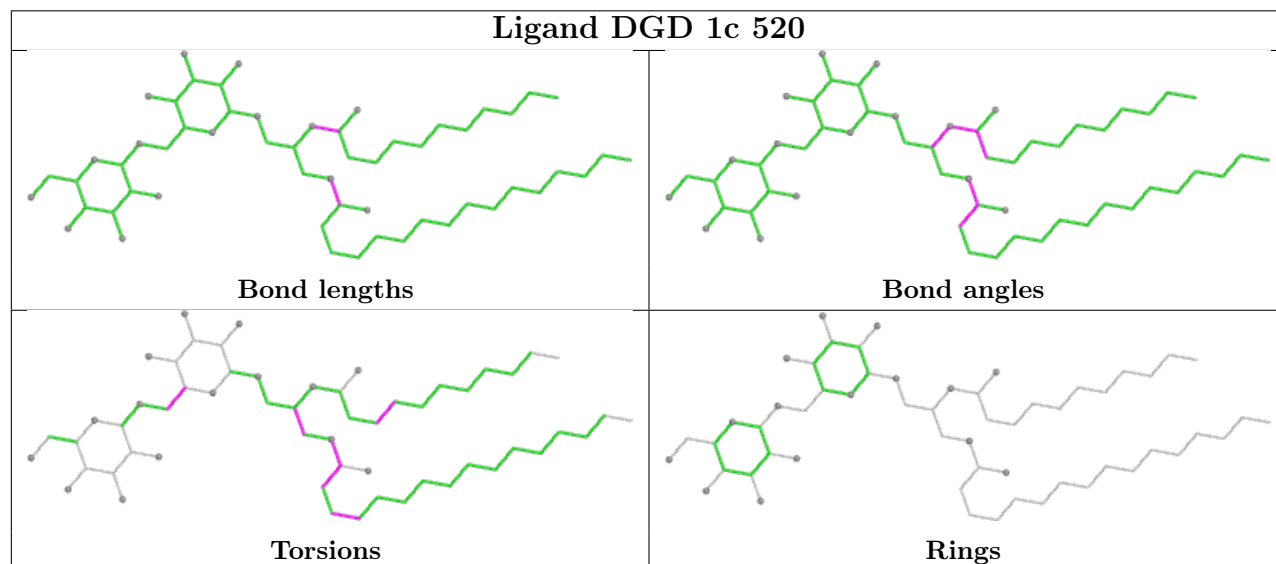
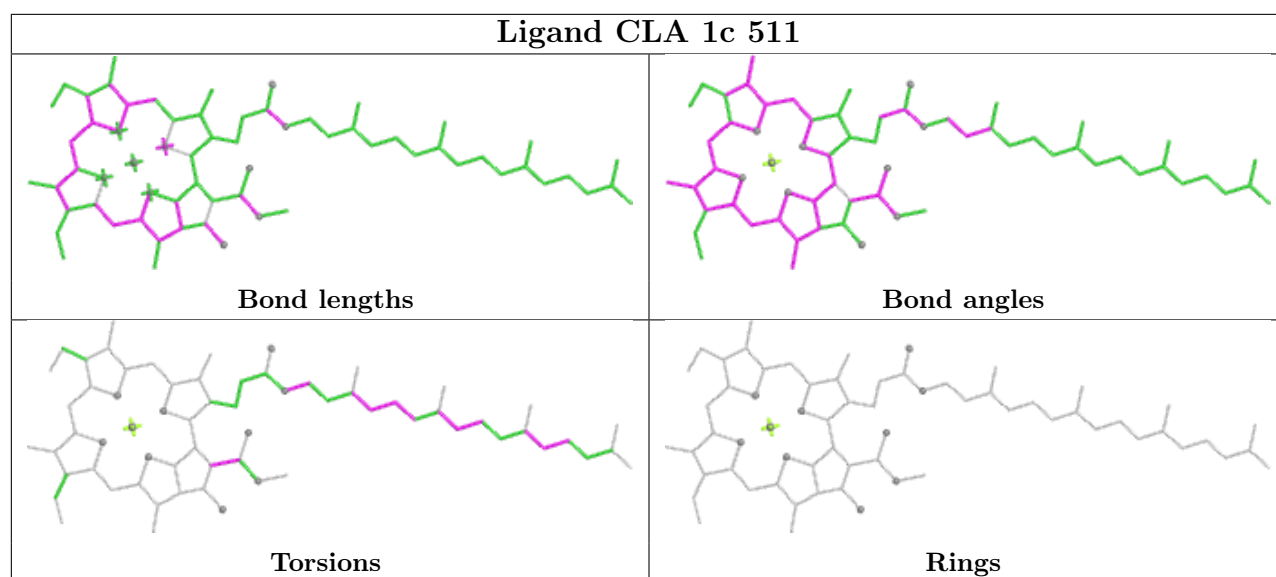


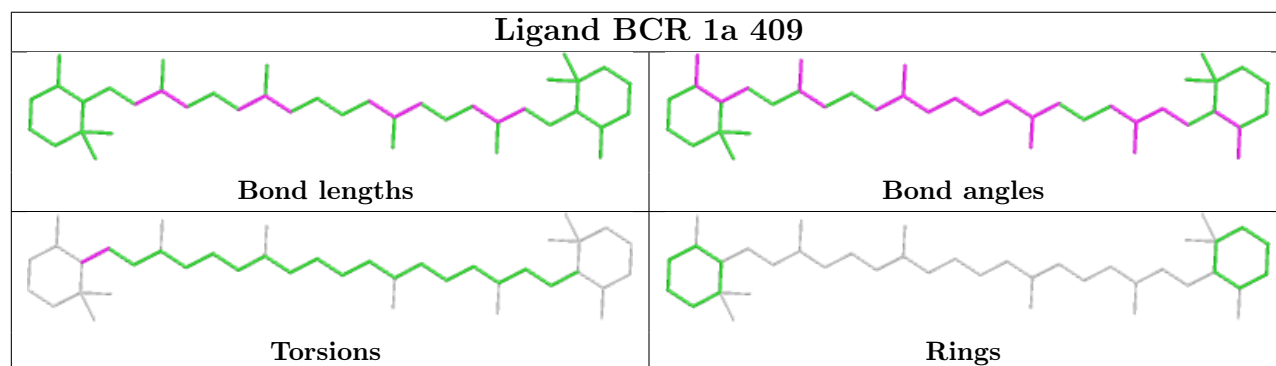
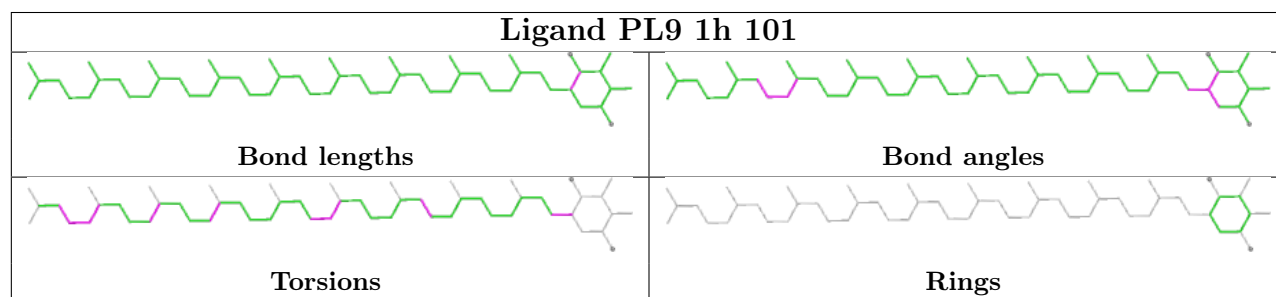
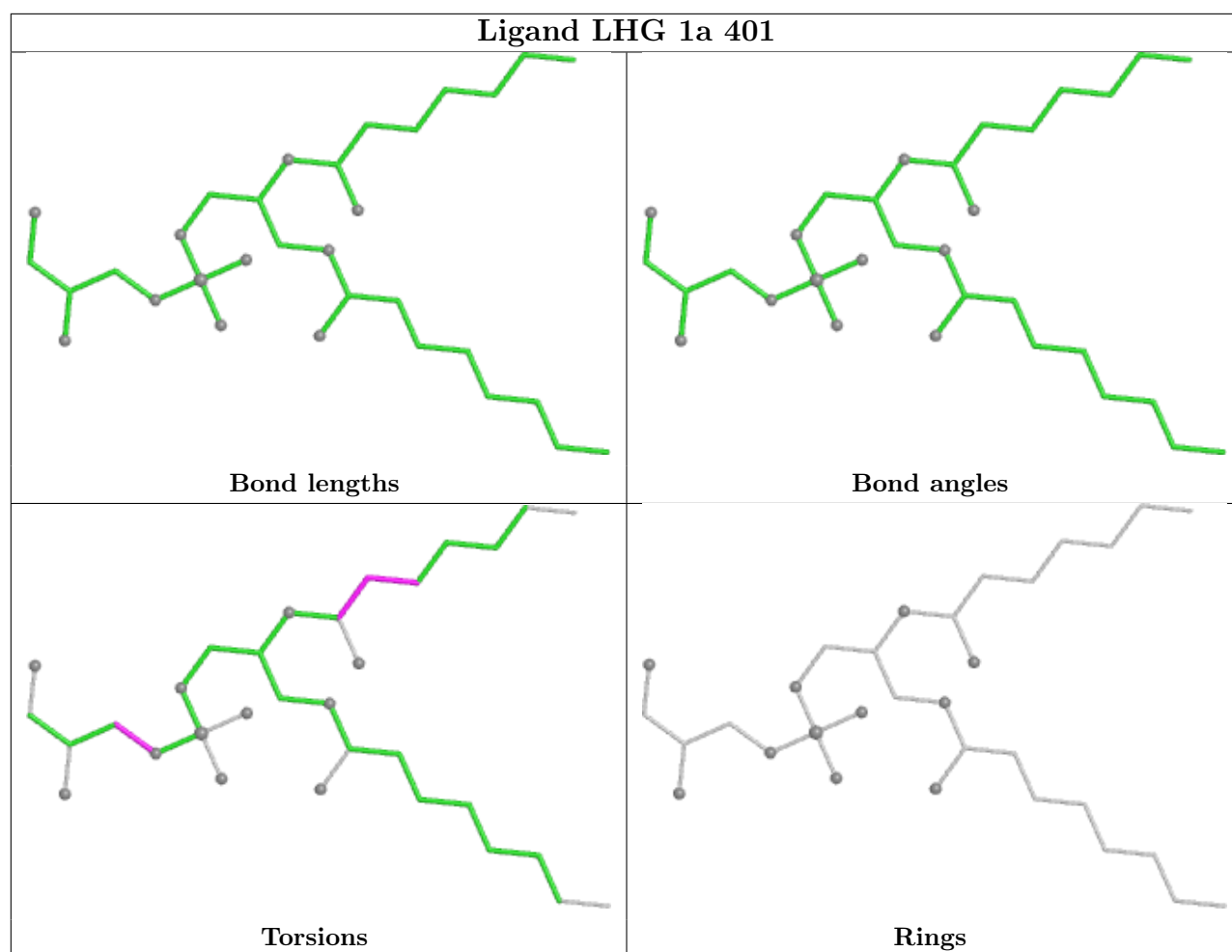


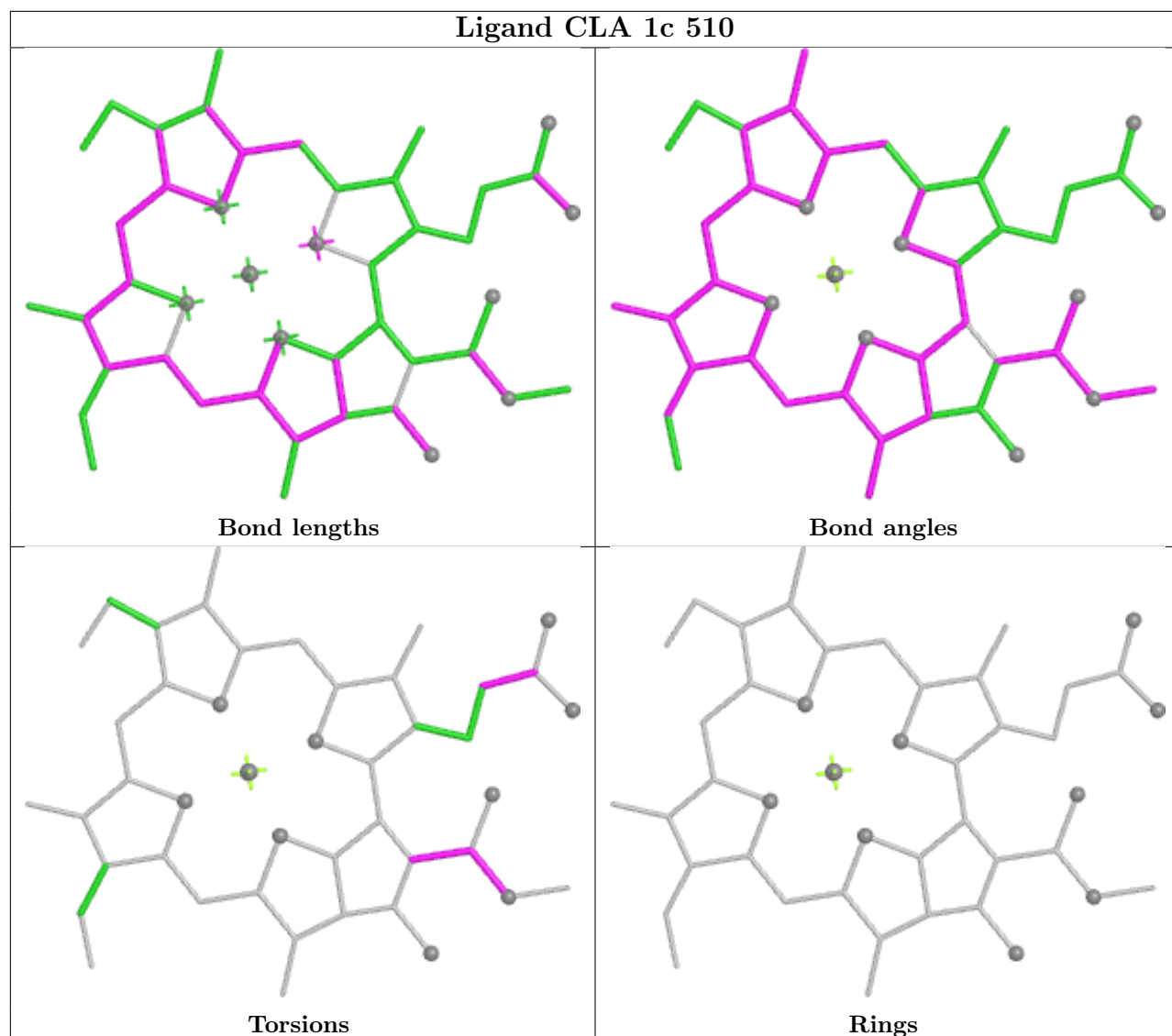
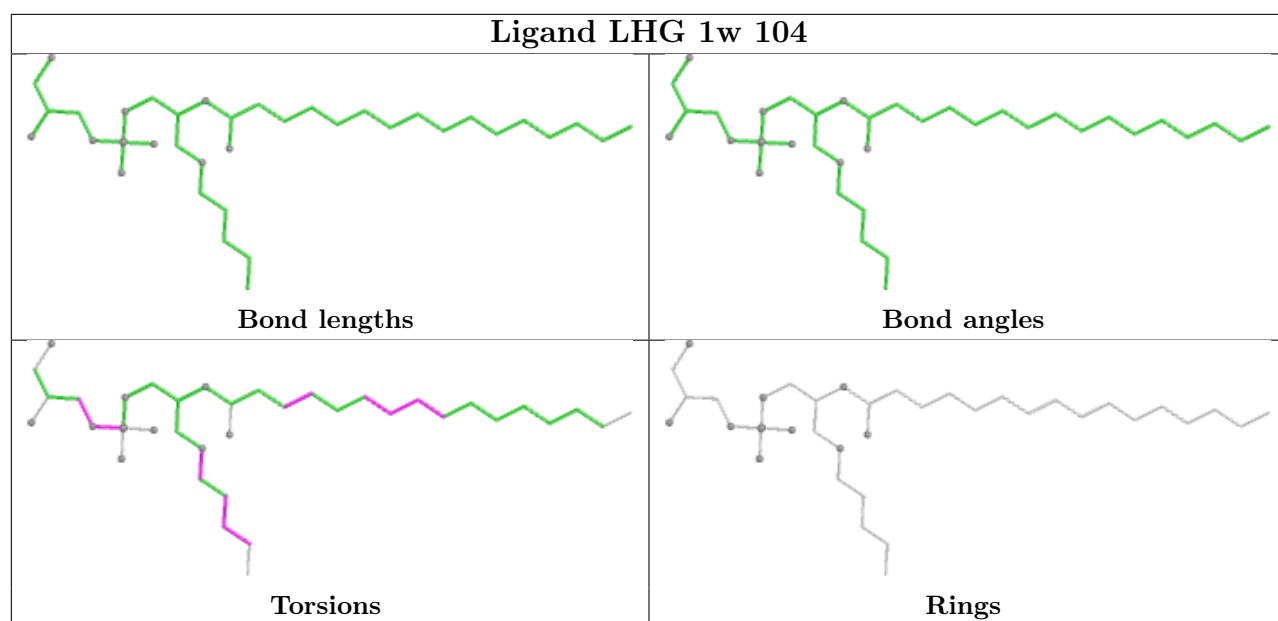


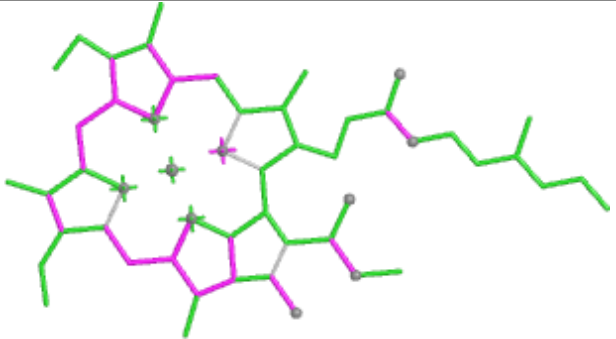
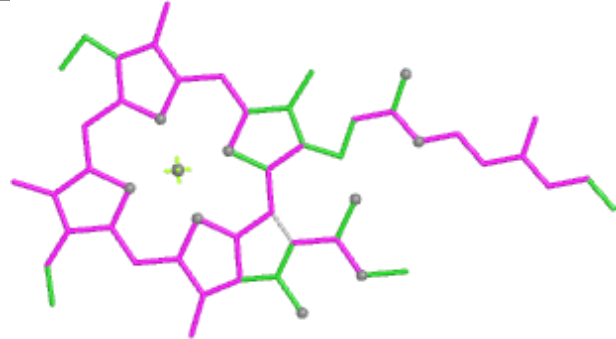
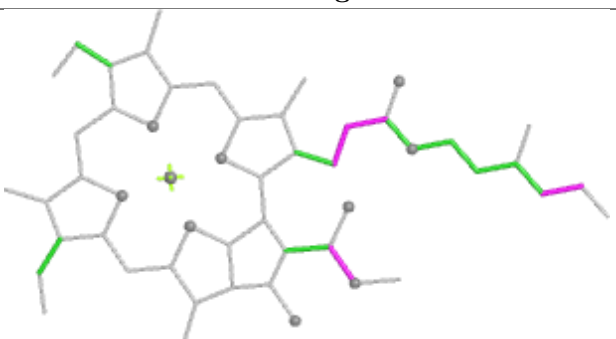
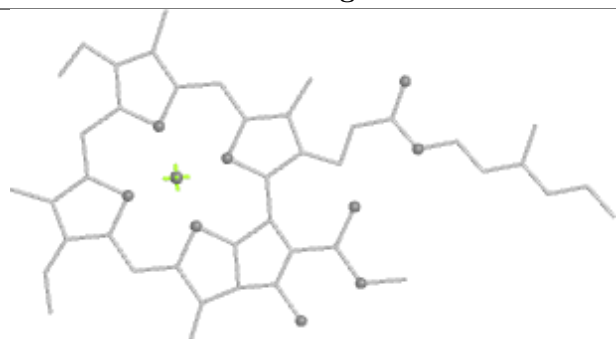


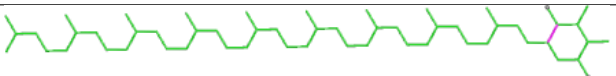
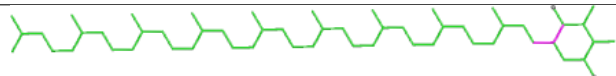
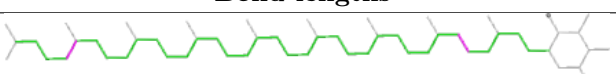
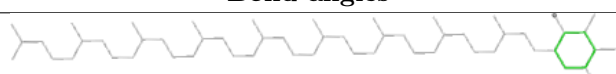


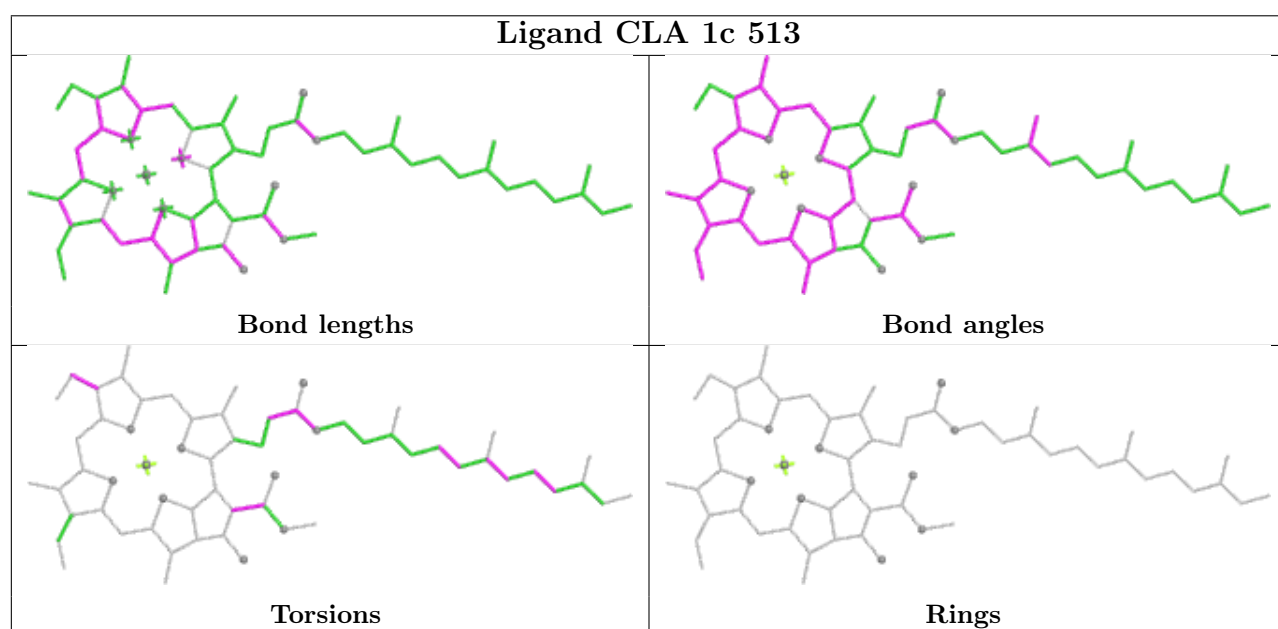
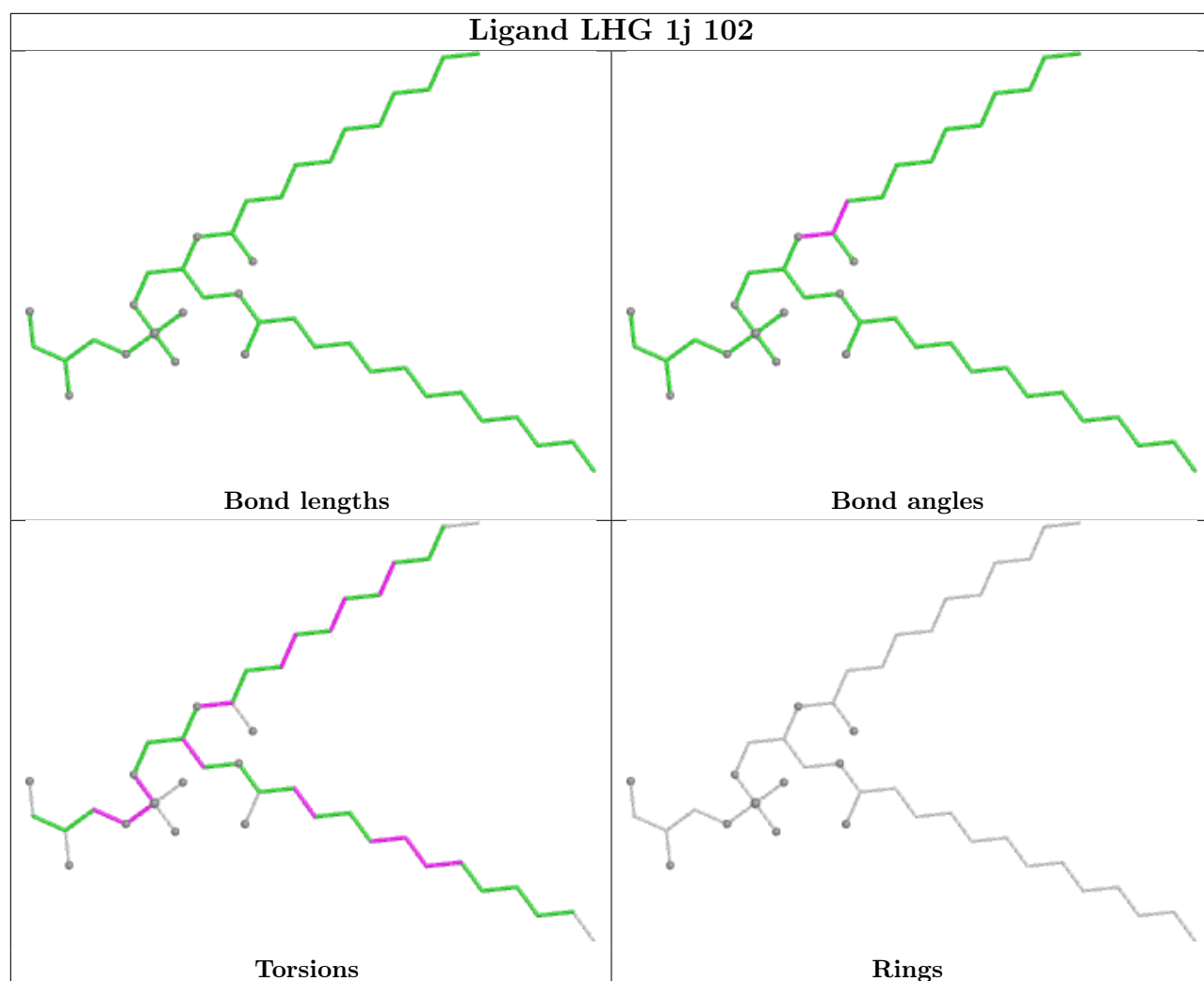


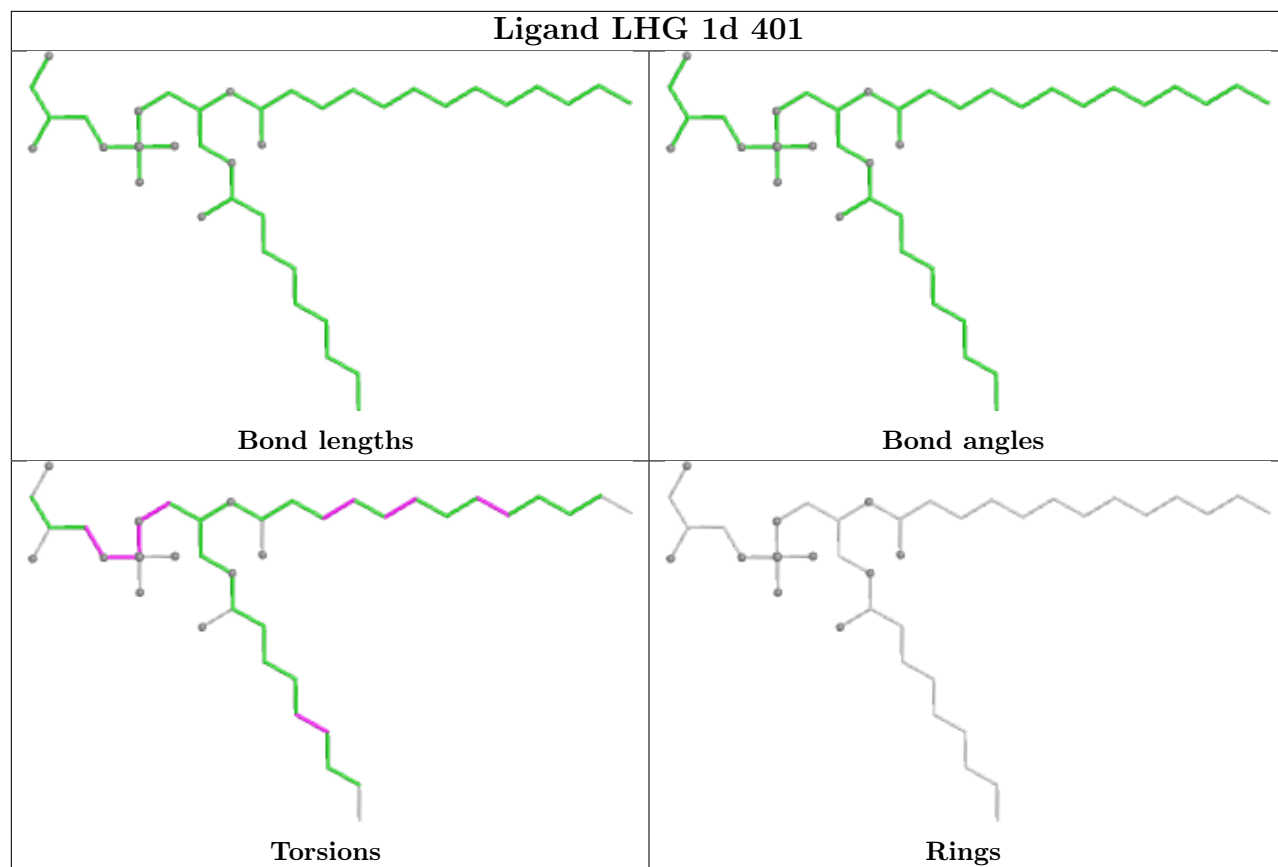




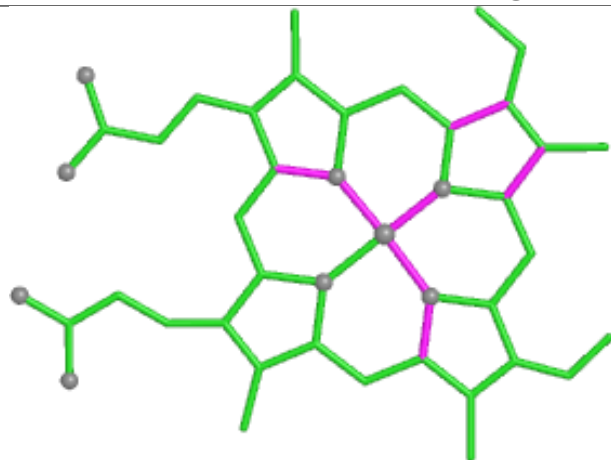
Ligand CLA 1a 405	
	
Bond lengths	Bond angles
	
Torsions	Rings

Ligand PL9 1d 410	
	
Bond lengths	Bond angles
	
Torsions	Rings

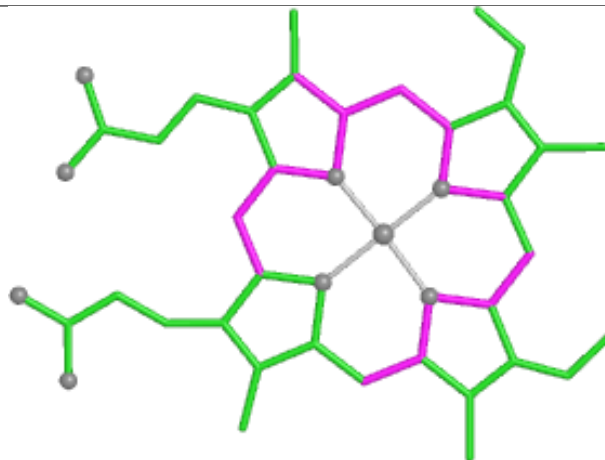




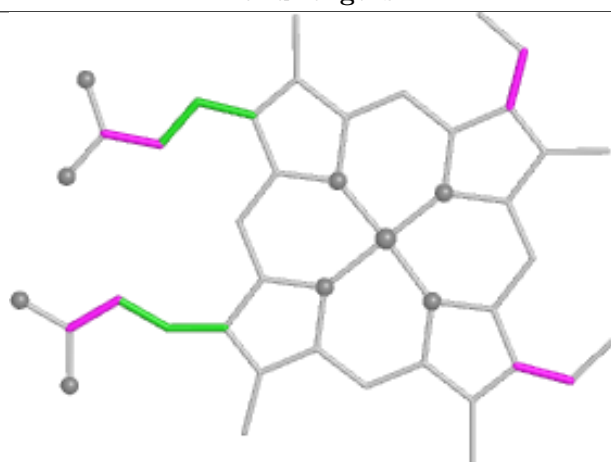
Ligand HEM 1f 101



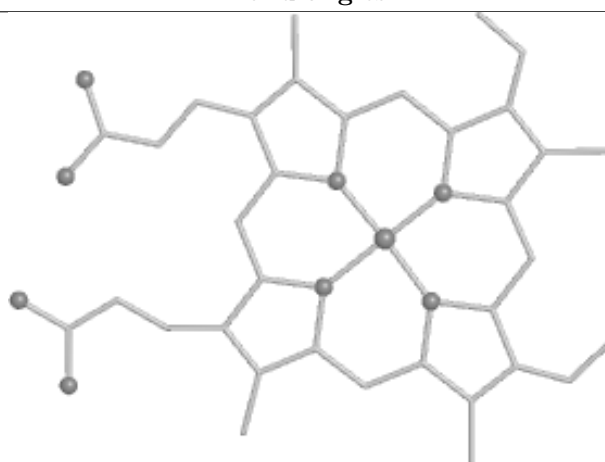
Bond lengths



Bond angles

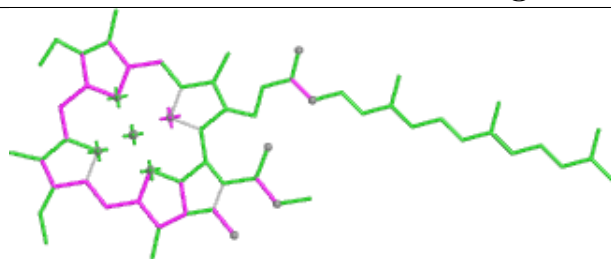


Torsions

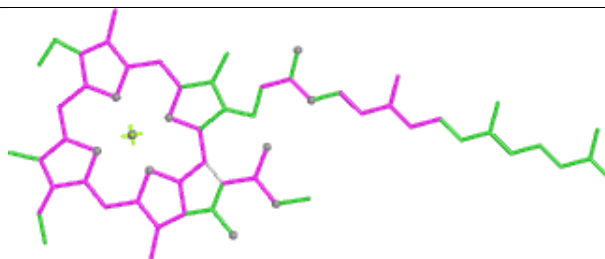


Rings

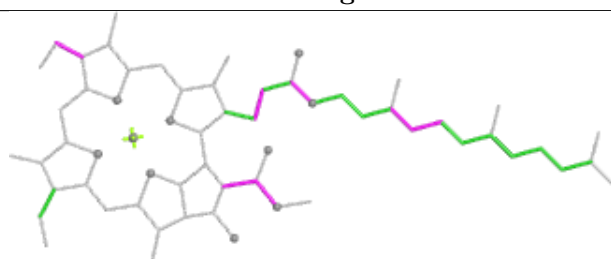
Ligand CLA 1c 503



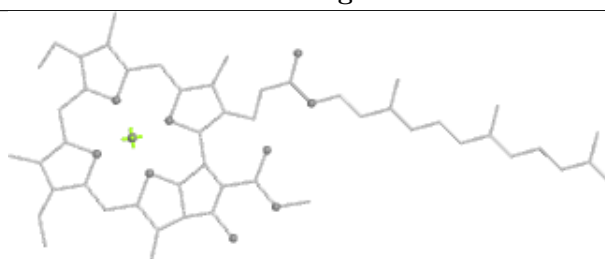
Bond lengths



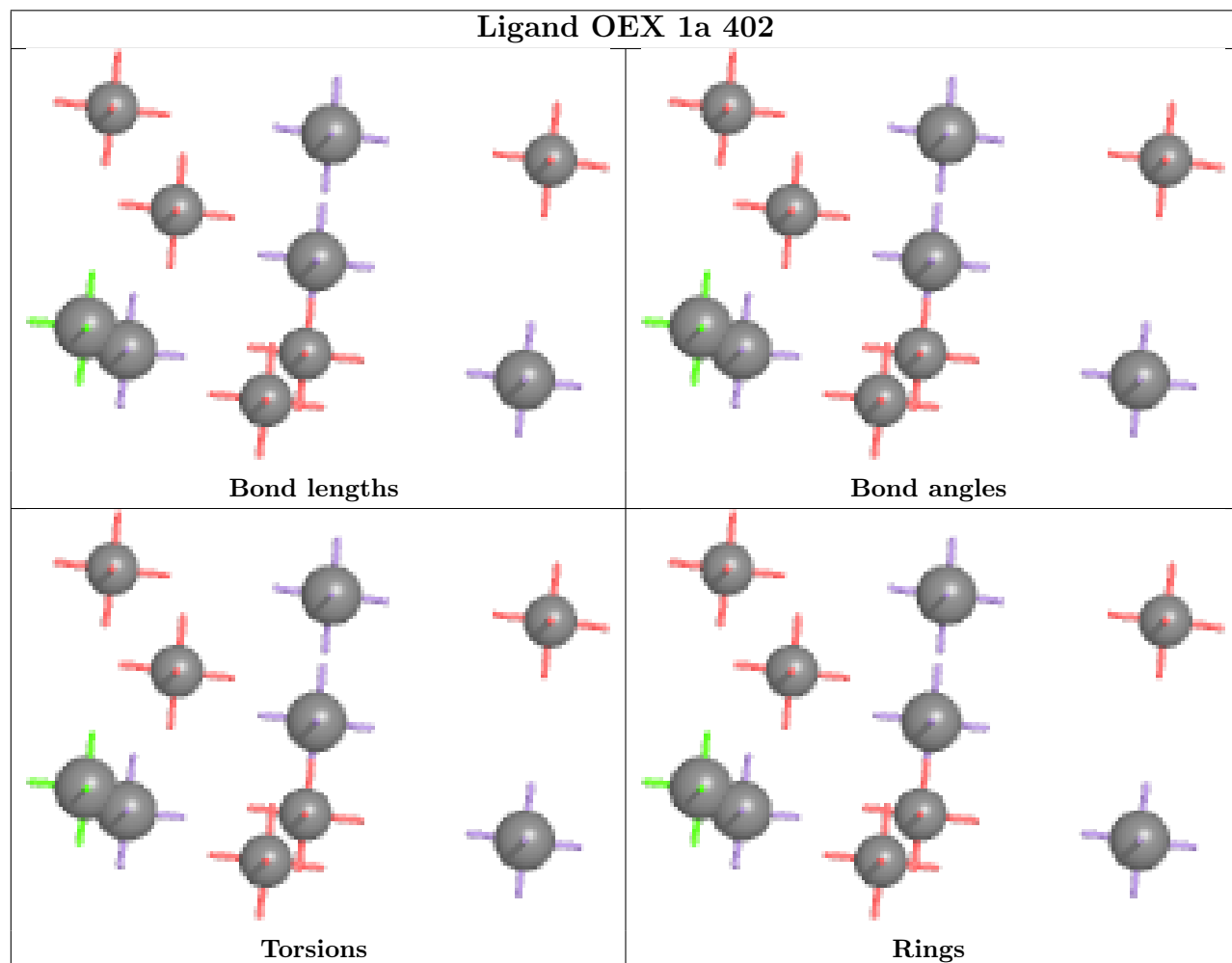
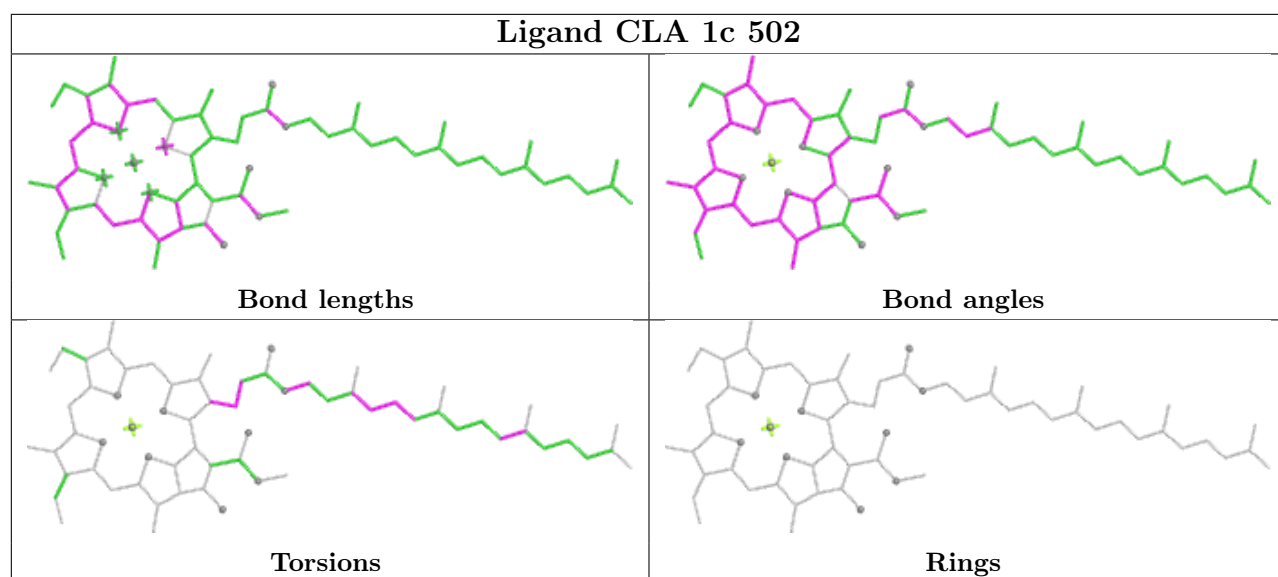
Bond angles

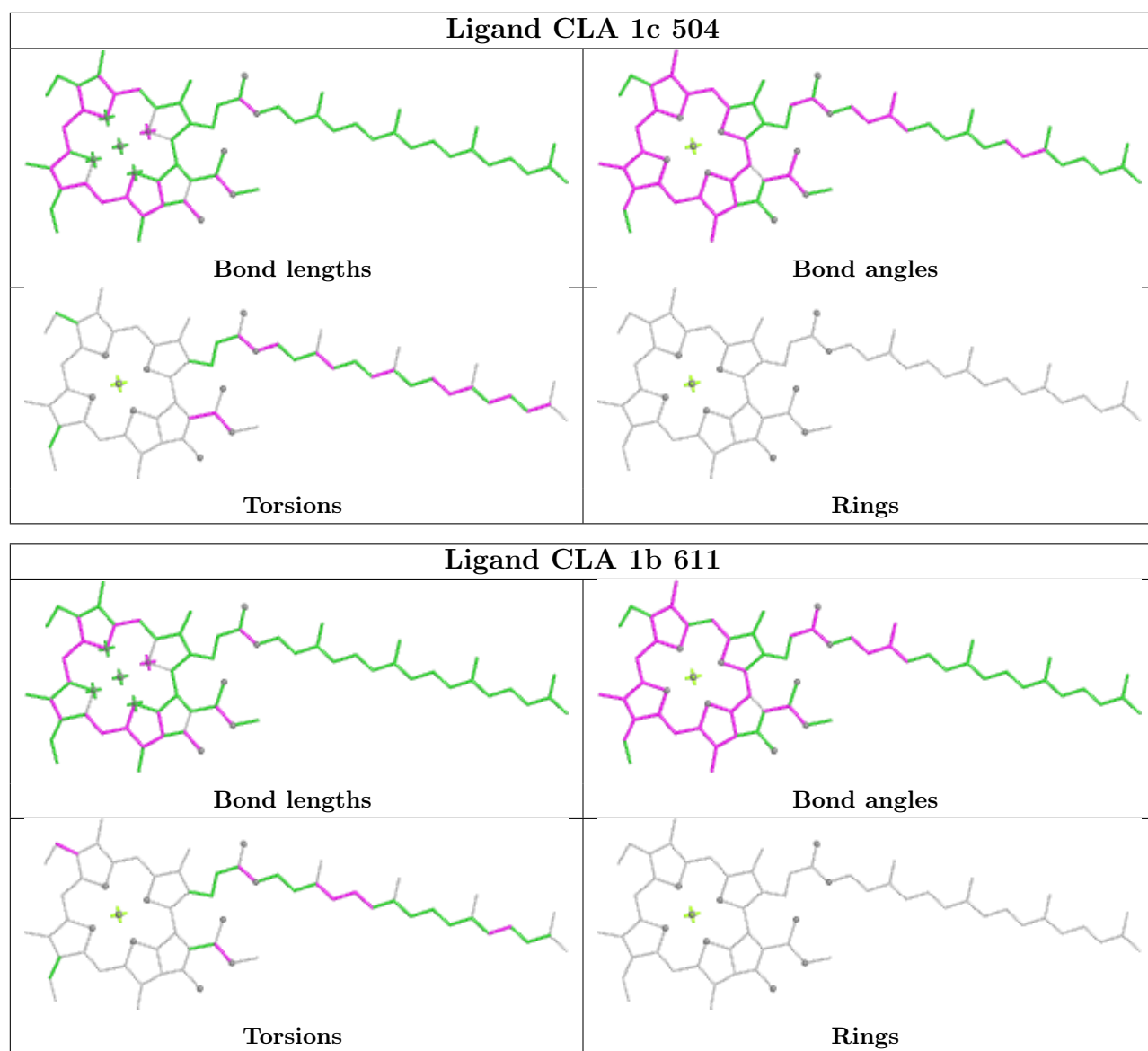


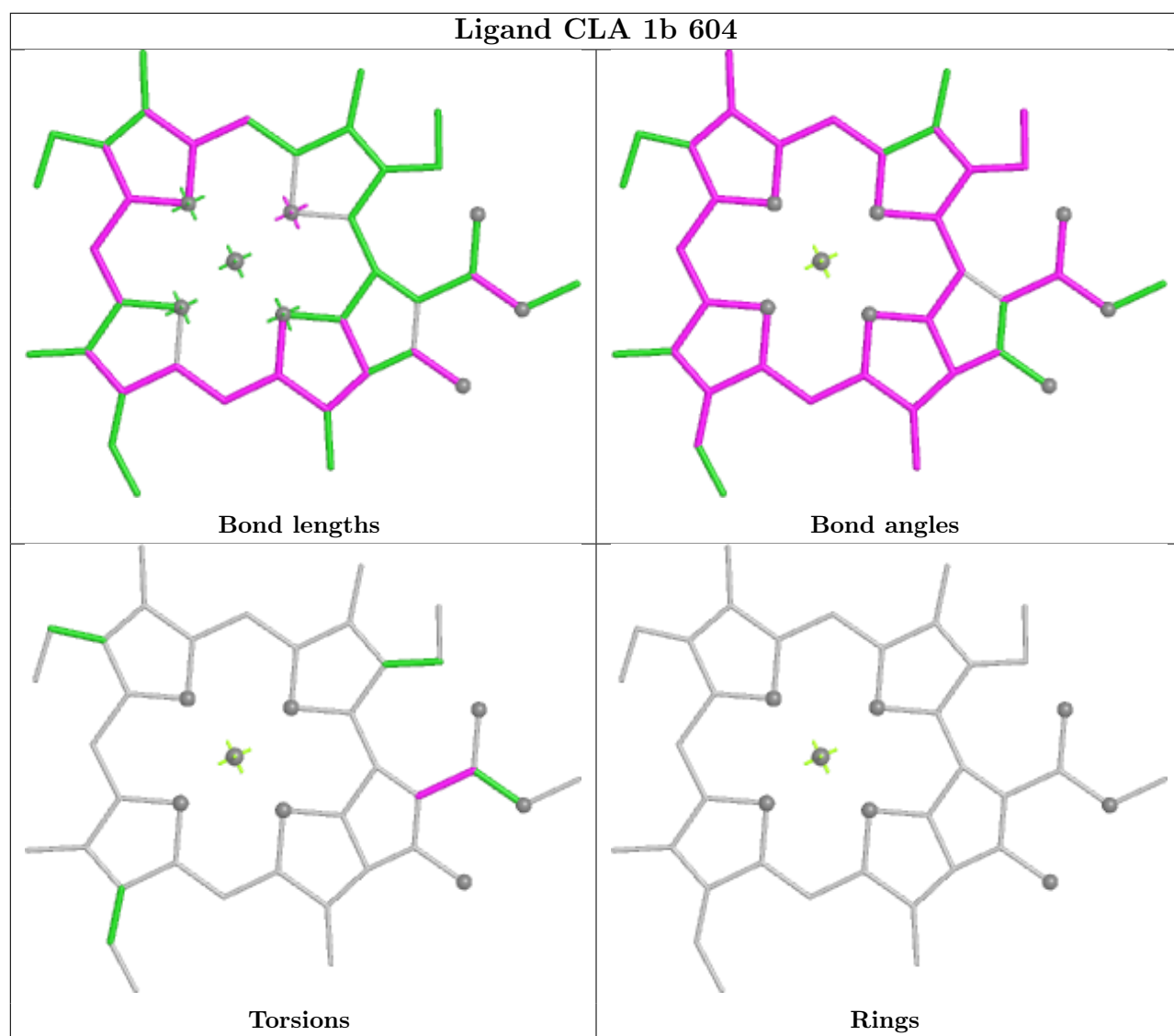
Torsions

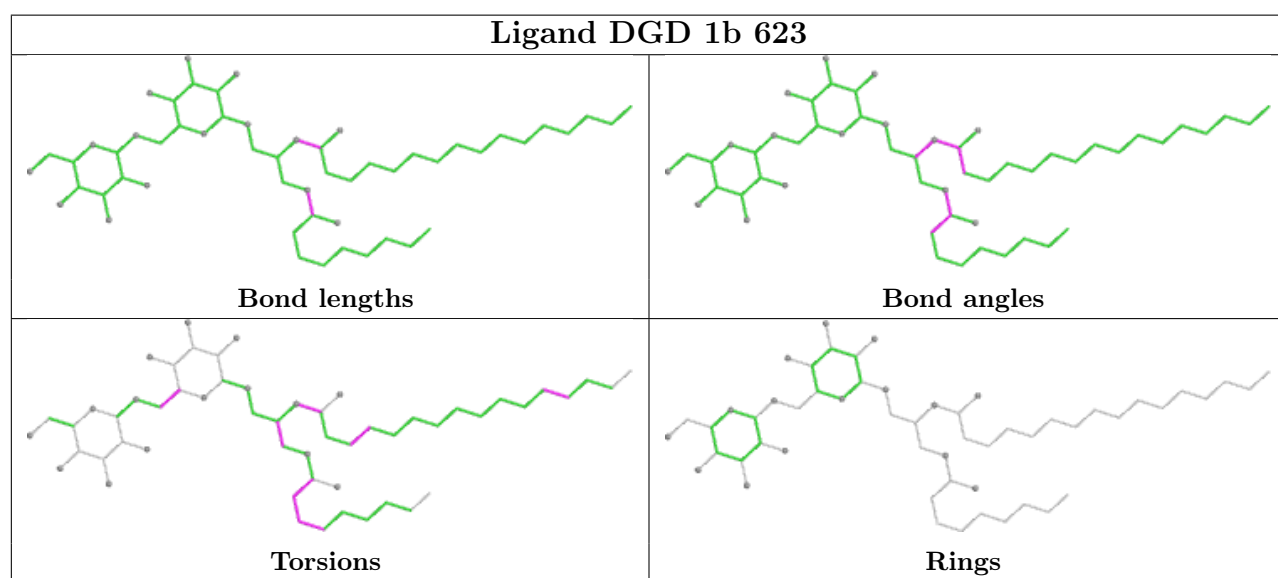
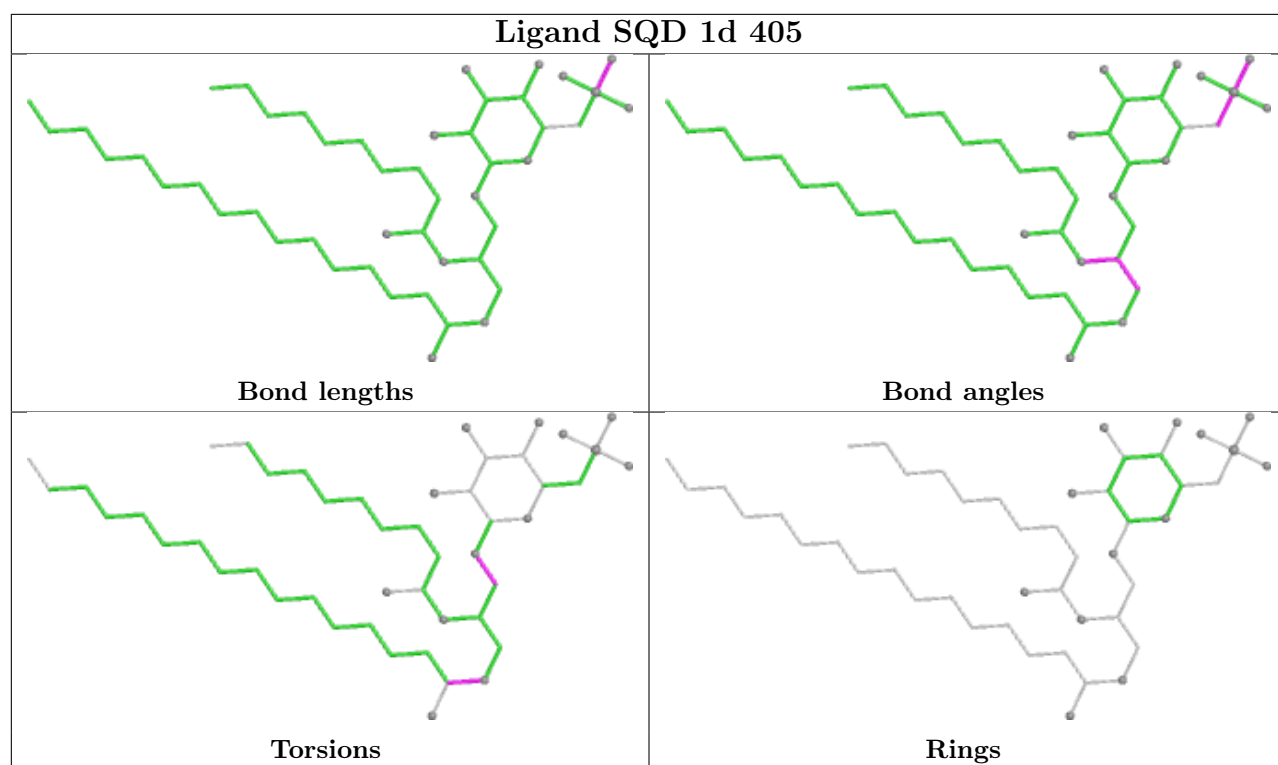


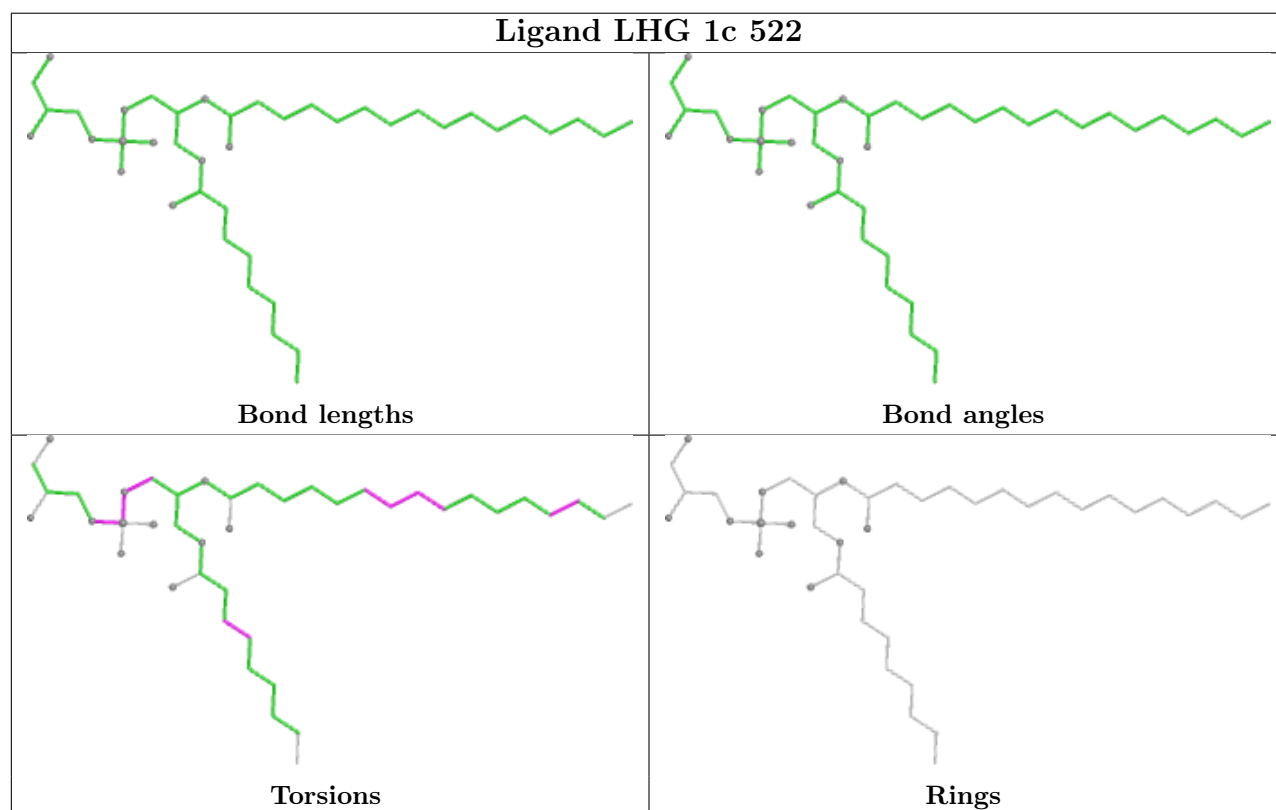
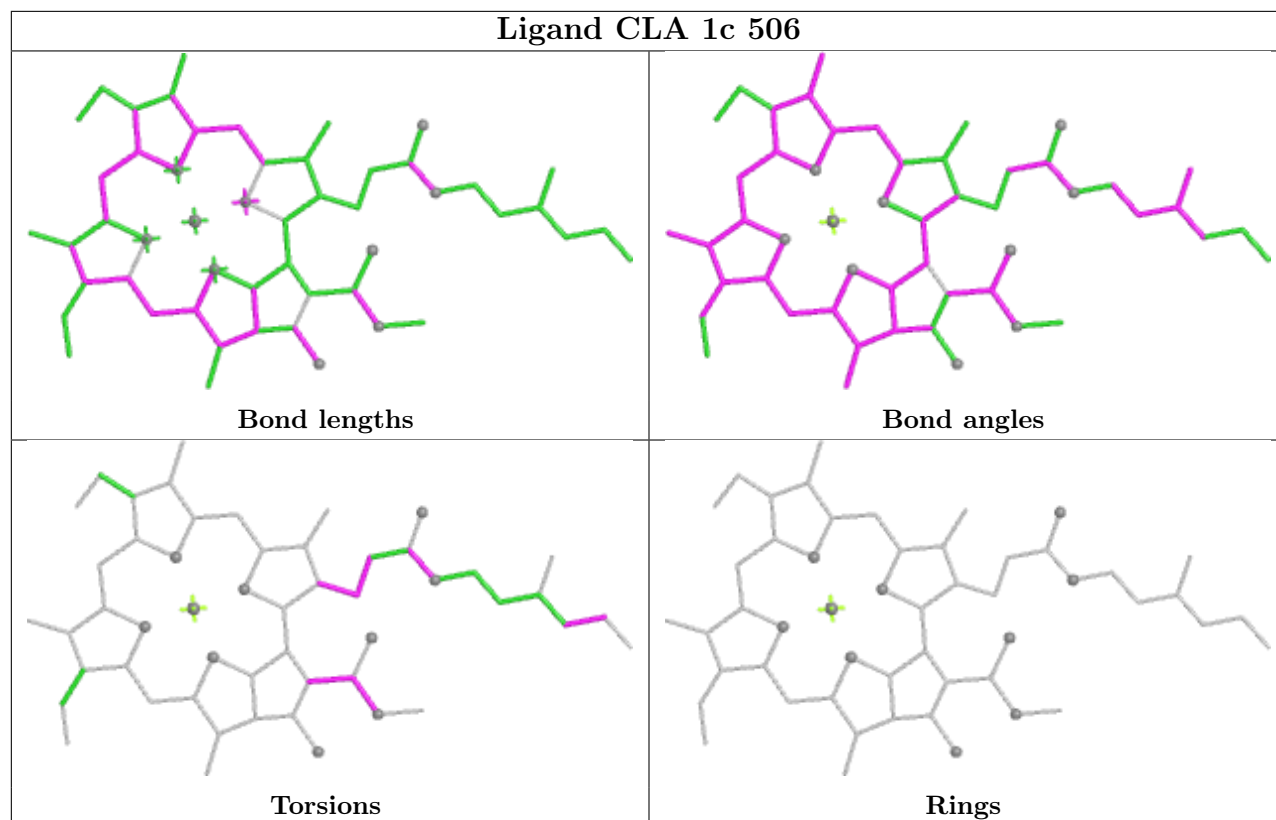
Rings

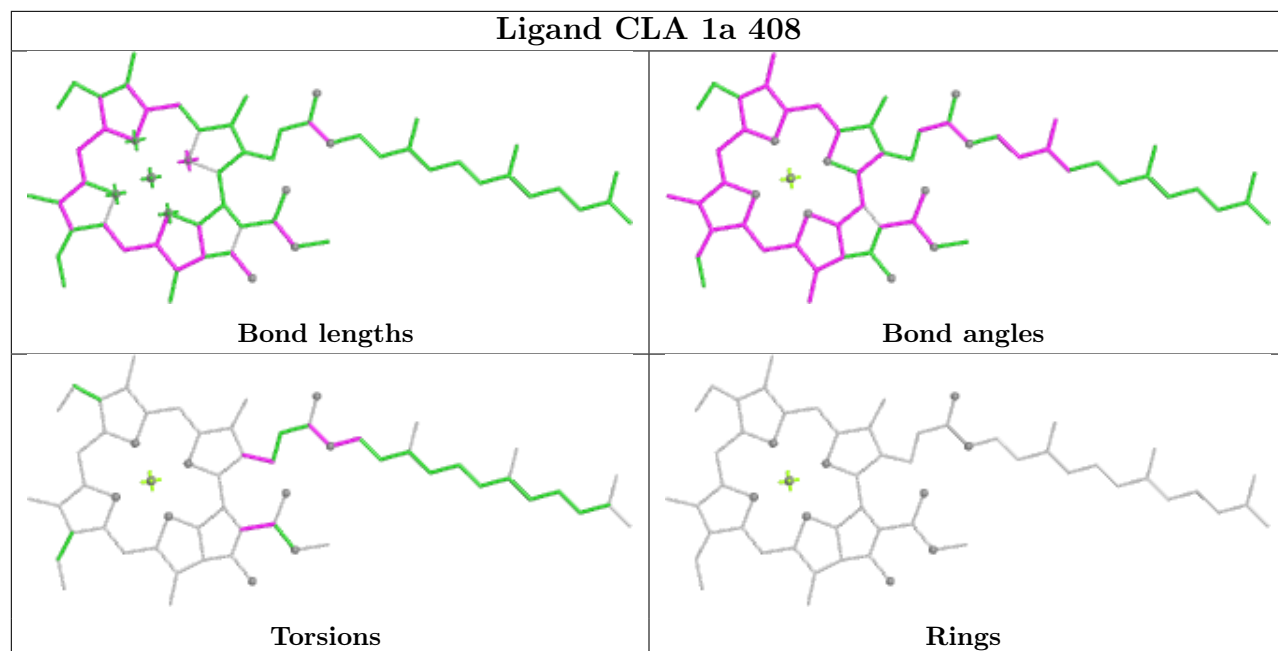


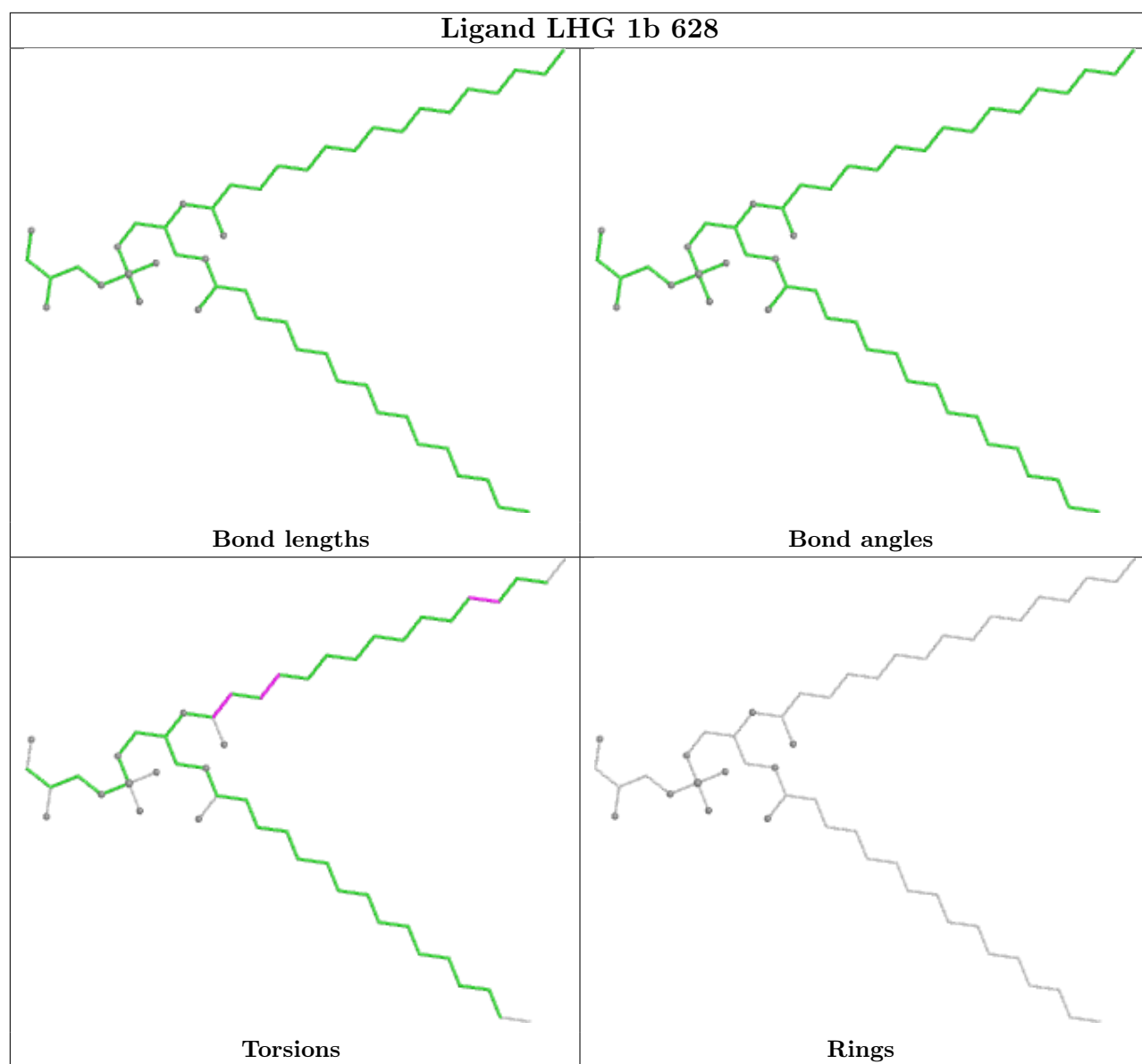


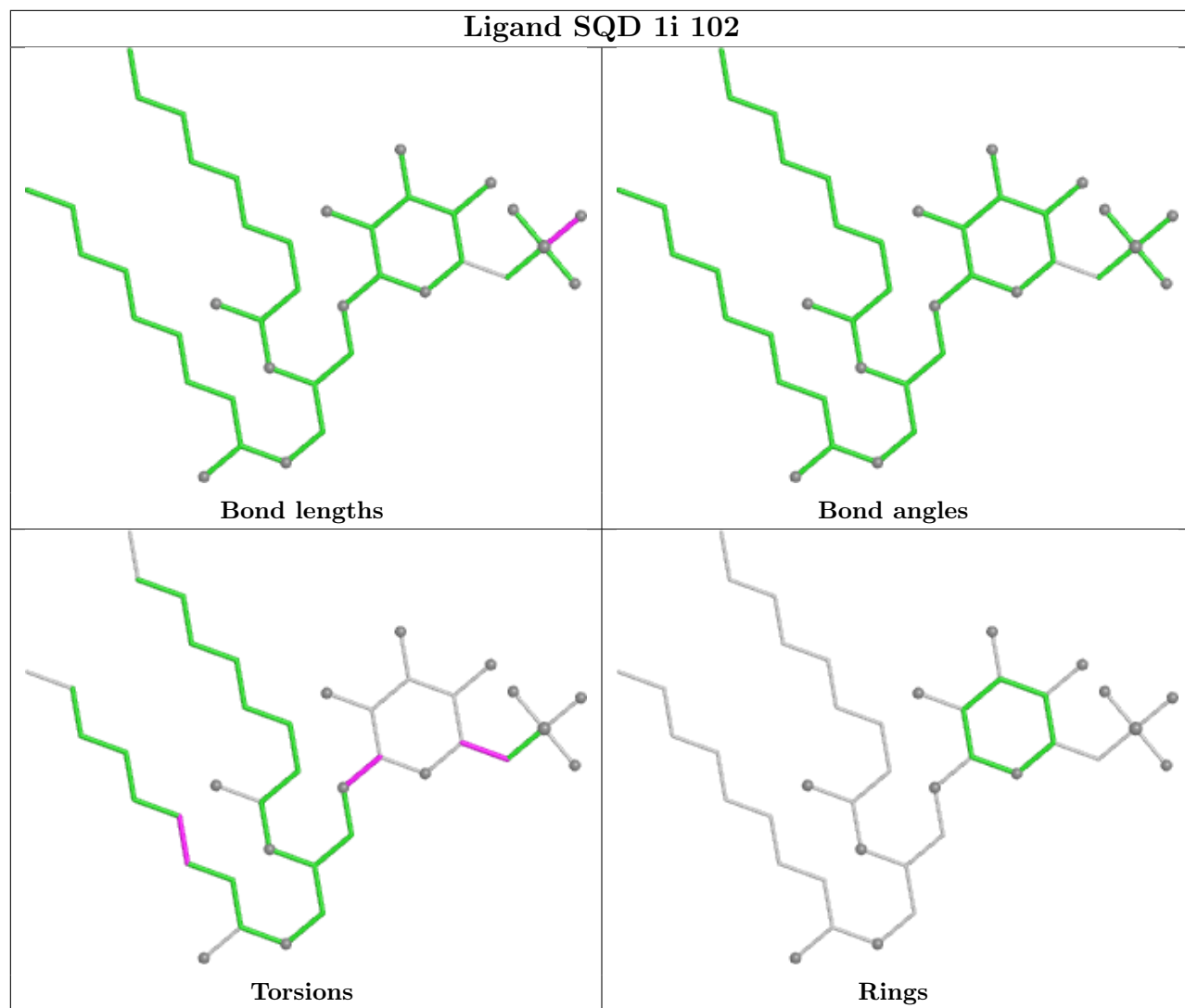


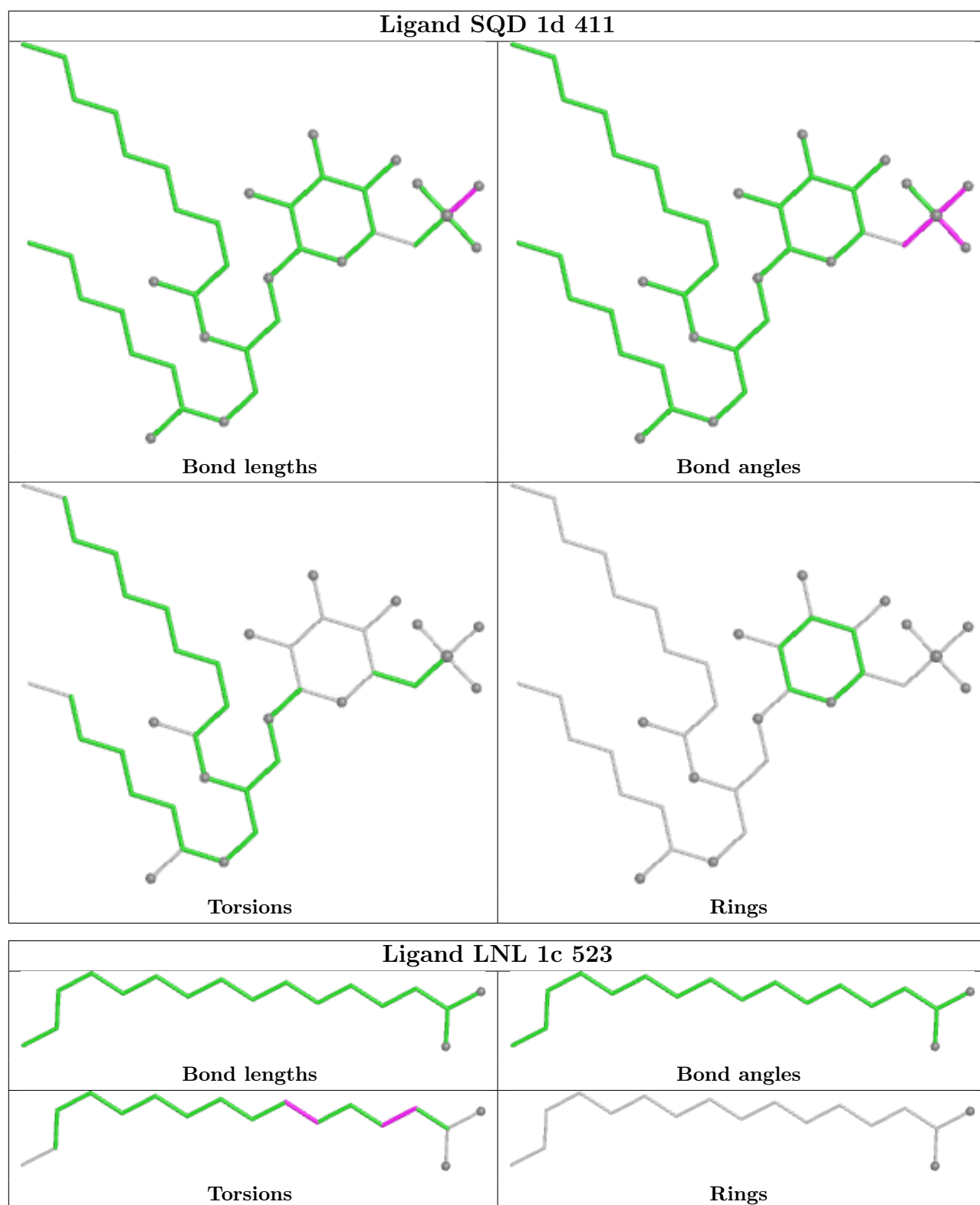


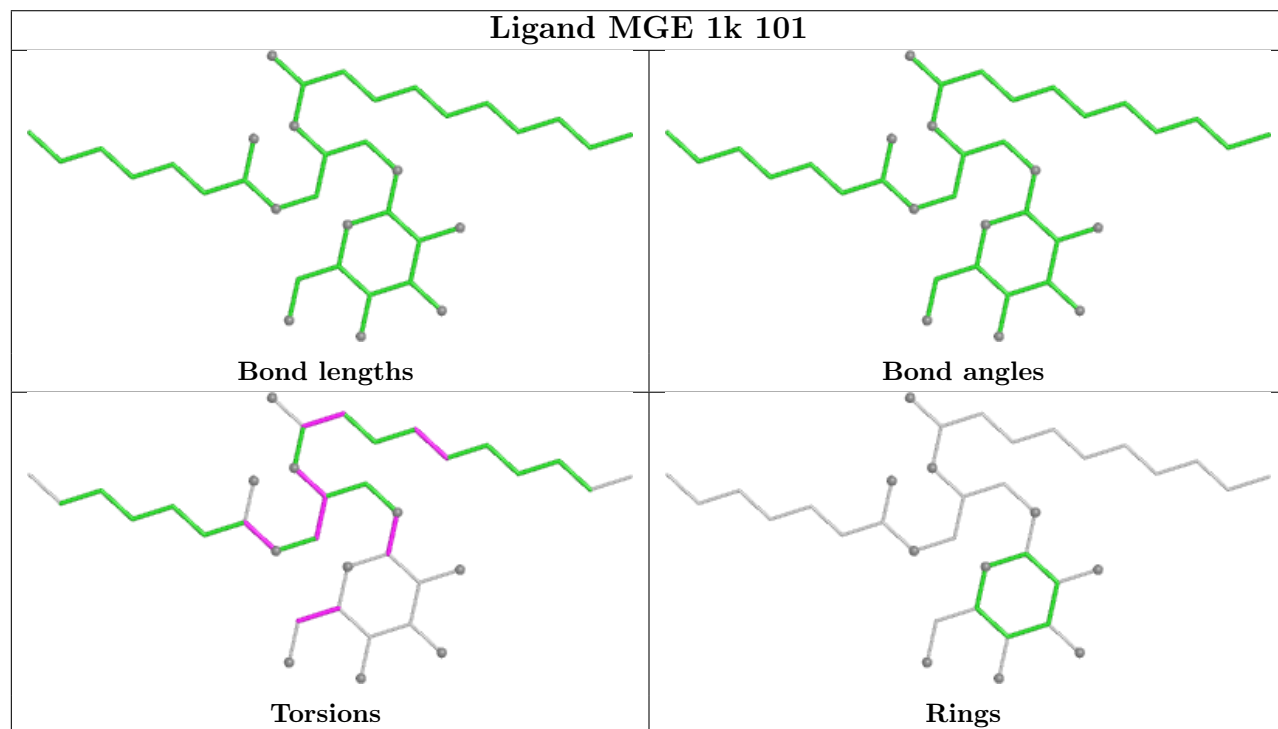
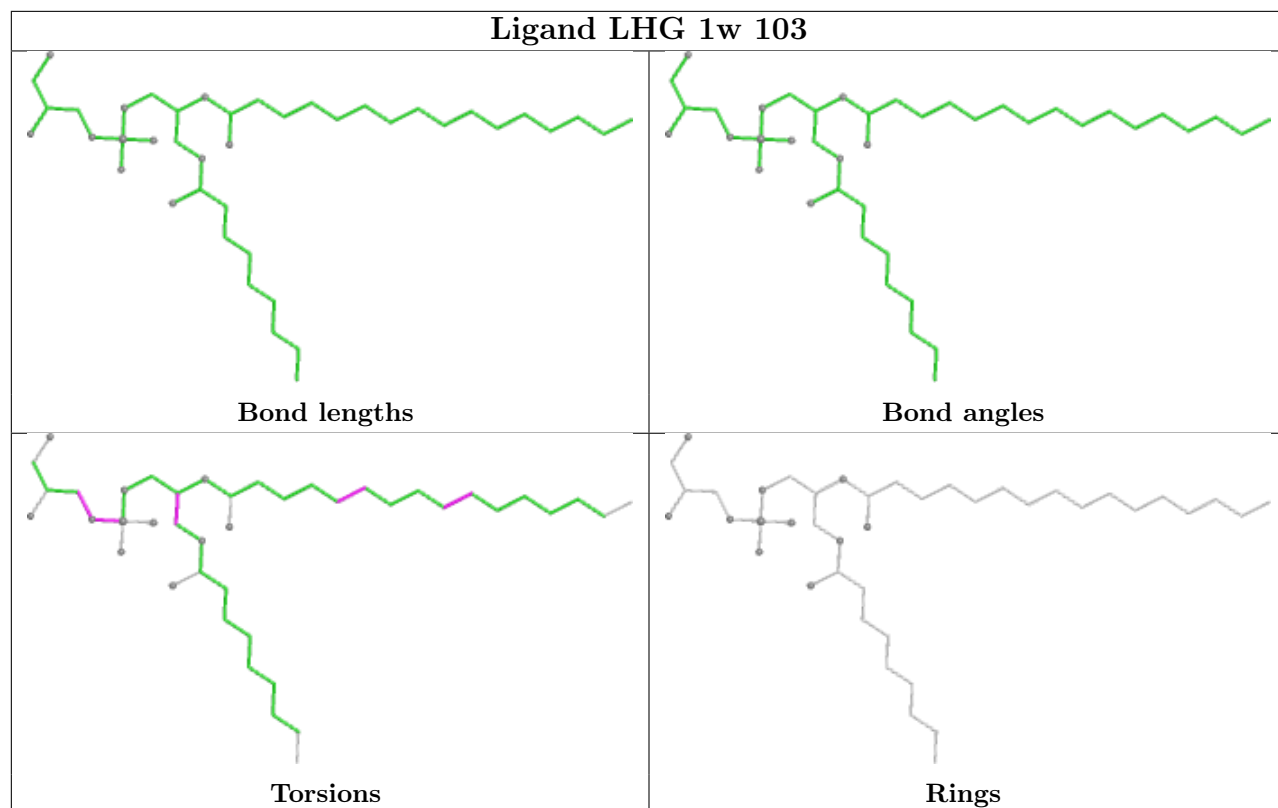


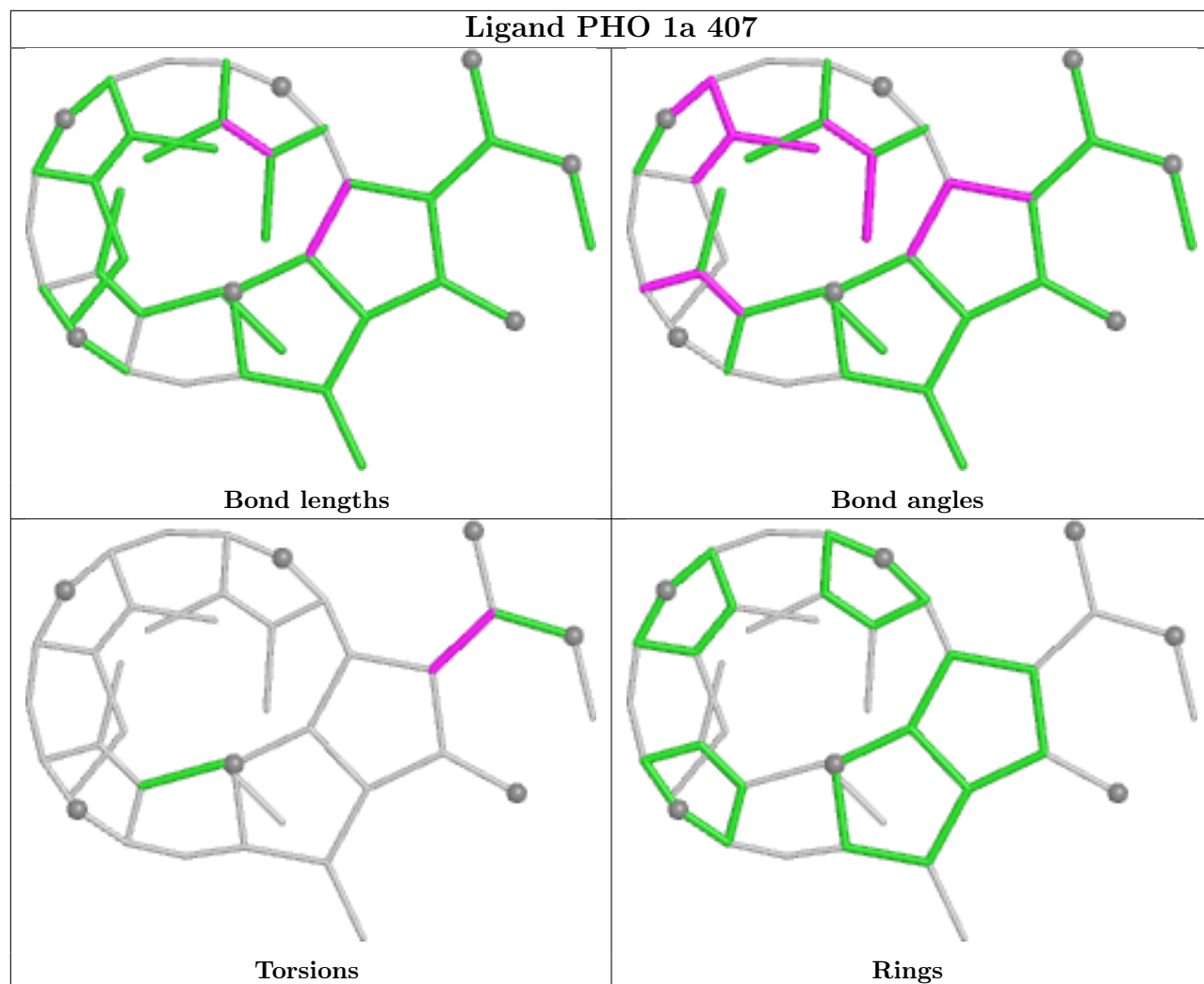


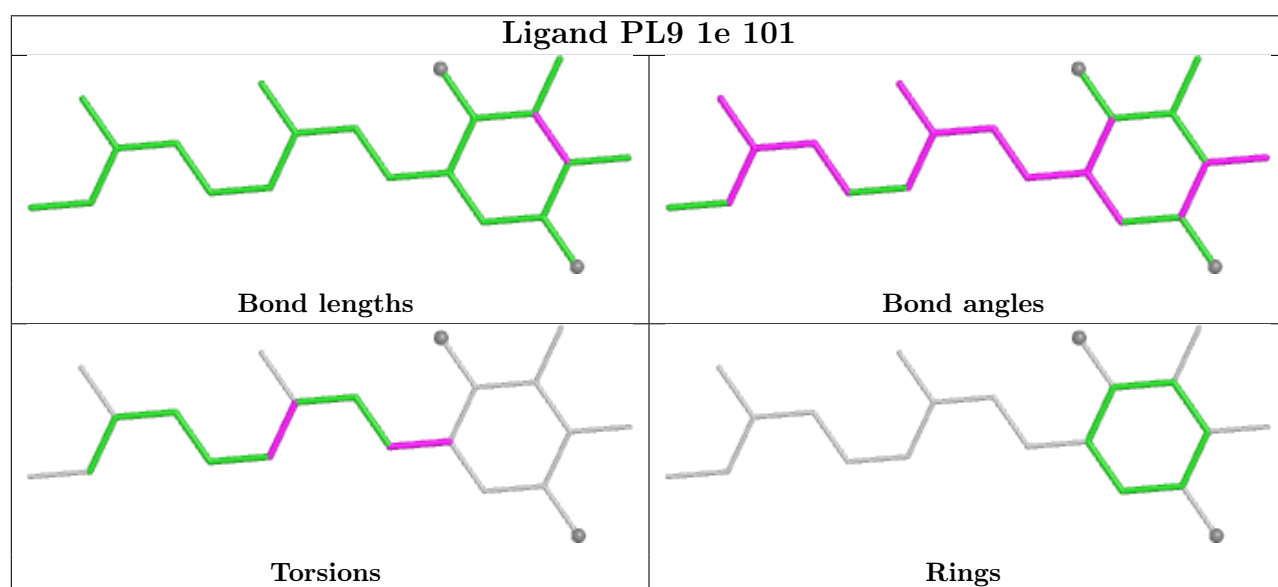
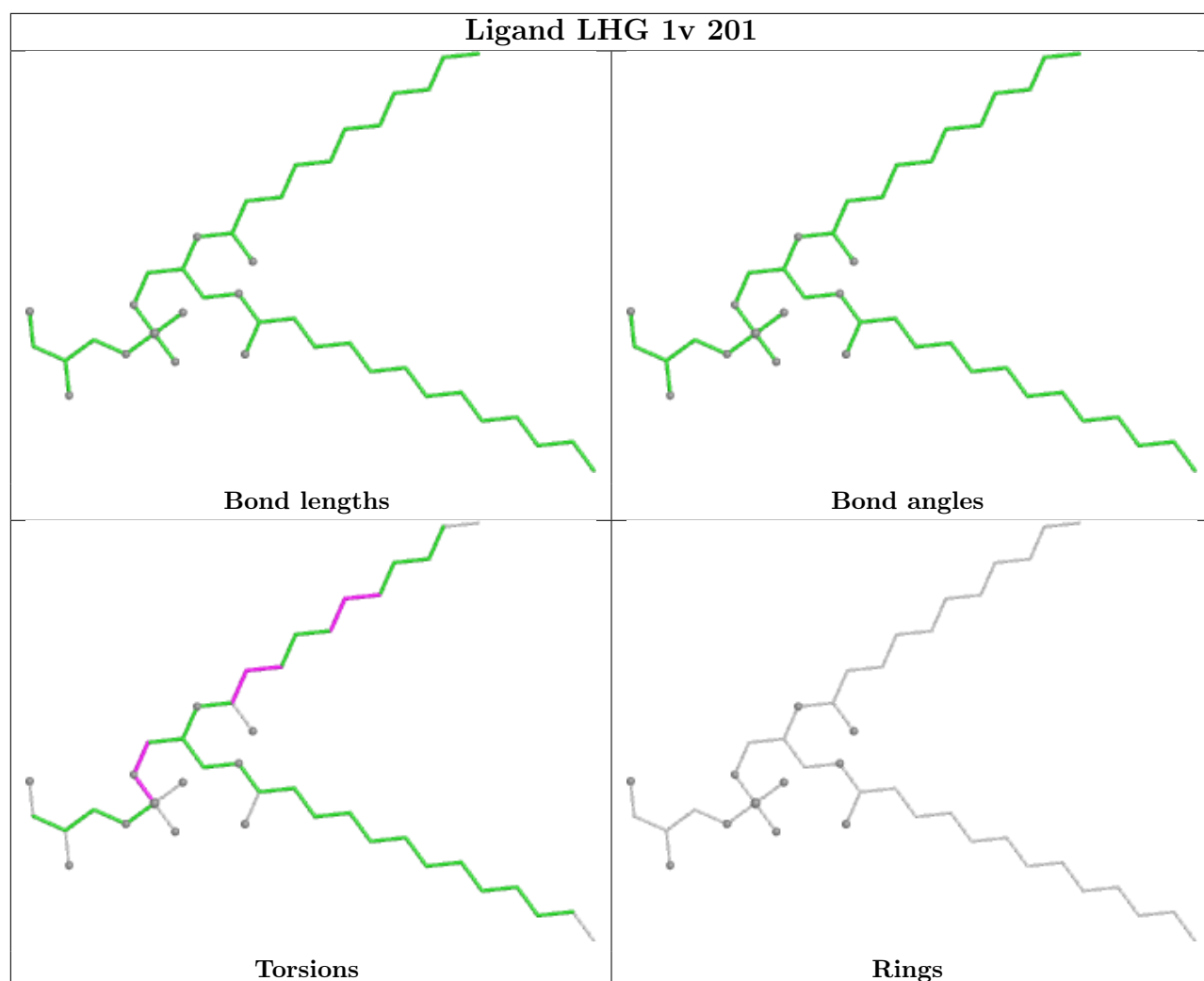


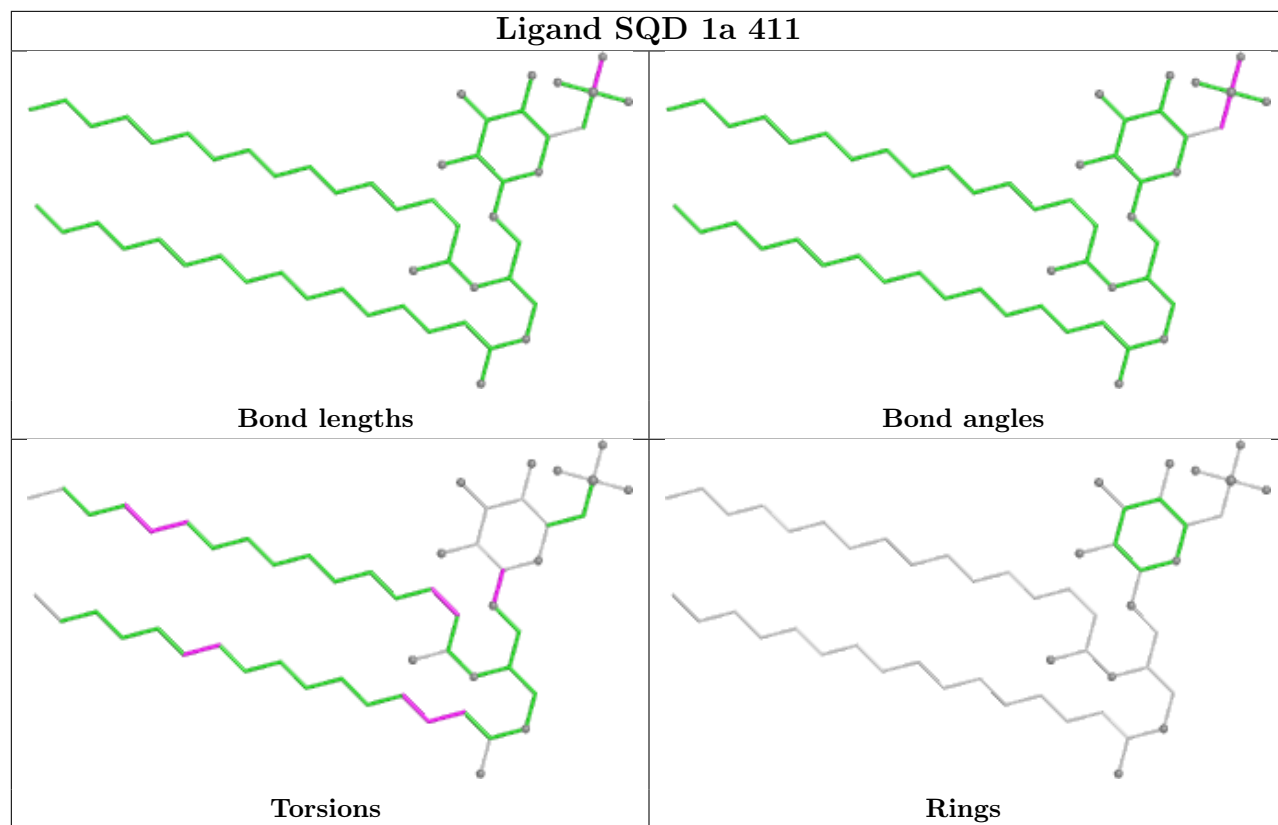
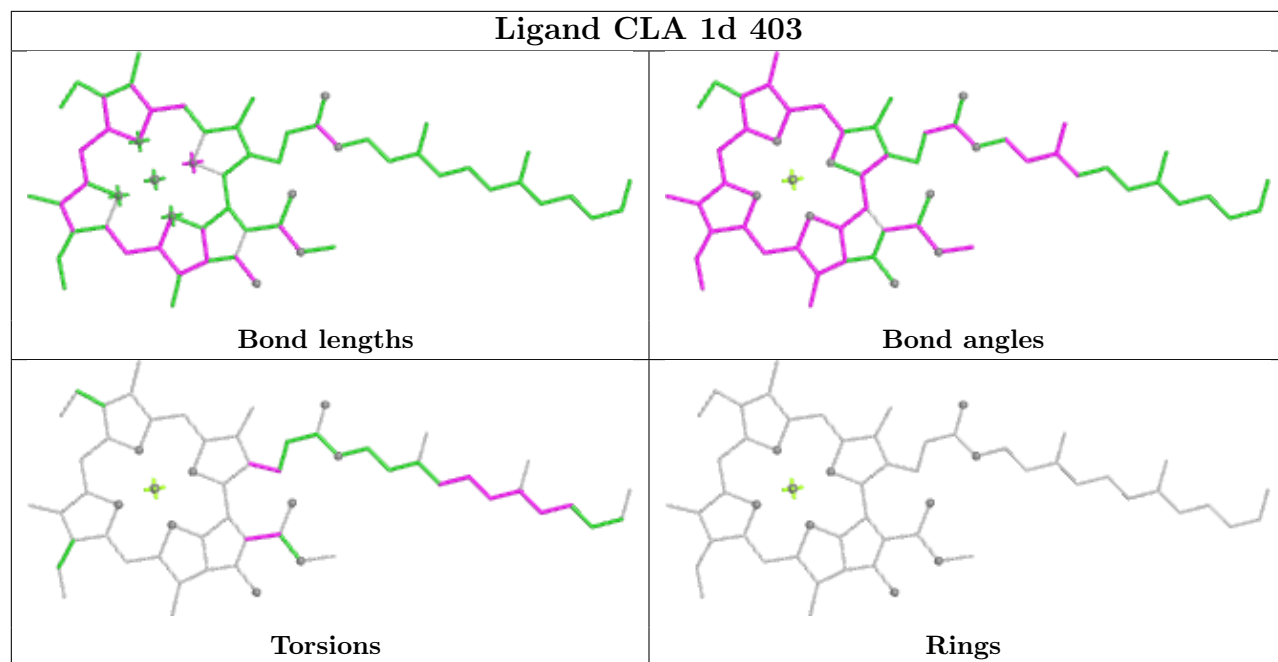


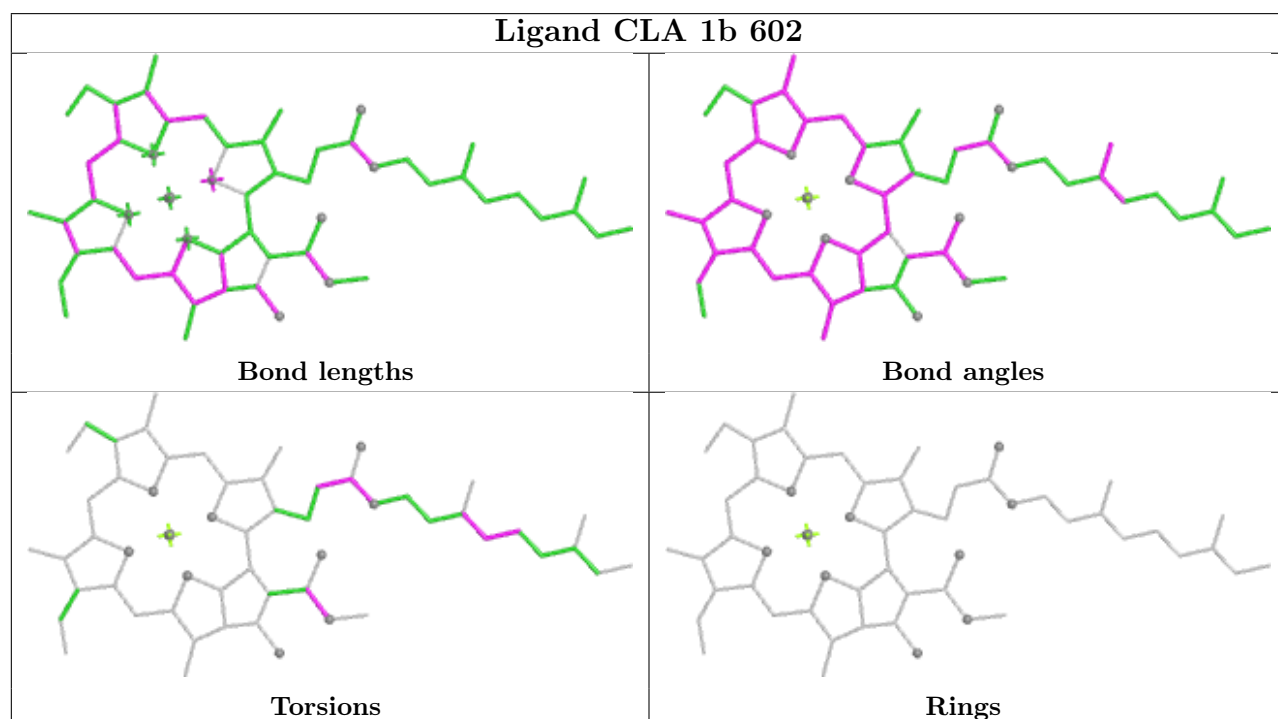
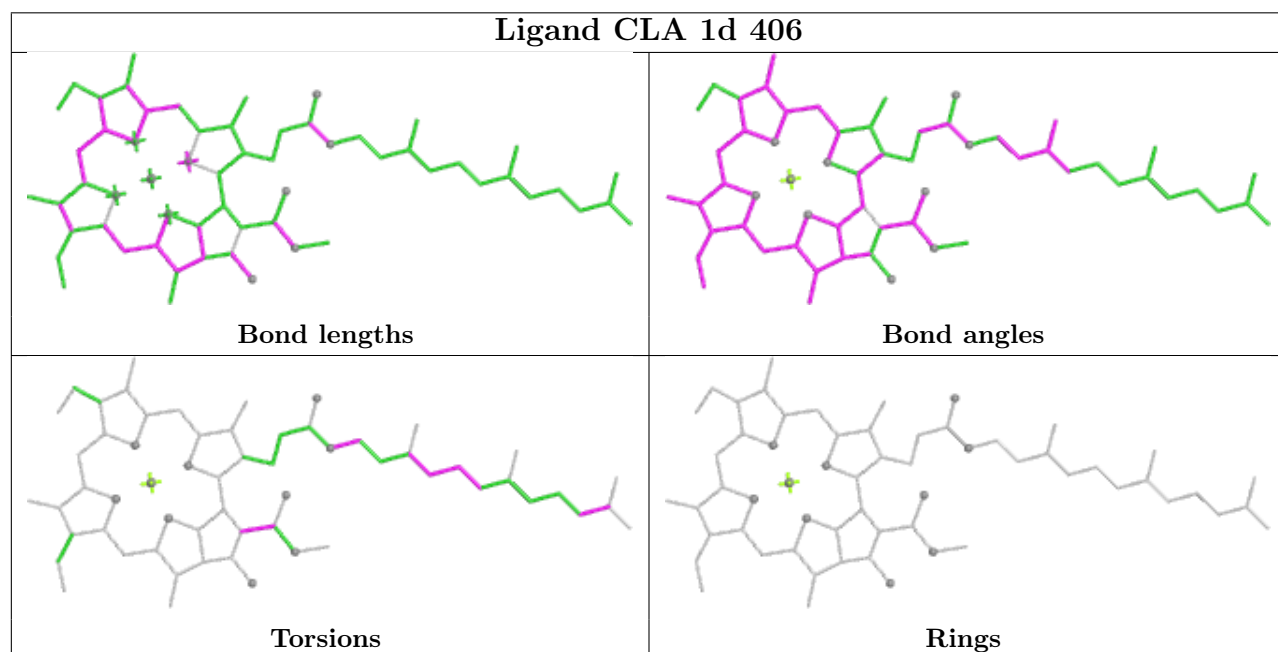
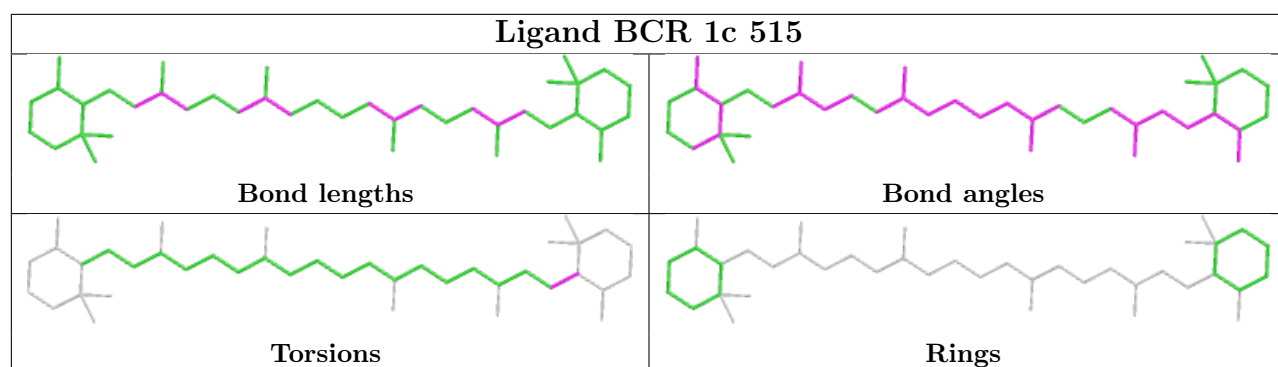


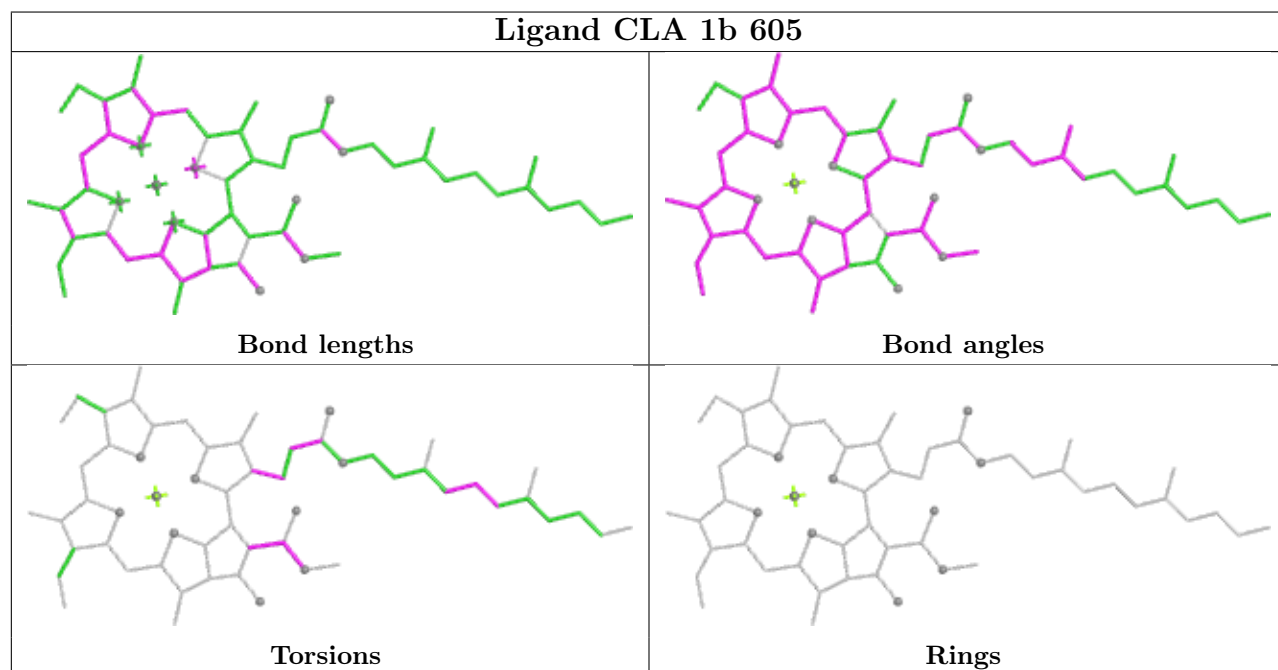
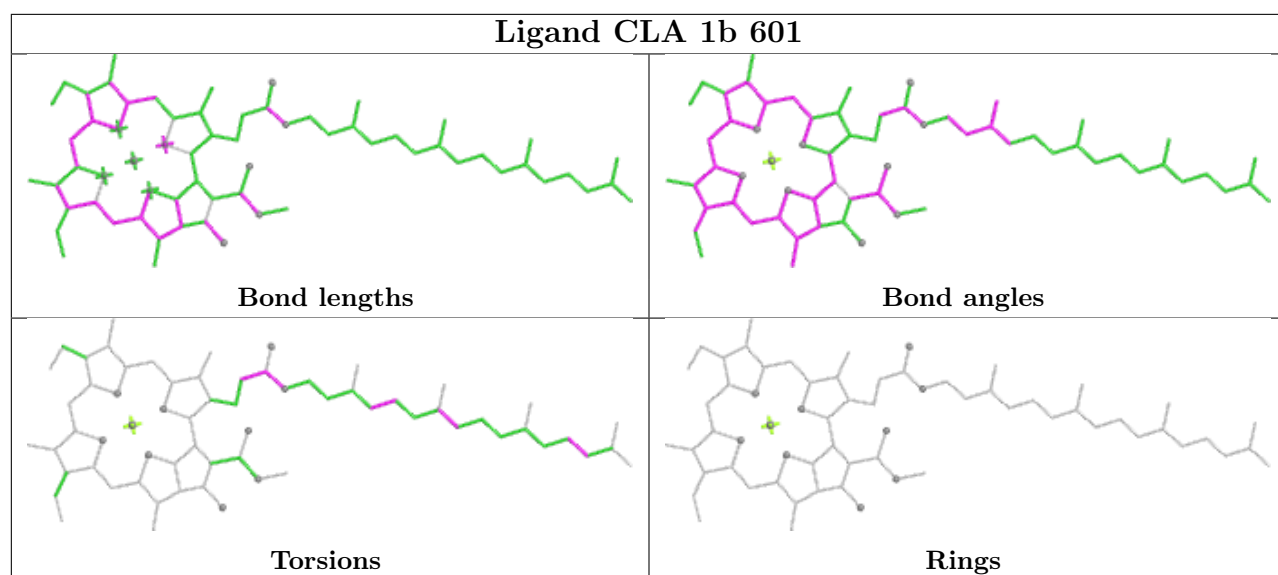


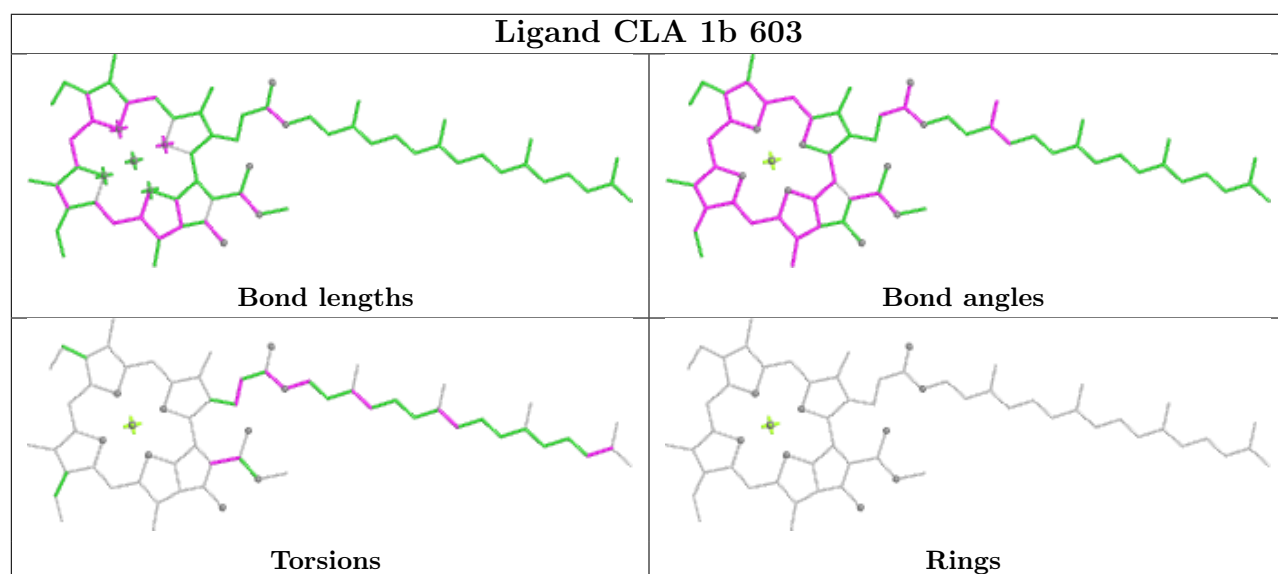
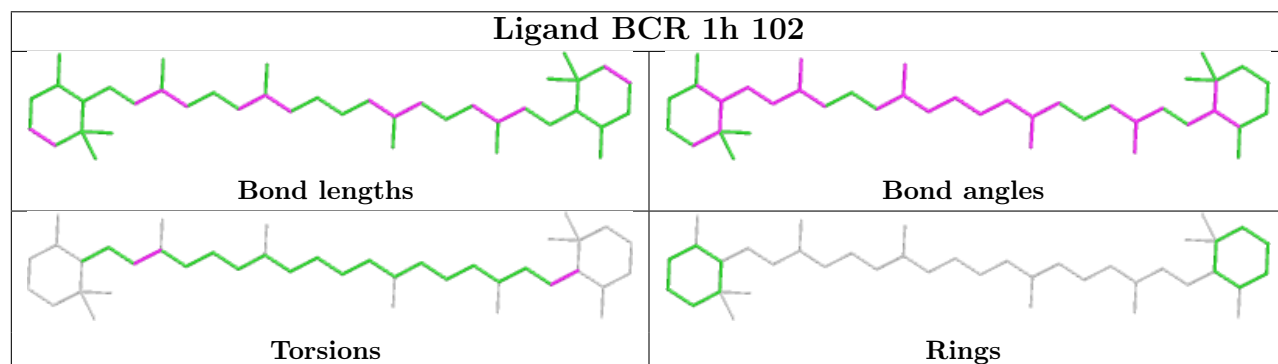
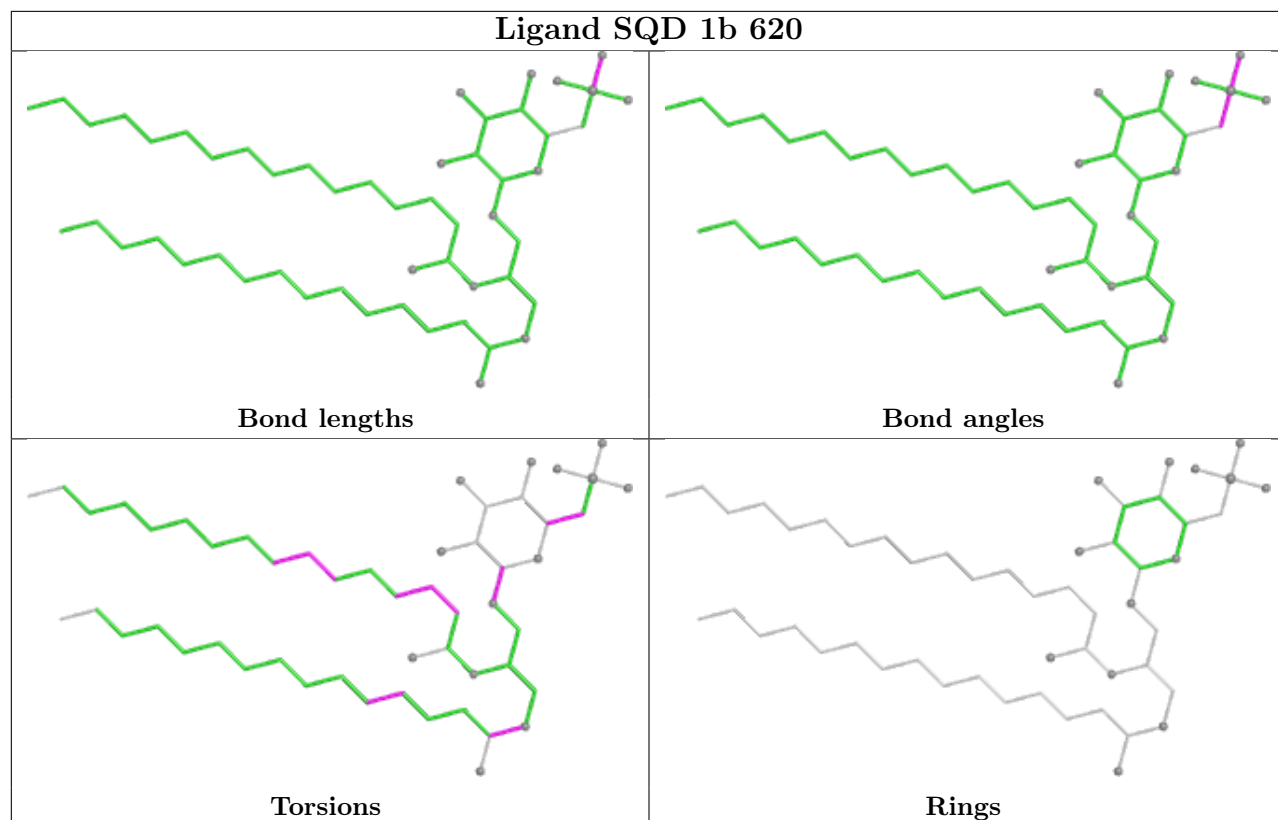


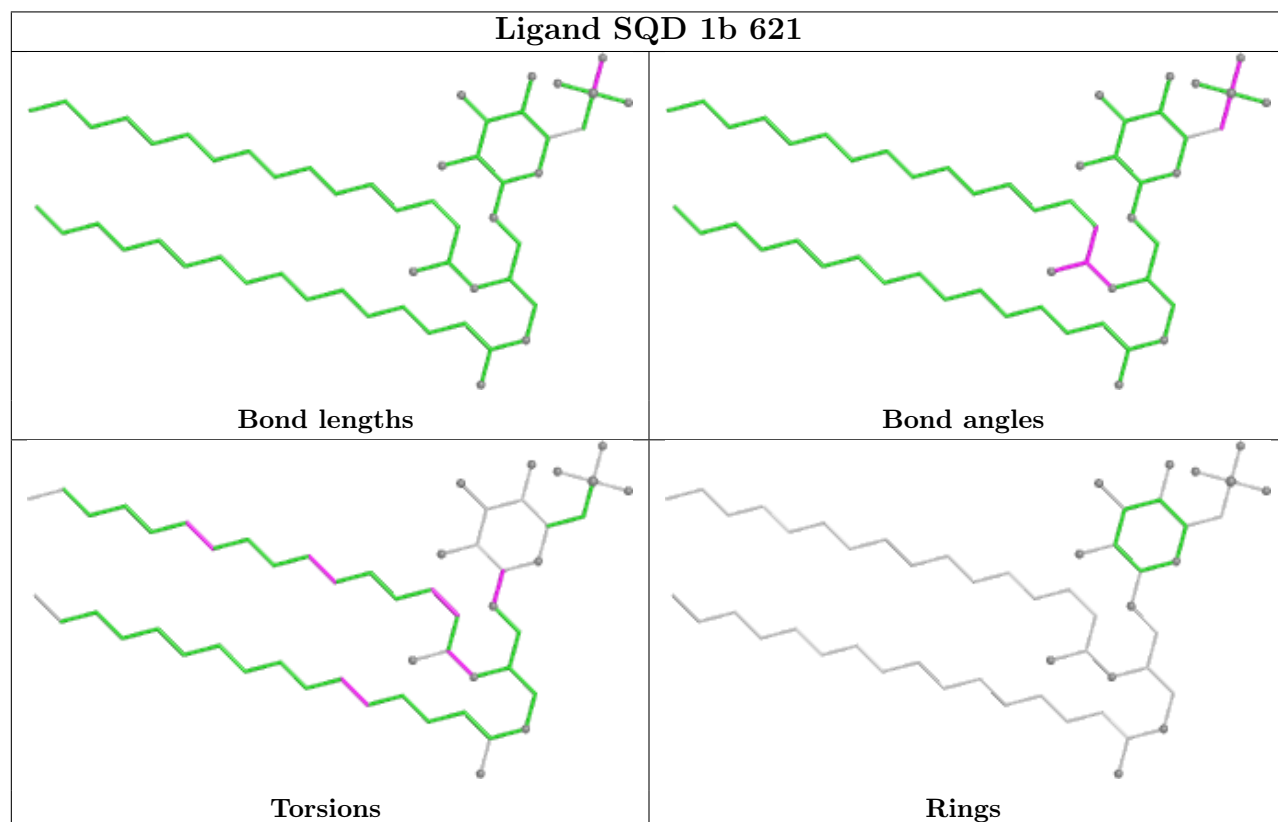
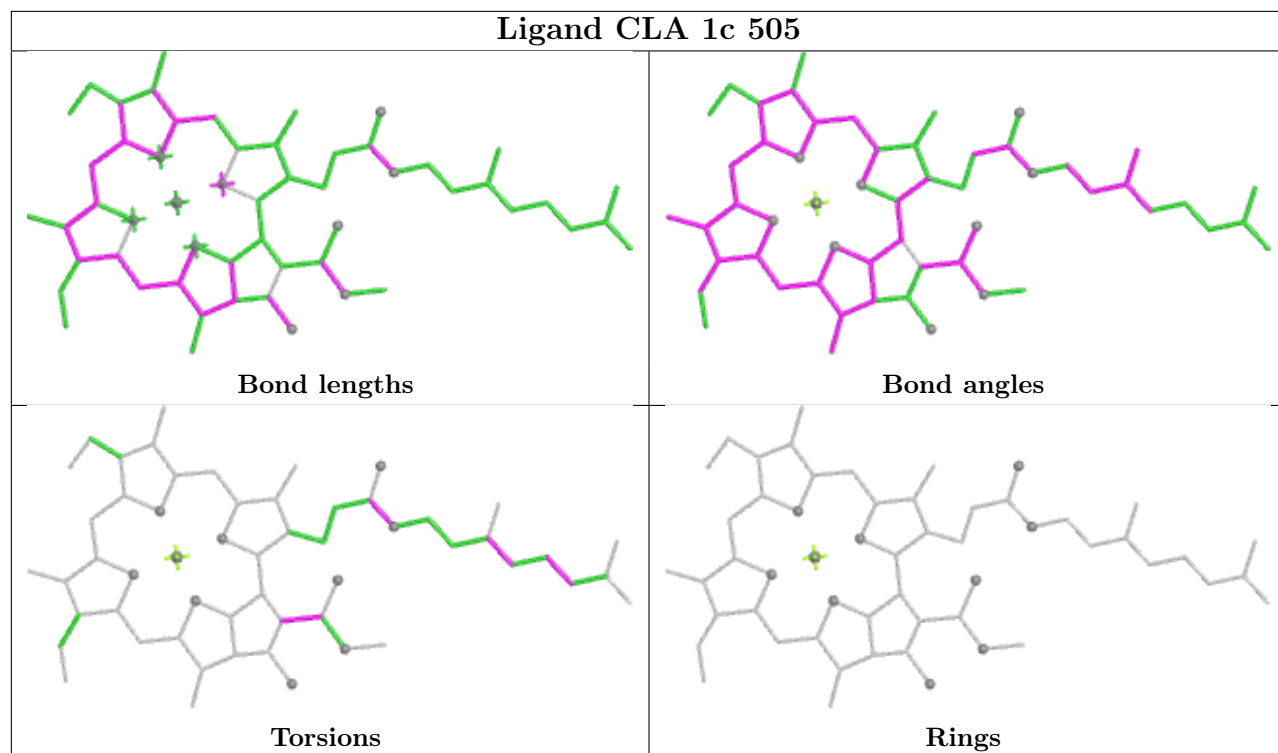


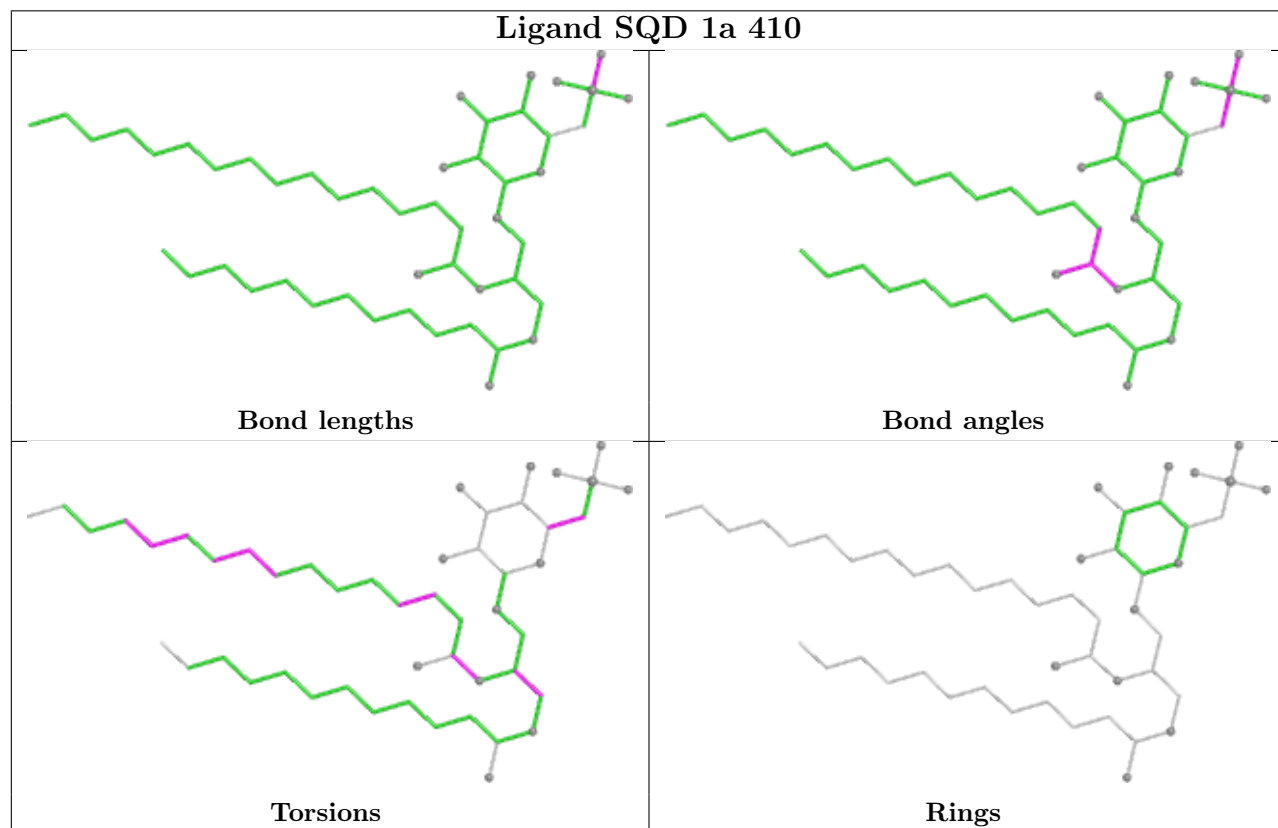
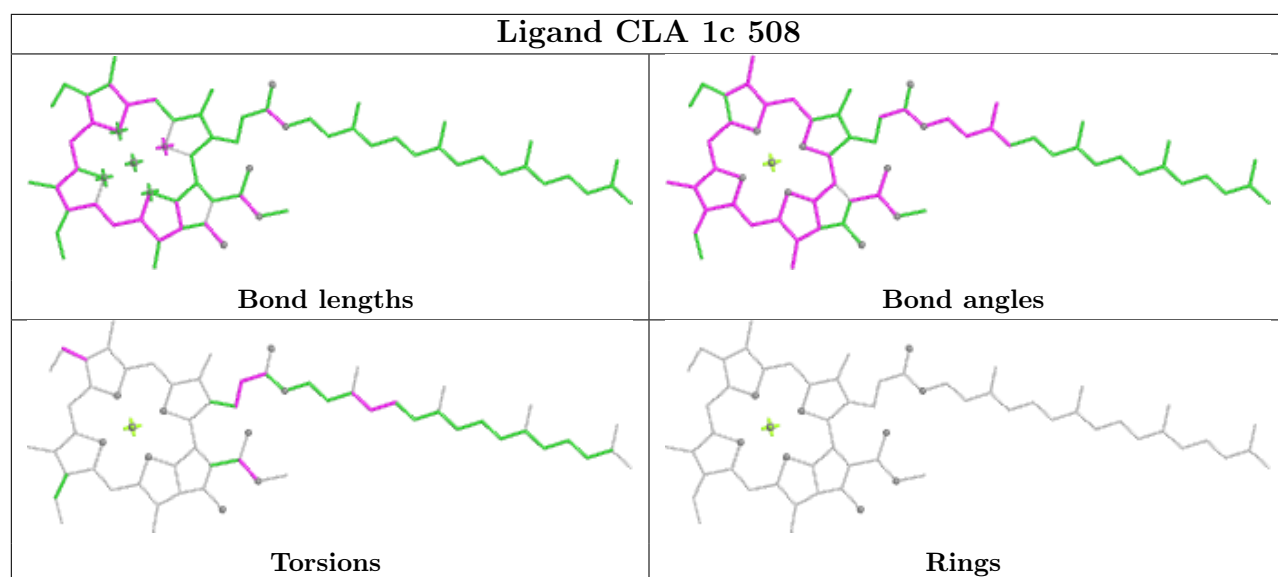


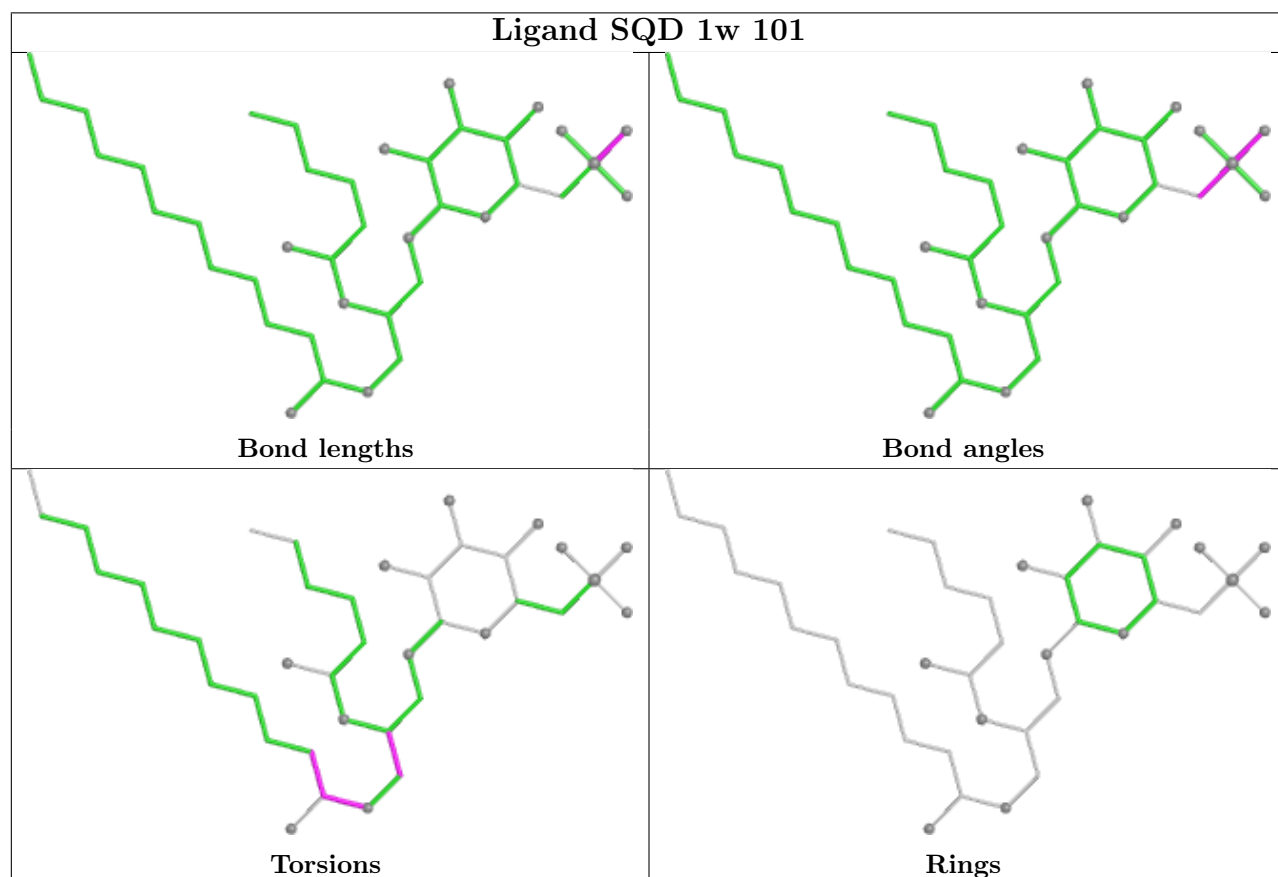
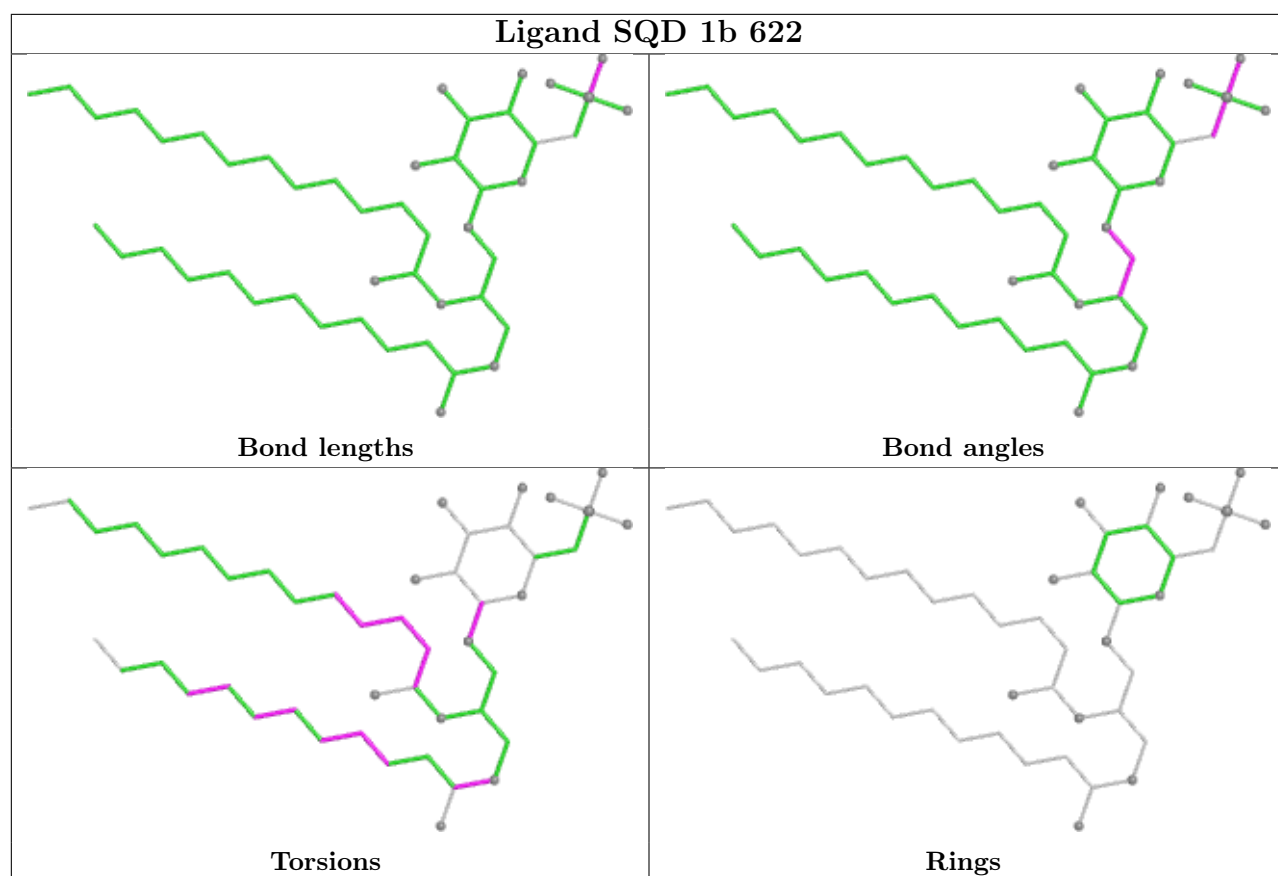


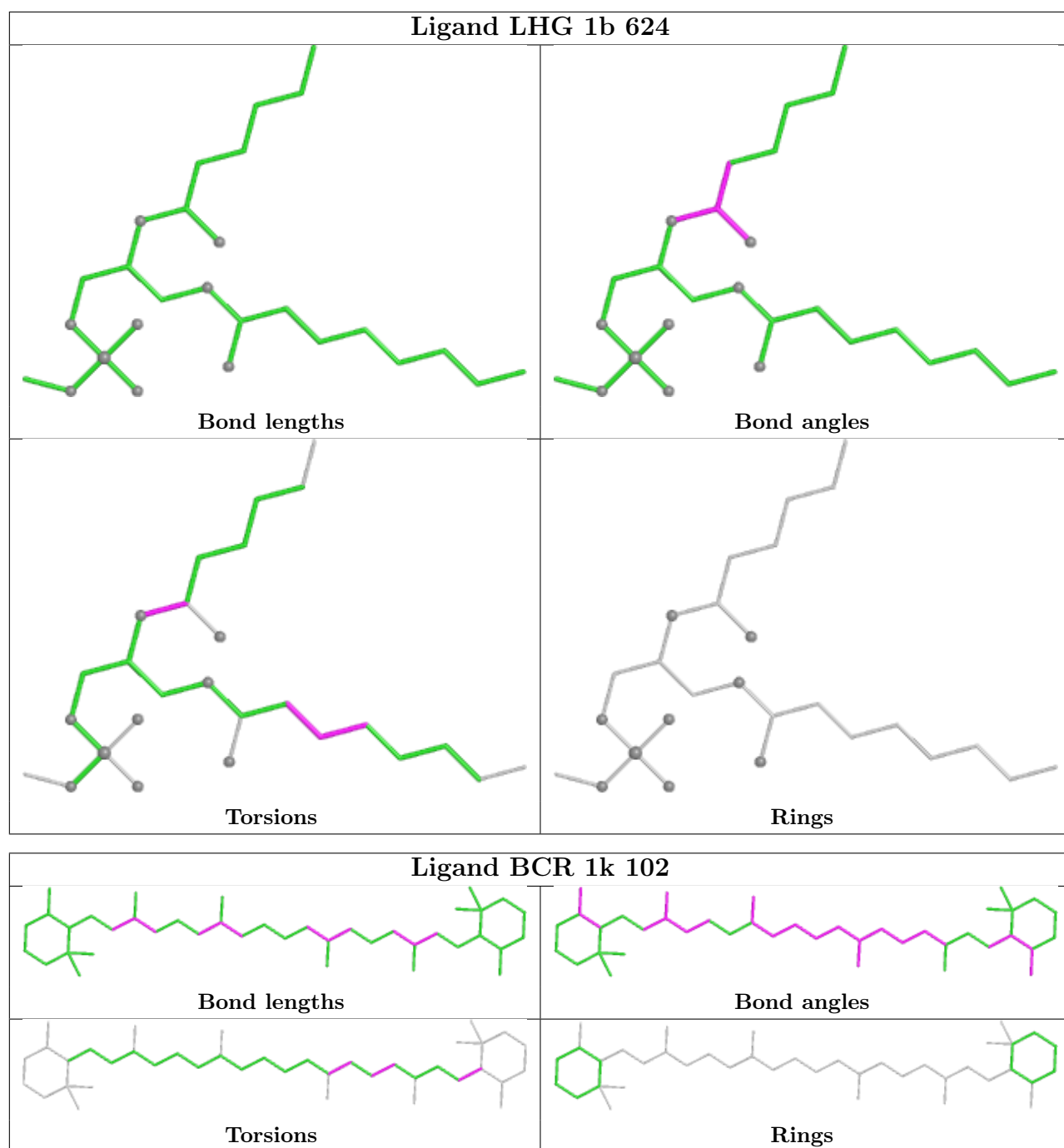


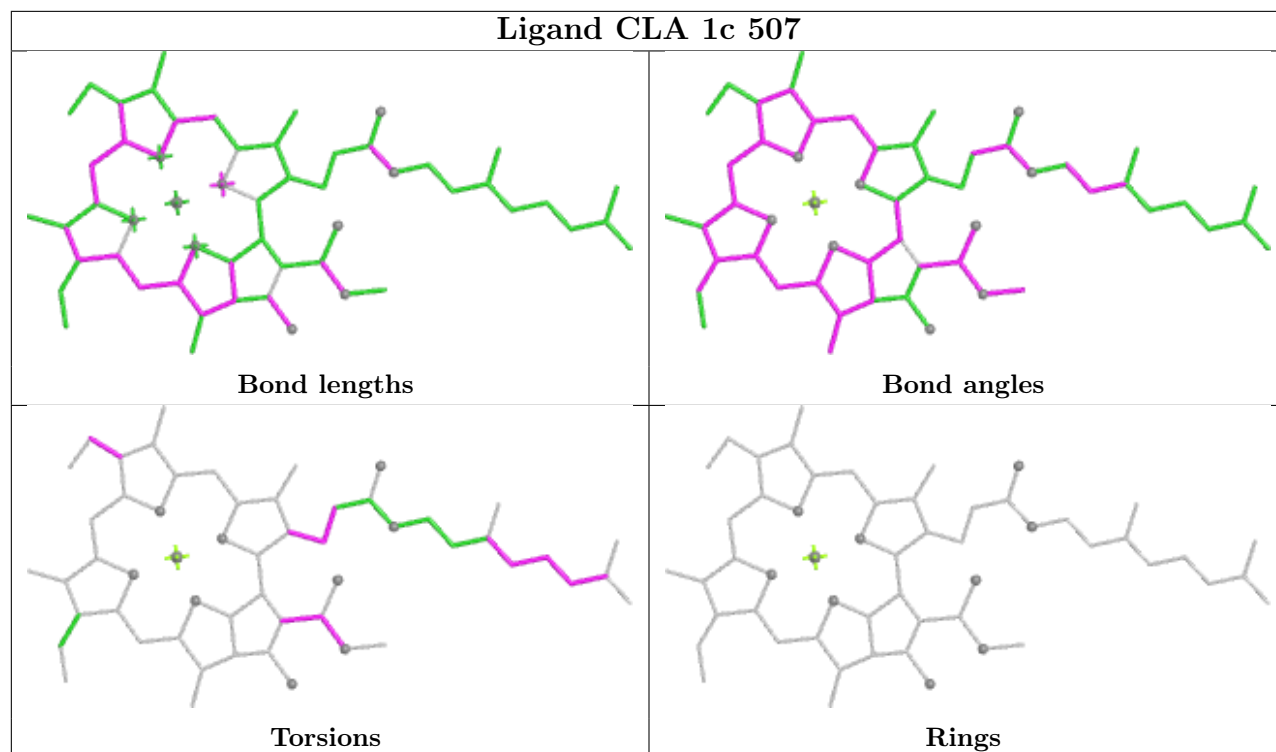
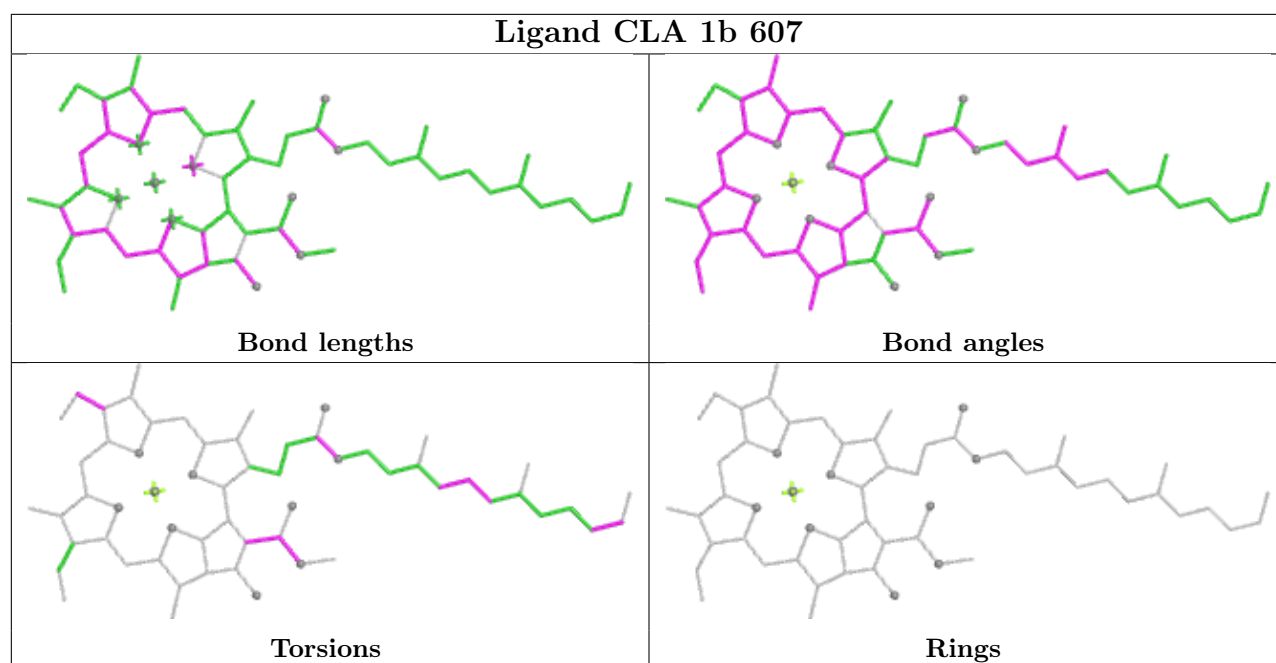


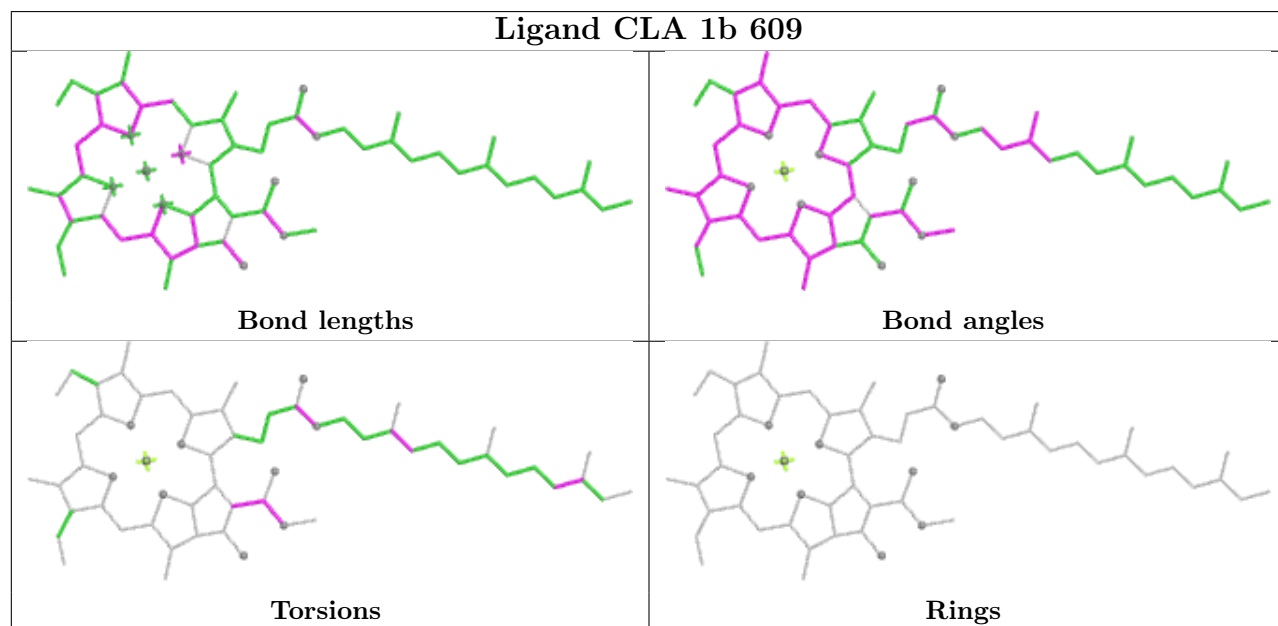
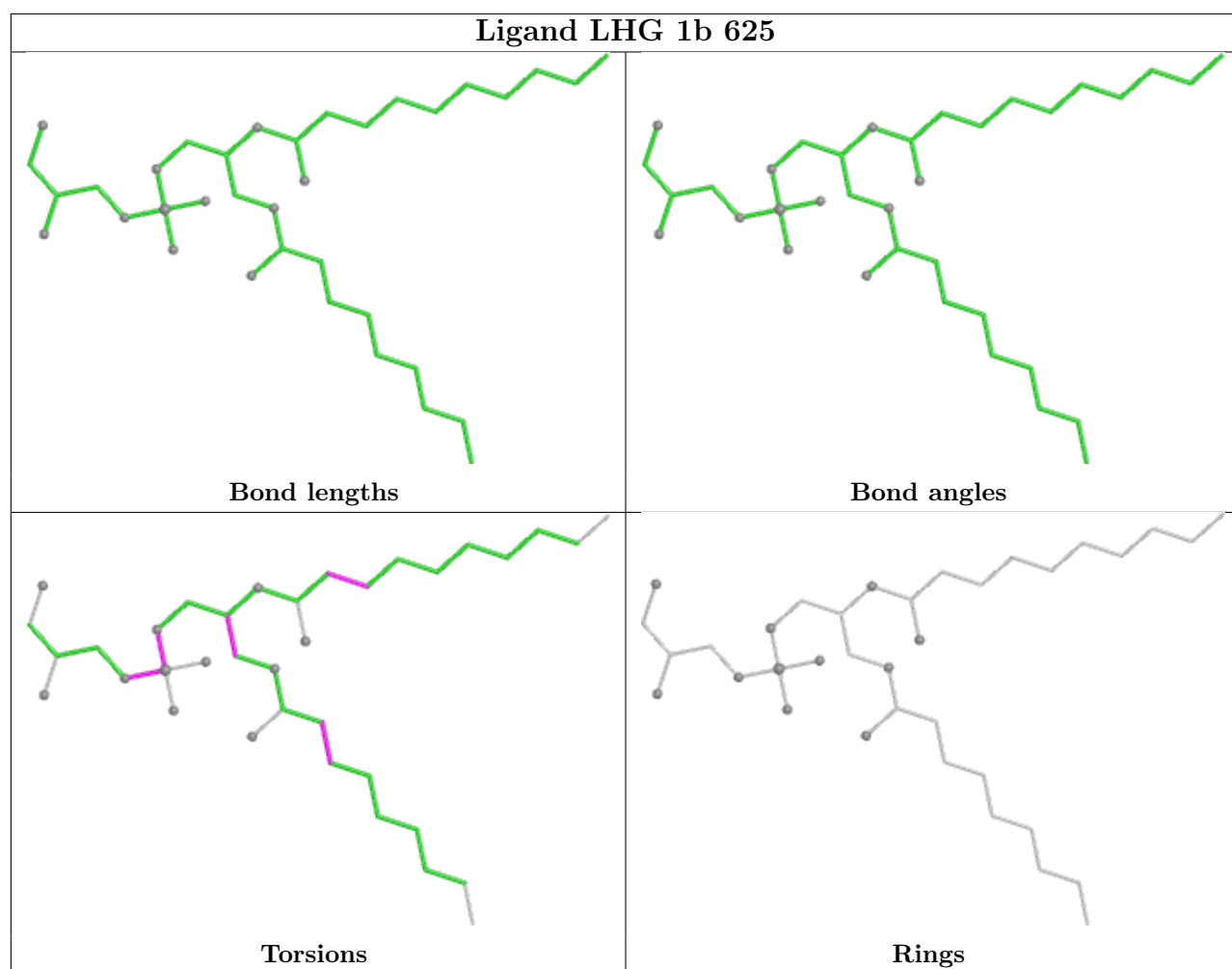


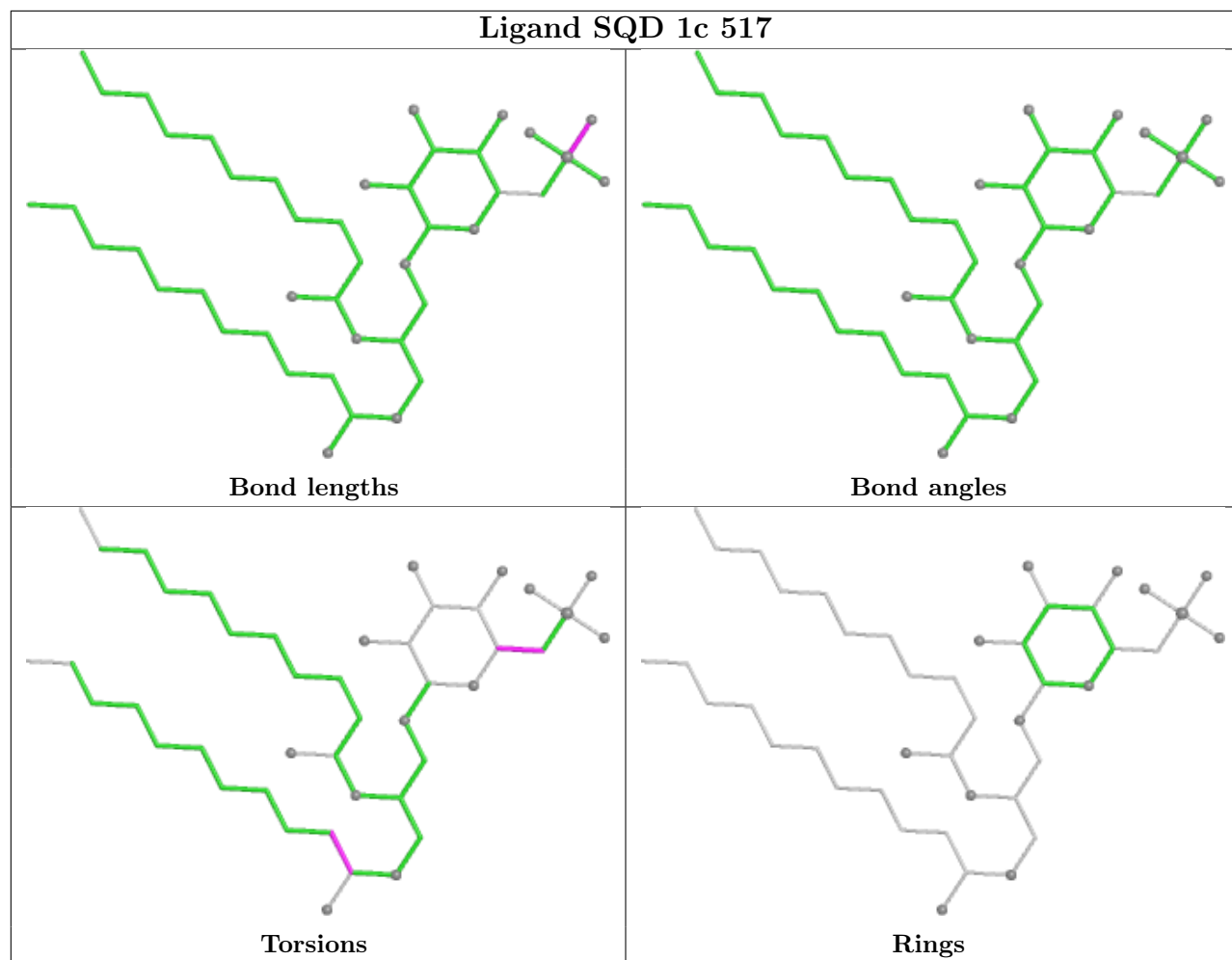


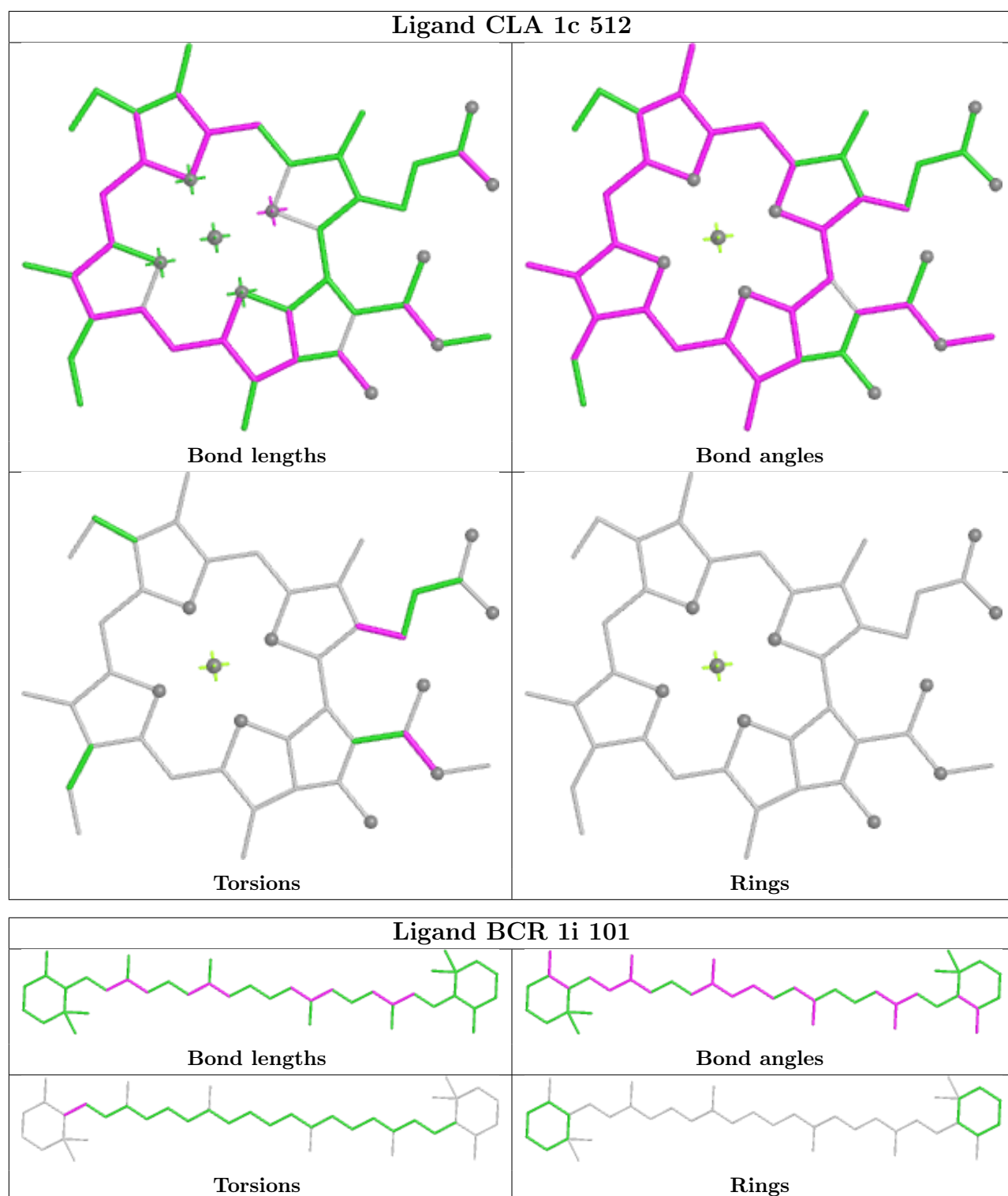


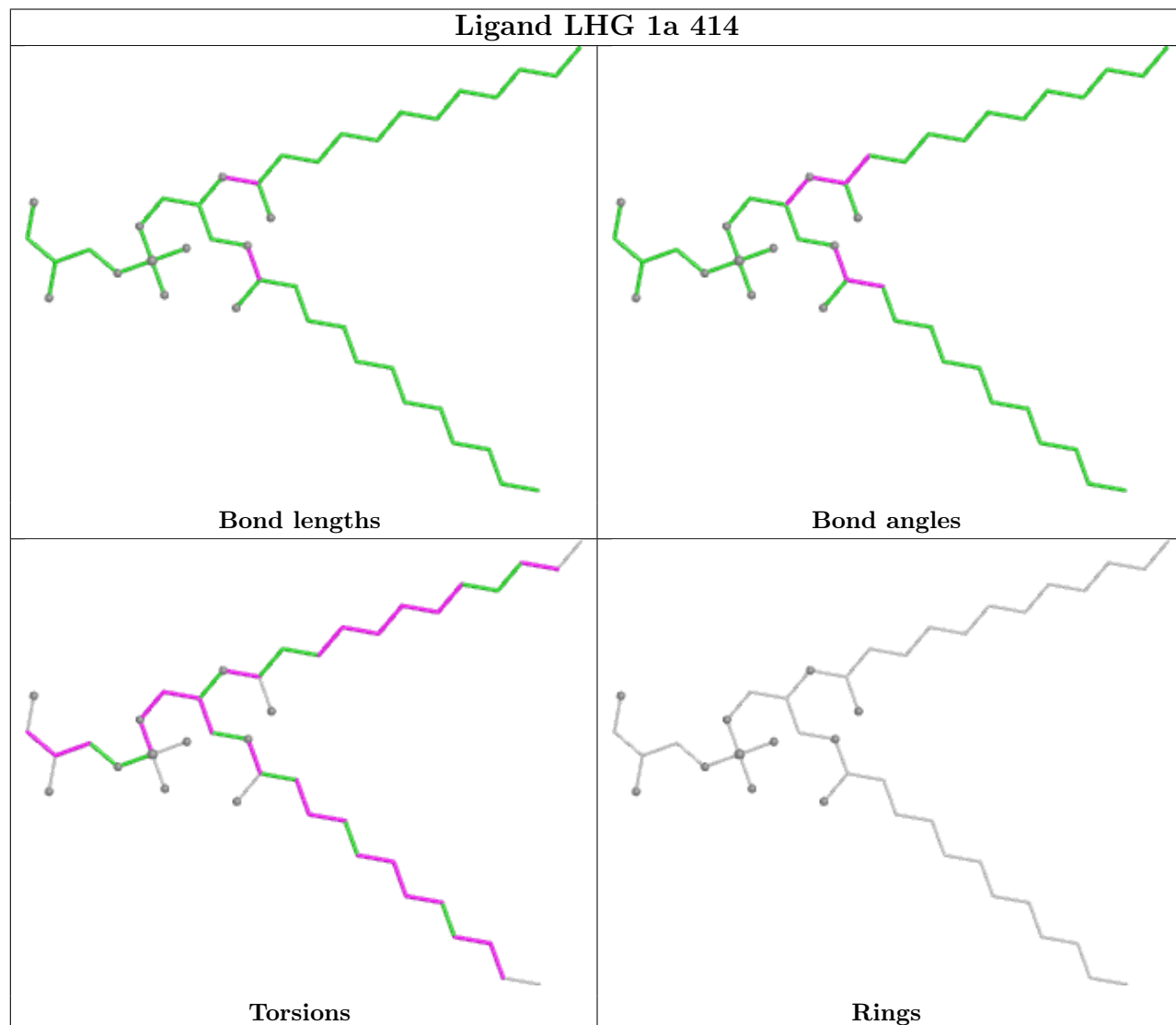
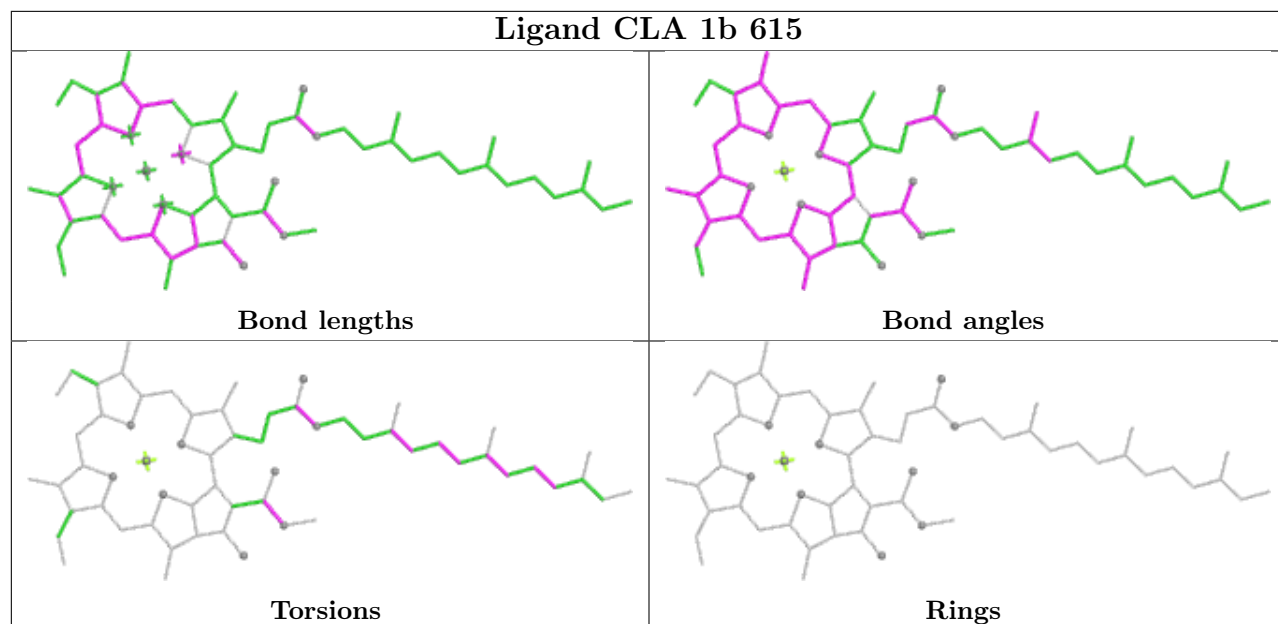


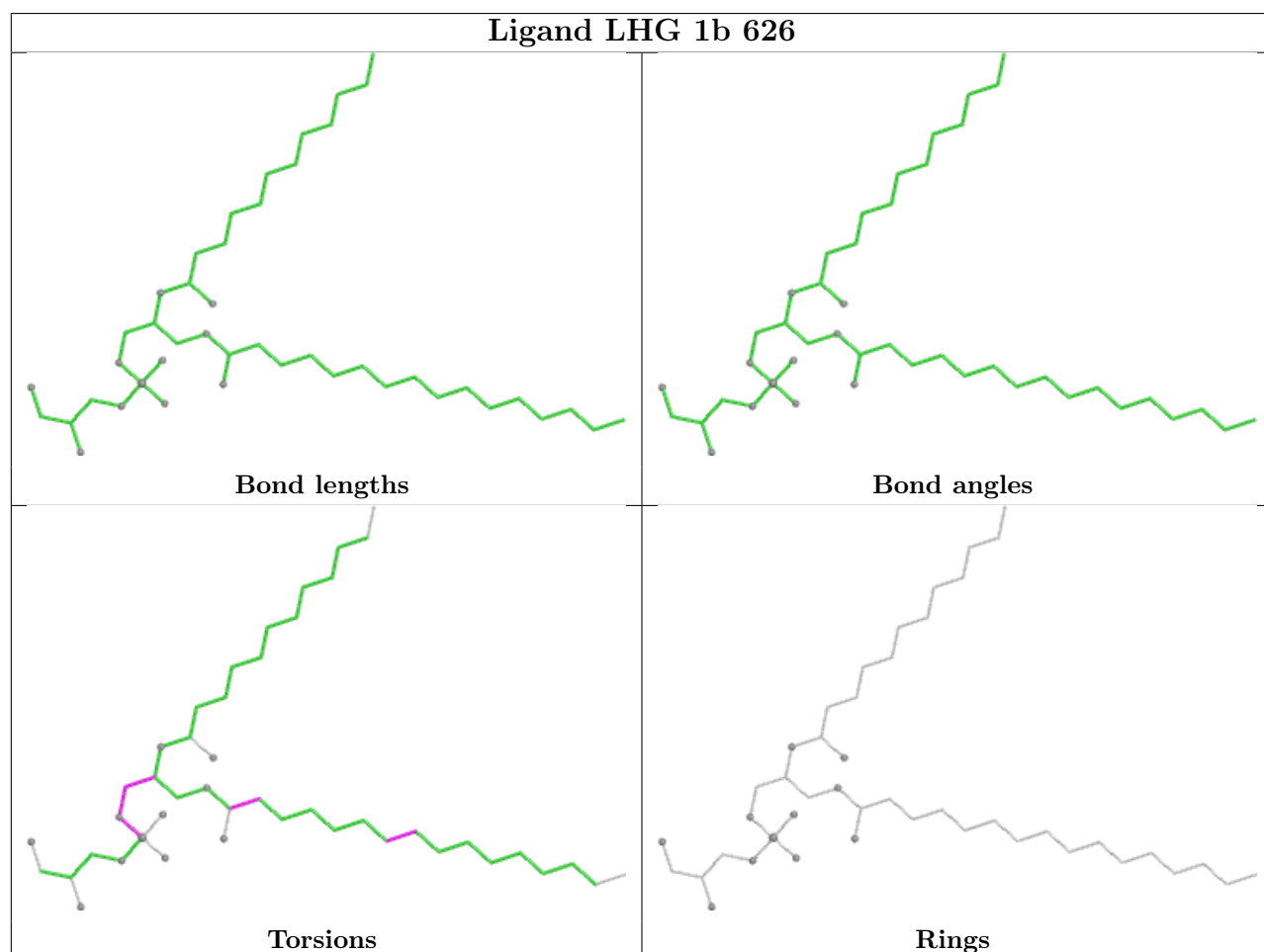
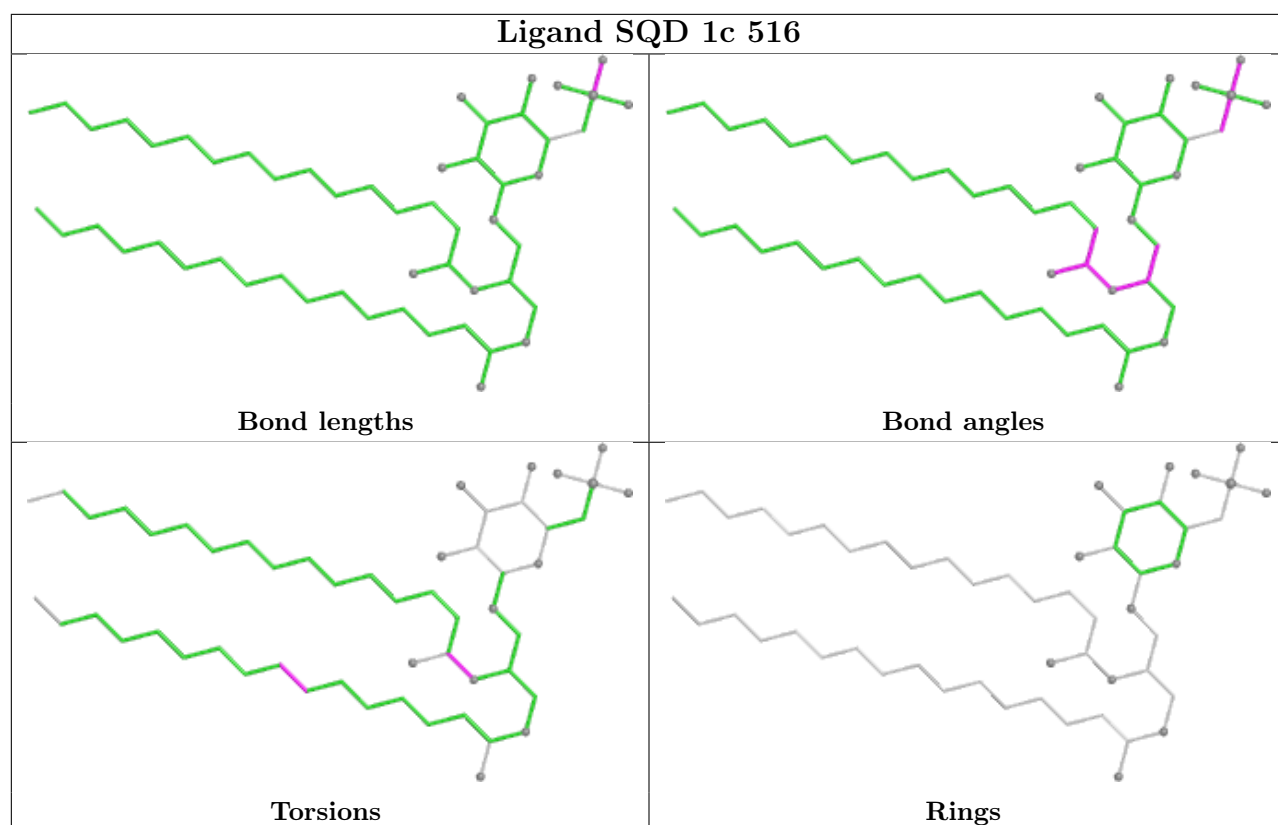


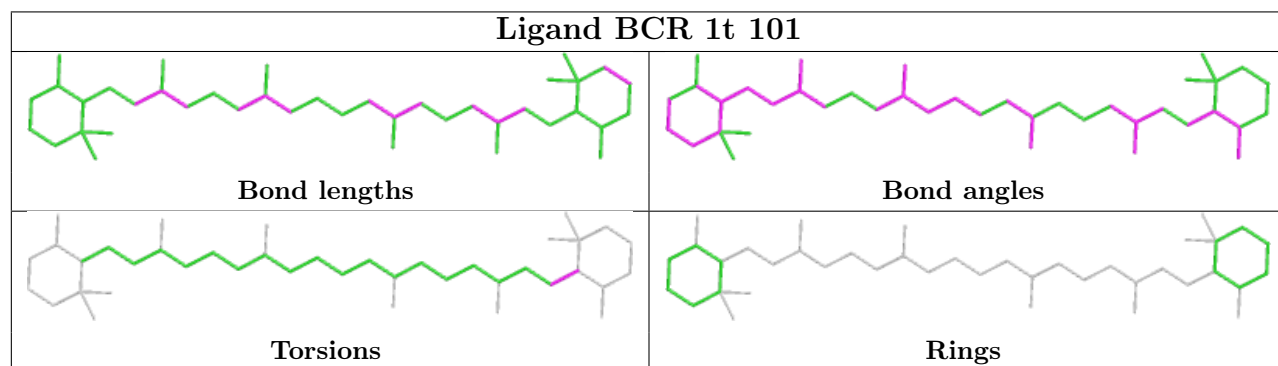
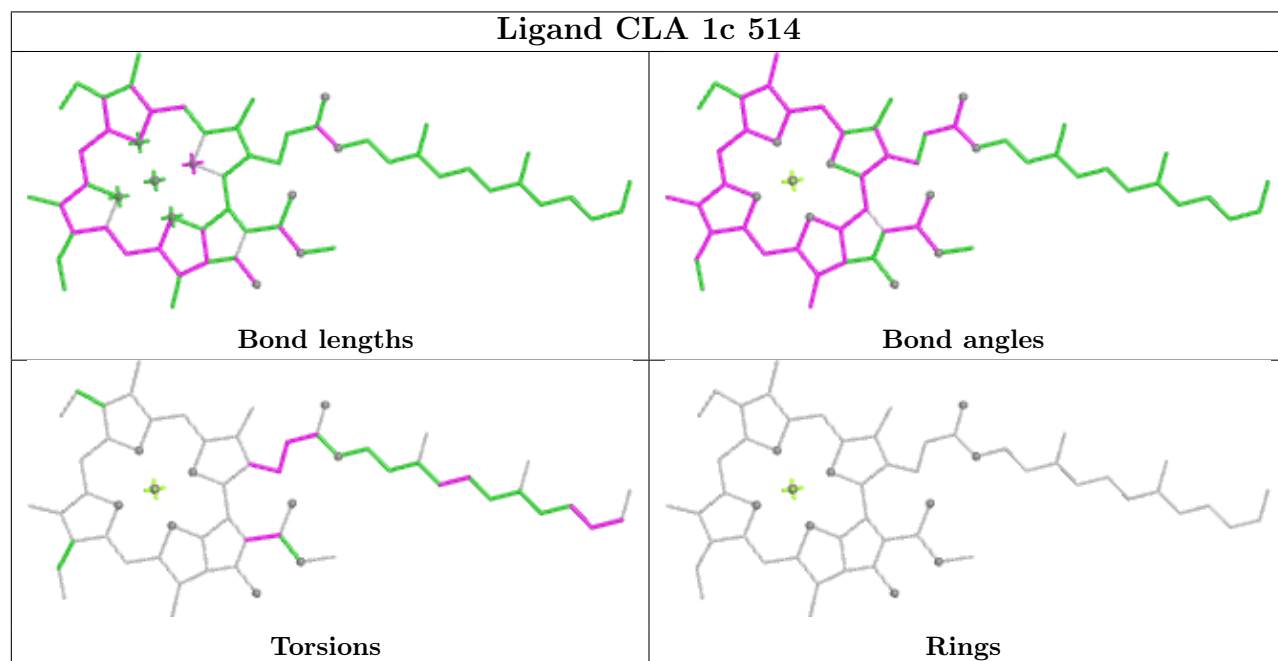
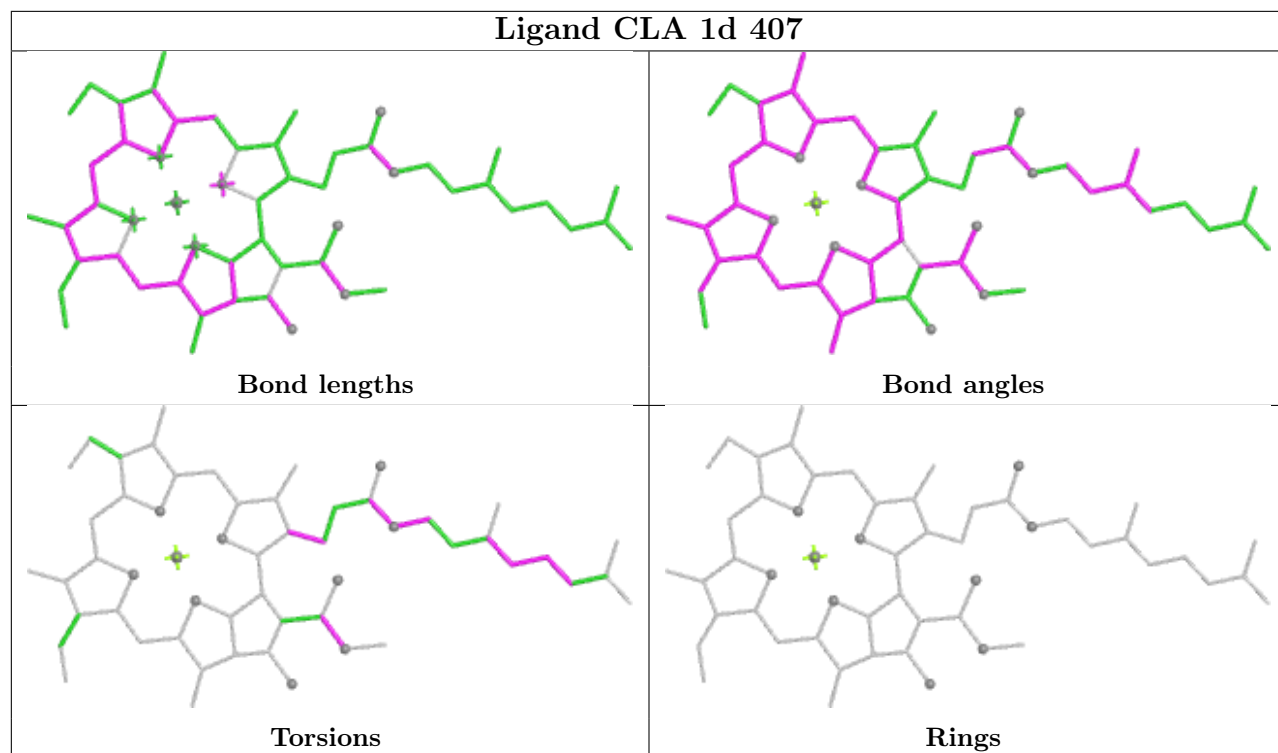


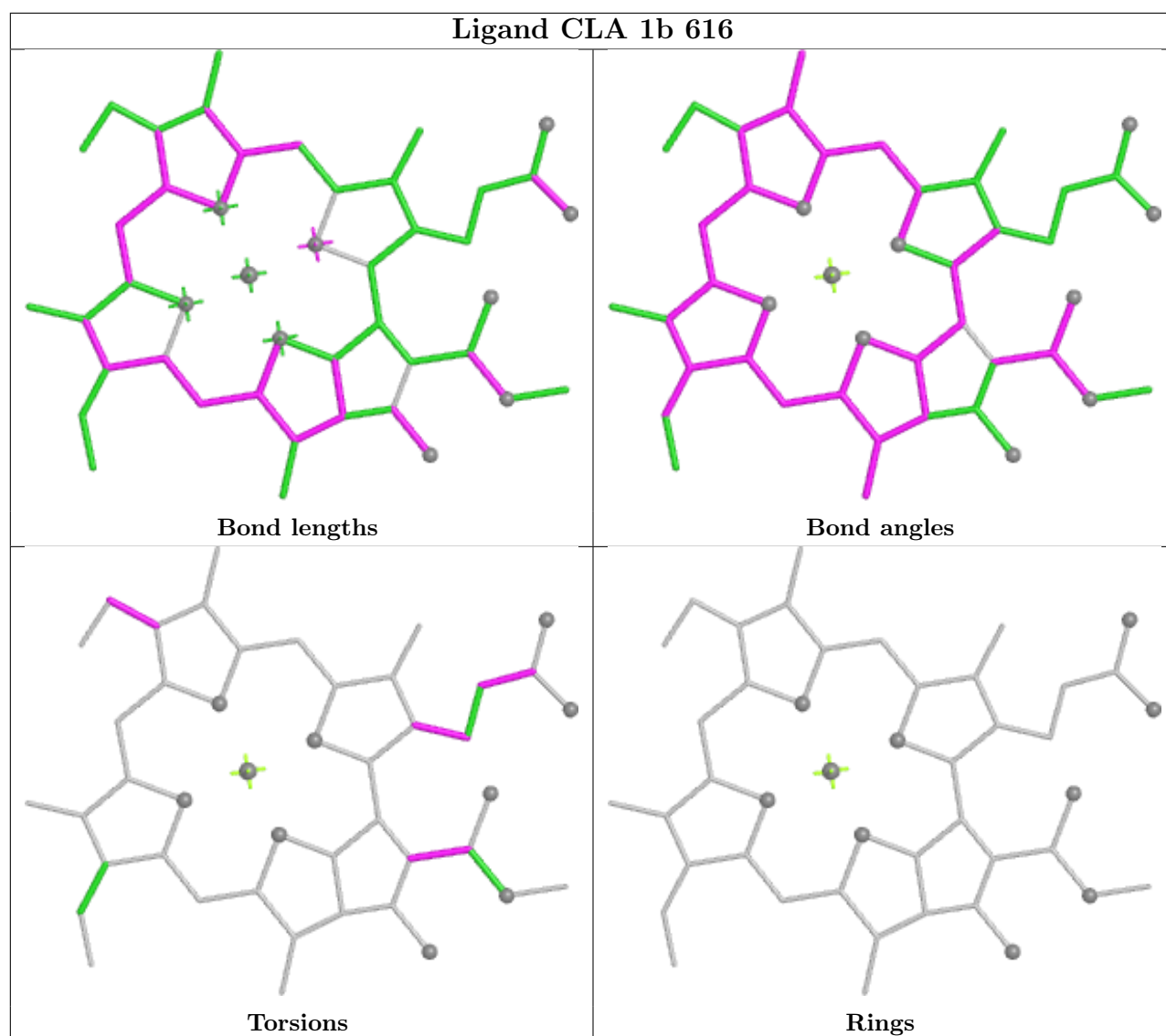












5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

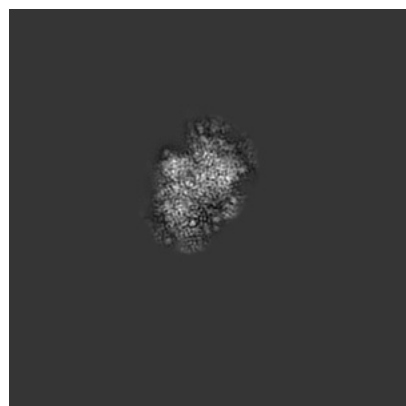
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-66947. These allow visual inspection of the internal detail of the map and identification of artifacts.

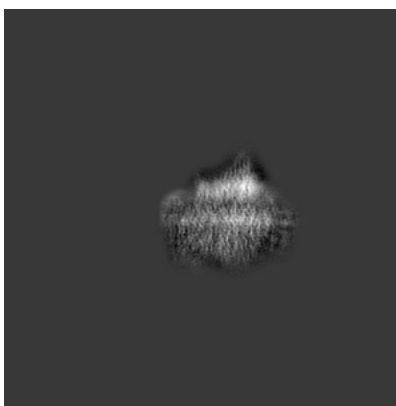
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

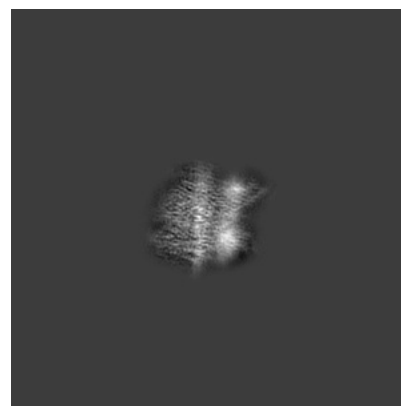
6.1.1 Primary map



X

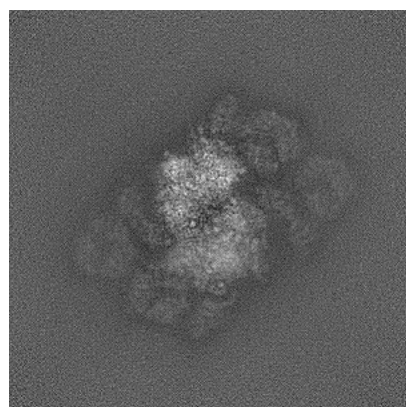


Y

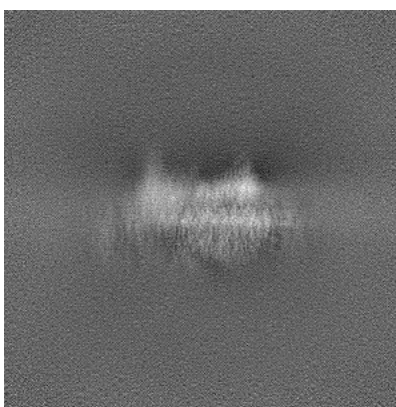


Z

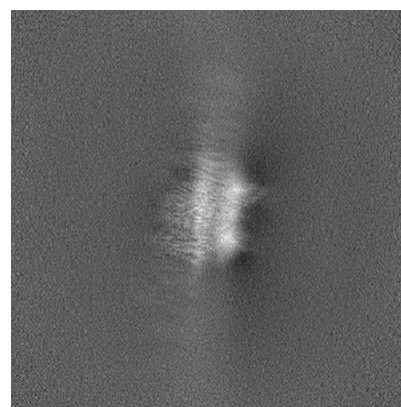
6.1.2 Raw map



X



Y

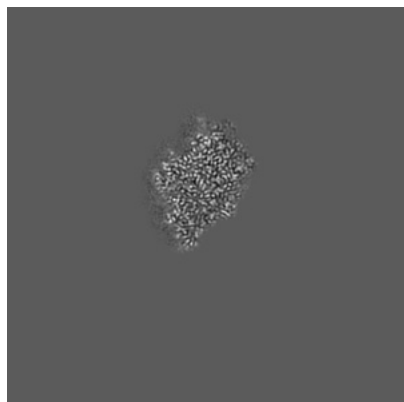


Z

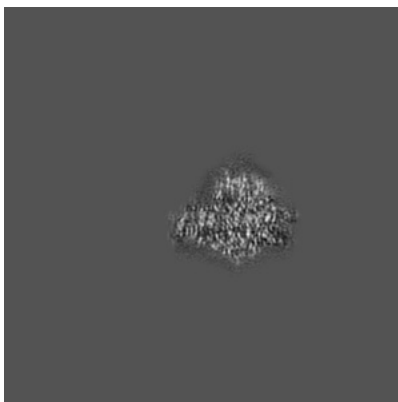
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

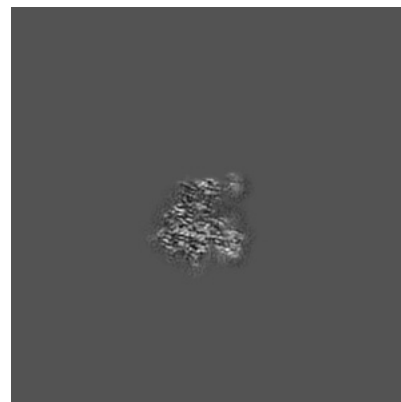
6.2.1 Primary map



X Index: 256

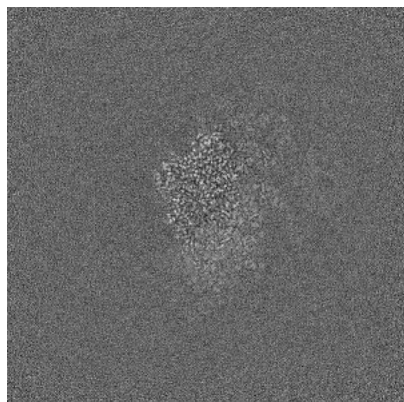


Y Index: 256

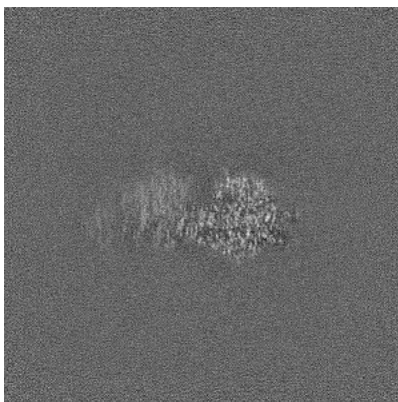


Z Index: 256

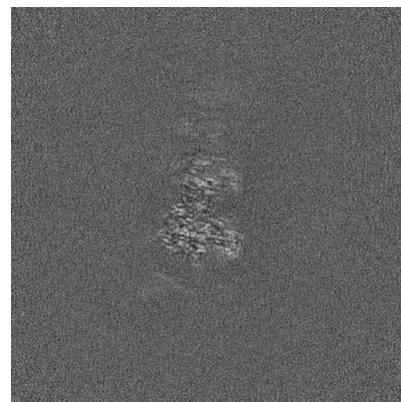
6.2.2 Raw map



X Index: 256



Y Index: 256

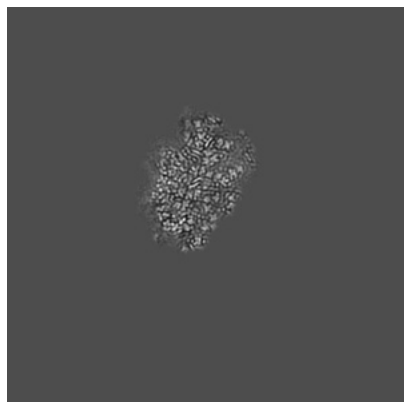


Z Index: 256

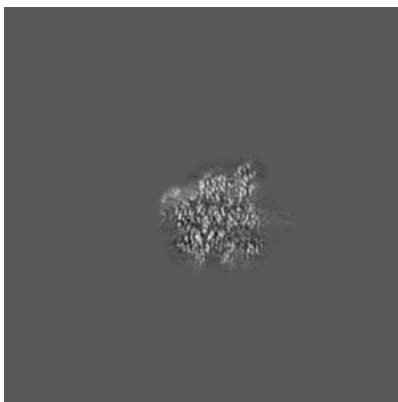
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

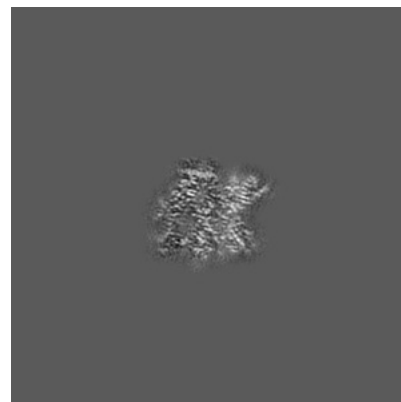
6.3.1 Primary map



X Index: 241

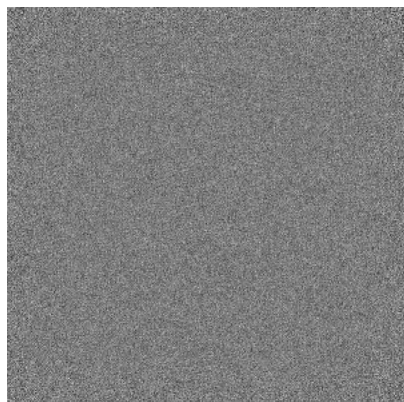


Y Index: 220

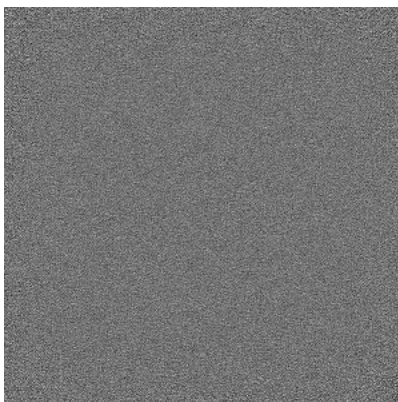


Z Index: 306

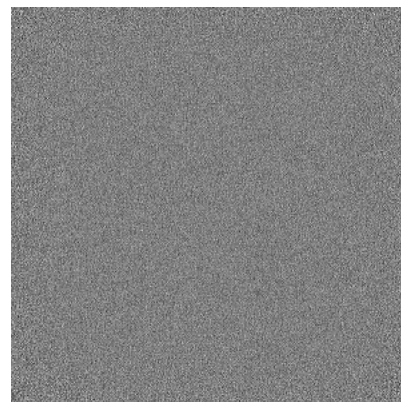
6.3.2 Raw map



X Index: 0



Y Index: 0

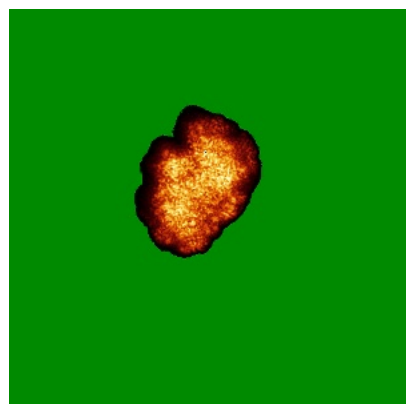


Z Index: 0

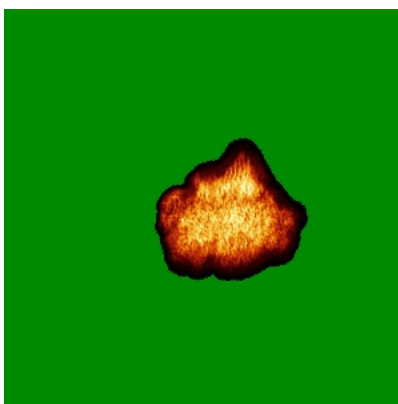
The images above show the largest variance slices of the map in three orthogonal directions.

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

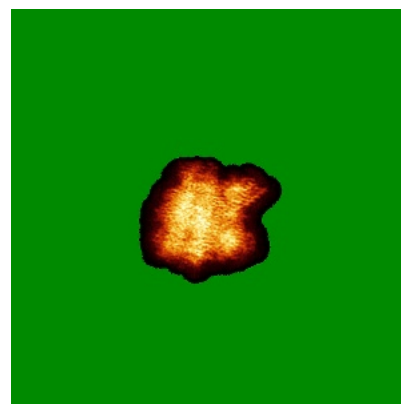
6.4.1 Primary map



X

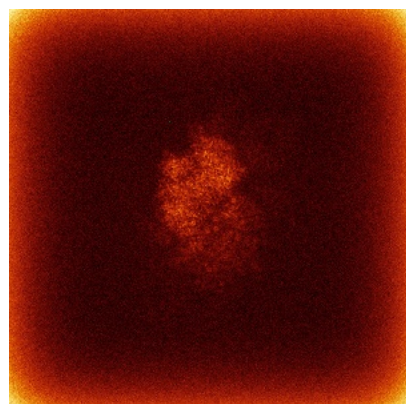


Y

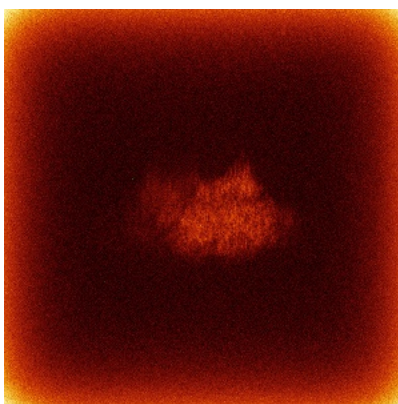


Z

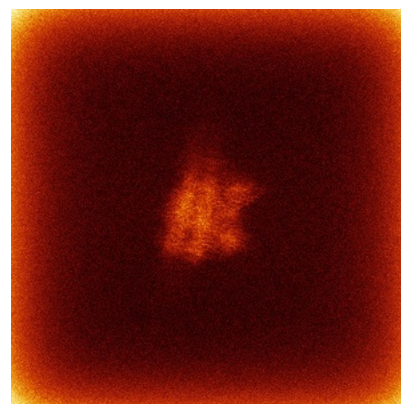
6.4.2 Raw map



X



Y

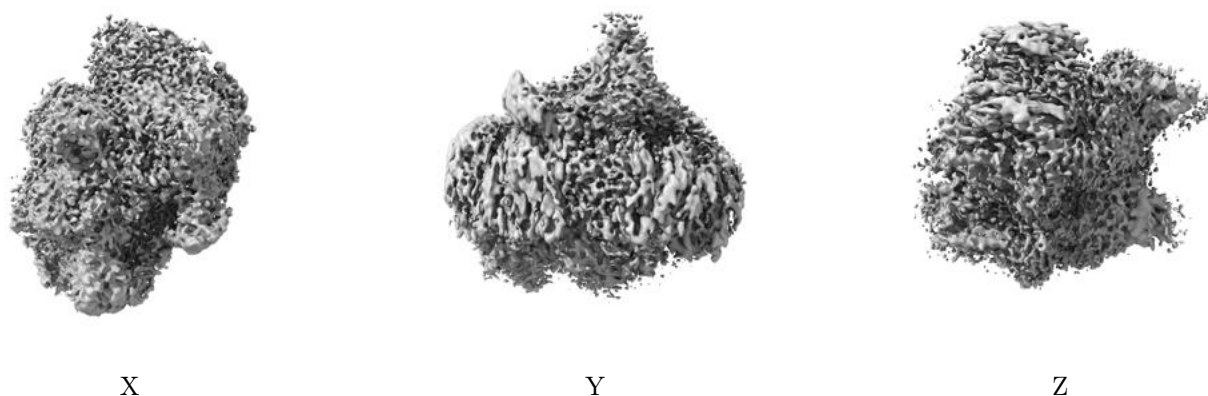


Z

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

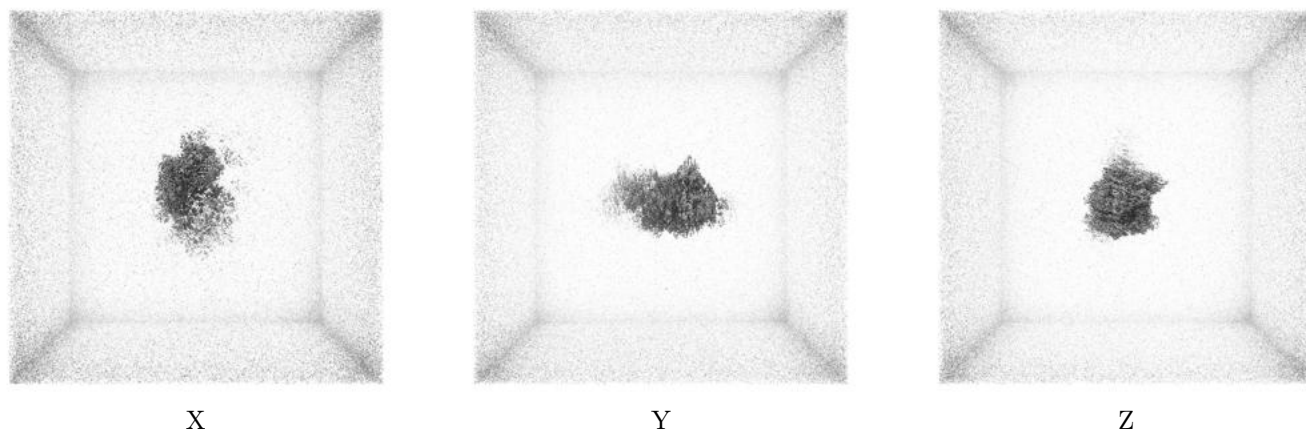
6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 0.02. 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.

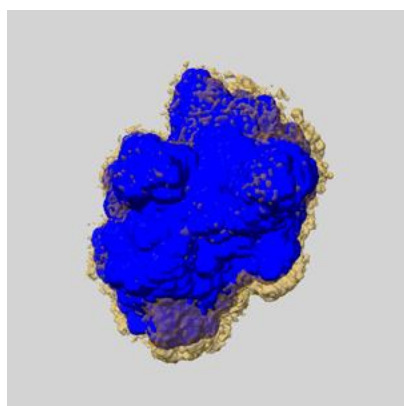
6.6 Mask visualisation [i](#)

This section shows the 3D surface view of the primary map at 50% transparency overlaid with the specified mask at 0% transparency

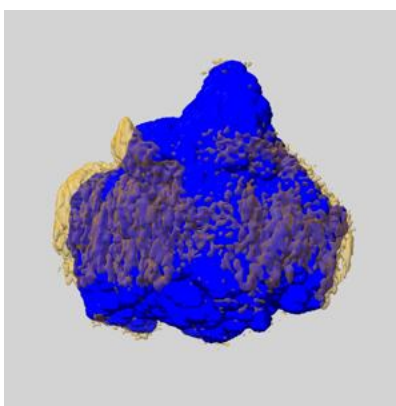
A mask typically either:

- Encompasses the whole structure
- Separates out a domain, a functional unit, a monomer or an area of interest from a larger structure

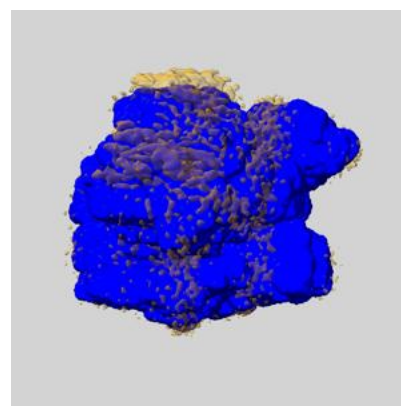
6.6.1 emd_66947_msk_1.map [i](#)



X



Y

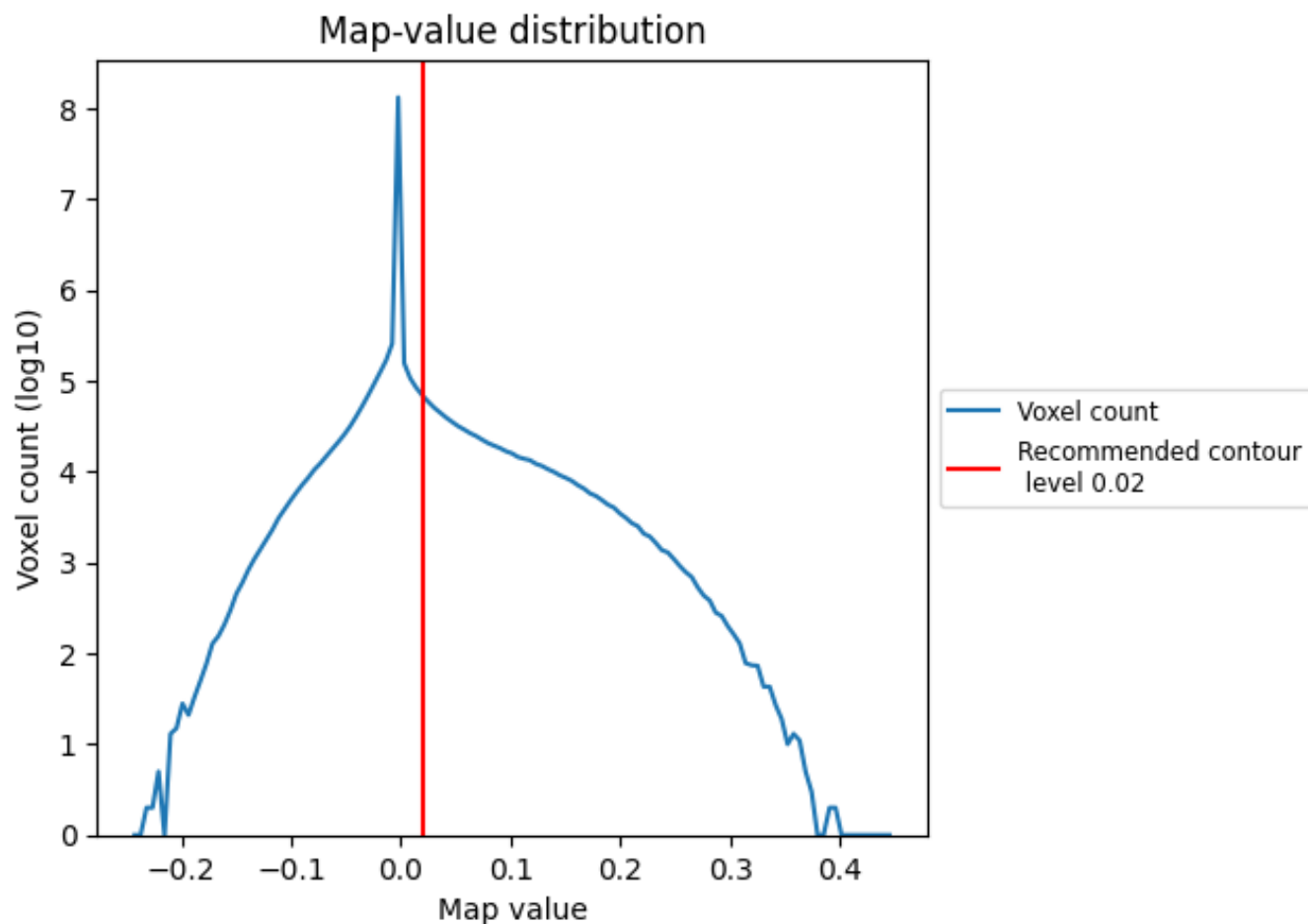


Z

7 Map analysis [i](#)

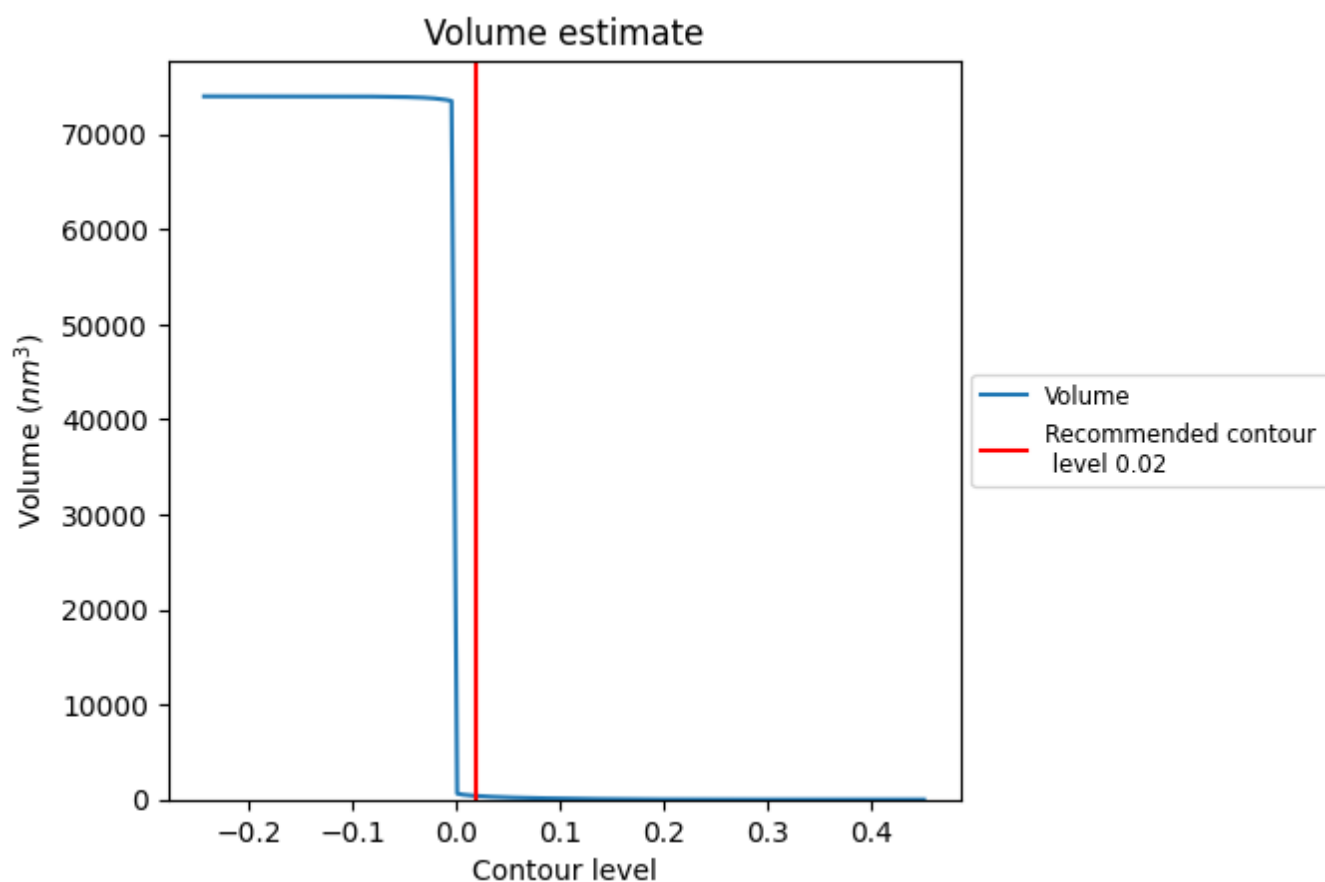
This section contains the results of statistical analysis of the map.

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.

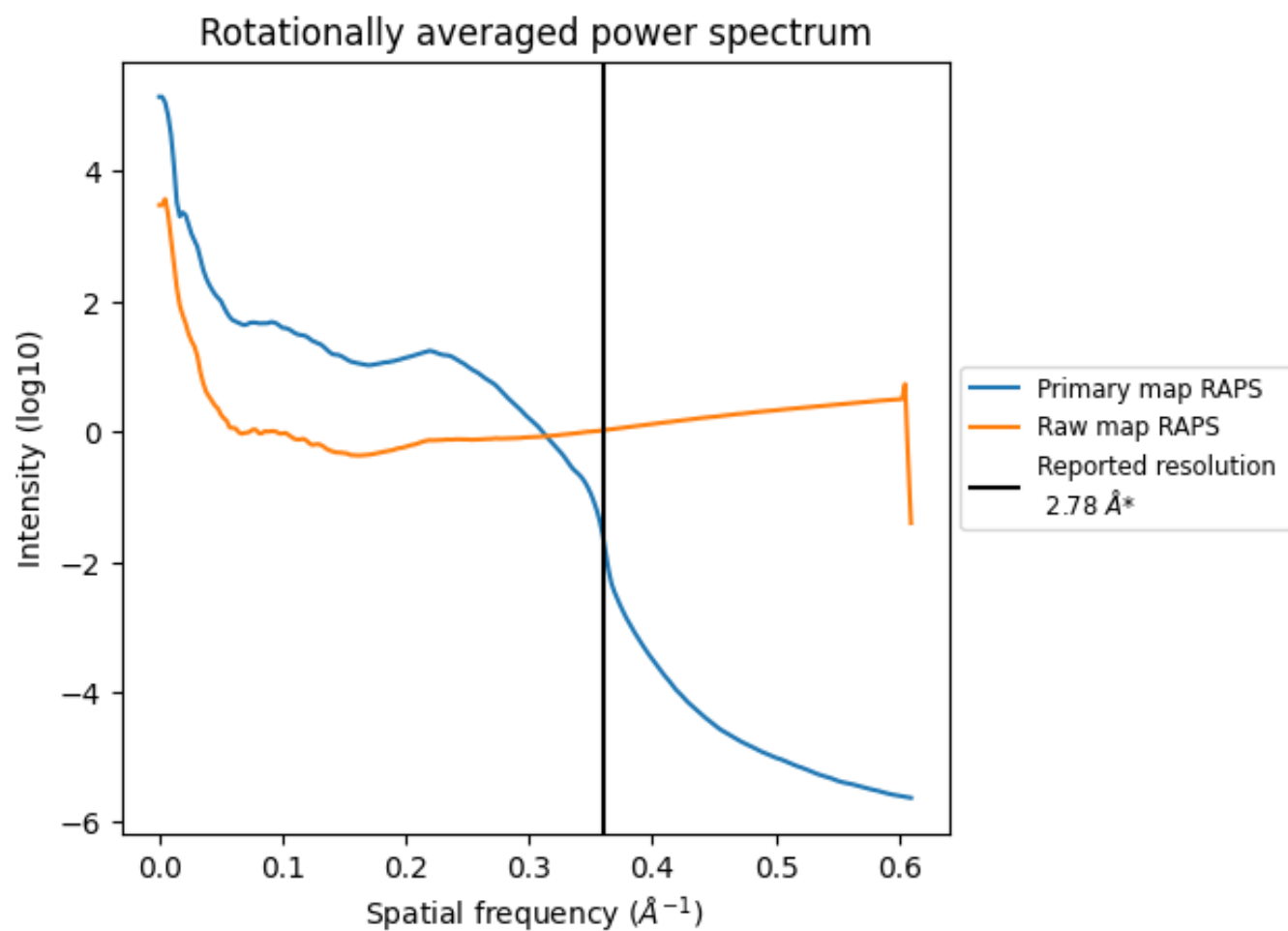
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 382 nm^3 ; this corresponds to an approximate mass of 345 kDa.

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

7.3 Rotationally averaged power spectrum ⓘ

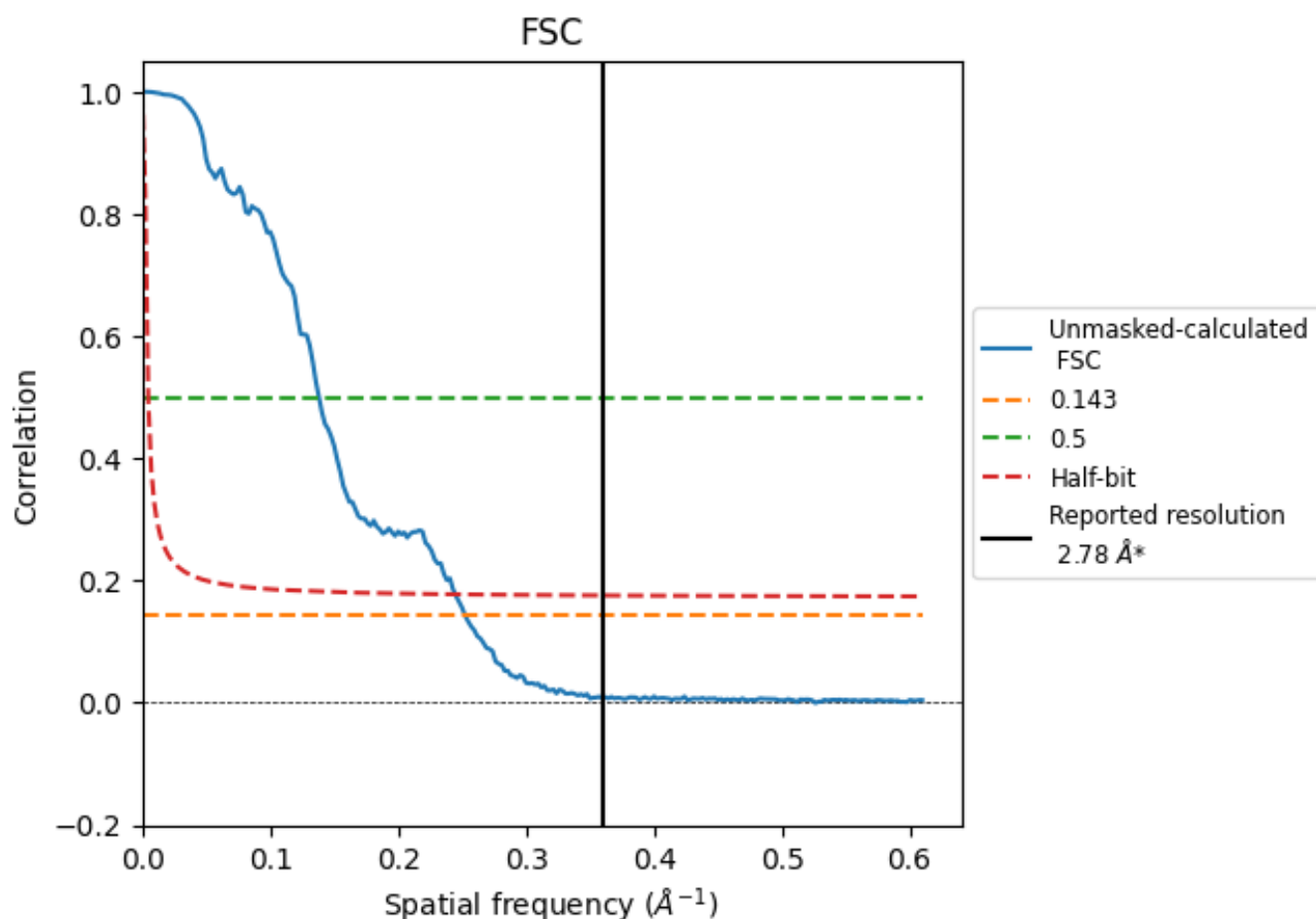


*Reported resolution corresponds to spatial frequency of 0.360 Å⁻¹

8 Fourier-Shell correlation [i](#)

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

8.1 FSC [i](#)



*Reported resolution corresponds to spatial frequency of 0.360 Å⁻¹

8.2 Resolution estimates [i](#)

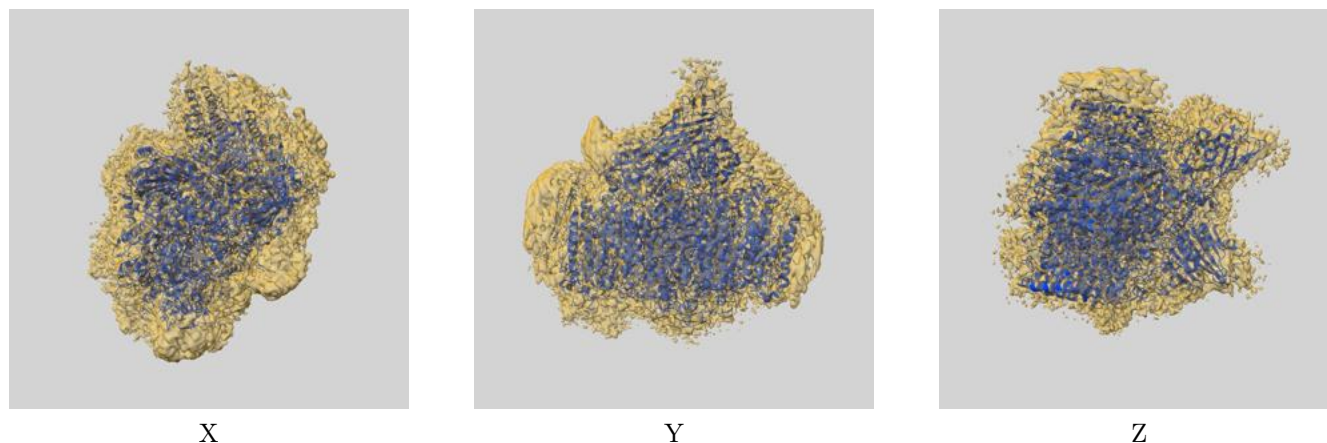
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	2.78	-	-
Author-provided FSC curve	-	-	-
Unmasked-calculated*	3.96	7.24	4.08

*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 3.96 differs from the reported value 2.78 by more than 10 %

9 Map-model fit [i](#)

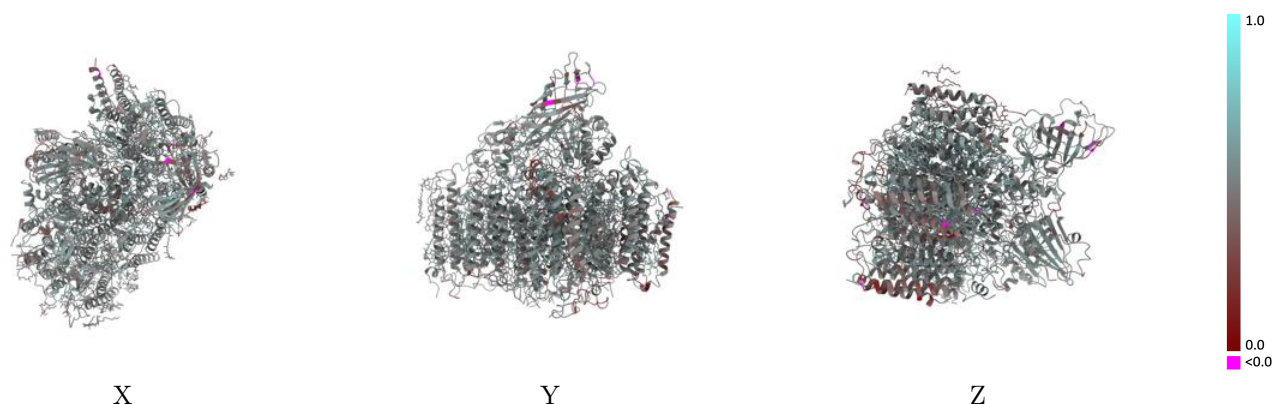
This section contains information regarding the fit between EMDB map EMD-66947 and PDB model 9XK4. Per-residue inclusion information can be found in section 3 on page 19.

9.1 Map-model overlay [i](#)



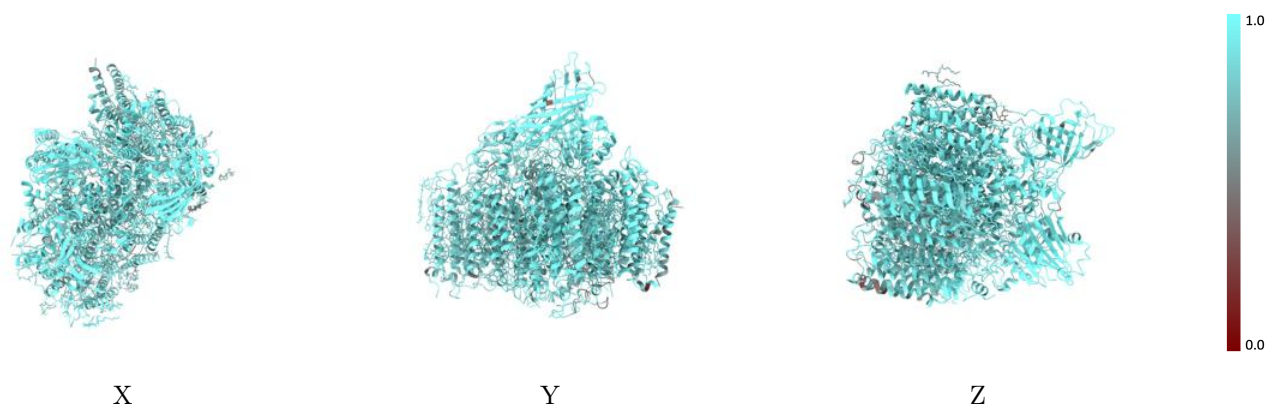
The images above show the 3D surface view of the map at the recommended contour level 0.02 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



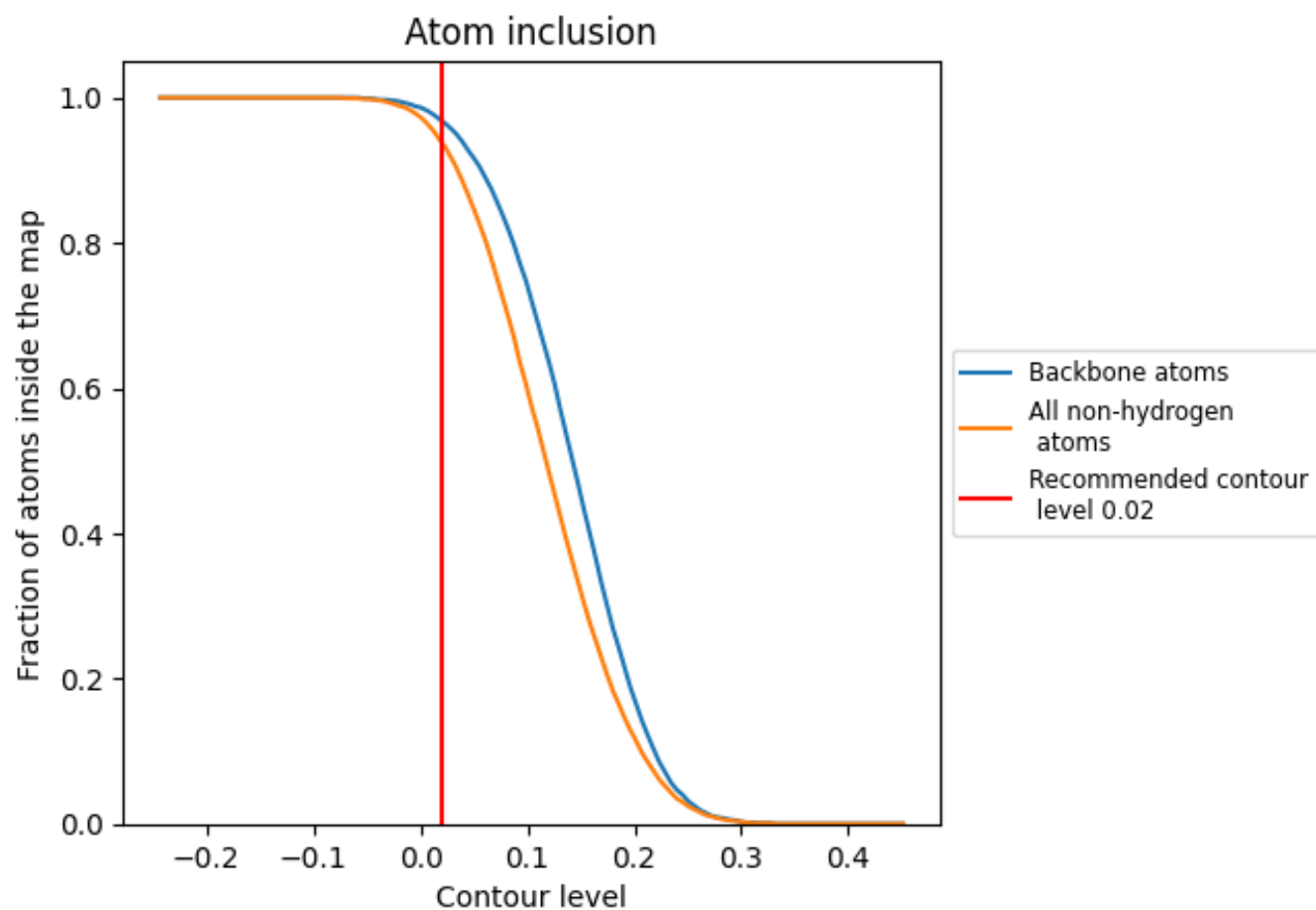
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions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

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



The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.02).

9.4 Atom inclusion [i](#)



At the recommended contour level, 97% of all backbone atoms, 94% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary ⓘ

The table lists the average atom inclusion at the recommended contour level (0.02) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.9380	 0.4960
1a	 0.9510	 0.5120
1b	 0.9450	 0.5050
1c	 0.9540	 0.5160
1d	 0.9640	 0.5190
1e	 0.9520	 0.5040
1f	 0.9640	 0.5070
1h	 0.8980	 0.4920
1i	 0.8670	 0.4550
1j	 0.9330	 0.4780
1k	 0.9180	 0.5030
1l	 0.9250	 0.5080
1m	 0.8680	 0.4740
1o	 0.9650	 0.4740
1p	 0.9730	 0.4840
1t	 0.9130	 0.4920
1u	 0.9850	 0.4730
1v	 0.7690	 0.3820
1w	 0.8960	 0.4540
1x	 0.9070	 0.4700
1y	 0.7770	 0.4080
1z	 0.7970	 0.3920

