



Full wwPDB EM Validation Report ⓘ

Sep 28, 2026 – 12:40 PM JST

PDB ID : 9XK3 / pdb_00009xk3
EMDB ID : EMD-66946
Title : In situ C2S2M2L4-type PSII-LHCII supercomplex, core, protomer 1
Authors : Li, J.; Elias, E.; Zhang, K.; Croce, R.; Zhu, J.
Deposited on : 2025-11-05
Resolution : 2.70 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

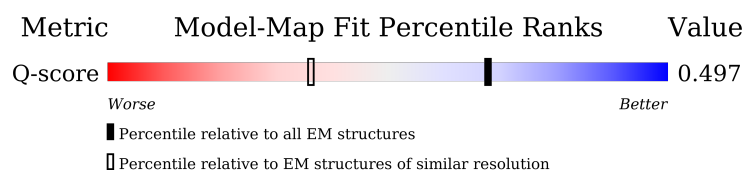
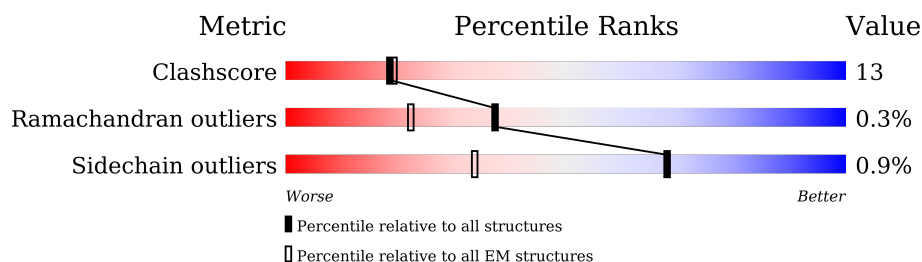
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 2.70 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	10327 (2.20 - 3.20)

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	334	
2	1B	503	
3	1C	450	
4	1D	341	

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Mol	Chain	Length	Quality of chain
5	1E	75	
6	1F	36	
7	1H	60	
8	1I	34	
9	1J	35	
10	1K	37	
11	1L	37	
12	1M	33	
13	1O	248	
14	1P	186	
15	1T	32	
16	1U	27	
17	1V	105	
18	1W	54	
19	1X	39	
20	1Y	34	
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
23	CLA	1A	402	X	-	-	-
23	CLA	1B	601	X	-	-	-
23	CLA	1B	602	X	-	-	-
23	CLA	1B	603	X	-	-	-
23	CLA	1B	604	X	-	-	-
23	CLA	1B	605	X	-	-	-
23	CLA	1B	606	X	-	-	-
23	CLA	1B	607	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
23	CLA	1B	608	X	-	-	-
23	CLA	1B	609	X	-	-	-
23	CLA	1B	610	X	-	-	-
23	CLA	1B	611	X	-	-	-
23	CLA	1B	612	X	-	-	-
23	CLA	1B	613	X	-	-	-
23	CLA	1B	616	X	-	-	-
23	CLA	1C	501	X	-	-	-
23	CLA	1C	502	X	-	-	-
23	CLA	1C	503	X	-	-	-
23	CLA	1C	504	X	-	-	-
23	CLA	1C	505	X	-	-	-
23	CLA	1C	507	X	-	-	-
23	CLA	1C	508	X	-	-	-
23	CLA	1C	509	X	-	-	-
23	CLA	1C	510	X	-	-	-
23	CLA	1C	512	X	-	-	-
23	CLA	1D	401	X	-	-	-
23	CLA	1D	404	X	-	-	-
27	PL9	1E	102	-	-	X	-

2 Entry composition

There are 35 unique types of molecules in this entry. The entry contains 26005 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	334	Total	C	N	O	S	0	0
			2612	1706	430	463	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
			3486	2296	582	599	9		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
4	1D	340	Total	C	N	O	S	0	0
			2708	1790	442	464	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	35	Total	C	N	O	S	0	0
			286	192	49	44	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	36	Total	C	N	O	S	0	0
			304	201	48	55			

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

Mol	Chain	Residues	Atoms					AltConf	Trace
12	1M	32	Total	C	N	O	S	0	0
			247	171	35	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	247	Total	C	N	O	S	0	0
			1861	1177	306	373	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	32	Total	C	N	O	S	0	0
			261	182	37	41	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	98	Total	C	N	O		0	0
			715	464	117	134			

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

Mol	Chain	Residues	Atoms					AltConf	Trace
18	1W	54	Total	C	N	O	S	0	0
			413	263	61	88	1		

- Molecule 19 is a protein called Os07g0673550 protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
19	1X	39	Total	C	N	O		0	0
			276	181	46	49			

- Molecule 20 is a protein called Os08g0119800 protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
20	1Y	34	Total	C	N	O	S	0	0
			270	176	50	43	1		

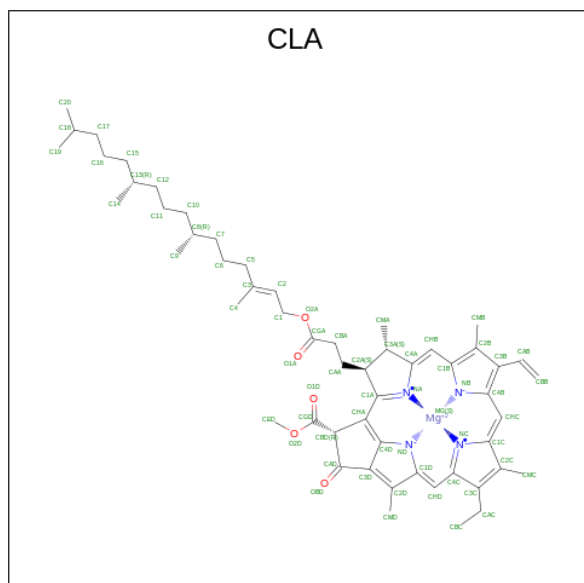
- Molecule 21 is a protein called Photosystem II reaction center protein Z.

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

- Molecule 22 is FE (II) ION (CCD ID: FE2) (formula: Fe) (labeled as "Ligand of Interest" by depositor).

Mol	Chain	Residues	Atoms		AltConf
22	1A	1	Total	Fe	0
			1	1	

- Molecule 23 is CHLOROPHYLL A (CCD ID: CLA) (formula: $C_{55}H_{72}MgN_4O_5$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms					AltConf
23	1A	1	Total	C	Mg	N	O	0
			61	51	1	4	5	
23	1A	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
23	1B	1	Total	C	Mg	N	O	0
			65	55	1	4	5	

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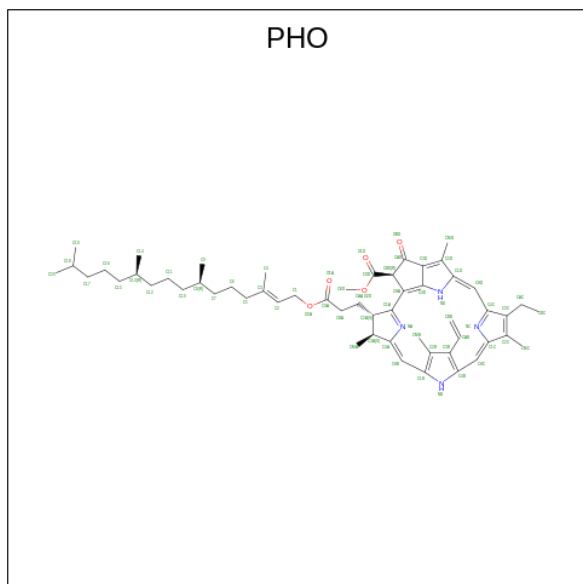
Mol	Chain	Residues	Atoms					AltConf
23	1B	1	Total	C	Mg	N	O	0
			61	51	1	4	5	
23	1B	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
23	1B	1	Total	C	Mg	N	O	0
			56	46	1	4	5	
23	1B	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
23	1B	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
23	1B	1	Total	C	Mg	N	O	0
			62	52	1	4	5	
23	1B	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
23	1B	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
23	1B	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
23	1B	1	Total	C	Mg	N	O	0
			56	46	1	4	5	
23	1B	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
23	1B	1	Total	C	Mg	N	O	0
			58	48	1	4	5	
23	1B	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
23	1B	1	Total	C	Mg	N	O	0
			41	33	1	4	3	
23	1B	1	Total	C	Mg	N	O	0
			59	49	1	4	5	
23	1C	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
23	1C	1	Total	C	Mg	N	O	0
			61	51	1	4	5	
23	1C	1	Total	C	Mg	N	O	0
			56	46	1	4	5	
23	1C	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
23	1C	1	Total	C	Mg	N	O	0
			60	50	1	4	5	
23	1C	1	Total	C	Mg	N	O	0
			49	39	1	4	5	

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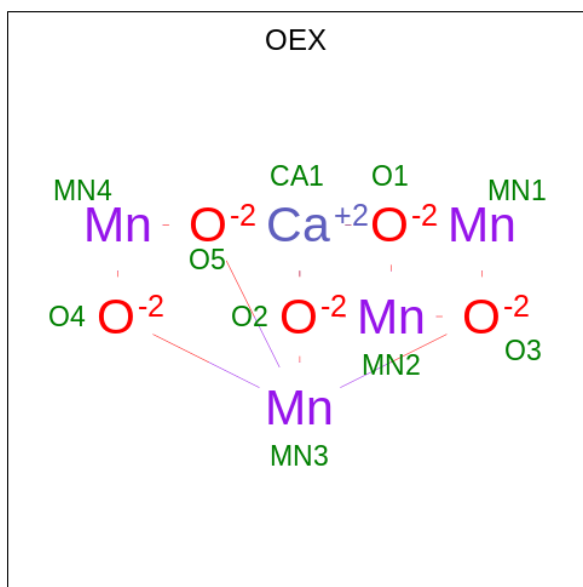
Mol	Chain	Residues	Atoms					AltConf
23	1C	1	Total	C	Mg	N	O	0
			58	48	1	4	5	
23	1C	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
23	1C	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
23	1C	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
23	1C	1	Total	C	Mg	N	O	0
			46	36	1	4	5	
23	1C	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
23	1C	1	Total	C	Mg	N	O	0
			41	33	1	4	3	
23	1D	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
23	1D	1	Total	C	Mg	N	O	0
			50	40	1	4	5	
23	1D	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
23	1D	1	Total	C	Mg	N	O	0
			42	34	1	4	3	

- Molecule 24 is PHEOPHYTIN A (CCD ID: PHO) (formula: $C_{55}H_{74}N_4O_5$) (labeled as "Ligand of Interest" by depositor).



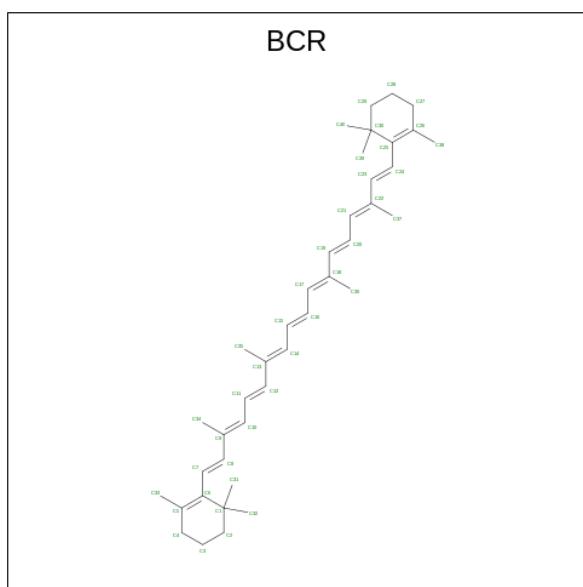
Mol	Chain	Residues	Atoms				AltConf
24	1A	1	Total	C	N	O	0
			64	55	4	5	
24	1A	1	Total	C	N	O	0
			64	55	4	5	

- Molecule 25 is CA-MN4-O5 CLUSTER (CCD ID: OEX) (formula: CaMn_4O_5).



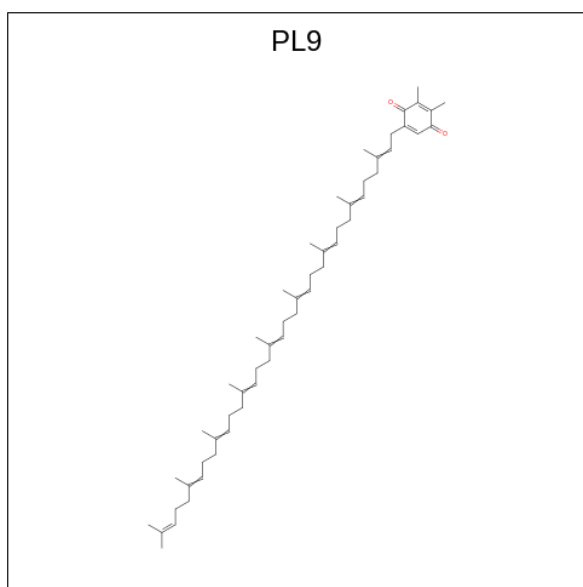
Mol	Chain	Residues	Atoms				AltConf
25	1A	1	Total	Ca	Mn	O	0
			10	1	4	5	

- Molecule 26 is BETA-CAROTENE (CCD ID: BCR) (formula: $\text{C}_{40}\text{H}_{56}$) (labeled as "Ligand of Interest" by depositor).



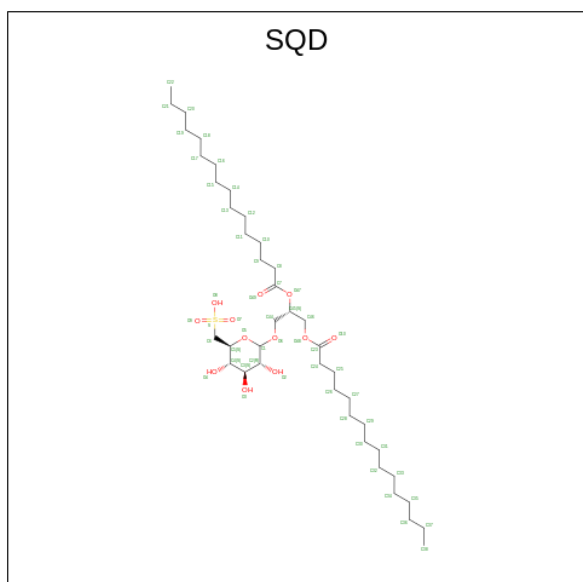
Mol	Chain	Residues	Atoms	AltConf
26	1A	1	Total C 40 40	0
26	1B	1	Total C 40 40	0
26	1B	1	Total C 40 40	0
26	1B	1	Total C 40 40	0
26	1D	1	Total C 40 40	0
26	1H	1	Total C 40 40	0
26	1I	1	Total C 40 40	0
26	1J	1	Total C 40 40	0
26	1T	1	Total C 40 40	0
26	1Z	1	Total C 40 40	0
26	1Z	1	Total C 40 40	0

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



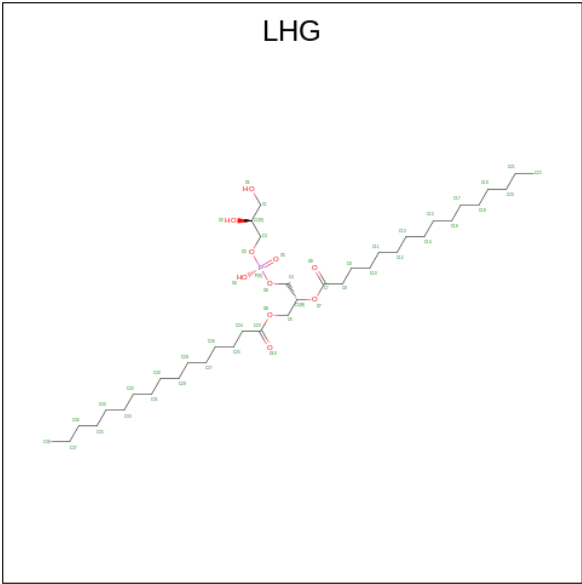
Mol	Chain	Residues	Atoms			AltConf
27	1A	1	Total	C	O	0
			55	53	2	
27	1D	1	Total	C	O	0
			55	53	2	
27	1E	1	Total	C	O	0
			55	53	2	
27	1H	1	Total	C	O	0
			55	53	2	

- Molecule 28 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
28	1A	1	Total	C	O	S	0
			48	35	12	1	
28	1A	1	Total	C	O	S	0
			42	29	12	1	
28	1A	1	Total	C	O	S	0
			45	32	12	1	
28	1B	1	Total	C	O	S	0
			45	32	12	1	
28	1B	1	Total	C	O	S	0
			50	37	12	1	
28	1C	1	Total	C	O	S	0
			51	38	12	1	
28	1C	1	Total	C	O	S	0
			46	33	12	1	
28	1D	1	Total	C	O	S	0
			46	33	12	1	
28	1D	1	Total	C	O	S	0
			43	30	12	1	
28	1M	1	Total	C	O	S	0
			42	29	12	1	

- Molecule 29 is 1,2-DIPALMITOYL-PHOSPHATIDYL-GLYCEROLE (CCD ID: LHG) (formula: C₃₈H₇₅O₁₀P).



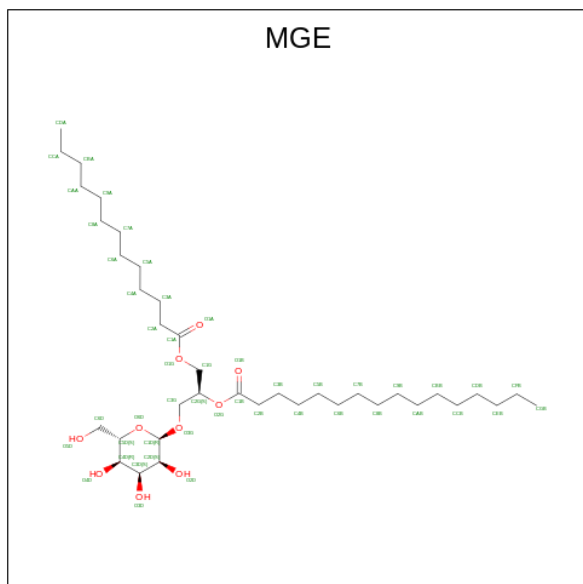
Mol	Chain	Residues	Atoms				AltConf
29	1B	1	Total	C	O	P	0
			38	27	10	1	

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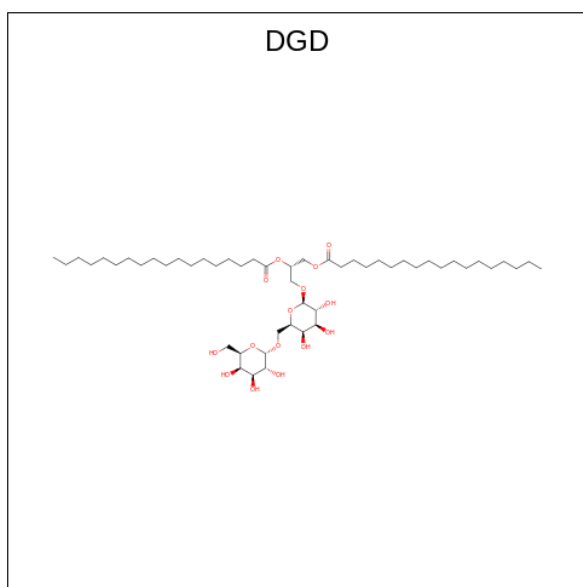
Mol	Chain	Residues	Atoms				AltConf
29	1B	1	Total	C	O	P	0
			39	31	7	1	
29	1C	1	Total	C	O	P	0
			34	23	10	1	
29	1C	1	Total	C	O	P	0
			29	18	10	1	
29	1C	1	Total	C	O	P	0
			32	22	9	1	
29	1C	1	Total	C	O	P	0
			34	23	10	1	
29	1C	1	Total	C	O	P	0
			37	26	10	1	
29	1D	1	Total	C	O	P	0
			31	20	10	1	
29	1D	1	Total	C	O	P	0
			43	32	10	1	
29	1D	1	Total	C	O	P	0
			32	21	10	1	
29	1D	1	Total	C	O	P	0
			41	32	8	1	
29	1E	1	Total	C	O	P	0
			30	19	10	1	
29	1F	1	Total	C	O	P	0
			30	21	8	1	
29	1I	1	Total	C	O	P	0
			32	23	8	1	
29	1I	1	Total	C	O	P	0
			39	28	10	1	
29	1J	1	Total	C	O	P	0
			43	34	8	1	
29	1K	1	Total	C	O	P	0
			43	34	8	1	
29	1L	1	Total	C	O	P	0
			49	38	10	1	
29	1P	1	Total	C	O	P	0
			45	36	8	1	
29	1V	1	Total	C	O	P	0
			49	38	10	1	
29	1W	1	Total	C	O	P	0
			44	33	10	1	
29	1W	1	Total	C	O	P	0
			44	33	10	1	

- Molecule 30 is (1S)-2-(ALPHA-L-ALLOPYRANOSYLOXY)-1-[(TRIDECANOYLOXY)METHYL]ETHYL PALMITATE (CCD ID: MGE) (formula: $C_{38}H_{72}O_{10}$) (labeled as "Ligand of Interest" by depositor).



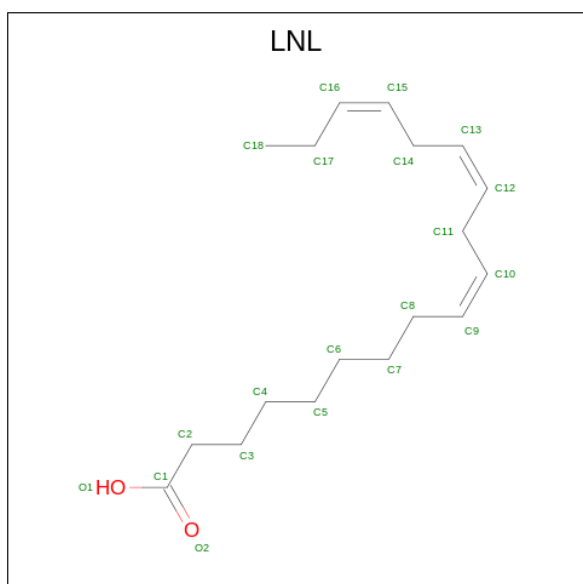
Mol	Chain	Residues	Atoms			AltConf
30	1B	1	Total	C	O	0
			44	34	10	
30	1B	1	Total	C	O	0
			43	33	10	
30	1C	1	Total	C	O	0
			45	35	10	

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



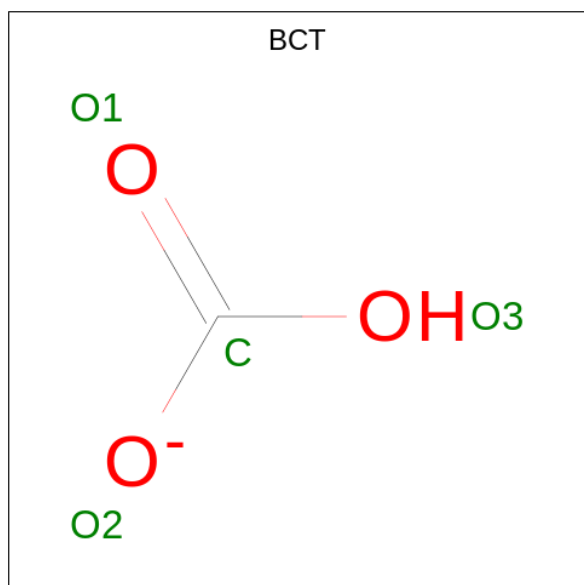
Mol	Chain	Residues	Atoms			AltConf
31	1B	1	Total	C	O	0
			62	47	15	
31	1C	1	Total	C	O	0
			55	40	15	
31	1C	1	Total	C	O	0
			58	43	15	
31	1C	1	Total	C	O	0
			60	45	15	

- Molecule 32 is ALPHA-LINOLENIC ACID (CCD ID: LNL) (formula: $C_{18}H_{30}O_2$) (labeled as "Ligand of Interest" by depositor).



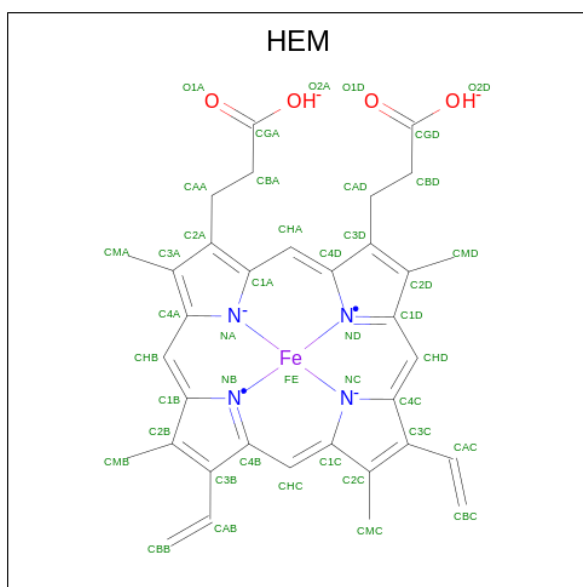
Mol	Chain	Residues	Atoms			AltConf
32	1C	1	Total	C	O	0
			18	16	2	
32	1C	1	Total	C	O	0
			17	15	2	

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



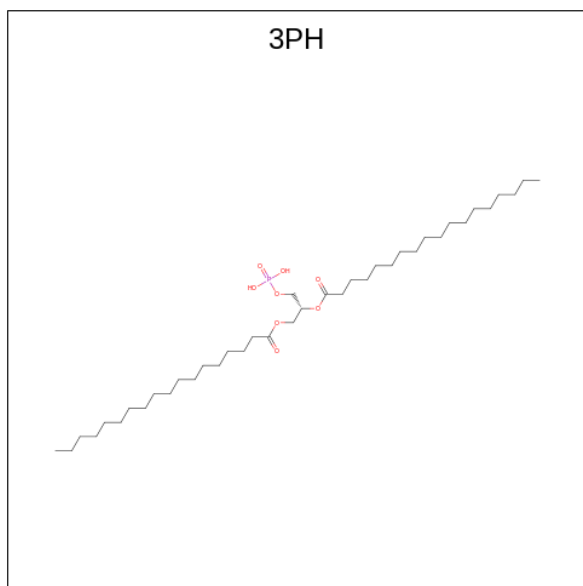
Mol	Chain	Residues	Atoms			AltConf
33	1D	1	Total	C	O	0
			4	1	3	

- 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	1E	1	Total	C	Fe	N	O	0
			43	34	1	4	4	

- Molecule 35 is 1,2-DIACYL-GLYCEROL-3-SN-PHOSPHATE (CCD ID: 3PH) (formula: $\text{C}_{39}\text{H}_{77}\text{O}_8\text{P}$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms				AltConf
35	1X	1	Total	C	O	P	0
			39	30	8	1	

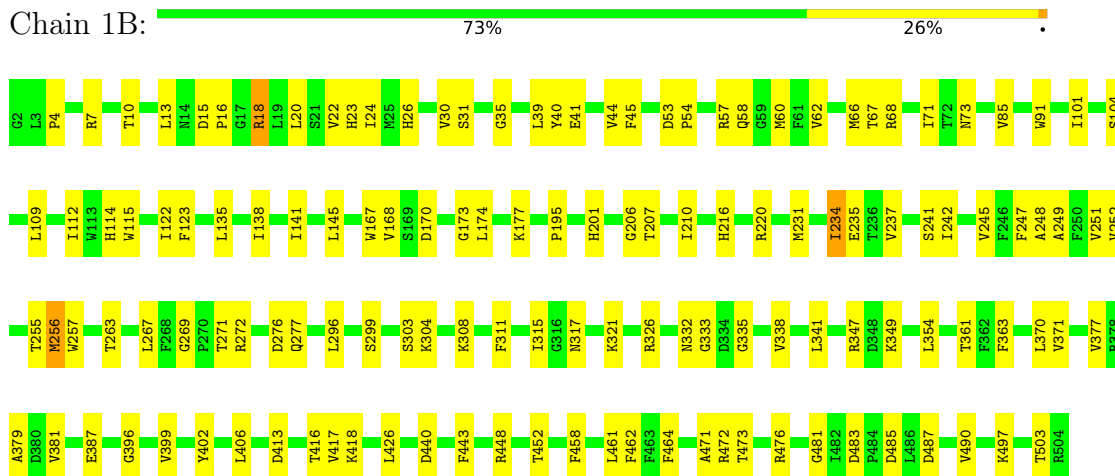
3 Residue-property plots

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.

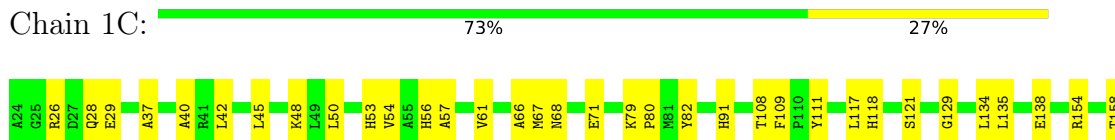
- Molecule 1: Photosystem II protein D1

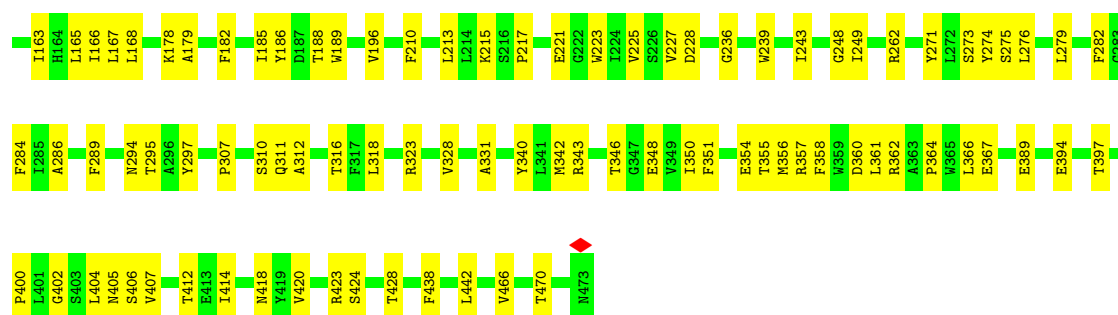


- Molecule 2: Photosystem II CP47 reaction center protein



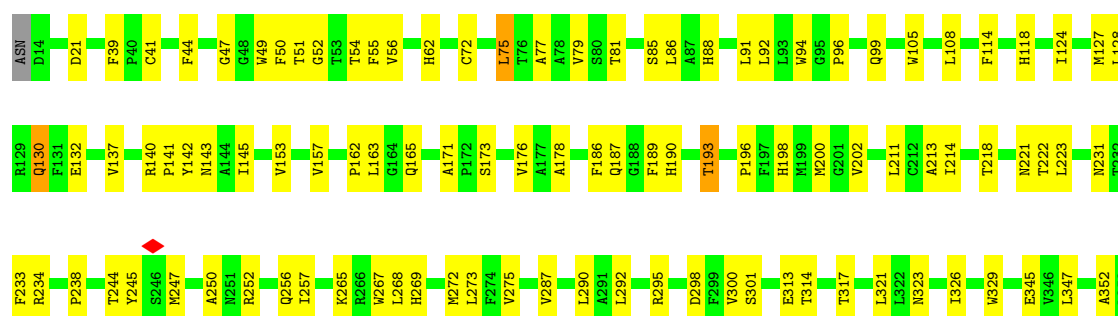
- Molecule 3: Photosystem II CP43 reaction center protein





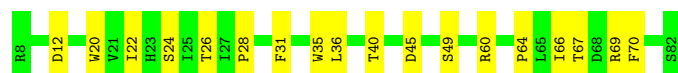
• Molecule 4: Photosystem II D2 protein

Chain 1D:  70% 29% .



• Molecule 5: Cytochrome b559 subunit alpha

Chain 1E:  76% 24% .



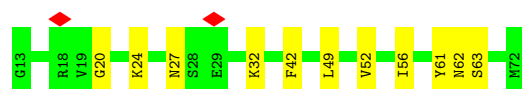
• Molecule 6: Cytochrome b559 subunit beta

Chain 1F:  47% 50% .

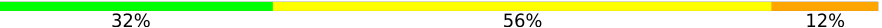


• Molecule 7: Photosystem II reaction center protein H

Chain 1H:  82% 18% .



• Molecule 8: Photosystem II reaction center protein I

Chain 1I:  32% 56% 12% .



- Molecule 9: Photosystem II reaction center protein J

Chain 1J: 74% 26%



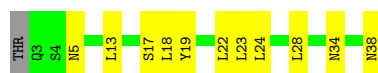
- Molecule 10: Photosystem II reaction center protein K

Chain 1K: 73% 27%



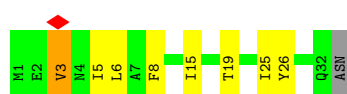
- Molecule 11: Photosystem II reaction center protein L

Chain 1L: 68% 30%



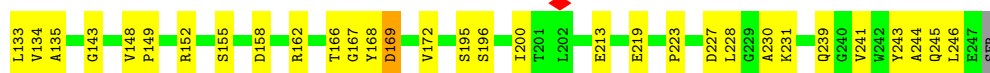
- Molecule 12: Photosystem II reaction center protein M

Chain 1M: 73% 21%



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

Chain 1O: 74% 25%



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

Chain 1P: 86% 14%



- Molecule 15: Photosystem II reaction center protein T

Chain 1T:  66% 34%



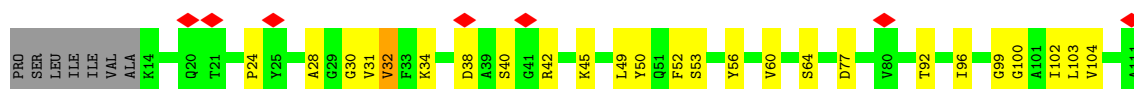
- Molecule 16: Os02g0581100 protein

Chain 1U:  93% 7%



- Molecule 17: Photosystem II 10 kDa polypeptide, chloroplastic

Chain 1V:  7% 70% 23% 7%



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

Chain 1W:  72% 28%



- Molecule 19: Os07g0673550 protein

Chain 1X:  77% 21%



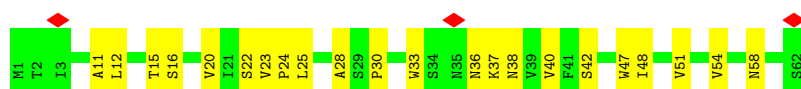
- Molecule 20: Os08g0119800 protein

Chain 1Y:  85% 15%



- Molecule 21: Photosystem II reaction center protein Z

Chain 1Z:  5% 65% 35%



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	0.401	Depositor
Minimum map value	-0.269	Depositor
Average map value	0.000	Depositor
Map value standard deviation	0.007	Depositor
Recommended contour level	0.02	Depositor
Map size (Å)	419.84, 419.84, 419.84	wwPDB
Map dimensions	512, 512, 512	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	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: 3PH, LHG, BCR, PHO, SQD, CLA, DGD, MGE, BCT, OEX, LNL, HEM, PL9, FE2

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	0/2693	0.62	3/3672 (0.1%)
2	1B	0.27	0/4077	0.52	1/5551 (0.0%)
3	1C	0.24	0/3603	0.49	0/4910
4	1D	0.30	1/2801 (0.0%)	0.59	2/3818 (0.1%)
5	1E	0.26	0/632	0.53	0/860
6	1F	0.43	0/295	0.62	0/400
7	1H	0.25	0/464	0.56	0/630
8	1I	0.51	0/285	0.62	0/385
9	1J	0.24	0/261	0.63	0/353
10	1K	0.28	0/317	0.57	0/433
11	1L	0.26	0/312	0.51	0/424
12	1M	0.34	0/251	0.89	0/344
13	1O	0.25	0/1898	0.59	1/2567 (0.0%)
14	1P	0.19	0/1452	0.48	0/1961
15	1T	0.19	0/269	0.40	0/365
16	1U	0.12	0/211	0.32	0/281
17	1V	0.22	0/731	0.51	0/991
18	1W	0.27	0/419	0.62	0/567
19	1X	0.23	0/279	0.47	0/380
20	1Y	0.29	0/275	0.57	0/376
21	1Z	0.33	0/476	0.70	0/652
All	All	0.28	1/22001 (0.0%)	0.56	7/29920 (0.0%)

All (1) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	1D	39	PHE	C-N	5.22	1.38	1.33

All (7) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	1A	284	TRP	CA-CB-CG	6.19	125.36	113.60
13	1O	49	LYS	N-CA-C	5.71	115.82	108.34
1	1A	168	PHE	N-CA-C	-5.67	106.20	113.01
4	1D	267	TRP	CA-C-N	5.54	132.11	121.54
4	1D	267	TRP	C-N-CA	5.54	132.11	121.54
1	1A	63	ILE	CA-CB-CG1	5.35	119.49	110.40
2	1B	256	MET	CB-CG-SD	-5.09	97.42	112.70

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts ⓘ

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	1A	2612	0	2522	86	0
2	1B	3945	0	3810	104	0
3	1C	3486	0	3396	95	0
4	1D	2708	0	2598	89	0
5	1E	614	0	592	19	0
6	1F	286	0	293	21	0
7	1H	454	0	473	12	0
8	1I	277	0	289	27	0
9	1J	255	0	265	8	0
10	1K	305	0	311	11	0
11	1L	304	0	292	13	0
12	1M	247	0	272	8	0
13	1O	1861	0	1847	42	0
14	1P	1422	0	1384	15	0
15	1T	261	0	280	9	0
16	1U	208	0	221	2	0
17	1V	715	0	721	18	0
18	1W	413	0	401	13	0
19	1X	276	0	303	8	0
20	1Y	270	0	289	5	0
21	1Z	466	0	494	15	0
22	1A	1	0	0	0	0
23	1A	106	0	94	3	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
23	1B	958	0	977	68	0
23	1C	751	0	736	38	0
23	1D	222	0	214	17	0
24	1A	128	0	148	7	0
25	1A	10	0	0	0	0
26	1A	40	0	56	4	0
26	1B	120	0	168	15	0
26	1D	40	0	56	4	0
26	1H	40	0	56	2	0
26	1I	40	0	56	6	0
26	1J	40	0	56	4	0
26	1T	40	0	56	1	0
26	1Z	80	0	112	9	0
27	1A	55	0	80	6	0
27	1D	55	0	80	6	0
27	1E	55	0	80	29	0
27	1H	55	0	80	6	0
28	1A	135	0	162	9	0
28	1B	95	0	121	10	0
28	1C	97	0	125	7	0
28	1D	89	0	106	7	0
28	1M	42	0	48	6	0
29	1B	77	0	102	3	0
29	1C	166	0	181	6	0
29	1D	147	0	181	5	0
29	1E	30	0	30	0	0
29	1F	30	0	31	1	0
29	1I	71	0	88	4	0
29	1J	43	0	60	4	0
29	1K	43	0	60	1	0
29	1L	49	0	74	2	0
29	1P	45	0	67	8	0
29	1V	49	0	74	2	0
29	1W	88	0	122	2	0
30	1B	87	0	120	4	0
30	1C	45	0	63	4	0
31	1B	62	0	82	5	0
31	1C	173	0	220	15	0
32	1C	35	0	45	1	0
33	1D	4	0	0	1	0
34	1E	43	0	30	4	0
35	1X	39	0	51	1	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
All	All	26005	0	26401	681	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 13.

All (681) 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)
27:1E:102:PL9:H371	29:1P:201:LHG:H202	1.59	0.85
4:1D:130:GLN:NE2	4:1D:143:ASN:OD1	2.09	0.84
2:1B:114:HIS:HE1	23:1B:614:CLA:ND	1.75	0.81
23:1B:613:CLA:HHC	23:1B:613:CLA:HBB1	1.65	0.75
4:1D:252:ARG:HD2	4:1D:256:GLN:HE21	1.52	0.75
23:1D:402:CLA:HAB	23:1D:404:CLA:H72	1.67	0.75
4:1D:265:LYS:HE2	4:1D:269:HIS:HE1	1.52	0.74
27:1E:102:PL9:H461	27:1E:102:PL9:H352	1.69	0.74
4:1D:142:TYR:HA	4:1D:145:ILE:HD12	1.69	0.72
1:1A:223:LEU:HB2	4:1D:140:ARG:HH21	1.54	0.72
27:1E:102:PL9:H18	6:1F:25:VAL:HG12	1.70	0.72
8:1I:5:LYS:HD2	18:1W:6:MET:HE1	1.73	0.71
2:1B:16:PRO:HG2	2:1B:123:PHE:HB3	1.73	0.70
27:1D:407:PL9:H122	29:1D:409:LHG:HC92	1.73	0.70
4:1D:193:THR:HG23	23:1D:404:CLA:HBC2	1.73	0.70
4:1D:187:GLN:HB2	23:1D:404:CLA:HBC1	1.75	0.68
17:1V:50:TYR:HB3	17:1V:53:SER:HB3	1.76	0.68
1:1A:85:THR:HA	1:1A:109:GLY:HA3	1.76	0.68
3:1C:53:HIS:CD2	23:1C:508:CLA:NA	2.62	0.67
2:1B:311:PHE:O	2:1B:317:ASN:ND2	2.28	0.67
3:1C:68:ASN:ND2	3:1C:111:TYR:O	2.26	0.67
4:1D:140:ARG:HD2	4:1D:142:TYR:HE1	1.58	0.66
2:1B:13:LEU:HD21	2:1B:476:ARG:HH22	1.61	0.66
23:1B:609:CLA:H72	23:1B:611:CLA:H51	1.79	0.65
27:1E:102:PL9:H361	29:1P:201:LHG:H371	1.78	0.65
1:1A:329:GLU:HG2	3:1C:412:THR:HG21	1.79	0.64
28:1B:620:SQD:H5	28:1M:101:SQD:H3	1.80	0.63
4:1D:269:HIS:NE2	33:1D:403:BCT:O2	2.31	0.63
11:1L:24:LEU:HD23	29:1L:101:LHG:H271	1.80	0.63
7:1H:42:PHE:HB3	27:1H:101:PL9:H221	1.80	0.63
1:1A:259:ILE:HD12	27:1A:408:PL9:H23	1.81	0.62
3:1C:134:LEU:HD21	23:1C:510:CLA:H12	1.80	0.62
8:1I:9:TYR:O	8:1I:13:ILE:HG12	2.00	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1A:282:GLY:O	1:1A:286:THR:OG1	2.17	0.62
2:1B:220:ARG:HD3	7:1H:32:LYS:HB3	1.82	0.62
31:1C:517:DGD:HG31	28:1C:522:SQD:H81	1.80	0.62
4:1D:108:LEU:HD23	5:1E:66:ILE:HD13	1.81	0.62
27:1E:102:PL9:C25	27:1E:102:PL9:H28	2.29	0.62
17:1V:99:GLY:HA2	17:1V:102:ILE:HD12	1.81	0.62
6:1F:14:TRP:O	6:1F:18:HIS:ND1	2.31	0.62
1:1A:183:MET:HE3	23:1D:401:CLA:HAC1	1.81	0.62
2:1B:91:TRP:HE1	29:1B:621:LHG:HC62	1.65	0.62
3:1C:215:LYS:HG2	3:1C:221:GLU:HB3	1.82	0.62
1:1A:215:HIS:HA	27:1A:408:PL9:HC2	1.81	0.62
23:1C:510:CLA:H203	26:1Z:102:BCR:H17C	1.82	0.62
1:1A:183:MET:HB3	23:1A:402:CLA:HBC2	1.81	0.61
8:1I:3:THR:HA	8:1I:6:LEU:HD12	1.82	0.61
29:1C:526:LHG:H252	29:1C:526:LHG:H151	1.82	0.61
10:1K:44:PRO:O	10:1K:47:PHE:HB2	2.00	0.61
23:1B:610:CLA:H152	23:1B:616:CLA:HBA2	1.83	0.61
2:1B:30:VAL:HG12	23:1B:603:CLA:HHD	1.81	0.61
3:1C:343:ARG:NH1	13:1O:87:ASP:OD1	2.32	0.61
2:1B:39:LEU:HD22	28:1B:622:SQD:H111	1.82	0.61
1:1A:34:GLY:HA2	1:1A:37:MET:HB3	1.83	0.61
1:1A:57:PRO:O	13:1O:123:ARG:NH2	2.33	0.60
1:1A:223:LEU:O	4:1D:140:ARG:NH2	2.35	0.60
3:1C:42:LEU:HD22	3:1C:48:LYS:HB2	1.83	0.60
28:1A:409:SQD:H311	23:1C:507:CLA:H8	1.82	0.60
1:1A:147:TYR:OH	24:1A:403:PHO:O1A	2.17	0.60
4:1D:187:GLN:NE2	4:1D:323:ASN:OD1	2.35	0.60
3:1C:117:LEU:HD11	28:1C:523:SQD:H101	1.83	0.60
3:1C:273:SER:HA	3:1C:276:LEU:HD12	1.84	0.59
3:1C:470:THR:O	4:1D:252:ARG:NH2	2.34	0.59
2:1B:272:ARG:NH1	2:1B:276:ASP:OD2	2.35	0.59
4:1D:238:PRO:HD3	17:1V:60:VAL:HG22	1.84	0.59
15:1T:24:ARG:HH12	15:1T:27:PRO:HD3	1.68	0.59
1:1A:137:LEU:HD12	3:1C:466:VAL:HG22	1.84	0.59
2:1B:73:ASN:HB3	2:1B:85:VAL:HG11	1.85	0.59
2:1B:269:GLY:O	2:1B:448:ARG:NH1	2.36	0.59
2:1B:109:LEU:HA	2:1B:112:ILE:HD12	1.84	0.59
13:1O:78:LEU:HA	13:1O:116:VAL:HG12	1.85	0.59
14:1P:139:ASP:OD1	14:1P:139:ASP:N	2.35	0.59
1:1A:218:LEU:HB3	1:1A:251:ALA:HB1	1.84	0.59
2:1B:15:ASP:OD2	11:1L:5:ASN:ND2	2.36	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:1B:602:CLA:HBC3	23:1B:608:CLA:H52	1.85	0.59
8:1I:14:PHE:CZ	8:1I:18:LEU:HD11	2.37	0.59
1:1A:222:SER:HB2	1:1A:246:TYR:HB2	1.85	0.58
8:1I:17:SER:HA	8:1I:20:ILE:HD12	1.84	0.58
1:1A:64:ARG:NH1	13:1O:113:ALA:O	2.36	0.58
8:1I:20:ILE:HG23	26:1I:102:BCR:H332	1.84	0.58
4:1D:173:SER:HB2	4:1D:178:ALA:HB1	1.86	0.58
3:1C:28:GLN:OE1	4:1D:234:ARG:NH1	2.36	0.58
28:1C:522:SQD:H291	10:1K:42:VAL:HG21	1.86	0.58
1:1A:297:LEU:HD23	31:1C:517:DGD:HBF1	1.86	0.58
2:1B:387:GLU:HB2	14:1P:89:GLY:HA3	1.85	0.58
27:1A:408:PL9:H221	27:1E:102:PL9:H531	1.85	0.58
4:1D:92:LEU:HD23	23:1D:405:CLA:HBD	1.85	0.58
2:1B:10:THR:HG21	23:1B:609:CLA:HED3	1.85	0.58
4:1D:128:LEU:HD22	28:1D:412:SQD:H291	1.85	0.58
8:1I:15:PHE:HA	8:1I:18:LEU:HD12	1.86	0.58
8:1I:9:TYR:O	8:1I:10:THR:C	2.47	0.58
10:1K:47:PHE:HA	10:1K:50:LEU:HG	1.86	0.58
2:1B:247:PHE:HB2	23:1B:606:CLA:HBC1	1.85	0.57
2:1B:464:PHE:HD2	23:1B:609:CLA:HAC2	1.68	0.57
3:1C:279:LEU:HD12	23:1C:508:CLA:HED2	1.85	0.57
3:1C:262:ARG:NH1	18:1W:37:TYR:OH	2.35	0.57
1:1A:106:LEU:HD11	26:1A:407:BCR:H402	1.86	0.57
3:1C:188:THR:HG22	3:1C:364:PRO:HG2	1.86	0.57
1:1A:67:VAL:HG22	4:1D:313:GLU:HG2	1.86	0.57
29:1I:103:LHG:HC82	18:1W:21:LEU:HD21	1.86	0.57
5:1E:28:PRO:HG3	27:1E:102:PL9:H301	1.86	0.57
5:1E:45:ASP:OD2	20:1Y:4:ARG:NH2	2.38	0.57
23:1B:601:CLA:H171	31:1B:626:DGD:HBT1	1.87	0.57
29:1C:521:LHG:H131	29:1C:521:LHG:H292	1.87	0.57
12:1M:15:ILE:O	12:1M:19:THR:OG1	2.20	0.57
1:1A:225:ARG:HG3	2:1B:481:GLY:HA3	1.87	0.57
2:1B:349:LYS:HD3	2:1B:396:GLY:HA3	1.87	0.57
5:1E:36:LEU:O	5:1E:40:THR:OG1	2.21	0.57
27:1H:101:PL9:H212	27:1H:101:PL9:H151	1.86	0.57
1:1A:174:LEU:HB3	24:1A:403:PHO:H151	1.86	0.56
13:1O:135:ALA:HA	13:1O:143:GLY:O	2.05	0.56
2:1B:138:ILE:HA	2:1B:141:ILE:HD12	1.87	0.56
23:1D:401:CLA:HHC	23:1D:401:CLA:HBB1	1.86	0.56
18:1W:36:LEU:HA	18:1W:39:ILE:HD12	1.88	0.56
28:1B:620:SQD:H332	28:1B:620:SQD:H121	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1A:403:PHO:H202	27:1D:407:PL9:H453	1.86	0.56
3:1C:397:THR:HG22	14:1P:170:LYS:HE3	1.86	0.56
12:1M:3:VAL:HG23	12:1M:5:ILE:H	1.70	0.56
28:1A:409:SQD:O9	4:1D:231:ASN:ND2	2.36	0.56
2:1B:251:VAL:HA	31:1B:626:DGD:HB61	1.86	0.56
1:1A:328:MET:HE2	4:1D:326:ILE:HG12	1.88	0.56
28:1A:409:SQD:H441	29:1C:526:LHG:HC81	1.88	0.56
2:1B:452:THR:HB	4:1D:292:LEU:HD21	1.88	0.56
5:1E:69:ARG:NH2	7:1H:62:ASN:O	2.37	0.56
27:1E:102:PL9:H171	34:1E:103:HEM:HBC1	1.87	0.56
9:1J:26:GLY:HA3	29:1J:102:LHG:H152	1.87	0.56
26:1J:101:BCR:H15C	10:1K:50:LEU:HD21	1.87	0.56
1:1A:78:ILE:HD13	1:1A:176:ILE:HD13	1.88	0.56
13:1O:129:THR:HG21	13:1O:149:PRO:HD3	1.88	0.56
1:1A:317:TRP:HE1	4:1D:178:ALA:HB2	1.71	0.55
2:1B:24:ILE:HG12	23:1B:613:CLA:HED2	1.88	0.55
23:1B:610:CLA:H18	23:1B:611:CLA:HBB2	1.88	0.55
1:1A:94:TYR:HE2	1:1A:105:TRP:HA	1.71	0.55
3:1C:360:ASP:O	31:1C:516:DGD:O2E	2.24	0.55
27:1D:407:PL9:H43	29:1D:409:LHG:H222	1.89	0.55
2:1B:332:ASN:HD21	30:1B:624:MGE:H4D	1.70	0.55
1:1A:194:MET:O	1:1A:300:PHE:N	2.39	0.55
3:1C:227:VAL:HG11	26:1I:102:BCR:H291	1.88	0.55
23:1C:506:CLA:C1B	23:1C:513:CLA:HMB2	2.28	0.55
4:1D:162:PRO:HB3	4:1D:171:ALA:HB2	1.87	0.55
23:1B:607:CLA:H42	30:1B:625:MGE:H6B1	1.88	0.55
13:1O:227:ASP:HB3	13:1O:230:ALA:HB3	1.87	0.55
21:1Z:54:VAL:O	21:1Z:58:ASN:ND2	2.40	0.55
4:1D:47:GLY:O	4:1D:51:THR:OG1	2.24	0.54
2:1B:399:VAL:HG23	2:1B:417:VAL:HG22	1.89	0.54
34:1E:103:HEM:HAC	6:1F:21:ALA:HB1	1.88	0.54
2:1B:18:ARG:HH22	28:1B:620:SQD:H62	1.72	0.54
27:1E:102:PL9:H271	29:1P:201:LHG:H372	1.88	0.54
8:1I:2:LEU:HD13	8:1I:6:LEU:HD11	1.89	0.54
1:1A:162:PRO:HB3	1:1A:168:PHE:HA	1.89	0.54
23:1B:613:CLA:H92	23:1B:614:CLA:HBB1	1.89	0.54
4:1D:52:GLY:HA3	4:1D:79:VAL:HG22	1.89	0.54
4:1D:198:HIS:HE1	23:1D:404:CLA:NC	2.04	0.54
29:1I:103:LHG:H112	29:1I:103:LHG:H271	1.90	0.54
29:1I:103:LHG:H251	29:1I:103:LHG:HC91	1.88	0.54
1:1A:343:LEU:O	3:1C:310:SER:OG	2.21	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:1B:135:LEU:HA	2:1B:138:ILE:HD12	1.89	0.54
14:1P:115:GLU:HG2	14:1P:130:THR:HB	1.90	0.54
3:1C:217:PRO:HD3	30:1C:525:MGE:H5B2	1.89	0.54
5:1E:20:TRP:O	5:1E:24:SER:OG	2.20	0.54
8:1I:13:ILE:HB	18:1W:29:VAL:HG21	1.90	0.54
1:1A:303:ASN:HD22	3:1C:414:ILE:HA	1.71	0.53
2:1B:371:VAL:HG12	2:1B:377:VAL:HG22	1.90	0.53
4:1D:86:LEU:HD13	4:1D:91:LEU:HD11	1.90	0.53
8:1I:14:PHE:O	8:1I:18:LEU:HG	2.09	0.53
1:1A:241:GLN:HG3	1:1A:243:GLU:H	1.73	0.53
1:1A:267:ASN:ND2	4:1D:233:PHE:O	2.34	0.53
2:1B:54:PRO:HD2	2:1B:57:ARG:HG3	1.90	0.53
31:1B:626:DGD:O1G	7:1H:62:ASN:ND2	2.41	0.53
3:1C:406:SER:O	3:1C:418:ASN:ND2	2.37	0.53
8:1I:25:SER:O	8:1I:30:ARG:NH2	2.41	0.53
3:1C:342:MET:HE3	3:1C:350:ILE:HD11	1.91	0.53
28:1C:522:SQD:H302	29:1J:102:LHG:H171	1.91	0.53
1:1A:11:THR:OG1	1:1A:12:SER:N	2.41	0.53
28:1B:620:SQD:H291	28:1M:101:SQD:H101	1.91	0.53
6:1F:35:GLN:HB3	9:1J:31:GLY:HA3	1.90	0.53
1:1A:140:ARG:NH1	29:1D:410:LHG:O5	2.37	0.53
2:1B:255:THR:HG21	23:1B:601:CLA:HED1	1.91	0.53
1:1A:104:GLU:OE2	18:1W:5:ARG:NH2	2.42	0.53
1:1A:281:VAL:HA	1:1A:284:TRP:CD1	2.43	0.53
3:1C:134:LEU:HD22	21:1Z:28:ALA:HA	1.90	0.53
3:1C:168:LEU:HD11	23:1C:508:CLA:H61	1.91	0.53
5:1E:22:ILE:HG12	20:1Y:19:VAL:HG12	1.91	0.52
28:1A:409:SQD:H122	29:1C:526:LHG:H172	1.91	0.52
13:1O:56:THR:N	13:1O:239:GLN:O	2.24	0.52
2:1B:321:LYS:NZ	2:1B:363:PHE:O	2.42	0.52
2:1B:35:GLY:HA3	2:1B:101:ILE:HG12	1.92	0.52
3:1C:284:PHE:HB3	31:1C:516:DGD:HB61	1.92	0.52
4:1D:54:THR:HG22	6:1F:34:MET:HE1	1.92	0.52
3:1C:279:LEU:HD23	3:1C:282:PHE:HD2	1.73	0.52
23:1C:509:CLA:H201	10:1K:45:VAL:HG22	1.91	0.52
4:1D:55:PHE:O	5:1E:49:SER:OG	2.20	0.52
2:1B:53:ASP:O	2:1B:58:GLN:NE2	2.42	0.52
3:1C:307:PRO:HB2	3:1C:361:LEU:HD13	1.92	0.52
2:1B:122:ILE:HA	7:1H:24:LYS:HD3	1.91	0.52
3:1C:354:GLU:HG3	3:1C:357:ARG:HH21	1.74	0.52
19:1X:53:ASN:O	19:1X:57:SER:OG	2.26	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:1C:282:PHE:HE1	23:1C:501:CLA:H112	1.74	0.51
2:1B:333:GLY:HA2	2:1B:440:ASP:HB3	1.92	0.51
26:1D:406:BCR:H372	28:1D:411:SQD:H252	1.92	0.51
11:1L:19:TYR:OH	15:1T:23:PHE:O	2.24	0.51
23:1B:613:CLA:H102	23:1B:614:CLA:C1B	2.41	0.51
17:1V:31:VAL:HG23	17:1V:32:VAL:HG23	1.91	0.51
1:1A:141:PRO:O	4:1D:221:ASN:ND2	2.44	0.51
3:1C:54:VAL:HG13	3:1C:129:GLY:HA2	1.93	0.51
13:1O:20:VAL:HG13	13:1O:25:THR:HB	1.92	0.51
14:1P:20:ALA:HA	14:1P:29:LEU:HA	1.92	0.51
1:1A:218:LEU:HD21	1:1A:255:PHE:HB2	1.91	0.51
29:1J:102:LHG:HC92	29:1J:102:LHG:H251	1.92	0.51
14:1P:22:SER:OG	14:1P:27:LYS:NZ	2.42	0.51
1:1A:97:TRP:HB3	8:1I:4:LEU:HD23	1.91	0.51
3:1C:225:VAL:HG13	3:1C:289:PHE:HA	1.93	0.51
5:1E:12:ASP:O	9:1J:7:ARG:NH2	2.41	0.51
2:1B:341:LEU:HD23	2:1B:406:LEU:HD11	1.93	0.51
23:1B:612:CLA:H42	28:1M:101:SQD:H291	1.93	0.51
1:1A:159:LEU:HD21	31:1C:516:DGD:HA62	1.92	0.51
3:1C:29:GLU:OE2	17:1V:30:GLY:N	2.43	0.51
3:1C:331:ALA:O	13:1O:111:TYR:OH	2.26	0.51
4:1D:211:LEU:HB3	4:1D:272:MET:HG2	1.91	0.51
4:1D:234:ARG:NH2	17:1V:28:ALA:O	2.40	0.51
21:1Z:23:VAL:HG22	21:1Z:40:VAL:HG12	1.93	0.51
1:1A:78:ILE:H	11:1L:34:ASN:ND2	2.08	0.51
1:1A:131:TRP:HH2	3:1C:442:LEU:HD13	1.76	0.51
2:1B:242:ILE:HG23	2:1B:462:PHE:HD2	1.75	0.51
28:1B:620:SQD:H92	28:1M:101:SQD:H102	1.93	0.51
3:1C:67:MET:O	3:1C:71:GLU:HG3	2.11	0.50
3:1C:323:ARG:NH2	3:1C:389:GLU:OE1	2.44	0.50
7:1H:52:VAL:HG22	19:1X:58:ILE:HD12	1.92	0.50
8:1I:9:TYR:CD2	18:1W:22:LEU:HD22	2.45	0.50
1:1A:84:PRO:HA	1:1A:112:TYR:CG	2.47	0.50
1:1A:130:GLU:HB2	1:1A:144:ALA:HB2	1.91	0.50
1:1A:133:LEU:HD23	4:1D:257:ILE:HG12	1.93	0.50
3:1C:343:ARG:NH1	13:1O:85:THR:O	2.44	0.50
4:1D:21:ASP:OD2	19:1X:83:ARG:NH1	2.43	0.50
27:1E:102:PL9:H212	6:1F:28:LEU:HD13	1.93	0.50
27:1E:102:PL9:H103	6:1F:20:LEU:HD22	1.93	0.50
3:1C:239:TRP:O	3:1C:243:ILE:HG13	2.11	0.50
3:1C:297:TYR:O	3:1C:423:ARG:NH2	2.42	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:1J:7:ARG:HD2	17:1V:77:ASP:HB3	1.93	0.50
1:1A:28:LEU:HB3	28:1A:410:SQD:H101	1.94	0.50
2:1B:413:ASP:OD1	2:1B:416:THR:OG1	2.29	0.50
4:1D:128:LEU:HD13	28:1D:412:SQD:H311	1.93	0.50
28:1A:411:SQD:H131	28:1A:411:SQD:H251	1.94	0.50
23:1B:610:CLA:H11	23:1B:613:CLA:O1A	2.11	0.50
19:1X:66:VAL:HA	19:1X:69:VAL:HG12	1.94	0.50
2:1B:41:GLU:HA	2:1B:44:VAL:HG22	1.93	0.50
14:1P:54:ASP:OD2	14:1P:167:ARG:NE	2.45	0.50
1:1A:97:TRP:HZ3	8:1I:8:VAL:HG21	1.77	0.50
6:1F:27:PHE:O	6:1F:31:ILE:HD12	2.12	0.50
13:1O:200:ILE:HA	13:1O:219:GLU:O	2.12	0.50
1:1A:96:ILE:HB	8:1I:4:LEU:HD21	1.94	0.49
3:1C:79:LYS:O	3:1C:80:PRO:C	2.55	0.49
23:1C:501:CLA:HBB1	26:1I:102:BCR:H23C	1.93	0.49
4:1D:127:MET:HA	4:1D:130:GLN:HG3	1.93	0.49
13:1O:6:ARG:HH12	13:1O:241:VAL:HG11	1.77	0.49
1:1A:55:ALA:O	1:1A:70:SER:OG	2.26	0.49
23:1B:603:CLA:H101	23:1B:608:CLA:H42	1.93	0.49
3:1C:236:GLY:HA3	26:1I:102:BCR:H402	1.93	0.49
3:1C:165:LEU:HG	23:1C:506:CLA:HED1	1.94	0.49
14:1P:56:ASN:O	14:1P:58:ASN:ND2	2.45	0.49
3:1C:249:ILE:HG12	32:1C:514:LNL:H9	1.94	0.49
4:1D:41:CYS:SG	4:1D:118:HIS:ND1	2.85	0.49
2:1B:40:TYR:OH	23:1B:605:CLA:OBD	2.19	0.49
2:1B:68:ARG:HA	2:1B:167:TRP:HB2	1.95	0.49
2:1B:237:VAL:O	2:1B:241:SER:OG	2.29	0.49
3:1C:189:TRP:NE1	3:1C:228:ASP:O	2.45	0.49
6:1F:10:PHE:HZ	20:1Y:23:ILE:HD12	1.77	0.49
6:1F:17:VAL:HG22	29:1V:201:LHG:H362	1.95	0.49
2:1B:57:ARG:NH2	2:1B:335:GLY:O	2.45	0.49
26:1B:617:BCR:HC22	12:1M:6:LEU:HD22	1.95	0.49
11:1L:18:LEU:HD22	12:1M:26:TYR:CD2	2.47	0.49
17:1V:100:GLY:HA2	17:1V:103:LEU:HD12	1.93	0.49
23:1C:505:CLA:H101	30:1C:525:MGE:H9A1	1.94	0.48
4:1D:41:CYS:HG	4:1D:118:HIS:HD1	1.60	0.48
13:1O:158:ASP:HB2	13:1O:162:ARG:H	1.78	0.48
1:1A:303:ASN:O	1:1A:305:SER:N	2.46	0.48
5:1E:28:PRO:CD	27:1E:102:PL9:H301	2.43	0.48
2:1B:40:TYR:HA	29:1B:623:LHG:H262	1.95	0.48
2:1B:173:GLY:O	2:1B:308:LYS:NZ	2.46	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:1B:381:VAL:HG12	2:1B:418:LYS:HG2	1.95	0.48
5:1E:35:TRP:HA	6:1F:33:ALA:HB2	1.95	0.48
11:1L:13:LEU:HD22	12:1M:25:ILE:HG13	1.94	0.48
3:1C:57:ALA:O	3:1C:61:VAL:HG23	2.13	0.48
3:1C:61:VAL:HG13	3:1C:118:HIS:HD2	1.78	0.48
1:1A:56:PRO:HB2	13:1O:123:ARG:HH22	1.78	0.48
26:1A:407:BCR:H373	29:1I:101:LHG:H262	1.95	0.48
23:1C:505:CLA:H72	30:1C:525:MGE:H111	1.95	0.48
26:1D:406:BCR:HC8	26:1D:406:BCR:H331	1.96	0.48
13:1O:59:THR:HB	13:1O:73:PHE:HB3	1.94	0.48
13:1O:227:ASP:HB2	13:1O:231:LYS:HB2	1.96	0.48
13:1O:103:PHE:HD2	13:1O:133:LEU:HD23	1.78	0.48
2:1B:263:THR:O	2:1B:263:THR:OG1	2.32	0.48
1:1A:225:ARG:NH2	2:1B:483:ASP:OD1	2.47	0.48
1:1A:326:LEU:HB2	3:1C:412:THR:HB	1.96	0.48
4:1D:85:SER:OG	5:1E:66:ILE:O	2.28	0.48
26:1D:406:BCR:H321	26:1D:406:BCR:HC7	1.66	0.48
21:1Z:16:SER:O	21:1Z:20:VAL:HG23	2.14	0.48
13:1O:67:LYS:NZ	13:1O:72:GLU:OE1	2.44	0.48
1:1A:341:LEU:HD21	14:1P:170:LYS:HE2	1.96	0.47
2:1B:66:MET:HB3	2:1B:71:ILE:HB	1.96	0.47
23:1B:608:CLA:HBB1	23:1B:608:CLA:HHC	1.95	0.47
27:1E:102:PL9:H33	27:1E:102:PL9:H48	1.96	0.47
6:1F:31:ILE:O	6:1F:35:GLN:HG2	2.14	0.47
13:1O:166:THR:OG1	13:1O:167:GLY:N	2.47	0.47
2:1B:497:LYS:HB2	2:1B:503:THR:HG21	1.95	0.47
7:1H:49:LEU:HB3	26:1H:102:BCR:H14C	1.96	0.47
19:1X:61:GLY:HA2	35:1X:101:3PH:H3A2	1.95	0.47
1:1A:159:LEU:HD11	31:1C:516:DGD:HA31	1.95	0.47
23:1B:613:CLA:HBB1	23:1B:613:CLA:CHC	2.39	0.47
4:1D:50:PHE:O	4:1D:54:THR:OG1	2.25	0.47
4:1D:96:PRO:O	4:1D:99:GLN:NE2	2.47	0.47
4:1D:157:VAL:HG12	4:1D:287:VAL:HG11	1.94	0.47
13:1O:213:GLU:OE1	13:1O:243:TYR:OH	2.32	0.47
3:1C:82:TYR:OH	3:1C:394:GLU:OE1	2.27	0.47
29:1W:101:LHG:H112	29:1W:102:LHG:H262	1.96	0.47
1:1A:156:ALA:HA	1:1A:160:ILE:HB	1.97	0.47
24:1A:403:PHO:H72	23:1D:401:CLA:H171	1.96	0.47
2:1B:235:GLU:HB3	2:1B:473:THR:HB	1.96	0.47
2:1B:326:ARG:NH2	4:1D:298:ASP:OD2	2.46	0.47
23:1B:611:CLA:H61	23:1B:611:CLA:H41	1.61	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:1C:189:TRP:HE1	3:1C:295:THR:HB	1.79	0.47
3:1C:275:SER:HB3	23:1C:508:CLA:HED3	1.97	0.47
3:1C:311:GLN:NE2	3:1C:358:PHE:O	2.47	0.47
23:1C:512:CLA:H52	29:1C:519:LHG:H102	1.96	0.47
27:1E:102:PL9:C35	29:1P:201:LHG:H381	2.45	0.47
28:1A:409:SQD:H292	23:1C:507:CLA:H62	1.97	0.47
2:1B:20:LEU:O	2:1B:24:ILE:HG13	2.15	0.47
2:1B:249:ALA:HA	2:1B:252:VAL:HG22	1.97	0.47
3:1C:167:LEU:HD21	23:1C:511:CLA:HMB2	1.97	0.47
9:1J:39:SER:O	9:1J:39:SER:OG	2.30	0.47
10:1K:44:PRO:HA	10:1K:47:PHE:HD2	1.80	0.47
2:1B:347:ARG:NH2	2:1B:402:TYR:OH	2.48	0.47
3:1C:66:ALA:HB1	10:1K:40:MET:HB3	1.96	0.47
3:1C:362:ARG:HA	3:1C:367:GLU:OE1	2.15	0.47
8:1I:7:PHE:O	8:1I:8:VAL:C	2.58	0.47
13:1O:50:LYS:HB3	13:1O:245:GLN:HB2	1.96	0.47
1:1A:30:ILE:HG23	1:1A:38:ILE:HD12	1.96	0.47
2:1B:4:PRO:HD2	2:1B:7:ARG:HB2	1.96	0.47
2:1B:114:HIS:HE1	23:1B:614:CLA:C1D	2.27	0.47
3:1C:400:PRO:O	3:1C:424:SER:OG	2.29	0.47
23:1C:505:CLA:HHC	23:1C:505:CLA:HBB1	1.97	0.47
28:1M:101:SQD:H462	28:1M:101:SQD:H242	1.43	0.47
2:1B:354:LEU:HD23	2:1B:370:LEU:HB3	1.97	0.46
3:1C:243:ILE:HG22	23:1C:513:CLA:HAC2	1.97	0.46
26:1B:619:BCR:H321	26:1B:619:BCR:HC8	1.96	0.46
13:1O:148:VAL:O	13:1O:196:SER:N	2.44	0.46
1:1A:147:TYR:HD1	1:1A:150:PRO:HG2	1.79	0.46
23:1B:609:CLA:HMB2	23:1B:611:CLA:HBA1	1.98	0.46
1:1A:86:SER:HB3	1:1A:89:ILE:HD13	1.97	0.46
23:1A:402:CLA:H122	24:1A:403:PHO:H3A	1.97	0.46
23:1B:604:CLA:HBB1	29:1B:621:LHG:H292	1.98	0.46
8:1I:18:LEU:O	8:1I:19:PHE:C	2.58	0.46
26:1Z:102:BCR:H341	26:1Z:102:BCR:H11C	1.73	0.46
4:1D:72:CYS:HB3	4:1D:77:ALA:HB2	1.97	0.46
13:1O:27:ASN:O	13:1O:85:THR:OG1	2.29	0.46
2:1B:207:THR:O	2:1B:210:ILE:HB	2.16	0.46
23:1B:605:CLA:HBC3	26:1B:618:BCR:HC8	1.98	0.46
17:1V:42:ARG:HH22	17:1V:45:LYS:HE2	1.80	0.46
4:1D:314:THR:HB	4:1D:317:THR:HG23	1.97	0.46
26:1T:101:BCR:H23C	26:1T:101:BCR:H403	1.97	0.46
2:1B:206:GLY:O	2:1B:210:ILE:N	2.42	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:1B:603:CLA:H193	23:1B:607:CLA:HBB2	1.97	0.46
13:1O:149:PRO:HA	13:1O:195:SER:HA	1.98	0.46
2:1B:276:ASP:OD1	2:1B:361:THR:OG1	2.31	0.46
3:1C:109:PHE:HE2	28:1C:523:SQD:H2	1.81	0.46
27:1H:101:PL9:H151	27:1H:101:PL9:H172	1.76	0.46
12:1M:8:PHE:CE1	15:1T:1:MET:HG2	2.51	0.46
2:1B:471:ALA:HB1	4:1D:141:PRO:HG2	1.98	0.46
26:1B:619:BCR:H331	26:1B:619:BCR:HC7	1.73	0.46
23:1D:401:CLA:H91	27:1D:407:PL9:H402	1.97	0.46
8:1I:5:LYS:HD3	18:1W:22:LEU:HD11	1.97	0.46
2:1B:370:LEU:HB2	2:1B:379:ALA:HB3	1.97	0.45
3:1C:210:PHE:HA	3:1C:213:LEU:HD12	1.98	0.45
29:1F:101:LHG:HC62	29:1F:101:LHG:H242	1.41	0.45
2:1B:22:VAL:HG11	23:1B:612:CLA:HMA1	1.98	0.45
2:1B:115:TRP:CG	26:1B:617:BCR:H292	2.51	0.45
2:1B:257:TRP:O	2:1B:271:THR:OG1	2.33	0.45
3:1C:135:LEU:HD23	21:1Z:30:PRO:HB3	1.98	0.45
4:1D:88:HIS:NE2	4:1D:165:GLN:O	2.35	0.45
10:1K:54:TRP:HD1	29:1K:101:LHG:HC61	1.81	0.45
4:1D:189:PHE:O	4:1D:295:ARG:NH1	2.50	0.45
29:1P:201:LHG:H242	29:1P:201:LHG:H101	1.98	0.45
2:1B:490:VAL:HG12	4:1D:137:VAL:HB	1.98	0.45
28:1D:411:SQD:O8	6:1F:34:MET:O	2.25	0.45
5:1E:28:PRO:HD3	27:1E:102:PL9:H301	1.98	0.45
13:1O:93:LEU:HD11	13:1O:101:ILE:HD11	1.99	0.45
2:1B:115:TRP:NE1	28:1B:620:SQD:O3	2.48	0.45
2:1B:231:MET:HG2	23:1B:608:CLA:HBC3	1.99	0.45
2:1B:242:ILE:HA	2:1B:245:VAL:HG22	1.97	0.45
3:1C:312:ALA:O	3:1C:316:THR:OG1	2.28	0.45
3:1C:318:LEU:HD13	3:1C:351:PHE:HE1	1.81	0.45
23:1C:504:CLA:H61	31:1C:517:DGD:HB71	1.99	0.45
9:1J:13:ILE:O	9:1J:17:THR:HG22	2.16	0.45
27:1A:408:PL9:H322	27:1A:408:PL9:H361	1.86	0.45
28:1A:411:SQD:H461	28:1A:411:SQD:H242	1.47	0.45
29:1C:521:LHG:H121	29:1C:521:LHG:H241	1.99	0.45
23:1D:401:CLA:H52	27:1D:407:PL9:H151	1.99	0.45
2:1B:458:PHE:CE2	23:1B:616:CLA:HBB1	2.52	0.45
23:1B:602:CLA:H61	23:1B:602:CLA:H41	1.59	0.45
3:1C:56:HIS:HE1	23:1C:509:CLA:NB	2.08	0.45
13:1O:162:ARG:HH11	13:1O:168:TYR:HB2	1.80	0.45
2:1B:241:SER:HB3	23:1B:608:CLA:HAA1	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:1B:617:BCR:H313	12:1M:6:LEU:HD21	1.98	0.45
23:1D:401:CLA:H92	23:1D:401:CLA:H62	1.79	0.45
13:1O:115:THR:HG22	13:1O:125:PRO:HB3	1.97	0.45
6:1F:23:PRO:HA	6:1F:26:PHE:HB3	1.99	0.45
23:1B:601:CLA:H193	31:1B:626:DGD:HAH2	1.98	0.45
23:1B:606:CLA:H12	23:1B:607:CLA:H62	1.98	0.45
3:1C:362:ARG:N	31:1C:516:DGD:O3E	2.43	0.45
4:1D:196:PRO:O	4:1D:200:MET:HG3	2.16	0.45
26:1H:102:BCR:H393	19:1X:47:LEU:HD13	1.99	0.45
13:1O:110:ASP:HB3	13:1O:131:LYS:HG2	1.99	0.45
15:1T:9:LEU:O	15:1T:13:THR:OG1	2.33	0.45
17:1V:92:THR:O	17:1V:96:ILE:HG22	2.17	0.44
21:1Z:22:SER:HA	21:1Z:25:LEU:HD12	1.98	0.44
26:1Z:101:BCR:H11C	26:1Z:101:BCR:H341	1.86	0.44
26:1B:619:BCR:H15C	26:1B:619:BCR:H351	1.83	0.44
23:1C:512:CLA:H42	26:1Z:101:BCR:H382	1.97	0.44
31:1C:516:DGD:HBW2	31:1C:516:DGD:HBN1	1.56	0.44
4:1D:214:ILE:O	4:1D:218:THR:OG1	2.26	0.44
13:1O:48:MET:HB3	13:1O:246:LEU:HA	1.98	0.44
17:1V:52:PHE:HB3	17:1V:56:TYR:CD1	2.52	0.44
3:1C:40:ALA:HB2	23:1C:507:CLA:H2A	1.98	0.44
11:1L:22:LEU:HB3	15:1T:16:ILE:HD12	1.97	0.44
1:1A:292:THR:HA	3:1C:428:THR:HG22	1.99	0.44
23:1B:603:CLA:H51	23:1B:616:CLA:H42	2.00	0.44
4:1D:44:PHE:HD2	4:1D:114:PHE:HZ	1.66	0.44
4:1D:290:LEU:HD23	4:1D:290:LEU:HA	1.82	0.44
27:1E:102:PL9:H321	27:1E:102:PL9:H362	1.67	0.44
3:1C:91:HIS:NE2	23:1C:502:CLA:O1D	2.41	0.44
8:1I:13:ILE:O	8:1I:14:PHE:C	2.61	0.44
20:1Y:20:LEU:O	20:1Y:24:LEU:HB2	2.17	0.44
3:1C:154:ARG:O	3:1C:158:THR:OG1	2.32	0.44
4:1D:75:LEU:HA	4:1D:176:VAL:HB	1.99	0.44
13:1O:152:ARG:HB2	13:1O:228:LEU:HG	2.00	0.44
17:1V:34:LYS:HE2	17:1V:34:LYS:HB2	1.85	0.44
1:1A:160:ILE:HD11	31:1C:516:DGD:HBW1	1.98	0.44
2:1B:67:THR:HG23	2:1B:267:LEU:HD13	1.98	0.44
23:1B:609:CLA:H61	23:1B:609:CLA:H2	1.66	0.44
30:1B:625:MGE:H2A1	28:1D:412:SQD:H142	2.00	0.44
3:1C:178:LYS:NZ	3:1C:182:PHE:O	2.43	0.44
4:1D:142:TYR:HB3	4:1D:273:LEU:HD11	1.99	0.44
5:1E:26:THR:HB	34:1E:103:HEM:HAB	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:1B:30:VAL:HG22	23:1B:611:CLA:C2C	2.47	0.44
2:1B:45:PHE:HD1	2:1B:60:MET:HE3	1.82	0.44
2:1B:201:HIS:HA	23:1B:601:CLA:C4B	2.48	0.44
2:1B:299:SER:O	2:1B:303:SER:OG	2.28	0.44
3:1C:346:THR:OG1	3:1C:348:GLU:OE1	2.30	0.44
4:1D:247:MET:SD	4:1D:265:LYS:HG3	2.57	0.44
8:1I:5:LYS:HG2	18:1W:22:LEU:HD21	2.00	0.44
10:1K:45:VAL:O	10:1K:48:PHE:HB3	2.18	0.44
26:1A:407:BCR:H341	26:1A:407:BCR:H11C	1.85	0.44
23:1B:610:CLA:CMB	23:1B:612:CLA:HBB1	2.48	0.44
3:1C:37:ALA:HA	23:1C:507:CLA:HAA1	2.00	0.44
4:1D:345:GLU:H	4:1D:345:GLU:HG3	1.65	0.44
23:1C:512:CLA:H41	23:1C:512:CLA:H61	1.77	0.43
23:1B:609:CLA:HAB	23:1B:611:CLA:HHB	2.00	0.43
23:1C:510:CLA:H71	21:1Z:24:PRO:HB3	1.98	0.43
4:1D:75:LEU:HD23	4:1D:176:VAL:HG21	2.00	0.43
4:1D:347:LEU:HD23	4:1D:347:LEU:HA	1.76	0.43
3:1C:53:HIS:HE1	23:1C:508:CLA:NC	2.08	0.43
4:1D:244:THR:OG1	4:1D:245:TYR:N	2.50	0.43
5:1E:67:THR:O	16:1U:132:HIS:ND1	2.51	0.43
27:1E:102:PL9:H18	6:1F:25:VAL:CG1	2.44	0.43
14:1P:108:VAL:HG13	14:1P:136:ALA:HB3	2.00	0.43
18:1W:44:LEU:HB3	18:1W:46:GLU:HG2	2.00	0.43
2:1B:31:SER:HB3	2:1B:104:SER:HB2	2.00	0.43
23:1B:612:CLA:H203	26:1B:617:BCR:H343	2.01	0.43
26:1B:619:BCR:H341	26:1B:619:BCR:H11C	1.70	0.43
14:1P:113:ILE:HG12	14:1P:131:VAL:HG22	2.00	0.43
1:1A:286:THR:HG22	23:1A:402:CLA:O1D	2.18	0.43
2:1B:426:LEU:HD13	2:1B:443:PHE:HZ	1.83	0.43
2:1B:464:PHE:CZ	29:1D:408:LHG:H252	2.52	0.43
2:1B:481:GLY:C	4:1D:140:ARG:HH12	2.26	0.43
23:1B:610:CLA:H62	23:1B:610:CLA:H101	1.75	0.43
23:1B:612:CLA:HBC2	28:1M:101:SQD:H292	2.01	0.43
3:1C:45:LEU:HG	3:1C:138:GLU:HB2	2.01	0.43
15:1T:12:SER:O	15:1T:16:ILE:HG12	2.19	0.43
1:1A:216:GLY:O	1:1A:220:THR:OG1	2.33	0.43
27:1A:408:PL9:H121	27:1A:408:PL9:H101	1.82	0.43
2:1B:23:HIS:HE1	23:1B:610:CLA:C4D	2.31	0.43
23:1B:609:CLA:H93	23:1B:609:CLA:H62	1.82	0.43
3:1C:179:ALA:HA	3:1C:185:ILE:HG13	1.99	0.43
3:1C:318:LEU:HD12	3:1C:340:TYR:HB3	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1E:28:PRO:CG	27:1E:102:PL9:H301	2.48	0.43
21:1Z:33:TRP:O	21:1Z:37:LYS:HE3	2.18	0.43
1:1A:27:ARG:HB3	28:1A:410:SQD:H442	2.01	0.43
23:1B:601:CLA:H41	23:1B:601:CLA:H61	1.54	0.43
26:1B:617:BCR:H11C	26:1B:617:BCR:H341	1.80	0.43
4:1D:62:HIS:NE2	4:1D:81:THR:OG1	2.40	0.43
8:1I:17:SER:HB2	18:1W:33:ILE:HD13	2.00	0.43
11:1L:23:LEU:HD12	11:1L:23:LEU:HA	1.88	0.43
17:1V:99:GLY:O	17:1V:103:LEU:HG	2.18	0.43
21:1Z:16:SER:HB3	21:1Z:47:TRP:HE1	1.83	0.43
23:1B:608:CLA:HBD	23:1B:608:CLA:H143	2.01	0.43
30:1B:624:MGE:H5A1	30:1B:624:MGE:H2A1	1.89	0.43
27:1H:101:PL9:H421	27:1H:101:PL9:H401	1.70	0.43
29:1P:201:LHG:H171	17:1V:104:VAL:HG11	2.00	0.43
21:1Z:58:ASN:HD21	26:1Z:101:BCR:H323	1.83	0.43
2:1B:145:LEU:HD11	23:1B:613:CLA:CMB	2.49	0.43
2:1B:277:GLN:HG2	16:1U:129:LYS:HG3	2.01	0.43
3:1C:117:LEU:O	3:1C:121:SER:OG	2.34	0.43
3:1C:286:ALA:HA	3:1C:289:PHE:HB2	2.01	0.43
27:1E:102:PL9:H353	29:1P:201:LHG:H381	2.01	0.43
21:1Z:38:ASN:O	21:1Z:42:SER:OG	2.25	0.43
1:1A:27:ARG:NH2	15:1T:21:ILE:O	2.52	0.43
3:1C:328:VAL:HG13	3:1C:340:TYR:HB2	1.99	0.43
27:1E:102:PL9:H212	6:1F:28:LEU:CD1	2.48	0.43
34:1E:103:HEM:HMA1	20:1Y:23:ILE:HG21	2.01	0.43
26:1I:102:BCR:H11C	26:1I:102:BCR:H341	1.91	0.43
3:1C:357:ARG:H	3:1C:357:ARG:HG2	1.66	0.42
3:1C:402:GLY:HA3	3:1C:420:VAL:HG22	1.99	0.42
4:1D:202:VAL:HG22	23:1D:404:CLA:C1B	2.49	0.42
29:1D:410:LHG:H241	29:1D:410:LHG:H272	1.83	0.42
27:1E:102:PL9:H172	27:1E:102:PL9:H151	1.72	0.42
8:1I:23:PHE:HB3	26:1I:102:BCR:HC22	2.01	0.42
1:1A:64:ARG:HA	1:1A:64:ARG:HD3	1.90	0.42
1:1A:237:TYR:HE1	1:1A:241:GLN:HG2	1.84	0.42
2:1B:315:ILE:HG13	2:1B:321:LYS:HG3	2.01	0.42
23:1B:609:CLA:H142	29:1L:101:LHG:H383	2.00	0.42
5:1E:70:PHE:HZ	7:1H:63:SER:HB3	1.84	0.42
12:1M:15:ILE:HD11	15:1T:9:LEU:HD21	2.01	0.42
14:1P:18:PHE:CE2	14:1P:178:SER:HB2	2.54	0.42
1:1A:230:ASN:OD1	1:1A:230:ASN:N	2.50	0.42
1:1A:288:LEU:HD23	1:1A:288:LEU:HA	1.78	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:1A:408:PL9:H372	6:1F:16:ALA:HA	1.99	0.42
11:1L:13:LEU:HG	11:1L:17:SER:HB2	2.01	0.42
23:1B:604:CLA:H52	26:1B:619:BCR:H342	2.01	0.42
4:1D:198:HIS:HE1	23:1D:404:CLA:C1C	2.31	0.42
4:1D:222:THR:HG21	4:1D:250:ALA:HB2	2.00	0.42
13:1O:55:PRO:HD2	13:1O:84:TYR:HD1	1.84	0.42
21:1Z:12:LEU:HG	26:1Z:102:BCR:H342	2.00	0.42
2:1B:18:ARG:HD2	2:1B:18:ARG:HA	1.84	0.42
2:1B:257:TRP:CZ3	4:1D:292:LEU:HD23	2.54	0.42
23:1C:507:CLA:H112	23:1C:507:CLA:H71	1.95	0.42
4:1D:52:GLY:HA2	4:1D:56:VAL:HB	2.01	0.42
6:1F:30:SER:O	6:1F:34:MET:HG3	2.19	0.42
17:1V:64:SER:O	17:1V:64:SER:OG	2.34	0.42
18:1W:32:LEU:O	18:1W:36:LEU:HD12	2.20	0.42
1:1A:143:ILE:HD11	4:1D:218:THR:HA	2.01	0.42
3:1C:163:ILE:O	3:1C:167:LEU:HG	2.19	0.42
3:1C:186:TYR:HA	3:1C:196:VAL:HA	2.01	0.42
4:1D:105:TRP:HA	4:1D:108:LEU:HB2	2.00	0.42
5:1E:31:PHE:CD2	27:1E:102:PL9:H311	2.54	0.42
21:1Z:36:ASN:O	21:1Z:40:VAL:HG22	2.19	0.42
1:1A:128:GLY:HA2	1:1A:131:TRP:NE1	2.35	0.42
1:1A:268:SER:O	1:1A:272:HIS:ND1	2.51	0.42
24:1A:403:PHO:HMB3	23:1D:401:CLA:H71	2.00	0.42
2:1B:255:THR:HG22	7:1H:61:TYR:HE2	1.85	0.42
2:1B:485:ASP:OD1	2:1B:485:ASP:N	2.48	0.42
3:1C:26:ARG:NH2	23:1C:510:CLA:O2A	2.51	0.42
3:1C:271:TYR:HA	3:1C:274:TYR:CD2	2.54	0.42
23:1C:508:CLA:H161	23:1C:508:CLA:H141	1.83	0.42
4:1D:223:LEU:H	4:1D:223:LEU:HD12	1.85	0.42
13:1O:80:THR:O	13:1O:83:THR:OG1	2.33	0.42
2:1B:168:VAL:HG13	2:1B:195:PRO:HG3	2.01	0.42
2:1B:487:ASP:OD1	2:1B:487:ASP:N	2.48	0.42
23:1B:606:CLA:H143	23:1D:405:CLA:H3A	2.02	0.42
3:1C:50:LEU:O	3:1C:54:VAL:HG12	2.19	0.42
28:1C:522:SQD:H272	29:1J:102:LHG:H112	2.01	0.42
4:1D:321:LEU:HD23	4:1D:321:LEU:HA	1.88	0.42
8:1I:11:VAL:O	8:1I:12:VAL:C	2.63	0.42
23:1B:606:CLA:HAB	4:1D:124:ILE:HA	2.01	0.42
23:1B:613:CLA:HAC2	7:1H:27:ASN:HD21	1.85	0.42
23:1C:505:CLA:H112	23:1C:505:CLA:H71	1.89	0.42
4:1D:94:TRP:HB2	19:1X:53:ASN:HB3	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:1F:31:ILE:HA	6:1F:34:MET:HG3	2.01	0.42
8:1I:16:VAL:O	8:1I:17:SER:C	2.61	0.42
11:1L:24:LEU:O	11:1L:28:LEU:HB2	2.20	0.42
13:1O:196:SER:HB3	13:1O:223:PRO:HG2	2.01	0.42
1:1A:26:ASN:N	1:1A:29:TYR:OH	2.53	0.42
1:1A:29:TYR:HB3	1:1A:129:ARG:HH21	1.85	0.42
1:1A:37:MET:HB2	1:1A:125:CYS:HB2	2.02	0.42
3:1C:117:LEU:HD13	28:1C:523:SQD:H292	2.02	0.42
26:1Z:101:BCR:H15C	26:1Z:101:BCR:H351	1.88	0.42
1:1A:77:ILE:HG12	15:1T:10:LEU:HD11	2.02	0.41
1:1A:272:HIS:HA	1:1A:275:LEU:HD12	2.01	0.41
2:1B:234:ILE:HD12	2:1B:234:ILE:H	1.84	0.41
23:1B:610:CLA:H12	23:1B:613:CLA:HBD	2.02	0.41
31:1B:626:DGD:HA32	4:1D:163:LEU:HD11	2.01	0.41
3:1C:342:MET:HE1	3:1C:356:MET:HE2	2.01	0.41
8:1I:21:PHE:CZ	18:1W:34:TRP:HB2	2.55	0.41
17:1V:30:GLY:HA3	17:1V:49:LEU:HB2	2.02	0.41
21:1Z:48:ILE:HA	21:1Z:51:VAL:HG12	2.02	0.41
23:1B:613:CLA:H121	23:1B:614:CLA:NB	2.36	0.41
28:1B:620:SQD:H2	28:1B:620:SQD:H461	2.02	0.41
4:1D:132:GLU:HG3	28:1D:412:SQD:H282	2.02	0.41
13:1O:169:ASP:OD1	13:1O:169:ASP:N	2.53	0.41
14:1P:71:ILE:O	14:1P:74:PHE:HB2	2.20	0.41
1:1A:276:ALA:HA	4:1D:213:ALA:HA	2.01	0.41
23:1B:616:CLA:H93	23:1B:616:CLA:H61	1.80	0.41
3:1C:223:TRP:CE2	30:1C:525:MGE:H8B1	2.56	0.41
4:1D:301:SER:OG	11:1L:38:ASN:O	2.33	0.41
2:1B:461:LEU:HD13	23:1B:611:CLA:H91	2.03	0.41
3:1C:223:TRP:HE3	31:1C:516:DGD:HB21	1.86	0.41
23:1C:503:CLA:H101	23:1C:503:CLA:H61	1.75	0.41
4:1D:153:VAL:O	4:1D:157:VAL:HG22	2.20	0.41
27:1E:102:PL9:H372	27:1E:102:PL9:H412	1.57	0.41
7:1H:56:ILE:HG12	19:1X:54:PHE:CE2	2.54	0.41
13:1O:52:CYS:HB3	13:1O:243:TYR:HB3	2.03	0.41
14:1P:31:PRO:O	14:1P:33:LYS:N	2.52	0.41
14:1P:160:LYS:NZ	14:1P:162:GLN:OE1	2.52	0.41
29:1W:102:LHG:HC81	29:1W:102:LHG:H111	1.90	0.41
1:1A:161:TYR:CE2	1:1A:170:ASP:HB3	2.55	0.41
31:1C:518:DGD:HA31	28:1D:411:SQD:H82	2.01	0.41
4:1D:202:VAL:HG13	23:1D:404:CLA:HBB1	2.01	0.41
8:1I:5:LYS:O	8:1I:6:LEU:C	2.63	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:1O:50:LYS:O	13:1O:244:ALA:HA	2.21	0.41
1:1A:41:LEU:HD23	1:1A:41:LEU:HA	1.91	0.41
1:1A:77:ILE:HB	11:1L:34:ASN:HD21	1.86	0.41
1:1A:219:VAL:HG23	1:1A:246:TYR:CG	2.55	0.41
23:1B:606:CLA:HAC2	23:1B:607:CLA:H121	2.02	0.41
27:1E:102:PL9:H261	9:1J:20:ALA:HB1	2.02	0.41
7:1H:20:GLY:O	7:1H:24:LYS:HB2	2.21	0.41
1:1A:56:PRO:HB2	13:1O:123:ARG:NH2	2.35	0.41
24:1A:404:PHO:H13	4:1D:49:TRP:CG	2.56	0.41
23:1C:510:CLA:H2	26:1Z:102:BCR:H272	2.03	0.41
27:1E:102:PL9:H13	6:1F:24:THR:HG21	2.03	0.41
29:1V:201:LHG:H261	29:1V:201:LHG:H141	2.01	0.41
1:1A:292:THR:HG21	31:1C:517:DGD:HB2	2.02	0.41
26:1A:407:BCR:H403	26:1A:407:BCR:H24C	1.86	0.41
2:1B:18:ARG:NH2	28:1B:620:SQD:H62	2.36	0.41
2:1B:26:HIS:CD2	23:1B:611:CLA:ND	2.84	0.41
23:1B:608:CLA:H202	23:1B:608:CLA:H161	1.93	0.41
3:1C:279:LEU:HD22	23:1C:502:CLA:HAC1	2.02	0.41
3:1C:294:ASN:N	31:1C:516:DGD:O5E	2.45	0.41
23:1C:504:CLA:ND	31:1C:517:DGD:HB32	2.36	0.41
4:1D:252:ARG:HH11	4:1D:256:GLN:NE2	2.19	0.41
4:1D:275:VAL:HG22	27:1D:407:PL9:H222	2.03	0.41
4:1D:329:TRP:CE3	4:1D:347:LEU:HD13	2.56	0.41
26:1D:406:BCR:H11C	26:1D:406:BCR:H341	1.98	0.41
5:1E:60:ARG:CZ	5:1E:64:PRO:HG3	2.51	0.41
27:1E:102:PL9:HC2	27:1E:102:PL9:HC8	1.72	0.41
27:1H:101:PL9:H201	27:1H:101:PL9:H222	1.70	0.41
26:1J:101:BCR:H10C	26:1J:101:BCR:HC7	1.83	0.41
21:1Z:11:ALA:O	21:1Z:15:THR:OG1	2.36	0.41
26:1Z:102:BCR:H371	26:1Z:102:BCR:H24C	1.78	0.41
2:1B:170:ASP:HB3	2:1B:174:LEU:H	1.86	0.41
2:1B:216:HIS:HE1	23:1B:607:CLA:C1A	2.34	0.41
3:1C:405:ASN:HB2	3:1C:407:VAL:HG23	2.03	0.41
10:1K:52:PHE:O	10:1K:56:ALA:N	2.51	0.41
2:1B:177:LYS:HB3	2:1B:177:LYS:HE3	1.89	0.40
2:1B:440:ASP:OD1	4:1D:300:VAL:HG11	2.21	0.40
26:1B:617:BCR:HC7	26:1B:617:BCR:H331	1.73	0.40
26:1B:618:BCR:H351	26:1B:618:BCR:H15C	1.83	0.40
27:1E:102:PL9:H461	27:1E:102:PL9:H421	1.62	0.40
27:1E:102:PL9:H262	27:1E:102:PL9:H221	1.84	0.40
13:1O:162:ARG:HH22	13:1O:172:VAL:HG22	1.87	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1A:308:ASP:OD1	1:1A:311:GLY:N	2.38	0.40
2:1B:216:HIS:HE1	23:1B:607:CLA:C4D	2.35	0.40
2:1B:296:LEU:HD13	2:1B:304:LYS:HE3	2.02	0.40
23:1B:607:CLA:H111	23:1B:607:CLA:H91	1.89	0.40
23:1B:614:CLA:HBA2	26:1B:619:BCR:H372	2.02	0.40
3:1C:166:ILE:HG13	3:1C:248:GLY:HA3	2.03	0.40
3:1C:438:PHE:O	3:1C:442:LEU:HG	2.22	0.40
23:1C:508:CLA:H92	23:1C:508:CLA:H111	1.92	0.40
1:1A:132:GLU:O	1:1A:136:ARG:HG2	2.22	0.40
23:1B:610:CLA:H102	23:1B:610:CLA:H13	1.91	0.40
4:1D:186:PHE:O	4:1D:190:HIS:HB2	2.20	0.40
4:1D:234:ARG:HH21	17:1V:24:PRO:HG2	1.86	0.40
27:1H:101:PL9:H112	27:1H:101:PL9:HC2	2.03	0.40
2:1B:256:MET:HA	2:1B:263:THR:HG21	2.04	0.40
23:1C:508:CLA:CAD	23:1C:508:CLA:H151	2.51	0.40
6:1F:35:GLN:HG2	6:1F:35:GLN:H	1.77	0.40
26:1J:101:BCR:H15C	26:1J:101:BCR:H351	1.82	0.40
26:1J:101:BCR:H381	10:1K:56:ALA:HB2	2.04	0.40
17:1V:38:ASP:OD1	17:1V:40:SER:OG	2.40	0.40
1:1A:120:LEU:HA	1:1A:123:VAL:HG22	2.03	0.40
2:1B:248:ALA:HA	23:1B:602:CLA:H42	2.03	0.40
2:1B:472:ARG:HG2	2:1B:472:ARG:HH11	1.87	0.40
23:1B:612:CLA:H62	23:1B:612:CLA:H41	1.75	0.40
26:1B:618:BCR:H11C	26:1B:618:BCR:H341	1.87	0.40
28:1B:622:SQD:H81	28:1B:622:SQD:H45	1.85	0.40
3:1C:404:LEU:HD23	3:1C:404:LEU:HA	1.93	0.40
4:1D:202:VAL:HG11	23:1D:401:CLA:C3D	2.50	0.40
27:1E:102:PL9:H361	29:1P:201:LHG:H332	2.03	0.40
9:1J:21:VAL:O	9:1J:25:ILE:HG12	2.21	0.40
11:1L:28:LEU:HD23	11:1L:28:LEU:HA	1.96	0.40
13:1O:15:LYS:HD2	13:1O:20:VAL:HG22	2.04	0.40
13:1O:129:THR:HG21	13:1O:148:VAL:HA	2.03	0.40
13:1O:155:SER:HA	13:1O:166:THR:HG22	2.03	0.40

There are no symmetry-related clashes.

5.3 Torsion angles ⓘ

5.3.1 Protein backbone ⓘ

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	1A	332/334 (99%)	314 (95%)	18 (5%)	0	100	100
2	1B	501/503 (100%)	476 (95%)	24 (5%)	1 (0%)	43	68
3	1C	448/450 (100%)	427 (95%)	20 (4%)	1 (0%)	43	68
4	1D	338/341 (99%)	319 (94%)	17 (5%)	2 (1%)	21	44
5	1E	73/75 (97%)	68 (93%)	5 (7%)	0	100	100
6	1F	33/36 (92%)	33 (100%)	0	0	100	100
7	1H	58/60 (97%)	53 (91%)	5 (9%)	0	100	100
8	1I	32/34 (94%)	23 (72%)	8 (25%)	1 (3%)	3	8
9	1J	33/35 (94%)	33 (100%)	0	0	100	100
10	1K	35/37 (95%)	32 (91%)	3 (9%)	0	100	100
11	1L	34/37 (92%)	33 (97%)	1 (3%)	0	100	100
12	1M	30/33 (91%)	24 (80%)	5 (17%)	1 (3%)	3	7
13	1O	245/248 (99%)	210 (86%)	35 (14%)	0	100	100
14	1P	184/186 (99%)	164 (89%)	19 (10%)	1 (0%)	24	48
15	1T	30/32 (94%)	30 (100%)	0	0	100	100
16	1U	25/27 (93%)	23 (92%)	2 (8%)	0	100	100
17	1V	96/105 (91%)	79 (82%)	16 (17%)	1 (1%)	12	32
18	1W	52/54 (96%)	47 (90%)	5 (10%)	0	100	100
19	1X	37/39 (95%)	36 (97%)	1 (3%)	0	100	100
20	1Y	32/34 (94%)	31 (97%)	1 (3%)	0	100	100
21	1Z	60/62 (97%)	58 (97%)	2 (3%)	0	100	100
All	All	2708/2762 (98%)	2513 (93%)	187 (7%)	8 (0%)	37	60

All (8) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	1B	18	ARG
4	1D	268	LEU
12	1M	3	VAL
14	1P	53	PHE
3	1C	355	THR
4	1D	352	ALA
17	1V	32	VAL
8	1I	20	ILE

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%)	268 (99%)	2 (1%)	76	90
2	1B	402/402 (100%)	399 (99%)	3 (1%)	76	90
3	1C	346/350 (99%)	344 (99%)	2 (1%)	78	91
4	1D	274/275 (100%)	271 (99%)	3 (1%)	65	85
5	1E	68/68 (100%)	68 (100%)	0	100	100
6	1F	30/31 (97%)	30 (100%)	0	100	100
7	1H	49/49 (100%)	49 (100%)	0	100	100
8	1I	31/31 (100%)	28 (90%)	3 (10%)	8	20
9	1J	26/26 (100%)	26 (100%)	0	100	100
10	1K	32/32 (100%)	32 (100%)	0	100	100
11	1L	34/35 (97%)	34 (100%)	0	100	100
12	1M	27/29 (93%)	27 (100%)	0	100	100
13	1O	202/204 (99%)	200 (99%)	2 (1%)	68	86
14	1P	149/149 (100%)	149 (100%)	0	100	100
15	1T	29/29 (100%)	28 (97%)	1 (3%)	32	62
16	1U	23/23 (100%)	23 (100%)	0	100	100
17	1V	70/77 (91%)	70 (100%)	0	100	100
18	1W	46/46 (100%)	44 (96%)	2 (4%)	26	54

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
19	1X	32/32 (100%)	31 (97%)	1 (3%)	35	65
20	1Y	28/28 (100%)	28 (100%)	0	100	100
21	1Z	54/54 (100%)	54 (100%)	0	100	100
All	All	2222/2240 (99%)	2203 (99%)	19 (1%)	68	87

All (19) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	1A	37	MET
1	1A	227	THR
2	1B	62	VAL
2	1B	234	ILE
2	1B	338	VAL
3	1C	108	THR
3	1C	366	LEU
4	1D	75	LEU
4	1D	130	GLN
4	1D	193	THR
8	1I	2	LEU
8	1I	4	LEU
8	1I	13	ILE
13	1O	134	VAL
13	1O	169	ASP
15	1T	2	GLU
18	1W	9	GLU
18	1W	53	LEU
19	1X	57	SER

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (30) such sidechains are listed below:

Mol	Chain	Res	Type
1	1A	165	GLN
1	1A	338	ASN
2	1B	73	ASN
2	1B	295	ASN
2	1B	332	ASN
2	1B	394	GLN
2	1B	425	GLN
3	1C	84	GLN
3	1C	385	GLN

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Mol	Chain	Res	Type
3	1C	473	ASN
4	1D	195	ASN
4	1D	333	GLN
4	1D	339	ASN
5	1E	61	GLN
11	1L	34	ASN
12	1M	4	ASN
13	1O	13	GLN
13	1O	27	ASN
13	1O	117	GLN
13	1O	132	ASN
13	1O	170	ASN
14	1P	52	ASN
14	1P	58	ASN
14	1P	145	GLN
16	1U	133	ASN
17	1V	23	GLN
19	1X	77	ASN
20	1Y	22	ASN
20	1Y	25	GLN
20	1Y	29	ASN

5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 98 ligands modelled in this entry, 1 is monoatomic - leaving 97 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
29	LHG	1F	101	-	29,29,48	0.36	0	32,34,54	0.46	0
28	SQD	1D	412	-	42,43,54	0.44	1 (2%)	51,54,65	0.66	2 (3%)
26	BCR	1A	407	-	41,41,41	1.72	8 (19%)	56,56,56	1.71	12 (21%)
32	LNL	1C	514	-	17,17,19	0.63	0	17,17,19	0.59	0
34	HEM	1E	103	5	50,50,50	1.63	9 (18%)	66,82,82	1.74	12 (18%)
29	LHG	1P	201	-	44,44,48	0.28	0	47,49,54	0.35	0
26	BCR	1H	102	-	41,41,41	1.76	8 (19%)	56,56,56	1.74	14 (25%)
23	CLA	1D	402	-	54,58,73	2.38	18 (33%)	65,95,113	3.20	30 (46%)
23	CLA	1D	405	4	46,50,73	2.51	19 (41%)	55,85,113	3.44	27 (49%)
29	LHG	1L	101	-	48,48,48	0.28	0	51,54,54	0.39	0
27	PL9	1D	407	-	55,55,55	0.81	1 (1%)	68,69,69	0.59	2 (2%)
31	DGD	1C	516	-	56,56,67	0.89	2 (3%)	70,70,81	0.95	3 (4%)
28	SQD	1C	522	-	50,51,54	0.40	1 (2%)	59,62,65	0.44	1 (1%)
23	CLA	1C	509	3	69,73,73	2.12	19 (27%)	83,113,113	2.89	30 (36%)
26	BCR	1B	617	-	41,41,41	1.69	9 (21%)	56,56,56	1.79	13 (23%)
23	CLA	1A	402	1	65,69,73	2.13	19 (29%)	78,108,113	3.03	27 (34%)
24	PHO	1A	403	-	58,69,69	0.80	3 (5%)	56,99,99	1.07	4 (7%)
28	SQD	1A	411	-	44,45,54	0.42	1 (2%)	53,56,65	1.12	5 (9%)
27	PL9	1E	102	-	55,55,55	0.57	1 (1%)	68,69,69	1.92	21 (30%)
30	MGE	1C	525	-	45,45,48	0.24	0	53,53,56	0.52	0
32	LNL	1C	515	-	16,16,19	0.61	0	15,16,19	0.64	0
26	BCR	1B	618	-	41,41,41	1.71	8 (19%)	56,56,56	1.76	14 (25%)
29	LHG	1B	621	-	37,37,48	0.30	0	40,43,54	0.37	0
35	3PH	1X	101	-	38,38,47	0.70	1 (2%)	42,43,52	0.65	1 (2%)
23	CLA	1C	501	3	69,73,73	2.15	20 (28%)	83,113,113	2.85	29 (34%)
23	CLA	1B	602	2	65,69,73	2.13	19 (29%)	78,108,113	2.74	27 (34%)
26	BCR	1D	406	-	41,41,41	1.76	8 (19%)	56,56,56	1.78	14 (25%)
29	LHG	1V	201	-	48,48,48	0.27	0	51,54,54	0.34	0
30	MGE	1B	624	-	44,44,48	0.25	0	52,52,56	0.65	1 (1%)
30	MGE	1B	625	-	43,43,48	0.33	0	51,51,56	0.53	0
29	LHG	1D	408	-	30,30,48	0.34	0	33,36,54	0.38	0
29	LHG	1D	409	-	42,42,48	0.30	0	45,48,54	0.36	0
29	LHG	1C	520	-	28,28,48	0.38	0	31,34,54	0.45	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
29	LHG	1C	524	-	33,33,48	0.35	0	36,39,54	0.93	1 (2%)
29	LHG	1C	526	-	36,36,48	0.34	0	39,42,54	0.53	1 (2%)
23	CLA	1B	613	-	62,66,73	2.37	19 (30%)	74,104,113	3.19	32 (43%)
28	SQD	1B	620	-	44,45,54	0.43	1 (2%)	53,56,65	0.55	1 (1%)
26	BCR	1I	102	-	41,41,41	1.69	8 (19%)	56,56,56	1.64	12 (21%)
27	PL9	1A	408	-	55,55,55	0.68	1 (1%)	68,69,69	0.72	1 (1%)
31	DGD	1B	626	-	63,63,67	0.86	2 (3%)	77,77,81	0.88	2 (2%)
23	CLA	1B	614	2	49,53,73	2.57	19 (38%)	59,89,113	3.61	27 (45%)
26	BCR	1B	619	-	41,41,41	1.68	9 (21%)	56,56,56	1.98	17 (30%)
23	CLA	1B	605	-	69,73,73	2.07	19 (27%)	83,113,113	2.78	29 (34%)
28	SQD	1A	410	-	41,42,54	0.46	1 (2%)	50,53,65	0.63	1 (2%)
29	LHG	1I	101	-	31,31,48	0.43	0	35,36,54	0.56	1 (2%)
26	BCR	1J	101	-	41,41,41	1.71	9 (21%)	56,56,56	1.95	15 (26%)
29	LHG	1E	101	-	29,29,48	0.31	0	32,35,54	0.40	0
23	CLA	1B	615	-	45,49,73	2.62	19 (42%)	54,84,113	3.50	28 (51%)
23	CLA	1C	513	3	45,49,73	2.58	19 (42%)	54,84,113	3.53	27 (50%)
29	LHG	1K	101	-	42,42,48	0.30	0	45,47,54	0.36	0
23	CLA	1D	404	4	69,73,73	2.01	19 (27%)	83,113,113	2.77	30 (36%)
25	OEX	1A	406	1,3	0,14,14	-	-	-	-	-
23	CLA	1A	405	1	49,53,73	2.44	19 (38%)	59,89,113	3.35	27 (45%)
29	LHG	1I	103	-	38,38,48	0.30	0	41,44,54	0.38	0
23	CLA	1C	510	3	69,73,73	2.10	20 (28%)	83,113,113	2.88	30 (36%)
23	CLA	1D	401	-	69,73,73	2.11	18 (26%)	83,113,113	2.97	32 (38%)
23	CLA	1B	611	2	60,64,73	2.27	18 (30%)	72,102,113	3.14	29 (40%)
23	CLA	1B	607	2	66,70,73	2.16	19 (28%)	79,109,113	3.00	32 (40%)
24	PHO	1A	404	-	58,69,69	0.76	1 (1%)	56,99,99	1.07	4 (7%)
33	BCT	1D	403	22	2,3,3	0.96	0	2,3,3	0.36	0
23	CLA	1C	504	-	69,73,73	2.09	19 (27%)	83,113,113	2.86	29 (34%)
29	LHG	1D	413	-	40,40,48	0.30	0	43,45,54	0.36	0
29	LHG	1B	623	-	35,38,48	0.26	0	36,41,54	0.34	0
26	BCR	1Z	101	-	41,41,41	1.72	8 (19%)	56,56,56	1.68	12 (21%)
23	CLA	1B	604	2	60,64,73	2.25	18 (30%)	72,102,113	3.05	31 (43%)
23	CLA	1B	603	2	69,73,73	2.07	18 (26%)	83,113,113	2.92	30 (36%)
28	SQD	1A	409	-	47,48,54	0.39	1 (2%)	56,59,65	0.45	0
28	SQD	1B	622	-	49,50,54	0.42	1 (2%)	58,61,65	0.64	1 (1%)
23	CLA	1B	601	2	69,73,73	2.05	19 (27%)	83,113,113	2.89	31 (37%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
23	CLA	1B	612	2	69,73,73	2.09	19 (27%)	83,113,113	2.83	30 (36%)
28	SQD	1M	101	-	41,42,54	0.45	1 (2%)	50,53,65	0.46	0
29	LHG	1C	519	-	33,33,48	0.32	0	36,39,54	0.37	0
29	LHG	1W	101	-	43,43,48	0.30	0	46,49,54	0.37	0
23	CLA	1C	505	3	64,68,73	2.17	19 (29%)	77,107,113	2.97	30 (38%)
23	CLA	1C	507	3	62,66,73	2.18	19 (30%)	74,104,113	2.95	28 (37%)
23	CLA	1B	606	2	69,73,73	2.05	18 (26%)	83,113,113	2.67	29 (34%)
23	CLA	1C	511	-	50,54,73	2.41	19 (38%)	60,90,113	3.37	28 (46%)
26	BCR	1T	101	-	41,41,41	1.87	9 (21%)	56,56,56	2.15	19 (33%)
23	CLA	1C	508	3	69,73,73	2.12	19 (27%)	83,113,113	2.95	31 (37%)
29	LHG	1C	521	-	30,31,48	0.34	0	33,37,54	0.41	0
31	DGD	1C	517	-	59,59,67	0.88	2 (3%)	73,73,81	1.03	5 (6%)
31	DGD	1C	518	-	61,61,67	0.86	2 (3%)	75,75,81	0.96	4 (5%)
23	CLA	1B	610	-	69,73,73	2.03	17 (24%)	83,113,113	2.77	31 (37%)
23	CLA	1C	506	-	53,57,73	2.38	19 (35%)	62,93,113	3.32	28 (45%)
23	CLA	1C	512	3	59,63,73	2.31	18 (30%)	71,101,113	3.11	33 (46%)
26	BCR	1Z	102	-	41,41,41	1.68	8 (19%)	56,56,56	1.83	17 (30%)
28	SQD	1C	523	-	45,46,54	0.44	1 (2%)	54,57,65	0.40	0
23	CLA	1B	608	-	69,73,73	2.13	18 (26%)	83,113,113	2.90	28 (33%)
23	CLA	1C	503	3	60,64,73	2.23	20 (33%)	72,102,113	3.11	30 (41%)
27	PL9	1H	101	-	55,55,55	0.69	1 (1%)	68,69,69	0.76	1 (1%)
28	SQD	1D	411	-	45,46,54	0.44	0	54,57,65	1.05	6 (11%)
29	LHG	1J	102	-	42,42,48	0.30	0	45,47,54	0.57	0
23	CLA	1B	609	2	69,73,73	2.05	19 (27%)	83,113,113	2.71	28 (33%)
29	LHG	1D	410	-	31,31,48	0.34	0	34,37,54	0.47	0
29	LHG	1W	102	-	43,43,48	0.31	0	46,49,54	0.73	1 (2%)
23	CLA	1B	616	2	63,67,73	2.17	19 (30%)	75,105,113	3.11	33 (44%)
23	CLA	1C	502	3	65,69,73	2.11	18 (27%)	78,108,113	2.93	29 (37%)

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
29	LHG	1F	101	-	-	10/33/33/53	-
28	SQD	1D	412	-	-	4/38/58/69	0/1/1/1

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
26	BCR	1A	407	-	-	3/29/63/63	0/2/2/2
32	LNL	1C	514	-	-	7/15/15/17	-
34	HEM	1E	103	5	-	6/14/54/54	-
29	LHG	1P	201	-	-	6/48/48/53	-
26	BCR	1H	102	-	-	5/29/63/63	0/2/2/2
23	CLA	1D	402	-	-	8/21/97/115	-
23	CLA	1D	405	4	-	4/12/88/115	-
29	LHG	1L	101	-	-	10/53/53/53	-
27	PL9	1D	407	-	-	6/53/73/73	0/1/1/1
31	DGD	1C	516	-	-	6/44/84/95	0/2/2/2
28	SQD	1C	522	-	-	5/46/66/69	0/1/1/1
23	CLA	1C	509	3	1/1/15/20	11/39/115/115	-
26	BCR	1B	617	-	-	4/29/63/63	0/2/2/2
23	CLA	1A	402	1	1/1/14/20	8/35/111/115	-
24	PHO	1A	403	-	-	7/37/103/103	0/5/6/6
28	SQD	1A	411	-	-	9/40/60/69	0/1/1/1
27	PL9	1E	102	-	-	10/53/73/73	0/1/1/1
30	MGE	1C	525	-	-	6/40/60/63	0/1/1/1
32	LNL	1C	515	-	-	3/14/14/17	-
26	BCR	1B	618	-	-	3/29/63/63	0/2/2/2
29	LHG	1B	621	-	-	6/42/42/53	-
35	3PH	1X	101	-	-	18/40/40/49	-
23	CLA	1C	501	3	1/1/15/20	9/39/115/115	-
23	CLA	1B	602	2	1/1/14/20	14/35/111/115	-
26	BCR	1D	406	-	-	4/29/63/63	0/2/2/2
29	LHG	1V	201	-	-	9/53/53/53	-
30	MGE	1B	624	-	-	8/39/59/63	0/1/1/1
30	MGE	1B	625	-	-	4/38/58/63	0/1/1/1
29	LHG	1D	408	-	-	2/35/35/53	-
29	LHG	1D	409	-	-	7/47/47/53	-
29	LHG	1C	520	-	-	4/33/33/53	-
29	LHG	1C	524	-	-	11/38/38/53	-
29	LHG	1C	526	-	-	12/41/41/53	-
23	CLA	1B	613	-	1/1/13/20	6/31/107/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
28	SQD	1B	620	-	-	7/40/60/69	0/1/1/1
26	BCR	1I	102	-	-	3/29/63/63	0/2/2/2
27	PL9	1A	408	-	-	11/53/73/73	0/1/1/1
31	DGD	1B	626	-	-	10/51/91/95	0/2/2/2
23	CLA	1B	614	2	-	6/15/91/115	-
26	BCR	1B	619	-	-	4/29/63/63	0/2/2/2
23	CLA	1B	605	-	1/1/15/20	11/39/115/115	-
28	SQD	1A	410	-	-	4/37/57/69	0/1/1/1
29	LHG	1I	101	-	-	3/33/33/53	-
26	BCR	1J	101	-	-	5/29/63/63	0/2/2/2
29	LHG	1E	101	-	-	8/34/34/53	-
23	CLA	1B	615	-	-	4/10/86/115	-
23	CLA	1C	513	3	-	5/10/86/115	-
29	LHG	1K	101	-	-	12/46/46/53	-
23	CLA	1D	404	4	1/1/15/20	15/39/115/115	-
23	CLA	1A	405	1	-	3/15/91/115	-
29	LHG	1I	103	-	-	4/43/43/53	-
23	CLA	1C	510	3	1/1/15/20	5/39/115/115	-
23	CLA	1D	401	-	1/1/15/20	7/39/115/115	-
23	CLA	1B	611	2	1/1/13/20	8/29/105/115	-
23	CLA	1B	607	2	1/1/14/20	10/36/112/115	-
24	PHO	1A	404	-	-	10/37/103/103	0/5/6/6
23	CLA	1C	504	-	1/1/15/20	7/39/115/115	-
29	LHG	1D	413	-	-	2/44/44/53	-
29	LHG	1B	623	-	-	7/38/40/53	-
26	BCR	1Z	101	-	-	2/29/63/63	0/2/2/2
23	CLA	1B	604	2	1/1/13/20	6/29/105/115	-
23	CLA	1B	603	2	1/1/15/20	10/39/115/115	-
28	SQD	1A	409	-	-	2/43/63/69	0/1/1/1
28	SQD	1B	622	-	-	6/45/65/69	0/1/1/1
23	CLA	1B	601	2	1/1/15/20	15/39/115/115	-
23	CLA	1B	612	2	1/1/15/20	16/39/115/115	-
28	SQD	1M	101	-	-	5/37/57/69	0/1/1/1
29	LHG	1C	519	-	-	9/38/38/53	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
29	LHG	1W	101	-	-	13/48/48/53	-
23	CLA	1C	505	3	1/1/14/20	16/33/109/115	-
23	CLA	1C	507	3	1/1/13/20	6/31/107/115	-
23	CLA	1B	606	2	1/1/15/20	8/39/115/115	-
23	CLA	1C	511	-	-	7/17/93/115	-
26	BCR	1T	101	-	-	7/29/63/63	0/2/2/2
23	CLA	1C	508	3	1/1/15/20	14/39/115/115	-
29	LHG	1C	521	-	-	4/35/35/53	-
31	DGD	1C	517	-	-	11/47/87/95	0/2/2/2
31	DGD	1C	518	-	-	7/49/89/95	0/2/2/2
23	CLA	1B	610	-	1/1/15/20	17/39/115/115	-
23	CLA	1C	512	3	1/1/13/20	10/27/103/115	-
23	CLA	1C	506	-	-	7/20/96/115	-
26	BCR	1Z	102	-	-	4/29/63/63	0/2/2/2
28	SQD	1C	523	-	-	6/41/61/69	0/1/1/1
23	CLA	1C	503	3	1/1/13/20	6/29/105/115	-
23	CLA	1B	608	-	1/1/15/20	17/39/115/115	-
27	PL9	1H	101	-	-	18/53/73/73	0/1/1/1
28	SQD	1D	411	-	-	9/41/61/69	0/1/1/1
29	LHG	1J	102	-	-	12/46/46/53	-
23	CLA	1B	609	2	1/1/15/20	11/39/115/115	-
29	LHG	1D	410	-	-	3/36/36/53	-
29	LHG	1W	102	-	-	21/48/48/53	-
23	CLA	1B	616	2	1/1/13/20	5/32/108/115	-
23	CLA	1C	502	3	1/1/14/20	10/35/111/115	-

All (784) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
23	1B	613	CLA	C1D-ND	10.60	1.50	1.37
23	1B	614	CLA	C1D-ND	8.78	1.48	1.37
23	1C	508	CLA	C1D-ND	8.73	1.48	1.37
23	1B	607	CLA	C1D-ND	8.73	1.48	1.37
23	1B	608	CLA	C1D-ND	8.64	1.48	1.37
23	1D	401	CLA	C1D-ND	8.64	1.48	1.37
23	1C	503	CLA	C1D-ND	8.61	1.48	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
23	1B	615	CLA	C1D-ND	8.58	1.48	1.37
23	1D	405	CLA	C1D-ND	8.57	1.48	1.37
23	1D	402	CLA	C1D-ND	8.55	1.48	1.37
23	1C	501	CLA	C1D-ND	8.55	1.48	1.37
23	1B	604	CLA	C1D-ND	8.54	1.48	1.37
23	1C	506	CLA	C1D-ND	8.48	1.48	1.37
23	1C	502	CLA	C1D-ND	8.43	1.48	1.37
23	1C	512	CLA	C1D-ND	8.42	1.48	1.37
23	1B	616	CLA	C1D-ND	8.41	1.48	1.37
23	1B	605	CLA	C1D-ND	8.40	1.48	1.37
23	1C	513	CLA	C1D-ND	8.39	1.48	1.37
23	1C	510	CLA	C1D-ND	8.33	1.48	1.37
23	1B	611	CLA	C1D-ND	8.32	1.48	1.37
23	1C	511	CLA	C1D-ND	8.22	1.47	1.37
23	1C	505	CLA	C1D-ND	8.21	1.47	1.37
23	1A	402	CLA	C1D-ND	8.19	1.47	1.37
23	1C	509	CLA	C1D-ND	8.19	1.47	1.37
23	1B	603	CLA	C1D-ND	8.15	1.47	1.37
23	1B	612	CLA	C1D-ND	8.15	1.47	1.37
23	1C	504	CLA	C1D-ND	8.12	1.47	1.37
23	1B	601	CLA	C1D-ND	8.10	1.47	1.37
23	1B	609	CLA	C1D-ND	8.05	1.47	1.37
23	1A	405	CLA	C1D-ND	8.05	1.47	1.37
23	1C	507	CLA	C1D-ND	7.89	1.47	1.37
23	1B	602	CLA	C1D-ND	7.84	1.47	1.37
23	1D	404	CLA	C1D-ND	7.42	1.46	1.37
23	1B	606	CLA	C1D-ND	7.37	1.46	1.37
23	1B	610	CLA	C1D-ND	7.16	1.46	1.37
26	1T	101	BCR	C21-C22	5.88	1.43	1.35
27	1D	407	PL9	C3-C4	-5.29	1.40	1.49
34	1E	103	HEM	FE-NB	5.28	2.11	1.94
23	1C	512	CLA	O2D-CGD	5.27	1.46	1.33
23	1B	603	CLA	O2D-CGD	5.20	1.45	1.33
23	1B	602	CLA	O2D-CGD	5.15	1.45	1.33
23	1C	513	CLA	O2D-CGD	5.14	1.45	1.33
23	1C	508	CLA	O2D-CGD	5.14	1.45	1.33
23	1B	606	CLA	O2D-CGD	5.12	1.45	1.33
23	1B	607	CLA	O2D-CGD	5.11	1.45	1.33
23	1B	614	CLA	O2D-CGD	5.11	1.45	1.33
23	1D	402	CLA	O2D-CGD	5.11	1.45	1.33
23	1C	504	CLA	O2D-CGD	5.10	1.45	1.33
23	1B	605	CLA	O2D-CGD	5.09	1.45	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
23	1C	501	CLA	O2D-CGD	5.08	1.45	1.33
23	1C	509	CLA	O2D-CGD	5.07	1.45	1.33
23	1B	601	CLA	O2D-CGD	5.07	1.45	1.33
23	1B	615	CLA	O2D-CGD	5.06	1.45	1.33
23	1C	510	CLA	O2D-CGD	5.05	1.45	1.33
23	1C	503	CLA	O2D-CGD	5.05	1.45	1.33
23	1C	502	CLA	O2D-CGD	5.04	1.45	1.33
23	1B	604	CLA	O2D-CGD	5.03	1.45	1.33
23	1B	610	CLA	O2D-CGD	5.03	1.45	1.33
23	1A	405	CLA	O2D-CGD	5.03	1.45	1.33
23	1D	401	CLA	O2D-CGD	5.02	1.45	1.33
23	1B	616	CLA	O2D-CGD	5.02	1.45	1.33
23	1C	505	CLA	O2D-CGD	5.00	1.45	1.33
23	1B	613	CLA	O2D-CGD	4.99	1.45	1.33
23	1D	404	CLA	O2D-CGD	4.97	1.45	1.33
23	1C	506	CLA	O2D-CGD	4.97	1.45	1.33
23	1C	511	CLA	O2D-CGD	4.93	1.45	1.33
23	1D	405	CLA	O2D-CGD	4.93	1.45	1.33
23	1B	608	CLA	O2D-CGD	4.93	1.45	1.33
23	1B	606	CLA	C3D-C4D	-4.91	1.33	1.44
23	1B	609	CLA	O2D-CGD	4.91	1.45	1.33
23	1B	612	CLA	O2D-CGD	4.89	1.45	1.33
23	1C	507	CLA	O2D-CGD	4.88	1.45	1.33
23	1B	611	CLA	O2D-CGD	4.88	1.45	1.33
23	1D	404	CLA	C3D-C4D	-4.87	1.33	1.44
23	1B	602	CLA	C3D-C4D	-4.85	1.33	1.44
23	1B	610	CLA	C3D-C4D	-4.84	1.33	1.44
23	1A	402	CLA	C3D-C4D	-4.73	1.33	1.44
23	1A	402	CLA	O2D-CGD	4.71	1.44	1.33
23	1C	505	CLA	C3D-C4D	-4.69	1.33	1.44
23	1B	612	CLA	C3D-C4D	-4.69	1.33	1.44
23	1B	614	CLA	CHB-C1B	4.68	1.49	1.39
23	1B	603	CLA	C3D-C4D	-4.65	1.33	1.44
23	1B	601	CLA	C3D-C4D	-4.65	1.33	1.44
23	1C	513	CLA	C3C-C2C	4.64	1.46	1.36
23	1B	613	CLA	C3D-C4D	-4.62	1.33	1.44
23	1C	506	CLA	CHC-C1C	4.60	1.47	1.38
23	1A	405	CLA	C3D-C4D	-4.59	1.33	1.44
23	1C	503	CLA	C3D-C4D	-4.58	1.33	1.44
23	1B	614	CLA	CHC-C1C	4.57	1.47	1.38
27	1H	101	PL9	C3-C4	-4.57	1.42	1.49
23	1B	616	CLA	C3D-C4D	-4.54	1.33	1.44

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
27	1A	408	PL9	C3-C4	-4.54	1.42	1.49
23	1C	504	CLA	C3D-C4D	-4.54	1.33	1.44
23	1C	512	CLA	C3D-C4D	-4.54	1.33	1.44
23	1B	608	CLA	C3C-C2C	4.53	1.46	1.36
23	1C	512	CLA	C3C-C2C	4.53	1.46	1.36
23	1C	501	CLA	C3C-C2C	4.53	1.46	1.36
23	1C	501	CLA	C3D-C4D	-4.53	1.34	1.44
23	1B	614	CLA	O2A-CGA	4.52	1.45	1.30
23	1C	505	CLA	C3C-C2C	4.52	1.46	1.36
23	1C	512	CLA	O2A-CGA	4.51	1.46	1.33
23	1C	509	CLA	C3D-C4D	-4.51	1.34	1.44
23	1B	611	CLA	C3D-C4D	-4.51	1.34	1.44
23	1B	611	CLA	CHC-C1C	4.49	1.47	1.38
23	1B	604	CLA	C3D-C4D	-4.49	1.34	1.44
23	1B	607	CLA	C3D-C4D	-4.47	1.34	1.44
23	1B	605	CLA	C3D-C4D	-4.47	1.34	1.44
23	1C	512	CLA	CHC-C1C	4.47	1.47	1.38
23	1A	405	CLA	CHC-C1C	4.46	1.47	1.38
23	1D	402	CLA	C3C-C2C	4.46	1.46	1.36
23	1C	511	CLA	CHC-C1C	4.46	1.47	1.38
23	1C	513	CLA	CHC-C1C	4.45	1.47	1.38
23	1D	402	CLA	C3D-C4D	-4.45	1.34	1.44
23	1C	508	CLA	CHB-C1B	4.44	1.49	1.39
23	1A	405	CLA	O2A-CGA	4.44	1.45	1.30
23	1B	610	CLA	CHC-C1C	4.44	1.47	1.38
23	1C	504	CLA	CHC-C1C	4.44	1.47	1.38
23	1B	609	CLA	C3D-C4D	-4.43	1.34	1.44
23	1A	402	CLA	CHC-C1C	4.43	1.47	1.38
23	1B	608	CLA	C3D-C4D	-4.42	1.34	1.44
23	1B	604	CLA	C3C-C2C	4.42	1.46	1.36
23	1D	405	CLA	C3D-C4D	-4.42	1.34	1.44
23	1B	601	CLA	C3C-C2C	4.41	1.46	1.36
23	1C	502	CLA	C3D-C4D	-4.41	1.34	1.44
23	1B	616	CLA	C3C-C2C	4.40	1.46	1.36
23	1C	510	CLA	C3D-C4D	-4.40	1.34	1.44
23	1C	507	CLA	C3C-C2C	4.40	1.46	1.36
23	1D	405	CLA	C3C-C2C	4.40	1.46	1.36
23	1B	615	CLA	CHC-C1C	4.39	1.47	1.38
23	1D	401	CLA	C3D-C4D	-4.39	1.34	1.44
23	1C	507	CLA	C3D-C4D	-4.37	1.34	1.44
23	1C	504	CLA	C3C-C2C	4.37	1.46	1.36
23	1B	602	CLA	C3C-C2C	4.37	1.46	1.36

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
23	1B	607	CLA	C3C-C2C	4.36	1.46	1.36
23	1C	508	CLA	C3D-C4D	-4.36	1.34	1.44
23	1B	606	CLA	C3C-C2C	4.35	1.46	1.36
23	1B	615	CLA	C3A-C2A	-4.35	1.50	1.54
23	1C	508	CLA	O2A-CGA	4.35	1.46	1.33
23	1B	615	CLA	C3C-C2C	4.34	1.46	1.36
23	1C	501	CLA	O2A-CGA	4.34	1.46	1.33
23	1B	615	CLA	C3D-C4D	-4.34	1.34	1.44
23	1B	602	CLA	O2A-CGA	4.34	1.46	1.33
23	1C	509	CLA	CHC-C1C	4.34	1.47	1.38
23	1C	506	CLA	C3C-C2C	4.33	1.45	1.36
23	1B	612	CLA	CHC-C1C	4.32	1.47	1.38
23	1B	603	CLA	C3C-C2C	4.32	1.45	1.36
23	1B	609	CLA	O2A-CGA	4.31	1.45	1.33
23	1C	510	CLA	C3C-C2C	4.31	1.45	1.36
23	1C	513	CLA	C3D-C4D	-4.30	1.34	1.44
23	1C	503	CLA	C3C-C2C	4.30	1.45	1.36
23	1B	611	CLA	CHB-C1B	4.30	1.49	1.39
23	1C	510	CLA	O2A-CGA	4.29	1.45	1.33
23	1D	405	CLA	CHC-C1C	4.28	1.47	1.38
23	1B	612	CLA	O2A-CGA	4.28	1.45	1.33
23	1B	612	CLA	C3C-C2C	4.28	1.45	1.36
23	1B	604	CLA	CHC-C1C	4.28	1.47	1.38
23	1A	405	CLA	C3C-C2C	4.26	1.45	1.36
23	1B	605	CLA	O2A-CGA	4.26	1.45	1.33
23	1C	509	CLA	CHB-C1B	4.26	1.49	1.39
23	1B	601	CLA	O2A-CGA	4.26	1.45	1.33
23	1C	506	CLA	C3D-C4D	-4.24	1.34	1.44
23	1C	506	CLA	O2A-CGA	4.24	1.45	1.33
23	1B	605	CLA	C3C-C2C	4.23	1.45	1.36
23	1B	616	CLA	O2A-CGA	4.23	1.45	1.33
23	1B	607	CLA	O2A-CGA	4.23	1.45	1.33
23	1B	611	CLA	O2A-CGA	4.23	1.45	1.33
23	1D	401	CLA	C3C-C2C	4.23	1.45	1.36
23	1C	501	CLA	CHC-C1C	4.23	1.47	1.38
23	1C	509	CLA	C3C-C2C	4.22	1.45	1.36
23	1B	613	CLA	C3C-C2C	4.22	1.45	1.36
31	1C	517	DGD	O1G-C1A	4.21	1.45	1.33
23	1C	510	CLA	CHC-C1C	4.20	1.47	1.38
23	1B	603	CLA	O2A-CGA	4.20	1.45	1.33
23	1B	611	CLA	C3C-C2C	4.20	1.45	1.36
31	1B	626	DGD	O1G-C1A	4.20	1.45	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
23	1C	504	CLA	O2A-CGA	4.19	1.45	1.33
23	1C	511	CLA	C3D-C4D	-4.19	1.34	1.44
23	1D	404	CLA	O2A-CGA	4.18	1.45	1.33
23	1B	608	CLA	O2A-CGA	4.18	1.45	1.33
23	1C	503	CLA	CHC-C1C	4.18	1.47	1.38
23	1C	509	CLA	O2A-CGA	4.18	1.45	1.33
23	1B	610	CLA	C3C-C2C	4.17	1.45	1.36
23	1C	505	CLA	O2A-CGA	4.17	1.45	1.33
23	1B	608	CLA	CHC-C1C	4.17	1.47	1.38
23	1D	402	CLA	O2A-CGA	4.16	1.45	1.33
23	1B	606	CLA	O2A-CGA	4.16	1.45	1.33
23	1B	613	CLA	O2A-CGA	4.15	1.45	1.33
23	1D	401	CLA	CHC-C1C	4.15	1.47	1.38
23	1B	614	CLA	C3D-C4D	-4.15	1.34	1.44
31	1C	516	DGD	O1G-C1A	4.13	1.45	1.33
26	1H	102	BCR	C21-C22	4.13	1.41	1.35
23	1B	616	CLA	CHC-C1C	4.13	1.46	1.38
23	1B	606	CLA	CHC-C1C	4.12	1.46	1.38
23	1D	402	CLA	CHC-C1C	4.11	1.46	1.38
23	1C	502	CLA	O2A-CGA	4.11	1.45	1.33
23	1C	507	CLA	O2A-CGA	4.10	1.45	1.33
23	1B	601	CLA	CHC-C1C	4.09	1.46	1.38
23	1C	503	CLA	O2A-CGA	4.09	1.45	1.33
26	1J	101	BCR	C14-C13	4.08	1.41	1.35
23	1D	401	CLA	O2A-CGA	4.07	1.45	1.33
31	1C	518	DGD	O2G-C1B	4.07	1.45	1.34
23	1B	609	CLA	C3C-C2C	4.06	1.45	1.36
23	1A	402	CLA	C3C-C2C	4.06	1.45	1.36
23	1C	511	CLA	C3C-C2C	4.06	1.45	1.36
23	1C	513	CLA	C3A-C2A	-4.05	1.50	1.54
23	1A	402	CLA	O2A-CGA	4.04	1.45	1.33
23	1C	508	CLA	C3C-C2C	4.04	1.45	1.36
23	1B	610	CLA	O2A-CGA	4.03	1.45	1.33
23	1D	404	CLA	CHC-C1C	4.03	1.46	1.38
31	1C	518	DGD	O1G-C1A	4.03	1.45	1.33
23	1B	614	CLA	C4B-NB	-4.03	1.32	1.37
23	1B	603	CLA	CHC-C1C	4.01	1.46	1.38
23	1C	505	CLA	CHC-C1C	4.01	1.46	1.38
31	1C	517	DGD	O2G-C1B	4.00	1.45	1.34
23	1C	502	CLA	C3C-C2C	4.00	1.45	1.36
23	1B	602	CLA	CHC-C1C	4.00	1.46	1.38
23	1C	511	CLA	O2A-CGA	3.99	1.45	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
31	1C	516	DGD	O2G-C1B	3.98	1.45	1.34
31	1B	626	DGD	O2G-C1B	3.97	1.45	1.34
23	1B	604	CLA	O2A-CGA	3.95	1.44	1.33
23	1D	404	CLA	C3C-C2C	3.95	1.45	1.36
26	1D	406	BCR	C21-C22	3.94	1.41	1.35
34	1E	103	HEM	FE-NC	3.93	2.08	1.95
23	1B	609	CLA	CHC-C1C	3.92	1.46	1.38
26	1H	102	BCR	C14-C13	3.92	1.41	1.35
26	1H	102	BCR	C17-C18	3.92	1.41	1.35
26	1D	406	BCR	C10-C9	3.91	1.41	1.35
23	1B	613	CLA	CHC-C1C	3.91	1.46	1.38
23	1D	401	CLA	CHB-C1B	3.91	1.48	1.39
23	1B	605	CLA	CHC-C1C	3.87	1.46	1.38
23	1C	507	CLA	CHC-C1C	3.85	1.46	1.38
23	1B	607	CLA	CHB-C1B	3.85	1.48	1.39
26	1D	406	BCR	C14-C13	3.85	1.40	1.35
23	1C	508	CLA	CHC-C1C	3.83	1.46	1.38
26	1T	101	BCR	C10-C9	3.81	1.40	1.35
23	1B	613	CLA	CHB-C1B	3.80	1.47	1.39
23	1B	616	CLA	CHB-C1B	3.79	1.47	1.39
26	1J	101	BCR	C10-C9	3.79	1.40	1.35
26	1D	406	BCR	C17-C18	3.78	1.40	1.35
23	1C	502	CLA	CHC-C1C	3.78	1.46	1.38
23	1C	511	CLA	CHB-C1B	3.76	1.47	1.39
23	1C	502	CLA	CHB-C1B	3.75	1.47	1.39
23	1C	513	CLA	CHB-C1B	3.75	1.47	1.39
26	1J	101	BCR	C21-C22	3.75	1.40	1.35
26	1H	102	BCR	C10-C9	3.75	1.40	1.35
23	1B	615	CLA	CHB-C1B	3.74	1.47	1.39
23	1C	509	CLA	OBD-CAD	3.74	1.28	1.22
23	1D	402	CLA	OBD-CAD	3.72	1.28	1.22
23	1B	615	CLA	OBD-CAD	3.71	1.28	1.22
23	1B	609	CLA	OBD-CAD	3.71	1.28	1.22
23	1C	507	CLA	OBD-CAD	3.70	1.28	1.22
23	1D	402	CLA	CHB-C1B	3.70	1.47	1.39
23	1B	614	CLA	OBD-CAD	3.69	1.28	1.22
23	1B	607	CLA	CHC-C1C	3.68	1.46	1.38
23	1B	614	CLA	C3C-C2C	3.68	1.44	1.36
23	1C	511	CLA	OBD-CAD	3.67	1.28	1.22
23	1C	510	CLA	CHB-C1B	3.67	1.47	1.39
23	1B	614	CLA	MG-NA	-3.66	1.97	2.06
26	1Z	101	BCR	C14-C13	3.66	1.40	1.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
26	1A	407	BCR	C21-C22	3.65	1.40	1.35
23	1D	405	CLA	OBD-CAD	3.64	1.28	1.22
23	1C	502	CLA	OBD-CAD	3.64	1.28	1.22
26	1Z	101	BCR	C10-C9	3.64	1.40	1.35
23	1B	608	CLA	CHB-C1B	3.64	1.47	1.39
23	1D	404	CLA	CHB-C1B	3.63	1.47	1.39
26	1T	101	BCR	C17-C18	3.63	1.40	1.35
23	1B	606	CLA	OBD-CAD	3.62	1.28	1.22
23	1D	401	CLA	OBD-CAD	3.62	1.28	1.22
23	1B	610	CLA	CHB-C1B	3.62	1.47	1.39
26	1Z	101	BCR	C17-C18	3.61	1.40	1.35
23	1B	603	CLA	OBD-CAD	3.61	1.28	1.22
23	1C	510	CLA	OBD-CAD	3.59	1.28	1.22
26	1T	101	BCR	C14-C13	3.59	1.40	1.35
26	1A	407	BCR	C14-C13	3.58	1.40	1.35
26	1I	102	BCR	C14-C13	3.58	1.40	1.35
23	1C	512	CLA	CHB-C1B	3.57	1.47	1.39
26	1A	407	BCR	C17-C18	3.56	1.40	1.35
26	1B	617	BCR	C23-C22	-3.56	1.38	1.45
23	1C	501	CLA	OBD-CAD	3.56	1.28	1.22
26	1B	618	BCR	C21-C22	3.55	1.40	1.35
23	1C	512	CLA	OBD-CAD	3.55	1.28	1.22
23	1B	605	CLA	CHB-C1B	3.54	1.47	1.39
26	1B	619	BCR	C21-C22	3.54	1.40	1.35
26	1B	618	BCR	C10-C9	3.52	1.40	1.35
23	1B	604	CLA	CHB-C1B	3.52	1.47	1.39
34	1E	103	HEM	C4D-ND	-3.52	1.34	1.40
23	1C	506	CLA	OBD-CAD	3.52	1.28	1.22
23	1B	604	CLA	OBD-CAD	3.51	1.28	1.22
26	1B	619	BCR	C10-C9	3.50	1.40	1.35
26	1Z	101	BCR	C21-C22	3.50	1.40	1.35
26	1B	618	BCR	C17-C18	3.50	1.40	1.35
23	1A	405	CLA	CHB-C1B	3.50	1.47	1.39
23	1B	606	CLA	C1B-NB	-3.49	1.33	1.37
23	1C	505	CLA	CHB-C1B	3.49	1.47	1.39
23	1D	405	CLA	CHB-C1B	3.48	1.47	1.39
23	1A	405	CLA	OBD-CAD	3.48	1.28	1.22
23	1C	513	CLA	OBD-CAD	3.48	1.28	1.22
26	1B	619	BCR	C17-C18	3.47	1.40	1.35
23	1C	508	CLA	OBD-CAD	3.47	1.28	1.22
26	1I	102	BCR	C17-C18	3.47	1.40	1.35
23	1B	616	CLA	OBD-CAD	3.46	1.28	1.22

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
26	1Z	102	BCR	C10-C9	3.46	1.40	1.35
26	1B	618	BCR	C14-C13	3.46	1.40	1.35
23	1C	504	CLA	CHB-C1B	3.46	1.47	1.39
23	1C	504	CLA	OBD-CAD	3.44	1.28	1.22
23	1C	513	CLA	CHC-C4B	3.44	1.47	1.39
23	1B	603	CLA	CHB-C1B	3.44	1.47	1.39
26	1B	617	BCR	C8-C9	-3.43	1.38	1.45
26	1A	407	BCR	C10-C9	3.43	1.40	1.35
26	1J	101	BCR	C17-C18	3.42	1.40	1.35
23	1B	602	CLA	OBD-CAD	3.42	1.28	1.22
26	1B	619	BCR	C14-C13	3.42	1.40	1.35
26	1Z	102	BCR	C17-C18	3.42	1.40	1.35
23	1B	610	CLA	OBD-CAD	3.41	1.28	1.22
23	1C	506	CLA	CHB-C1B	3.40	1.47	1.39
23	1B	602	CLA	C1B-NB	-3.40	1.33	1.37
23	1B	608	CLA	OBD-CAD	3.40	1.28	1.22
23	1A	402	CLA	OBD-CAD	3.39	1.28	1.22
23	1C	505	CLA	OBD-CAD	3.38	1.28	1.22
23	1C	501	CLA	C4B-NB	-3.37	1.33	1.37
26	1I	102	BCR	C10-C9	3.36	1.40	1.35
23	1B	611	CLA	OBD-CAD	3.36	1.28	1.22
23	1B	612	CLA	CHB-C1B	3.35	1.46	1.39
23	1C	512	CLA	CHC-C4B	3.35	1.46	1.39
23	1C	503	CLA	CHB-C1B	3.34	1.46	1.39
23	1B	612	CLA	OBD-CAD	3.34	1.28	1.22
23	1C	511	CLA	CHC-C4B	3.33	1.46	1.39
23	1A	402	CLA	CHB-C1B	3.33	1.46	1.39
23	1C	505	CLA	CHD-C1D	3.33	1.44	1.38
23	1B	611	CLA	C4B-NB	-3.33	1.33	1.37
23	1B	602	CLA	CHB-C1B	3.33	1.46	1.39
23	1B	605	CLA	OBD-CAD	3.32	1.28	1.22
26	1Z	102	BCR	C21-C22	3.32	1.40	1.35
23	1C	501	CLA	CHD-C1D	3.31	1.44	1.38
26	1I	102	BCR	C21-C22	3.31	1.40	1.35
26	1T	101	BCR	C23-C22	-3.30	1.38	1.45
23	1C	504	CLA	CHC-C4B	3.30	1.46	1.39
23	1B	607	CLA	OBD-CAD	3.30	1.28	1.22
23	1B	604	CLA	CHD-C1D	3.30	1.44	1.38
35	1X	101	3PH	P-O11	3.30	1.70	1.60
23	1B	608	CLA	C4B-NB	-3.30	1.33	1.37
23	1B	601	CLA	OBD-CAD	3.29	1.28	1.22
23	1C	506	CLA	CHC-C4B	3.29	1.46	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
23	1C	507	CLA	C3D-C2D	3.28	1.48	1.39
34	1E	103	HEM	C1B-NB	-3.27	1.34	1.40
26	1Z	102	BCR	C23-C22	-3.27	1.38	1.45
23	1B	613	CLA	C4D-ND	3.27	1.42	1.37
23	1C	507	CLA	CHD-C1D	3.26	1.44	1.38
23	1B	609	CLA	CHB-C1B	3.26	1.46	1.39
23	1C	501	CLA	CHD-C4C	3.26	1.46	1.39
23	1B	602	CLA	CHD-C1D	3.25	1.44	1.38
23	1B	608	CLA	C1B-NB	-3.25	1.33	1.37
23	1B	615	CLA	CHC-C4B	3.25	1.46	1.39
23	1B	601	CLA	CHC-C4B	3.24	1.46	1.39
23	1A	405	CLA	CHC-C4B	3.24	1.46	1.39
23	1B	607	CLA	CHD-C1D	3.23	1.44	1.38
23	1C	507	CLA	CHB-C1B	3.23	1.46	1.39
23	1B	613	CLA	C4B-NB	-3.23	1.33	1.37
23	1C	507	CLA	C1B-NB	-3.23	1.33	1.37
26	1Z	102	BCR	C14-C13	3.22	1.40	1.35
23	1C	508	CLA	C4B-NB	-3.21	1.33	1.37
23	1B	606	CLA	CHB-C1B	3.21	1.46	1.39
23	1D	405	CLA	CHD-C4C	3.20	1.46	1.39
23	1B	604	CLA	CHD-C4C	3.20	1.46	1.39
23	1B	609	CLA	C1B-NB	-3.19	1.33	1.37
23	1D	401	CLA	MG-NA	-3.19	1.98	2.06
26	1I	102	BCR	C8-C9	-3.18	1.39	1.45
23	1B	605	CLA	CHD-C1D	3.18	1.44	1.38
23	1A	402	CLA	CHC-C4B	3.17	1.46	1.39
26	1B	618	BCR	C23-C22	-3.17	1.39	1.45
23	1B	604	CLA	CHC-C4B	3.17	1.46	1.39
23	1C	507	CLA	C4B-NB	-3.17	1.33	1.37
23	1B	612	CLA	CHD-C1D	3.16	1.44	1.38
23	1D	404	CLA	OBD-CAD	3.16	1.27	1.22
23	1C	501	CLA	CHB-C1B	3.16	1.46	1.39
23	1B	606	CLA	CHD-C1D	3.15	1.44	1.38
26	1A	407	BCR	C8-C9	-3.15	1.39	1.45
23	1B	613	CLA	CHD-C4C	3.14	1.46	1.39
24	1A	403	PHO	C4D-CHA	3.14	1.44	1.39
23	1D	405	CLA	CHC-C4B	3.14	1.46	1.39
23	1D	402	CLA	CHD-C1D	3.14	1.44	1.38
23	1D	405	CLA	CHD-C1D	3.13	1.44	1.38
26	1B	617	BCR	C10-C9	3.13	1.39	1.35
23	1C	502	CLA	C4B-NB	-3.13	1.33	1.37
23	1B	610	CLA	C1B-NB	-3.13	1.33	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
23	1B	612	CLA	C4B-NB	-3.12	1.33	1.37
23	1B	612	CLA	CHC-C4B	3.12	1.46	1.39
23	1B	602	CLA	CHD-C4C	3.12	1.46	1.39
23	1B	611	CLA	MG-NA	-3.12	1.98	2.06
23	1B	609	CLA	CHD-C1D	3.11	1.44	1.38
23	1B	609	CLA	CHD-C4C	3.11	1.46	1.39
23	1B	610	CLA	CHC-C4B	3.11	1.46	1.39
26	1B	618	BCR	C8-C9	-3.10	1.39	1.45
23	1C	501	CLA	CHC-C4B	3.10	1.46	1.39
23	1C	501	CLA	C3D-C2D	3.09	1.47	1.39
23	1B	605	CLA	CHD-C4C	3.09	1.46	1.39
23	1B	601	CLA	CHD-C1D	3.09	1.44	1.38
23	1B	607	CLA	C3D-C2D	3.08	1.47	1.39
23	1B	607	CLA	CHD-C4C	3.08	1.46	1.39
23	1B	616	CLA	CHD-C1D	3.07	1.44	1.38
23	1C	509	CLA	CHC-C4B	3.07	1.46	1.39
23	1B	615	CLA	CHD-C4C	3.07	1.46	1.39
23	1D	402	CLA	CHD-C4C	3.07	1.46	1.39
23	1C	503	CLA	CHC-C4B	3.06	1.46	1.39
23	1C	512	CLA	CHD-C4C	3.06	1.46	1.39
24	1A	404	PHO	C4D-CHA	3.06	1.44	1.39
23	1C	510	CLA	CHD-C1D	3.06	1.44	1.38
23	1C	503	CLA	OBD-CAD	3.05	1.27	1.22
23	1B	611	CLA	CHC-C4B	3.05	1.46	1.39
23	1B	601	CLA	CHD-C4C	3.05	1.46	1.39
23	1B	601	CLA	CHB-C1B	3.04	1.46	1.39
23	1C	512	CLA	CHD-C1D	3.04	1.44	1.38
23	1C	506	CLA	C4B-NB	-3.04	1.34	1.37
26	1Z	101	BCR	C23-C22	-3.03	1.39	1.45
23	1C	504	CLA	CHD-C4C	3.03	1.46	1.39
23	1B	603	CLA	CHC-C4B	3.03	1.46	1.39
26	1Z	101	BCR	C8-C9	-3.03	1.39	1.45
23	1B	615	CLA	CHD-C1D	3.02	1.44	1.38
23	1D	404	CLA	CHC-C4B	3.02	1.46	1.39
23	1C	503	CLA	CHD-C4C	3.02	1.46	1.39
23	1B	606	CLA	CHC-C4B	3.02	1.46	1.39
23	1C	510	CLA	CHD-C4C	3.01	1.46	1.39
23	1B	608	CLA	CHD-C1D	3.01	1.44	1.38
23	1B	612	CLA	CHD-C4C	3.01	1.46	1.39
23	1B	605	CLA	C3D-C2D	3.01	1.47	1.39
26	1Z	102	BCR	C8-C9	-3.00	1.39	1.45
23	1C	505	CLA	CHC-C4B	3.00	1.46	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
23	1B	609	CLA	C3D-C2D	2.99	1.47	1.39
23	1C	507	CLA	CHD-C4C	2.99	1.46	1.39
23	1C	510	CLA	C4B-NB	-2.99	1.34	1.37
23	1A	402	CLA	MG-NA	-2.99	1.99	2.06
23	1B	603	CLA	CHD-C4C	2.99	1.46	1.39
23	1B	610	CLA	C4B-NB	-2.99	1.34	1.37
23	1C	506	CLA	CHD-C4C	2.98	1.46	1.39
26	1J	101	BCR	C8-C9	-2.98	1.39	1.45
23	1C	513	CLA	C3D-C2D	2.98	1.47	1.39
23	1D	401	CLA	C4B-NB	-2.98	1.34	1.37
26	1A	407	BCR	C23-C22	-2.98	1.39	1.45
26	1I	102	BCR	C23-C22	-2.97	1.39	1.45
23	1B	612	CLA	C3D-C2D	2.96	1.47	1.39
23	1C	509	CLA	C4B-NB	-2.96	1.34	1.37
23	1C	505	CLA	CHD-C4C	2.96	1.46	1.39
26	1T	101	BCR	C8-C9	-2.96	1.39	1.45
26	1B	619	BCR	C8-C9	-2.95	1.39	1.45
23	1B	603	CLA	CHD-C1D	2.95	1.44	1.38
23	1D	401	CLA	CHC-C4B	2.95	1.46	1.39
26	1B	617	BCR	C17-C18	2.95	1.39	1.35
26	1B	617	BCR	C14-C13	2.94	1.39	1.35
23	1C	509	CLA	C1B-NB	-2.94	1.34	1.37
23	1C	503	CLA	CHD-C1D	2.94	1.44	1.38
23	1C	509	CLA	CHD-C4C	2.94	1.45	1.39
23	1D	404	CLA	C1B-NB	-2.94	1.34	1.37
23	1C	510	CLA	CHC-C4B	2.94	1.46	1.39
23	1D	404	CLA	CHD-C4C	2.93	1.45	1.39
23	1D	402	CLA	C3D-C2D	2.93	1.47	1.39
23	1C	505	CLA	C1B-NB	-2.93	1.34	1.37
23	1B	601	CLA	C3D-C2D	2.93	1.47	1.39
23	1C	505	CLA	C3B-C4B	2.93	1.49	1.42
23	1A	402	CLA	C3B-C4B	2.92	1.49	1.42
23	1D	405	CLA	C3D-C2D	2.92	1.47	1.39
34	1E	103	HEM	C1C-C2C	-2.92	1.39	1.45
23	1C	513	CLA	C3B-C4B	2.92	1.49	1.42
23	1B	616	CLA	CHC-C4B	2.92	1.46	1.39
23	1C	511	CLA	C3B-C4B	2.91	1.49	1.42
26	1H	102	BCR	C8-C9	-2.90	1.39	1.45
23	1B	608	CLA	CHD-C4C	2.90	1.45	1.39
23	1D	401	CLA	CHD-C4C	2.90	1.45	1.39
23	1D	404	CLA	C4B-NB	-2.90	1.34	1.37
26	1B	619	BCR	C23-C22	-2.90	1.39	1.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
23	1B	607	CLA	C4B-NB	-2.89	1.34	1.37
23	1B	615	CLA	C4B-NB	-2.89	1.34	1.37
23	1B	615	CLA	C3D-C2D	2.89	1.47	1.39
23	1C	509	CLA	CHD-C1D	2.89	1.44	1.38
23	1B	608	CLA	MG-NA	-2.89	1.99	2.06
23	1B	608	CLA	CHC-C4B	2.89	1.45	1.39
23	1C	504	CLA	C3D-C2D	2.88	1.47	1.39
23	1B	604	CLA	C3D-C2D	2.88	1.47	1.39
23	1B	614	CLA	C1B-C2B	2.88	1.50	1.43
23	1B	606	CLA	CHD-C4C	2.88	1.45	1.39
23	1C	509	CLA	MG-NA	-2.87	1.99	2.06
23	1D	402	CLA	CHC-C4B	2.87	1.45	1.39
23	1C	502	CLA	C3D-C2D	2.87	1.47	1.39
23	1C	504	CLA	C3B-C4B	2.87	1.49	1.42
26	1B	617	BCR	C19-C18	-2.87	1.39	1.45
23	1B	608	CLA	C3D-C2D	2.87	1.46	1.39
23	1C	502	CLA	CHD-C1D	2.87	1.43	1.38
23	1B	614	CLA	CHC-C4B	2.86	1.45	1.39
23	1B	606	CLA	C3D-C2D	2.86	1.46	1.39
23	1C	501	CLA	C1B-NB	-2.86	1.34	1.37
26	1J	101	BCR	C23-C22	-2.85	1.39	1.45
23	1C	511	CLA	C3D-C2D	2.85	1.46	1.39
23	1C	502	CLA	MG-NA	-2.85	1.99	2.06
23	1B	614	CLA	C3D-C2D	2.85	1.46	1.39
23	1B	613	CLA	OBD-CAD	2.85	1.27	1.22
23	1A	402	CLA	C4B-NB	-2.85	1.34	1.37
23	1B	608	CLA	C3B-C4B	2.84	1.49	1.42
23	1D	402	CLA	C4B-NB	-2.84	1.34	1.37
23	1B	612	CLA	C1B-NB	-2.84	1.34	1.37
23	1B	613	CLA	CHC-C4B	2.83	1.45	1.39
23	1B	603	CLA	C4B-NB	-2.83	1.34	1.37
26	1B	617	BCR	C12-C13	-2.83	1.39	1.45
23	1C	512	CLA	C4B-NB	-2.83	1.34	1.37
23	1C	503	CLA	C4B-NB	-2.83	1.34	1.37
23	1B	613	CLA	CHD-C1D	2.83	1.43	1.38
23	1C	506	CLA	CHD-C1D	2.82	1.43	1.38
23	1B	605	CLA	C4B-NB	-2.82	1.34	1.37
23	1C	510	CLA	C3D-C2D	2.82	1.46	1.39
23	1C	513	CLA	C4B-NB	-2.82	1.34	1.37
23	1D	401	CLA	C3B-C4B	2.81	1.49	1.42
26	1D	406	BCR	C23-C22	-2.81	1.39	1.45
23	1D	401	CLA	C3D-C2D	2.81	1.46	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
23	1C	508	CLA	CHD-C1D	2.80	1.43	1.38
23	1A	405	CLA	C3D-C2D	2.80	1.46	1.39
23	1A	405	CLA	CHD-C4C	2.80	1.45	1.39
23	1B	602	CLA	C3D-C2D	2.80	1.46	1.39
26	1H	102	BCR	C23-C22	-2.80	1.39	1.45
23	1B	616	CLA	CHD-C4C	2.80	1.45	1.39
23	1C	512	CLA	C3D-C2D	2.79	1.46	1.39
23	1B	610	CLA	MG-NA	-2.78	1.99	2.06
23	1C	501	CLA	C1D-C2D	2.78	1.50	1.45
23	1D	402	CLA	MG-NA	-2.78	1.99	2.06
23	1B	609	CLA	C4B-NB	-2.77	1.34	1.37
23	1B	613	CLA	MG-NA	-2.77	1.99	2.06
23	1C	504	CLA	C1B-NB	-2.77	1.34	1.37
23	1B	613	CLA	C3D-C2D	2.76	1.46	1.39
23	1D	405	CLA	C1D-C2D	2.76	1.50	1.45
23	1C	508	CLA	CHC-C4B	2.75	1.45	1.39
23	1C	511	CLA	MG-NA	-2.75	1.99	2.06
26	1B	617	BCR	C21-C22	2.74	1.39	1.35
23	1C	508	CLA	CHD-C4C	2.74	1.45	1.39
23	1B	607	CLA	C1B-C2B	2.74	1.49	1.43
23	1B	605	CLA	CHC-C4B	2.73	1.45	1.39
23	1C	507	CLA	MG-NA	-2.73	1.99	2.06
23	1D	405	CLA	MG-NA	-2.73	1.99	2.06
23	1D	401	CLA	C1B-NB	-2.73	1.34	1.37
26	1I	102	BCR	C12-C13	-2.73	1.40	1.45
23	1B	610	CLA	CHD-C4C	2.73	1.45	1.39
23	1B	601	CLA	C4B-NB	-2.73	1.34	1.37
23	1C	513	CLA	CHD-C4C	2.73	1.45	1.39
23	1C	506	CLA	C3D-C2D	2.72	1.46	1.39
23	1C	512	CLA	MG-NA	-2.72	1.99	2.06
23	1A	402	CLA	C1B-NB	-2.72	1.34	1.37
23	1C	511	CLA	C1B-NB	-2.72	1.34	1.37
23	1D	405	CLA	C3B-C4B	2.71	1.49	1.42
23	1C	503	CLA	C3D-C2D	2.71	1.46	1.39
23	1C	504	CLA	CHD-C1D	2.71	1.43	1.38
23	1C	512	CLA	C1D-C2D	2.71	1.50	1.45
23	1B	602	CLA	CHC-C4B	2.71	1.45	1.39
23	1C	508	CLA	MG-NA	-2.71	1.99	2.06
23	1B	606	CLA	C3B-C4B	2.70	1.49	1.42
23	1C	502	CLA	CHD-C4C	2.70	1.45	1.39
23	1B	615	CLA	MG-NA	-2.70	1.99	2.06
23	1B	615	CLA	C1D-C2D	2.70	1.50	1.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
26	1A	407	BCR	C12-C13	-2.70	1.40	1.45
23	1B	604	CLA	C3B-C4B	2.70	1.49	1.42
23	1B	611	CLA	C3D-C2D	2.69	1.46	1.39
23	1C	505	CLA	C4B-NB	-2.68	1.34	1.37
23	1B	609	CLA	CHC-C4B	2.68	1.45	1.39
23	1A	405	CLA	CHD-C1D	2.68	1.43	1.38
23	1C	504	CLA	MG-NA	-2.68	1.99	2.06
26	1D	406	BCR	C8-C9	-2.68	1.40	1.45
23	1C	512	CLA	C3B-C4B	2.68	1.49	1.42
23	1C	501	CLA	C3B-C4B	2.67	1.49	1.42
23	1B	611	CLA	CHD-C4C	2.67	1.45	1.39
23	1C	504	CLA	C4B-NB	-2.67	1.34	1.37
23	1B	603	CLA	C1B-NB	-2.67	1.34	1.37
23	1D	404	CLA	CHD-C1D	2.67	1.43	1.38
23	1D	401	CLA	CHD-C1D	2.66	1.43	1.38
23	1B	615	CLA	C3B-C4B	2.66	1.49	1.42
23	1B	611	CLA	C1B-C2B	2.66	1.49	1.43
23	1C	501	CLA	MG-NA	-2.66	2.00	2.06
23	1B	605	CLA	C1D-C2D	2.66	1.50	1.45
23	1A	402	CLA	CHD-C4C	2.66	1.45	1.39
23	1C	511	CLA	C4B-NB	-2.66	1.34	1.37
23	1A	405	CLA	C3B-C4B	2.65	1.49	1.42
23	1B	605	CLA	MG-NA	-2.65	2.00	2.06
23	1D	402	CLA	C1D-C2D	2.65	1.50	1.45
23	1C	513	CLA	C1B-C2B	2.65	1.49	1.43
23	1B	603	CLA	C1D-C2D	2.65	1.50	1.45
23	1C	507	CLA	CHC-C4B	2.65	1.45	1.39
23	1C	508	CLA	C3D-C2D	2.65	1.46	1.39
26	1Z	101	BCR	C19-C18	-2.64	1.40	1.45
23	1C	510	CLA	C1B-NB	-2.64	1.34	1.37
23	1A	402	CLA	CHD-C1D	2.64	1.43	1.38
26	1B	618	BCR	C12-C13	-2.64	1.40	1.45
23	1B	604	CLA	C1D-C2D	2.64	1.50	1.45
23	1B	610	CLA	CHD-C1D	2.63	1.43	1.38
23	1D	401	CLA	C1D-C2D	2.63	1.50	1.45
23	1B	603	CLA	C3D-C2D	2.63	1.46	1.39
23	1D	405	CLA	C4B-NB	-2.62	1.34	1.37
26	1Z	102	BCR	C19-C18	-2.62	1.40	1.45
23	1D	402	CLA	C1B-NB	-2.62	1.34	1.37
23	1A	405	CLA	MG-NA	-2.62	2.00	2.06
26	1B	618	BCR	C19-C18	-2.61	1.40	1.45
23	1B	604	CLA	C4B-NB	-2.61	1.34	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
23	1C	503	CLA	C3B-C4B	2.61	1.48	1.42
23	1C	510	CLA	C1B-C2B	2.61	1.49	1.43
26	1A	407	BCR	C19-C18	-2.60	1.40	1.45
23	1B	607	CLA	C1D-C2D	2.59	1.50	1.45
23	1B	603	CLA	MG-NA	-2.59	2.00	2.06
23	1B	606	CLA	C4B-NB	-2.59	1.34	1.37
26	1I	102	BCR	C19-C18	-2.59	1.40	1.45
23	1C	502	CLA	C1B-NB	-2.58	1.34	1.37
23	1C	511	CLA	CHD-C4C	2.58	1.45	1.39
23	1C	509	CLA	C1B-C2B	2.58	1.49	1.43
23	1B	616	CLA	C4B-NB	-2.58	1.34	1.37
23	1C	510	CLA	C1D-C2D	2.57	1.50	1.45
23	1B	609	CLA	MG-NA	-2.57	2.00	2.06
26	1T	101	BCR	C19-C18	-2.57	1.40	1.45
23	1B	605	CLA	C1B-NB	-2.57	1.34	1.37
23	1C	508	CLA	C1D-C2D	2.57	1.50	1.45
34	1E	103	HEM	C3C-C4C	-2.57	1.41	1.46
23	1B	611	CLA	CHD-C1D	2.57	1.43	1.38
23	1C	502	CLA	C1B-C2B	2.57	1.49	1.43
27	1E	102	PL9	C6-C5	2.56	1.48	1.35
23	1C	509	CLA	C3D-C2D	2.56	1.46	1.39
23	1B	613	CLA	C1D-C2D	2.56	1.50	1.45
23	1C	511	CLA	CHD-C1D	2.55	1.43	1.38
23	1C	513	CLA	MG-NA	-2.55	2.00	2.06
23	1D	404	CLA	MG-NA	-2.55	2.00	2.06
23	1B	614	CLA	C1B-NB	-2.55	1.34	1.37
23	1C	508	CLA	C1B-C2B	2.55	1.49	1.43
23	1B	616	CLA	C3B-C4B	2.55	1.48	1.42
23	1A	405	CLA	C4B-NB	-2.55	1.34	1.37
23	1B	613	CLA	C1B-C2B	2.55	1.49	1.43
26	1Z	102	BCR	C12-C13	-2.54	1.40	1.45
23	1B	615	CLA	C1B-C2B	2.54	1.49	1.43
23	1C	506	CLA	MG-NA	-2.53	2.00	2.06
23	1C	513	CLA	CHD-C1D	2.53	1.43	1.38
23	1C	503	CLA	C1D-C2D	2.53	1.50	1.45
23	1B	611	CLA	C1B-NB	-2.53	1.34	1.37
23	1B	601	CLA	C1D-C2D	2.53	1.50	1.45
23	1B	607	CLA	CHC-C4B	2.52	1.45	1.39
23	1C	502	CLA	CHC-C4B	2.52	1.45	1.39
23	1B	616	CLA	C3D-C2D	2.52	1.46	1.39
23	1A	402	CLA	C3D-C2D	2.52	1.46	1.39
23	1B	602	CLA	C4B-NB	-2.51	1.34	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
23	1C	505	CLA	C3D-C2D	2.51	1.46	1.39
23	1B	612	CLA	MG-NA	-2.51	2.00	2.06
23	1B	613	CLA	C1B-NB	-2.50	1.34	1.37
23	1B	603	CLA	C3B-C4B	2.50	1.48	1.42
23	1C	506	CLA	C3B-C4B	2.49	1.48	1.42
26	1Z	101	BCR	C12-C13	-2.49	1.40	1.45
23	1B	610	CLA	C3D-C2D	2.49	1.45	1.39
23	1B	602	CLA	MG-NA	-2.48	2.00	2.06
26	1B	619	BCR	C19-C18	-2.48	1.40	1.45
23	1B	612	CLA	C1D-C2D	2.48	1.50	1.45
34	1E	103	HEM	FE-ND	-2.48	1.87	1.94
26	1B	619	BCR	C12-C13	-2.48	1.40	1.45
23	1B	612	CLA	C3B-C4B	2.48	1.48	1.42
23	1B	616	CLA	C1B-NB	-2.47	1.34	1.37
23	1A	405	CLA	C1B-NB	-2.47	1.34	1.37
23	1C	504	CLA	C1D-C2D	2.47	1.50	1.45
23	1B	604	CLA	C1B-C2B	2.47	1.49	1.43
23	1C	510	CLA	MG-NA	-2.47	2.00	2.06
23	1B	609	CLA	C1D-C2D	2.46	1.50	1.45
23	1C	508	CLA	C1B-NB	-2.46	1.34	1.37
23	1D	405	CLA	C1B-NB	-2.46	1.34	1.37
24	1A	403	PHO	C3A-C2A	-2.46	1.52	1.54
23	1B	603	CLA	C1B-C2B	2.46	1.49	1.43
23	1C	509	CLA	C1D-C2D	2.45	1.50	1.45
23	1C	505	CLA	MG-NA	-2.45	2.00	2.06
23	1C	513	CLA	C1C-C2C	2.45	1.49	1.44
23	1C	506	CLA	C1D-C2D	2.44	1.50	1.45
26	1H	102	BCR	C12-C13	-2.44	1.40	1.45
23	1B	606	CLA	MG-NA	-2.43	2.00	2.06
23	1C	503	CLA	MG-NA	-2.43	2.00	2.06
23	1B	610	CLA	C3B-C4B	2.43	1.48	1.42
23	1B	616	CLA	MG-NA	-2.43	2.00	2.06
23	1B	611	CLA	C3B-C4B	2.43	1.48	1.42
23	1C	505	CLA	C1D-C2D	2.43	1.50	1.45
23	1B	607	CLA	C1B-NB	-2.42	1.34	1.37
23	1B	607	CLA	MG-NA	-2.42	2.00	2.06
26	1J	101	BCR	C12-C13	-2.41	1.40	1.45
23	1D	402	CLA	C1B-C2B	2.41	1.48	1.43
23	1C	508	CLA	C3B-C4B	2.41	1.48	1.42
23	1B	611	CLA	C1D-C2D	2.41	1.50	1.45
23	1B	616	CLA	C1B-C2B	2.40	1.48	1.43
23	1B	614	CLA	C3B-C4B	2.40	1.48	1.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
23	1C	512	CLA	C1B-C2B	2.39	1.48	1.43
23	1B	607	CLA	C4C-C3C	2.39	1.49	1.45
23	1B	615	CLA	C1B-NB	-2.39	1.34	1.37
23	1C	507	CLA	C3B-C4B	2.39	1.48	1.42
23	1C	505	CLA	C4C-C3C	2.38	1.49	1.45
23	1D	404	CLA	C3D-C2D	2.38	1.45	1.39
23	1B	609	CLA	C3B-C4B	2.38	1.48	1.42
23	1B	601	CLA	C1B-NB	-2.37	1.34	1.37
23	1C	507	CLA	C1D-C2D	2.36	1.50	1.45
26	1T	101	BCR	C12-C13	-2.35	1.40	1.45
23	1C	506	CLA	C1B-NB	-2.35	1.34	1.37
23	1D	404	CLA	C1B-C2B	2.35	1.48	1.43
23	1C	503	CLA	C1B-C2B	2.35	1.48	1.43
23	1B	601	CLA	C3B-C4B	2.34	1.48	1.42
23	1B	612	CLA	C1C-C2C	2.34	1.49	1.44
23	1B	604	CLA	C1B-NB	-2.34	1.34	1.37
23	1B	613	CLA	C3B-C4B	2.33	1.48	1.42
23	1A	405	CLA	C1B-C2B	2.33	1.48	1.43
23	1D	402	CLA	C3B-C4B	2.32	1.48	1.42
23	1D	401	CLA	C1B-C2B	2.32	1.48	1.43
23	1B	614	CLA	CHD-C4C	2.31	1.44	1.39
23	1C	505	CLA	C1B-C2B	2.31	1.48	1.43
23	1C	506	CLA	C1C-C2C	2.31	1.49	1.44
26	1D	406	BCR	C12-C13	-2.31	1.41	1.45
23	1C	510	CLA	C3B-C4B	2.30	1.48	1.42
23	1C	512	CLA	C1B-NB	-2.30	1.35	1.37
23	1A	405	CLA	C1C-C2C	2.29	1.49	1.44
23	1B	605	CLA	C3B-C4B	2.29	1.48	1.42
23	1C	511	CLA	C1B-C2B	2.29	1.48	1.43
23	1C	508	CLA	C4C-C3C	2.28	1.49	1.45
23	1B	608	CLA	C1D-C2D	2.28	1.49	1.45
23	1C	503	CLA	C1B-NB	-2.28	1.35	1.37
23	1C	511	CLA	C1C-C2C	2.27	1.49	1.44
23	1B	602	CLA	C1D-C2D	2.27	1.49	1.45
26	1J	101	BCR	C19-C18	-2.27	1.41	1.45
23	1C	513	CLA	C1D-C2D	2.27	1.49	1.45
23	1A	402	CLA	CBD-CGD	-2.27	1.45	1.52
23	1B	614	CLA	C4D-ND	2.25	1.40	1.37
23	1B	602	CLA	C3B-C4B	2.24	1.48	1.42
23	1D	405	CLA	C1B-C2B	2.24	1.48	1.43
23	1A	402	CLA	C1D-C2D	2.24	1.49	1.45
26	1D	406	BCR	C19-C18	-2.24	1.41	1.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
23	1B	607	CLA	C3B-C4B	2.23	1.48	1.42
23	1B	610	CLA	C1C-C2C	2.22	1.48	1.44
23	1A	405	CLA	C1D-C2D	2.22	1.49	1.45
26	1T	101	BCR	C29-C28	-2.22	1.47	1.52
26	1B	617	BCR	C2-C3	-2.22	1.47	1.52
23	1C	503	CLA	C1C-C2C	2.22	1.48	1.44
26	1H	102	BCR	C19-C18	-2.22	1.41	1.45
23	1C	509	CLA	C3B-C4B	2.22	1.48	1.42
23	1B	616	CLA	C4C-C3C	2.21	1.48	1.45
23	1C	507	CLA	C4C-C3C	2.20	1.48	1.45
23	1C	506	CLA	C1B-C2B	2.19	1.48	1.43
23	1C	501	CLA	C4C-C3C	2.18	1.48	1.45
23	1B	604	CLA	MG-NA	-2.17	2.01	2.06
28	1C	523	SQD	O8-S	2.16	1.55	1.47
23	1B	601	CLA	MG-NA	-2.15	2.01	2.06
28	1B	620	SQD	O8-S	2.15	1.55	1.47
23	1C	513	CLA	C1B-NB	-2.15	1.35	1.37
23	1D	404	CLA	C3B-C4B	2.15	1.47	1.42
23	1B	616	CLA	C1D-C2D	2.15	1.49	1.45
23	1C	504	CLA	C1C-C2C	2.15	1.48	1.44
23	1C	511	CLA	C1D-C2D	2.15	1.49	1.45
23	1B	605	CLA	C1B-C2B	2.14	1.48	1.43
23	1B	612	CLA	C1B-C2B	2.14	1.48	1.43
28	1C	522	SQD	O8-S	2.14	1.55	1.47
23	1B	602	CLA	C4C-C3C	2.14	1.48	1.45
23	1C	509	CLA	C3B-C2B	2.14	1.48	1.41
23	1C	502	CLA	C3B-C4B	2.14	1.47	1.42
23	1C	504	CLA	C1B-C2B	2.13	1.48	1.43
23	1B	614	CLA	MG-NB	-2.13	2.01	2.05
23	1B	606	CLA	CHB-C4A	-2.13	1.32	1.37
28	1A	410	SQD	O8-S	2.12	1.55	1.47
23	1B	608	CLA	C4C-C3C	2.11	1.48	1.45
28	1M	101	SQD	O8-S	2.11	1.55	1.47
24	1A	403	PHO	CBD-CGD	-2.11	1.49	1.52
28	1A	411	SQD	O8-S	2.10	1.55	1.47
28	1D	412	SQD	O8-S	2.10	1.55	1.47
23	1B	609	CLA	C4C-C3C	2.10	1.48	1.45
23	1D	404	CLA	C4C-C3C	2.09	1.48	1.45
23	1C	501	CLA	C1B-C2B	2.09	1.48	1.43
23	1B	614	CLA	CHD-C1D	2.09	1.42	1.38
34	1E	103	HEM	C4B-NB	-2.09	1.34	1.38
23	1B	605	CLA	C4C-C3C	2.08	1.48	1.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	1E	103	HEM	C1A-C2A	-2.08	1.40	1.44
23	1C	503	CLA	C4C-C3C	2.08	1.48	1.45
23	1B	601	CLA	CHB-C4A	-2.08	1.32	1.37
23	1B	609	CLA	CHB-C4A	-2.07	1.32	1.37
23	1C	507	CLA	CHB-C4A	-2.07	1.32	1.37
23	1D	405	CLA	C4C-C3C	2.06	1.48	1.45
23	1C	510	CLA	C1C-C2C	2.06	1.48	1.44
23	1A	402	CLA	C1B-C2B	2.06	1.48	1.43
28	1A	409	SQD	O8-S	2.05	1.54	1.47
23	1C	501	CLA	CHB-C4A	-2.05	1.32	1.37
23	1C	510	CLA	C4C-C3C	2.05	1.48	1.45
23	1B	602	CLA	CHB-C4A	-2.05	1.32	1.37
23	1C	502	CLA	C1D-C2D	2.04	1.49	1.45
23	1D	405	CLA	C1C-C2C	2.04	1.48	1.44
23	1B	615	CLA	C1C-C2C	2.04	1.48	1.44
23	1B	601	CLA	C1B-C2B	2.04	1.48	1.43
26	1J	101	BCR	C29-C28	-2.02	1.47	1.52
23	1B	606	CLA	C1C-C2C	2.02	1.48	1.44
26	1B	619	BCR	C2-C3	-2.01	1.47	1.52
23	1D	404	CLA	C1D-C2D	2.01	1.49	1.45
28	1B	622	SQD	O8-S	2.01	1.54	1.47

All (1271) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	1B	613	CLA	C1D-ND-C4D	-11.20	98.38	106.33
23	1B	614	CLA	C1D-ND-C4D	-10.35	98.99	106.33
23	1C	513	CLA	C1D-ND-C4D	-10.26	99.05	106.33
23	1C	508	CLA	C2C-C1C-NC	10.21	119.54	109.97
23	1D	401	CLA	C1D-ND-C4D	-10.08	99.18	106.33
23	1C	511	CLA	C1D-ND-C4D	-9.94	99.27	106.33
23	1C	504	CLA	C1D-ND-C4D	-9.84	99.35	106.33
23	1C	512	CLA	C1D-ND-C4D	-9.78	99.39	106.33
23	1B	607	CLA	C2C-C1C-NC	9.76	119.11	109.97
23	1C	501	CLA	C2B-C1B-NB	9.61	116.67	110.23
23	1A	405	CLA	C1D-ND-C4D	-9.59	99.52	106.33
23	1B	615	CLA	C1D-ND-C4D	-9.51	99.58	106.33
23	1B	611	CLA	C1D-ND-C4D	-9.51	99.58	106.33
23	1C	507	CLA	C2B-C1B-NB	9.39	116.53	110.23
23	1B	608	CLA	C2B-C1B-NB	9.27	116.45	110.23
23	1A	402	CLA	C1D-ND-C4D	-9.22	99.79	106.33
23	1B	603	CLA	C1D-ND-C4D	-9.19	99.81	106.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	1C	503	CLA	C2B-C1B-NB	9.19	116.39	110.23
23	1C	508	CLA	C1D-ND-C4D	-9.19	99.81	106.33
23	1D	405	CLA	C2B-C1B-NB	9.15	116.36	110.23
23	1B	604	CLA	C1D-ND-C4D	-9.13	99.85	106.33
23	1C	506	CLA	C1D-ND-C4D	-9.13	99.85	106.33
23	1C	506	CLA	C2B-C1B-NB	9.11	116.34	110.23
23	1D	402	CLA	C1D-ND-C4D	-9.07	99.89	106.33
23	1B	601	CLA	C1D-ND-C4D	-9.02	99.93	106.33
23	1D	405	CLA	C1D-ND-C4D	-8.99	99.95	106.33
23	1C	502	CLA	C2C-C1C-NC	8.95	118.36	109.97
23	1B	608	CLA	C2C-C1C-NC	8.94	118.34	109.97
23	1B	612	CLA	C2B-C1B-NB	8.94	116.22	110.23
23	1A	402	CLA	C2B-C1B-NB	8.93	116.22	110.23
23	1C	509	CLA	C2C-C1C-NC	8.88	118.30	109.97
23	1B	611	CLA	C2C-C1C-NC	8.88	118.29	109.97
23	1C	509	CLA	C1D-ND-C4D	-8.88	100.03	106.33
23	1B	616	CLA	C1D-ND-C4D	-8.87	100.03	106.33
23	1C	505	CLA	C2C-C1C-NC	8.85	118.26	109.97
23	1B	613	CLA	C2C-C1C-NC	8.80	118.22	109.97
23	1C	510	CLA	C1D-ND-C4D	-8.80	100.08	106.33
23	1B	603	CLA	CMD-C2D-C1D	8.79	140.21	124.71
23	1C	505	CLA	CMD-C2D-C1D	8.78	140.18	124.71
23	1C	503	CLA	C1D-ND-C4D	-8.77	100.11	106.33
23	1D	404	CLA	C1D-ND-C4D	-8.74	100.13	106.33
23	1B	601	CLA	C2B-C1B-NB	8.72	116.08	110.23
23	1B	616	CLA	C2C-C1C-NC	8.72	118.14	109.97
23	1B	607	CLA	C1D-ND-C4D	-8.72	100.14	106.33
23	1C	501	CLA	C1D-ND-C4D	-8.72	100.14	106.33
23	1D	402	CLA	C2C-C1C-NC	8.66	118.08	109.97
23	1C	510	CLA	C2C-C1C-NC	8.64	118.06	109.97
23	1A	402	CLA	CMD-C2D-C1D	8.61	139.88	124.71
23	1B	605	CLA	C2C-C1C-NC	8.60	118.03	109.97
23	1C	504	CLA	C2B-C1B-NB	8.56	115.97	110.23
23	1B	603	CLA	C2B-C1B-NB	8.55	115.97	110.23
23	1B	608	CLA	C1D-ND-C4D	-8.55	100.26	106.33
23	1A	405	CLA	C2B-C1B-NB	8.49	115.92	110.23
23	1C	508	CLA	CMD-C2D-C1D	8.47	139.64	124.71
23	1B	616	CLA	CMD-C2D-C1D	8.47	139.64	124.71
23	1C	507	CLA	C2C-C1C-NC	8.39	117.84	109.97
23	1C	502	CLA	C1D-ND-C4D	-8.39	100.38	106.33
23	1B	604	CLA	C2B-C1B-NB	8.35	115.83	110.23
23	1D	401	CLA	C2C-C1C-NC	8.35	117.80	109.97

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	1B	602	CLA	C2C-C1C-NC	8.33	117.78	109.97
23	1B	615	CLA	C2B-C1B-NB	8.29	115.79	110.23
23	1C	503	CLA	CMD-C2D-C1D	8.29	139.31	124.71
23	1C	510	CLA	CMD-C2D-C1D	8.28	139.31	124.71
23	1D	405	CLA	CMD-C2D-C1D	8.28	139.31	124.71
23	1B	612	CLA	C1D-ND-C4D	-8.26	100.47	106.33
23	1C	512	CLA	C2B-C1B-NB	8.25	115.76	110.23
23	1D	404	CLA	C2C-C1C-NC	8.24	117.69	109.97
23	1B	614	CLA	C2C-C1C-NC	8.24	117.69	109.97
23	1C	510	CLA	C2B-C1B-NB	8.22	115.74	110.23
23	1C	513	CLA	C2B-C1B-NB	8.21	115.73	110.23
23	1B	610	CLA	C2C-C1C-NC	8.20	117.66	109.97
23	1B	614	CLA	C4A-NA-C1A	8.20	110.39	106.71
23	1B	609	CLA	C1D-ND-C4D	-8.20	100.51	106.33
23	1B	606	CLA	C2C-C1C-NC	8.20	117.65	109.97
23	1C	505	CLA	C2B-C1B-NB	8.18	115.71	110.23
23	1B	609	CLA	C2B-C1B-NB	8.15	115.70	110.23
23	1D	404	CLA	CMD-C2D-C1D	8.15	139.09	124.71
23	1B	605	CLA	C1D-ND-C4D	-8.15	100.55	106.33
23	1C	501	CLA	C2C-C1C-NC	8.15	117.60	109.97
23	1C	509	CLA	CMD-C2D-C1D	8.14	139.07	124.71
23	1D	405	CLA	C2C-C1C-NC	8.13	117.59	109.97
23	1C	505	CLA	C1D-ND-C4D	-8.12	100.56	106.33
23	1B	604	CLA	CMD-C2D-C1D	8.10	139.00	124.71
23	1B	613	CLA	CMD-C2D-C1D	8.09	138.97	124.71
23	1B	609	CLA	C2C-C1C-NC	8.08	117.54	109.97
23	1D	401	CLA	CMD-C2D-C1D	8.07	138.94	124.71
23	1C	506	CLA	CMD-C2D-C1D	8.06	138.92	124.71
23	1B	601	CLA	CMD-C2D-C1D	8.05	138.89	124.71
23	1C	503	CLA	C2C-C1C-NC	8.02	117.48	109.97
23	1D	402	CLA	CMD-C2D-C1D	7.99	138.79	124.71
23	1C	507	CLA	C1D-ND-C4D	-7.99	100.66	106.33
23	1B	615	CLA	CMD-C2D-C1D	7.97	138.75	124.71
23	1B	603	CLA	C2C-C1C-NC	7.97	117.43	109.97
23	1C	511	CLA	C2B-C1B-NB	7.96	115.57	110.23
23	1B	611	CLA	CMD-C2D-C1D	7.96	138.75	124.71
23	1B	606	CLA	C1D-ND-C4D	-7.94	100.69	106.33
23	1C	512	CLA	CMD-C2D-C1D	7.94	138.70	124.71
23	1B	612	CLA	C2C-C1C-NC	7.91	117.38	109.97
23	1B	605	CLA	C2B-C1B-NB	7.90	115.53	110.23
23	1B	615	CLA	C2C-C1C-NC	7.89	117.36	109.97
23	1B	606	CLA	C2B-C1B-NB	7.88	115.52	110.23

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	1B	602	CLA	CMD-C2D-C1D	7.88	138.59	124.71
23	1B	610	CLA	C1D-ND-C4D	-7.87	100.75	106.33
23	1B	612	CLA	CMD-C2D-C1D	7.84	138.52	124.71
23	1B	601	CLA	C2C-C1C-NC	7.82	117.30	109.97
23	1B	605	CLA	CMD-C2D-C1D	7.81	138.48	124.71
23	1B	604	CLA	C2C-C1C-NC	7.80	117.28	109.97
23	1C	504	CLA	CMD-C2D-C1D	7.77	138.41	124.71
23	1D	402	CLA	C2B-C1B-NB	7.77	115.44	110.23
23	1C	513	CLA	C2C-C1C-NC	7.74	117.22	109.97
23	1C	501	CLA	CMD-C2D-C1D	7.73	138.34	124.71
23	1C	511	CLA	C2C-C1C-NC	7.66	117.14	109.97
23	1B	610	CLA	C2B-C1B-NB	7.65	115.36	110.23
23	1C	506	CLA	C2C-C1C-NC	7.59	117.08	109.97
23	1B	608	CLA	CMD-C2D-C1D	7.51	137.95	124.71
23	1B	613	CLA	C2B-C1B-NB	7.51	115.27	110.23
23	1C	504	CLA	C2C-C1C-NC	7.50	117.00	109.97
23	1D	401	CLA	C2B-C1B-NB	7.50	115.26	110.23
23	1A	405	CLA	C2C-C1C-NC	7.47	116.97	109.97
23	1C	512	CLA	C2C-C1C-NC	7.46	116.96	109.97
23	1B	610	CLA	CMD-C2D-C1D	7.44	137.83	124.71
23	1A	405	CLA	CMD-C2D-C1D	7.43	137.81	124.71
23	1B	602	CLA	C1D-ND-C4D	-7.41	101.07	106.33
23	1B	614	CLA	C3C-C4C-NC	7.39	118.85	110.57
23	1B	609	CLA	CMD-C2D-C1D	7.26	137.51	124.71
23	1B	607	CLA	C2B-C1B-NB	7.14	115.02	110.23
23	1B	602	CLA	C2B-C1B-NB	7.13	115.01	110.23
23	1C	509	CLA	C2B-C1B-NB	7.09	114.98	110.23
23	1B	611	CLA	C2B-C1B-NB	7.02	114.94	110.23
23	1B	607	CLA	CMD-C2D-C1D	7.01	137.07	124.71
23	1C	502	CLA	CMD-C2D-C1D	7.01	137.06	124.71
23	1C	513	CLA	CMD-C2D-C1D	6.96	136.98	124.71
23	1B	614	CLA	CHD-C4C-C3C	-6.96	114.61	124.84
23	1B	610	CLA	C3C-C4C-NC	6.93	118.34	110.57
23	1D	404	CLA	C2B-C1B-NB	6.92	114.87	110.23
26	1T	101	BCR	C15-C16-C17	6.91	137.62	123.47
23	1C	513	CLA	CHD-C4C-C3C	-6.90	114.69	124.84
23	1C	502	CLA	C2B-C1B-NB	6.88	114.84	110.23
23	1B	616	CLA	C2B-C1B-NB	6.86	114.83	110.23
23	1C	513	CLA	C3C-C4C-NC	6.84	118.24	110.57
23	1A	402	CLA	C2C-C1C-NC	6.83	116.37	109.97
23	1C	511	CLA	CHD-C4C-C3C	-6.83	114.81	124.84
23	1C	511	CLA	C3C-C4C-NC	6.82	118.22	110.57

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	1B	608	CLA	C3C-C4C-NC	6.79	118.19	110.57
23	1C	511	CLA	CMD-C2D-C1D	6.73	136.58	124.71
23	1A	402	CLA	CHD-C4C-C3C	-6.73	114.95	124.84
23	1B	611	CLA	CHD-C4C-C3C	-6.69	115.01	124.84
23	1A	402	CLA	C3C-C4C-NC	6.68	118.06	110.57
23	1B	606	CLA	CMD-C2D-C1D	6.67	136.46	124.71
23	1C	506	CLA	C3C-C4C-NC	6.61	117.99	110.57
23	1C	508	CLA	C3C-C4C-NC	6.60	117.97	110.57
23	1C	506	CLA	CHD-C4C-C3C	-6.55	115.21	124.84
23	1B	616	CLA	C3C-C4C-NC	6.54	117.90	110.57
23	1B	611	CLA	C3C-C4C-NC	6.54	117.90	110.57
23	1C	507	CLA	CMD-C2D-C1D	6.48	136.14	124.71
23	1B	614	CLA	CMD-C2D-C1D	6.43	136.05	124.71
23	1A	405	CLA	C3C-C4C-NC	6.43	117.79	110.57
23	1C	502	CLA	C3C-C4C-NC	6.43	117.79	110.57
23	1D	401	CLA	CHD-C4C-C3C	-6.39	115.45	124.84
23	1B	610	CLA	CHD-C4C-C3C	-6.37	115.48	124.84
23	1B	616	CLA	O2D-CGD-CBD	6.33	122.53	111.27
23	1C	509	CLA	C3C-C4C-NC	6.30	117.64	110.57
23	1C	503	CLA	C3C-C4C-NC	6.27	117.60	110.57
23	1B	613	CLA	CHD-C4C-C3C	-6.22	115.70	124.84
23	1C	511	CLA	O2D-CGD-CBD	6.21	122.31	111.27
23	1C	510	CLA	C3C-C4C-NC	6.21	117.54	110.57
23	1A	405	CLA	CHD-C4C-C3C	-6.16	115.78	124.84
23	1C	503	CLA	CHD-C4C-C3C	-6.09	115.89	124.84
23	1B	606	CLA	C3C-C4C-NC	6.09	117.40	110.57
23	1B	607	CLA	O2D-CGD-CBD	6.09	122.08	111.27
23	1B	607	CLA	C3C-C4C-NC	6.07	117.38	110.57
23	1C	505	CLA	C3C-C4C-NC	6.06	117.37	110.57
23	1C	509	CLA	CHD-C4C-C3C	-6.04	115.97	124.84
23	1C	506	CLA	C3B-C2B-C1B	-6.03	99.89	107.16
23	1B	615	CLA	C3C-C4C-NC	6.02	117.32	110.57
23	1D	404	CLA	C3C-C4C-NC	6.01	117.31	110.57
23	1B	602	CLA	C3C-C4C-NC	6.01	117.31	110.57
23	1B	612	CLA	C3C-C4C-NC	5.99	117.29	110.57
23	1B	608	CLA	CHD-C4C-C3C	-5.98	116.05	124.84
23	1C	508	CLA	C4A-NA-C1A	5.97	109.39	106.71
23	1B	603	CLA	C3C-C4C-NC	5.97	117.26	110.57
23	1C	505	CLA	O2D-CGD-CBD	5.92	121.79	111.27
23	1C	502	CLA	CHD-C4C-C3C	-5.91	116.15	124.84
23	1C	507	CLA	C3C-C4C-NC	5.91	117.20	110.57
23	1D	402	CLA	CHD-C4C-C3C	-5.89	116.18	124.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	1D	405	CLA	C3C-C4C-NC	5.88	117.16	110.57
23	1B	616	CLA	CHD-C4C-C3C	-5.88	116.20	124.84
23	1B	613	CLA	C3C-C4C-NC	5.87	117.16	110.57
23	1B	615	CLA	CHD-C4C-C3C	-5.87	116.22	124.84
23	1C	510	CLA	CHD-C4C-C3C	-5.87	116.22	124.84
23	1B	614	CLA	C2B-C1B-NB	5.85	114.15	110.23
23	1D	401	CLA	C3C-C4C-NC	5.83	117.11	110.57
23	1C	508	CLA	CHD-C4C-C3C	-5.81	116.30	124.84
23	1B	606	CLA	CHD-C4C-C3C	-5.78	116.35	124.84
23	1B	612	CLA	CHD-C4C-C3C	-5.77	116.35	124.84
23	1B	601	CLA	CHD-C4C-C3C	-5.74	116.41	124.84
23	1B	605	CLA	C3C-C4C-NC	5.70	116.97	110.57
23	1B	603	CLA	CHD-C4C-C3C	-5.70	116.47	124.84
23	1C	504	CLA	C3C-C4C-NC	5.66	116.92	110.57
23	1B	612	CLA	O2D-CGD-CBD	5.66	121.33	111.27
23	1D	402	CLA	C3C-C4C-NC	5.61	116.87	110.57
23	1D	405	CLA	CHD-C4C-C3C	-5.61	116.60	124.84
23	1C	512	CLA	C3C-C4C-NC	5.58	116.83	110.57
23	1C	501	CLA	C3B-C2B-C1B	-5.57	100.44	107.16
23	1B	604	CLA	C3C-C4C-NC	5.57	116.81	110.57
23	1B	601	CLA	O2D-CGD-CBD	5.56	121.15	111.27
23	1B	605	CLA	CHD-C4C-C3C	-5.55	116.69	124.84
23	1C	501	CLA	C3C-C4C-NC	5.53	116.78	110.57
23	1B	609	CLA	C3C-C4C-NC	5.51	116.75	110.57
23	1B	609	CLA	CHD-C4C-C3C	-5.48	116.78	124.84
23	1C	513	CLA	C3B-C2B-C1B	-5.47	100.56	107.16
23	1C	503	CLA	C3B-C2B-C1B	-5.46	100.57	107.16
23	1B	601	CLA	C3C-C4C-NC	5.45	116.68	110.57
28	1A	411	SQD	O47-C7-C8	5.45	123.24	111.50
23	1C	504	CLA	CHD-C4C-C3C	-5.44	116.84	124.84
26	1J	101	BCR	C16-C15-C14	5.44	134.62	123.47
23	1B	601	CLA	C3B-C2B-C1B	-5.42	100.62	107.16
23	1C	507	CLA	O2D-CGD-CBD	5.41	120.88	111.27
23	1B	607	CLA	CHD-C4C-C3C	-5.40	116.91	124.84
24	1A	404	PHO	C4D-CHA-CBD	-5.39	106.08	108.52
23	1C	512	CLA	CHD-C4C-C3C	-5.39	116.92	124.84
23	1B	612	CLA	C3B-C2B-C1B	-5.39	100.66	107.16
23	1B	602	CLA	CHD-C4C-C3C	-5.34	116.98	124.84
23	1A	402	CLA	O2D-CGD-CBD	5.34	120.75	111.27
23	1B	615	CLA	C3B-C2B-C1B	-5.34	100.72	107.16
23	1B	604	CLA	CHD-C4C-C3C	-5.32	117.01	124.84
23	1C	507	CLA	CHD-C4C-C3C	-5.30	117.05	124.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	1C	502	CLA	O2D-CGD-CBD	5.29	120.66	111.27
23	1D	405	CLA	C3B-C2B-C1B	-5.27	100.80	107.16
23	1B	614	CLA	C1D-CHD-C4C	-5.23	114.77	126.06
23	1A	405	CLA	C3B-C2B-C1B	-5.23	100.84	107.16
23	1B	611	CLA	C1C-C2C-C3C	-5.23	101.46	106.96
23	1D	402	CLA	C1C-C2C-C3C	-5.22	101.47	106.96
23	1B	611	CLA	C4A-NA-C1A	5.21	109.05	106.71
23	1C	510	CLA	C3B-C2B-C1B	-5.20	100.89	107.16
23	1C	512	CLA	C3B-C2B-C1B	-5.20	100.89	107.16
23	1B	603	CLA	C3B-C2B-C1B	-5.19	100.89	107.16
23	1A	402	CLA	C3B-C2B-C1B	-5.18	100.91	107.16
23	1A	405	CLA	O2D-CGD-CBD	5.18	120.47	111.27
23	1D	401	CLA	C1C-C2C-C3C	-5.17	101.52	106.96
23	1C	508	CLA	C2B-C1B-NB	5.13	113.67	110.23
23	1C	509	CLA	C1C-C2C-C3C	-5.11	101.58	106.96
23	1B	614	CLA	O2D-CGD-CBD	5.11	120.35	111.27
23	1B	603	CLA	CHD-C1D-ND	-5.11	119.76	124.45
23	1C	501	CLA	O2D-CGD-CBD	5.10	120.33	111.27
23	1A	402	CLA	O1D-CGD-CBD	-5.09	114.06	124.48
23	1B	608	CLA	C3B-C2B-C1B	-5.09	101.02	107.16
23	1D	401	CLA	O2D-CGD-CBD	5.07	120.28	111.27
23	1C	512	CLA	O2D-CGD-CBD	5.07	120.28	111.27
23	1B	614	CLA	C3B-C2B-C1B	-5.07	101.04	107.16
23	1D	404	CLA	CHD-C4C-C3C	-5.07	117.39	124.84
23	1B	608	CLA	CHC-C4B-NB	-5.06	118.90	124.26
23	1B	613	CLA	CHD-C1D-ND	-5.06	119.81	124.45
23	1B	613	CLA	C3B-C2B-C1B	-5.06	101.06	107.16
23	1C	508	CLA	C1C-C2C-C3C	-5.05	101.65	106.96
23	1B	604	CLA	C3B-C2B-C1B	-5.04	101.08	107.16
23	1B	611	CLA	C3B-C2B-C1B	-5.02	101.10	107.16
23	1C	501	CLA	CHD-C4C-C3C	-4.98	117.52	124.84
23	1B	606	CLA	O2D-CGD-CBD	4.91	120.00	111.27
23	1C	504	CLA	C3B-C2B-C1B	-4.91	101.24	107.16
23	1C	503	CLA	O2D-CGD-CBD	4.90	119.97	111.27
23	1B	609	CLA	O2D-CGD-CBD	4.90	119.97	111.27
23	1C	509	CLA	O2D-CGD-CBD	4.88	119.94	111.27
23	1C	505	CLA	CHD-C4C-C3C	-4.88	117.67	124.84
23	1B	610	CLA	C3B-C2B-C1B	-4.88	101.27	107.16
34	1E	103	HEM	CHD-C1D-ND	4.87	129.71	124.42
23	1C	511	CLA	C3B-C2B-C1B	-4.86	101.30	107.16
26	1T	101	BCR	C20-C21-C22	4.86	134.24	127.31
23	1B	616	CLA	C4D-CHA-C1A	-4.85	115.35	121.25

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	1B	601	CLA	C1C-C2C-C3C	-4.85	101.86	106.96
23	1D	402	CLA	C3B-C2B-C1B	-4.84	101.31	107.16
23	1B	613	CLA	C1C-C2C-C3C	-4.84	101.87	106.96
23	1B	602	CLA	O2D-CGD-CBD	4.83	119.86	111.27
23	1C	507	CLA	C3B-C4B-NB	4.82	114.99	110.52
23	1C	512	CLA	C3D-C4D-ND	4.81	118.03	110.24
23	1B	607	CLA	C1C-C2C-C3C	-4.81	101.90	106.96
23	1C	509	CLA	C3B-C2B-C1B	-4.81	101.36	107.16
23	1D	404	CLA	C4D-CHA-C1A	-4.80	115.41	121.25
23	1B	613	CLA	O2D-CGD-CBD	4.79	119.77	111.27
26	1B	619	BCR	C34-C9-C10	-4.78	116.23	122.92
23	1C	504	CLA	O2D-CGD-CBD	4.76	119.72	111.27
23	1B	601	CLA	CHD-C1D-ND	-4.74	120.10	124.45
23	1C	507	CLA	C3B-C2B-C1B	-4.73	101.45	107.16
26	1J	101	BCR	C37-C22-C21	-4.71	116.33	122.92
23	1B	615	CLA	O2D-CGD-CBD	4.71	119.63	111.27
23	1B	614	CLA	CHC-C4B-NB	-4.70	119.28	124.26
23	1B	604	CLA	O2D-CGD-CBD	4.69	119.61	111.27
23	1D	404	CLA	C3B-C2B-C1B	-4.69	101.50	107.16
23	1C	512	CLA	C4D-CHA-C1A	-4.67	115.56	121.25
23	1B	614	CLA	CMB-C2B-C1B	4.67	132.49	125.37
23	1B	614	CLA	CHB-C1B-NB	-4.67	119.31	124.26
23	1C	505	CLA	C3B-C2B-C1B	-4.67	101.53	107.16
23	1B	606	CLA	C1C-C2C-C3C	-4.66	102.05	106.96
23	1D	401	CLA	CHC-C4B-NB	-4.66	119.32	124.26
23	1C	510	CLA	C1C-C2C-C3C	-4.65	102.07	106.96
23	1D	401	CLA	C3D-C4D-ND	4.64	117.74	110.24
23	1C	504	CLA	C3D-C4D-ND	4.64	117.74	110.24
26	1Z	102	BCR	C34-C9-C10	-4.60	116.48	122.92
23	1D	405	CLA	CHD-C1D-ND	-4.60	120.23	124.45
23	1B	612	CLA	C1C-C2C-C3C	-4.59	102.14	106.96
23	1B	607	CLA	C3B-C2B-C1B	-4.58	101.63	107.16
23	1C	513	CLA	C2D-C1D-ND	4.58	113.48	110.10
23	1B	610	CLA	O2D-CGD-CBD	4.58	119.41	111.27
23	1C	504	CLA	CHD-C1D-ND	-4.57	120.25	124.45
23	1B	614	CLA	CHC-C1C-C2C	-4.56	114.05	126.73
26	1B	617	BCR	C16-C15-C14	4.56	132.82	123.47
23	1B	614	CLA	C2D-C1D-ND	4.56	113.47	110.10
23	1D	404	CLA	O2D-CGD-CBD	4.56	119.37	111.27
23	1B	606	CLA	C3D-C4D-ND	4.56	117.61	110.24
23	1C	513	CLA	C3D-C4D-ND	4.55	117.60	110.24
34	1E	103	HEM	CHC-C4B-NB	4.54	129.35	124.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	1B	605	CLA	C3B-C2B-C1B	-4.53	101.69	107.16
24	1A	403	PHO	C4D-CHA-CBD	-4.51	106.48	108.52
23	1A	405	CLA	C3D-C4D-ND	4.51	117.53	110.24
23	1D	402	CLA	CHD-C1D-ND	-4.50	120.31	124.45
23	1B	615	CLA	C3D-C4D-ND	4.50	117.52	110.24
23	1C	513	CLA	C3D-C2D-C1D	-4.50	99.69	105.83
23	1C	501	CLA	C3D-C4D-ND	4.50	117.51	110.24
23	1C	502	CLA	C3B-C2B-C1B	-4.48	101.76	107.16
23	1D	402	CLA	C3D-C4D-ND	4.47	117.46	110.24
23	1C	506	CLA	O2D-CGD-CBD	4.46	119.20	111.27
23	1C	505	CLA	C1C-C2C-C3C	-4.46	102.27	106.96
23	1C	503	CLA	C3D-C2D-C1D	-4.46	99.74	105.83
23	1B	604	CLA	CHD-C1D-ND	-4.46	120.36	124.45
23	1B	603	CLA	C3D-C4D-ND	4.43	117.40	110.24
23	1C	510	CLA	O2D-CGD-CBD	4.42	119.13	111.27
23	1C	506	CLA	C3D-C2D-C1D	-4.41	99.81	105.83
23	1C	508	CLA	CHC-C1C-C2C	-4.40	114.50	126.73
23	1D	404	CLA	CAC-C3C-C4C	4.39	130.51	124.81
23	1B	605	CLA	O2D-CGD-CBD	4.39	119.07	111.27
23	1C	511	CLA	C3D-C4D-ND	4.39	117.34	110.24
23	1B	605	CLA	CHD-C1D-ND	-4.38	120.43	124.45
23	1B	604	CLA	C3D-C4D-ND	4.37	117.31	110.24
23	1C	501	CLA	C1C-C2C-C3C	-4.37	102.36	106.96
23	1B	605	CLA	C1C-C2C-C3C	-4.37	102.37	106.96
23	1C	513	CLA	C1C-C2C-C3C	-4.37	102.37	106.96
23	1D	401	CLA	C3B-C2B-C1B	-4.36	101.89	107.16
23	1D	401	CLA	C3D-C2D-C1D	-4.36	99.88	105.83
23	1D	401	CLA	CHD-C1D-ND	-4.36	120.45	124.45
23	1D	405	CLA	C1C-C2C-C3C	-4.35	102.38	106.96
23	1B	607	CLA	CHC-C1C-C2C	-4.34	114.67	126.73
23	1C	503	CLA	CHD-C1D-ND	-4.33	120.47	124.45
23	1B	615	CLA	C1C-C2C-C3C	-4.33	102.41	106.96
23	1C	502	CLA	CHC-C1C-C2C	-4.33	114.71	126.73
23	1B	602	CLA	C1C-C2C-C3C	-4.32	102.41	106.96
23	1B	604	CLA	C1C-C2C-C3C	-4.32	102.42	106.96
23	1C	504	CLA	C1C-C2C-C3C	-4.32	102.42	106.96
23	1C	502	CLA	C4A-NA-C1A	4.31	108.64	106.71
23	1D	405	CLA	C3D-C4D-ND	4.31	117.21	110.24
23	1C	511	CLA	C2D-C1D-ND	4.29	113.27	110.10
23	1B	609	CLA	CHD-C1D-ND	-4.29	120.51	124.45
23	1C	504	CLA	C3D-C2D-C1D	-4.28	99.99	105.83
23	1B	616	CLA	C1C-C2C-C3C	-4.28	102.46	106.96

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	1C	505	CLA	C4D-CHA-C1A	-4.27	116.05	121.25
23	1B	608	CLA	O2D-CGD-CBD	4.27	118.85	111.27
23	1C	504	CLA	C4D-CHA-C1A	-4.27	116.06	121.25
23	1B	612	CLA	C4D-CHA-C1A	-4.26	116.06	121.25
23	1C	508	CLA	C3D-C2D-C1D	-4.26	100.01	105.83
23	1B	615	CLA	CHD-C1D-ND	-4.25	120.55	124.45
23	1C	508	CLA	C1D-CHD-C4C	-4.25	116.90	126.06
26	1I	102	BCR	C16-C15-C14	4.24	132.17	123.47
23	1B	616	CLA	CMB-C2B-C1B	4.24	131.83	125.37
23	1B	604	CLA	C4D-CHA-C1A	-4.24	116.09	121.25
23	1B	609	CLA	CAC-C3C-C4C	4.23	130.30	124.81
23	1B	603	CLA	C1C-C2C-C3C	-4.22	102.52	106.96
23	1B	609	CLA	C3D-C4D-ND	4.22	117.06	110.24
23	1C	507	CLA	C3D-C4D-ND	4.21	117.06	110.24
23	1D	404	CLA	C1C-C2C-C3C	-4.21	102.53	106.96
23	1B	607	CLA	C3D-C4D-ND	4.21	117.05	110.24
23	1C	512	CLA	CHD-C1D-ND	-4.21	120.59	124.45
23	1B	614	CLA	C3D-C4D-ND	4.20	117.03	110.24
23	1D	405	CLA	O2D-CGD-CBD	4.19	118.72	111.27
26	1H	102	BCR	C15-C16-C17	4.18	132.04	123.47
23	1B	608	CLA	C1C-C2C-C3C	-4.18	102.56	106.96
23	1A	402	CLA	C3D-C4D-ND	4.18	117.00	110.24
23	1B	606	CLA	C4D-CHA-C1A	-4.18	116.16	121.25
23	1B	607	CLA	C3B-C4B-NB	4.18	114.39	110.52
26	1Z	102	BCR	C37-C22-C21	-4.17	117.08	122.92
23	1C	511	CLA	CHC-C4B-NB	-4.17	119.84	124.26
23	1B	607	CLA	CMB-C2B-C1B	4.16	131.71	125.37
23	1B	616	CLA	C3B-C2B-C1B	-4.16	102.14	107.16
23	1B	613	CLA	C3D-C4D-ND	4.16	116.97	110.24
23	1C	509	CLA	C3D-C4D-ND	4.16	116.97	110.24
26	1Z	101	BCR	C34-C9-C10	-4.16	117.09	122.92
23	1D	405	CLA	C3D-C2D-C1D	-4.16	100.16	105.83
23	1B	610	CLA	C1C-C2C-C3C	-4.16	102.59	106.96
23	1C	505	CLA	CMD-C2D-C3D	-4.15	118.06	127.61
26	1B	617	BCR	C34-C9-C10	-4.14	117.12	122.92
23	1B	611	CLA	C3D-C4D-ND	4.14	116.94	110.24
23	1B	611	CLA	C1D-CHD-C4C	-4.13	117.14	126.06
23	1B	609	CLA	C3B-C2B-C1B	-4.13	102.17	107.16
23	1A	405	CLA	C4D-CHA-C1A	-4.13	116.22	121.25
23	1A	402	CLA	CHC-C4B-NB	-4.13	119.89	124.26
23	1C	510	CLA	C3B-C4B-NB	4.13	114.35	110.52
23	1B	603	CLA	O2D-CGD-CBD	4.13	118.61	111.27

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	1C	501	CLA	CHD-C1D-ND	-4.13	120.66	124.45
23	1C	503	CLA	C1C-C2C-C3C	-4.13	102.62	106.96
29	1C	524	LHG	O7-C7-C8	4.12	120.38	111.50
23	1B	613	CLA	C1D-CHD-C4C	-4.12	117.18	126.06
23	1C	502	CLA	C3B-C4B-NB	4.11	114.33	110.52
23	1C	509	CLA	C4D-CHA-C1A	-4.11	116.25	121.25
26	1B	619	BCR	C37-C22-C21	-4.10	117.17	122.92
23	1B	601	CLA	C3D-C4D-ND	4.10	116.88	110.24
23	1C	511	CLA	C3D-C2D-C1D	-4.10	100.23	105.83
26	1Z	101	BCR	C37-C22-C21	-4.10	117.19	122.92
31	1C	518	DGD	O2G-C1B-C2B	4.10	120.33	111.50
23	1A	402	CLA	C4C-C3C-C2C	-4.09	100.93	106.90
23	1C	510	CLA	CHD-C1D-ND	-4.09	120.70	124.45
23	1C	510	CLA	C3D-C4D-ND	4.09	116.85	110.24
23	1B	615	CLA	C3D-C2D-C1D	-4.08	100.26	105.83
23	1B	612	CLA	CHD-C1D-ND	-4.08	120.70	124.45
23	1D	401	CLA	C2D-C1D-ND	4.08	113.11	110.10
23	1B	608	CLA	C3D-C2D-C1D	-4.08	100.27	105.83
26	1B	619	BCR	C8-C9-C10	4.07	125.19	118.94
23	1C	505	CLA	CHC-C4B-NB	-4.07	119.95	124.26
23	1A	405	CLA	C3D-C2D-C1D	-4.07	100.28	105.83
23	1B	603	CLA	C3D-C2D-C1D	-4.07	100.28	105.83
23	1B	608	CLA	CHC-C1C-C2C	-4.06	115.44	126.73
23	1B	615	CLA	C4D-CHA-C1A	-4.06	116.30	121.25
23	1B	611	CLA	C3D-C2D-C1D	-4.06	100.29	105.83
26	1A	407	BCR	C37-C22-C21	-4.05	117.25	122.92
23	1A	402	CLA	C3D-C2D-C1D	-4.05	100.31	105.83
23	1C	506	CLA	C1C-C2C-C3C	-4.05	102.70	106.96
26	1B	619	BCR	C16-C15-C14	4.04	131.76	123.47
23	1C	502	CLA	C1D-CHD-C4C	-4.04	117.34	126.06
23	1C	511	CLA	C1C-C2C-C3C	-4.03	102.72	106.96
26	1H	102	BCR	C37-C22-C21	-4.03	117.28	122.92
23	1B	605	CLA	C3D-C4D-ND	4.03	116.75	110.24
23	1B	607	CLA	C3D-C2D-C1D	-4.02	100.34	105.83
23	1D	402	CLA	C3D-C2D-C1D	-4.02	100.34	105.83
23	1D	402	CLA	O2D-CGD-CBD	4.02	118.41	111.27
23	1D	401	CLA	C1D-CHD-C4C	-4.02	117.39	126.06
26	1B	618	BCR	C37-C22-C21	-4.02	117.30	122.92
23	1A	405	CLA	C1C-C2C-C3C	-4.01	102.74	106.96
26	1T	101	BCR	C21-C20-C19	4.00	135.71	123.22
23	1B	601	CLA	C3D-C2D-C1D	-4.00	100.37	105.83
23	1C	512	CLA	C3D-C2D-C1D	-4.00	100.38	105.83

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	1B	604	CLA	C3D-C2D-C1D	-3.99	100.38	105.83
23	1C	513	CLA	O2D-CGD-CBD	3.99	118.36	111.27
23	1C	501	CLA	CHC-C4B-NB	-3.99	120.03	124.26
23	1B	602	CLA	C3D-C4D-ND	3.99	116.69	110.24
23	1B	602	CLA	C4D-CHA-C1A	-3.99	116.40	121.25
23	1B	612	CLA	C3D-C4D-ND	3.98	116.68	110.24
23	1B	609	CLA	C1C-C2C-C3C	-3.98	102.77	106.96
23	1D	404	CLA	C3D-C2D-C1D	-3.98	100.40	105.83
26	1A	407	BCR	C34-C9-C10	-3.98	117.35	122.92
23	1B	605	CLA	C3B-C4B-NB	3.97	114.20	110.52
23	1B	613	CLA	C3D-C2D-C1D	-3.96	100.42	105.83
26	1T	101	BCR	C19-C18-C17	3.96	125.01	118.94
23	1C	502	CLA	CMB-C2B-C1B	3.95	131.39	125.37
23	1C	508	CLA	C3B-C2B-C1B	-3.95	102.39	107.16
23	1A	402	CLA	CHD-C1D-ND	-3.95	120.82	124.45
23	1B	614	CLA	C3D-C2D-C1D	-3.95	100.44	105.83
23	1C	504	CLA	C2D-C1D-ND	3.95	113.01	110.10
23	1C	508	CLA	O2D-CGD-CBD	3.95	118.28	111.27
23	1C	505	CLA	C3D-C4D-ND	3.95	116.62	110.24
23	1B	616	CLA	CHC-C1C-C2C	-3.94	115.78	126.73
23	1C	506	CLA	C3D-C4D-ND	3.94	116.61	110.24
23	1C	501	CLA	C3D-C2D-C1D	-3.94	100.46	105.83
23	1B	605	CLA	CHC-C1C-C2C	-3.94	115.80	126.73
23	1B	608	CLA	C3D-C4D-ND	3.94	116.61	110.24
23	1D	402	CLA	C4D-CHA-C1A	-3.93	116.46	121.25
26	1J	101	BCR	C23-C22-C21	3.93	124.97	118.94
23	1A	405	CLA	CHD-C1D-ND	-3.93	120.84	124.45
23	1C	506	CLA	CHD-C1D-ND	-3.92	120.85	124.45
26	1T	101	BCR	C36-C18-C17	-3.92	117.43	122.92
23	1C	502	CLA	C3D-C4D-ND	3.91	116.57	110.24
23	1C	508	CLA	CAC-C3C-C4C	3.91	129.89	124.81
23	1C	508	CLA	C3D-C4D-ND	3.91	116.57	110.24
23	1B	608	CLA	C1D-CHD-C4C	-3.91	117.62	126.06
23	1C	510	CLA	C3D-C2D-C1D	-3.91	100.50	105.83
23	1C	502	CLA	C1C-C2C-C3C	-3.90	102.85	106.96
26	1B	618	BCR	C34-C9-C10	-3.90	117.46	122.92
26	1I	102	BCR	C34-C9-C10	-3.90	117.46	122.92
26	1J	101	BCR	C34-C9-C10	-3.90	117.46	122.92
23	1B	616	CLA	C3D-C4D-ND	3.90	116.54	110.24
23	1B	605	CLA	C3D-C2D-C1D	-3.90	100.51	105.83
23	1B	606	CLA	C3B-C2B-C1B	-3.90	102.46	107.16
23	1C	511	CLA	C1D-CHD-C4C	-3.90	117.66	126.06

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
26	1B	618	BCR	C16-C15-C14	3.90	131.45	123.47
23	1C	507	CLA	CHC-C1C-C2C	-3.89	115.92	126.73
23	1C	512	CLA	C1C-C2C-C3C	-3.89	102.87	106.96
23	1C	505	CLA	CHC-C1C-C2C	-3.88	115.95	126.73
23	1C	503	CLA	C3D-C4D-ND	3.88	116.51	110.24
23	1C	502	CLA	CAC-C3C-C4C	3.87	129.84	124.81
23	1B	611	CLA	CHC-C1C-C2C	-3.87	115.97	126.73
23	1B	609	CLA	C3B-C4B-NB	3.87	114.10	110.52
27	1E	102	PL9	C30-C29-C31	3.87	121.77	115.27
23	1C	507	CLA	CHD-C1D-ND	-3.86	120.91	124.45
23	1B	609	CLA	CHC-C1C-C2C	-3.85	116.04	126.73
23	1C	508	CLA	CMB-C2B-C1B	3.85	131.23	125.37
23	1C	509	CLA	C4A-NA-C1A	3.85	108.44	106.71
31	1C	517	DGD	O2G-C1B-C2B	3.85	119.79	111.50
23	1C	509	CLA	CHC-C1C-C2C	-3.85	116.05	126.73
23	1C	501	CLA	C4D-CHA-C1A	-3.84	116.57	121.25
23	1D	404	CLA	C3D-C4D-ND	3.84	116.45	110.24
23	1B	612	CLA	C3D-C2D-C1D	-3.84	100.59	105.83
23	1C	509	CLA	C3B-C4B-NB	3.83	114.07	110.52
23	1B	613	CLA	C4D-CHA-C1A	-3.83	116.59	121.25
23	1B	613	CLA	CHC-C1C-C2C	-3.83	116.10	126.73
23	1D	405	CLA	CHC-C4B-NB	-3.82	120.21	124.26
26	1D	406	BCR	C34-C9-C10	-3.82	117.57	122.92
23	1B	603	CLA	C4D-CHA-C1A	-3.82	116.60	121.25
27	1E	102	PL9	C25-C24-C26	3.82	121.69	115.27
23	1B	610	CLA	C3D-C4D-ND	3.81	116.41	110.24
26	1H	102	BCR	C34-C9-C10	-3.81	117.58	122.92
23	1C	507	CLA	C1C-C2C-C3C	-3.81	102.95	106.96
31	1C	516	DGD	O2G-C1B-C2B	3.80	119.69	111.50
23	1C	513	CLA	CHD-C1D-ND	-3.80	120.96	124.45
23	1B	601	CLA	C4-C3-C5	3.80	121.66	115.27
31	1B	626	DGD	O2G-C1B-C2B	3.79	119.68	111.50
26	1D	406	BCR	C37-C22-C21	-3.79	117.61	122.92
23	1D	404	CLA	CHD-C1D-ND	-3.79	120.97	124.45
23	1A	402	CLA	C1D-CHD-C4C	-3.79	117.89	126.06
29	1W	102	LHG	O7-C7-C8	3.79	119.66	111.50
23	1B	611	CLA	CHD-C1D-ND	-3.78	120.98	124.45
23	1C	507	CLA	C3D-C2D-C1D	-3.78	100.67	105.83
23	1B	602	CLA	CHD-C1D-ND	-3.78	120.98	124.45
26	1D	406	BCR	C16-C15-C14	3.78	131.21	123.47
23	1B	614	CLA	C4C-C3C-C2C	-3.78	101.39	106.90
26	1B	617	BCR	C37-C22-C21	-3.77	117.64	122.92

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	1B	610	CLA	C4D-CHA-C1A	-3.77	116.66	121.25
23	1C	504	CLA	CHC-C4B-NB	-3.77	120.27	124.26
23	1B	611	CLA	C4-C3-C5	3.77	121.61	115.27
23	1C	506	CLA	C2D-C1D-ND	3.76	112.88	110.10
26	1T	101	BCR	C34-C9-C10	-3.76	117.66	122.92
23	1B	607	CLA	CHB-C1B-NB	-3.75	120.29	124.26
27	1E	102	PL9	C7-C8-C9	-3.74	120.57	126.79
23	1B	607	CLA	CHD-C1D-ND	-3.73	121.02	124.45
23	1A	405	CLA	C2D-C1D-ND	3.71	112.83	110.10
23	1B	602	CLA	C3B-C2B-C1B	-3.70	102.69	107.16
23	1B	608	CLA	C4C-C3C-C2C	-3.70	101.50	106.90
23	1B	613	CLA	C1-C2-C3	-3.69	119.66	126.04
23	1B	602	CLA	CHC-C1C-C2C	-3.68	116.50	126.73
23	1D	401	CLA	CHC-C1C-C2C	-3.68	116.50	126.73
23	1D	401	CLA	C4D-CHA-C1A	-3.68	116.78	121.25
23	1B	609	CLA	C3D-C2D-C1D	-3.67	100.82	105.83
23	1D	402	CLA	CHC-C1C-C2C	-3.66	116.55	126.73
23	1C	509	CLA	CHD-C1D-ND	-3.66	121.09	124.45
23	1C	507	CLA	C4C-C3C-C2C	-3.66	101.56	106.90
23	1C	508	CLA	CHC-C4B-NB	-3.66	120.39	124.26
34	1E	103	HEM	C1B-NB-C4B	3.65	108.84	105.07
26	1B	617	BCR	C38-C26-C25	3.65	128.62	124.53
23	1B	610	CLA	C1D-CHD-C4C	-3.65	118.19	126.06
23	1C	510	CLA	CHC-C1C-C2C	-3.64	116.61	126.73
23	1C	510	CLA	CHB-C1B-NB	-3.64	120.40	124.26
23	1B	611	CLA	CHB-C1B-NB	-3.64	120.40	124.26
23	1C	502	CLA	C3D-C2D-C1D	-3.64	100.87	105.83
23	1A	405	CLA	CMC-C2C-C1C	3.63	130.57	125.04
23	1B	616	CLA	C4A-NA-C1A	3.63	108.34	106.71
26	1Z	101	BCR	C15-C16-C17	3.62	130.89	123.47
23	1B	604	CLA	O2A-CGA-CBA	3.62	123.27	111.91
27	1E	102	PL9	C35-C34-C36	3.62	121.36	115.27
26	1B	619	BCR	C35-C13-C14	-3.62	117.86	122.92
23	1B	607	CLA	O2A-CGA-CBA	3.60	123.21	111.91
23	1C	511	CLA	C4D-CHA-C1A	-3.60	116.86	121.25
23	1C	513	CLA	C1D-CHD-C4C	-3.59	118.31	126.06
26	1I	102	BCR	C37-C22-C21	-3.59	117.90	122.92
23	1B	616	CLA	CMD-C2D-C3D	-3.58	119.37	127.61
23	1B	615	CLA	CHC-C4B-NB	-3.58	120.46	124.26
23	1D	402	CLA	C3B-C4B-NB	3.58	113.84	110.52
26	1A	407	BCR	C35-C13-C14	-3.58	117.91	122.92
23	1C	506	CLA	C1D-CHD-C4C	-3.58	118.33	126.06

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	1C	507	CLA	CAC-C3C-C4C	3.58	129.45	124.81
23	1C	513	CLA	C4D-CHA-C1A	-3.58	116.89	121.25
23	1C	505	CLA	CAC-C3C-C4C	3.57	129.45	124.81
23	1C	502	CLA	CHB-C1B-NB	-3.56	120.49	124.26
23	1B	616	CLA	C3D-C2D-C1D	-3.56	100.97	105.83
26	1H	102	BCR	C36-C18-C17	-3.56	117.94	122.92
23	1B	605	CLA	CAC-C3C-C4C	3.56	129.43	124.81
23	1B	608	CLA	CHD-C1D-ND	-3.56	121.19	124.45
23	1C	512	CLA	CHC-C4B-NB	-3.55	120.49	124.26
23	1C	502	CLA	C4C-C3C-C2C	-3.55	101.72	106.90
23	1C	509	CLA	C1D-CHD-C4C	-3.55	118.40	126.06
23	1C	511	CLA	CMC-C2C-C1C	3.55	130.44	125.04
23	1B	607	CLA	CAC-C3C-C4C	3.53	129.39	124.81
23	1B	603	CLA	CMD-C2D-C3D	-3.53	119.49	127.61
23	1B	611	CLA	C2D-C1D-ND	3.53	112.70	110.10
23	1D	401	CLA	C3B-C4B-NB	3.52	113.78	110.52
24	1A	403	PHO	C2B-C1B-NB	-3.52	107.10	109.53
23	1B	613	CLA	C3B-C4B-NB	3.52	113.78	110.52
23	1C	507	CLA	CHC-C4B-NB	-3.52	120.53	124.26
23	1B	616	CLA	CHB-C1B-NB	-3.51	120.54	124.26
23	1D	401	CLA	C4A-NA-C1A	3.51	108.29	106.71
23	1D	405	CLA	CHC-C1C-C2C	-3.51	116.97	126.73
23	1B	607	CLA	C1D-CHD-C4C	-3.51	118.48	126.06
23	1C	513	CLA	CHC-C4B-NB	-3.51	120.55	124.26
30	1B	624	MGE	O2G-C1B-C2B	3.51	119.06	111.50
23	1B	614	CLA	CAC-C3C-C4C	3.50	129.35	124.81
26	1B	617	BCR	C35-C13-C14	-3.49	118.04	122.92
23	1B	606	CLA	CHC-C1C-C2C	-3.49	117.04	126.73
23	1B	602	CLA	C4-C3-C5	3.49	121.14	115.27
23	1C	506	CLA	CHB-C4A-NA	3.49	129.33	124.51
23	1B	606	CLA	CHC-C4B-NB	-3.48	120.57	124.26
23	1B	616	CLA	C1D-CHD-C4C	-3.48	118.55	126.06
23	1B	616	CLA	C4C-C3C-C2C	-3.48	101.82	106.90
23	1C	513	CLA	CHB-C1B-NB	-3.48	120.58	124.26
23	1B	603	CLA	CHC-C1C-C2C	-3.48	117.08	126.73
23	1B	610	CLA	CHC-C1C-C2C	-3.47	117.09	126.73
26	1B	618	BCR	C35-C13-C14	-3.47	118.07	122.92
23	1B	603	CLA	C3B-C4B-NB	3.47	113.73	110.52
26	1A	407	BCR	C12-C13-C14	3.46	124.26	118.94
23	1D	405	CLA	C4D-CHA-C1A	-3.46	117.04	121.25
23	1D	402	CLA	C1D-CHD-C4C	-3.46	118.59	126.06
23	1D	404	CLA	CMC-C2C-C1C	3.46	130.31	125.04

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	1E	103	HEM	CHB-C1B-NB	3.46	128.64	124.37
23	1B	601	CLA	C4D-CHA-C1A	-3.46	117.04	121.25
23	1B	602	CLA	CAC-C3C-C4C	3.46	129.29	124.81
23	1C	506	CLA	C4D-CHA-C1A	-3.46	117.04	121.25
23	1A	402	CLA	C4D-CHA-C1A	-3.45	117.05	121.25
23	1B	603	CLA	CMB-C2B-C1B	3.45	130.62	125.37
23	1B	614	CLA	C4D-CHA-C1A	-3.44	117.06	121.25
26	1J	101	BCR	C35-C13-C14	-3.44	118.11	122.92
26	1Z	102	BCR	C15-C16-C17	3.44	130.51	123.47
23	1A	402	CLA	CAC-C3C-C4C	3.43	129.26	124.81
26	1Z	102	BCR	C8-C9-C10	3.43	124.21	118.94
23	1C	509	CLA	CMD-C2D-C3D	-3.43	119.73	127.61
26	1A	407	BCR	C36-C18-C17	-3.43	118.12	122.92
23	1B	616	CLA	C3B-C4B-NB	3.42	113.69	110.52
23	1C	501	CLA	CHC-C1C-C2C	-3.42	117.24	126.73
27	1E	102	PL9	C7-C3-C4	3.41	119.65	116.88
23	1B	614	CLA	CHB-C4A-NA	3.41	129.23	124.51
23	1C	503	CLA	C3B-C4B-NB	3.41	113.68	110.52
23	1C	503	CLA	CAC-C3C-C4C	3.40	129.23	124.81
23	1A	402	CLA	CMD-C2D-C3D	-3.40	119.78	127.61
23	1B	615	CLA	CHB-C1B-NB	-3.40	120.66	124.26
26	1Z	101	BCR	C36-C18-C17	-3.40	118.16	122.92
23	1C	509	CLA	C3D-C2D-C1D	-3.40	101.19	105.83
23	1C	509	CLA	CHC-C4B-NB	-3.40	120.66	124.26
23	1A	405	CLA	CAC-C3C-C4C	3.40	129.22	124.81
23	1B	613	CLA	CHB-C1B-NB	-3.39	120.66	124.26
23	1C	508	CLA	CHD-C1D-ND	-3.39	121.34	124.45
23	1C	513	CLA	C4C-C3C-C2C	-3.39	101.96	106.90
23	1C	505	CLA	CHB-C4A-NA	3.39	129.19	124.51
23	1B	602	CLA	CMD-C2D-C3D	-3.38	119.83	127.61
23	1C	509	CLA	CHB-C1B-NB	-3.38	120.68	124.26
23	1B	612	CLA	O2D-CGD-O1D	-3.38	117.23	123.84
26	1B	618	BCR	C12-C13-C14	3.38	124.13	118.94
23	1C	512	CLA	C2D-C1D-ND	3.38	112.59	110.10
23	1B	604	CLA	C3B-C4B-NB	3.37	113.64	110.52
23	1B	616	CLA	CHC-C4B-NB	-3.37	120.69	124.26
23	1B	607	CLA	CHB-C4A-NA	3.37	129.18	124.51
23	1B	611	CLA	CHC-C4B-NB	-3.37	120.69	124.26
23	1C	501	CLA	C3B-C4B-NB	3.37	113.64	110.52
23	1B	615	CLA	C1D-CHD-C4C	-3.37	118.79	126.06
23	1B	603	CLA	CHB-C1B-NB	-3.37	120.69	124.26
26	1B	619	BCR	C12-C13-C14	3.36	124.10	118.94

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	1C	506	CLA	CHC-C1C-C2C	-3.36	117.39	126.73
26	1T	101	BCR	C30-C25-C24	3.36	125.29	115.78
23	1B	616	CLA	O2A-CGA-CBA	3.36	122.46	111.91
23	1B	612	CLA	CMC-C2C-C1C	3.36	130.15	125.04
23	1C	505	CLA	CHD-C1D-ND	-3.36	121.37	124.45
23	1C	503	CLA	C4D-CHA-C1A	-3.35	117.17	121.25
23	1C	502	CLA	CHB-C4A-NA	3.35	129.15	124.51
27	1E	102	PL9	C37-C38-C39	-3.35	119.59	127.66
23	1C	503	CLA	C4C-C3C-C2C	-3.35	102.02	106.90
23	1B	608	CLA	C3B-C4B-NB	3.35	113.62	110.52
23	1B	602	CLA	C3B-C4B-NB	3.35	113.62	110.52
26	1J	101	BCR	C12-C13-C14	3.34	124.07	118.94
23	1B	615	CLA	C2D-C1D-ND	3.34	112.56	110.10
23	1C	510	CLA	C4D-CHA-C1A	-3.34	117.19	121.25
23	1B	604	CLA	CHC-C1C-C2C	-3.34	117.46	126.73
34	1E	103	HEM	CHA-C4D-ND	3.33	128.48	124.37
23	1B	611	CLA	O2D-CGD-CBD	3.33	117.19	111.27
23	1C	503	CLA	CHC-C4B-NB	-3.33	120.73	124.26
23	1B	615	CLA	CHC-C1C-C2C	-3.33	117.48	126.73
23	1C	506	CLA	CMB-C2B-C1B	3.33	130.44	125.37
23	1C	505	CLA	C4C-C3C-C2C	-3.32	102.05	106.90
23	1B	601	CLA	O2A-CGA-CBA	3.32	122.33	111.91
23	1A	402	CLA	CHC-C1C-C2C	-3.32	117.51	126.73
23	1B	605	CLA	C1D-CHD-C4C	-3.32	118.90	126.06
34	1E	103	HEM	CHD-C1D-C2D	-3.31	119.81	124.98
23	1C	503	CLA	CHC-C1C-C2C	-3.31	117.54	126.73
23	1B	616	CLA	CHB-C4A-NA	3.31	129.09	124.51
23	1A	405	CLA	C4C-C3C-C2C	-3.31	102.08	106.90
23	1C	501	CLA	CAC-C3C-C4C	3.30	129.09	124.81
26	1A	407	BCR	C16-C15-C14	3.30	130.24	123.47
23	1C	504	CLA	CAC-C3C-C4C	3.30	129.09	124.81
23	1D	405	CLA	CAC-C3C-C4C	3.30	129.09	124.81
26	1Z	102	BCR	C35-C13-C14	-3.30	118.30	122.92
26	1T	101	BCR	C33-C5-C6	3.30	128.23	124.53
23	1B	601	CLA	CHB-C4A-NA	3.29	129.07	124.51
23	1B	610	CLA	C4C-C3C-C2C	-3.29	102.10	106.90
23	1C	512	CLA	CAC-C3C-C4C	3.29	129.08	124.81
27	1E	102	PL9	C12-C13-C14	-3.29	119.74	127.66
23	1C	512	CLA	C4C-C3C-C2C	-3.29	102.10	106.90
26	1B	619	BCR	C38-C26-C25	3.29	128.22	124.53
27	1H	101	PL9	C7-C3-C4	3.28	119.54	116.88
23	1C	510	CLA	C1D-CHD-C4C	-3.28	118.99	126.06

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
26	1D	406	BCR	C35-C13-C14	-3.27	118.34	122.92
26	1Z	101	BCR	C35-C13-C14	-3.27	118.34	122.92
23	1C	505	CLA	C3B-C4B-NB	3.27	113.55	110.52
26	1D	406	BCR	C38-C26-C25	3.27	128.20	124.53
23	1C	503	CLA	C1D-CHD-C4C	-3.27	119.01	126.06
23	1B	601	CLA	CMB-C2B-C1B	3.27	130.34	125.37
23	1C	511	CLA	C4C-C3C-C2C	-3.26	102.14	106.90
23	1D	405	CLA	C3B-C4B-NB	3.26	113.54	110.52
26	1B	619	BCR	C1-C6-C7	3.26	125.00	115.78
23	1B	603	CLA	CHC-C4B-NB	-3.26	120.81	124.26
23	1A	402	CLA	CHB-C4A-NA	3.26	129.02	124.51
23	1B	603	CLA	C4C-C3C-C2C	-3.26	102.15	106.90
23	1C	512	CLA	C1D-CHD-C4C	-3.26	119.03	126.06
23	1D	405	CLA	CHB-C4A-NA	3.26	129.01	124.51
23	1B	607	CLA	C4A-NA-C1A	3.25	108.17	106.71
26	1B	618	BCR	C36-C18-C17	-3.25	118.37	122.92
23	1B	612	CLA	C3B-C4B-NB	3.24	113.52	110.52
23	1D	401	CLA	CHB-C4A-NA	3.24	129.00	124.51
23	1C	512	CLA	CHC-C1C-C2C	-3.23	117.75	126.73
23	1B	616	CLA	CHD-C1D-ND	-3.23	121.48	124.45
23	1D	404	CLA	CHC-C1C-C2C	-3.23	117.76	126.73
23	1C	511	CLA	CHC-C1C-C2C	-3.23	117.76	126.73
23	1C	510	CLA	CMD-C2D-C3D	-3.23	120.19	127.61
23	1B	616	CLA	C1-C2-C3	-3.23	120.46	126.04
23	1B	602	CLA	O2A-CGA-CBA	3.22	122.02	111.91
23	1B	607	CLA	C4C-C3C-C2C	-3.22	102.20	106.90
23	1C	508	CLA	C2D-C1D-ND	3.22	112.48	110.10
23	1D	402	CLA	CHB-C1B-NB	-3.22	120.85	124.26
23	1B	608	CLA	CHB-C4A-NA	3.22	128.97	124.51
23	1C	511	CLA	CHB-C1B-NB	-3.22	120.85	124.26
23	1B	611	CLA	C3B-C4B-NB	3.22	113.50	110.52
23	1C	512	CLA	C1-O2A-CGA	3.22	124.89	116.44
23	1B	610	CLA	CMD-C2D-C3D	-3.22	120.21	127.61
27	1D	407	PL9	C7-C3-C4	3.21	119.49	116.88
23	1C	501	CLA	CHB-C4A-NA	3.21	128.95	124.51
23	1B	602	CLA	C4C-C3C-C2C	-3.21	102.22	106.90
23	1C	507	CLA	C1D-CHD-C4C	-3.21	119.14	126.06
23	1C	504	CLA	CHC-C1C-C2C	-3.21	117.83	126.73
26	1I	102	BCR	C35-C13-C14	-3.20	118.44	122.92
34	1E	103	HEM	CHD-C4C-NC	3.20	127.90	124.44
23	1C	506	CLA	C4C-C3C-C2C	-3.20	102.24	106.90
26	1B	617	BCR	C12-C13-C14	3.19	123.84	118.94

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	1C	511	CLA	C4A-NA-C1A	3.18	108.14	106.71
23	1D	405	CLA	C1D-CHD-C4C	-3.18	119.20	126.06
26	1A	407	BCR	C19-C18-C17	3.18	123.81	118.94
23	1D	404	CLA	C3B-C4B-NB	3.18	113.46	110.52
23	1A	405	CLA	CHB-C4A-NA	3.18	128.90	124.51
23	1B	610	CLA	CHB-C4A-NA	3.18	128.90	124.51
23	1A	405	CLA	CHC-C4B-NB	-3.17	120.90	124.26
23	1B	606	CLA	C1D-CHD-C4C	-3.17	119.22	126.06
23	1C	511	CLA	CHD-C1D-ND	-3.17	121.54	124.45
23	1C	508	CLA	CMD-C2D-C3D	-3.17	120.33	127.61
27	1E	102	PL9	C40-C39-C41	3.17	120.60	115.27
23	1C	513	CLA	CMB-C2B-C1B	3.16	130.18	125.37
23	1B	611	CLA	CHB-C4A-NA	3.16	128.88	124.51
23	1C	502	CLA	C4D-CHA-C1A	-3.16	117.41	121.25
23	1D	402	CLA	C2D-C1D-ND	3.15	112.43	110.10
23	1B	609	CLA	C1D-CHD-C4C	-3.15	119.26	126.06
27	1E	102	PL9	C20-C19-C21	3.15	120.57	115.27
23	1A	405	CLA	C1D-CHD-C4C	-3.15	119.26	126.06
23	1B	612	CLA	CHC-C1C-C2C	-3.14	118.00	126.73
23	1B	602	CLA	C3D-C2D-C1D	-3.14	101.55	105.83
23	1C	510	CLA	CHB-C4A-NA	3.14	128.85	124.51
23	1B	614	CLA	C1C-C2C-C3C	-3.13	103.66	106.96
23	1B	616	CLA	CAC-C3C-C4C	3.13	128.87	124.81
26	1Z	102	BCR	C36-C18-C17	-3.13	118.54	122.92
23	1B	609	CLA	C4C-C3C-C2C	-3.13	102.34	106.90
23	1C	501	CLA	C1D-CHD-C4C	-3.12	119.32	126.06
23	1B	604	CLA	CHC-C4B-NB	-3.12	120.95	124.26
23	1B	609	CLA	C4D-CHA-C1A	-3.12	117.45	121.25
23	1B	604	CLA	CAC-C3C-C4C	3.12	128.86	124.81
23	1C	501	CLA	C4C-C3C-C2C	-3.12	102.35	106.90
23	1B	607	CLA	C4D-CHA-C1A	-3.12	117.45	121.25
23	1C	505	CLA	CHB-C1B-NB	-3.12	120.96	124.26
23	1B	605	CLA	C4D-CHA-C1A	-3.11	117.46	121.25
23	1D	401	CLA	CHB-C1B-NB	-3.11	120.96	124.26
26	1H	102	BCR	C19-C18-C17	3.11	123.72	118.94
27	1E	102	PL9	C17-C18-C19	-3.11	120.17	127.66
26	1Z	101	BCR	C16-C15-C14	3.11	129.84	123.47
26	1B	618	BCR	C38-C26-C25	3.11	128.02	124.53
27	1A	408	PL9	C7-C3-C4	3.10	119.40	116.88
23	1D	404	CLA	CMD-C2D-C3D	-3.10	120.47	127.61
23	1C	504	CLA	CHB-C4A-NA	3.10	128.80	124.51
23	1B	605	CLA	CMB-C2B-C1B	3.10	130.09	125.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	1B	615	CLA	CHB-C4A-NA	3.10	128.79	124.51
23	1B	605	CLA	C4C-C3C-C2C	-3.10	102.39	106.90
23	1C	509	CLA	CHB-C4A-NA	3.10	128.79	124.51
26	1Z	101	BCR	C19-C18-C17	3.08	123.67	118.94
23	1D	405	CLA	CMD-C2D-C3D	-3.08	120.52	127.61
26	1B	619	BCR	C1-C6-C5	-3.08	118.27	122.61
23	1C	506	CLA	CHB-C1B-NB	-3.08	121.00	124.26
23	1B	612	CLA	CHB-C4A-NA	3.08	128.77	124.51
23	1B	606	CLA	CHD-C1D-ND	-3.08	121.63	124.45
23	1C	504	CLA	CMC-C2C-C1C	3.08	129.72	125.04
23	1B	613	CLA	C2D-C1D-ND	3.08	112.37	110.10
23	1C	502	CLA	CHC-C4B-NB	-3.07	121.01	124.26
23	1B	610	CLA	CMC-C2C-C1C	3.07	129.71	125.04
23	1B	613	CLA	CMD-C2D-C3D	-3.07	120.56	127.61
23	1C	508	CLA	CHB-C1B-NB	-3.07	121.01	124.26
23	1B	610	CLA	C4-C3-C5	3.06	120.42	115.27
23	1B	601	CLA	CMD-C2D-C3D	-3.06	120.58	127.61
23	1D	405	CLA	C4C-C3C-C2C	-3.06	102.44	106.90
23	1B	613	CLA	CHC-C4B-NB	-3.06	121.02	124.26
23	1C	512	CLA	CHB-C1B-NB	-3.05	121.03	124.26
23	1C	502	CLA	C1-C2-C3	-3.05	120.77	126.04
23	1B	610	CLA	CHC-C4B-NB	-3.05	121.03	124.26
26	1I	102	BCR	C37-C22-C23	3.05	122.88	118.08
23	1C	505	CLA	C1D-CHD-C4C	-3.05	119.49	126.06
26	1B	617	BCR	C1-C6-C7	3.04	124.39	115.78
23	1B	604	CLA	CMD-C2D-C3D	-3.04	120.62	127.61
23	1D	404	CLA	C4-C3-C5	3.04	120.38	115.27
23	1C	513	CLA	CHC-C1C-C2C	-3.04	118.29	126.73
23	1B	604	CLA	C4C-C3C-C2C	-3.04	102.47	106.90
23	1B	606	CLA	C3B-C4B-NB	3.04	113.33	110.52
26	1D	406	BCR	C36-C18-C17	-3.04	118.67	122.92
23	1B	613	CLA	CHB-C4A-NA	3.03	128.71	124.51
23	1B	610	CLA	CAC-C3C-C4C	3.03	128.75	124.81
23	1B	603	CLA	CAC-C3C-C4C	3.03	128.74	124.81
27	1E	102	PL9	C42-C43-C44	-3.03	120.36	127.66
23	1D	404	CLA	C4C-C3C-C2C	-3.03	102.48	106.90
23	1A	405	CLA	CHC-C1C-C2C	-3.02	118.33	126.73
24	1A	404	PHO	C2B-C1B-NB	-3.02	107.44	109.53
23	1B	609	CLA	O2A-CGA-CBA	3.02	121.39	111.91
23	1C	510	CLA	CAC-C3C-C4C	3.02	128.73	124.81
23	1D	405	CLA	C2D-C1D-ND	3.02	112.33	110.10
23	1B	603	CLA	C4-C3-C5	3.02	120.35	115.27

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	1C	510	CLA	C4C-C3C-C2C	-3.01	102.50	106.90
23	1C	507	CLA	O2D-CGD-O1D	-3.01	117.95	123.84
26	1B	617	BCR	C1-C6-C5	-3.01	118.37	122.61
26	1J	101	BCR	C30-C25-C24	3.01	124.29	115.78
23	1C	503	CLA	C2D-C1D-ND	3.01	112.32	110.10
26	1B	619	BCR	C36-C18-C17	-3.01	118.71	122.92
23	1B	615	CLA	C4C-C3C-C2C	-3.01	102.51	106.90
23	1C	507	CLA	CMB-C2B-C3B	3.01	133.87	126.59
26	1J	101	BCR	C36-C18-C17	-3.00	118.72	122.92
23	1B	615	CLA	C3B-C4B-NB	3.00	113.30	110.52
23	1B	612	CLA	C1D-CHD-C4C	-3.00	119.59	126.06
23	1C	505	CLA	C3D-C2D-C1D	-3.00	101.74	105.83
23	1B	611	CLA	C4D-CHA-C1A	-3.00	117.60	121.25
23	1B	601	CLA	CHC-C1C-C2C	-2.99	118.41	126.73
26	1Z	102	BCR	C23-C22-C21	2.99	123.53	118.94
26	1Z	102	BCR	C24-C23-C22	-2.99	121.72	126.23
23	1B	601	CLA	CMC-C2C-C1C	2.99	129.59	125.04
31	1C	517	DGD	C3G-O3G-C1D	-2.99	107.90	113.74
23	1B	604	CLA	C2D-C1D-ND	2.99	112.31	110.10
23	1B	606	CLA	C4C-C3C-C2C	-2.98	102.55	106.90
23	1B	605	CLA	CHB-C4A-NA	2.98	128.63	124.51
23	1B	615	CLA	CMB-C2B-C1B	2.98	129.90	125.37
23	1C	507	CLA	CHB-C4A-NA	2.97	128.62	124.51
23	1D	402	CLA	CMB-C2B-C1B	2.97	129.90	125.37
23	1A	405	CLA	CHB-C1B-NB	-2.97	121.11	124.26
26	1A	407	BCR	C15-C16-C17	2.97	129.56	123.47
34	1E	103	HEM	C4C-NC-C1C	2.96	108.25	105.35
23	1B	604	CLA	C1D-CHD-C4C	-2.96	119.68	126.06
23	1C	512	CLA	C4-C3-C5	2.96	120.25	115.27
23	1D	405	CLA	CHB-C1B-NB	-2.96	121.13	124.26
23	1C	508	CLA	C3B-C4B-NB	2.95	113.25	110.52
23	1C	503	CLA	CHB-C4A-NA	2.94	128.58	124.51
23	1C	511	CLA	CHB-C4A-NA	2.94	128.58	124.51
23	1B	613	CLA	C4-C3-C5	2.94	120.22	115.27
23	1B	613	CLA	CMB-C2B-C1B	2.94	129.85	125.37
23	1C	504	CLA	C4C-C3C-C2C	-2.94	102.61	106.90
23	1C	501	CLA	O2A-CGA-CBA	2.94	121.13	111.91
23	1D	402	CLA	CMD-C2D-C3D	-2.94	120.86	127.61
23	1C	504	CLA	C3B-C4B-NB	2.94	113.24	110.52
23	1C	512	CLA	C3B-C4B-NB	2.93	113.23	110.52
23	1A	405	CLA	CMB-C2B-C1B	2.93	129.83	125.37
23	1C	504	CLA	C1D-CHD-C4C	-2.93	119.74	126.06

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
26	1Z	102	BCR	C12-C13-C14	2.93	123.43	118.94
23	1B	612	CLA	CMD-C2D-C3D	-2.93	120.89	127.61
23	1D	402	CLA	O2A-CGA-CBA	2.92	121.07	111.91
23	1C	507	CLA	C1-C2-C3	-2.92	120.99	126.04
26	1J	101	BCR	C30-C25-C26	-2.92	118.50	122.61
23	1D	402	CLA	CHB-C4A-NA	2.92	128.55	124.51
23	1C	503	CLA	CMD-C2D-C3D	-2.92	120.91	127.61
23	1C	512	CLA	CMD-C2D-C3D	-2.91	120.92	127.61
23	1B	602	CLA	C1D-CHD-C4C	-2.91	119.78	126.06
23	1B	604	CLA	C1-C2-C3	-2.90	121.02	126.04
23	1B	608	CLA	C2D-C1D-ND	2.90	112.24	110.10
26	1B	619	BCR	C10-C11-C12	2.90	132.27	123.22
23	1C	505	CLA	C1-C2-C3	-2.90	121.03	126.04
23	1C	503	CLA	C4-C3-C5	2.90	120.14	115.27
23	1B	609	CLA	CHC-C4B-NB	-2.89	121.19	124.26
23	1B	611	CLA	CMD-C2D-C3D	-2.89	120.96	127.61
26	1D	406	BCR	C33-C5-C6	2.89	127.78	124.53
23	1B	611	CLA	CMC-C2C-C1C	2.89	129.44	125.04
23	1B	615	CLA	CMD-C2D-C3D	-2.89	120.97	127.61
23	1C	513	CLA	CHB-C4A-NA	2.88	128.50	124.51
26	1T	101	BCR	C23-C22-C21	2.88	123.36	118.94
26	1B	618	BCR	C19-C18-C17	2.88	123.36	118.94
23	1B	605	CLA	CMD-C2D-C3D	-2.88	120.99	127.61
23	1B	604	CLA	O2A-CGA-O1A	-2.88	116.33	123.59
23	1D	402	CLA	C1-C2-C3	-2.87	122.10	126.75
26	1H	102	BCR	C35-C13-C14	-2.87	118.90	122.92
23	1B	612	CLA	C4C-C3C-C2C	-2.87	102.71	106.90
23	1B	616	CLA	O2D-CGD-O1D	-2.87	118.23	123.84
23	1B	607	CLA	CHC-C4B-NB	-2.87	121.22	124.26
23	1B	605	CLA	CHC-C4B-NB	-2.87	121.22	124.26
23	1C	507	CLA	C4-C3-C5	2.87	120.09	115.27
23	1B	601	CLA	C4A-NA-C1A	-2.86	105.42	106.71
23	1C	506	CLA	CHC-C4B-NB	-2.86	121.23	124.26
26	1H	102	BCR	C16-C15-C14	2.85	129.32	123.47
23	1B	610	CLA	C3D-C2D-C1D	-2.85	101.94	105.83
23	1C	511	CLA	CMB-C2B-C1B	2.85	129.71	125.37
23	1D	402	CLA	CHC-C4B-NB	-2.85	121.24	124.26
23	1B	608	CLA	C4D-CHA-C1A	-2.85	117.78	121.25
23	1B	612	CLA	CAC-C3C-C4C	2.85	128.51	124.81
23	1C	508	CLA	C4C-C3C-C2C	-2.85	102.75	106.90
23	1D	401	CLA	O2A-CGA-CBA	2.85	120.84	111.91
23	1B	607	CLA	C2D-C1D-ND	2.85	112.20	110.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	1B	604	CLA	CHB-C4A-NA	2.85	128.45	124.51
26	1I	102	BCR	C33-C5-C6	2.84	127.72	124.53
23	1C	513	CLA	CAA-C2A-C3A	-2.84	109.47	116.10
26	1B	618	BCR	C15-C16-C17	2.84	129.29	123.47
23	1C	510	CLA	C1-C2-C3	-2.83	121.14	126.04
23	1C	512	CLA	CHB-C4A-NA	2.83	128.43	124.51
26	1H	102	BCR	C33-C5-C6	2.83	127.70	124.53
27	1E	102	PL9	C7-C3-C2	-2.83	119.58	123.30
26	1Z	102	BCR	C33-C5-C6	2.83	127.70	124.53
27	1E	102	PL9	C45-C44-C46	2.83	120.03	115.27
23	1B	603	CLA	C1D-CHD-C4C	-2.82	119.96	126.06
23	1D	404	CLA	C1-C2-C3	-2.82	121.16	126.04
23	1C	509	CLA	CMC-C2C-C1C	2.82	129.33	125.04
23	1C	507	CLA	C4D-CHA-C1A	-2.82	117.82	121.25
26	1Z	102	BCR	C16-C15-C14	2.82	129.24	123.47
23	1C	503	CLA	CHB-C1B-NB	-2.81	121.28	124.26
23	1B	603	CLA	C2D-C1D-ND	2.81	112.18	110.10
23	1C	504	CLA	C4-C3-C5	2.81	120.00	115.27
23	1D	401	CLA	CMD-C2D-C3D	-2.80	121.17	127.61
23	1C	506	CLA	C4A-NA-C1A	2.80	107.97	106.71
23	1B	610	CLA	C4A-NA-C1A	2.80	107.97	106.71
23	1B	613	CLA	C4C-C3C-C2C	-2.80	102.82	106.90
23	1C	512	CLA	O2A-CGA-CBA	2.80	120.68	111.91
27	1E	102	PL9	C15-C14-C16	2.79	119.97	115.27
28	1B	622	SQD	O47-C7-C8	2.79	117.52	111.50
31	1C	517	DGD	O1G-C1A-C2A	2.79	120.67	111.91
23	1C	505	CLA	O2D-CGD-O1D	-2.79	118.38	123.84
23	1B	606	CLA	C4-C3-C5	2.79	119.96	115.27
23	1C	501	CLA	CMD-C2D-C3D	-2.79	121.20	127.61
23	1B	608	CLA	O2A-CGA-CBA	2.79	120.65	111.91
23	1C	503	CLA	C1-C2-C3	-2.79	121.22	126.04
23	1C	511	CLA	CAC-C3C-C4C	2.79	128.43	124.81
28	1D	411	SQD	C44-O6-C1	2.79	119.18	113.74
31	1C	517	DGD	O3G-C1D-C2D	2.78	112.65	108.30
27	1E	102	PL9	C10-C9-C11	2.78	119.95	115.27
26	1I	102	BCR	C12-C13-C14	2.78	123.20	118.94
26	1D	406	BCR	C12-C13-C14	2.78	123.20	118.94
23	1C	509	CLA	C1-C2-C3	-2.77	121.25	126.04
23	1C	502	CLA	CHD-C1D-ND	-2.77	121.91	124.45
23	1B	601	CLA	C1D-CHD-C4C	-2.77	120.09	126.06
23	1C	506	CLA	CMC-C2C-C1C	2.77	129.25	125.04
23	1B	607	CLA	CED-O2D-CGD	2.76	122.19	115.94

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	1B	601	CLA	C4C-C3C-C2C	-2.76	102.87	106.90
23	1C	506	CLA	CMD-C2D-C3D	-2.76	121.26	127.61
23	1A	405	CLA	C3B-C4B-NB	2.76	113.08	110.52
23	1B	603	CLA	O2A-CGA-CBA	2.76	120.57	111.91
26	1B	617	BCR	C36-C18-C17	-2.76	119.06	122.92
23	1A	402	CLA	C2D-C1D-ND	2.75	112.13	110.10
26	1Z	102	BCR	C38-C26-C25	2.75	127.62	124.53
23	1B	605	CLA	C1-C2-C3	-2.75	121.28	126.04
23	1C	503	CLA	CMC-C2C-C1C	2.75	129.23	125.04
23	1B	604	CLA	CHB-C1B-NB	-2.75	121.35	124.26
23	1B	606	CLA	C1-C2-C3	-2.74	121.30	126.04
26	1T	101	BCR	C30-C25-C26	-2.74	118.75	122.61
23	1B	610	CLA	CHD-C1D-ND	-2.73	121.94	124.45
28	1D	411	SQD	O6-C44-C45	2.73	117.49	110.90
23	1B	604	CLA	CMB-C2B-C1B	2.72	129.52	125.37
26	1J	101	BCR	C16-C17-C18	2.72	131.19	127.31
23	1B	615	CLA	CAC-C3C-C4C	2.72	128.34	124.81
23	1B	613	CLA	C4A-NA-C1A	2.72	107.93	106.71
23	1B	602	CLA	CHB-C4A-NA	2.71	128.27	124.51
23	1B	606	CLA	CMD-C2D-C3D	-2.71	121.37	127.61
23	1B	607	CLA	O2D-CGD-O1D	-2.71	118.53	123.84
23	1B	608	CLA	C4-C3-C5	2.71	119.84	115.27
26	1D	406	BCR	C15-C16-C17	2.71	129.03	123.47
23	1B	612	CLA	CHC-C4B-NB	-2.71	121.39	124.26
23	1C	510	CLA	C2D-C1D-ND	2.71	112.10	110.10
26	1Z	101	BCR	C12-C13-C14	2.71	123.09	118.94
23	1C	512	CLA	CMB-C2B-C1B	2.70	129.48	125.37
23	1B	606	CLA	C3D-C2D-C1D	-2.70	102.15	105.83
23	1B	612	CLA	O2A-CGA-CBA	2.70	120.37	111.91
23	1C	503	CLA	CMB-C2B-C1B	2.69	129.47	125.37
23	1B	605	CLA	CHB-C1B-NB	-2.69	121.41	124.26
26	1D	406	BCR	C24-C25-C26	2.69	127.98	121.46
31	1C	516	DGD	C2G-O2G-C1B	-2.69	111.17	117.79
23	1A	402	CLA	C4-C3-C5	2.69	119.79	115.27
23	1D	404	CLA	CHB-C4A-NA	2.69	128.23	124.51
23	1B	615	CLA	CMC-C2C-C1C	2.69	129.13	125.04
23	1C	511	CLA	O1D-CGD-CBD	-2.68	118.99	124.48
23	1A	402	CLA	C1C-C2C-C3C	-2.68	104.14	106.96
23	1C	502	CLA	O2D-CGD-O1D	-2.68	118.61	123.84
27	1E	102	PL9	C53-C6-C1	2.68	120.46	114.99
23	1B	606	CLA	O2A-CGA-CBA	2.67	120.29	111.91
23	1C	511	CLA	O2D-CGD-O1D	-2.66	118.63	123.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
26	1J	101	BCR	C33-C5-C6	2.66	127.51	124.53
34	1E	103	HEM	C4C-CHD-C1D	-2.65	120.33	126.06
23	1B	609	CLA	CHB-C4A-NA	2.65	128.18	124.51
23	1B	601	CLA	C3B-C4B-NB	2.64	112.97	110.52
26	1A	407	BCR	C33-C5-C6	2.64	127.49	124.53
23	1B	614	CLA	CHC-C1C-NC	2.64	128.21	124.20
26	1B	617	BCR	C24-C25-C26	2.64	127.86	121.46
26	1I	102	BCR	C36-C18-C17	-2.64	119.23	122.92
23	1B	615	CLA	CAA-C2A-C3A	-2.64	109.94	116.10
23	1C	501	CLA	CHB-C1B-NB	-2.63	121.47	124.26
28	1D	411	SQD	O5-C1-O6	-2.63	103.74	109.97
28	1D	411	SQD	O2-C2-C3	-2.63	104.26	110.35
23	1B	603	CLA	C1-C2-C3	-2.63	121.49	126.04
23	1C	504	CLA	C2A-C1A-CHA	-2.62	119.27	123.86
23	1C	502	CLA	O2A-CGA-CBA	2.62	120.14	111.91
23	1C	505	CLA	CMB-C2B-C1B	2.62	129.36	125.37
23	1B	604	CLA	C4-C3-C5	2.62	119.68	115.27
23	1C	504	CLA	CMD-C2D-C3D	-2.62	121.59	127.61
23	1B	603	CLA	CHB-C4A-NA	2.61	128.13	124.51
23	1C	507	CLA	C2D-C1D-ND	2.61	112.03	110.10
27	1E	102	PL9	C32-C33-C34	-2.61	121.38	127.66
23	1C	503	CLA	O2A-CGA-CBA	2.61	120.08	111.91
26	1Z	102	BCR	C19-C18-C17	2.61	122.94	118.94
23	1B	608	CLA	CMB-C2B-C3B	2.60	132.89	126.59
23	1C	512	CLA	O2D-CGD-O1D	-2.60	118.75	123.84
23	1C	501	CLA	C2D-C1D-ND	2.60	112.02	110.10
27	1E	102	PL9	C22-C23-C24	-2.60	121.39	127.66
23	1B	609	CLA	C1-C2-C3	-2.60	121.55	126.04
23	1B	608	CLA	C4A-NA-C1A	2.60	107.87	106.71
23	1C	506	CLA	O2A-CGA-CBA	2.59	120.04	111.91
26	1B	619	BCR	C15-C16-C17	2.59	128.78	123.47
28	1D	412	SQD	C1-O5-C5	2.59	118.77	113.69
31	1B	626	DGD	O1G-C1A-C2A	2.59	120.03	111.91
23	1C	510	CLA	C4A-NA-C1A	2.59	107.87	106.71
23	1B	609	CLA	CMD-C2D-C3D	-2.58	121.67	127.61
23	1A	402	CLA	CHB-C1B-NB	-2.58	121.52	124.26
26	1B	618	BCR	C33-C5-C6	2.58	127.43	124.53
23	1D	404	CLA	C1D-CHD-C4C	-2.58	120.49	126.06
27	1E	102	PL9	C51-C49-C50	2.58	120.30	114.60
23	1C	509	CLA	O2A-CGA-CBA	2.58	120.00	111.91
23	1A	402	CLA	C3B-C4B-NB	2.58	112.91	110.52
23	1A	405	CLA	O2D-CGD-O1D	-2.58	118.80	123.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	1C	513	CLA	CMC-C2C-C1C	2.57	128.96	125.04
26	1H	102	BCR	C23-C22-C21	2.57	122.89	118.94
23	1B	616	CLA	O1D-CGD-CBD	-2.57	119.22	124.48
23	1B	612	CLA	C1-C2-C3	-2.57	121.60	126.04
23	1C	511	CLA	C3B-C4B-NB	2.57	112.90	110.52
23	1D	404	CLA	CHB-C1B-NB	-2.57	121.54	124.26
23	1B	606	CLA	CAC-C3C-C4C	2.56	128.14	124.81
23	1C	501	CLA	O2D-CGD-O1D	-2.56	118.84	123.84
26	1T	101	BCR	C35-C13-C14	-2.55	119.35	122.92
31	1C	518	DGD	O1G-C1A-C2A	2.55	119.91	111.91
28	1A	411	SQD	O47-C7-O49	-2.55	117.55	123.70
23	1C	509	CLA	C4-C3-C5	2.54	119.55	115.27
26	1J	101	BCR	C1-C6-C5	-2.54	119.03	122.61
23	1B	608	CLA	CMD-C2D-C3D	-2.54	121.77	127.61
23	1C	509	CLA	C4C-C3C-C2C	-2.54	103.20	106.90
28	1A	411	SQD	O8-S-C6	-2.53	101.70	105.74
26	1H	102	BCR	C30-C25-C26	-2.53	119.05	122.61
23	1C	508	CLA	CMC-C2C-C1C	2.53	128.90	125.04
23	1B	613	CLA	CAC-C3C-C4C	2.53	128.09	124.81
28	1B	620	SQD	O47-C45-C46	-2.53	99.24	108.40
23	1D	405	CLA	CMB-C2B-C1B	2.53	129.22	125.37
23	1B	607	CLA	C4-C3-C5	2.53	119.52	115.27
27	1E	102	PL9	C30-C29-C28	-2.52	117.20	123.68
26	1T	101	BCR	C15-C14-C13	2.52	130.91	127.31
26	1H	102	BCR	C30-C25-C24	2.52	122.92	115.78
23	1D	402	CLA	C4C-C3C-C2C	-2.52	103.22	106.90
23	1C	504	CLA	C1-C2-C3	-2.52	121.69	126.04
23	1B	604	CLA	C2A-C1A-CHA	-2.52	119.46	123.86
23	1C	502	CLA	C2D-C1D-ND	2.51	111.96	110.10
23	1B	608	CLA	CHB-C1B-NB	-2.51	121.60	124.26
23	1B	605	CLA	O2A-CGA-CBA	2.51	119.79	111.91
23	1C	513	CLA	C3B-C4B-NB	2.51	112.85	110.52
26	1Z	101	BCR	C38-C26-C25	2.51	127.34	124.53
23	1B	612	CLA	CHB-C1B-NB	-2.51	121.60	124.26
23	1C	507	CLA	O2A-CGA-CBA	2.50	119.77	111.91
26	1A	407	BCR	C38-C26-C25	2.50	127.34	124.53
23	1D	404	CLA	C2A-C1A-CHA	-2.50	119.49	123.86
26	1B	619	BCR	C7-C8-C9	2.50	130.01	126.23
23	1C	509	CLA	CAC-C3C-C4C	2.50	128.05	124.81
23	1B	602	CLA	CHC-C4B-NB	-2.50	121.61	124.26
23	1B	601	CLA	C2A-C1A-CHA	-2.50	119.49	123.86
23	1B	616	CLA	C4-C3-C5	2.50	119.47	115.27

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	1B	607	CLA	O1D-CGD-CBD	-2.49	119.38	124.48
23	1C	510	CLA	CHC-C4B-NB	-2.49	121.62	124.26
23	1B	611	CLA	C1-C2-C3	-2.49	121.74	126.04
23	1C	501	CLA	C1-C2-C3	-2.48	121.75	126.04
26	1Z	102	BCR	C10-C11-C12	2.48	130.97	123.22
23	1D	401	CLA	C4C-C3C-C2C	-2.48	103.28	106.90
23	1C	508	CLA	CED-O2D-CGD	2.48	121.55	115.94
23	1A	405	CLA	CMD-C2D-C3D	-2.48	121.91	127.61
23	1C	504	CLA	CHB-C1B-NB	-2.48	121.63	124.26
23	1B	612	CLA	C4-C3-C5	2.48	119.44	115.27
26	1B	618	BCR	C24-C25-C26	2.48	127.46	121.46
23	1D	404	CLA	O2A-CGA-CBA	2.48	119.68	111.91
23	1B	606	CLA	CMC-C2C-C1C	2.47	128.81	125.04
23	1B	611	CLA	O2A-CGA-CBA	2.47	119.67	111.91
27	1E	102	PL9	C47-C48-C49	-2.47	119.30	127.75
23	1B	607	CLA	O2A-CGA-O1A	-2.47	117.36	123.59
26	1Z	101	BCR	C8-C9-C10	2.47	122.72	118.94
23	1B	601	CLA	O2D-CGD-O1D	-2.46	119.02	123.84
23	1B	613	CLA	O2A-CGA-CBA	2.46	119.64	111.91
23	1C	510	CLA	CMC-C2C-C1C	2.46	128.79	125.04
23	1B	609	CLA	O2D-CGD-O1D	-2.46	119.03	123.84
26	1D	406	BCR	C7-C6-C5	2.45	127.40	121.46
23	1B	601	CLA	CAC-C3C-C4C	2.45	127.99	124.81
23	1C	508	CLA	C1-C2-C3	-2.45	121.81	126.04
23	1C	509	CLA	O2D-CGD-O1D	-2.45	119.06	123.84
23	1B	612	CLA	C2A-C1A-CHA	-2.44	119.58	123.86
26	1B	619	BCR	C19-C18-C17	2.44	122.68	118.94
23	1C	508	CLA	O2A-CGA-CBA	2.43	119.54	111.91
23	1B	614	CLA	C3B-C4B-NB	2.43	112.77	110.52
23	1C	508	CLA	CHB-C4A-NA	2.43	127.87	124.51
23	1B	610	CLA	O2A-CGA-CBA	2.43	119.53	111.91
23	1B	611	CLA	C4C-C3C-C2C	-2.43	103.36	106.90
23	1B	601	CLA	O2A-CGA-O1A	-2.42	117.47	123.59
23	1B	616	CLA	C2D-C1D-ND	2.42	111.89	110.10
23	1C	505	CLA	C4-C3-C5	2.42	119.34	115.27
23	1C	510	CLA	C4-C3-C5	2.42	119.34	115.27
23	1D	405	CLA	CMC-C2C-C1C	2.42	128.72	125.04
23	1D	404	CLA	C2D-C1D-ND	2.42	111.88	110.10
23	1C	502	CLA	CMD-C2D-C3D	-2.41	122.06	127.61
31	1C	518	DGD	C2G-O2G-C1B	-2.41	111.85	117.79
23	1B	610	CLA	C3B-C4B-NB	2.41	112.75	110.52
23	1C	512	CLA	CAA-C2A-C3A	-2.41	106.18	112.78

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	1B	610	CLA	CHB-C1B-NB	-2.40	121.71	124.26
23	1B	615	CLA	O2D-CGD-O1D	-2.40	119.14	123.84
31	1C	516	DGD	O1G-C1A-C2A	2.40	119.43	111.91
23	1B	609	CLA	C2D-C1D-ND	2.40	111.87	110.10
23	1B	611	CLA	CMB-C2B-C1B	2.39	129.01	125.37
23	1B	607	CLA	C1-C2-C3	-2.39	121.91	126.04
23	1C	508	CLA	C4D-CHA-C1A	-2.39	118.34	121.25
23	1C	506	CLA	CAC-C3C-C4C	2.38	127.90	124.81
23	1B	614	CLA	CHD-C1D-ND	-2.38	122.27	124.45
23	1B	614	CLA	O2D-CGD-O1D	-2.38	119.19	123.84
23	1C	501	CLA	CMB-C2B-C3B	2.38	132.34	126.59
26	1J	101	BCR	C21-C20-C19	2.38	130.63	123.22
28	1D	412	SQD	O8-S-C6	-2.37	101.96	105.74
23	1B	601	CLA	CHB-C1B-NB	-2.37	121.75	124.26
23	1B	613	CLA	CMC-C2C-C1C	2.37	128.65	125.04
23	1B	608	CLA	CAC-C3C-C4C	2.37	127.88	124.81
26	1B	619	BCR	C24-C25-C26	2.36	127.19	121.46
26	1D	406	BCR	C19-C18-C17	2.36	122.56	118.94
23	1B	606	CLA	CHB-C1B-C2B	-2.35	120.59	127.24
23	1B	610	CLA	O2D-CGD-O1D	-2.35	119.25	123.84
23	1A	402	CLA	CMB-C2B-C1B	2.35	128.94	125.37
23	1D	401	CLA	CMC-C2C-C1C	2.35	128.61	125.04
23	1A	402	CLA	O2A-CGA-CBA	2.34	119.27	111.91
23	1C	503	CLA	O2D-CGD-O1D	-2.34	119.26	123.84
23	1B	606	CLA	CHB-C4A-NA	2.34	127.75	124.51
26	1J	101	BCR	C34-C9-C8	2.33	121.75	118.08
23	1C	510	CLA	O2A-CGA-CBA	2.33	119.23	111.91
23	1B	606	CLA	C2A-C1A-CHA	-2.33	119.78	123.86
29	1I	101	LHG	O4-P-O5	2.33	119.80	110.68
26	1B	619	BCR	C2-C1-C6	2.32	114.05	110.48
23	1B	614	CLA	CBC-CAC-C3C	-2.32	106.04	112.43
23	1B	603	CLA	C2A-C1A-CHA	-2.32	119.81	123.86
23	1B	605	CLA	C4A-NA-C1A	2.32	107.75	106.71
23	1B	604	CLA	O2D-CGD-O1D	-2.31	119.31	123.84
23	1C	502	CLA	C4-C3-C5	2.31	119.16	115.27
26	1T	101	BCR	C7-C6-C5	2.31	127.06	121.46
34	1E	103	HEM	C4A-NA-C1A	2.31	107.61	105.35
26	1T	101	BCR	C24-C25-C26	-2.31	115.87	121.46
26	1B	618	BCR	C34-C9-C8	2.31	121.71	118.08
26	1T	101	BCR	C29-C30-C25	2.30	114.02	110.48
23	1B	610	CLA	C6-C5-C3	-2.29	107.44	113.45
23	1B	610	CLA	CAA-CBA-CGA	-2.29	106.55	113.25

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	1B	605	CLA	C4-C3-C5	2.29	119.13	115.27
23	1C	505	CLA	O1D-CGD-CBD	-2.29	119.79	124.48
23	1C	504	CLA	O2A-CGA-CBA	2.29	119.10	111.91
23	1B	601	CLA	O1D-CGD-CBD	-2.29	119.79	124.48
23	1C	513	CLA	CAC-C3C-C2C	2.29	131.44	127.53
28	1D	411	SQD	O6-C1-C2	2.29	111.87	108.30
23	1D	401	CLA	C1-C2-C3	-2.28	122.10	126.04
26	1D	406	BCR	C34-C9-C8	2.28	121.67	118.08
23	1C	505	CLA	O2A-CGA-CBA	2.27	119.03	111.91
28	1A	410	SQD	O8-S-C6	-2.26	102.13	105.74
24	1A	403	PHO	C1C-C2C-C3C	-2.26	106.73	108.61
23	1C	509	CLA	C2D-C1D-ND	2.26	111.77	110.10
23	1B	616	CLA	CAA-CBA-CGA	-2.26	106.65	113.25
23	1C	501	CLA	C2A-C1A-CHA	-2.26	119.91	123.86
26	1A	407	BCR	C8-C9-C10	2.26	122.41	118.94
26	1Z	101	BCR	C24-C25-C26	2.26	126.92	121.46
26	1H	102	BCR	C34-C9-C8	2.25	121.63	118.08
28	1D	411	SQD	C1-O5-C5	2.25	118.11	113.69
23	1C	513	CLA	CED-O2D-CGD	2.25	121.03	115.94
26	1B	619	BCR	C29-C30-C25	2.25	113.94	110.48
23	1D	401	CLA	CMB-C2B-C1B	2.25	128.79	125.37
26	1Z	101	BCR	C33-C5-C6	2.24	127.05	124.53
23	1B	605	CLA	C2D-C1D-ND	2.24	111.76	110.10
23	1B	609	CLA	CMC-C2C-C1C	2.24	128.46	125.04
23	1B	607	CLA	CMD-C2D-C3D	-2.24	122.46	127.61
23	1C	504	CLA	O2D-CGD-O1D	-2.24	119.46	123.84
26	1B	618	BCR	C1-C6-C5	-2.24	119.46	122.61
23	1D	404	CLA	O2D-CGD-O1D	-2.23	119.47	123.84
23	1B	613	CLA	C2A-C1A-CHA	-2.23	119.96	123.86
23	1D	401	CLA	O2D-CGD-O1D	-2.23	119.48	123.84
35	1X	101	3PH	O13-P-O11	-2.23	100.81	106.73
26	1T	101	BCR	C1-C6-C5	-2.23	119.48	122.61
26	1D	406	BCR	C37-C22-C23	2.22	121.58	118.08
23	1D	402	CLA	C5-C3-C4	2.22	119.51	114.60
26	1T	101	BCR	C34-C9-C8	2.22	121.57	118.08
23	1B	606	CLA	CMB-C2B-C3B	2.22	131.96	126.59
28	1C	522	SQD	O8-S-C6	-2.22	102.21	105.74
23	1D	402	CLA	CMC-C2C-C1C	2.22	128.41	125.04
24	1A	404	PHO	C1C-C2C-C3C	-2.22	106.77	108.61
23	1B	609	CLA	CHB-C1B-C2B	-2.21	120.99	127.24
23	1C	510	CLA	CMB-C2B-C1B	2.21	128.74	125.37
23	1B	604	CLA	CMC-C2C-C1C	2.21	128.41	125.04

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
26	1H	102	BCR	C7-C6-C5	2.21	126.81	121.46
26	1H	102	BCR	C12-C13-C14	2.21	122.33	118.94
26	1J	101	BCR	C19-C18-C17	2.20	122.32	118.94
26	1I	102	BCR	C38-C26-C25	2.20	127.00	124.53
23	1B	616	CLA	C4D-C3D-CAD	2.20	110.69	108.10
23	1B	610	CLA	C11-C12-C13	-2.20	108.82	115.92
23	1B	603	CLA	CED-O2D-CGD	2.20	120.91	115.94
23	1B	606	CLA	O2D-CGD-O1D	-2.19	119.55	123.84
23	1C	505	CLA	C4D-C3D-CAD	2.19	110.68	108.10
23	1C	507	CLA	CHB-C1B-C2B	-2.19	121.05	127.24
26	1Z	102	BCR	C1-C6-C5	-2.19	119.53	122.61
23	1D	401	CLA	C4-C3-C5	2.19	118.95	115.27
26	1T	101	BCR	C2-C1-C6	2.19	113.85	110.48
26	1B	617	BCR	C8-C9-C10	2.19	122.30	118.94
23	1C	506	CLA	O2D-CGD-O1D	-2.18	119.57	123.84
26	1I	102	BCR	C1-C6-C5	-2.18	119.54	122.61
23	1B	613	CLA	O2D-CGD-O1D	-2.17	119.60	123.84
23	1C	508	CLA	C6-C5-C3	-2.17	107.77	113.45
26	1Z	102	BCR	C24-C25-C26	2.17	126.71	121.46
23	1B	602	CLA	C2A-C1A-CHA	-2.16	120.08	123.86
23	1C	509	CLA	CMB-C2B-C3B	2.16	131.81	126.59
23	1B	602	CLA	O2A-CGA-O1A	-2.15	118.15	123.59
24	1A	404	PHO	CMB-C2B-C3B	2.15	128.70	124.68
23	1D	402	CLA	CED-O2D-CGD	2.15	120.80	115.94
23	1B	610	CLA	C1-C2-C3	-2.15	122.33	126.04
31	1C	517	DGD	O1G-C1A-O1A	-2.15	118.18	123.59
23	1C	512	CLA	CMC-C2C-C1C	2.14	128.30	125.04
23	1B	612	CLA	CMB-C2B-C3B	2.14	131.78	126.59
23	1D	404	CLA	OBD-CAD-C3D	-2.14	123.37	128.52
23	1B	615	CLA	C2A-C1A-CHA	-2.13	120.13	123.85
23	1B	602	CLA	CHB-C1B-C2B	-2.13	121.21	127.24
23	1B	616	CLA	O2A-CGA-O1A	-2.13	118.22	123.59
26	1Z	102	BCR	C2-C1-C6	2.13	113.76	110.48
23	1B	603	CLA	CMC-C2C-C1C	2.13	128.28	125.04
23	1B	605	CLA	O2D-CGD-O1D	-2.12	119.69	123.84
26	1B	618	BCR	C37-C22-C23	2.12	121.42	118.08
23	1A	405	CLA	C2A-C1A-CHA	-2.12	120.15	123.86
23	1B	602	CLA	O1D-CGD-CBD	-2.12	120.16	124.48
23	1C	507	CLA	CHB-C1B-NB	-2.11	122.02	124.26
23	1D	405	CLA	O2D-CGD-O1D	-2.11	119.71	123.84
23	1B	608	CLA	O2D-CGD-O1D	-2.11	119.71	123.84
23	1C	511	CLA	O2A-CGA-CBA	2.11	120.56	112.23

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	1E	103	HEM	C4D-ND-C1D	2.11	107.25	105.07
23	1C	512	CLA	O2A-C1-C2	2.10	114.14	108.64
23	1D	402	CLA	C4A-NA-C1A	2.09	107.65	106.71
23	1D	404	CLA	CMB-C2B-C1B	2.09	128.55	125.37
23	1B	611	CLA	CBC-CAC-C3C	-2.09	106.68	112.43
23	1C	512	CLA	C2A-C1A-CHA	-2.09	120.21	123.86
23	1D	401	CLA	O1D-CGD-CBD	-2.08	120.23	124.48
23	1D	401	CLA	C11-C12-C13	-2.07	109.23	115.92
23	1D	401	CLA	O2A-CGA-O1A	-2.07	118.37	123.59
23	1B	609	CLA	C4-C3-C5	2.06	118.73	115.27
23	1B	612	CLA	C2D-C1D-ND	2.05	111.62	110.10
23	1D	402	CLA	C2A-C1A-CHA	-2.05	120.28	123.86
28	1A	411	SQD	C45-O47-C7	2.05	122.83	117.79
23	1C	512	CLA	CED-O2D-CGD	2.05	120.57	115.94
23	1B	613	CLA	O2A-CGA-O1A	-2.04	118.43	123.59
23	1C	501	CLA	CHB-C1B-C2B	-2.04	121.47	127.24
26	1B	617	BCR	C30-C25-C24	-2.04	110.00	115.78
24	1A	403	PHO	CMB-C2B-C3B	2.04	128.49	124.68
23	1C	506	CLA	O2A-CGA-O1A	-2.04	118.45	123.59
26	1T	101	BCR	C11-C10-C9	2.04	130.22	127.31
23	1C	503	CLA	CAA-CBA-CGA	-2.04	107.30	113.25
27	1D	407	PL9	C7-C3-C2	-2.04	120.62	123.30
26	1I	102	BCR	C20-C21-C22	2.03	130.21	127.31
26	1B	617	BCR	C37-C22-C23	2.03	121.27	118.08
34	1E	103	HEM	CBA-CAA-C2A	-2.02	107.00	112.63
23	1D	405	CLA	CAA-C2A-C3A	-2.02	109.20	114.26
23	1C	505	CLA	C2A-C1A-CHA	-2.02	120.32	123.86
23	1C	513	CLA	C2A-C1A-CHA	-2.02	120.33	123.85
26	1A	407	BCR	C7-C6-C5	2.02	126.35	121.46
28	1A	411	SQD	O47-C45-C46	2.02	115.71	108.40
23	1C	508	CLA	C6-C7-C8	-2.02	109.40	115.92
23	1B	601	CLA	CAA-C2A-C3A	-2.02	107.25	112.78
31	1C	518	DGD	O6D-C5D-C6D	2.02	110.73	106.67
29	1C	526	LHG	O7-C5-C4	2.01	115.69	108.40
23	1C	510	CLA	CAA-C2A-C3A	-2.00	107.29	112.78
26	1I	102	BCR	C7-C6-C5	2.00	126.31	121.46

All (27) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
23	1A	402	CLA	C8
23	1B	601	CLA	C8

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Mol	Chain	Res	Type	Atom
23	1B	602	CLA	C8
23	1B	603	CLA	C8
23	1B	604	CLA	C8
23	1B	605	CLA	C8
23	1B	606	CLA	C8
23	1B	607	CLA	C8
23	1B	608	CLA	C8
23	1B	609	CLA	C8
23	1B	610	CLA	C8
23	1B	611	CLA	C8
23	1B	612	CLA	C8
23	1B	613	CLA	C8
23	1B	616	CLA	C8
23	1C	501	CLA	C8
23	1C	502	CLA	C8
23	1C	503	CLA	C8
23	1C	504	CLA	C8
23	1C	505	CLA	C8
23	1C	507	CLA	C8
23	1C	508	CLA	C8
23	1C	509	CLA	C8
23	1C	510	CLA	C8
23	1C	512	CLA	C8
23	1D	401	CLA	C8
23	1D	404	CLA	C8

All (746) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
23	1B	601	CLA	C2B-C3B-CAB-CBB
23	1B	601	CLA	C4B-C3B-CAB-CBB
23	1B	602	CLA	C4B-C3B-CAB-CBB
23	1B	602	CLA	C6-C7-C8-C9
23	1B	610	CLA	C1A-C2A-CAA-CBA
23	1B	610	CLA	C3A-C2A-CAA-CBA
23	1B	611	CLA	C4-C3-C5-C6
23	1B	612	CLA	CHA-CBD-CGD-O1D
23	1B	612	CLA	CHA-CBD-CGD-O2D
23	1B	612	CLA	CAD-CBD-CGD-O1D
23	1B	612	CLA	CAD-CBD-CGD-O2D
23	1B	615	CLA	CHA-CBD-CGD-O1D
23	1B	615	CLA	CHA-CBD-CGD-O2D

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Mol	Chain	Res	Type	Atoms
23	1B	615	CLA	CAD-CBD-CGD-O1D
23	1C	503	CLA	C2-C3-C5-C6
23	1C	503	CLA	C4-C3-C5-C6
23	1C	505	CLA	CHA-CBD-CGD-O1D
23	1C	505	CLA	CHA-CBD-CGD-O2D
23	1D	401	CLA	CHA-CBD-CGD-O1D
23	1D	401	CLA	CHA-CBD-CGD-O2D
23	1D	402	CLA	CHA-CBD-CGD-O1D
23	1D	402	CLA	CHA-CBD-CGD-O2D
23	1D	404	CLA	C1A-C2A-CAA-CBA
24	1A	403	PHO	CBA-CGA-O2A-C1
24	1A	403	PHO	O1A-CGA-O2A-C1
26	1B	617	BCR	C7-C8-C9-C10
26	1B	617	BCR	C7-C8-C9-C34
26	1B	619	BCR	C7-C8-C9-C10
26	1D	406	BCR	C23-C24-C25-C26
26	1D	406	BCR	C23-C24-C25-C30
26	1J	101	BCR	C7-C8-C9-C10
26	1T	101	BCR	C17-C18-C19-C20
26	1T	101	BCR	C36-C18-C19-C20
26	1T	101	BCR	C21-C22-C23-C24
26	1T	101	BCR	C37-C22-C23-C24
27	1A	408	PL9	C15-C14-C16-C17
27	1E	102	PL9	C9-C11-C12-C13
27	1E	102	PL9	C13-C14-C16-C17
27	1E	102	PL9	C15-C14-C16-C17
27	1H	101	PL9	C20-C19-C21-C22
27	1H	101	PL9	C19-C21-C22-C23
27	1H	101	PL9	C43-C44-C46-C47
27	1H	101	PL9	C45-C44-C46-C47
28	1A	410	SQD	C2-C1-O6-C44
28	1A	410	SQD	O5-C1-O6-C44
28	1A	411	SQD	O49-C7-O47-C45
28	1A	411	SQD	C8-C7-O47-C45
28	1A	411	SQD	O10-C23-O48-C46
28	1A	411	SQD	C24-C23-O48-C46
28	1B	620	SQD	C2-C1-O6-C44
28	1B	620	SQD	O5-C1-O6-C44
28	1B	622	SQD	O49-C7-O47-C45
28	1B	622	SQD	C8-C7-O47-C45
28	1D	411	SQD	C45-C44-O6-C1
28	1D	411	SQD	O5-C1-O6-C44

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Mol	Chain	Res	Type	Atoms
28	1D	412	SQD	O5-C1-O6-C44
28	1M	101	SQD	O5-C1-O6-C44
28	1M	101	SQD	O10-C23-O48-C46
28	1M	101	SQD	C24-C23-O48-C46
29	1B	621	LHG	C4-O6-P-O3
29	1B	623	LHG	O10-C23-O8-C6
29	1B	623	LHG	C24-C23-O8-C6
29	1C	519	LHG	C3-O3-P-O5
29	1C	524	LHG	C3-O3-P-O5
29	1C	524	LHG	O9-C7-O7-C5
29	1C	524	LHG	C8-C7-O7-C5
29	1C	526	LHG	O10-C23-O8-C6
29	1C	526	LHG	C24-C23-O8-C6
29	1D	409	LHG	C3-O3-P-O5
29	1D	409	LHG	C4-O6-P-O4
29	1E	101	LHG	C3-O3-P-O4
29	1E	101	LHG	C3-O3-P-O5
29	1E	101	LHG	C3-O3-P-O6
29	1F	101	LHG	C4-O6-P-O5
29	1F	101	LHG	O10-C23-O8-C6
29	1F	101	LHG	C24-C23-O8-C6
29	1J	102	LHG	C4-O6-P-O5
29	1K	101	LHG	C3-O3-P-O5
29	1K	101	LHG	C3-O3-P-O6
29	1L	101	LHG	C3-O3-P-O5
29	1L	101	LHG	C3-O3-P-O6
29	1P	201	LHG	C4-O6-P-O5
29	1V	201	LHG	C3-O3-P-O5
29	1W	101	LHG	C4-O6-P-O3
29	1W	101	LHG	C4-O6-P-O5
29	1W	101	LHG	C5-C4-O6-P
29	1W	101	LHG	O10-C23-O8-C6
29	1W	101	LHG	C24-C23-O8-C6
29	1W	102	LHG	O2-C2-C3-O3
29	1W	102	LHG	C2-C3-O3-P
29	1W	102	LHG	C3-O3-P-O5
29	1W	102	LHG	C3-O3-P-O6
29	1W	102	LHG	C4-O6-P-O3
29	1W	102	LHG	C4-O6-P-O5
29	1W	102	LHG	C5-C4-O6-P
29	1W	102	LHG	O9-C7-O7-C5
29	1W	102	LHG	C8-C7-O7-C5

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Mol	Chain	Res	Type	Atoms
30	1B	624	MGE	C2B-C1B-O2G-C2G
30	1B	624	MGE	O1B-C1B-O2G-C2G
30	1B	625	MGE	C2D-C1D-O3G-C3G
30	1B	625	MGE	O6D-C1D-O3G-C3G
30	1C	525	MGE	O6D-C1D-O3G-C3G
32	1C	515	LNL	C12-C13-C14-C15
34	1E	103	HEM	C2B-C3B-CAB-CBB
34	1E	103	HEM	C4B-C3B-CAB-CBB
34	1E	103	HEM	C2C-C3C-CAC-CBC
34	1E	103	HEM	C4C-C3C-CAC-CBC
35	1X	101	3PH	C1-O11-P-O13
35	1X	101	3PH	C1-O11-P-O14
35	1X	101	3PH	O21-C2-C3-O31
35	1X	101	3PH	C22-C21-O21-C2
23	1B	603	CLA	O1D-CGD-O2D-CED
23	1A	402	CLA	CBD-CGD-O2D-CED
23	1B	603	CLA	CBD-CGD-O2D-CED
23	1B	608	CLA	CBD-CGD-O2D-CED
23	1B	611	CLA	CBD-CGD-O2D-CED
23	1C	506	CLA	CBD-CGD-O2D-CED
23	1C	507	CLA	CBD-CGD-O2D-CED
23	1C	510	CLA	CBD-CGD-O2D-CED
23	1D	405	CLA	CBD-CGD-O2D-CED
23	1A	402	CLA	O1D-CGD-O2D-CED
23	1B	611	CLA	O1D-CGD-O2D-CED
23	1D	405	CLA	O1D-CGD-O2D-CED
23	1B	607	CLA	CBD-CGD-O2D-CED
23	1C	508	CLA	CBD-CGD-O2D-CED
35	1X	101	3PH	O22-C21-O21-C2
23	1B	605	CLA	C3-C5-C6-C7
23	1B	608	CLA	C3-C5-C6-C7
23	1B	609	CLA	C3-C5-C6-C7
23	1C	502	CLA	C3-C5-C6-C7
23	1C	505	CLA	C3-C5-C6-C7
23	1C	507	CLA	C3-C5-C6-C7
23	1B	601	CLA	CBD-CGD-O2D-CED
23	1C	505	CLA	O1A-CGA-O2A-C1
23	1B	612	CLA	C4-C3-C5-C6
23	1C	504	CLA	C4-C3-C5-C6
23	1C	507	CLA	C4-C3-C5-C6
23	1C	512	CLA	C4-C3-C5-C6
23	1B	612	CLA	C2-C3-C5-C6

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Mol	Chain	Res	Type	Atoms
27	1H	101	PL9	C18-C19-C21-C22
23	1C	503	CLA	CBD-CGD-O2D-CED
23	1B	604	CLA	C2A-CAA-CBA-CGA
23	1C	512	CLA	C2A-CAA-CBA-CGA
23	1B	601	CLA	C3-C5-C6-C7
23	1B	603	CLA	C3-C5-C6-C7
23	1B	606	CLA	C3-C5-C6-C7
23	1B	612	CLA	C3-C5-C6-C7
23	1C	509	CLA	C3-C5-C6-C7
26	1T	101	BCR	C19-C20-C21-C22
23	1B	609	CLA	CBD-CGD-O2D-CED
23	1C	511	CLA	CBD-CGD-O2D-CED
23	1D	402	CLA	CBD-CGD-O2D-CED
23	1C	510	CLA	O1D-CGD-O2D-CED
29	1C	526	LHG	O2-C2-C3-O3
23	1B	607	CLA	C3-C5-C6-C7
23	1B	616	CLA	C3-C5-C6-C7
23	1C	508	CLA	CBA-CGA-O2A-C1
23	1C	508	CLA	O1A-CGA-O2A-C1
23	1C	506	CLA	O1D-CGD-O2D-CED
23	1C	505	CLA	CBA-CGA-O2A-C1
29	1C	524	LHG	C2-C3-O3-P
23	1B	601	CLA	C4-C3-C5-C6
23	1B	602	CLA	C4-C3-C5-C6
27	1A	408	PL9	C12-C11-C9-C10
27	1A	408	PL9	C30-C29-C31-C32
27	1H	101	PL9	C15-C14-C16-C17
27	1H	101	PL9	C40-C39-C41-C42
23	1B	601	CLA	C2-C3-C5-C6
23	1B	602	CLA	C2-C3-C5-C6
23	1B	611	CLA	C2-C3-C5-C6
23	1C	504	CLA	C2-C3-C5-C6
27	1A	408	PL9	C12-C11-C9-C8
27	1A	408	PL9	C13-C14-C16-C17
27	1A	408	PL9	C28-C29-C31-C32
27	1H	101	PL9	C13-C14-C16-C17
27	1H	101	PL9	C38-C39-C41-C42
23	1B	608	CLA	O1D-CGD-O2D-CED
29	1W	102	LHG	C1-C2-C3-O3
23	1B	613	CLA	C3-C5-C6-C7
23	1B	603	CLA	CBA-CGA-O2A-C1
23	1B	612	CLA	CBA-CGA-O2A-C1

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Mol	Chain	Res	Type	Atoms
23	1B	607	CLA	O1D-CGD-O2D-CED
23	1C	507	CLA	O1D-CGD-O2D-CED
28	1A	411	SQD	C2-C1-O6-C44
28	1D	412	SQD	C2-C1-O6-C44
30	1C	525	MGE	C2D-C1D-O3G-C3G
23	1C	507	CLA	C2-C3-C5-C6
23	1D	404	CLA	C6-C7-C8-C9
23	1D	404	CLA	C11-C12-C13-C14
23	1D	404	CLA	C14-C13-C15-C16
26	1B	619	BCR	C7-C8-C9-C34
26	1H	102	BCR	C37-C22-C23-C24
26	1J	101	BCR	C7-C8-C9-C34
26	1J	101	BCR	C37-C22-C23-C24
26	1Z	102	BCR	C7-C8-C9-C34
26	1J	101	BCR	C21-C22-C23-C24
26	1Z	102	BCR	C7-C8-C9-C10
23	1C	508	CLA	O1D-CGD-O2D-CED
23	1B	602	CLA	C5-C6-C7-C8
23	1B	613	CLA	C8-C10-C11-C12
23	1C	508	CLA	C10-C11-C12-C13
23	1D	401	CLA	C10-C11-C12-C13
31	1C	516	DGD	C1A-C2A-C3A-C4A
32	1C	515	LNL	C1-C2-C3-C4
23	1B	605	CLA	C10-C11-C12-C13
23	1B	610	CLA	C13-C15-C16-C17
23	1C	502	CLA	C8-C10-C11-C12
23	1C	504	CLA	C13-C15-C16-C17
23	1D	404	CLA	C13-C15-C16-C17
31	1C	516	DGD	O6E-C5E-C6E-O5E
23	1B	609	CLA	C13-C15-C16-C17
23	1B	612	CLA	O1A-CGA-O2A-C1
23	1B	612	CLA	CBD-CGD-O2D-CED
23	1C	508	CLA	C8-C10-C11-C12
27	1A	408	PL9	C24-C26-C27-C28
27	1E	102	PL9	C14-C16-C17-C18
28	1C	522	SQD	C23-C24-C25-C26
23	1B	601	CLA	C13-C15-C16-C17
23	1C	501	CLA	C5-C6-C7-C8
23	1C	509	CLA	C8-C10-C11-C12
23	1B	603	CLA	O1A-CGA-O2A-C1
29	1W	101	LHG	C23-C24-C25-C26
29	1D	409	LHG	C4-O6-P-O3

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Mol	Chain	Res	Type	Atoms
23	1B	605	CLA	CBA-CGA-O2A-C1
23	1B	610	CLA	CBA-CGA-O2A-C1
29	1C	526	LHG	C1-C2-C3-O3
23	1B	603	CLA	C4-C3-C5-C6
23	1C	512	CLA	C2-C3-C5-C6
23	1B	606	CLA	C16-C17-C18-C19
23	1B	602	CLA	C3-C5-C6-C7
23	1C	501	CLA	C3-C5-C6-C7
23	1C	512	CLA	CBA-CGA-O2A-C1
28	1B	622	SQD	C7-C8-C9-C10
28	1A	409	SQD	C9-C10-C11-C12
28	1A	411	SQD	C26-C27-C28-C29
29	1K	101	LHG	C26-C27-C28-C29
29	1W	102	LHG	C25-C26-C27-C28
31	1B	626	DGD	C3B-C4B-C5B-C6B
31	1C	517	DGD	C4B-C5B-C6B-C7B
29	1C	520	LHG	C2-C3-O3-P
29	1C	520	LHG	C5-C4-O6-P
29	1B	621	LHG	C13-C14-C15-C16
29	1J	102	LHG	C31-C32-C33-C34
23	1C	503	CLA	O1D-CGD-O2D-CED
28	1B	622	SQD	C23-C24-C25-C26
23	1B	601	CLA	O1D-CGD-O2D-CED
28	1D	411	SQD	C28-C29-C30-C31
23	1C	512	CLA	O1A-CGA-O2A-C1
29	1C	526	LHG	C13-C14-C15-C16
31	1B	626	DGD	CAA-CBA-CCA-CDA
29	1J	102	LHG	C33-C34-C35-C36
31	1C	518	DGD	C5A-C6A-C7A-C8A
23	1B	601	CLA	C2A-CAA-CBA-CGA
23	1B	605	CLA	O1A-CGA-O2A-C1
23	1B	610	CLA	O1A-CGA-O2A-C1
26	1I	102	BCR	C37-C22-C23-C24
23	1C	512	CLA	C3-C5-C6-C7
29	1B	623	LHG	C13-C14-C15-C16
23	1D	404	CLA	C4B-C3B-CAB-CBB
27	1E	102	PL9	C44-C46-C47-C48
27	1H	101	PL9	C44-C46-C47-C48
23	1C	505	CLA	CBD-CGD-O2D-CED
23	1C	501	CLA	C10-C11-C12-C13
23	1C	509	CLA	C10-C11-C12-C13
31	1C	516	DGD	C6B-C7B-C8B-C9B

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Mol	Chain	Res	Type	Atoms
23	1D	402	CLA	O1D-CGD-O2D-CED
23	1C	511	CLA	C3A-C2A-CAA-CBA
23	1D	404	CLA	C3A-C2A-CAA-CBA
29	1W	101	LHG	C25-C26-C27-C28
30	1C	525	MGE	C3B-C4B-C5B-C6B
29	1V	201	LHG	C12-C13-C14-C15
23	1B	611	CLA	C3-C5-C6-C7
23	1B	609	CLA	C4-C3-C5-C6
23	1B	609	CLA	C2-C3-C5-C6
24	1A	404	PHO	C2A-CAA-CBA-CGA
23	1B	602	CLA	C2B-C3B-CAB-CBB
23	1D	404	CLA	C2B-C3B-CAB-CBB
23	1C	502	CLA	C10-C11-C12-C13
35	1X	101	3PH	C25-C26-C27-C28
31	1B	626	DGD	C4A-C5A-C6A-C7A
26	1B	617	BCR	C23-C24-C25-C26
26	1B	618	BCR	C1-C6-C7-C8
26	1B	618	BCR	C23-C24-C25-C26
26	1B	618	BCR	C23-C24-C25-C30
26	1B	619	BCR	C23-C24-C25-C26
26	1D	406	BCR	C1-C6-C7-C8
26	1D	406	BCR	C5-C6-C7-C8
26	1H	102	BCR	C23-C24-C25-C30
26	1I	102	BCR	C1-C6-C7-C8
26	1T	101	BCR	C1-C6-C7-C8
26	1T	101	BCR	C5-C6-C7-C8
26	1Z	101	BCR	C23-C24-C25-C26
34	1E	103	HEM	C2A-CAA-CBA-CGA
31	1C	516	DGD	C4B-C5B-C6B-C7B
23	1B	605	CLA	CBD-CGD-O2D-CED
29	1C	524	LHG	C11-C10-C9-C8
30	1B	624	MGE	C7B-C8B-C9B-CAB
23	1B	613	CLA	C4-C3-C5-C6
23	1C	502	CLA	C11-C12-C13-C15
23	1D	404	CLA	C6-C7-C8-C10
32	1C	514	LNL	C6-C7-C8-C9
29	1C	520	LHG	C23-C24-C25-C26
23	1B	601	CLA	CBA-CGA-O2A-C1
23	1B	609	CLA	O1D-CGD-O2D-CED
23	1B	602	CLA	CBD-CGD-O2D-CED
23	1C	511	CLA	O1D-CGD-O2D-CED
29	1P	201	LHG	C33-C34-C35-C36

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Mol	Chain	Res	Type	Atoms
23	1C	504	CLA	C5-C6-C7-C8
23	1C	512	CLA	C5-C6-C7-C8
29	1P	201	LHG	C14-C15-C16-C17
23	1B	616	CLA	CBD-CGD-O2D-CED
28	1D	411	SQD	C26-C27-C28-C29
28	1D	411	SQD	C2-C1-O6-C44
28	1M	101	SQD	C2-C1-O6-C44
23	1B	606	CLA	C16-C17-C18-C20
29	1B	623	LHG	C5-C4-O6-P
23	1B	603	CLA	C2-C3-C5-C6
23	1B	613	CLA	C2-C3-C5-C6
27	1E	102	PL9	C4-C3-C7-C8
23	1B	606	CLA	C11-C12-C13-C14
35	1X	101	3PH	C28-C29-C2A-C2B
23	1B	612	CLA	C2A-CAA-CBA-CGA
23	1C	501	CLA	C2A-CAA-CBA-CGA
30	1B	624	MGE	O6D-C5D-C6D-O5D
23	1B	601	CLA	O1A-CGA-O2A-C1
23	1C	501	CLA	C1A-C2A-CAA-CBA
23	1C	510	CLA	C1A-C2A-CAA-CBA
23	1C	511	CLA	C1A-C2A-CAA-CBA
23	1D	401	CLA	C1A-C2A-CAA-CBA
23	1D	402	CLA	C1A-C2A-CAA-CBA
23	1C	513	CLA	CBD-CGD-O2D-CED
29	1C	519	LHG	C2-C3-O3-P
31	1C	518	DGD	C6B-C7B-C8B-C9B
24	1A	404	PHO	C13-C15-C16-C17
23	1B	608	CLA	CBA-CGA-O2A-C1
29	1B	623	LHG	O6-C4-C5-C6
23	1B	610	CLA	C15-C16-C17-C18
31	1B	626	DGD	O6E-C5E-C6E-O5E
29	1V	201	LHG	C4-C5-C6-O8
30	1B	624	MGE	O1G-C1G-C2G-C3G
28	1D	412	SQD	C45-C44-O6-C1
27	1H	101	PL9	C39-C41-C42-C43
28	1A	411	SQD	C9-C10-C11-C12
31	1B	626	DGD	C3A-C4A-C5A-C6A
23	1B	608	CLA	O1A-CGA-O2A-C1
28	1B	620	SQD	C7-C8-C9-C10
27	1H	101	PL9	C35-C34-C36-C37
27	1H	101	PL9	C33-C34-C36-C37
23	1B	610	CLA	C2A-CAA-CBA-CGA

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Mol	Chain	Res	Type	Atoms
23	1C	509	CLA	C13-C15-C16-C17
23	1C	508	CLA	C2-C1-O2A-CGA
29	1E	101	LHG	C2-C3-O3-P
35	1X	101	3PH	C1-O11-P-O12
23	1C	504	CLA	CBA-CGA-O2A-C1
29	1C	519	LHG	O6-C4-C5-O7
31	1B	626	DGD	O2G-C1B-C2B-C3B
28	1C	523	SQD	C2-C1-O6-C44
31	1C	518	DGD	C2A-C3A-C4A-C5A
29	1K	101	LHG	O8-C23-C24-C25
31	1C	517	DGD	O1G-C1G-C2G-O2G
29	1K	101	LHG	C15-C16-C17-C18
23	1C	509	CLA	C4-C3-C5-C6
23	1B	608	CLA	C6-C7-C8-C10
23	1C	501	CLA	C11-C12-C13-C15
23	1C	509	CLA	C11-C12-C13-C15
23	1D	404	CLA	C11-C12-C13-C15
23	1D	404	CLA	C12-C13-C15-C16
29	1W	102	LHG	C9-C10-C11-C12
31	1C	518	DGD	C4B-C5B-C6B-C7B
23	1B	608	CLA	C6-C7-C8-C9
23	1B	605	CLA	C13-C15-C16-C17
23	1B	609	CLA	C5-C6-C7-C8
29	1C	526	LHG	C15-C16-C17-C18
23	1B	602	CLA	CBA-CGA-O2A-C1
23	1B	609	CLA	CBA-CGA-O2A-C1
29	1K	101	LHG	C23-C24-C25-C26
23	1B	609	CLA	C4B-C3B-CAB-CBB
23	1B	610	CLA	C4B-C3B-CAB-CBB
27	1E	102	PL9	C29-C31-C32-C33
27	1E	102	PL9	C34-C36-C37-C38
28	1C	522	SQD	C7-C8-C9-C10
29	1E	101	LHG	C7-C8-C9-C10
29	1W	102	LHG	C11-C12-C13-C14
23	1C	509	CLA	C2-C3-C5-C6
31	1C	517	DGD	C1A-C2A-C3A-C4A
29	1J	102	LHG	O8-C23-C24-C25
29	1C	526	LHG	C2-C3-O3-P
29	1C	526	LHG	C5-C4-O6-P
29	1W	101	LHG	C2-C3-O3-P
23	1B	608	CLA	C3A-C2A-CAA-CBA
28	1C	522	SQD	C11-C10-C9-C8

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Mol	Chain	Res	Type	Atoms
23	1B	602	CLA	C10-C11-C12-C13
35	1X	101	3PH	C1-C2-C3-O31
31	1C	517	DGD	CAB-CBB-CCB-CDB
31	1C	518	DGD	O6D-C5D-C6D-O5D
29	1C	521	LHG	C4-O6-P-O3
32	1C	514	LNL	C10-C11-C12-C13
23	1C	504	CLA	O1A-CGA-O2A-C1
23	1B	610	CLA	C2B-C3B-CAB-CBB
23	1B	614	CLA	C2B-C3B-CAB-CBB
23	1B	609	CLA	O1A-CGA-O2A-C1
28	1C	523	SQD	O47-C45-C46-O48
29	1C	519	LHG	O7-C5-C6-O8
29	1C	524	LHG	O7-C5-C6-O8
30	1B	624	MGE	O1G-C1G-C2G-O2G
23	1B	611	CLA	C5-C6-C7-C8
23	1C	508	CLA	C13-C15-C16-C17
23	1C	508	CLA	C11-C12-C13-C14
31	1B	626	DGD	CCA-CDA-CEA-CFA
31	1C	517	DGD	C7B-C8B-C9B-CAB
29	1V	201	LHG	C2-C3-O3-P
29	1V	201	LHG	C5-C4-O6-P
23	1B	602	CLA	O1A-CGA-O2A-C1
26	1A	407	BCR	C1-C6-C7-C8
26	1B	617	BCR	C23-C24-C25-C30
26	1B	619	BCR	C23-C24-C25-C30
26	1J	101	BCR	C1-C6-C7-C8
26	1Z	101	BCR	C23-C24-C25-C30
26	1Z	102	BCR	C23-C24-C25-C26
23	1C	510	CLA	C10-C11-C12-C13
23	1B	601	CLA	CAA-CBA-CGA-O2A
23	1D	405	CLA	C1A-C2A-CAA-CBA
29	1F	101	LHG	O6-C4-C5-C6
23	1B	602	CLA	C6-C7-C8-C10
23	1C	508	CLA	C11-C12-C13-C15
23	1B	608	CLA	C2C-C3C-CAC-CBC
29	1L	101	LHG	C25-C26-C27-C28
29	1C	526	LHG	C7-C8-C9-C10
23	1C	508	CLA	C5-C6-C7-C8
29	1W	102	LHG	C15-C16-C17-C18
23	1B	603	CLA	C10-C11-C12-C13
23	1B	615	CLA	CAD-CBD-CGD-O2D
23	1C	506	CLA	CAD-CBD-CGD-O2D

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Mol	Chain	Res	Type	Atoms
23	1C	509	CLA	CAD-CBD-CGD-O2D
24	1A	403	PHO	CAD-CBD-CGD-O2D
23	1B	603	CLA	C15-C16-C17-C18
29	1L	101	LHG	C23-C24-C25-C26
27	1D	407	PL9	C15-C14-C16-C17
27	1D	407	PL9	C13-C14-C16-C17
29	1C	519	LHG	C4-C5-C6-O8
29	1B	623	LHG	O6-C4-C5-O7
23	1B	616	CLA	C10-C11-C12-C13
28	1C	522	SQD	C9-C10-C11-C12
23	1A	402	CLA	C2A-CAA-CBA-CGA
23	1B	607	CLA	CHA-CBD-CGD-O1D
23	1B	614	CLA	CHA-CBD-CGD-O1D
23	1B	614	CLA	CHA-CBD-CGD-O2D
23	1C	508	CLA	CHA-CBD-CGD-O1D
23	1C	513	CLA	CHA-CBD-CGD-O1D
29	1D	409	LHG	C12-C13-C14-C15
29	1I	103	LHG	O7-C5-C6-O8
29	1V	201	LHG	O7-C5-C6-O8
23	1B	608	CLA	C4C-C3C-CAC-CBC
23	1B	613	CLA	C5-C6-C7-C8
23	1B	605	CLA	O1D-CGD-O2D-CED
23	1C	513	CLA	O1D-CGD-O2D-CED
29	1W	102	LHG	C12-C13-C14-C15
23	1C	505	CLA	C4-C3-C5-C6
27	1E	102	PL9	C20-C19-C21-C22
31	1C	516	DGD	C5B-C6B-C7B-C8B
23	1C	511	CLA	CAA-CBA-CGA-O2A
23	1C	512	CLA	C2-C1-O2A-CGA
29	1D	409	LHG	C3-O3-P-O6
29	1J	102	LHG	C4-O6-P-O3
23	1B	607	CLA	C4-C3-C5-C6
23	1B	605	CLA	C4B-C3B-CAB-CBB
23	1B	614	CLA	C4B-C3B-CAB-CBB
23	1C	502	CLA	C4B-C3B-CAB-CBB
23	1C	506	CLA	C4B-C3B-CAB-CBB
23	1D	402	CLA	C4B-C3B-CAB-CBB
29	1B	621	LHG	C4-O6-P-O4
29	1C	521	LHG	C4-O6-P-O4
29	1D	409	LHG	C4-O6-P-O5
29	1D	410	LHG	O6-C4-C5-C6
31	1C	517	DGD	C2B-C1B-O2G-C2G

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Mol	Chain	Res	Type	Atoms
29	1W	102	LHG	C13-C14-C15-C16
23	1B	603	CLA	CAD-CBD-CGD-O1D
23	1B	607	CLA	CAD-CBD-CGD-O1D
23	1B	610	CLA	CAD-CBD-CGD-O1D
23	1C	504	CLA	CAD-CBD-CGD-O1D
23	1C	505	CLA	CAD-CBD-CGD-O1D
23	1C	513	CLA	CAD-CBD-CGD-O1D
23	1B	605	CLA	C11-C12-C13-C15
23	1B	610	CLA	C11-C12-C13-C15
23	1C	505	CLA	C2-C3-C5-C6
29	1D	410	LHG	O6-C4-C5-O7
29	1C	524	LHG	C4-C5-C6-O8
31	1C	517	DGD	O1G-C1G-C2G-C3G
29	1I	101	LHG	O7-C5-C6-O8
29	1W	102	LHG	O7-C5-C6-O8
35	1X	101	3PH	C2-C1-O11-P
29	1W	101	LHG	C13-C14-C15-C16
23	1A	402	CLA	C4-C3-C5-C6
23	1C	501	CLA	C11-C12-C13-C14
23	1C	509	CLA	C11-C12-C13-C14
23	1C	505	CLA	O1D-CGD-O2D-CED
23	1C	506	CLA	C2A-CAA-CBA-CGA
23	1B	609	CLA	C2B-C3B-CAB-CBB
23	1C	502	CLA	C2B-C3B-CAB-CBB
23	1D	402	CLA	C2B-C3B-CAB-CBB
23	1B	608	CLA	CAA-CBA-CGA-O2A
23	1B	608	CLA	C15-C16-C17-C18
23	1C	506	CLA	C1-C2-C3-C4
29	1C	519	LHG	O6-C4-C5-C6
23	1B	602	CLA	C2A-CAA-CBA-CGA
23	1B	612	CLA	C2-C1-O2A-CGA
23	1C	505	CLA	C2-C1-O2A-CGA
29	1J	102	LHG	C15-C16-C17-C18
23	1B	602	CLA	O1D-CGD-O2D-CED
35	1X	101	3PH	O11-C1-C2-O21
28	1A	410	SQD	C11-C10-C9-C8
27	1E	102	PL9	C18-C19-C21-C22
31	1C	517	DGD	O6E-C1E-O5D-C6D
23	1B	616	CLA	C11-C12-C13-C14
23	1C	511	CLA	C2A-CAA-CBA-CGA
29	1C	519	LHG	C9-C10-C11-C12
29	1K	101	LHG	O7-C5-C6-O8

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Mol	Chain	Res	Type	Atoms
32	1C	515	LNL	C2-C3-C4-C5
29	1C	519	LHG	C3-O3-P-O6
29	1C	521	LHG	C3-O3-P-O6
29	1C	524	LHG	C3-O3-P-O6
29	1C	524	LHG	C4-O6-P-O3
29	1C	526	LHG	C4-O6-P-O3
29	1F	101	LHG	C3-O3-P-O6
29	1F	101	LHG	C4-O6-P-O3
29	1I	103	LHG	C3-O3-P-O6
29	1P	201	LHG	C4-O6-P-O3
29	1V	201	LHG	C3-O3-P-O6
29	1V	201	LHG	C4-O6-P-O3
24	1A	404	PHO	CHA-CBD-CGD-O1D
24	1A	404	PHO	CHA-CBD-CGD-O2D
28	1C	523	SQD	C44-C45-C46-O48
24	1A	404	PHO	C4-C3-C5-C6
23	1B	606	CLA	C11-C12-C13-C15
23	1B	605	CLA	C11-C12-C13-C14
23	1B	601	CLA	C10-C11-C12-C13
35	1X	101	3PH	C36-C37-C38-C39
23	1C	509	CLA	O1A-CGA-O2A-C1
23	1C	509	CLA	CBA-CGA-O2A-C1
29	1B	623	LHG	C7-C8-C9-C10
35	1X	101	3PH	C33-C34-C35-C36
29	1W	101	LHG	C11-C12-C13-C14
23	1B	612	CLA	C4B-C3B-CAB-CBB
23	1C	501	CLA	C4B-C3B-CAB-CBB
23	1B	616	CLA	O1D-CGD-O2D-CED
31	1C	516	DGD	C8B-C9B-CAB-CBB
29	1K	101	LHG	O10-C23-C24-C25
32	1C	514	LNL	O2-C1-C2-C3
30	1B	624	MGE	C2A-C3A-C4A-C5A
31	1C	517	DGD	O1B-C1B-O2G-C2G
23	1C	507	CLA	C2-C1-O2A-CGA
23	1D	404	CLA	C2-C1-O2A-CGA
23	1B	613	CLA	C10-C11-C12-C13
29	1C	526	LHG	C11-C10-C9-C8
29	1J	102	LHG	O7-C5-C6-O8
28	1A	409	SQD	C14-C15-C16-C17
23	1B	607	CLA	C2-C3-C5-C6
27	1D	407	PL9	C4-C3-C7-C8
29	1C	526	LHG	C9-C10-C11-C12

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Mol	Chain	Res	Type	Atoms
23	1B	606	CLA	C11-C10-C8-C9
23	1D	401	CLA	C6-C7-C8-C9
24	1A	404	PHO	C11-C12-C13-C14
29	1J	102	LHG	C11-C12-C13-C14
26	1A	407	BCR	C16-C17-C18-C36
29	1I	103	LHG	C4-C5-C6-O8
31	1B	626	DGD	O1G-C1G-C2G-C3G
31	1B	626	DGD	O1B-C1B-C2B-C3B
29	1D	413	LHG	C25-C26-C27-C28
24	1A	404	PHO	O2A-C1-C2-C3
23	1B	612	CLA	O1D-CGD-O2D-CED
27	1H	101	PL9	C9-C11-C12-C13
28	1C	522	SQD	C28-C29-C30-C31
23	1A	405	CLA	C1A-C2A-CAA-CBA
23	1B	608	CLA	C1A-C2A-CAA-CBA
35	1X	101	3PH	C26-C27-C28-C29
23	1D	401	CLA	C8-C10-C11-C12
23	1C	502	CLA	C2A-CAA-CBA-CGA
23	1C	505	CLA	C2A-CAA-CBA-CGA
29	1L	101	LHG	C24-C25-C26-C27
27	1H	101	PL9	C3-C7-C8-C9
29	1W	101	LHG	O6-C4-C5-C6
23	1B	608	CLA	C4-C3-C5-C6
23	1A	402	CLA	C2-C3-C5-C6
23	1B	605	CLA	C2B-C3B-CAB-CBB
23	1B	607	CLA	C2B-C3B-CAB-CBB
23	1C	501	CLA	C2B-C3B-CAB-CBB
23	1C	506	CLA	C2B-C3B-CAB-CBB
29	1W	102	LHG	C24-C25-C26-C27
24	1A	403	PHO	C3-C5-C6-C7
26	1A	407	BCR	C16-C17-C18-C19
31	1C	517	DGD	C2E-C1E-O5D-C6D
28	1B	620	SQD	O47-C45-C46-O48
23	1D	401	CLA	C2A-CAA-CBA-CGA
28	1B	620	SQD	C9-C10-C11-C12
32	1C	514	LNL	O1-C1-C2-C3
23	1A	402	CLA	C2-C1-O2A-CGA
29	1J	102	LHG	O10-C23-C24-C25
23	1D	402	CLA	C2A-CAA-CBA-CGA
23	1B	604	CLA	O1A-CGA-O2A-C1
26	1H	102	BCR	C1-C6-C7-C8
26	1I	102	BCR	C5-C6-C7-C8

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Mol	Chain	Res	Type	Atoms
24	1A	404	PHO	C10-C11-C12-C13
29	1K	101	LHG	C10-C11-C12-C13
23	1C	502	CLA	C4-C3-C5-C6
24	1A	404	PHO	C15-C16-C17-C18
28	1C	523	SQD	C9-C10-C11-C12
29	1W	101	LHG	O6-C4-C5-O7
27	1A	408	PL9	C14-C16-C17-C18
27	1H	101	PL9	C14-C16-C17-C18
23	1A	402	CLA	C11-C10-C8-C7
24	1A	404	PHO	C11-C12-C13-C15
23	1B	604	CLA	CBA-CGA-O2A-C1
23	1B	614	CLA	CAA-CBA-CGA-O2A
23	1B	604	CLA	C4-C3-C5-C6
27	1A	408	PL9	C40-C39-C41-C42
23	1C	502	CLA	C11-C12-C13-C14
28	1A	410	SQD	C11-C12-C13-C14
35	1X	101	3PH	C23-C24-C25-C26
29	1L	101	LHG	C17-C18-C19-C20
23	1A	405	CLA	CAA-CBA-CGA-O2A
23	1B	604	CLA	CAD-CBD-CGD-O2D
23	1B	608	CLA	CAD-CBD-CGD-O2D
23	1C	505	CLA	CAD-CBD-CGD-O2D
23	1C	511	CLA	CAD-CBD-CGD-O2D
23	1C	512	CLA	CAD-CBD-CGD-O2D
23	1D	405	CLA	CAD-CBD-CGD-O2D
29	1W	102	LHG	C10-C11-C12-C13
30	1C	525	MGE	O2G-C1B-C2B-C3B
27	1A	408	PL9	C45-C44-C46-C47
28	1A	411	SQD	O5-C1-O6-C44
23	1B	604	CLA	C2-C3-C5-C6
23	1B	608	CLA	C2-C3-C5-C6
29	1E	101	LHG	O7-C7-C8-C9
26	1H	102	BCR	C21-C22-C23-C24
35	1X	101	3PH	C27-C28-C29-C2A
23	1C	505	CLA	C10-C11-C12-C13
32	1C	514	LNL	C13-C14-C15-C16
31	1C	517	DGD	C3B-C4B-C5B-C6B
30	1B	624	MGE	C1A-C2A-C3A-C4A
31	1C	518	DGD	O2G-C1B-C2B-C3B
23	1B	601	CLA	CAA-CBA-CGA-O1A
23	1B	607	CLA	CHA-CBD-CGD-O2D
23	1B	610	CLA	CHA-CBD-CGD-O1D

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Mol	Chain	Res	Type	Atoms
23	1C	508	CLA	CHA-CBD-CGD-O2D
23	1C	513	CLA	CHA-CBD-CGD-O2D
23	1B	612	CLA	CAA-CBA-CGA-O2A
23	1D	404	CLA	CAA-CBA-CGA-O2A
29	1B	621	LHG	O7-C7-C8-C9
29	1C	520	LHG	C24-C25-C26-C27
23	1B	614	CLA	CAA-CBA-CGA-O1A
28	1C	523	SQD	C24-C25-C26-C27
29	1L	101	LHG	O7-C7-C8-C9
29	1P	201	LHG	O7-C7-C8-C9
29	1J	102	LHG	C17-C18-C19-C20
32	1C	514	LNL	C3-C4-C5-C6
23	1B	610	CLA	CAA-CBA-CGA-O2A
29	1W	101	LHG	C9-C10-C11-C12
29	1K	101	LHG	C2-C3-O3-P
23	1D	404	CLA	C11-C10-C8-C7
29	1C	524	LHG	O7-C7-C8-C9
35	1X	101	3PH	O21-C21-C22-C23
23	1B	610	CLA	C11-C10-C8-C9
23	1B	610	CLA	C11-C12-C13-C14
27	1A	408	PL9	C29-C31-C32-C33
29	1F	101	LHG	C29-C30-C31-C32
28	1A	411	SQD	C4-C5-C6-S
28	1B	620	SQD	C4-C5-C6-S
28	1C	523	SQD	C4-C5-C6-S
28	1D	411	SQD	C4-C5-C6-S
28	1M	101	SQD	C4-C5-C6-S
27	1H	101	PL9	C41-C42-C43-C44
30	1B	625	MGE	O2G-C1B-C2B-C3B
29	1L	101	LHG	C7-C8-C9-C10
29	1W	102	LHG	C11-C10-C9-C8
29	1C	519	LHG	C10-C11-C12-C13
27	1H	101	PL9	C46-C47-C48-C49
24	1A	403	PHO	C2-C1-O2A-CGA
29	1C	524	LHG	O9-C7-C8-C9
29	1P	201	LHG	O9-C7-C8-C9
29	1W	102	LHG	C17-C18-C19-C20
29	1I	101	LHG	C4-C5-C6-O8
24	1A	403	PHO	C16-C17-C18-C19
23	1B	612	CLA	CAA-CBA-CGA-O1A
23	1A	405	CLA	CAA-CBA-CGA-O1A
29	1K	101	LHG	C14-C15-C16-C17

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Mol	Chain	Res	Type	Atoms
23	1B	607	CLA	C4B-C3B-CAB-CBB
29	1C	521	LHG	C3-O3-P-O5
29	1F	101	LHG	C3-O3-P-O5
29	1I	103	LHG	C3-O3-P-O5
29	1V	201	LHG	C4-O6-P-O5
23	1D	404	CLA	CAA-CBA-CGA-O1A
29	1B	621	LHG	O9-C7-C8-C9
31	1C	518	DGD	O1B-C1B-C2B-C3B
35	1X	101	3PH	O22-C21-C22-C23
26	1H	102	BCR	C23-C24-C25-C26
26	1Z	102	BCR	C1-C6-C7-C8
28	1B	622	SQD	C26-C27-C28-C29
29	1E	101	LHG	C11-C10-C9-C8
23	1B	606	CLA	CAA-CBA-CGA-O2A
29	1E	101	LHG	O9-C7-C8-C9
23	1B	606	CLA	C15-C16-C17-C18
23	1B	611	CLA	CAA-CBA-CGA-O2A
29	1D	413	LHG	C23-C24-C25-C26
30	1C	525	MGE	O1B-C1B-C2B-C3B
24	1A	403	PHO	C4-C3-C5-C6
27	1D	407	PL9	C31-C32-C33-C34
27	1D	407	PL9	C46-C47-C48-C49
23	1B	608	CLA	CAD-CBD-CGD-O1D
23	1C	502	CLA	CAD-CBD-CGD-O1D
28	1B	620	SQD	O5-C5-C6-S
28	1B	622	SQD	O5-C5-C6-S
28	1D	411	SQD	O5-C5-C6-S
29	1J	102	LHG	C4-C5-O7-C7
29	1K	101	LHG	C7-C8-C9-C10
29	1D	408	LHG	O8-C23-C24-C25
29	1F	101	LHG	O8-C23-C24-C25
23	1C	508	CLA	C11-C10-C8-C9
23	1C	505	CLA	CAA-CBA-CGA-O2A
29	1B	621	LHG	O8-C23-C24-C25
31	1B	626	DGD	C7A-C8A-C9A-CAA
23	1B	610	CLA	CAA-CBA-CGA-O1A
29	1F	101	LHG	O10-C23-C24-C25
28	1D	411	SQD	C25-C26-C27-C28
23	1B	601	CLA	C11-C12-C13-C15
23	1B	610	CLA	C11-C10-C8-C7
23	1C	512	CLA	C3A-C2A-CAA-CBA
30	1B	625	MGE	O1B-C1B-C2B-C3B

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Mol	Chain	Res	Type	Atoms
34	1E	103	HEM	CAA-CBA-CGA-O2A
32	1C	514	LNL	C4-C5-C6-C7
29	1J	102	LHG	O7-C7-C8-C9
29	1L	101	LHG	O8-C23-C24-C25
29	1L	101	LHG	O9-C7-C8-C9
23	1C	503	CLA	CAA-CBA-CGA-O2A
28	1D	411	SQD	C10-C11-C12-C13
23	1B	611	CLA	CAA-CBA-CGA-O1A
23	1C	505	CLA	CAA-CBA-CGA-O1A
28	1D	412	SQD	O47-C7-C8-C9
29	1D	410	LHG	O8-C23-C24-C25
29	1I	101	LHG	O7-C7-C8-C9
23	1C	503	CLA	C5-C6-C7-C8
29	1D	408	LHG	O10-C23-C24-C25
23	1C	510	CLA	C2A-CAA-CBA-CGA
23	1A	402	CLA	C4C-C3C-CAC-CBC
30	1C	525	MGE	C7A-C8A-C9A-CAA
27	1D	407	PL9	C12-C11-C9-C10
29	1D	409	LHG	C11-C12-C13-C14

There are no ring outliers.

89 monomers are involved in 286 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
29	1F	101	LHG	1	0
28	1D	412	SQD	4	0
26	1A	407	BCR	4	0
32	1C	514	LNL	1	0
34	1E	103	HEM	4	0
29	1P	201	LHG	8	0
26	1H	102	BCR	2	0
23	1D	402	CLA	1	0
23	1D	405	CLA	2	0
29	1L	101	LHG	2	0
27	1D	407	PL9	6	0
31	1C	516	DGD	9	0
28	1C	522	SQD	4	0
23	1C	509	CLA	2	0
26	1B	617	BCR	6	0
23	1A	402	CLA	3	0
24	1A	403	PHO	6	0
28	1A	411	SQD	2	0

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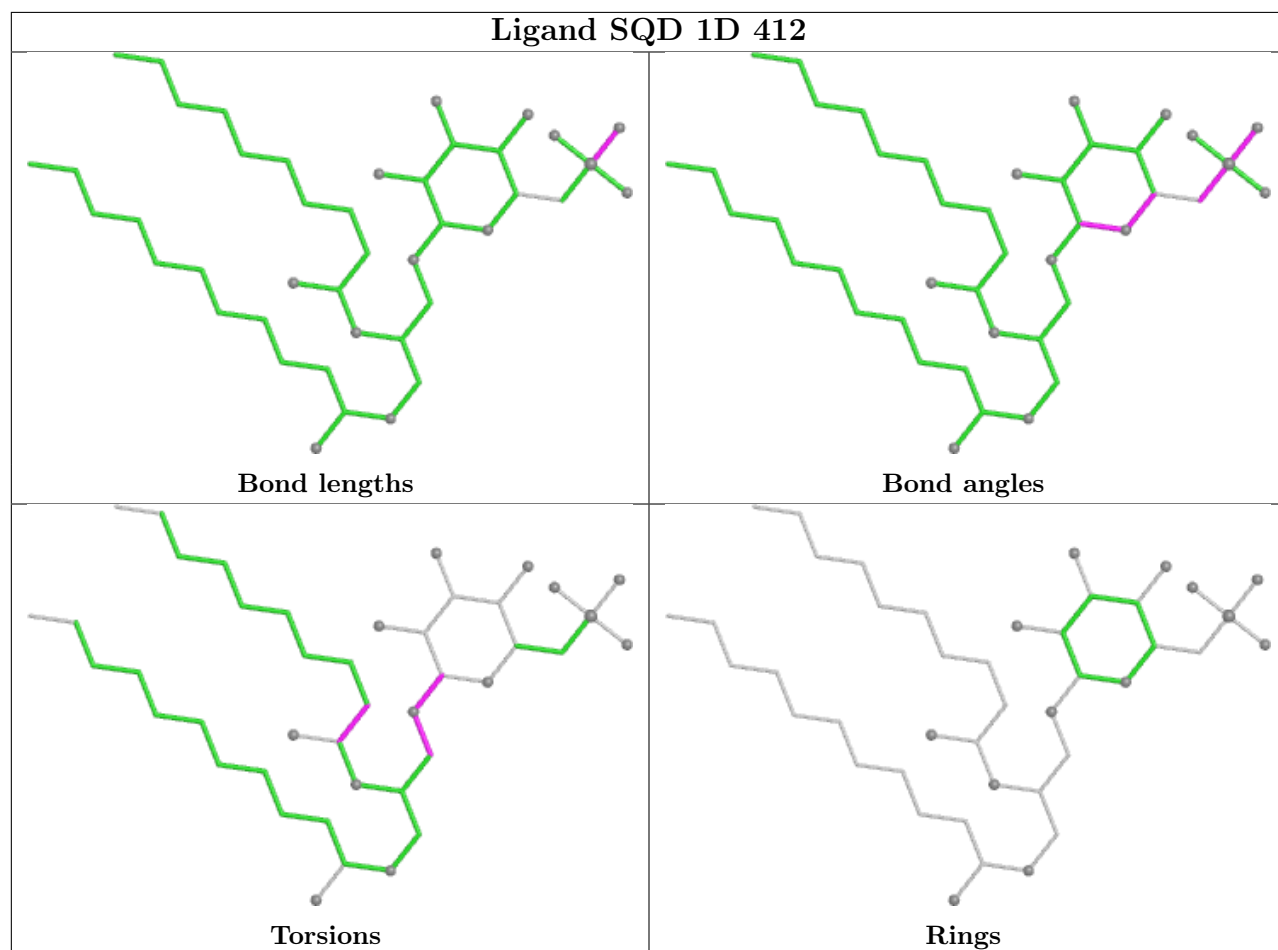
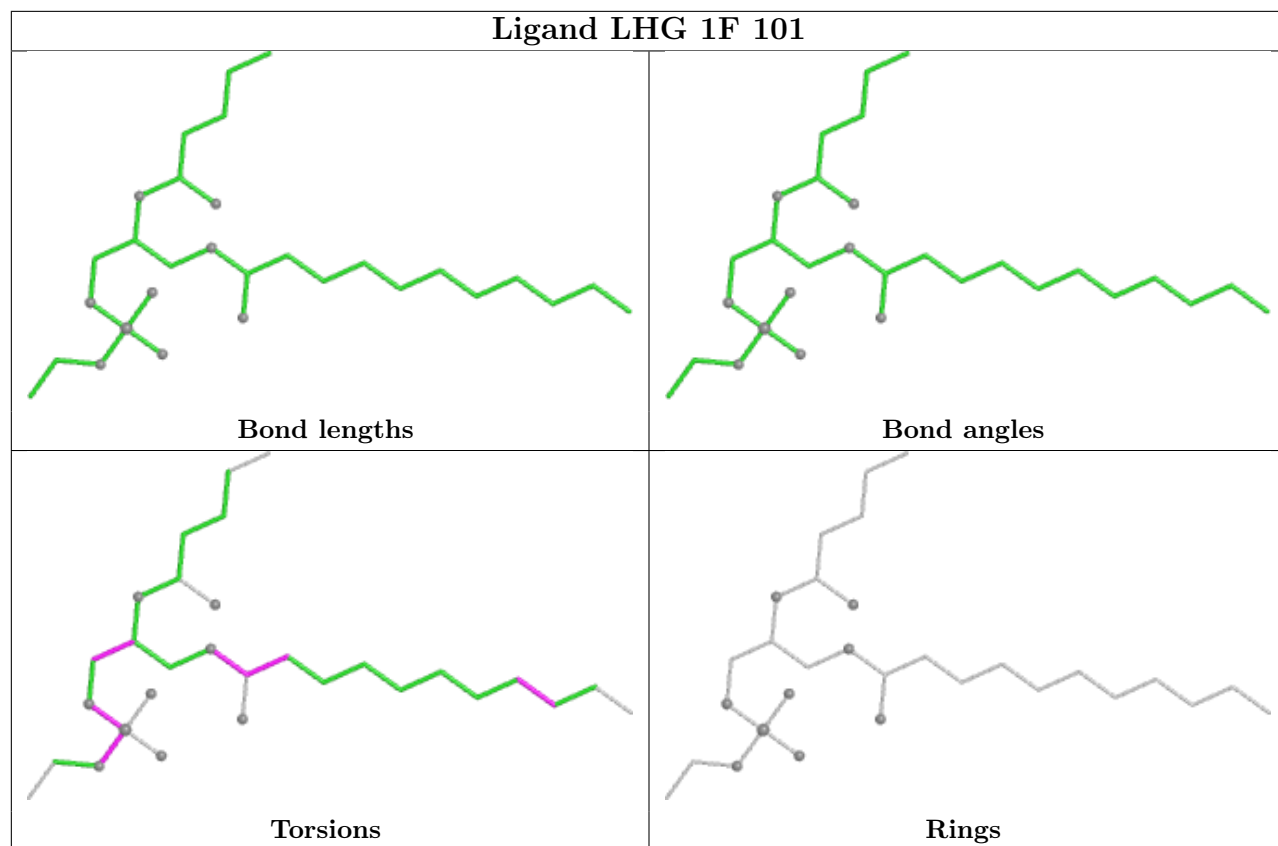
Mol	Chain	Res	Type	Clashes	Symm-Clashes
27	1E	102	PL9	29	0
30	1C	525	MGE	4	0
26	1B	618	BCR	3	0
29	1B	621	LHG	2	0
35	1X	101	3PH	1	0
23	1C	501	CLA	2	0
23	1B	602	CLA	3	0
26	1D	406	BCR	4	0
29	1V	201	LHG	2	0
30	1B	624	MGE	2	0
30	1B	625	MGE	2	0
29	1D	408	LHG	1	0
29	1D	409	LHG	2	0
29	1C	526	LHG	3	0
23	1B	613	CLA	10	0
28	1B	620	SQD	8	0
26	1I	102	BCR	6	0
27	1A	408	PL9	6	0
31	1B	626	DGD	5	0
23	1B	614	CLA	6	0
26	1B	619	BCR	6	0
23	1B	605	CLA	2	0
28	1A	410	SQD	2	0
29	1I	101	LHG	1	0
26	1J	101	BCR	4	0
23	1C	513	CLA	2	0
29	1K	101	LHG	1	0
23	1D	404	CLA	7	0
29	1I	103	LHG	3	0
23	1C	510	CLA	5	0
23	1D	401	CLA	8	0
23	1B	611	CLA	8	0
23	1B	607	CLA	7	0
24	1A	404	PHO	1	0
33	1D	403	BCT	1	0
23	1C	504	CLA	2	0
29	1B	623	LHG	1	0
26	1Z	101	BCR	4	0
23	1B	604	CLA	2	0
23	1B	603	CLA	4	0
28	1A	409	SQD	5	0
28	1B	622	SQD	2	0

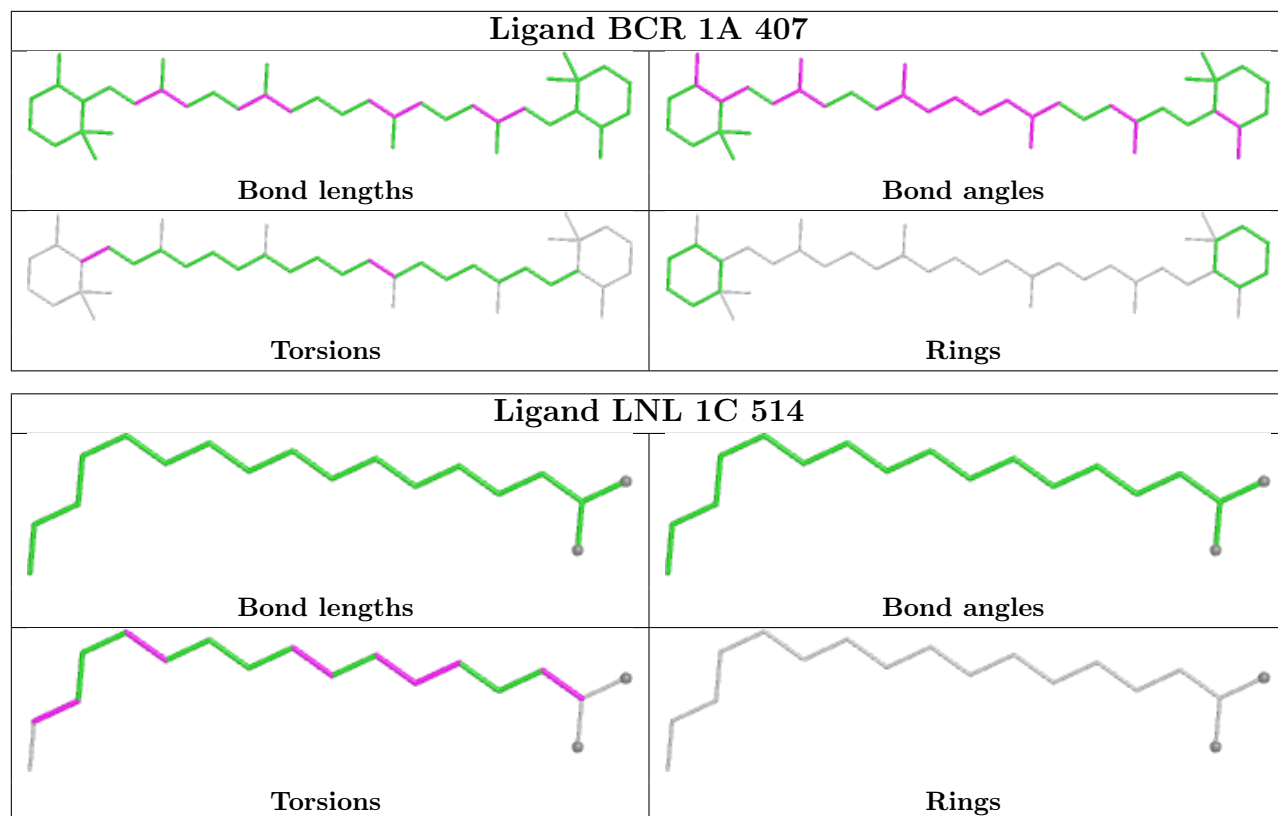
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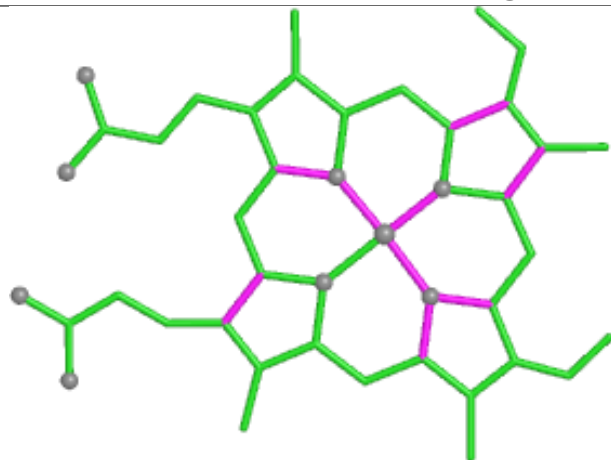
Mol	Chain	Res	Type	Clashes	Symm-Clashes
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23	1B	612	CLA	6	0
28	1M	101	SQD	6	0
29	1C	519	LHG	1	0
29	1W	101	LHG	1	0
23	1C	505	CLA	4	0
23	1C	507	CLA	5	0
23	1B	606	CLA	5	0
23	1C	511	CLA	1	0
26	1T	101	BCR	1	0
23	1C	508	CLA	8	0
29	1C	521	LHG	2	0
31	1C	517	DGD	5	0
31	1C	518	DGD	1	0
23	1B	610	CLA	8	0
23	1C	506	CLA	2	0
23	1C	512	CLA	3	0
26	1Z	102	BCR	5	0
28	1C	523	SQD	3	0
23	1B	608	CLA	7	0
23	1C	503	CLA	1	0
27	1H	101	PL9	6	0
28	1D	411	SQD	3	0
29	1J	102	LHG	4	0
23	1B	609	CLA	8	0
29	1D	410	LHG	2	0
29	1W	102	LHG	2	0
23	1B	616	CLA	4	0
23	1C	502	CLA	2	0

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

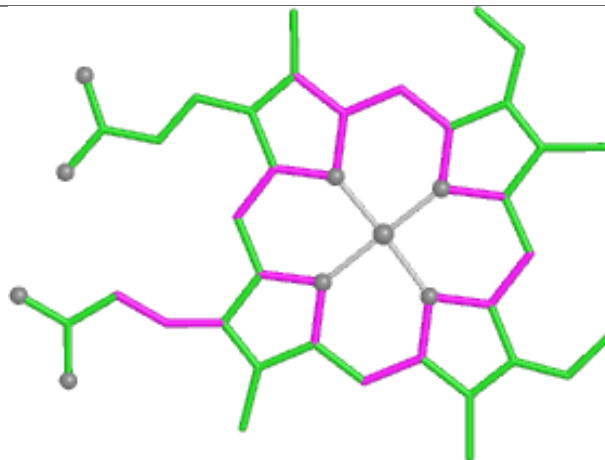




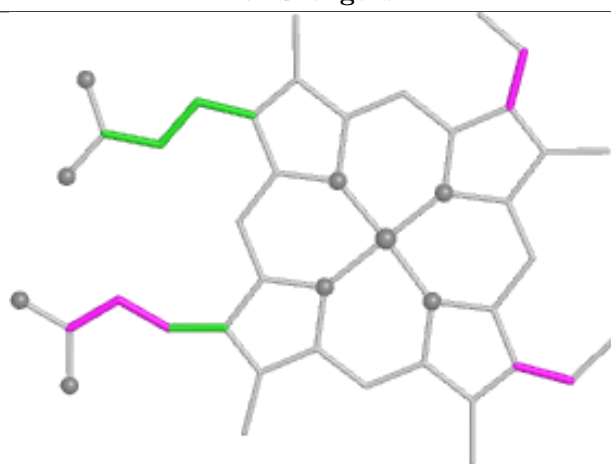
Ligand HEM 1E 103



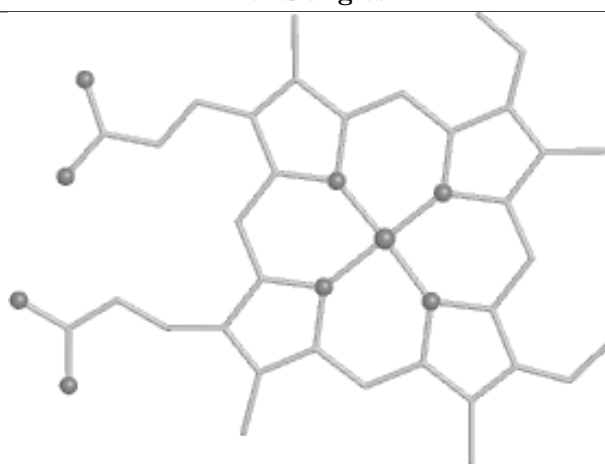
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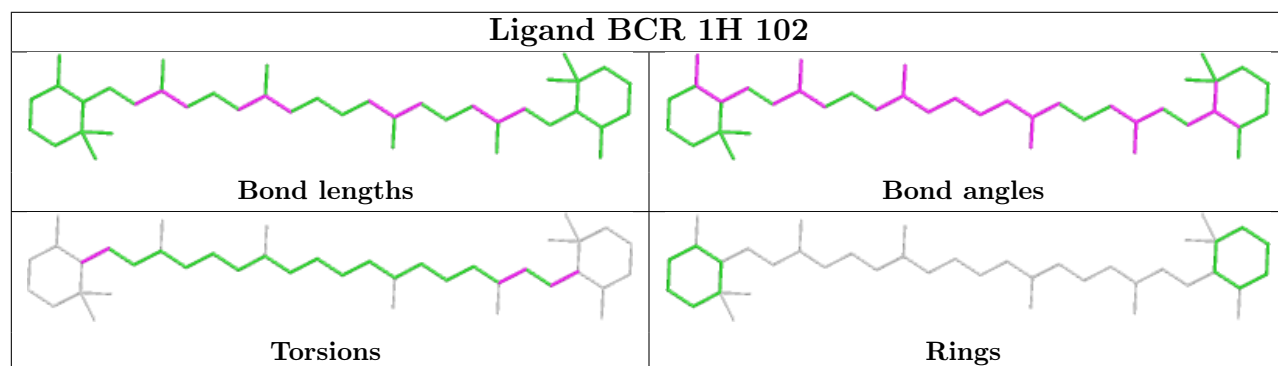
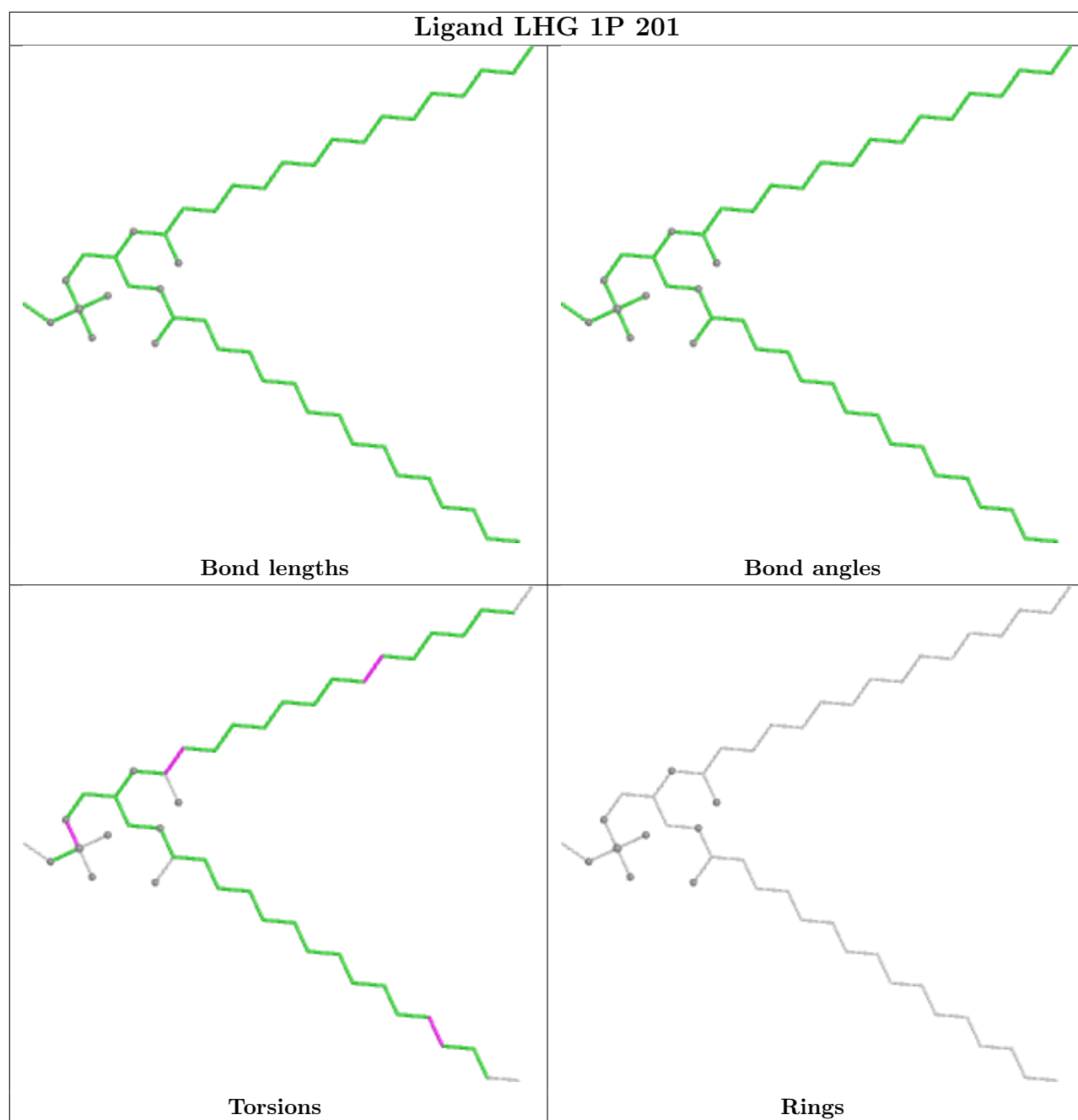
Bond angles

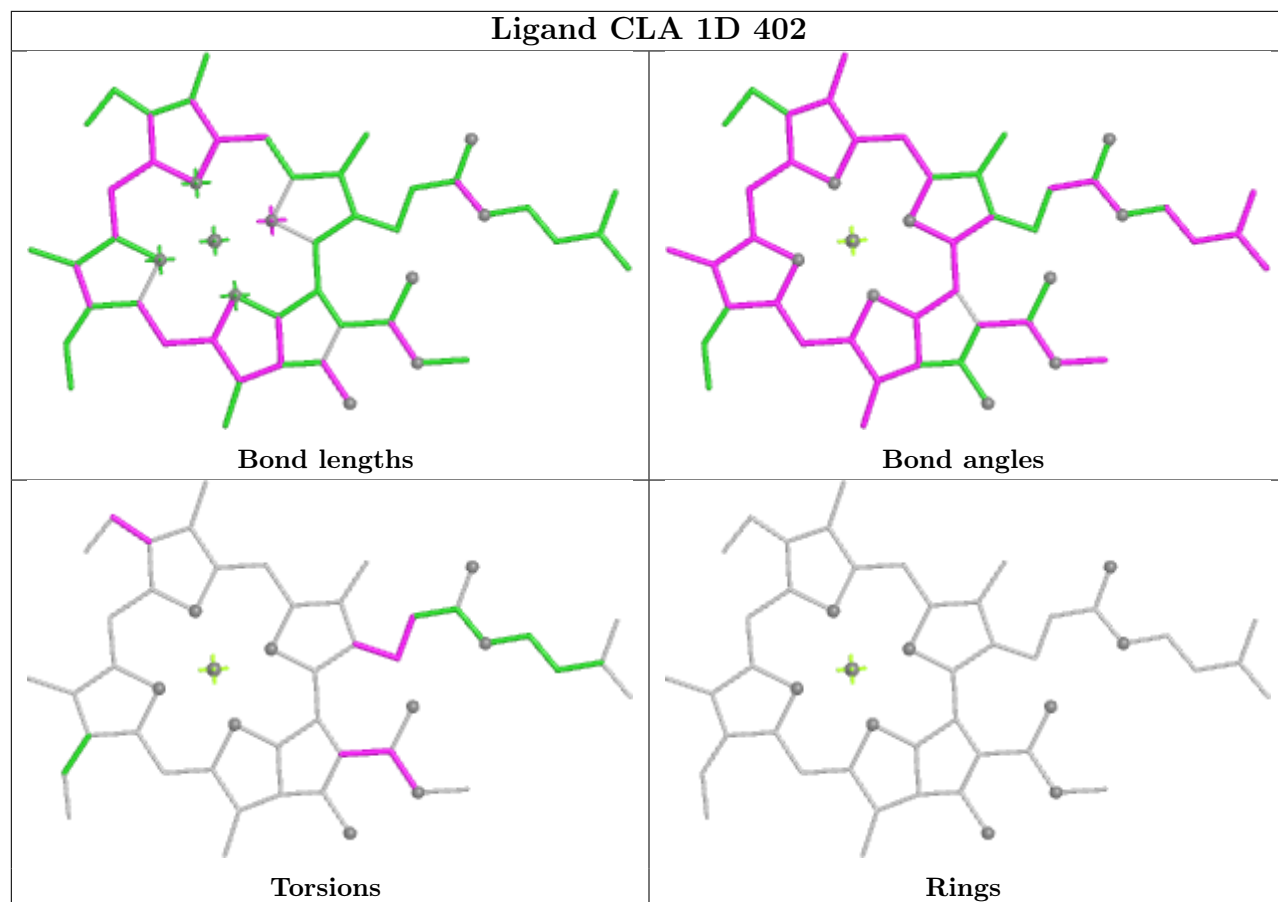


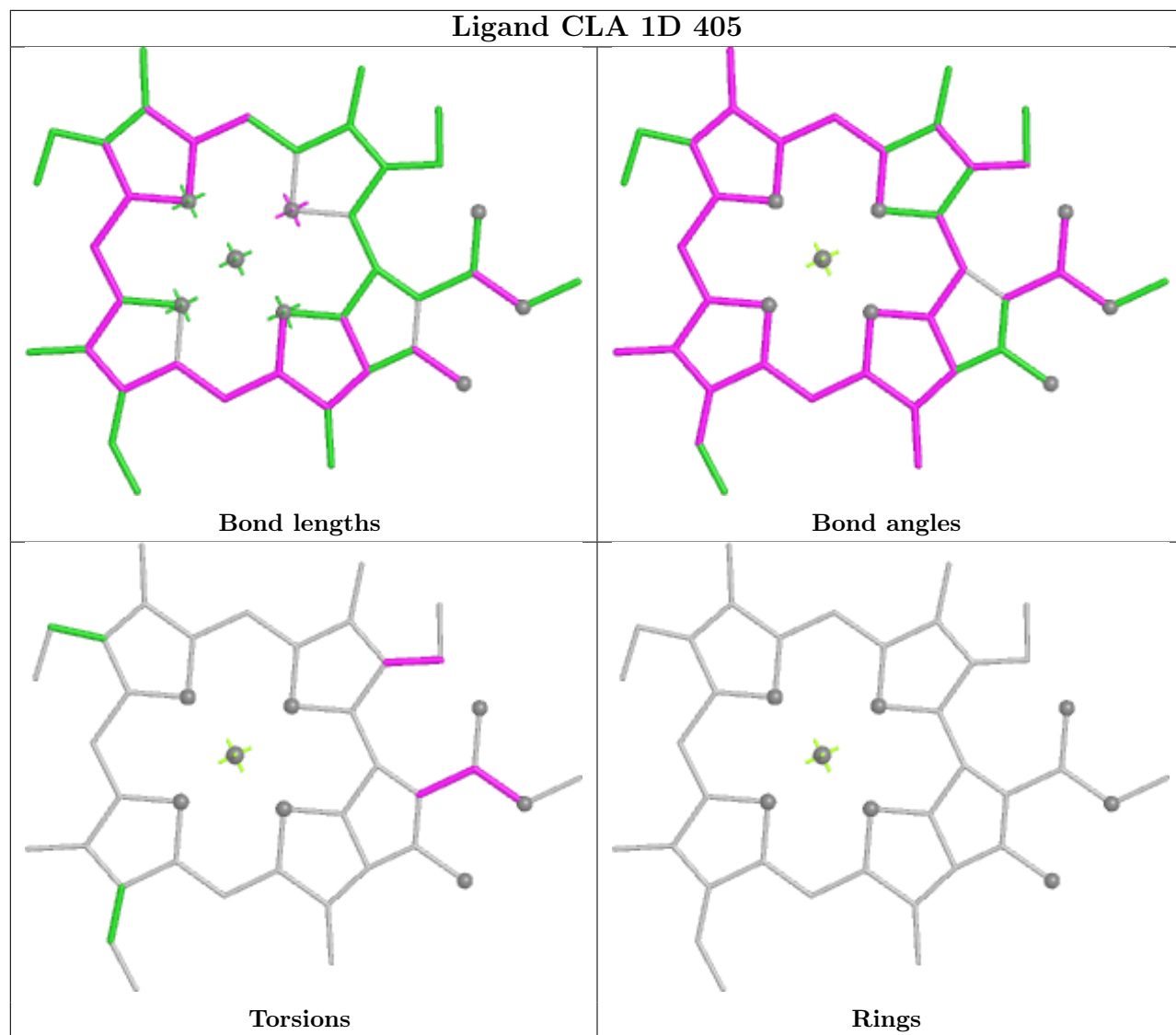
Torsions

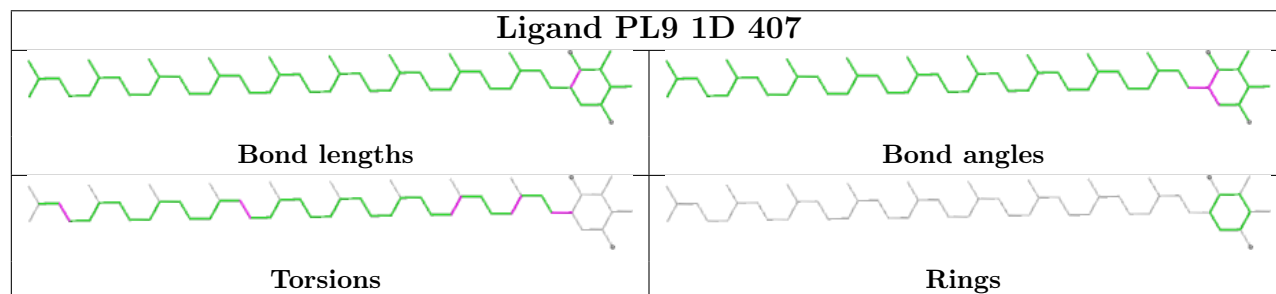
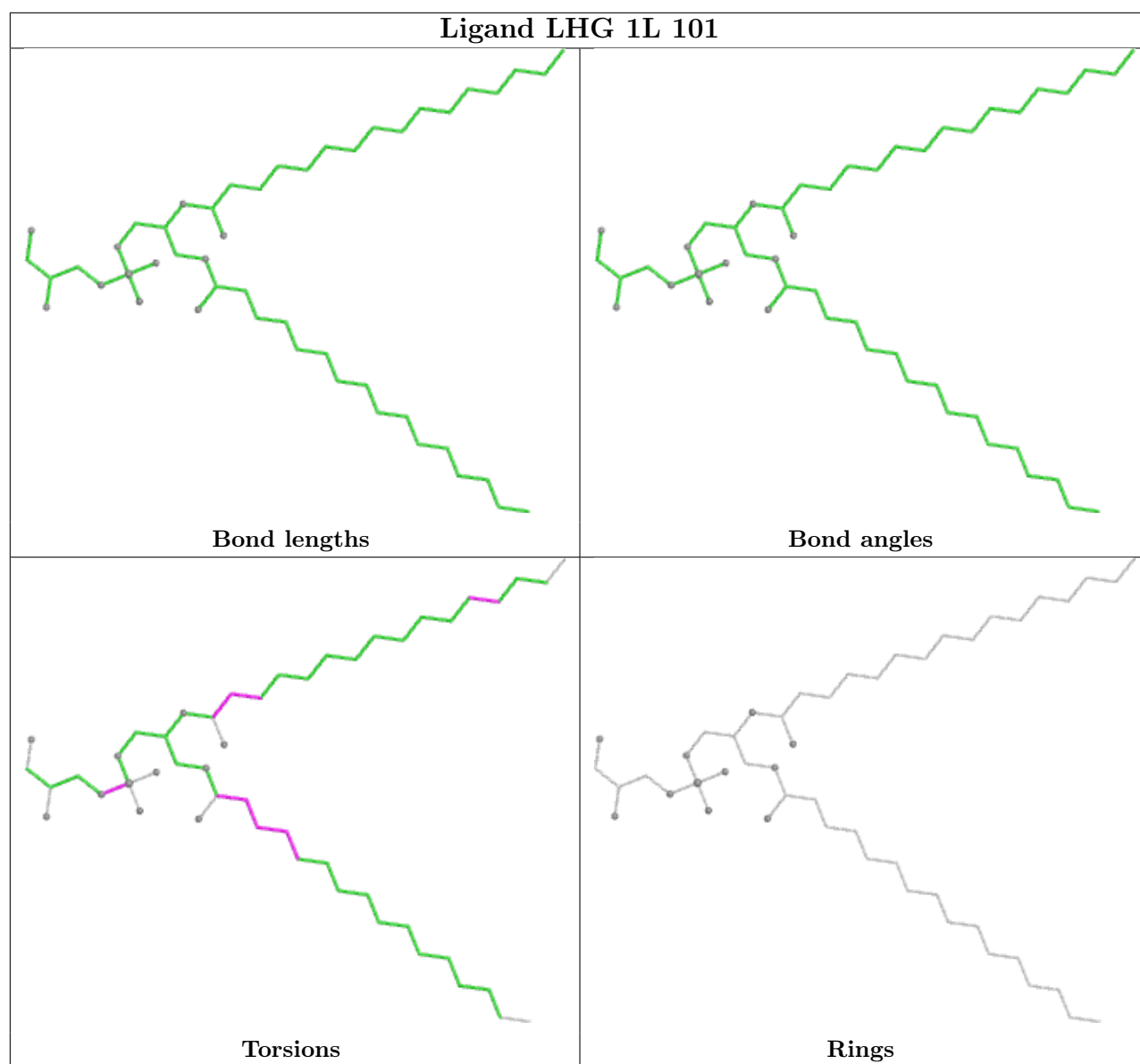


Rings

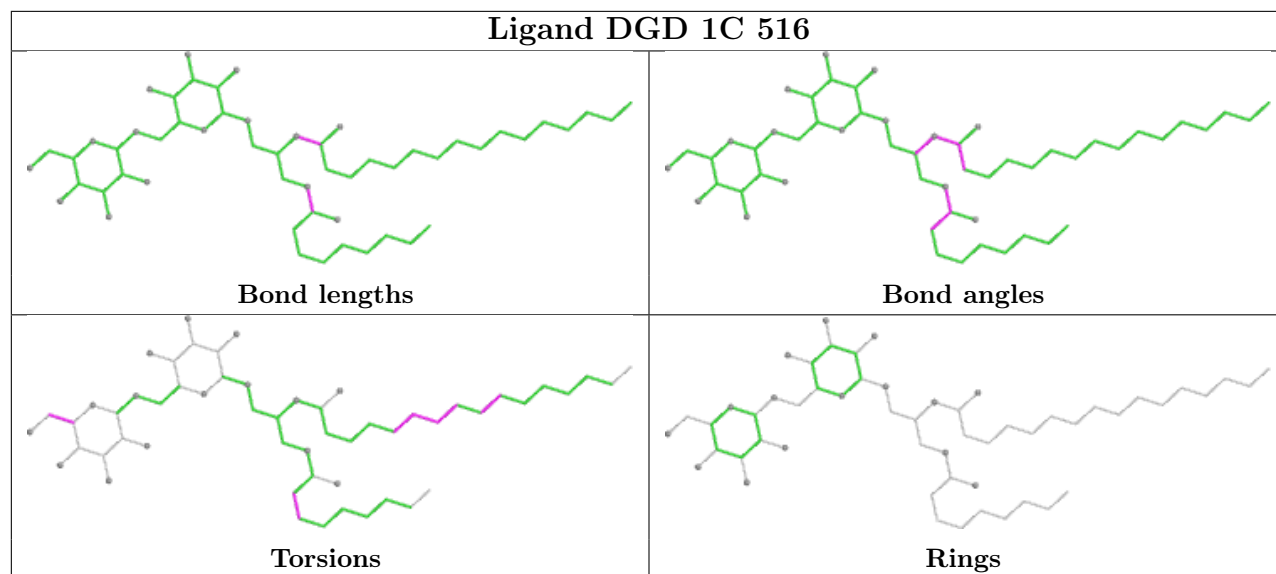




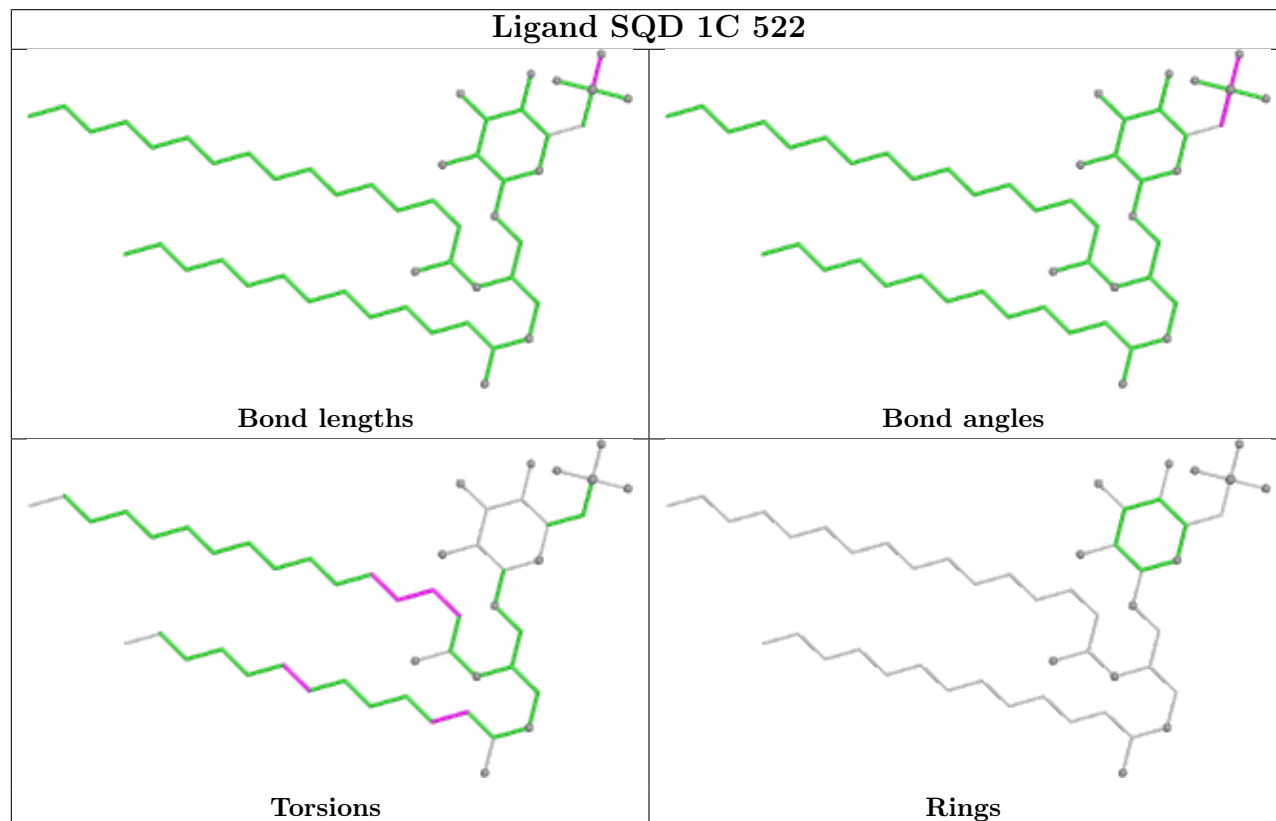


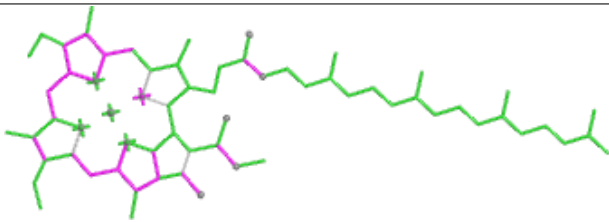
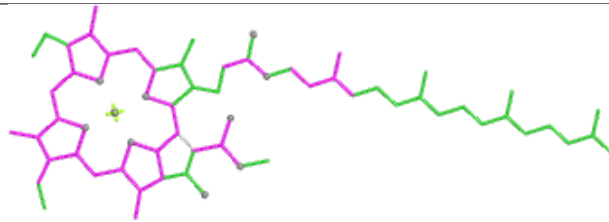
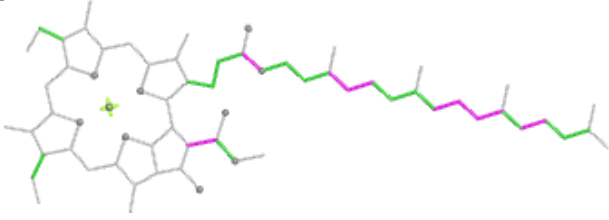
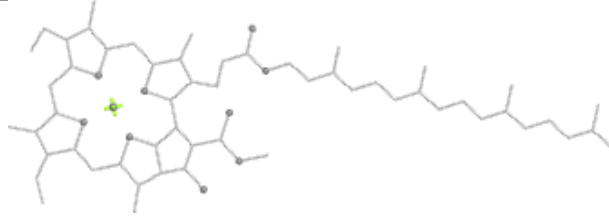


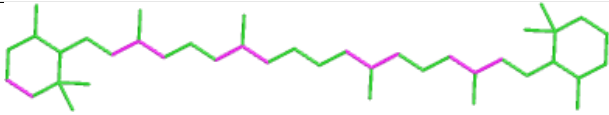
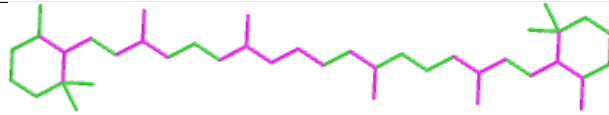
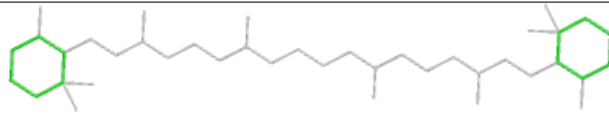
Ligand DGD 1C 516

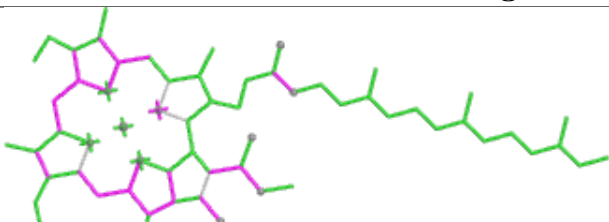
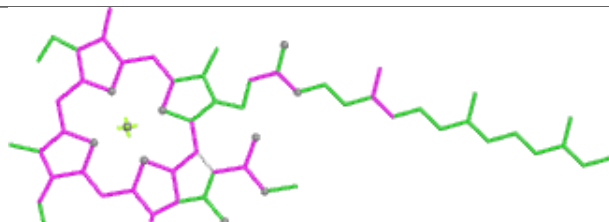
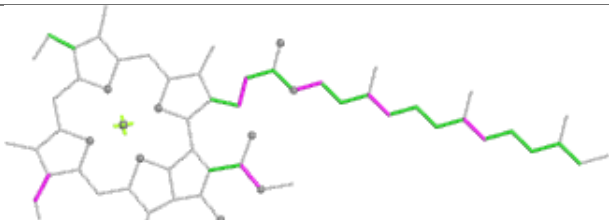
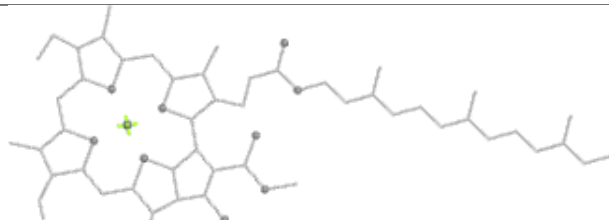


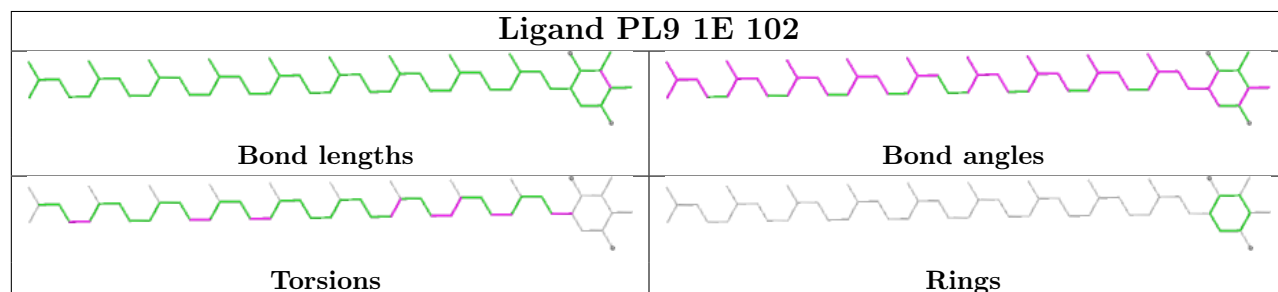
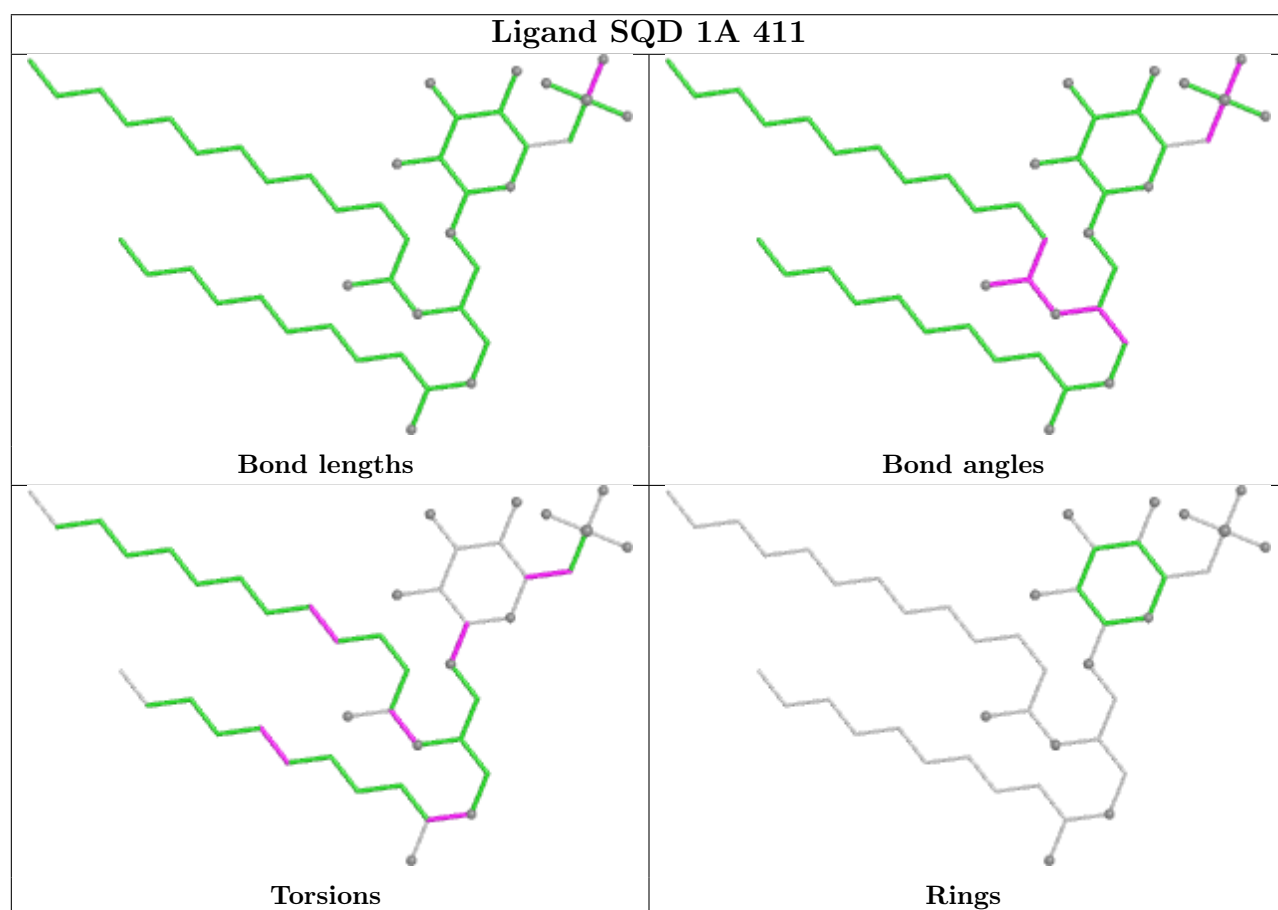
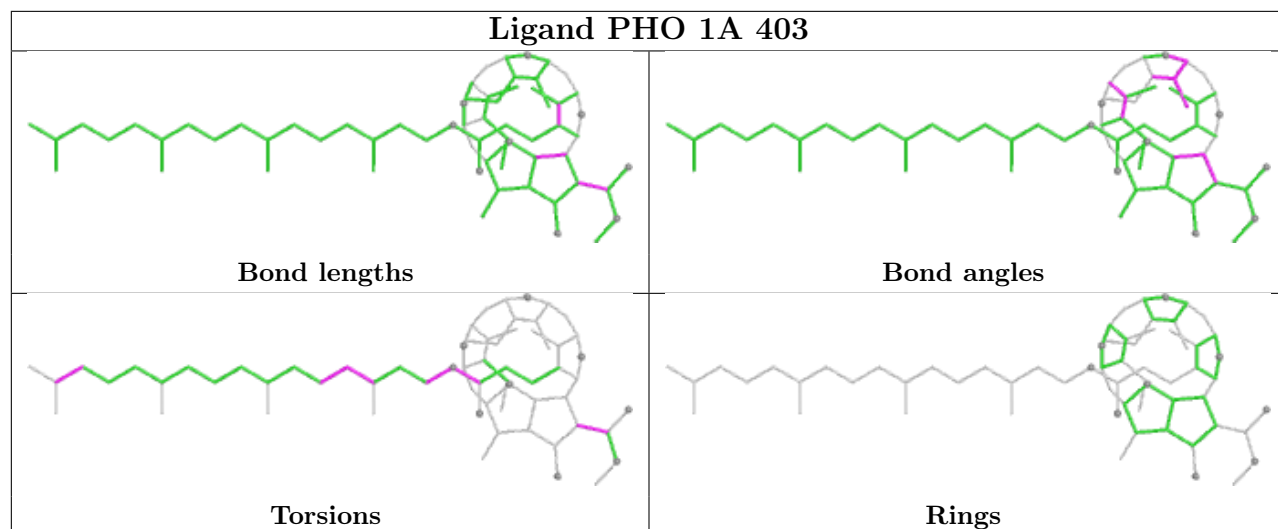
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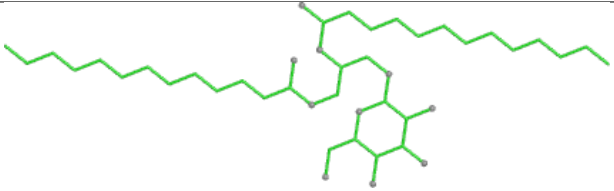
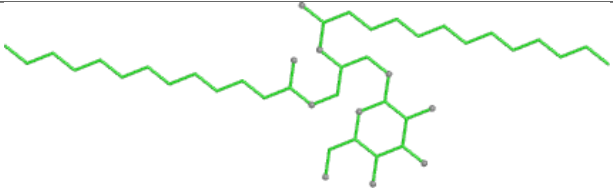
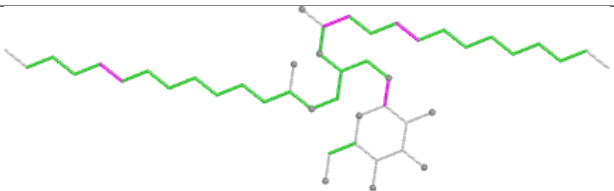
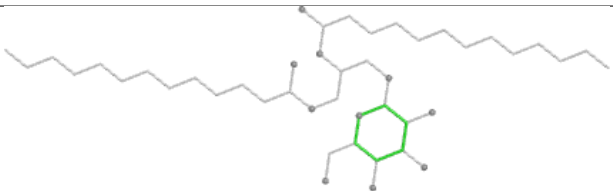
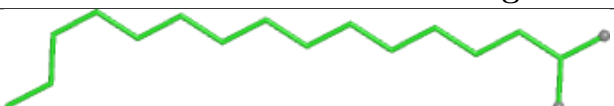
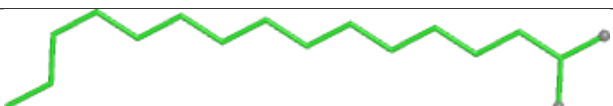
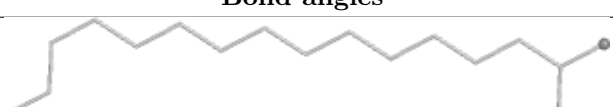
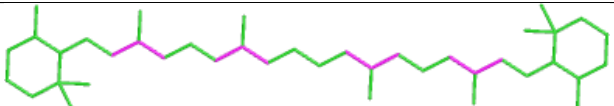
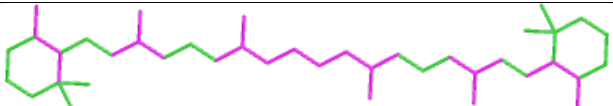
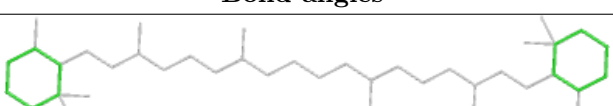


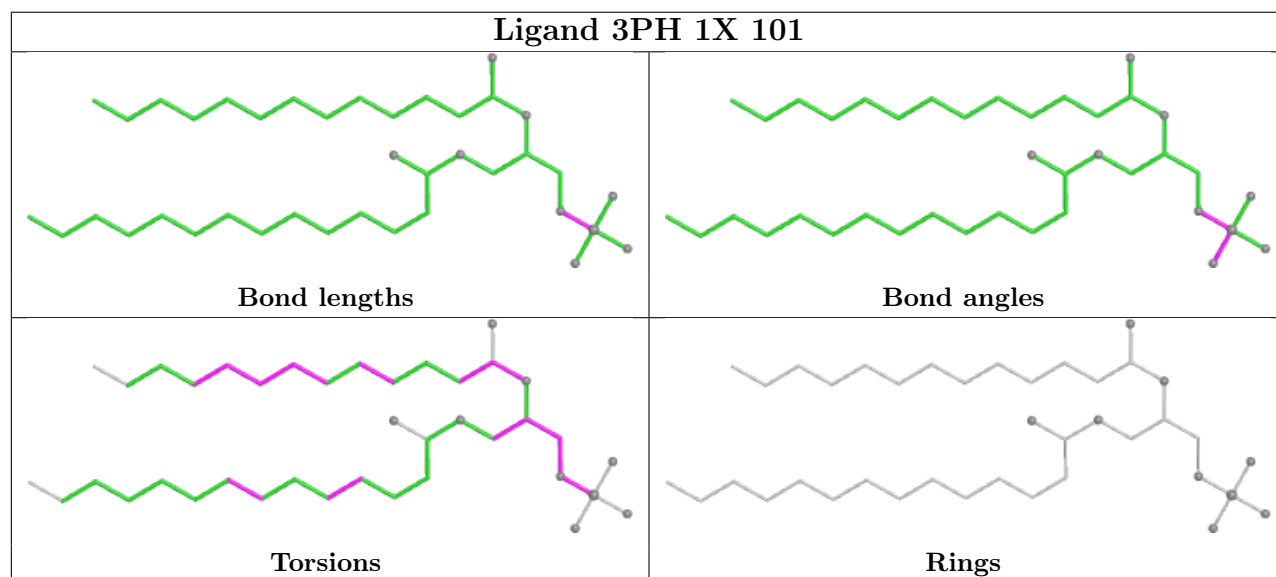
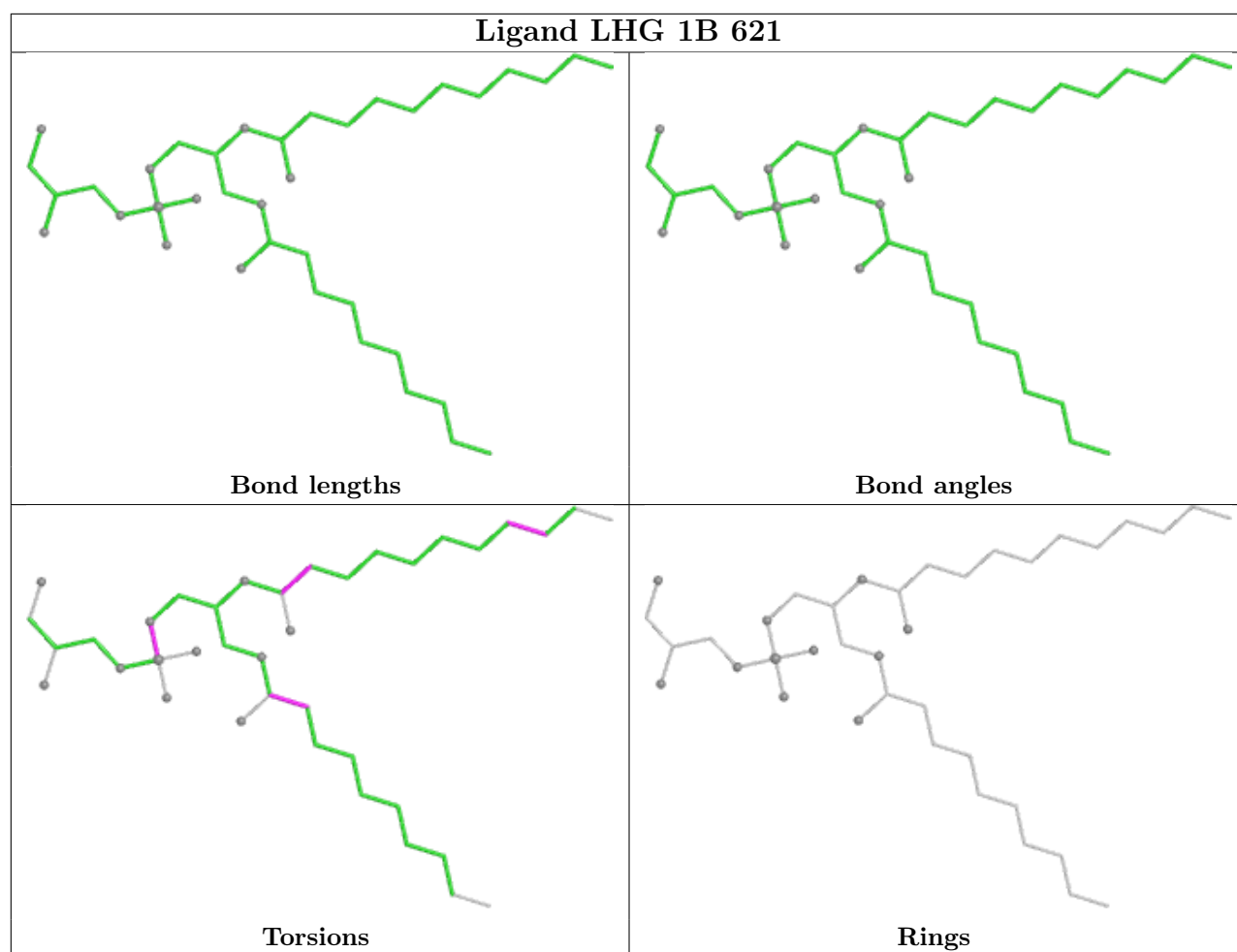
Ligand CLA 1C 509	
	
Bond lengths	Bond angles
	
Torsions	Rings

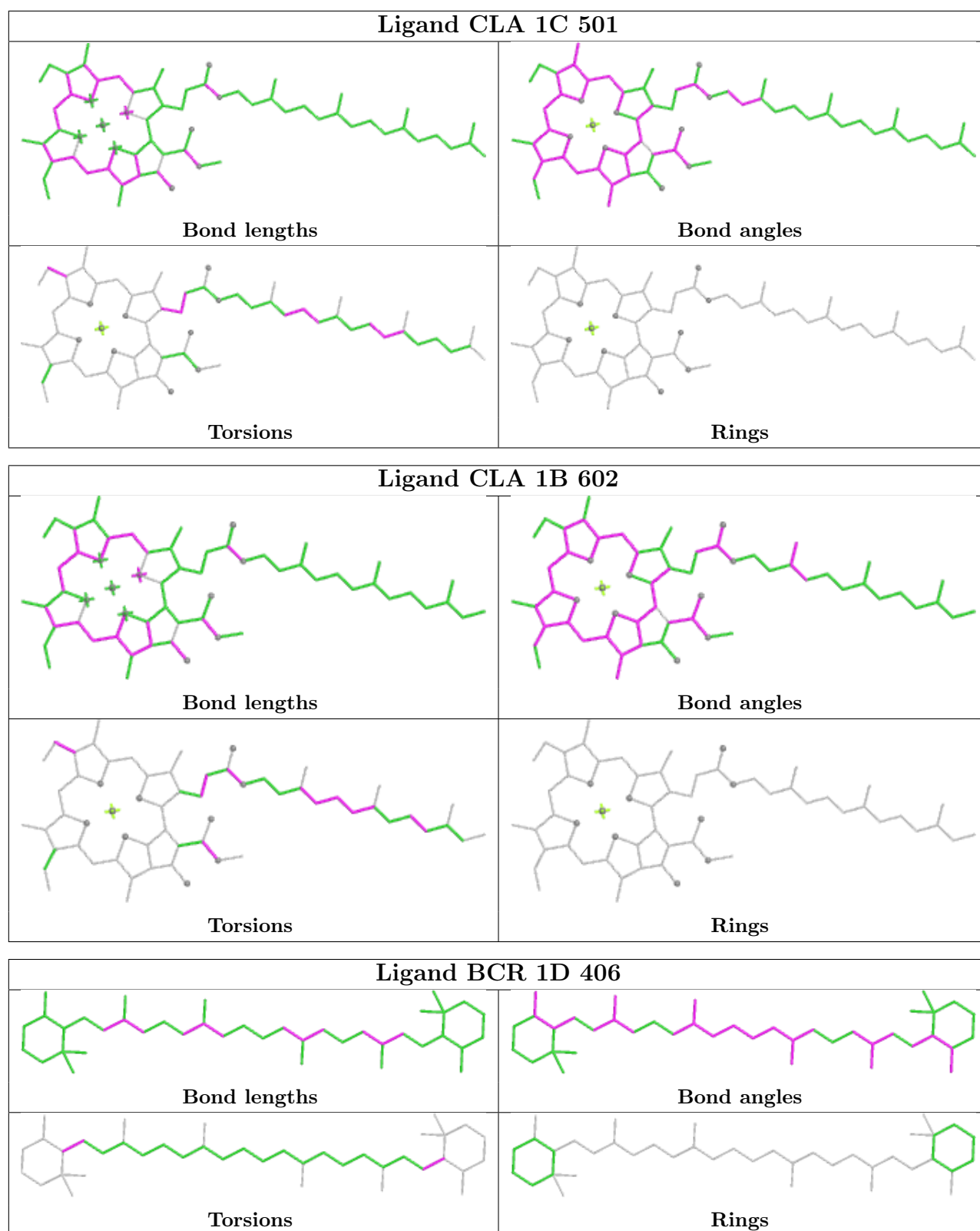
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Bond lengths	Bond angles
	
Torsions	Rings

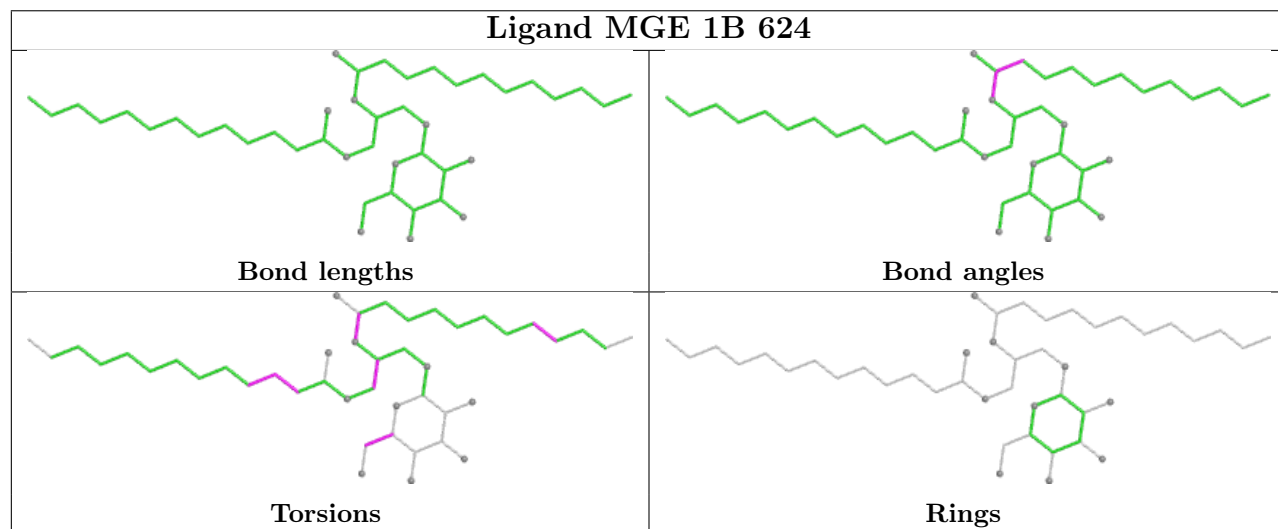
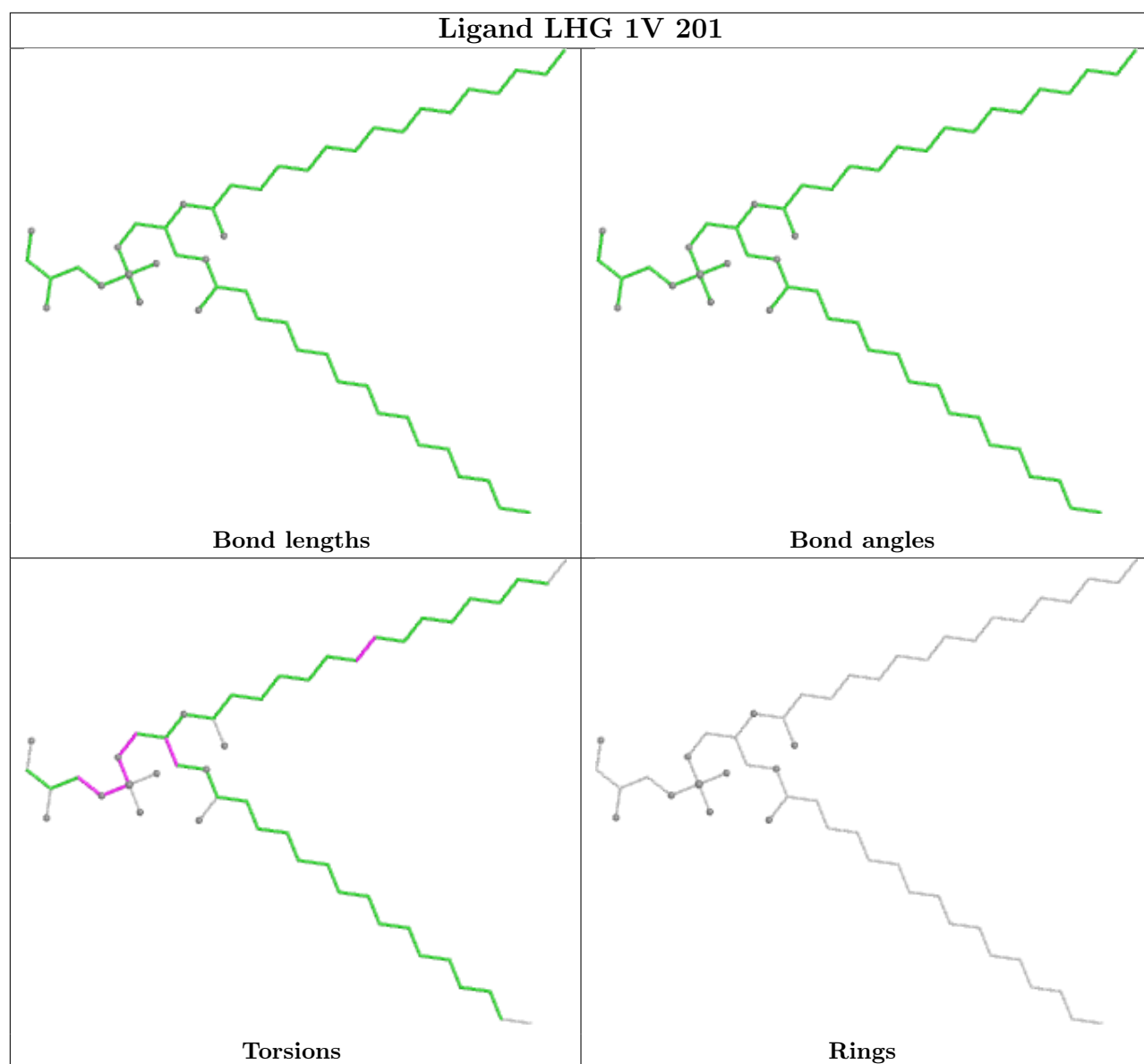
Ligand CLA 1A 402	
	
Bond lengths	Bond angles
	
Torsions	Rings

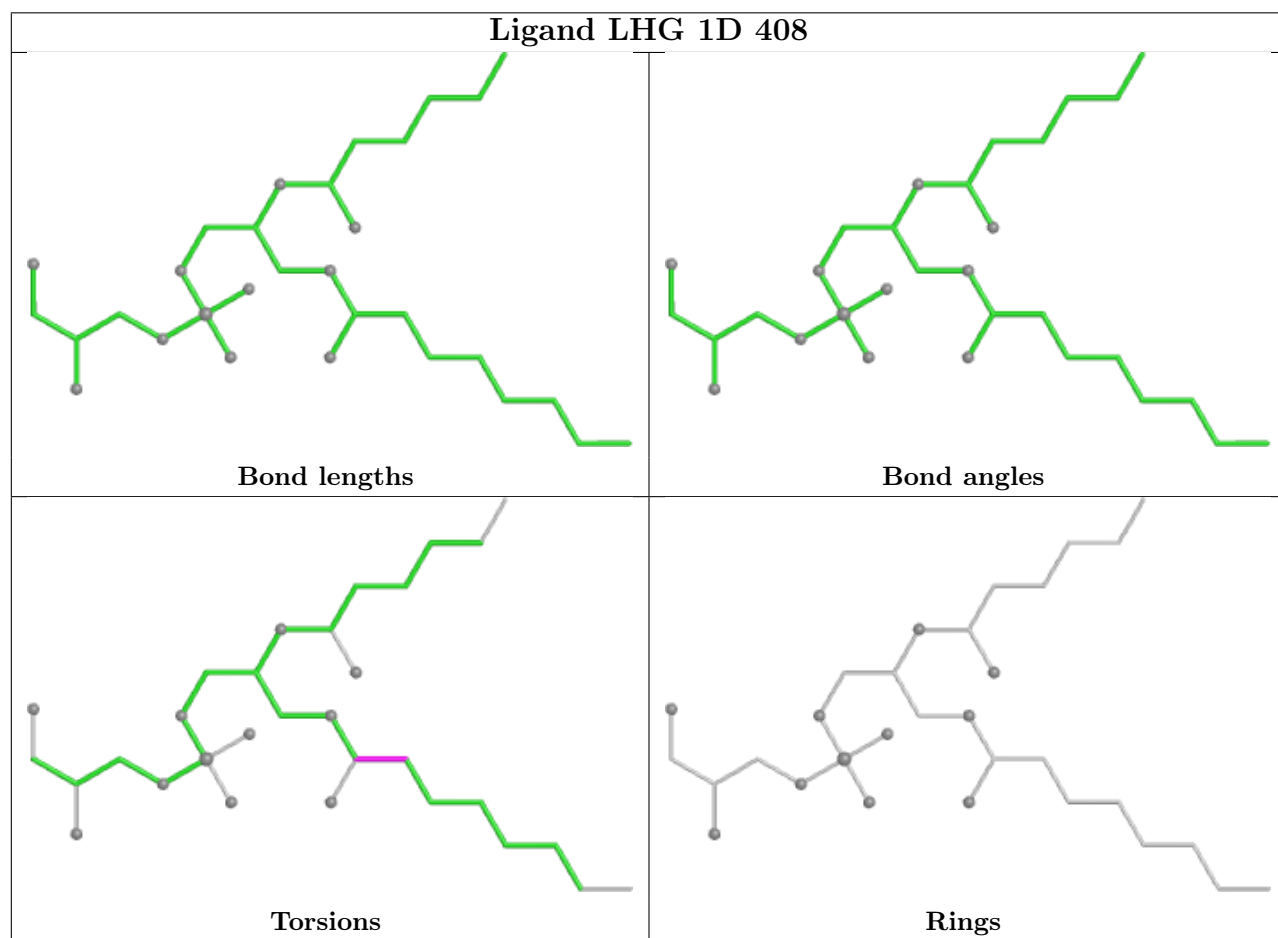
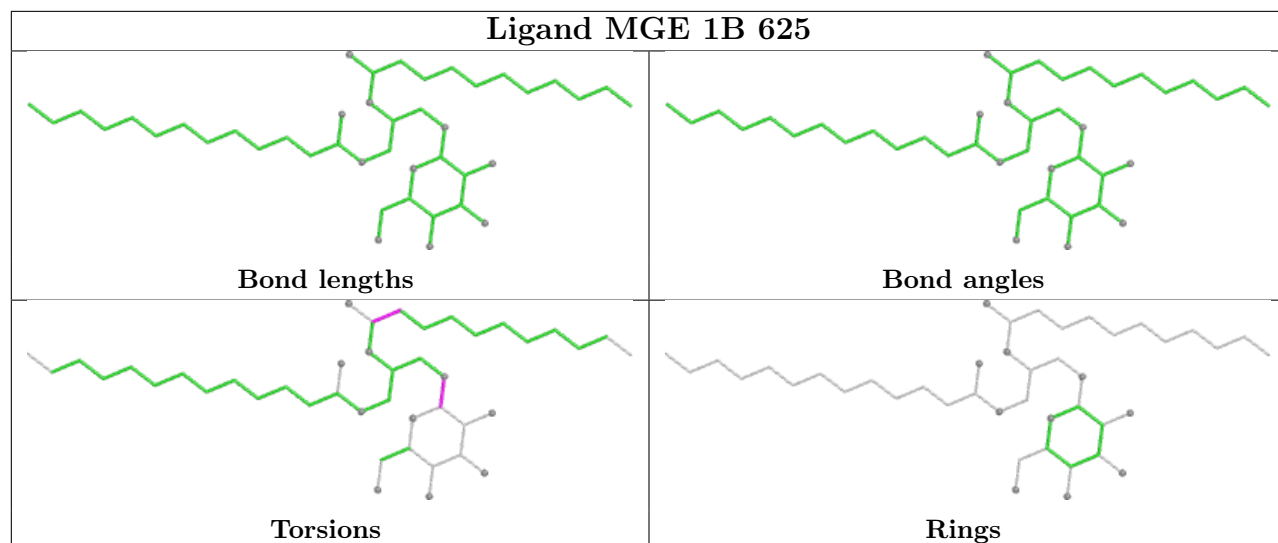


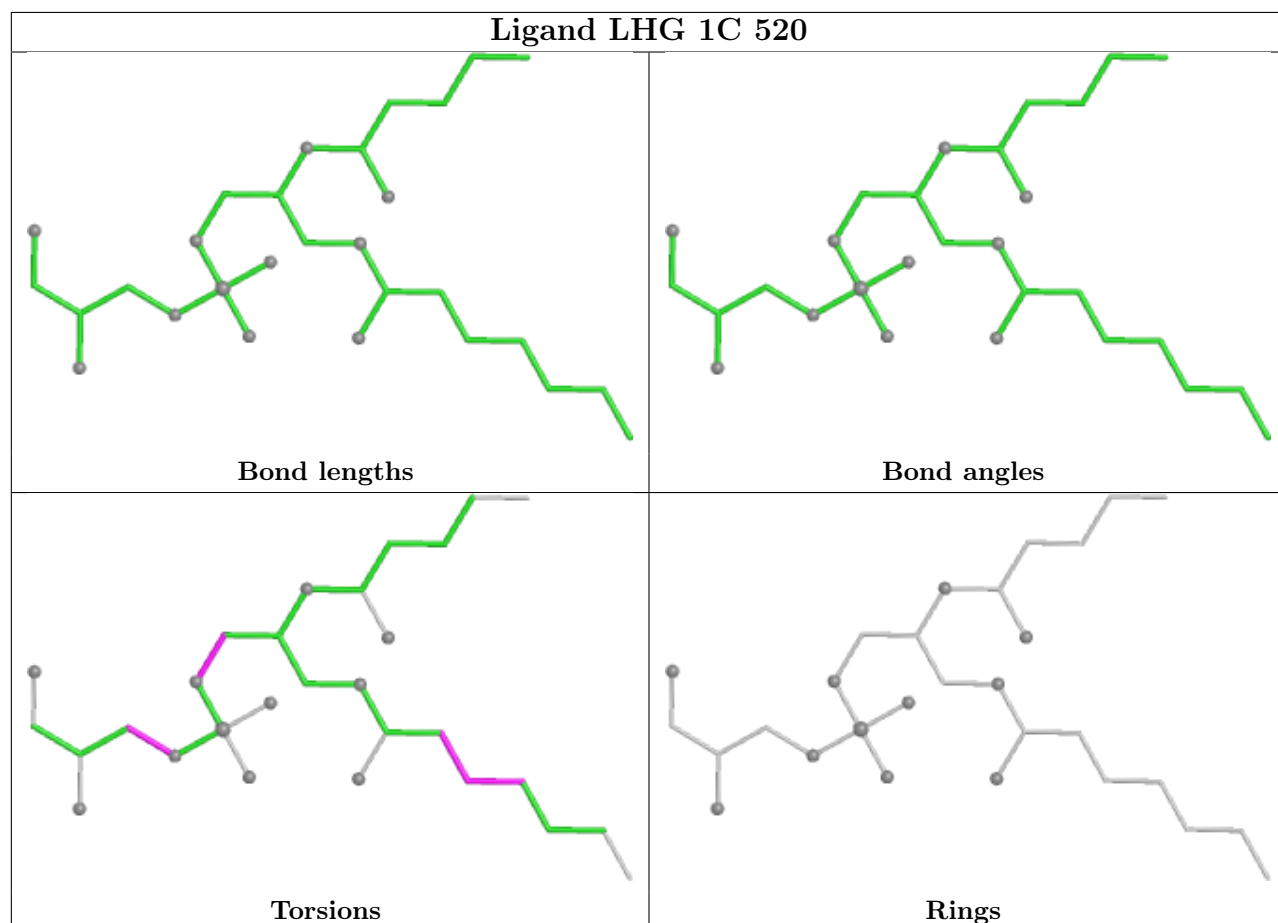
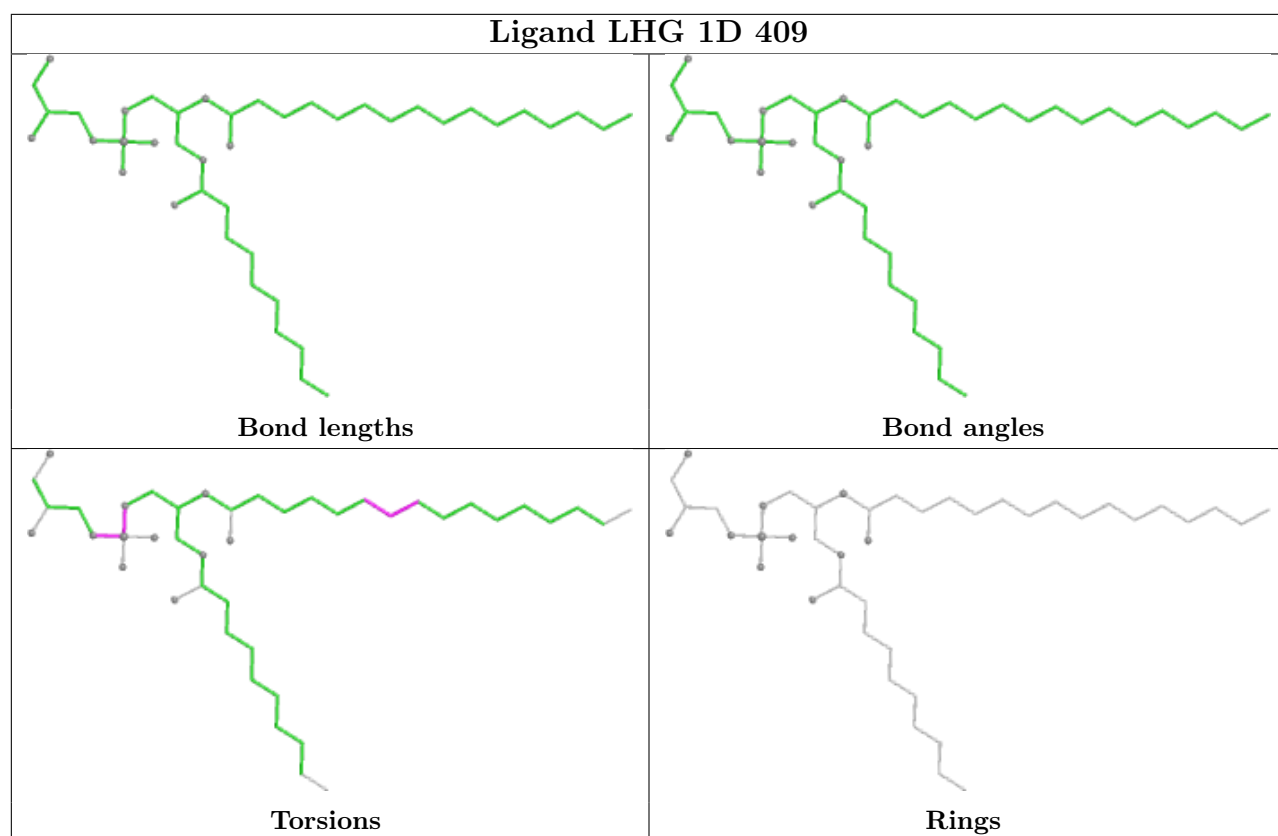
Ligand MGE 1C 525	
 Bond lengths	 Bond angles
 Torsions	 Rings
Ligand LNL 1C 515	
 Bond lengths	 Bond angles
 Torsions	 Rings
Ligand BCR 1B 618	
 Bond lengths	 Bond angles
 Torsions	 Rings

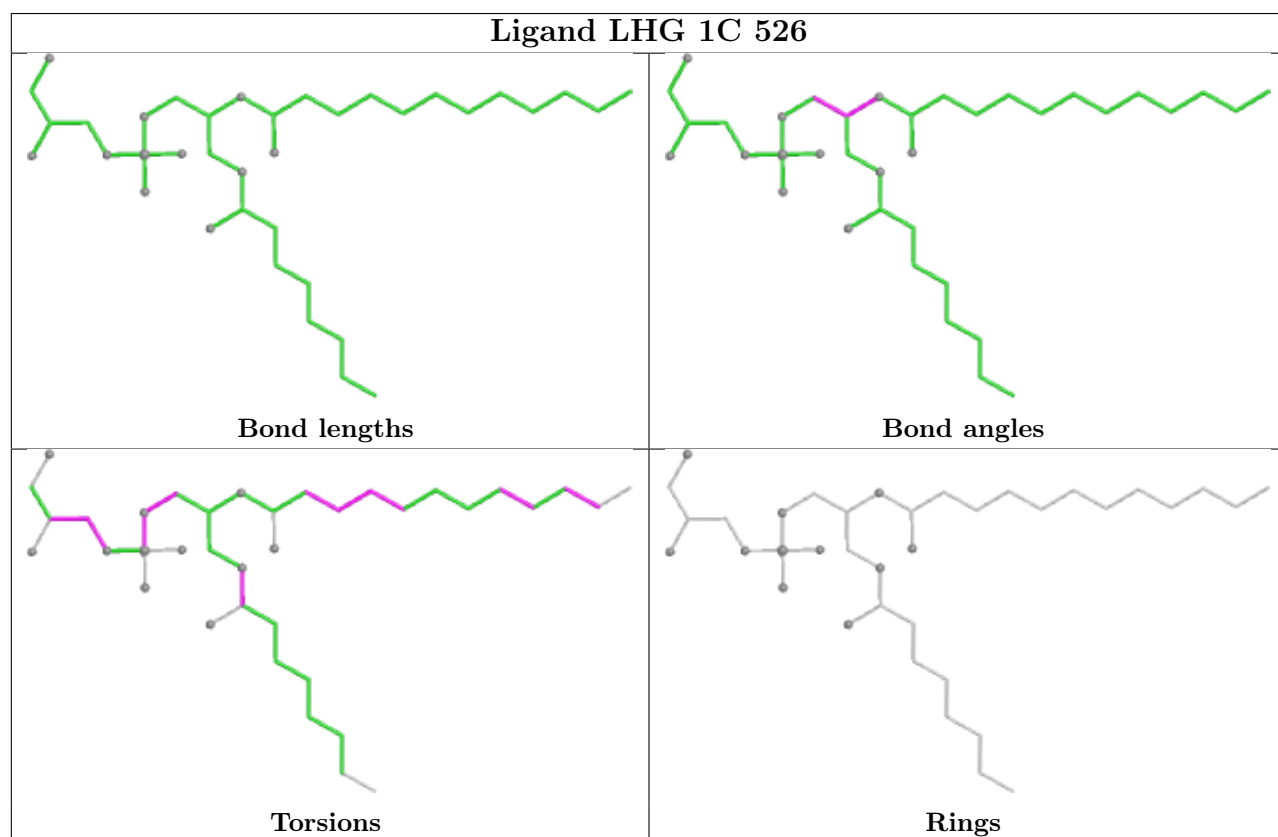
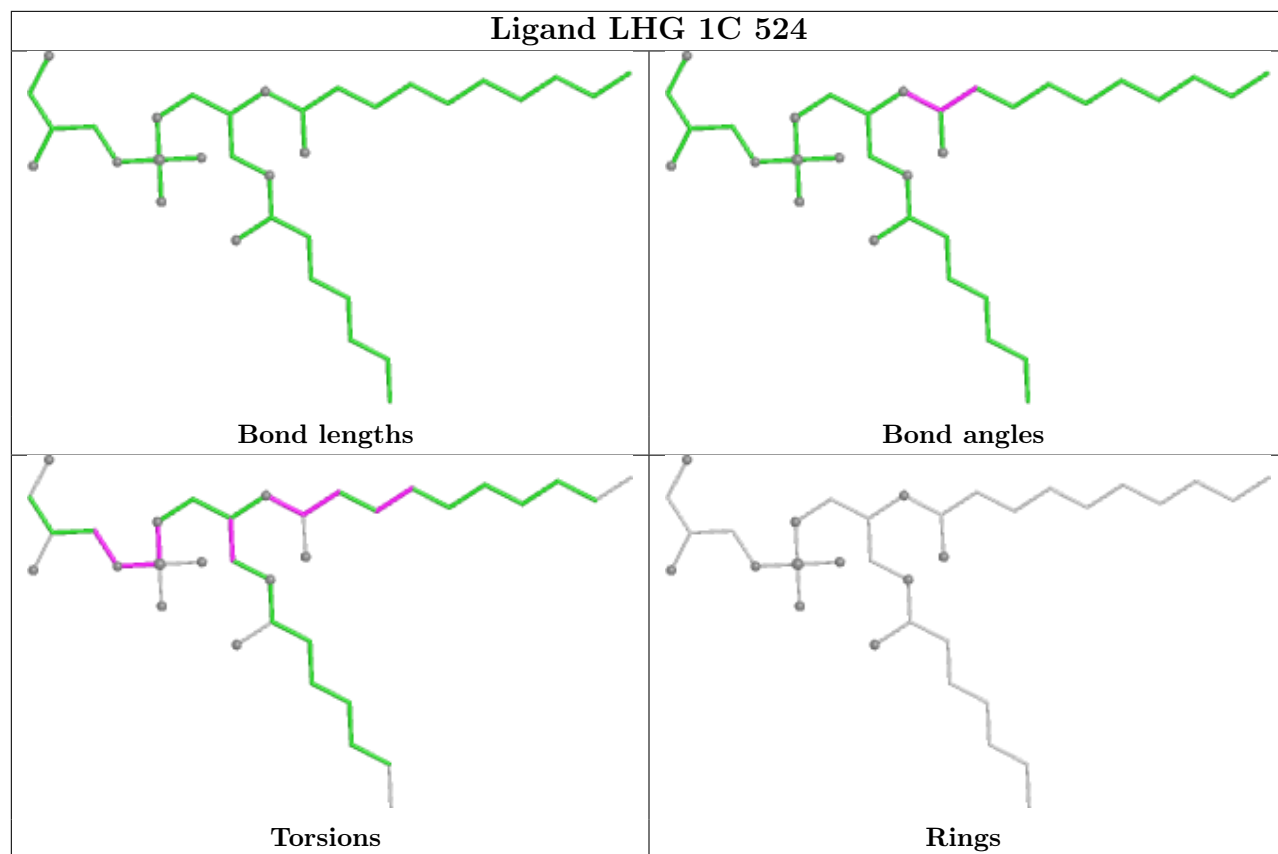




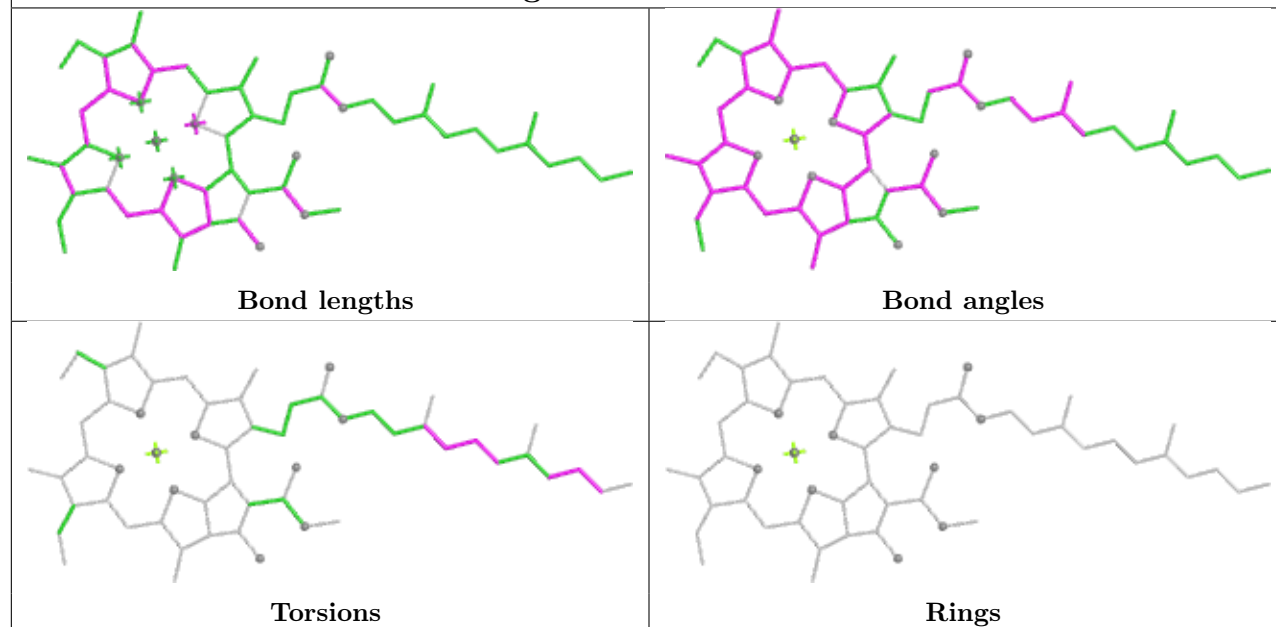




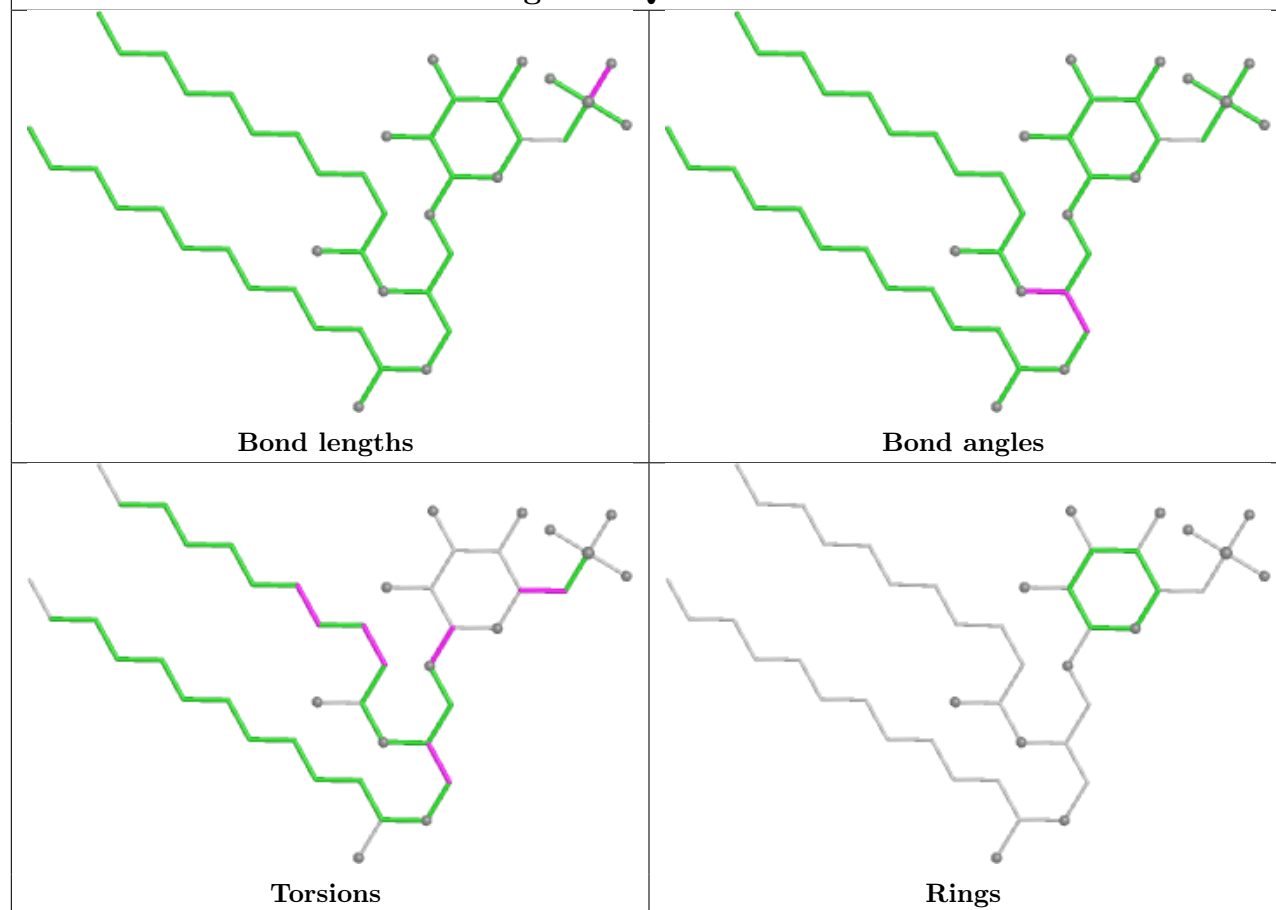


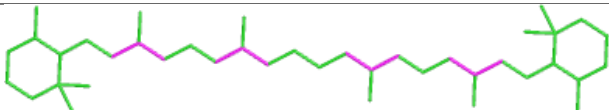
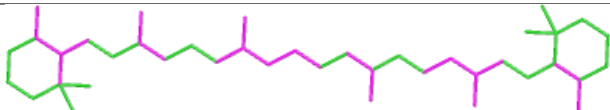
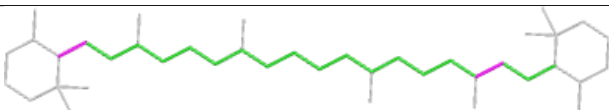
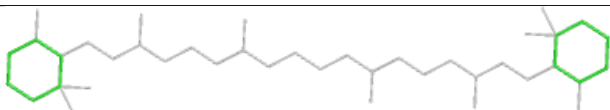


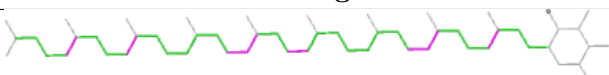
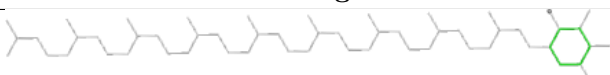
Ligand CLA 1B 613

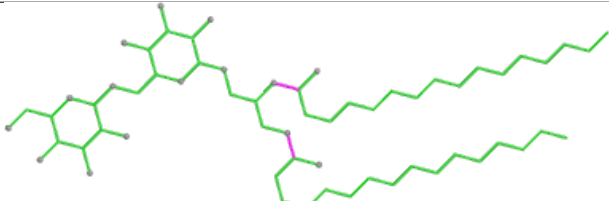
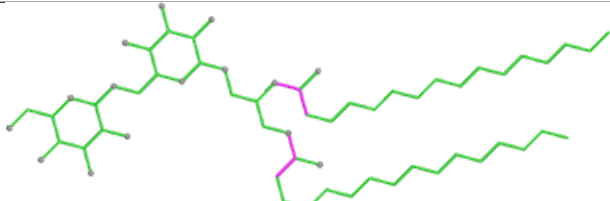
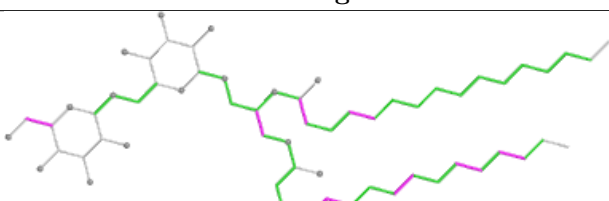
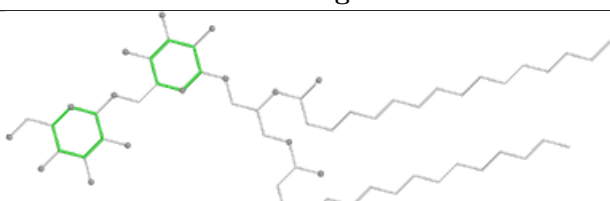


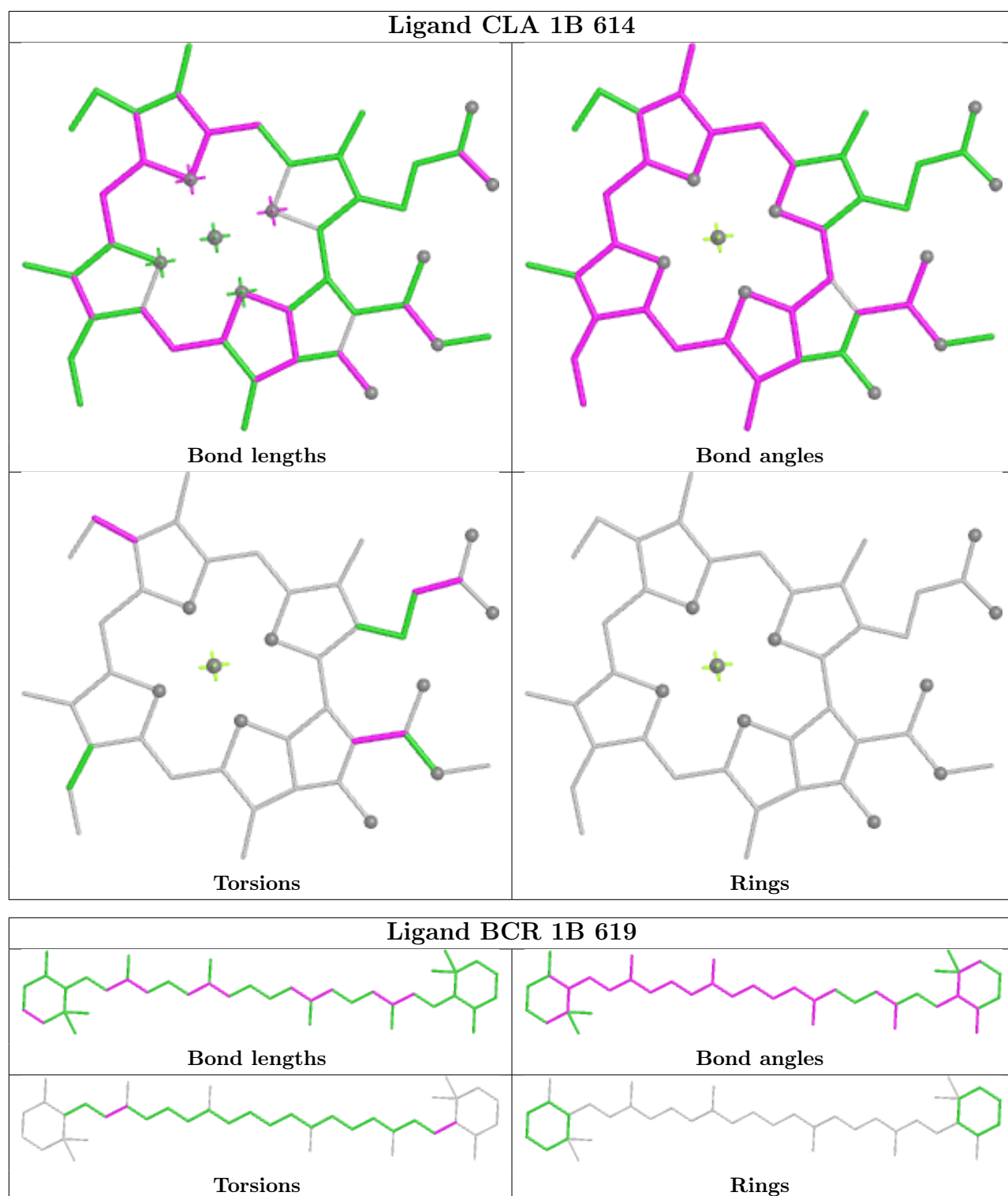
Ligand SQD 1B 620

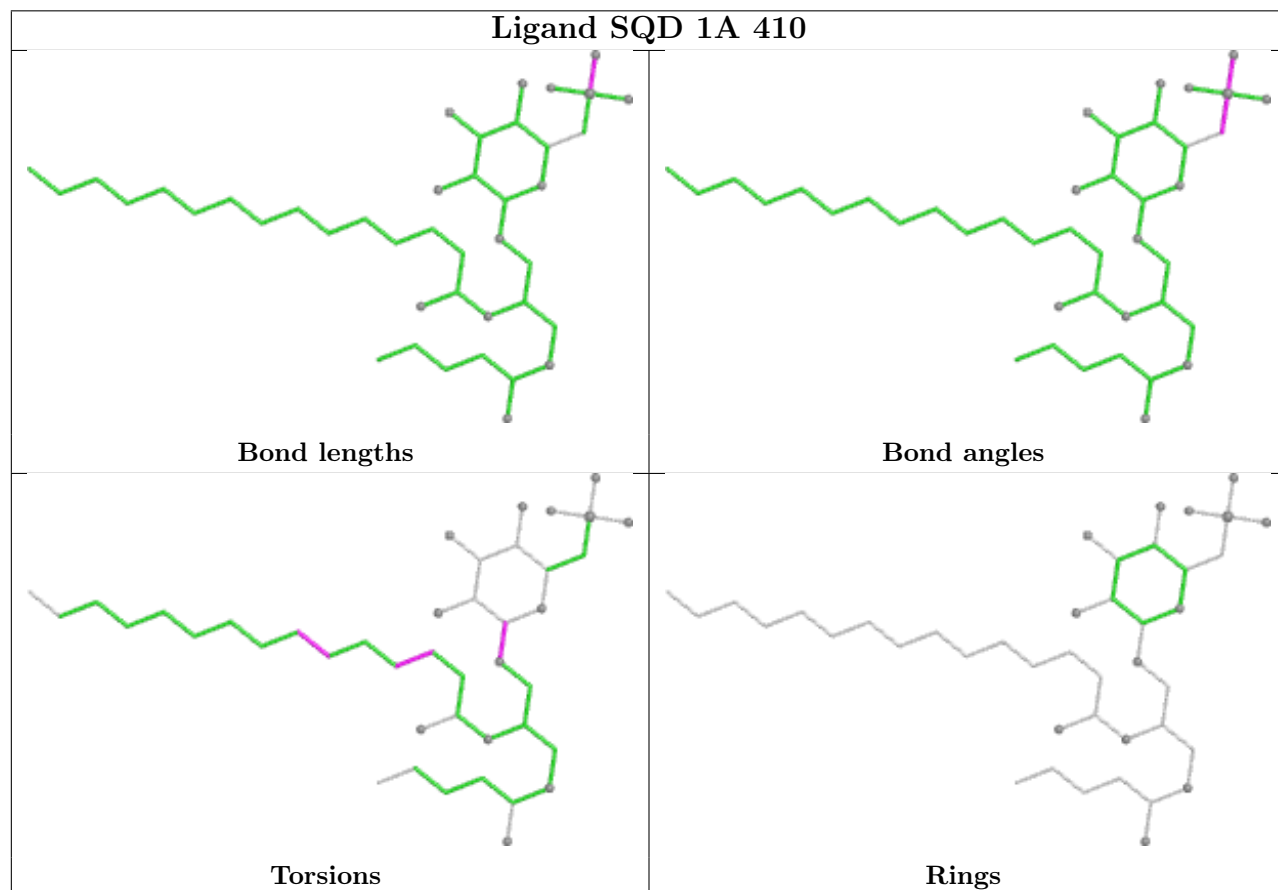
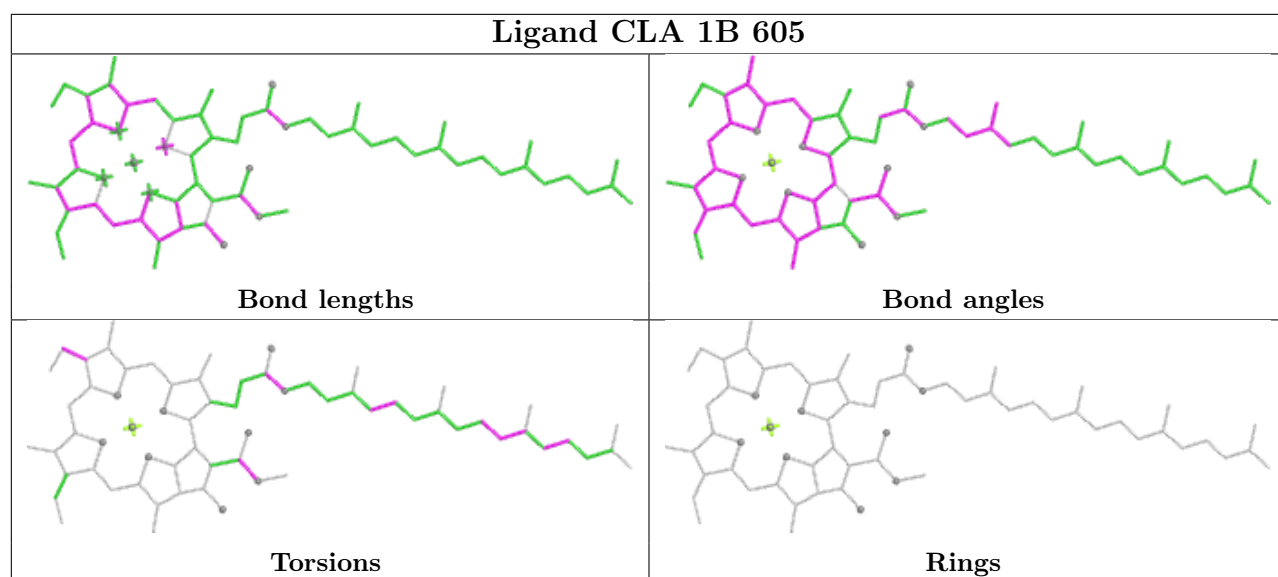


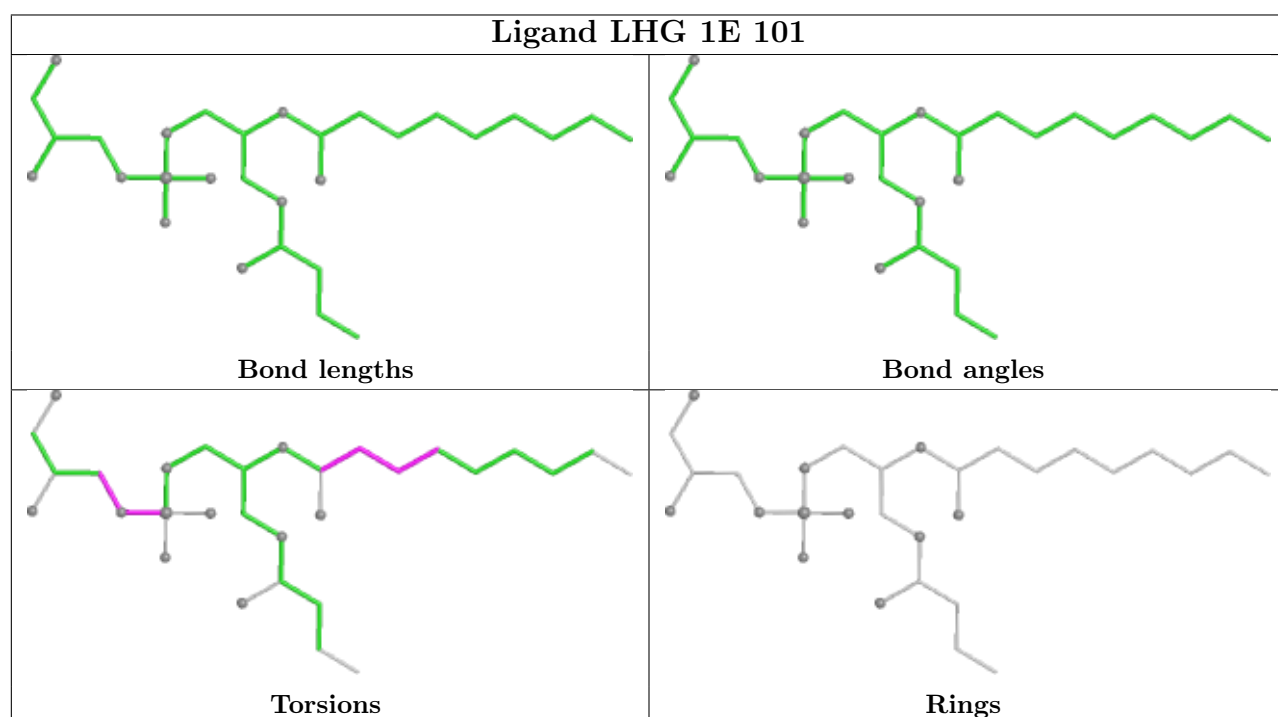
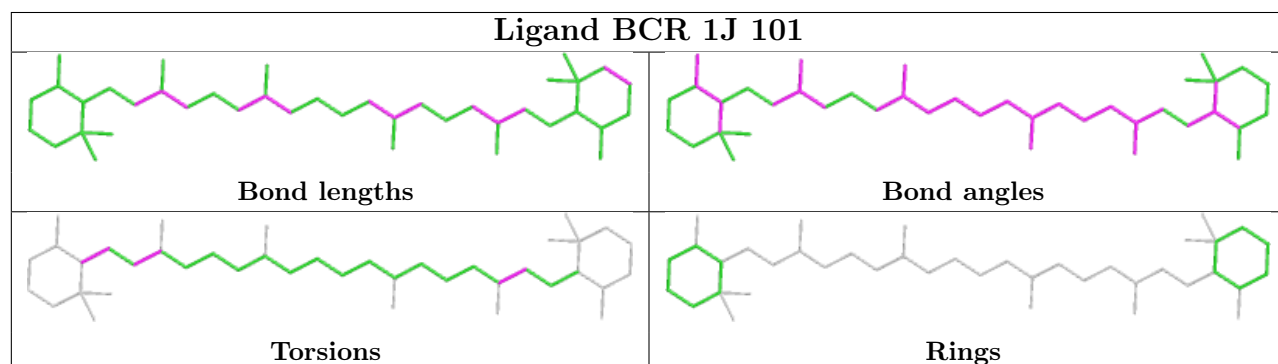
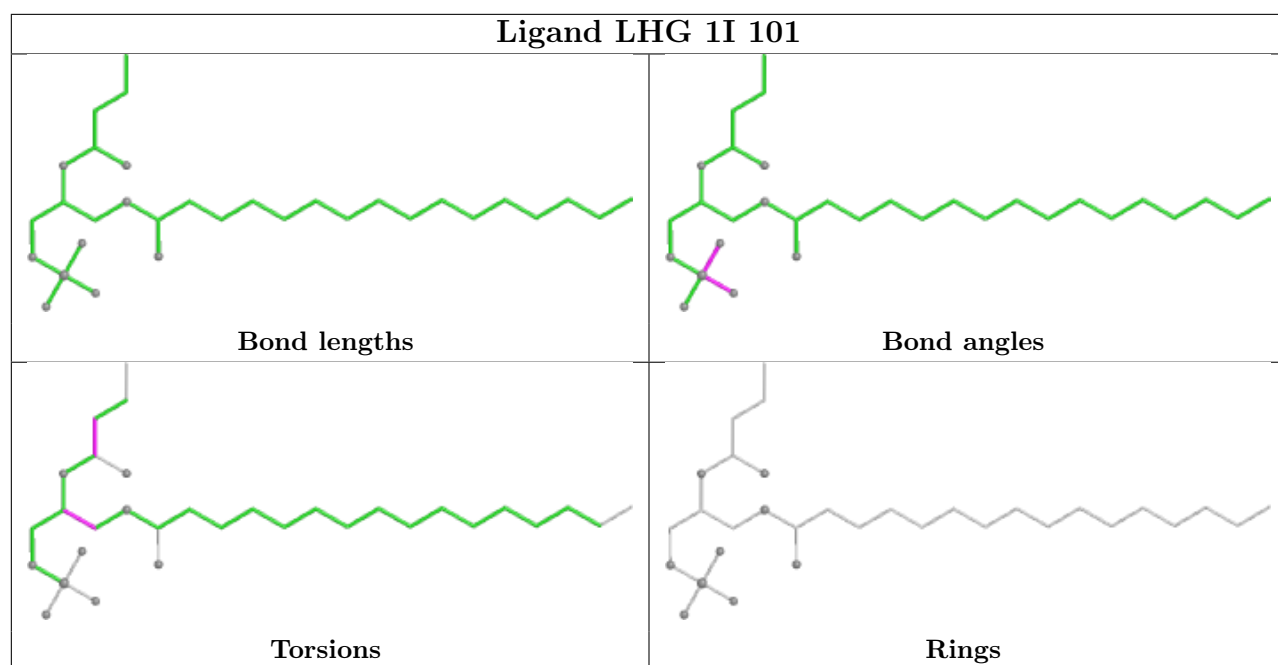
Ligand BCR 1I 102	
	
Bond lengths	Bond angles
	
Torsions	Rings

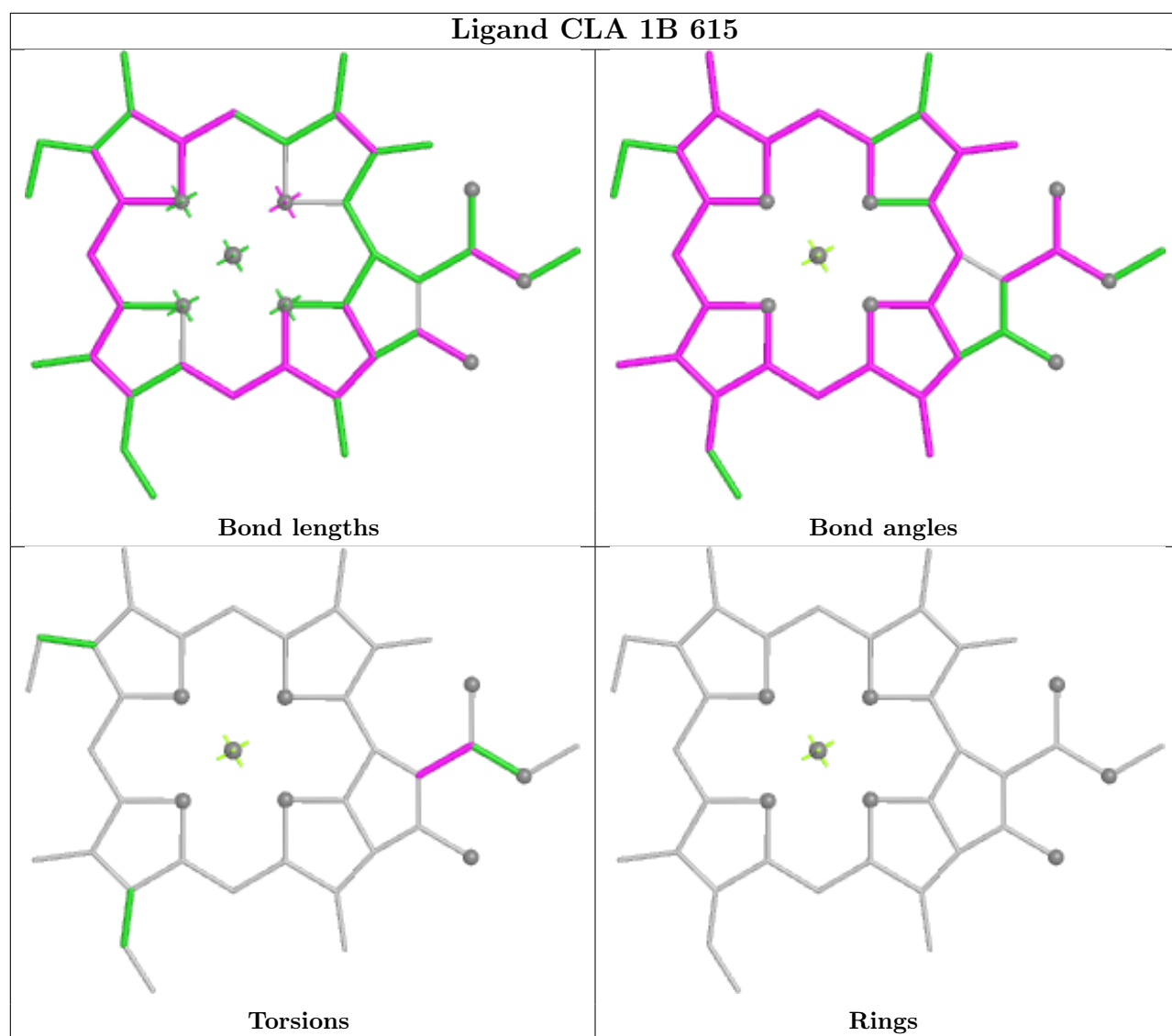
Ligand PL9 1A 408	
	
Bond lengths	Bond angles
	
Torsions	Rings

Ligand DGD 1B 626	
	
Bond lengths	Bond angles
	
Torsions	Rings

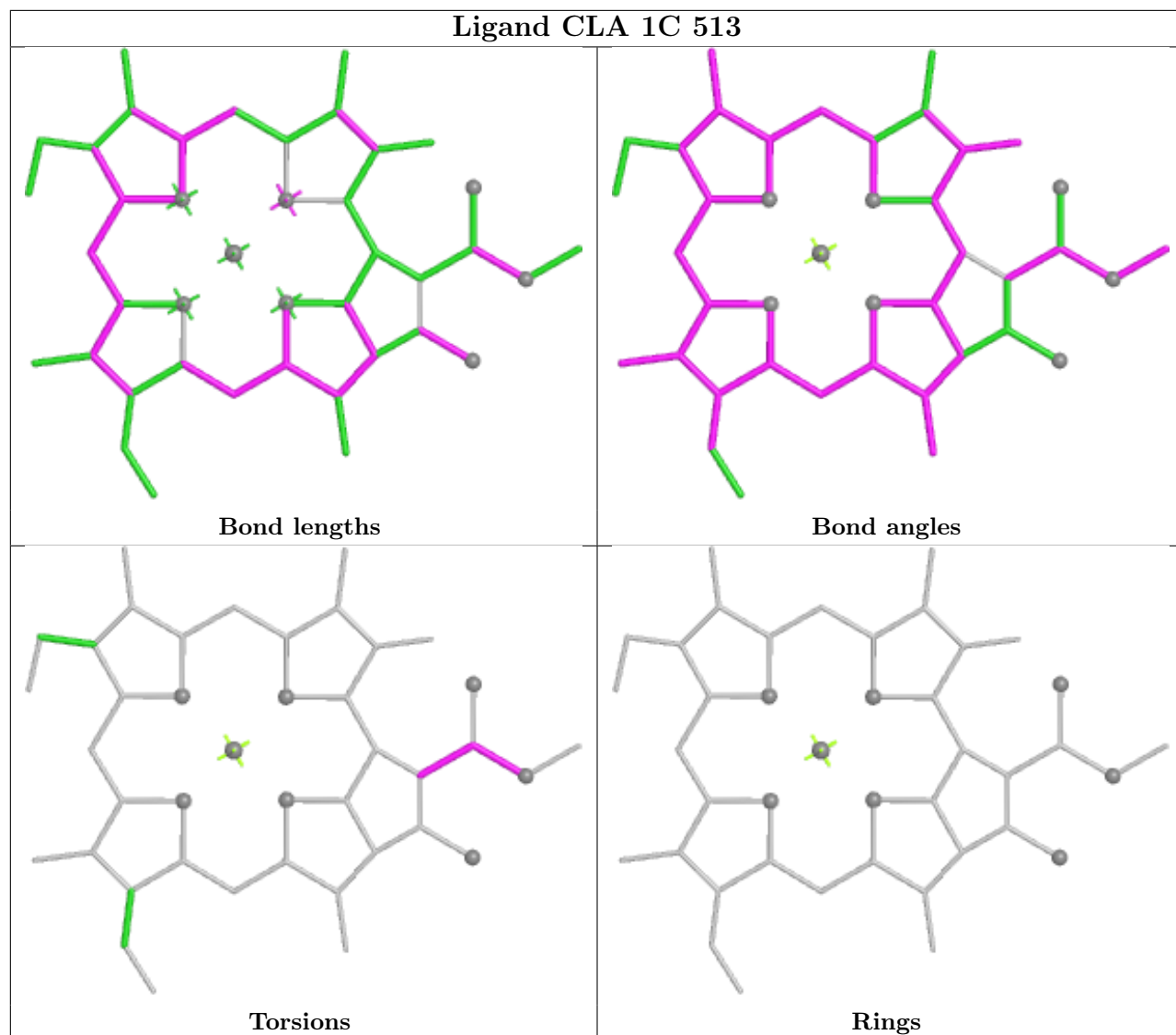


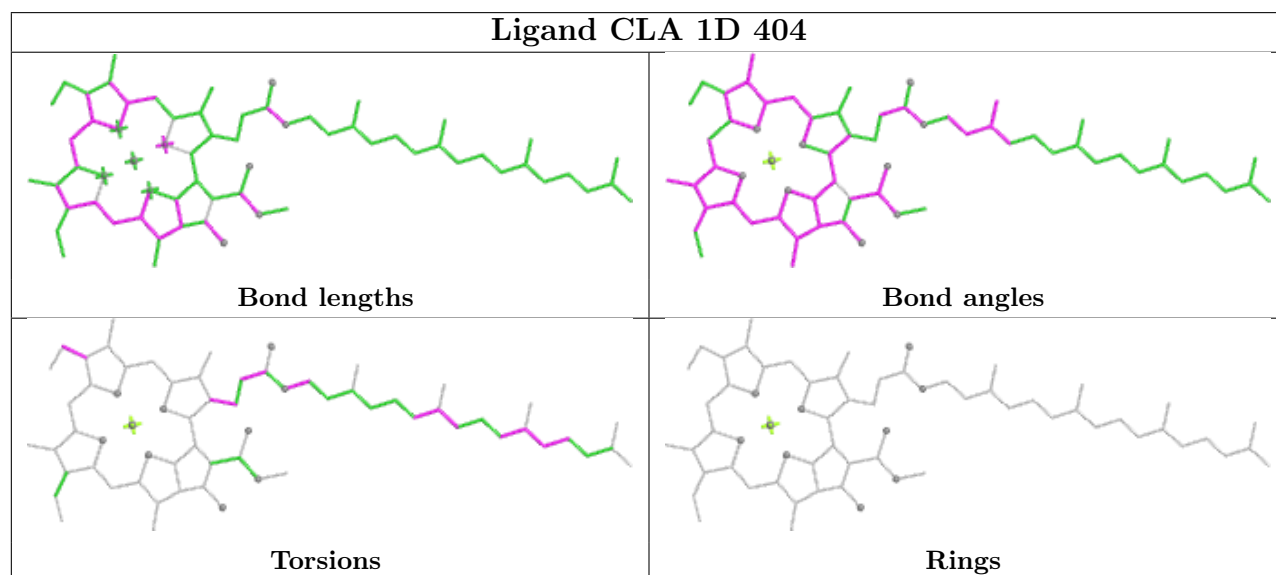
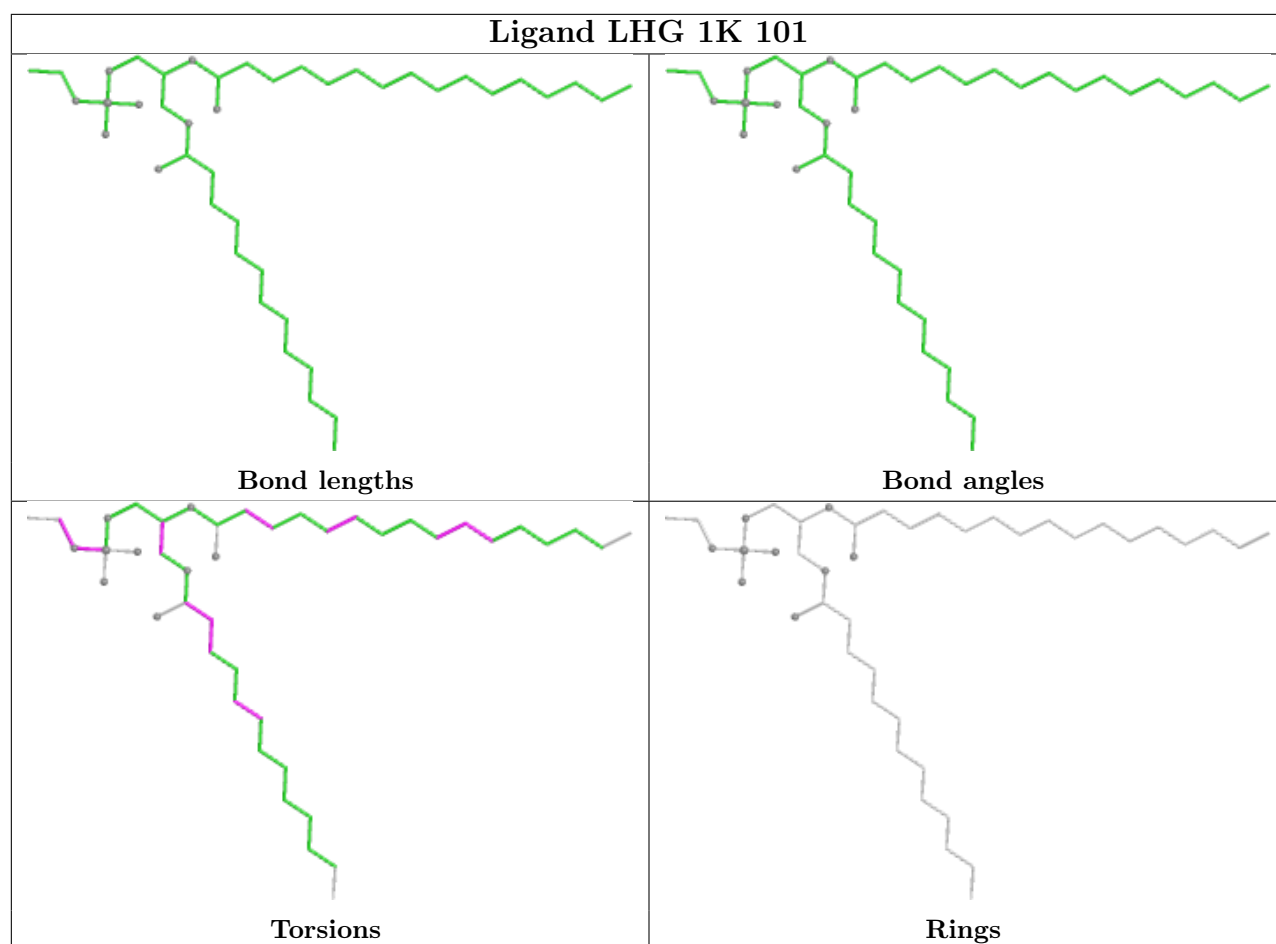


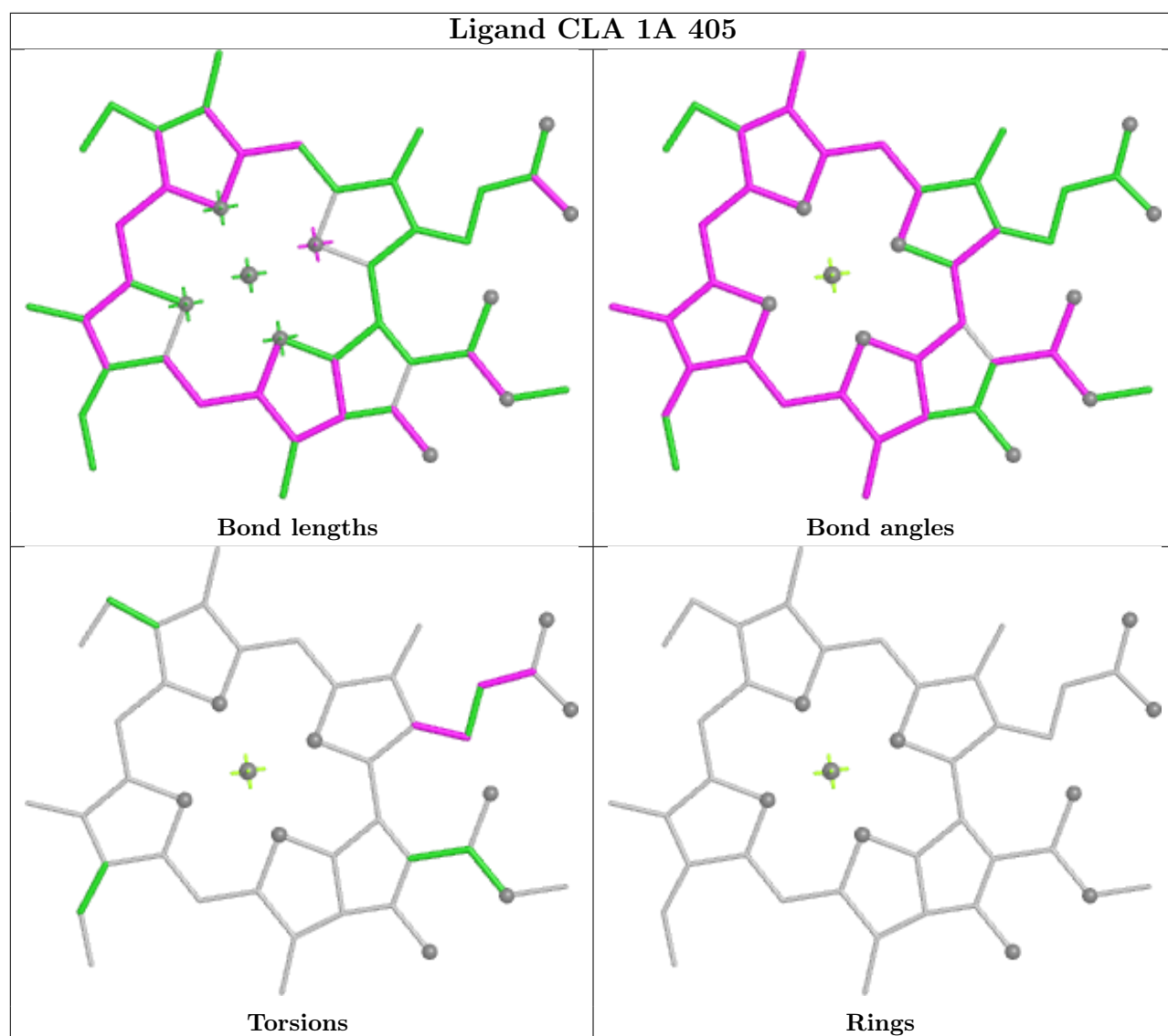


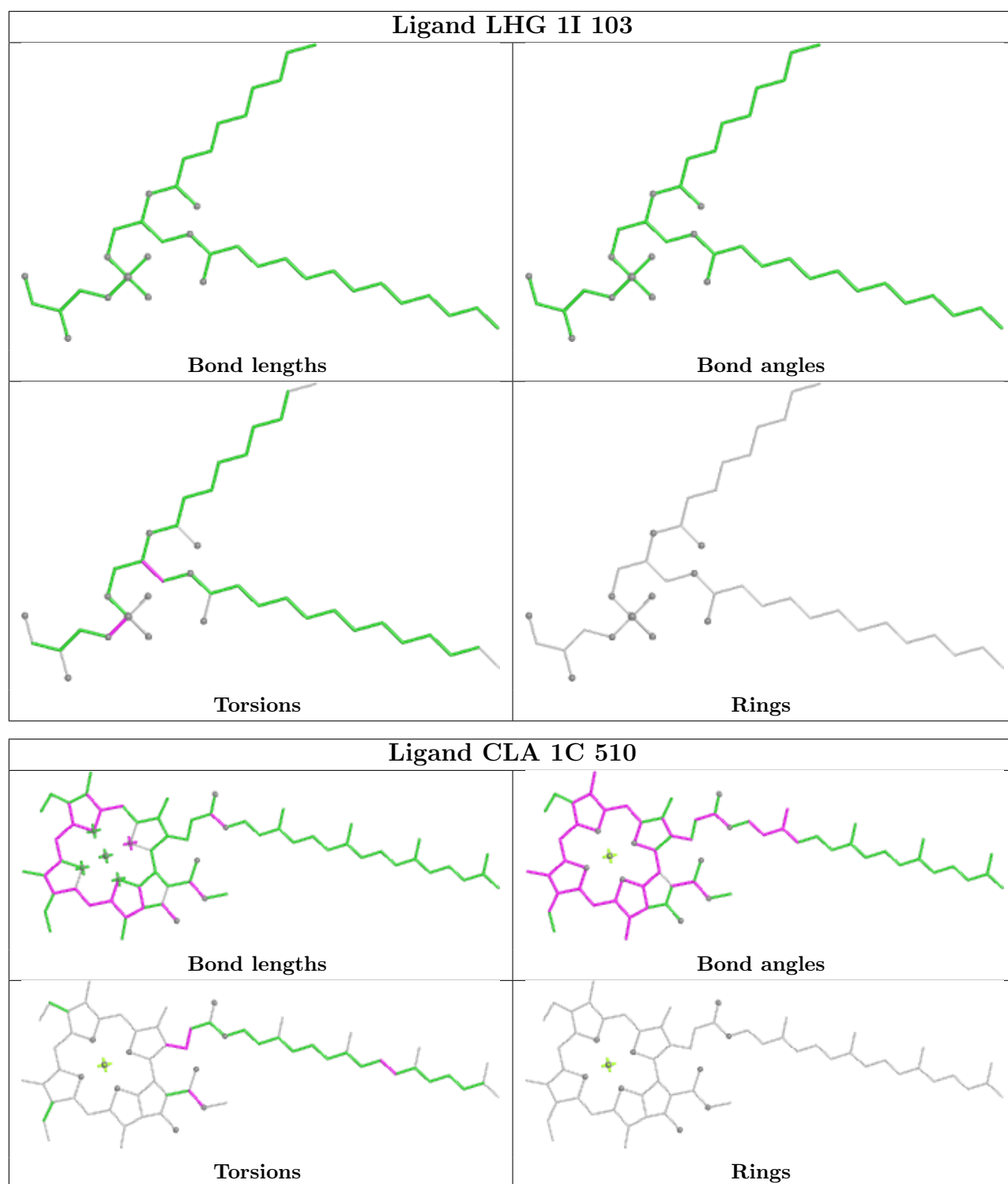


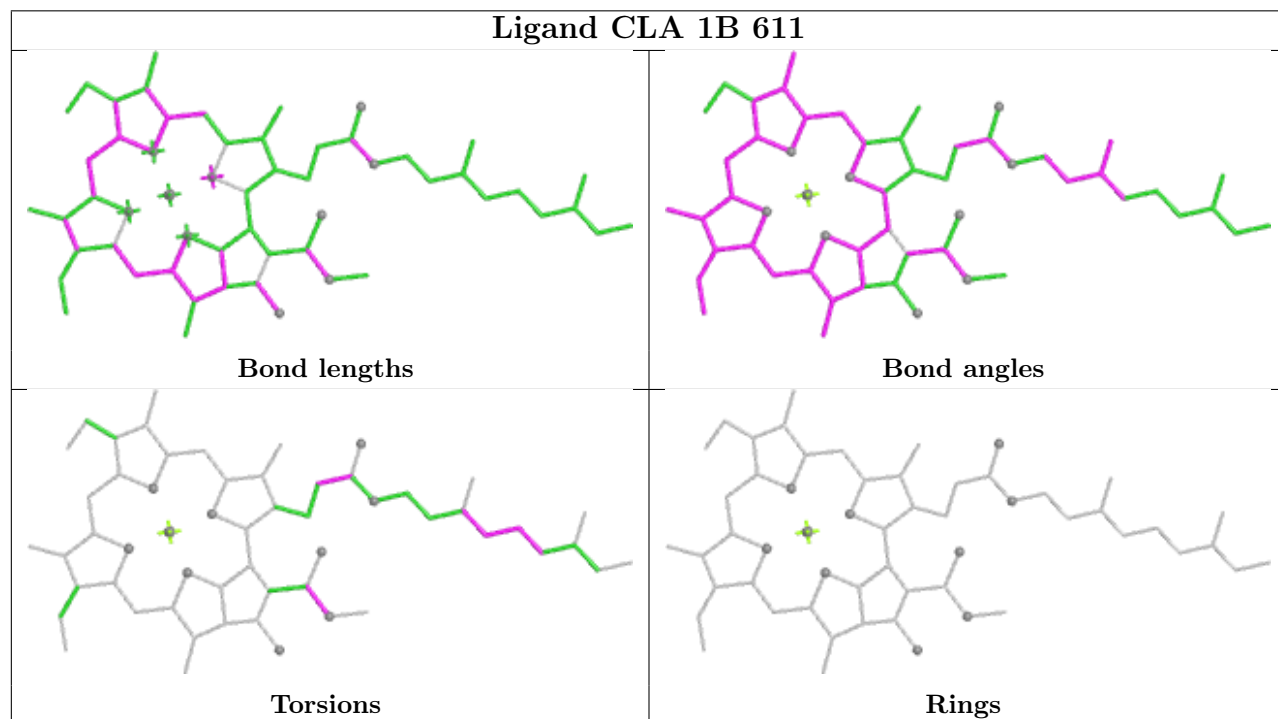
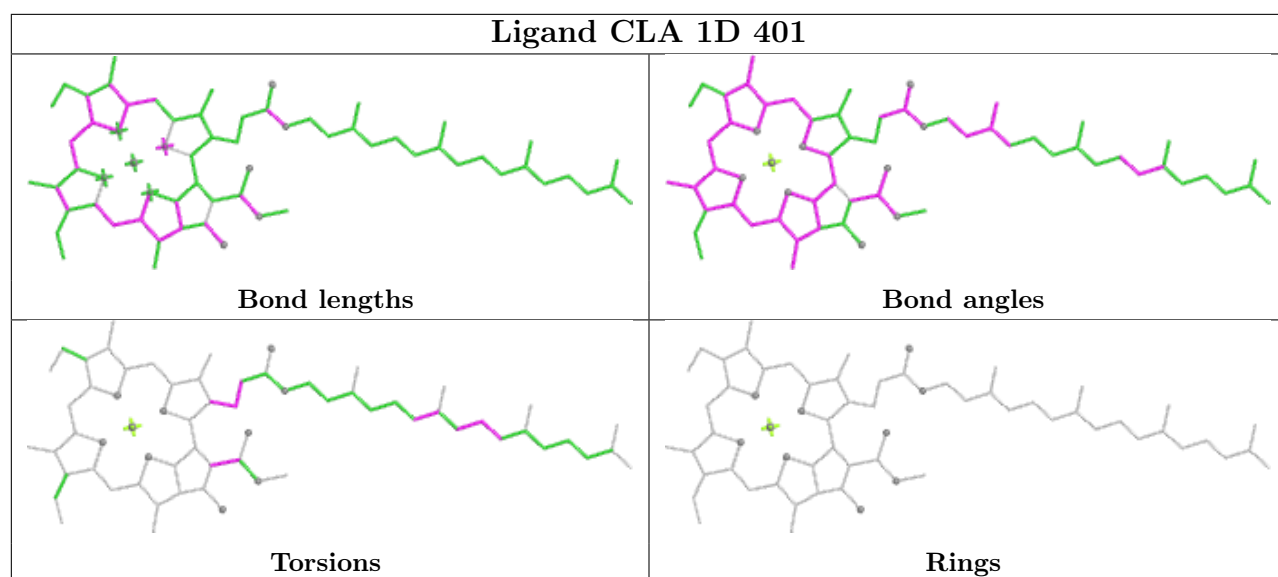
Ligand CLA 1C 513

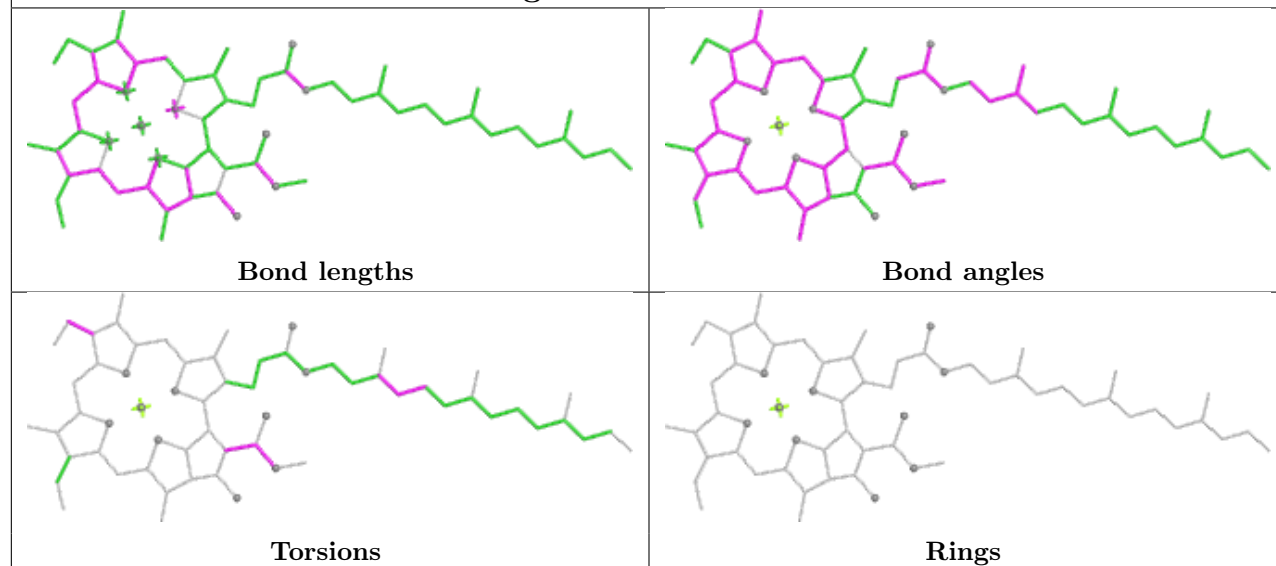
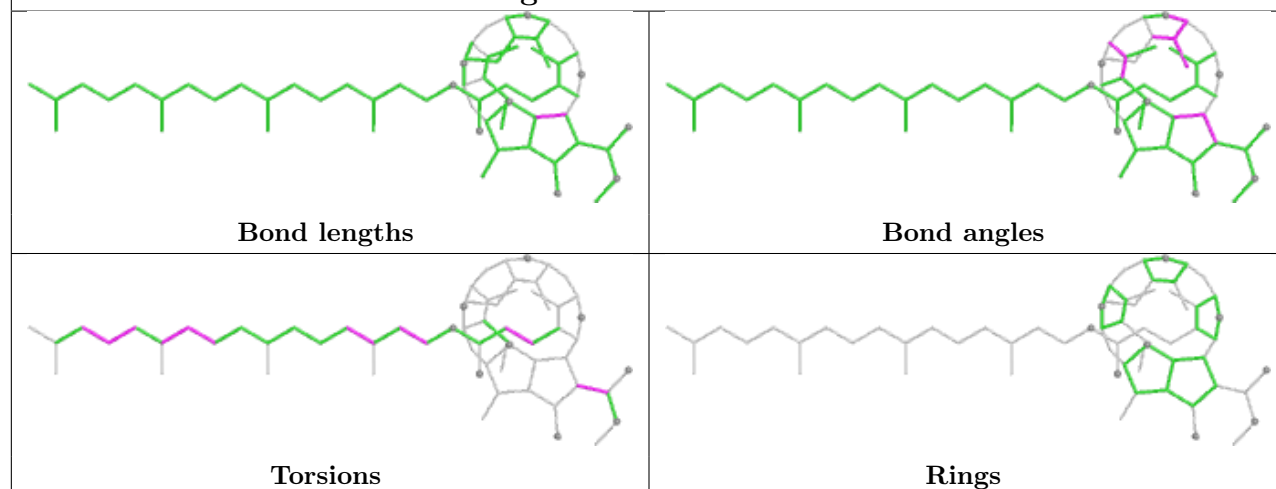


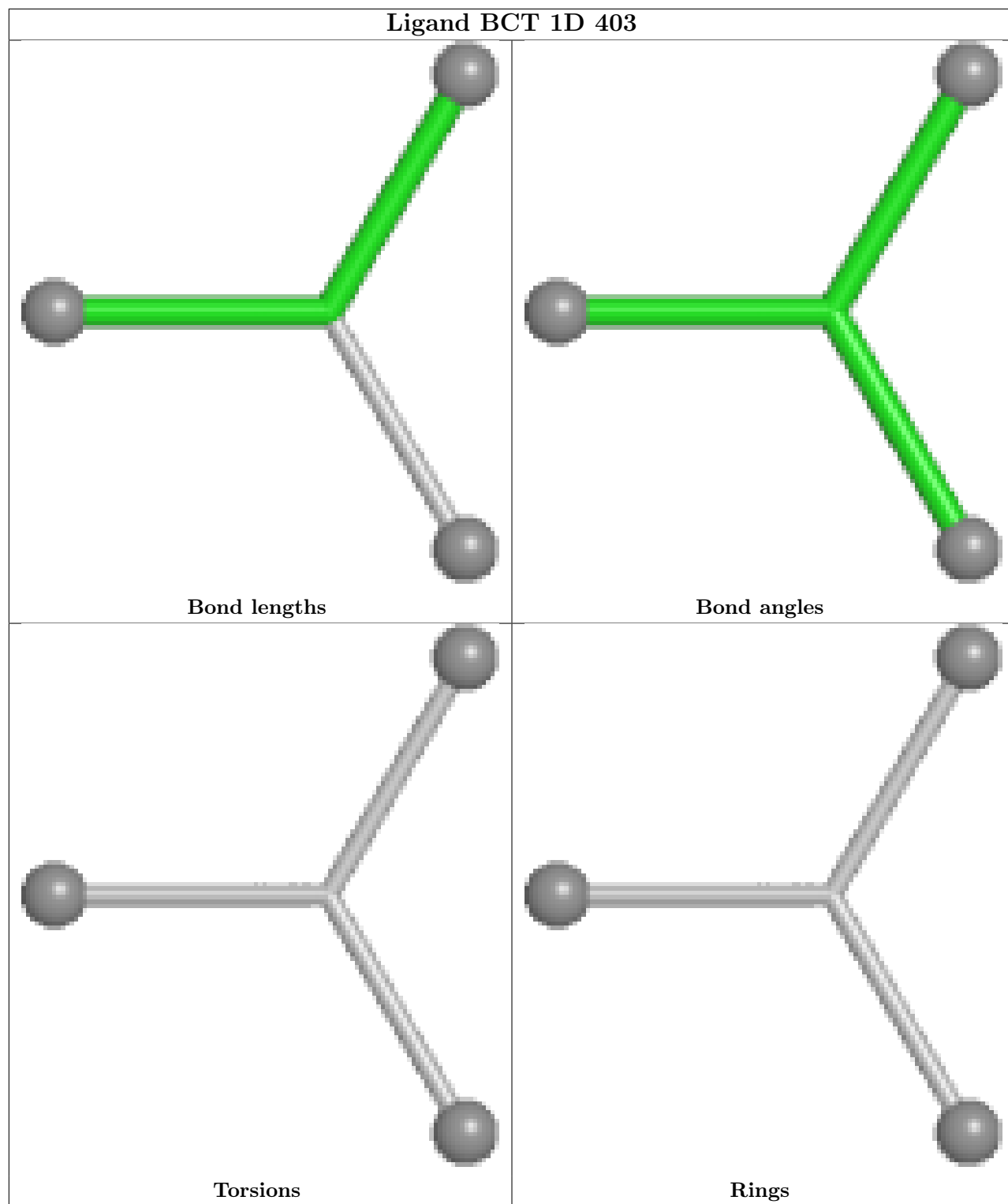


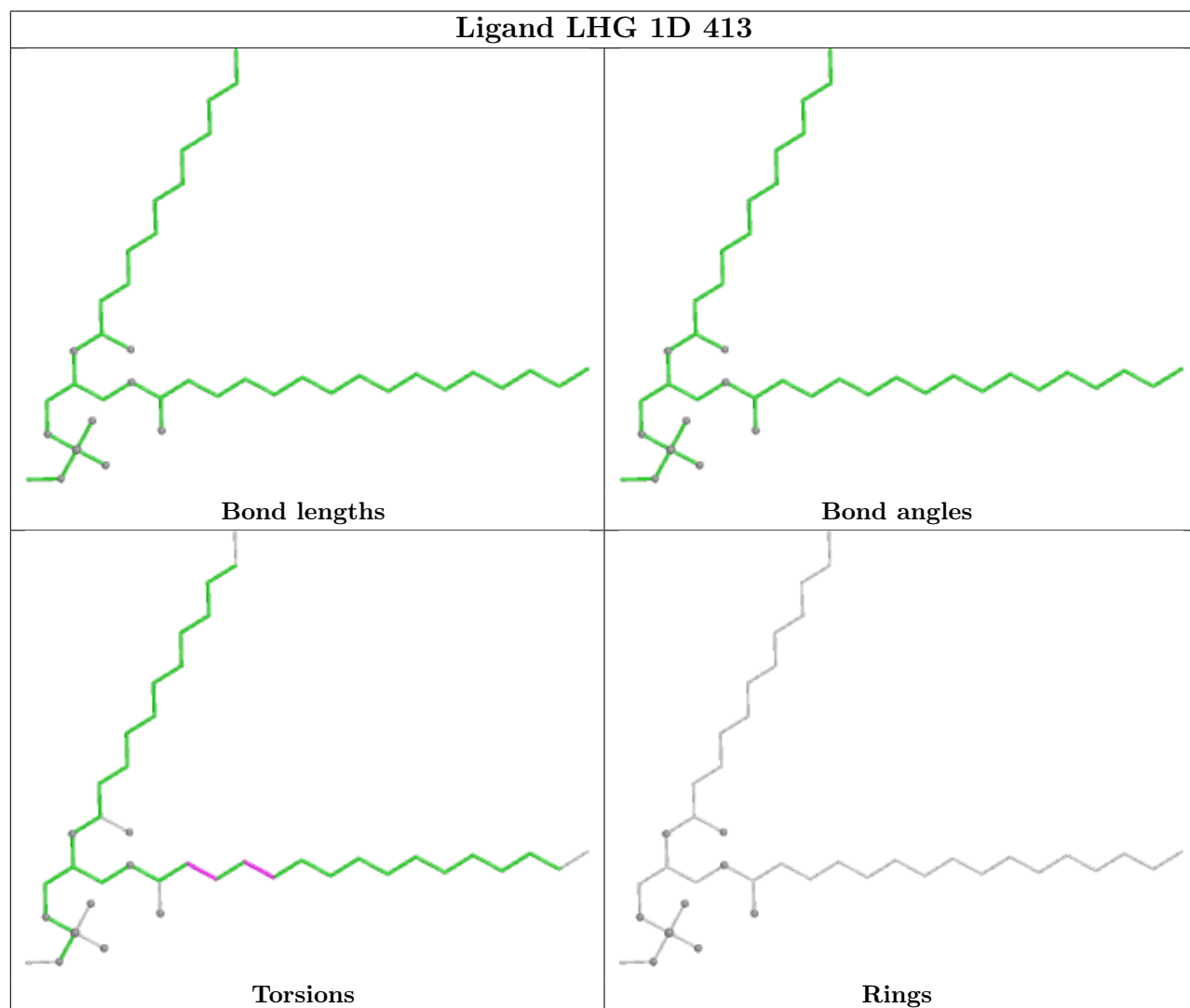
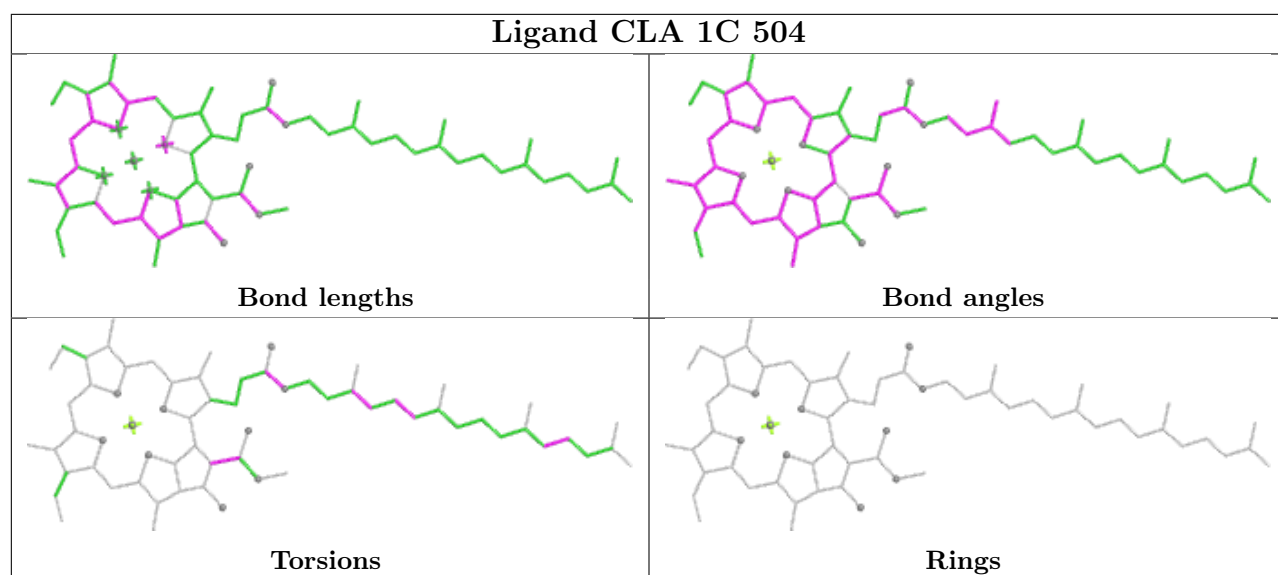


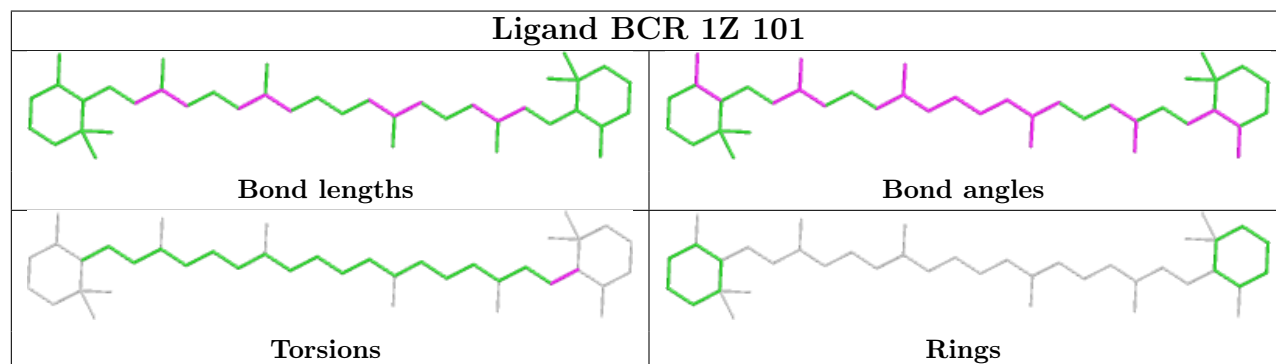
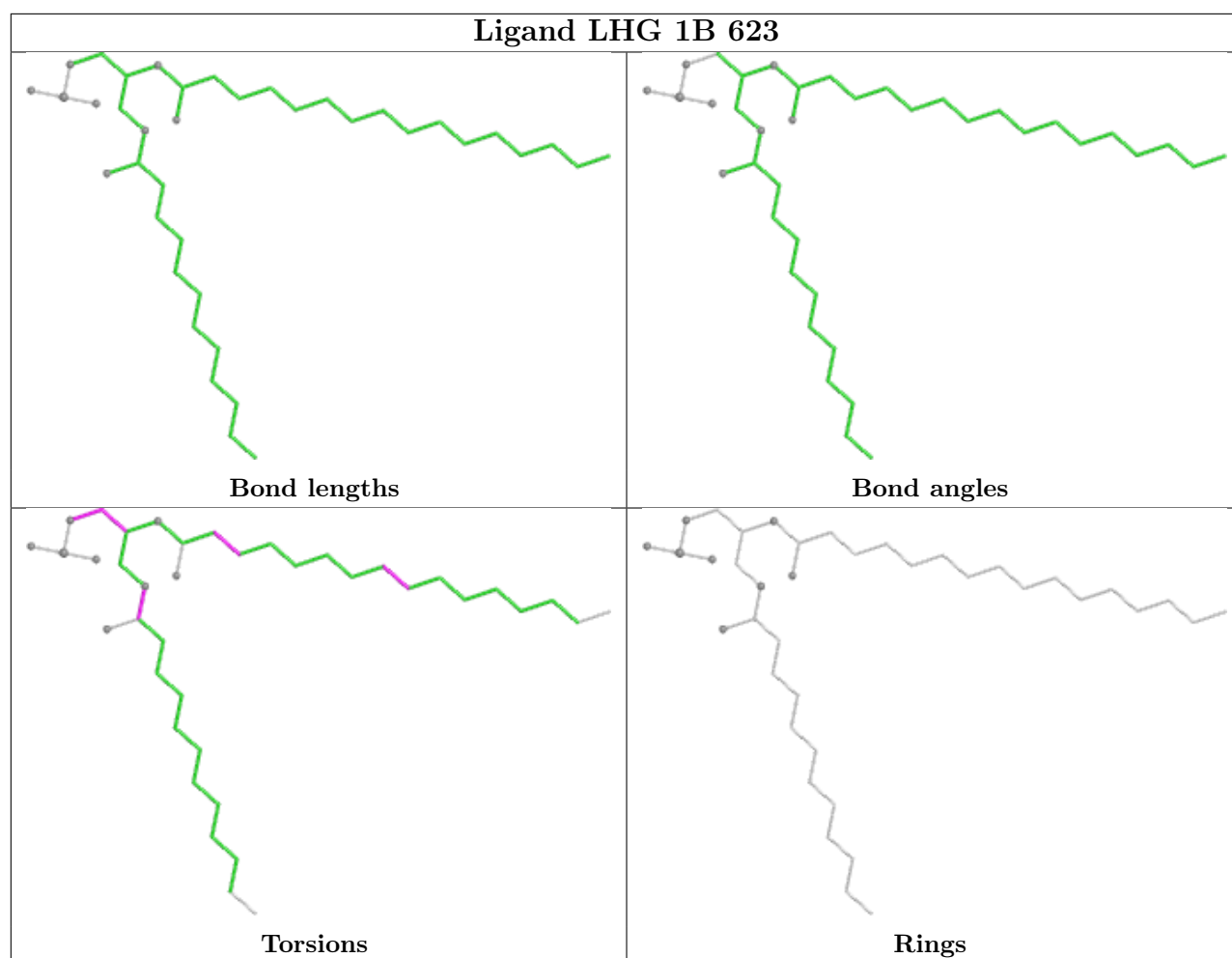


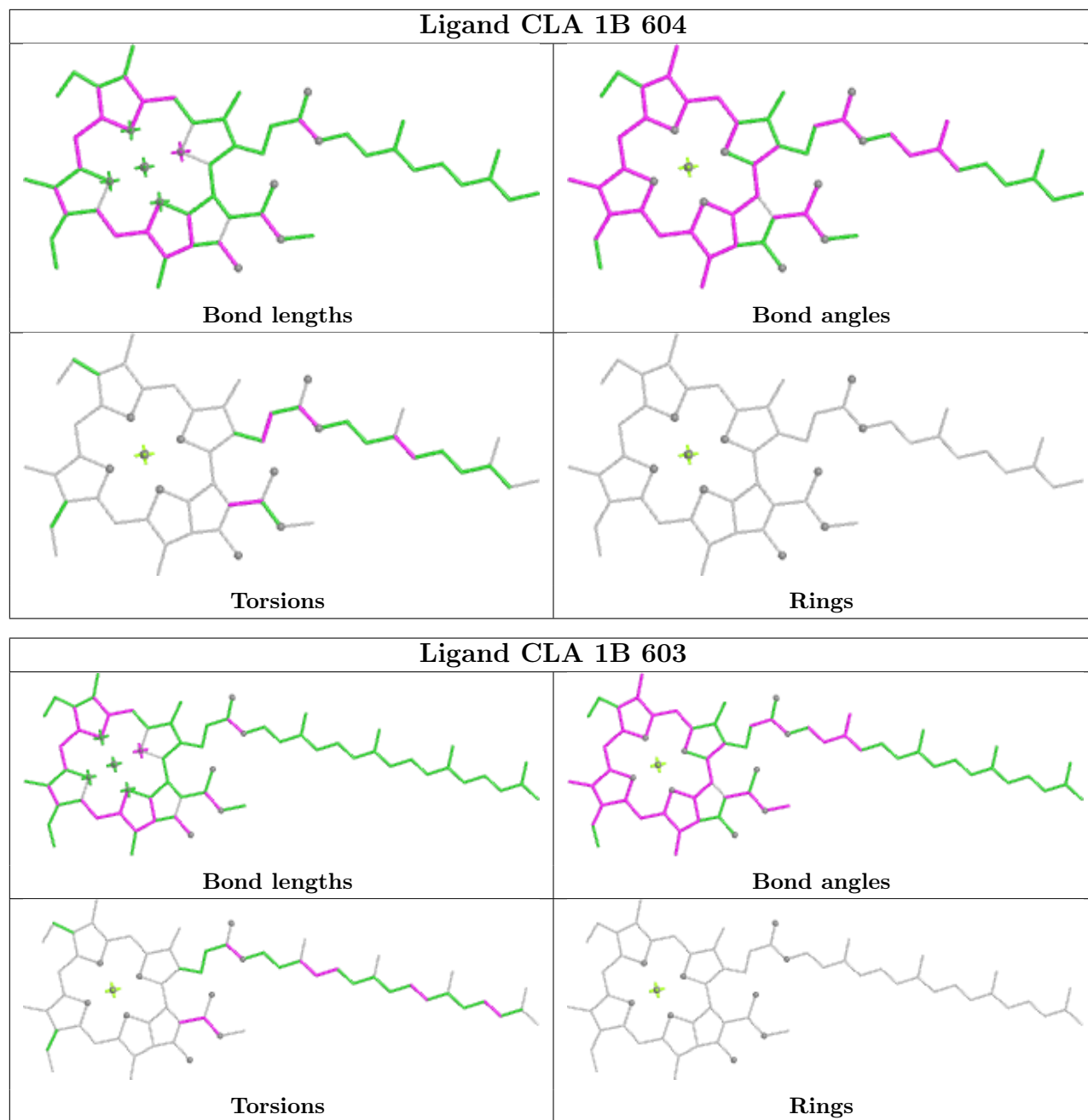


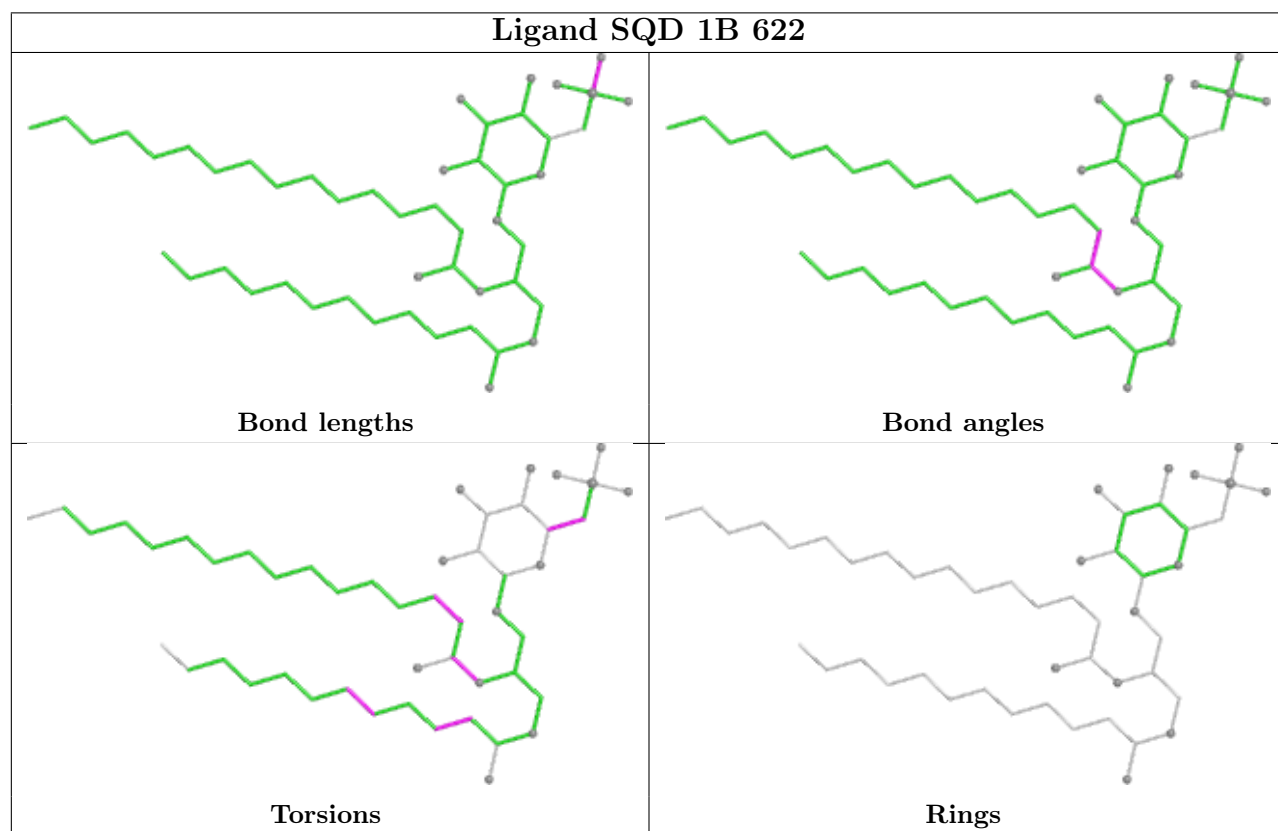
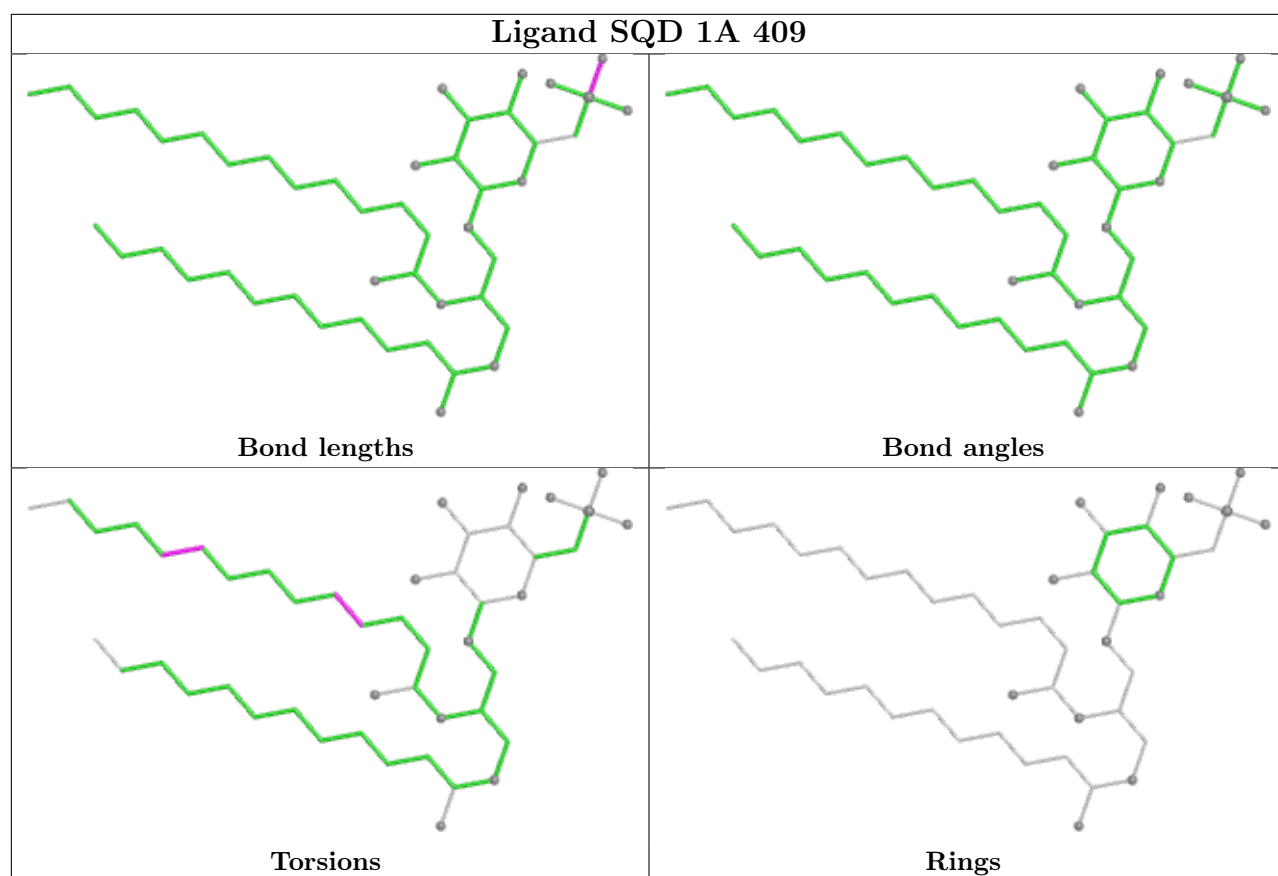
Ligand CLA 1B 607**Ligand PHO 1A 404**

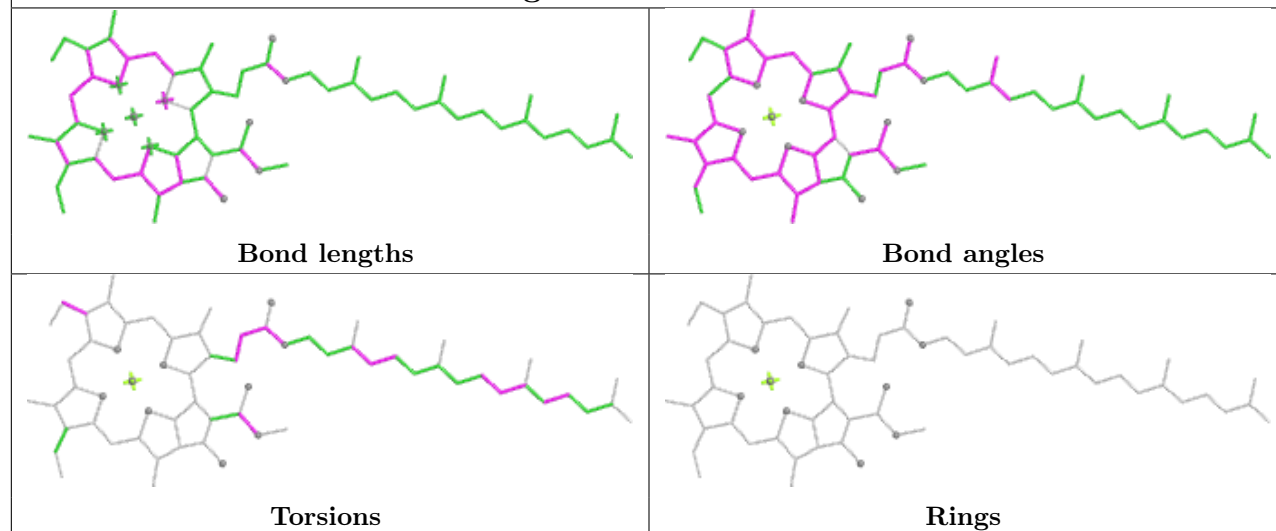
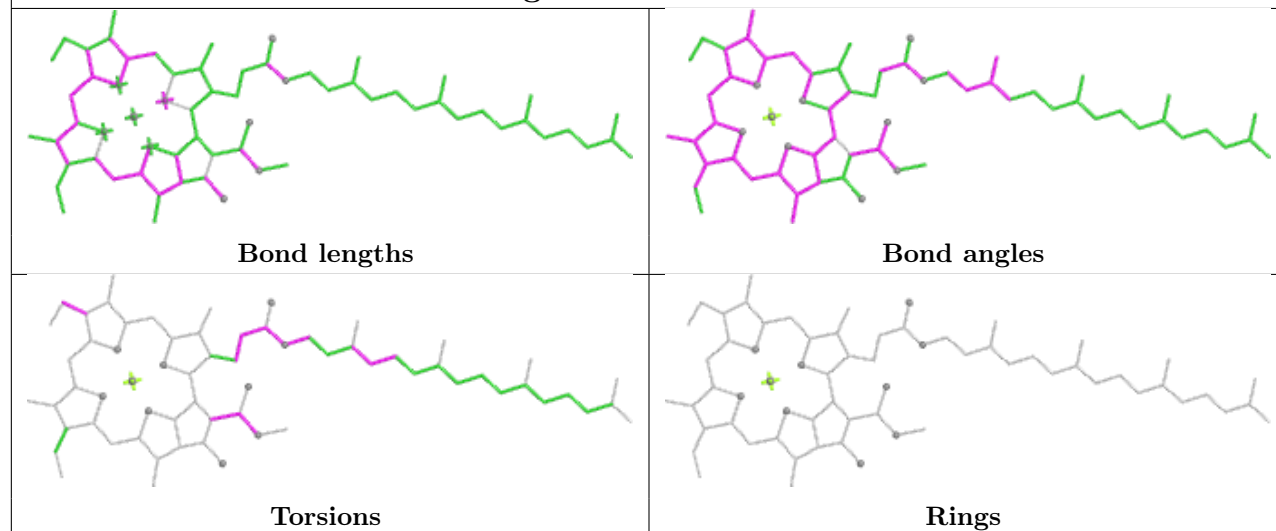


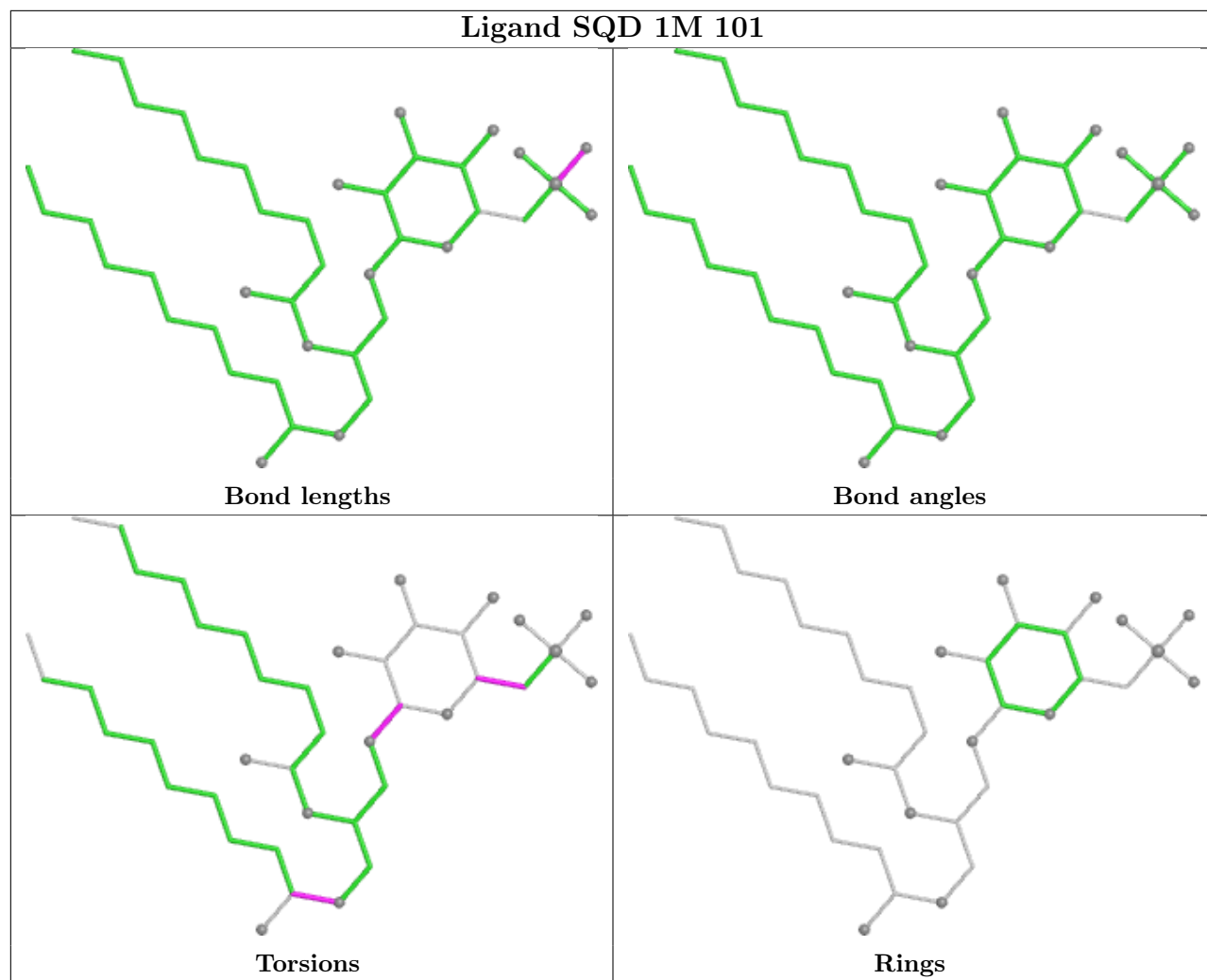


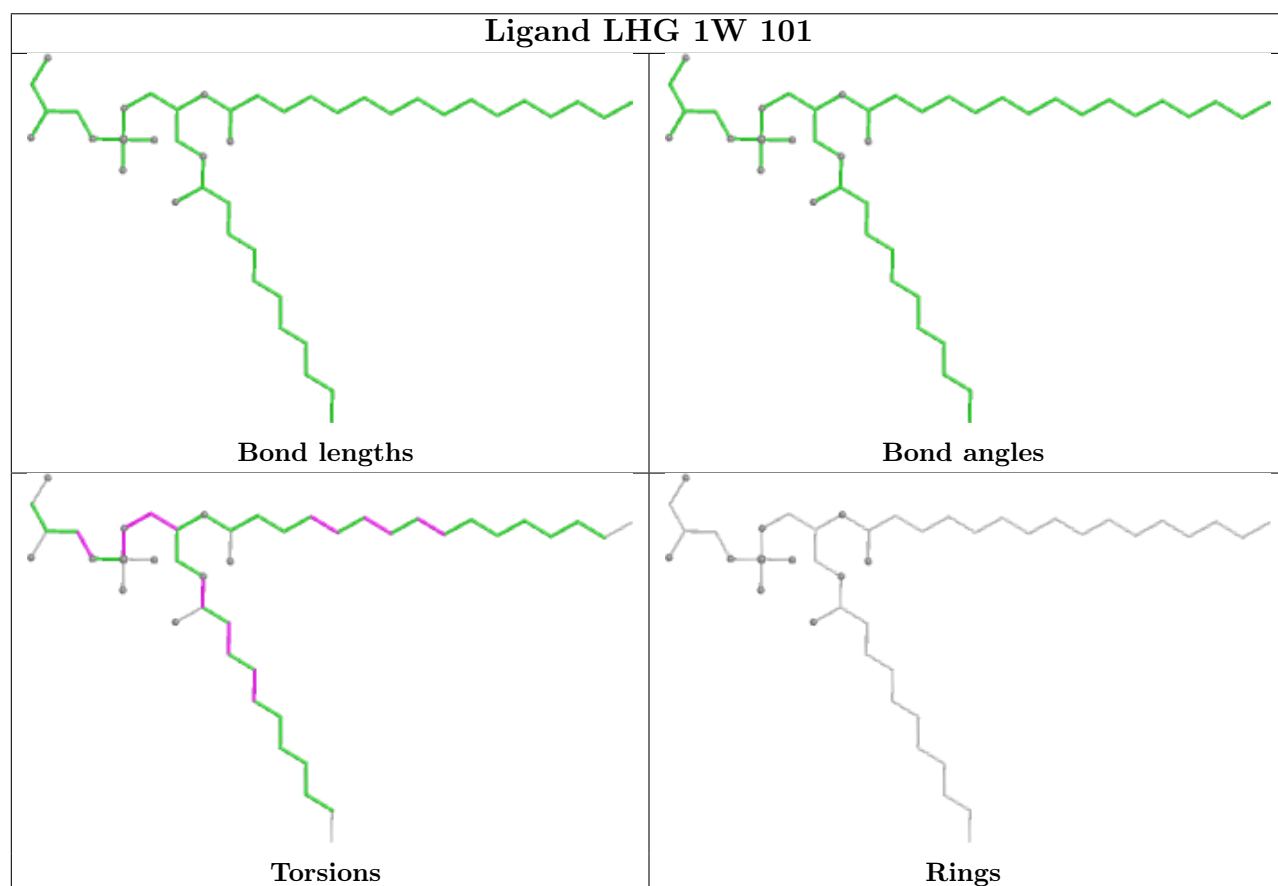
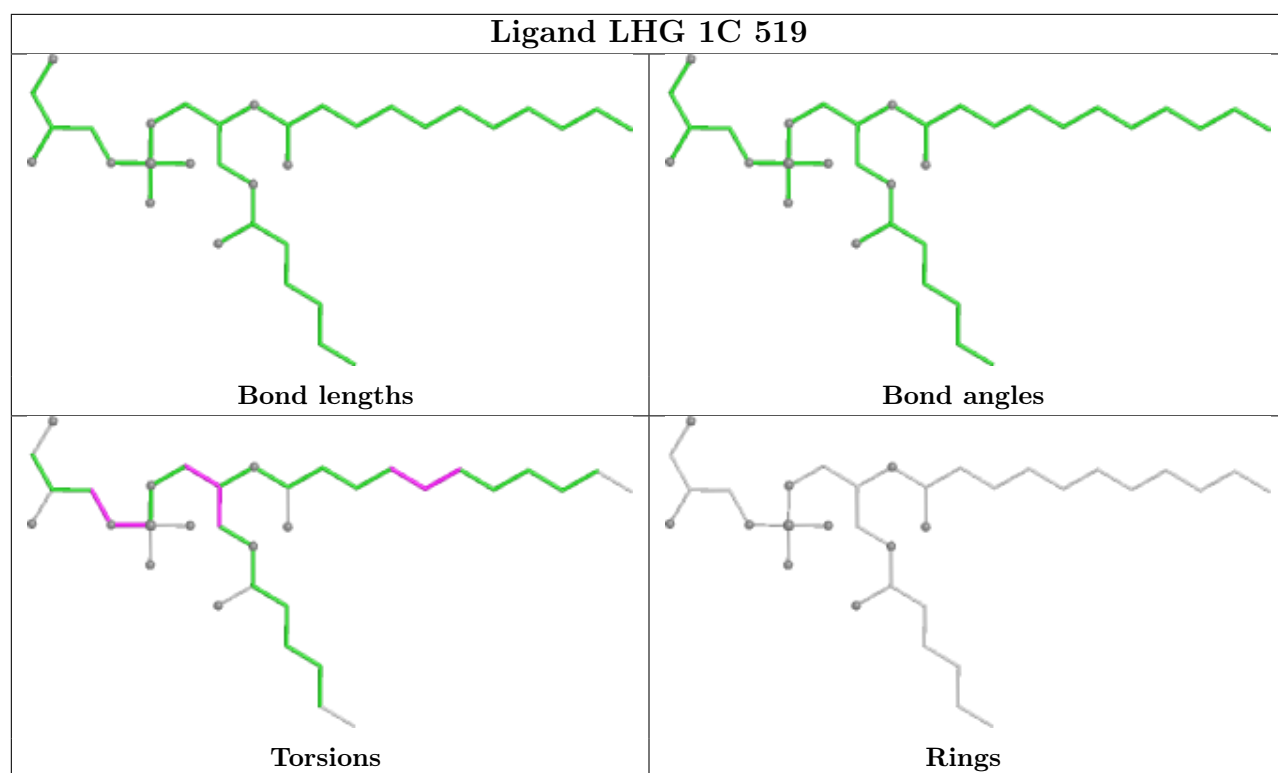


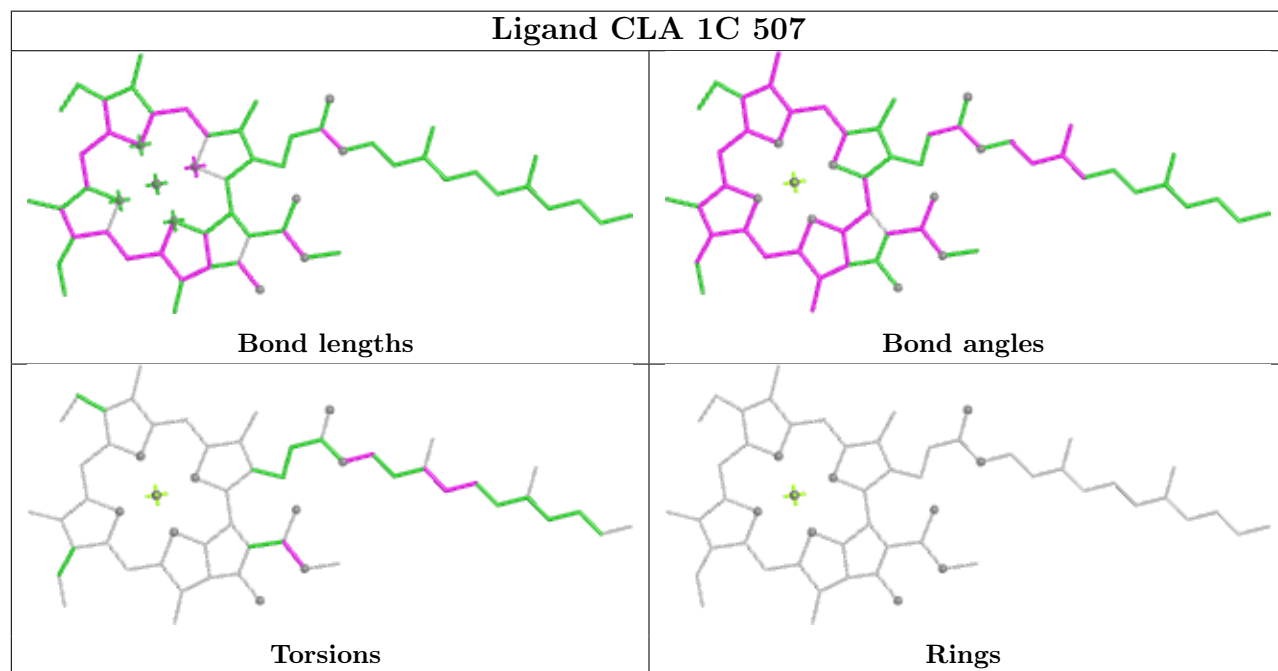
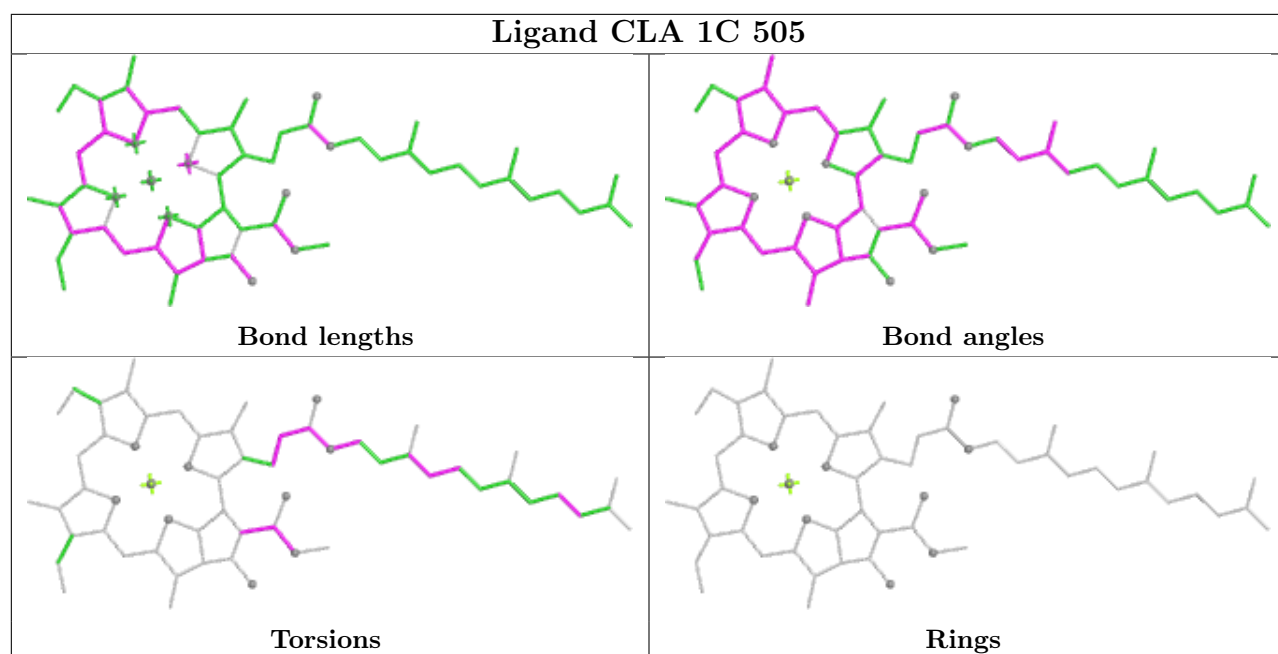




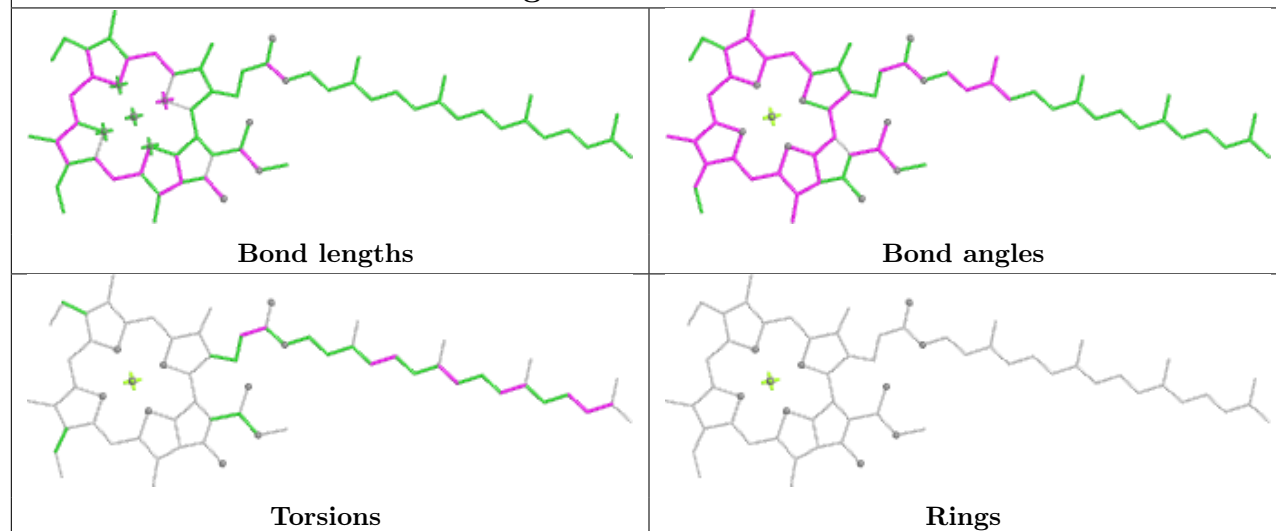
Ligand CLA 1B 601**Ligand CLA 1B 612**



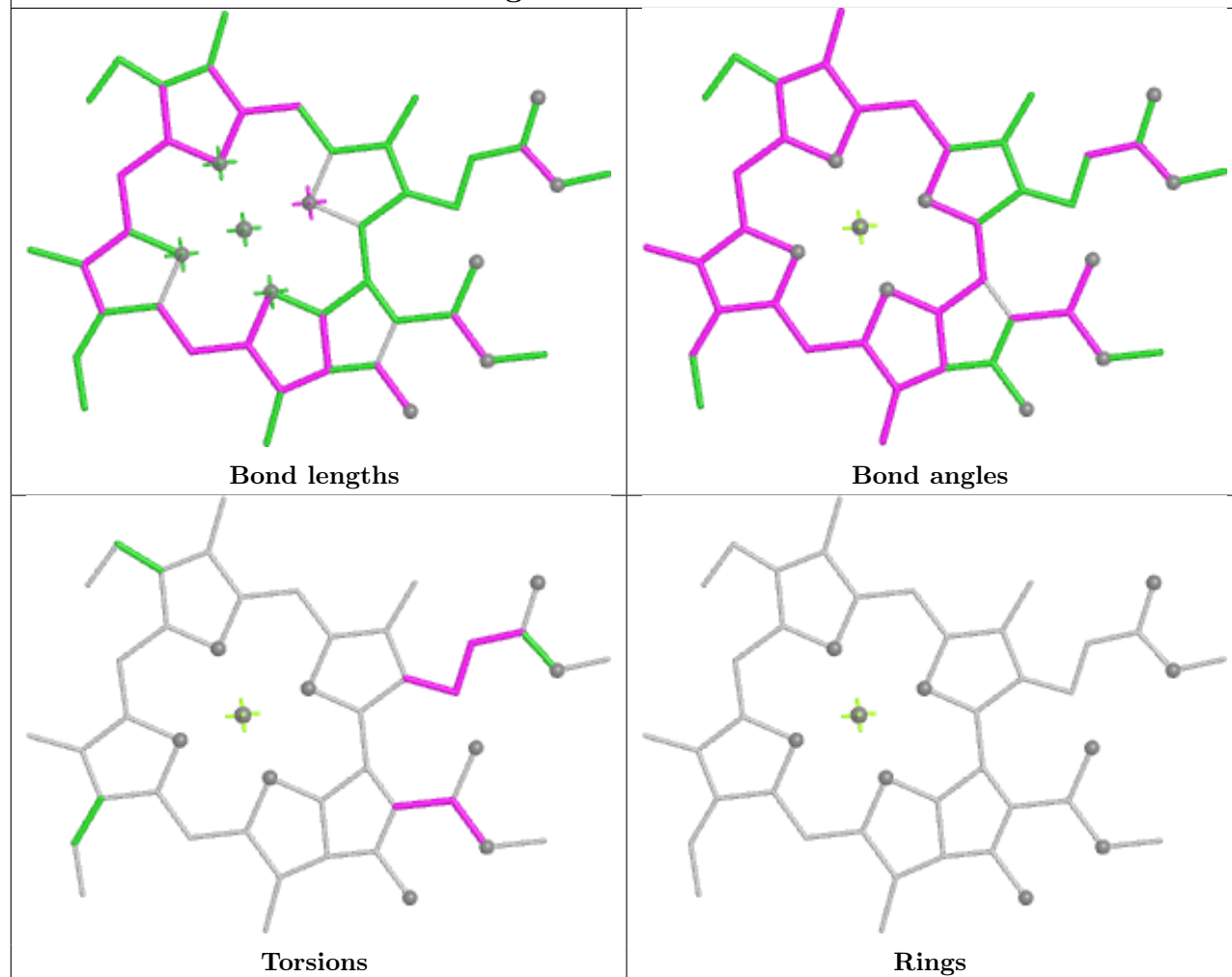


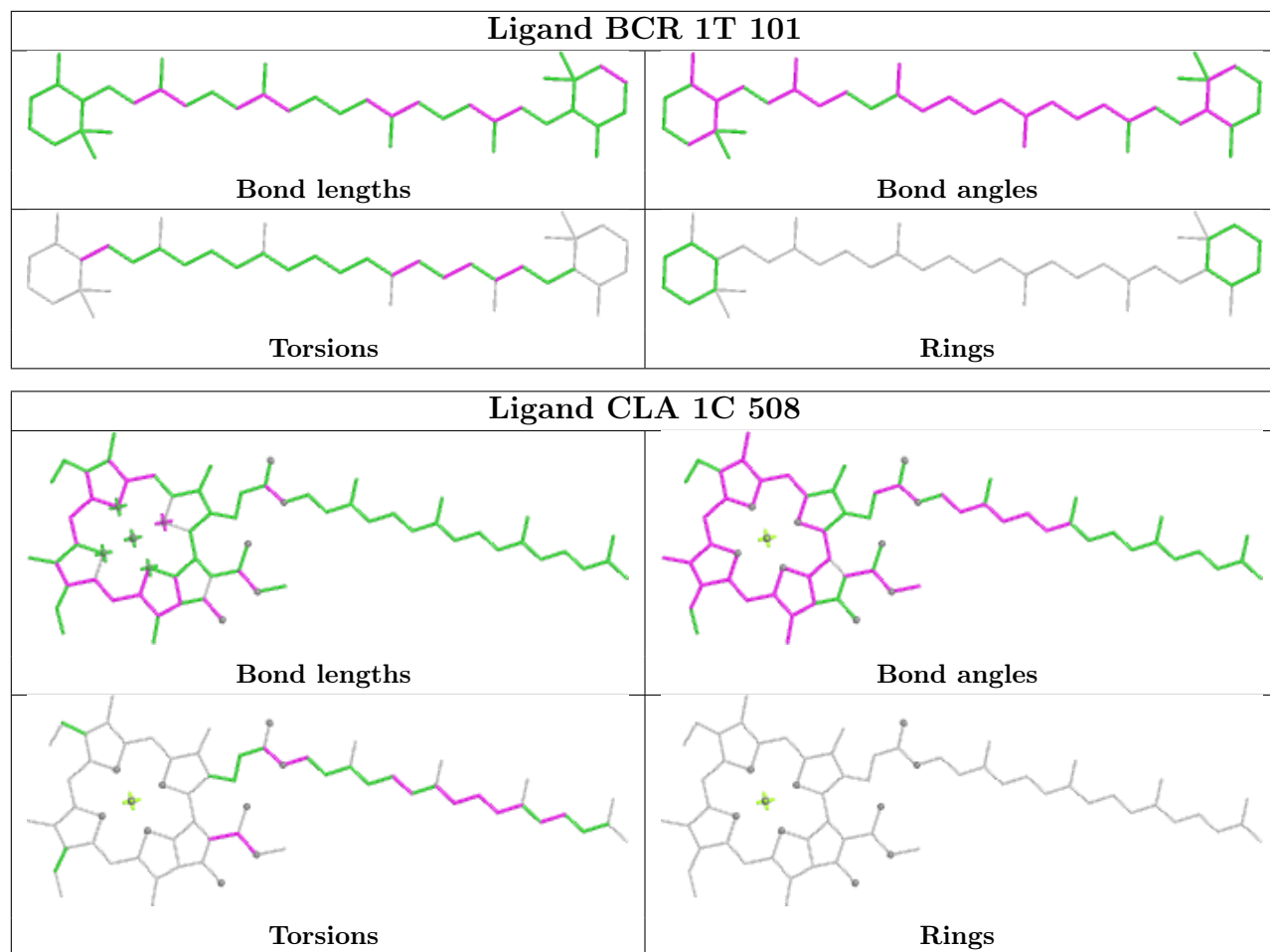


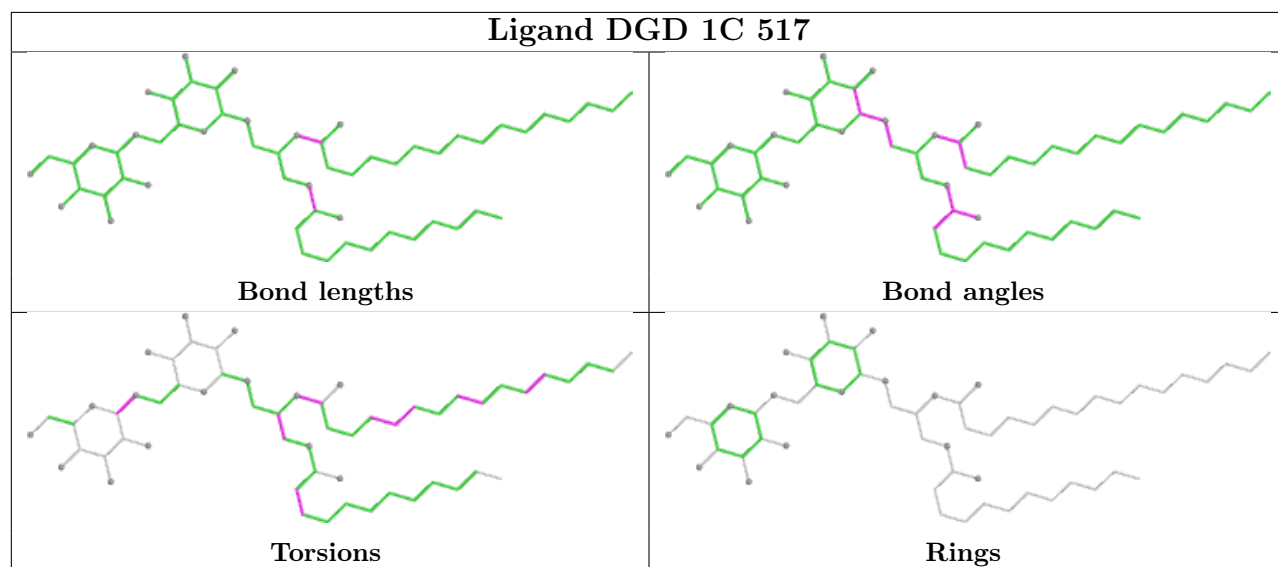
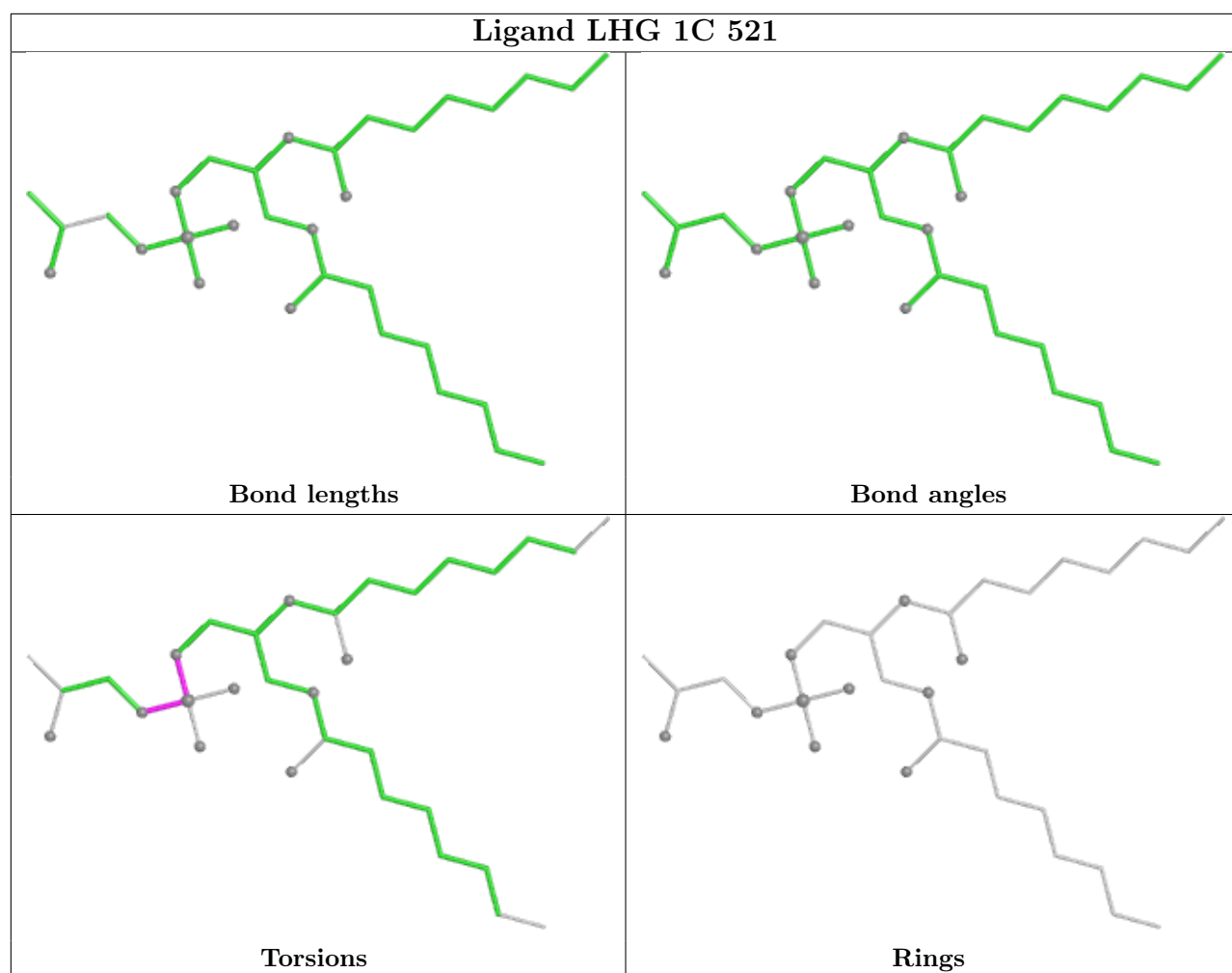
Ligand CLA 1B 606

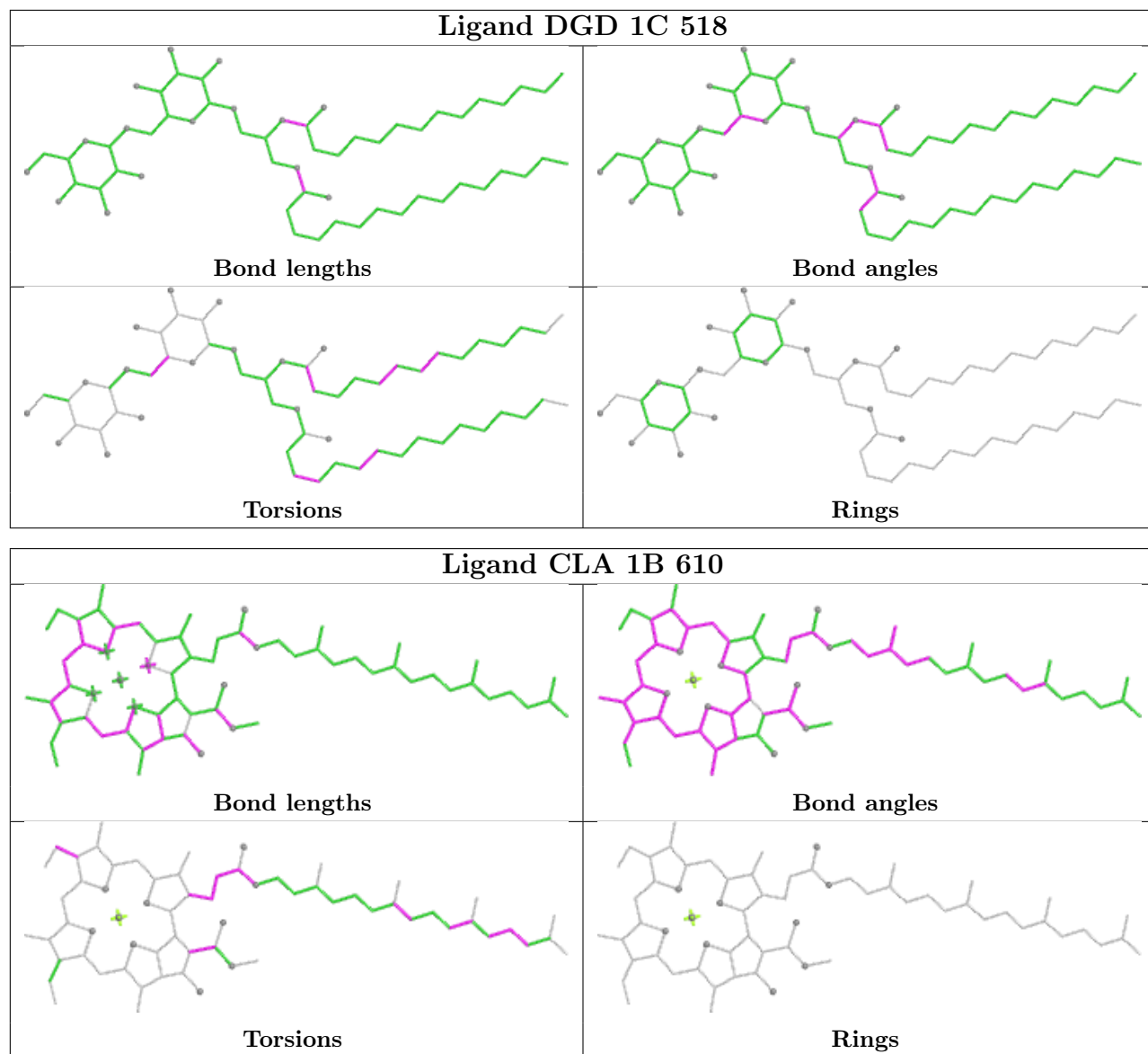


Ligand CLA 1C 511

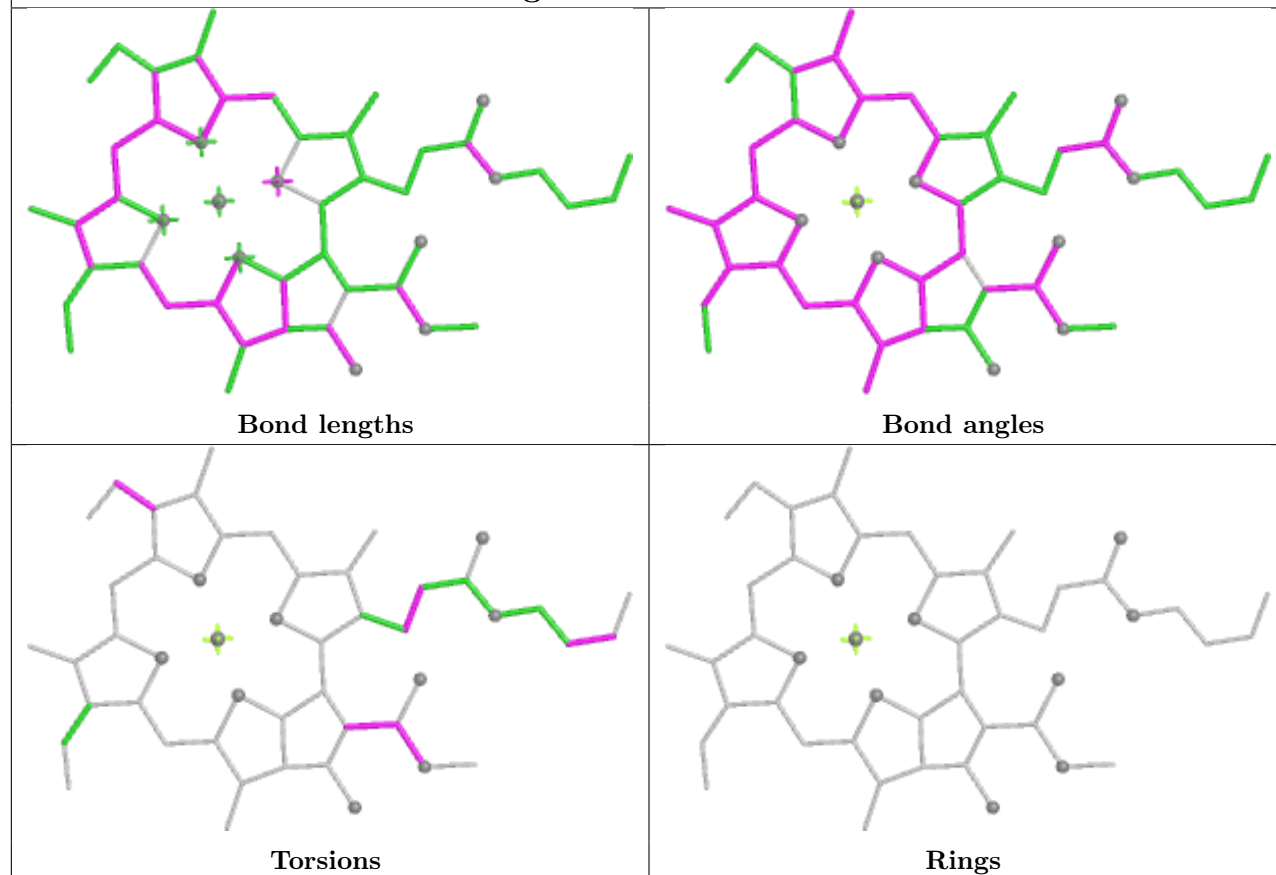




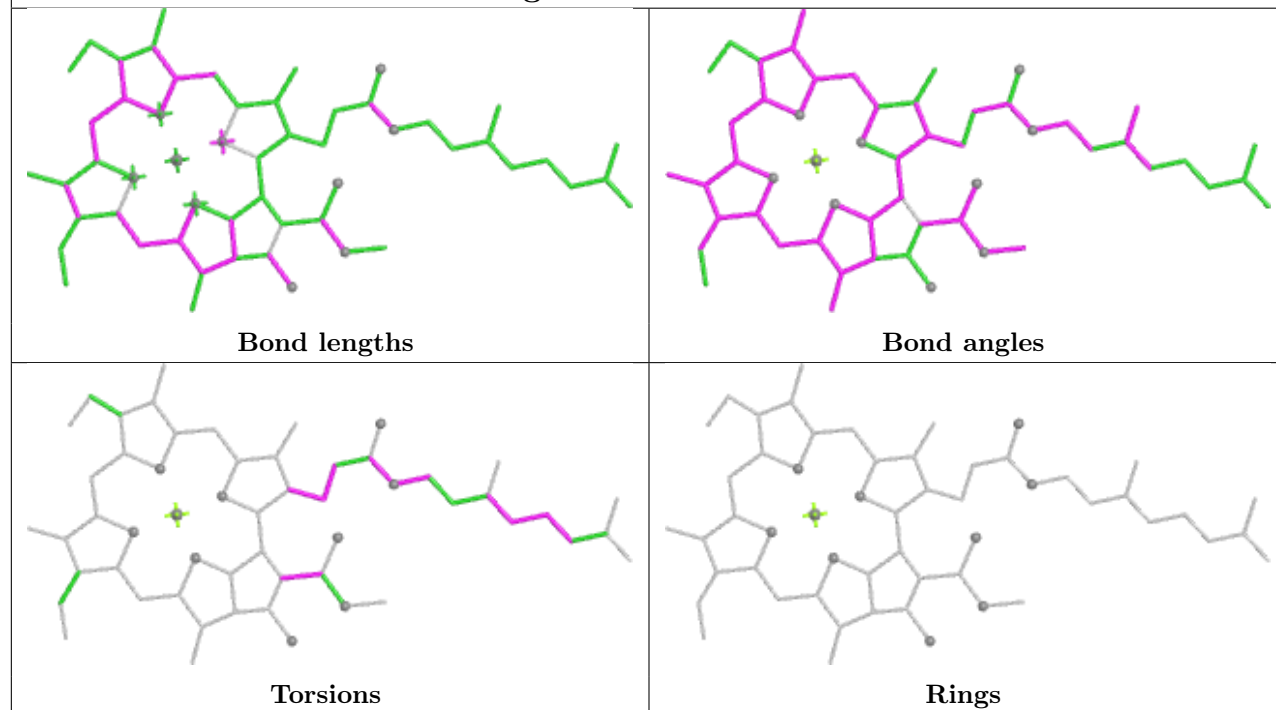


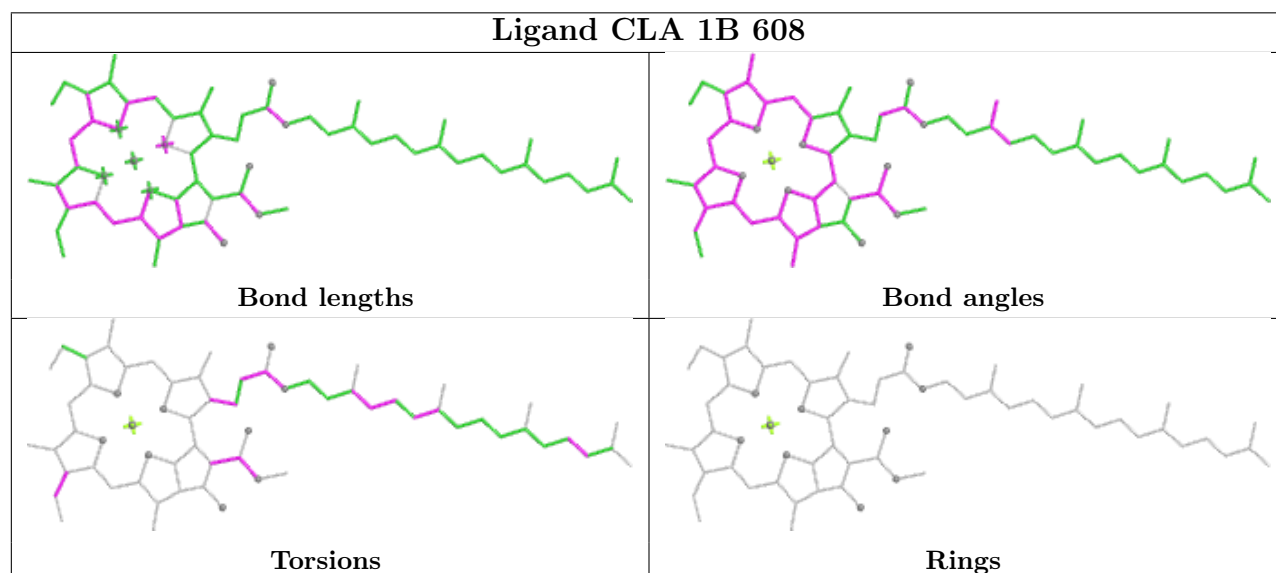
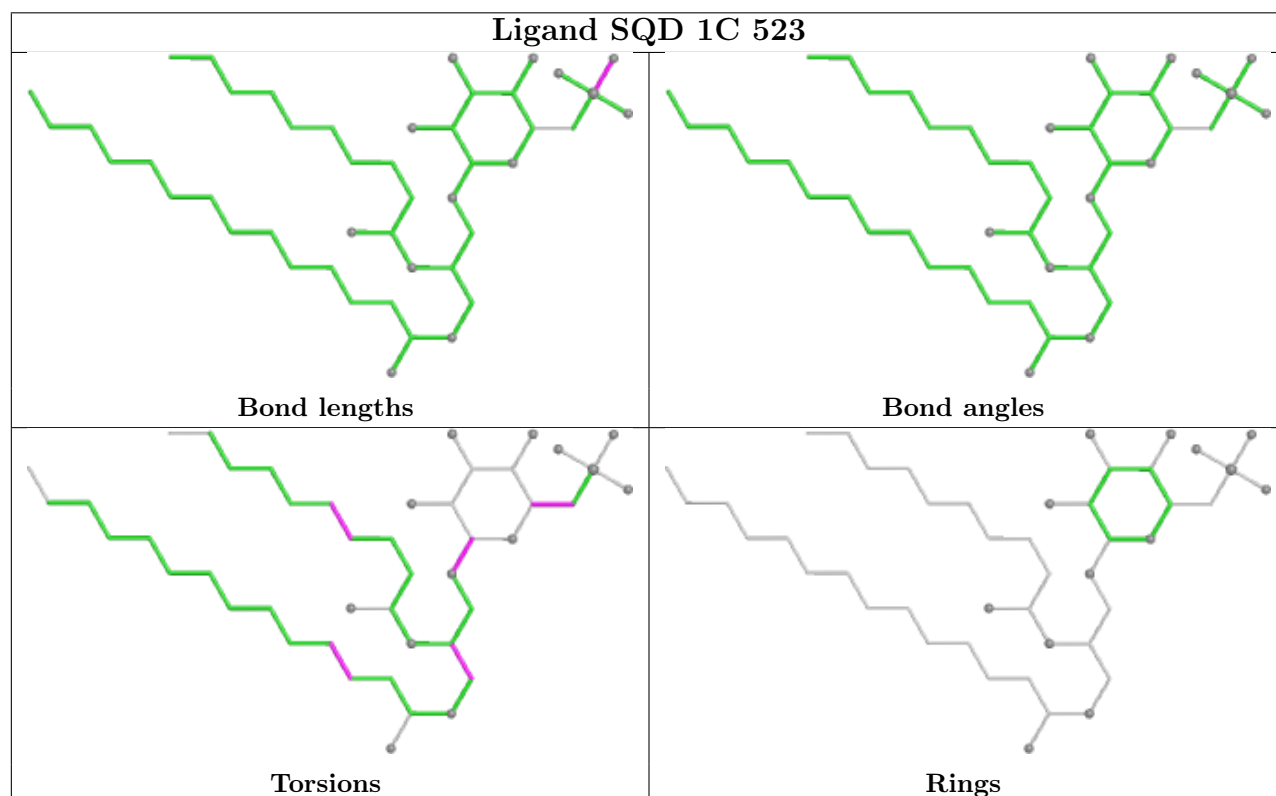
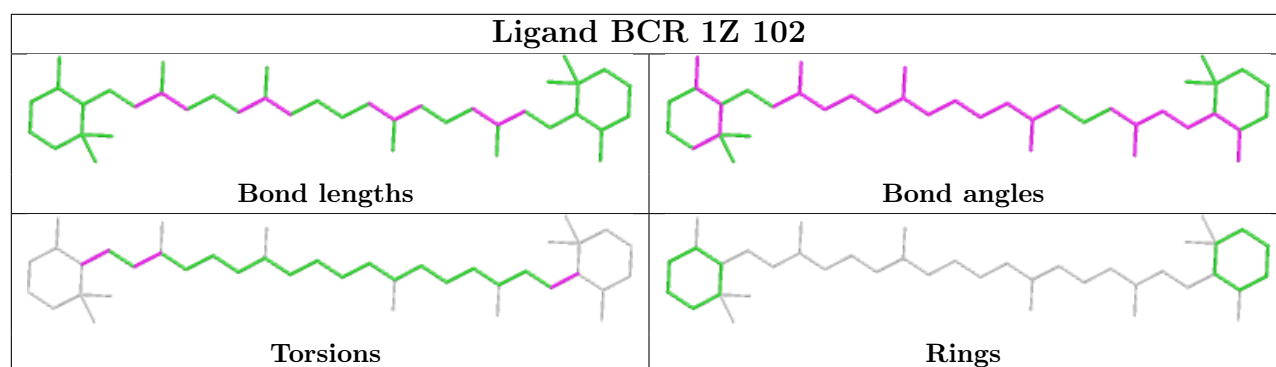


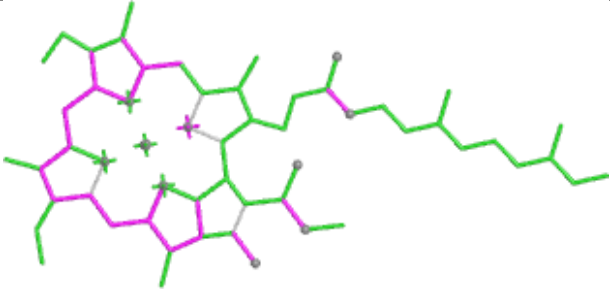
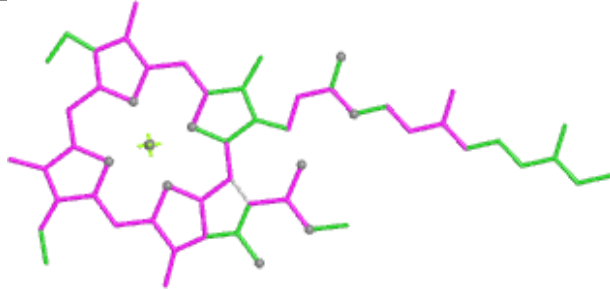
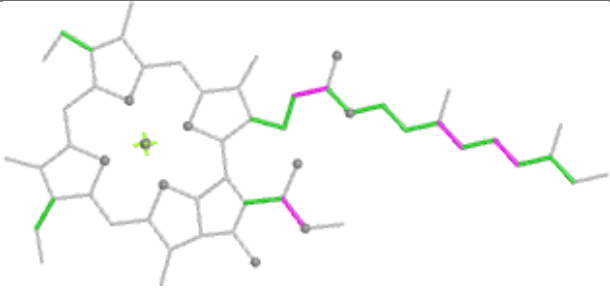
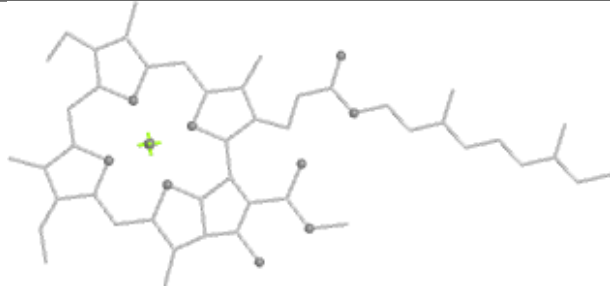
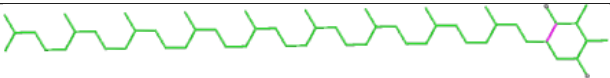
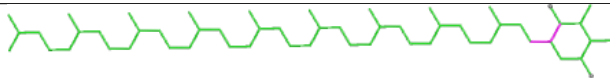
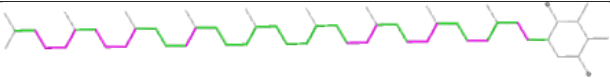
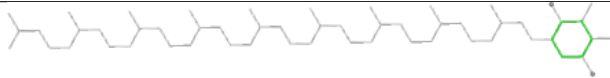
Ligand CLA 1C 506

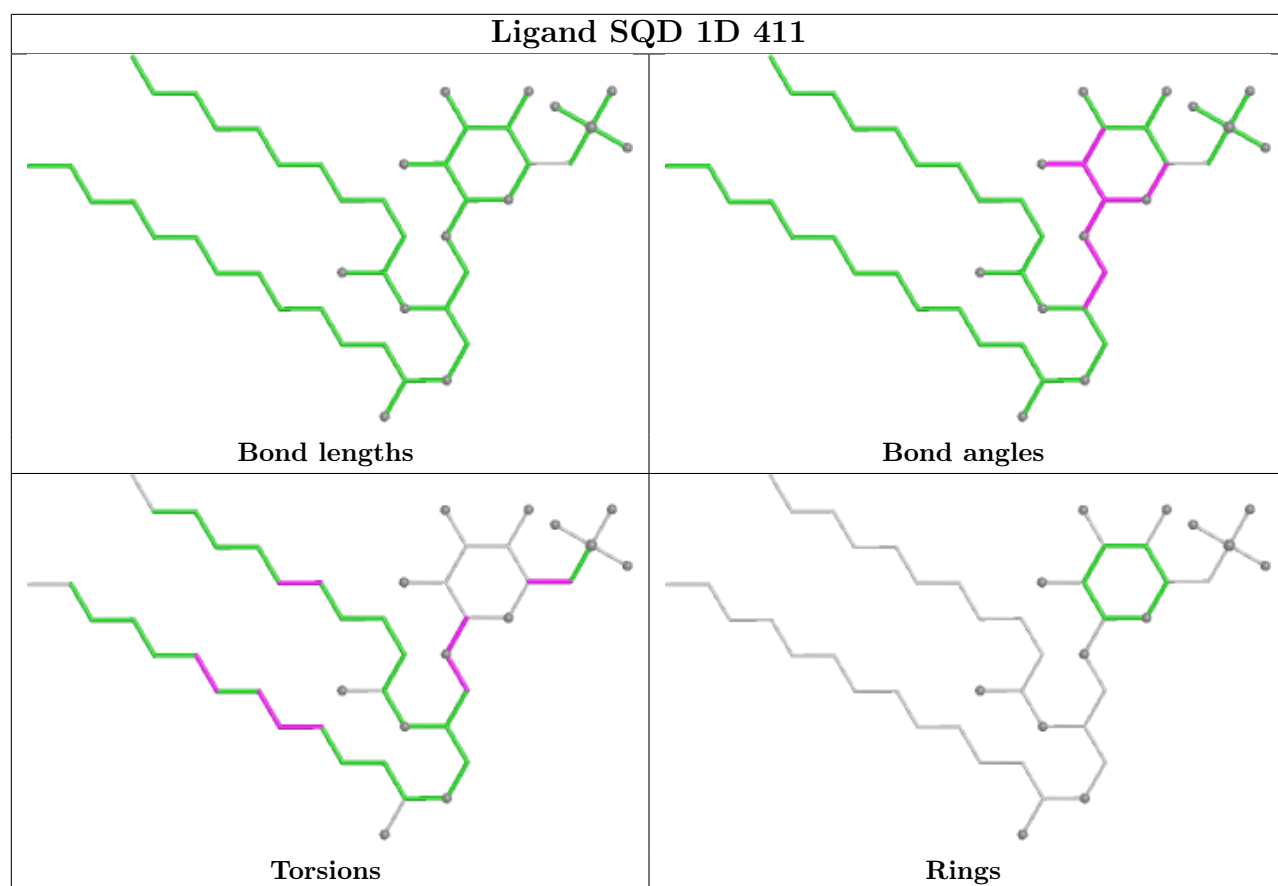


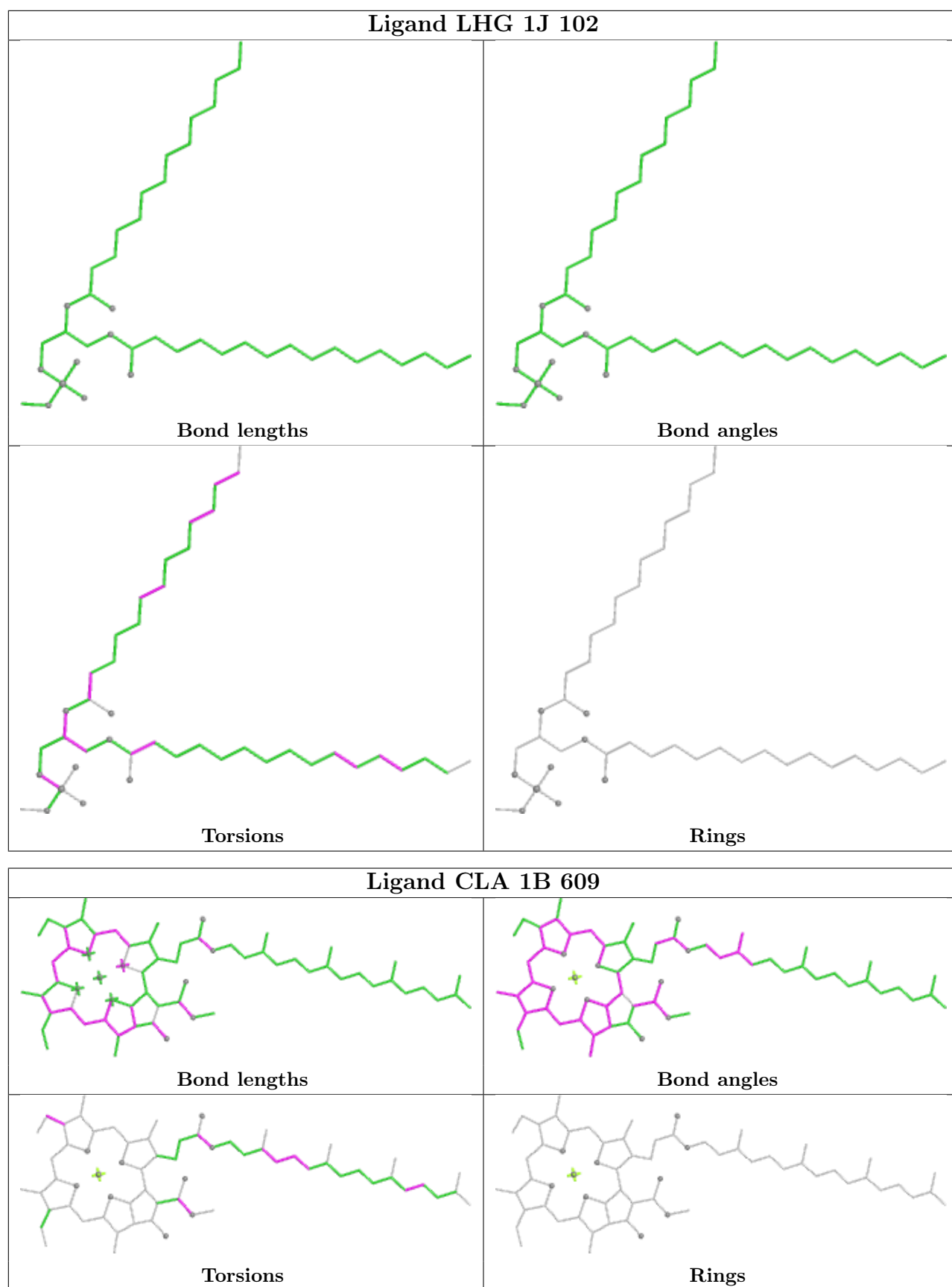
Ligand CLA 1C 512

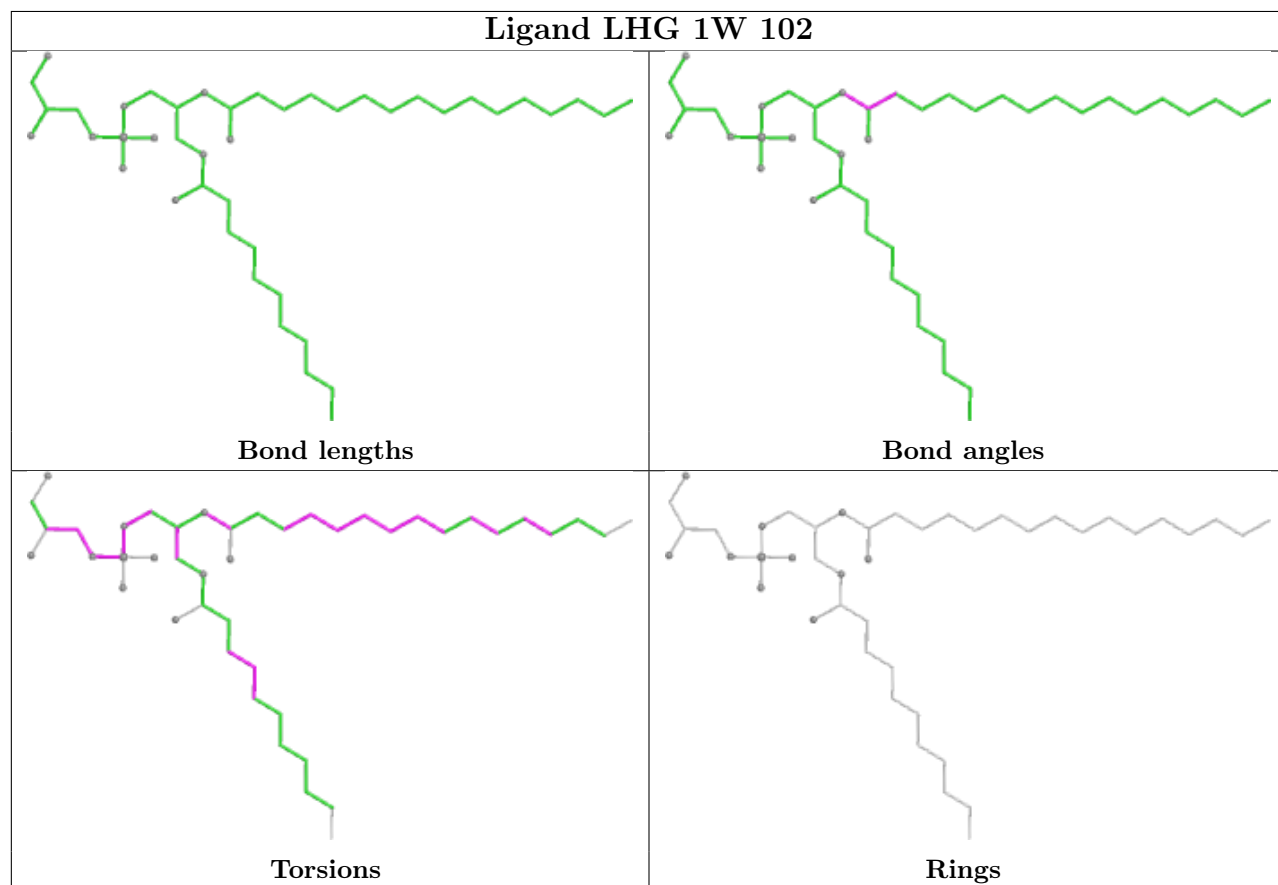
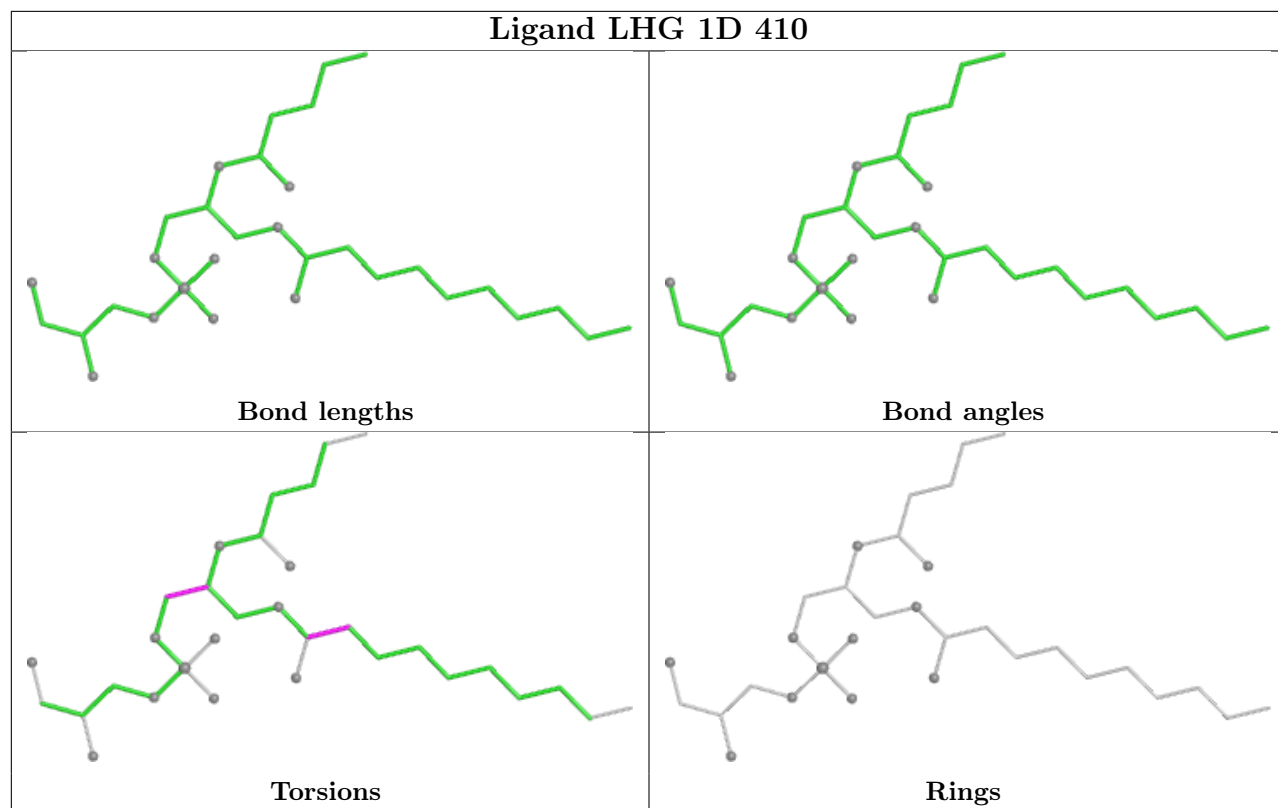


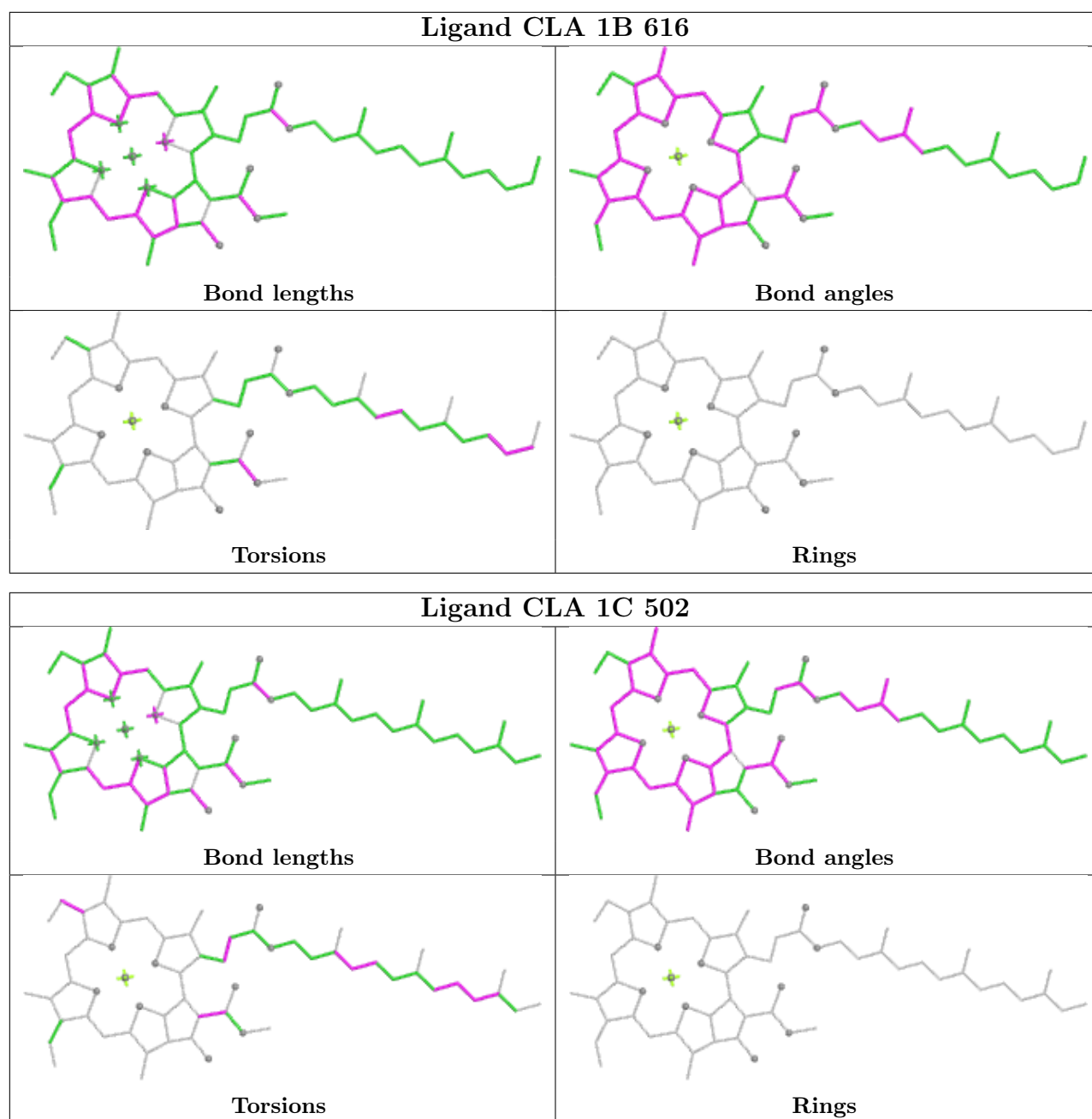


Ligand CLA 1C 503	
 Bond lengths	 Bond angles
 Torsions	 Rings
Ligand PL9 1H 101	
 Bond lengths	 Bond angles
 Torsions	 Rings









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.

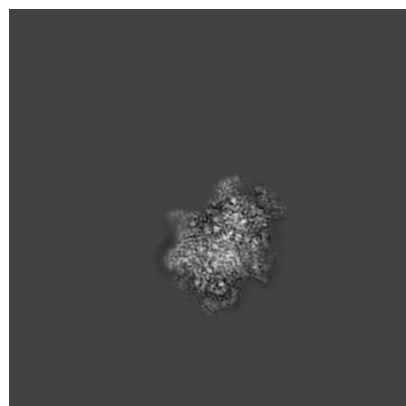
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-66946. These allow visual inspection of the internal detail of the map and identification of artifacts.

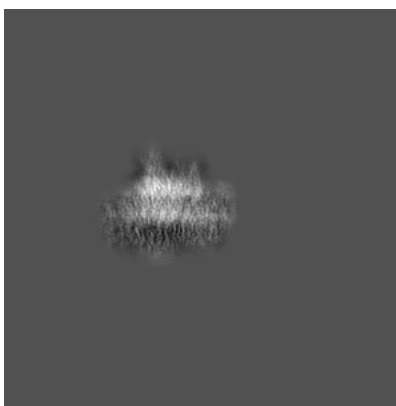
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

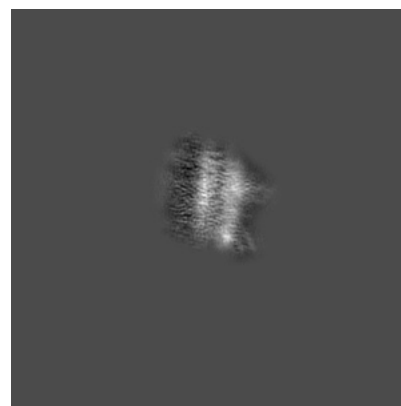
6.1.1 Primary map



X

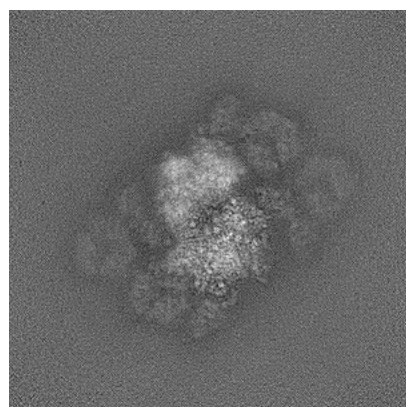


Y

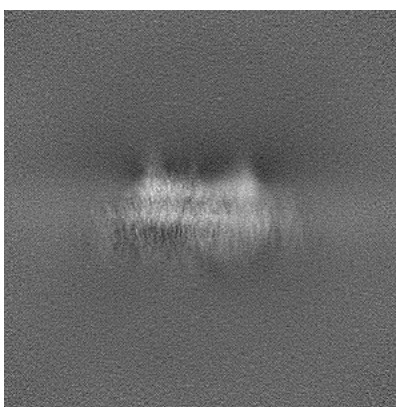


Z

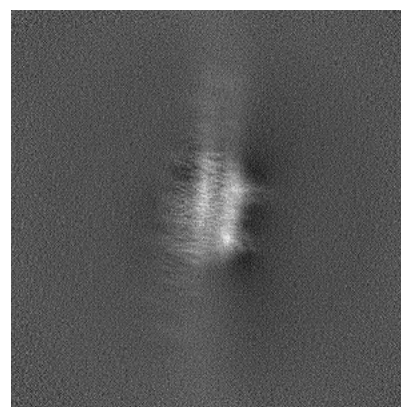
6.1.2 Raw map



X



Y

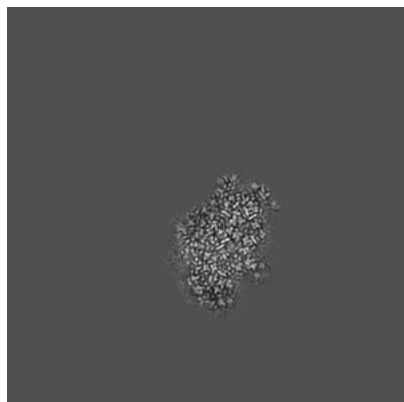


Z

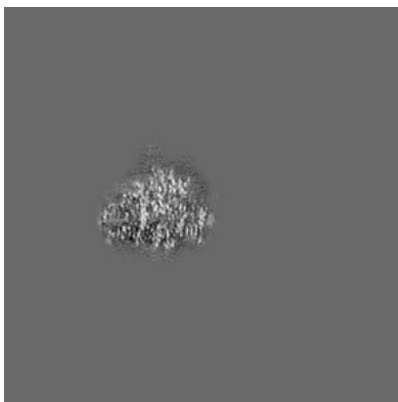
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

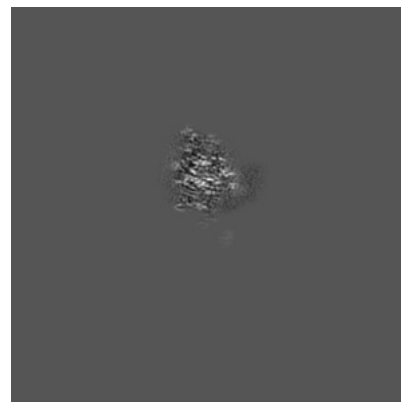
6.2.1 Primary map



X Index: 256

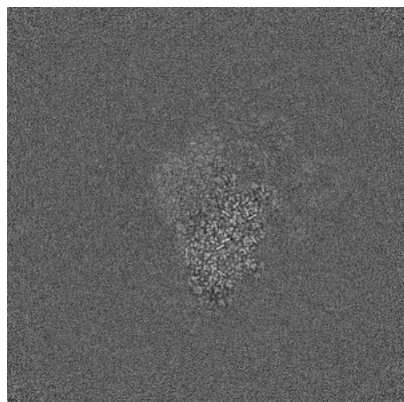


Y Index: 256

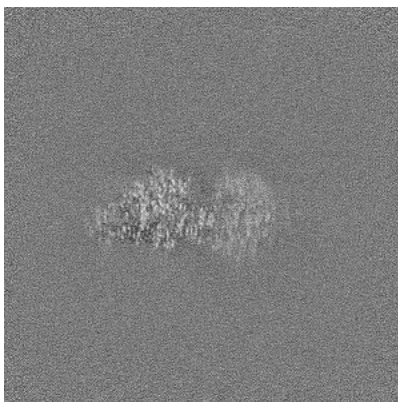


Z Index: 256

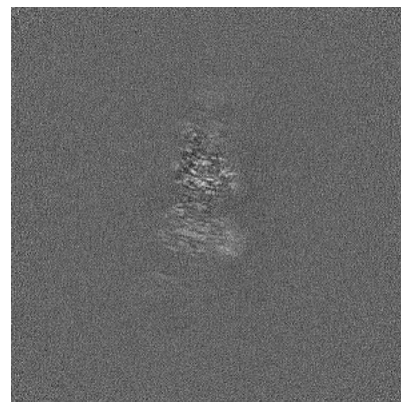
6.2.2 Raw map



X Index: 256



Y Index: 256

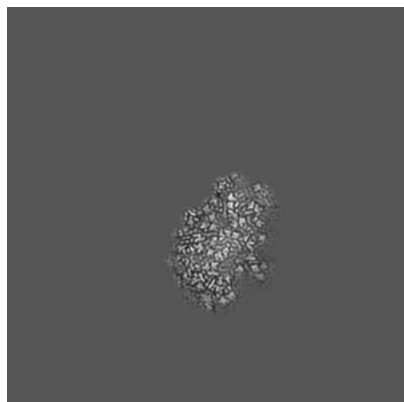


Z Index: 256

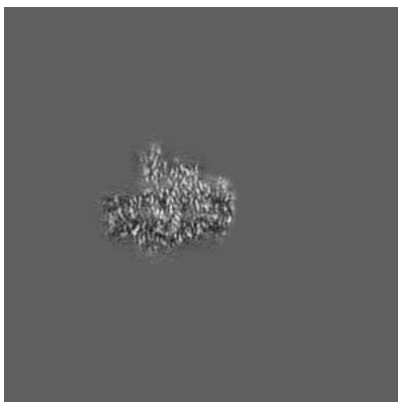
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

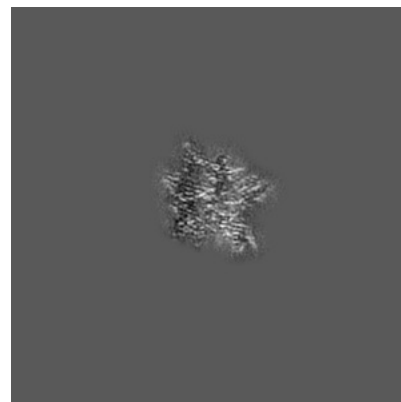
6.3.1 Primary map



X Index: 247

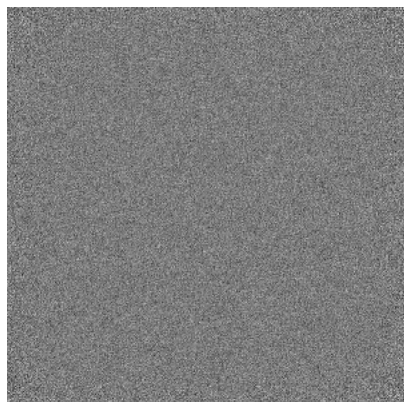


Y Index: 280

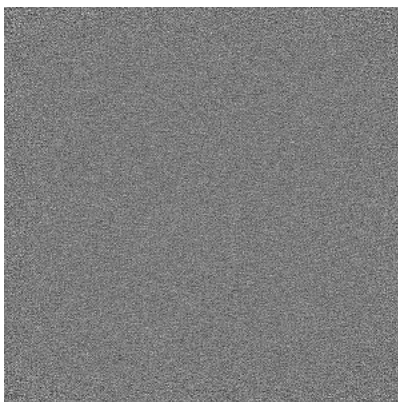


Z Index: 193

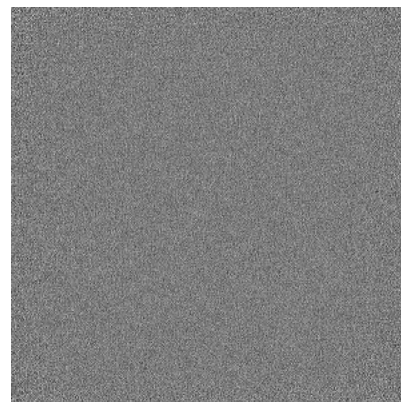
6.3.2 Raw map



X Index: 0



Y Index: 0

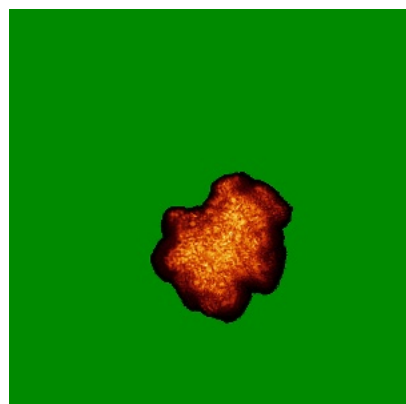


Z Index: 0

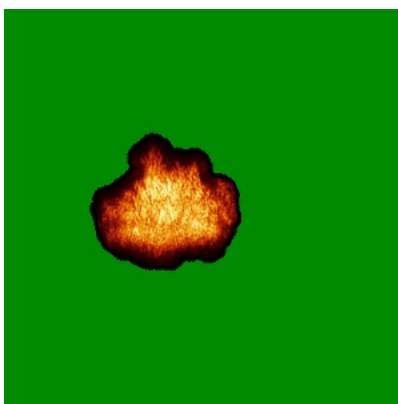
The images above show the largest variance slices of the map in three orthogonal directions.

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

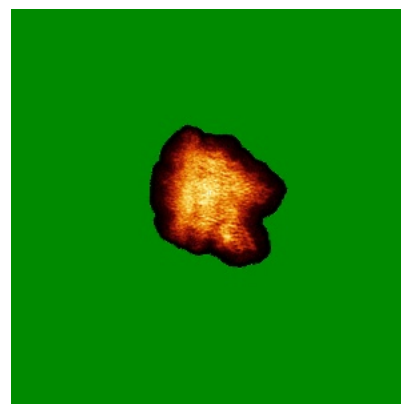
6.4.1 Primary map



X

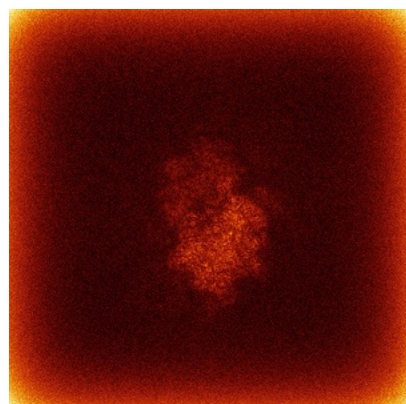


Y

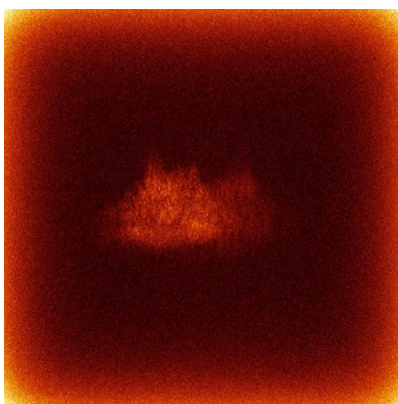


Z

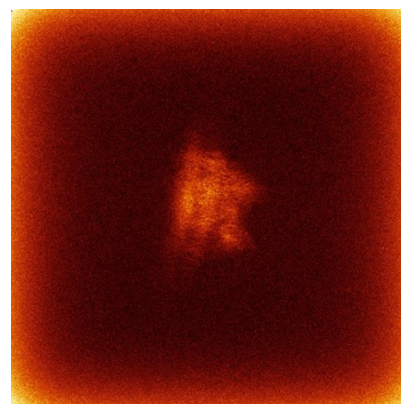
6.4.2 Raw map



X



Y

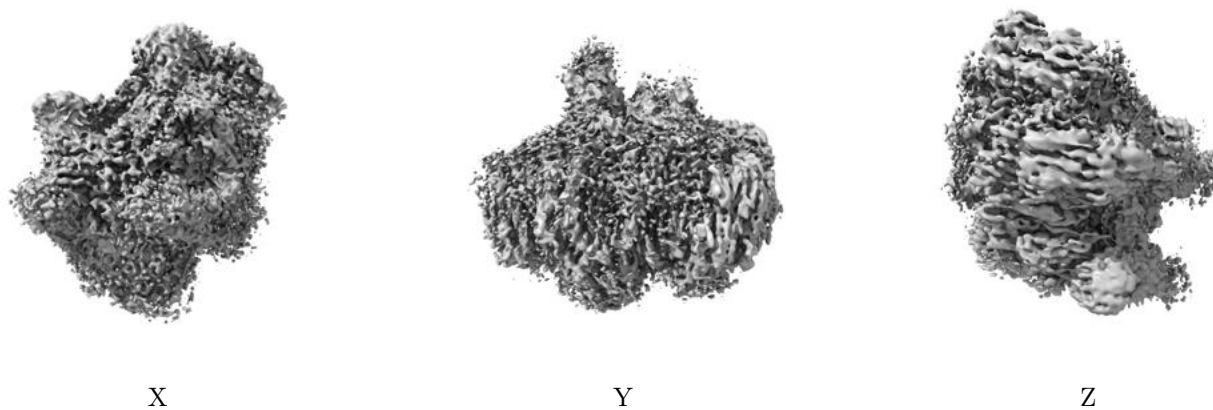


Z

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.

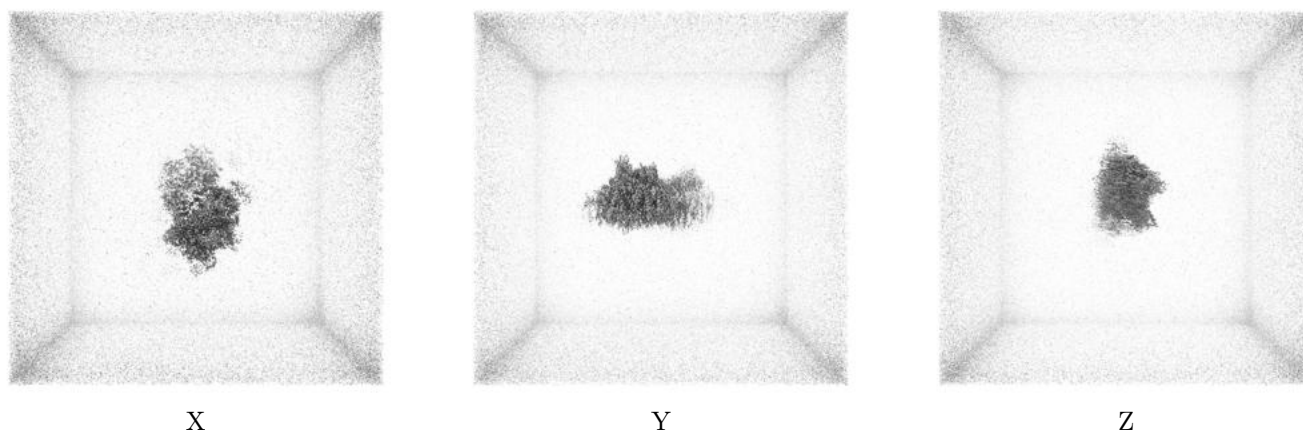
6.5 Orthogonal surface views [i](#)

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.

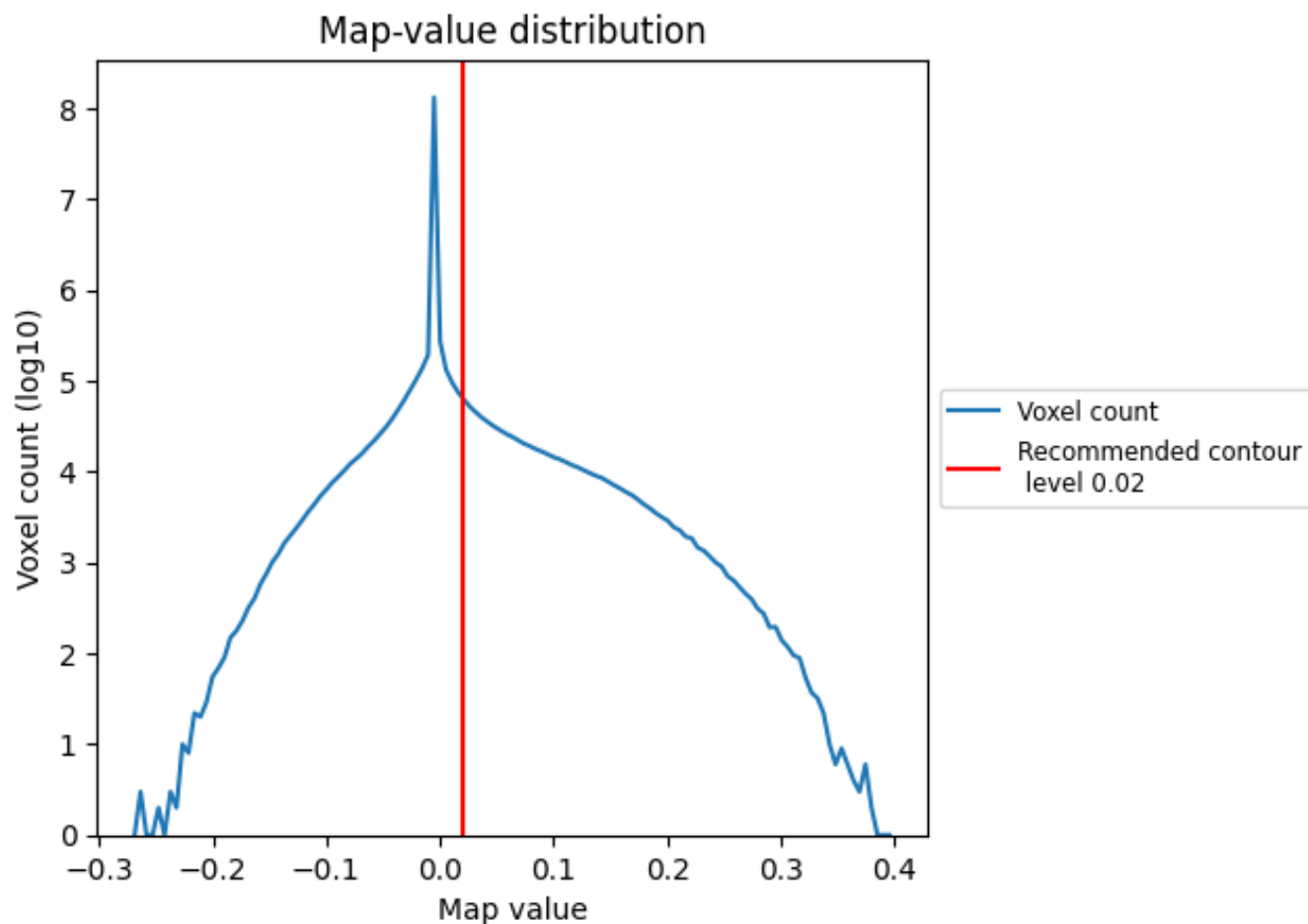
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

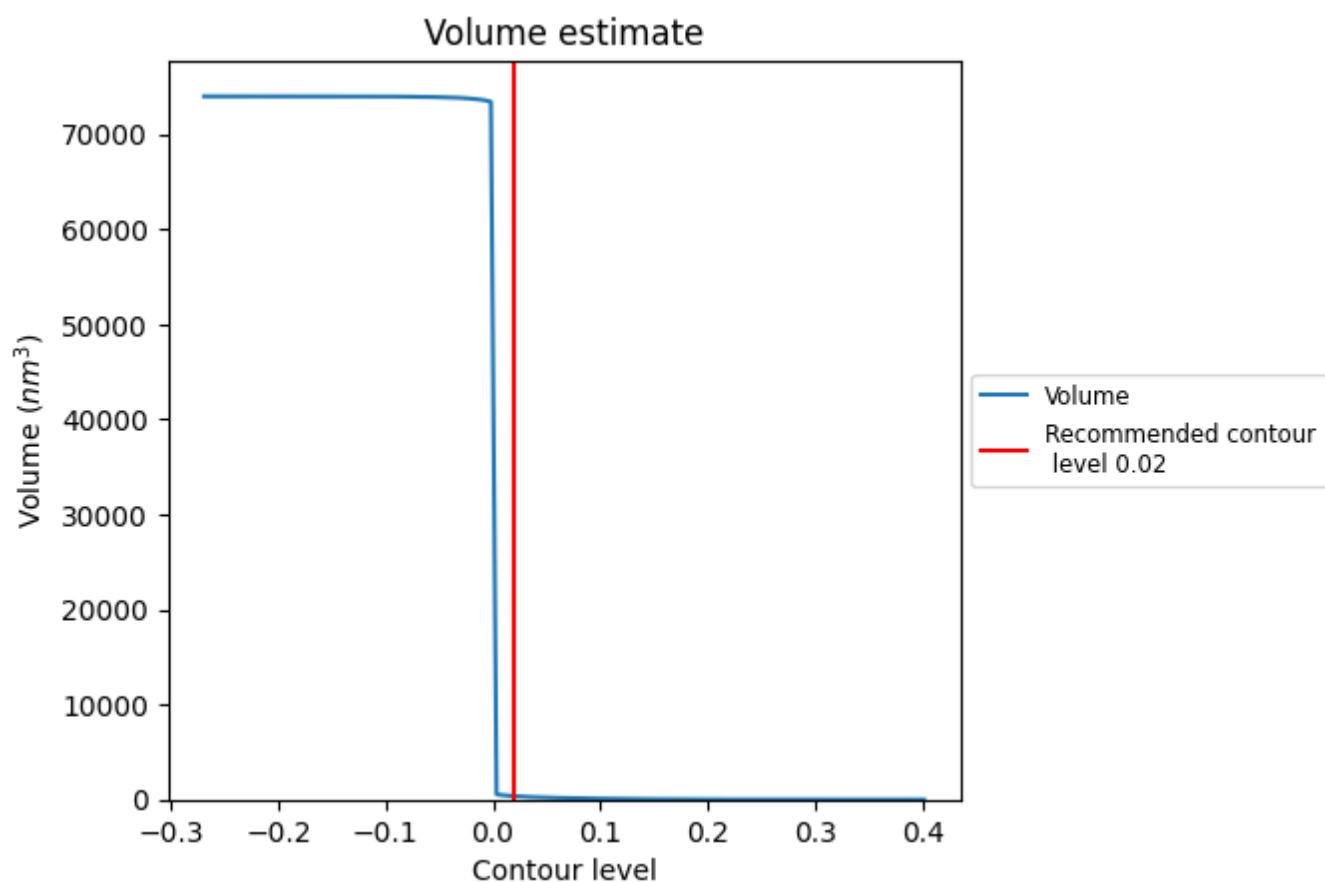
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution [i](#)



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

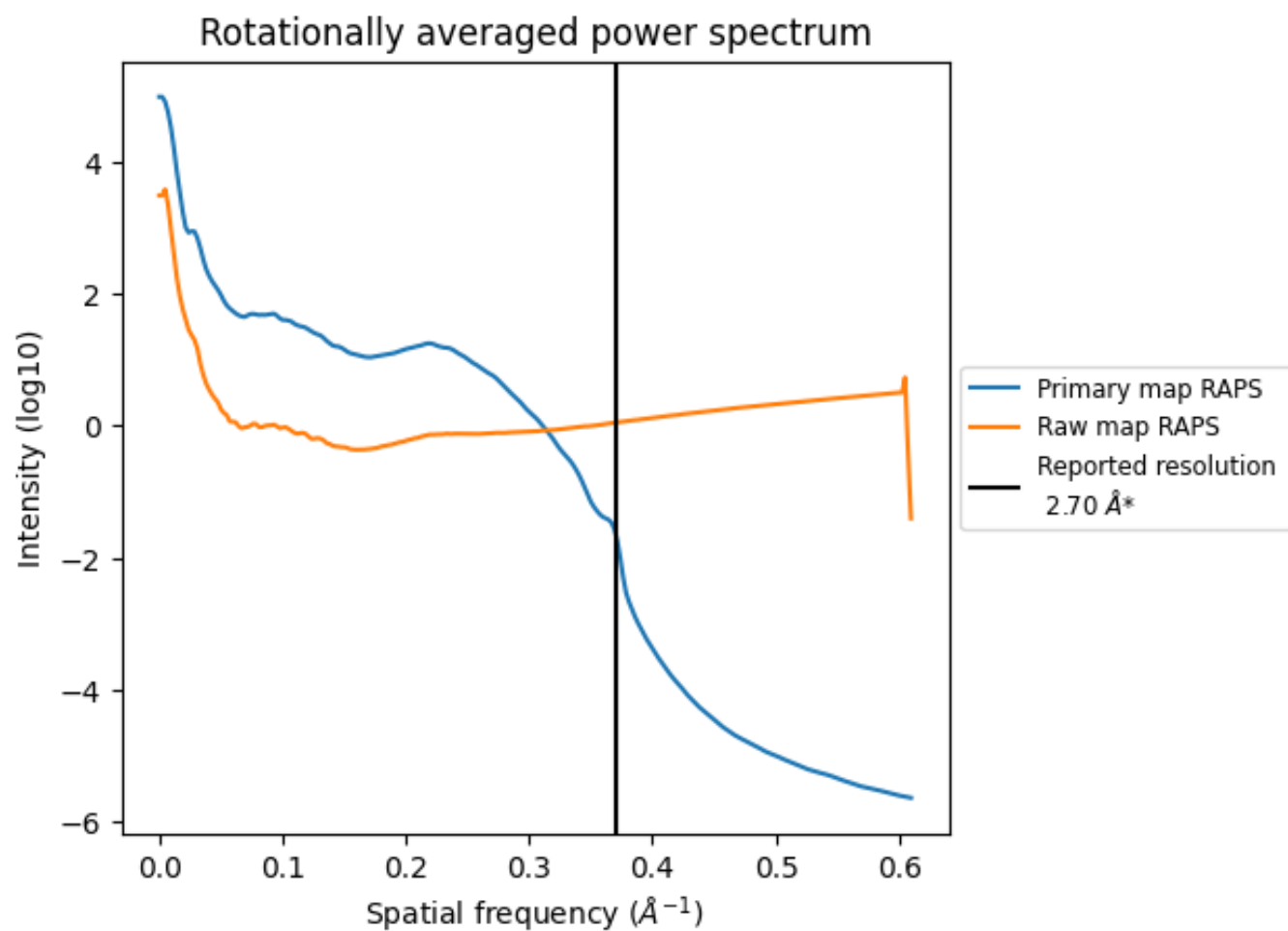
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 358 nm^3 ; this corresponds to an approximate mass of 323 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 ⓘ

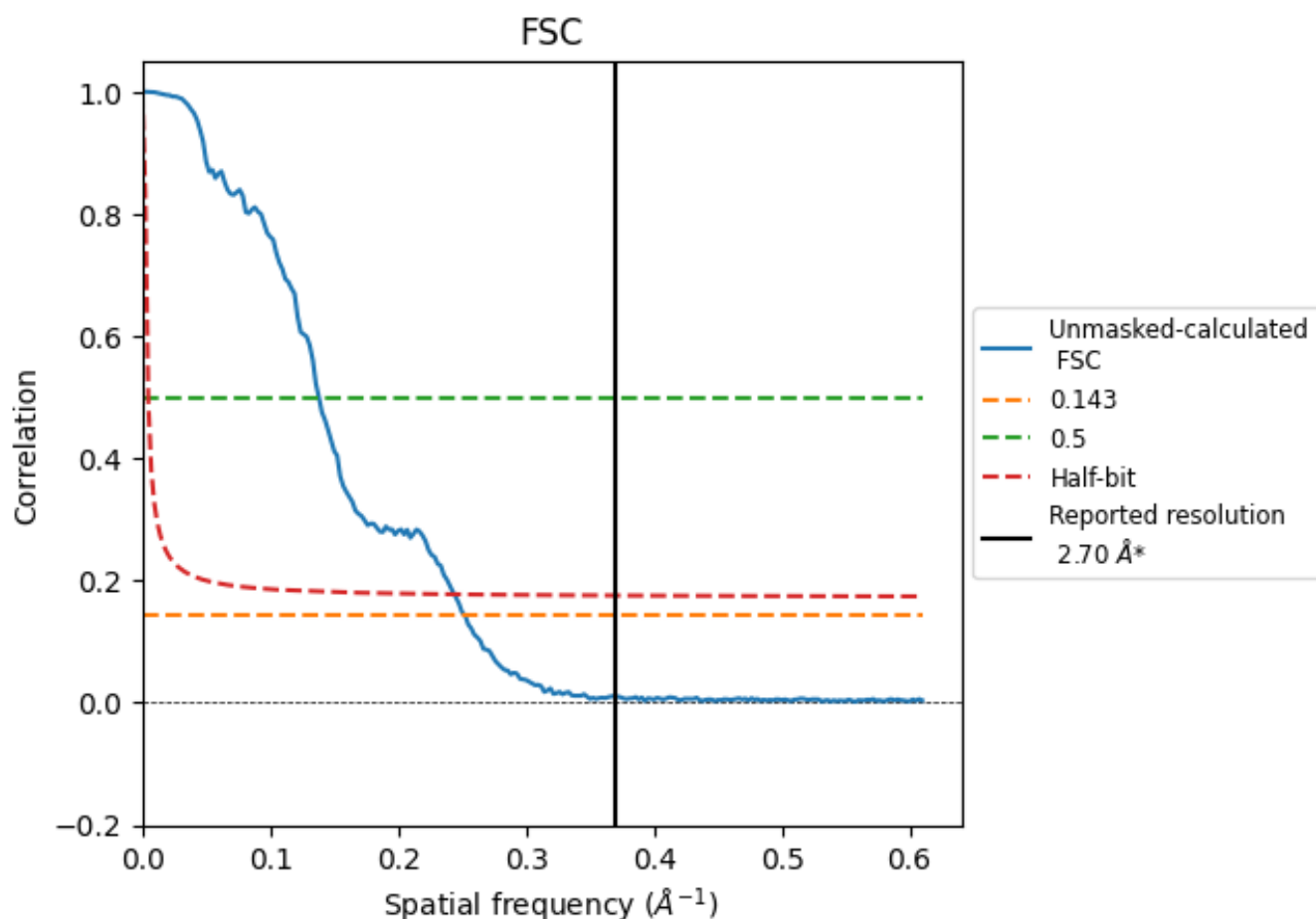


*Reported resolution corresponds to spatial frequency of 0.370 $\text{\AA}^{-1}$

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 0.370 $\text{\AA}^{-1}$

8.2 Resolution estimates [i](#)

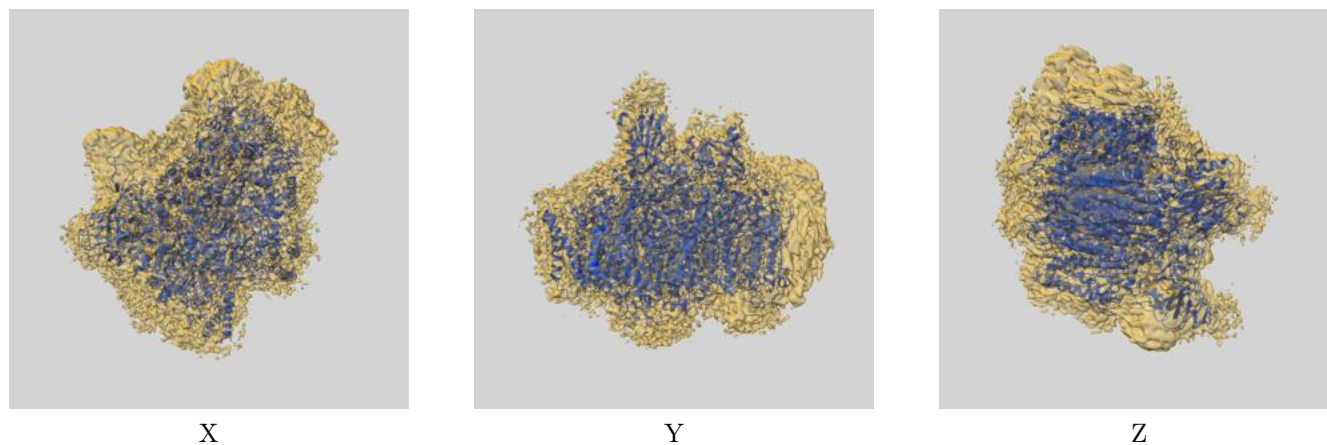
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	2.70	-	-
Author-provided FSC curve	-	-	-
Unmasked-calculated*	3.96	7.24	4.10

*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 2.7 by more than 10 %

9 Map-model fit [i](#)

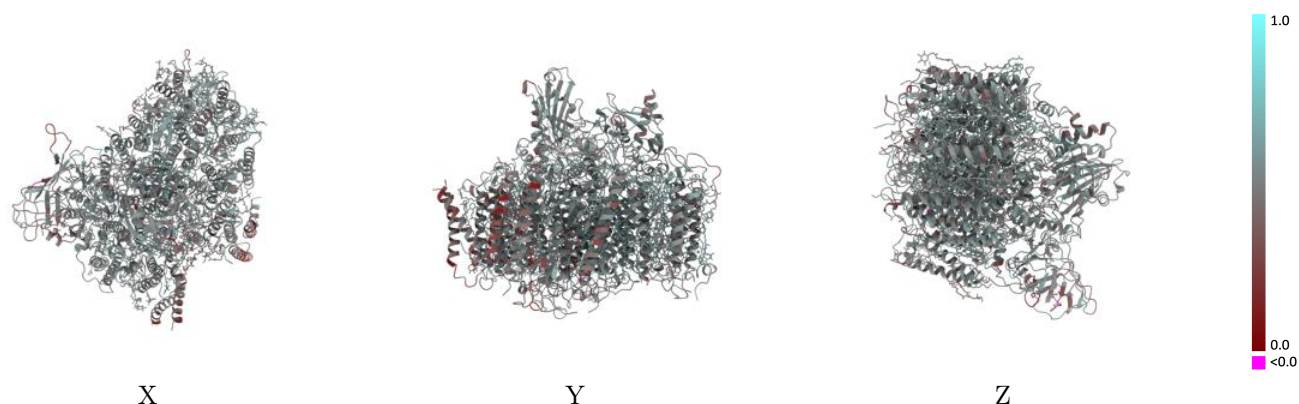
This section contains information regarding the fit between EMDB map EMD-66946 and PDB model 9XK3. Per-residue inclusion information can be found in [section 3](#) on [page 20](#).

9.1 Map-model overlay [i](#)



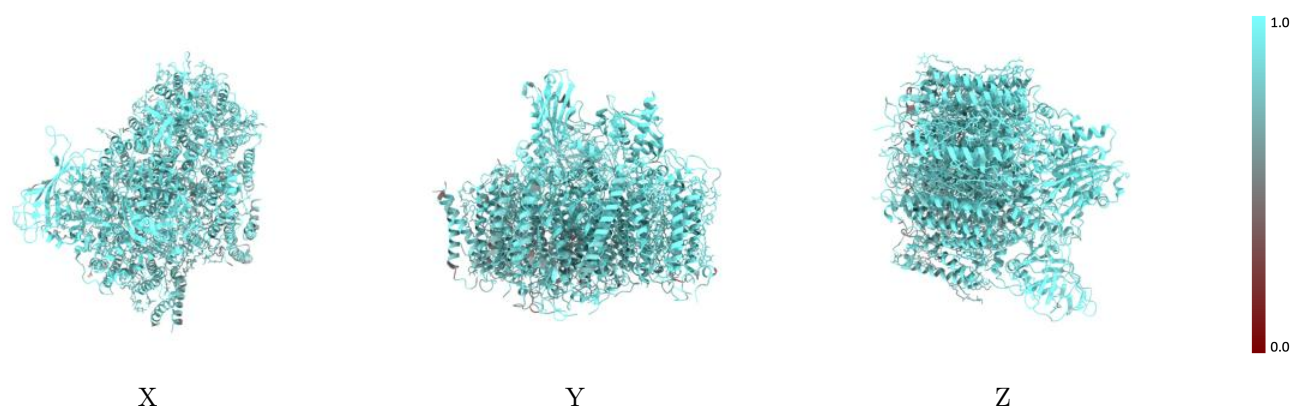
The images above show the 3D surface view of the map at the recommended contour level 0.02 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



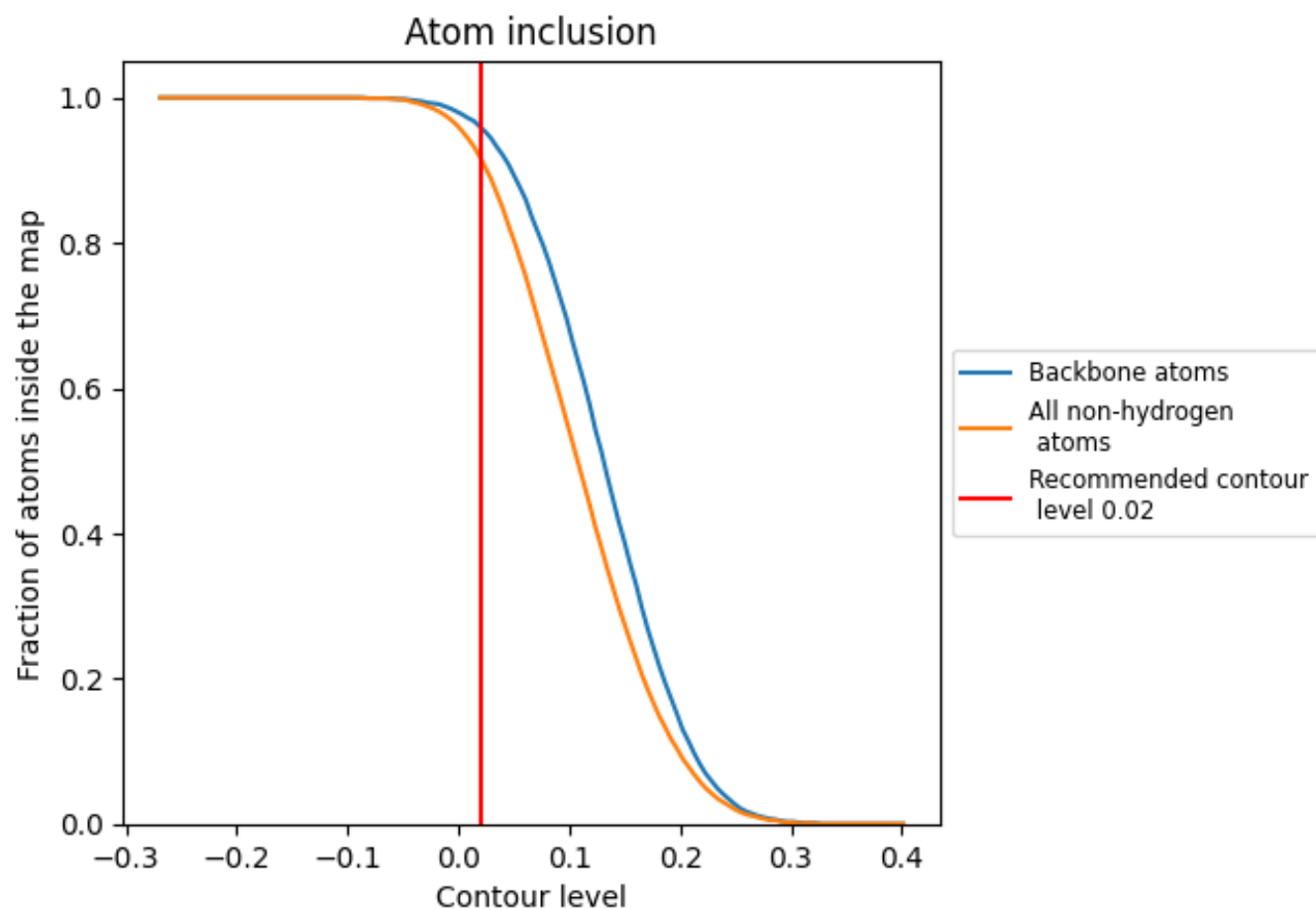
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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, 96% of all backbone atoms, 92% 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	 0.9170	 0.4970
1A	 0.9110	 0.5080
1B	 0.9440	 0.5120
1C	 0.9270	 0.5150
1D	 0.9370	 0.5230
1E	 0.9070	 0.4910
1F	 0.9250	 0.4940
1H	 0.8840	 0.4850
1I	 0.8620	 0.4930
1J	 0.8980	 0.4760
1K	 0.8630	 0.4850
1L	 0.9110	 0.5160
1M	 0.8260	 0.4680
1O	 0.9610	 0.4620
1P	 0.9520	 0.4930
1T	 0.9160	 0.5110
1U	 0.9660	 0.4840
1V	 0.7400	 0.4040
1W	 0.8360	 0.4320
1X	 0.8910	 0.4780
1Y	 0.8010	 0.4060
1Z	 0.7940	 0.3970

