



# Full wwPDB X-ray Structure Validation Report ⓘ

Jun 24, 2024 – 11:19 PM EDT

PDB ID : 6ZO8  
Title : Minocycline binding to the deep binding pocket of AcrB-G621P  
Authors : Tam, H.K.; Foong, W.E.; Pos, K.M.  
Deposited on : 2020-07-07  
Resolution : 2.50 Å(reported)

This is a Full wwPDB X-ray Structure Validation Report for a publicly released PDB entry.

We welcome your comments at [validation@mail.wwpdb.org](mailto:validation@mail.wwpdb.org)

A user guide is available at

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

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>.

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

MolProbity : 4.02b-467  
Mogul : 2022.3.0, CSD as543be (2022)  
Xtriage (Phenix) : 1.20.1  
EDS : 2.37.1  
buster-report : 1.1.7 (2018)  
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)  
Refmac : 5.8.0158  
CCP4 : 7.0.044 (Gargrove)  
Ideal geometry (proteins) : Engh & Huber (2001)  
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)  
Validation Pipeline (wwPDB-VP) : 2.37.1

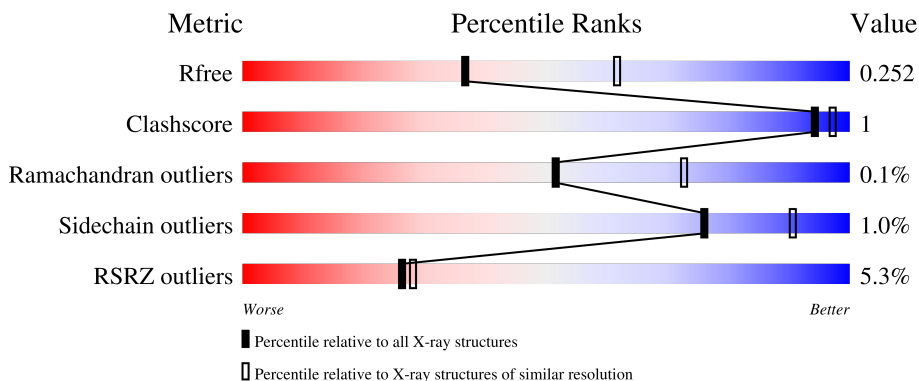
# 1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

*X-RAY DIFFRACTION*

The reported resolution of this entry is 2.50 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)	Similar resolution (#Entries, resolution range(Å))
$R_{free}$	130704	4661 (2.50-2.50)
Clashscore	141614	5346 (2.50-2.50)
Ramachandran outliers	138981	5231 (2.50-2.50)
Sidechain outliers	138945	5233 (2.50-2.50)
RSRZ outliers	127900	4559 (2.50-2.50)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments of the lower bar indicate the fraction of residues that contain outliers for  $\geq 3$ , 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 electron density. The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	A	1057	 5% (poor fit), 94% (0-3 outliers), 5% (not modelled)
1	B	1057	 4% (poor fit), 94% (0-3 outliers), 2% (not modelled)
1	C	1057	 3% (poor fit), 93% (0-3 outliers), 5% (not modelled)
2	D	169	 8% (poor fit), 92% (0-3 outliers), 8% (not modelled)
2	E	169	 22% (poor fit), 91% (0-3 outliers), 9% (not modelled)

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:

<b>Mol</b>	<b>Type</b>	<b>Chain</b>	<b>Res</b>	<b>Chirality</b>	<b>Geometry</b>	<b>Clashes</b>	<b>Electron density</b>
3	LMT	C	1103	-	-	-	X
7	EDO	D	201	-	-	-	X

## 2 Entry composition i

There are 20 unique types of molecules in this entry. The entry contains 27356 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, the ZeroOcc column contains the number of atoms modelled with zero occupancy, 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 Multidrug efflux pump subunit AcrB.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
1	A	1042	7930	5100	1311	1475	44	0	0	0
1	B	1034	7858	5058	1296	1460	44	0	0	0
1	C	1035	7885	5075	1302	1463	45	0	3	0

There are 27 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	621	PRO	GLY	engineered mutation	UNP P31224
A	1050	LEU	-	expression tag	UNP P31224
A	1051	GLU	-	expression tag	UNP P31224
A	1052	HIS	-	expression tag	UNP P31224
A	1053	HIS	-	expression tag	UNP P31224
A	1054	HIS	-	expression tag	UNP P31224
A	1055	HIS	-	expression tag	UNP P31224
A	1056	HIS	-	expression tag	UNP P31224
A	1057	HIS	-	expression tag	UNP P31224
B	621	PRO	GLY	engineered mutation	UNP P31224
B	1050	LEU	-	expression tag	UNP P31224
B	1051	GLU	-	expression tag	UNP P31224
B	1052	HIS	-	expression tag	UNP P31224
B	1053	HIS	-	expression tag	UNP P31224
B	1054	HIS	-	expression tag	UNP P31224
B	1055	HIS	-	expression tag	UNP P31224
B	1056	HIS	-	expression tag	UNP P31224
B	1057	HIS	-	expression tag	UNP P31224
C	621	PRO	GLY	engineered mutation	UNP P31224
C	1050	LEU	-	expression tag	UNP P31224
C	1051	GLU	-	expression tag	UNP P31224
C	1052	HIS	-	expression tag	UNP P31224
C	1053	HIS	-	expression tag	UNP P31224

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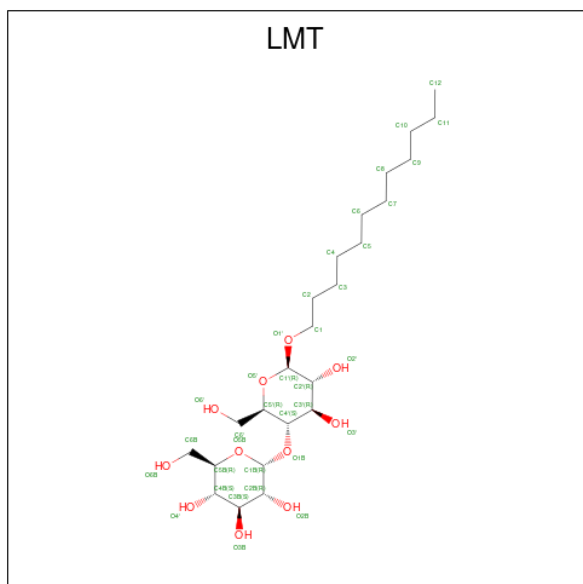
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Chain	Residue	Modelled	Actual	Comment	Reference
C	1054	HIS	-	expression tag	UNP P31224
C	1055	HIS	-	expression tag	UNP P31224
C	1056	HIS	-	expression tag	UNP P31224
C	1057	HIS	-	expression tag	UNP P31224

- Molecule 2 is a protein called DARPIN.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
2	D	156	1177	741	206	229	1	0	0	0
2	E	154	1167	736	204	226	1	0	0	0

- Molecule 3 is DODECYL-BETA-D-MALTOSE (three-letter code: LMT) (formula:  $C_{24}H_{46}O_{11}$ ).



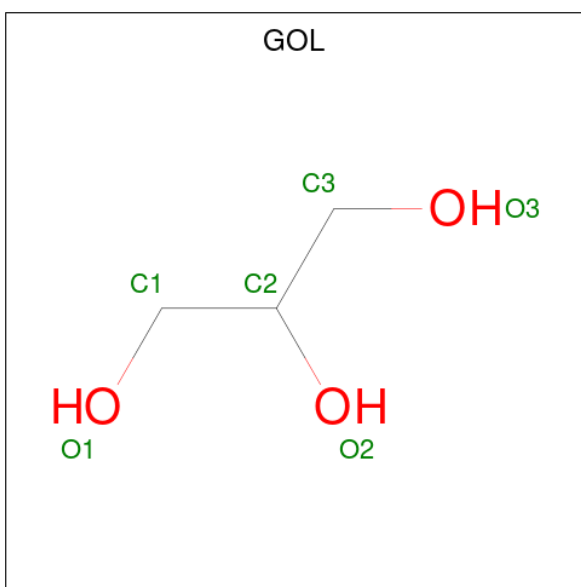
Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
			Total	C	O		
3	A	1	35	24	11	0	0
3	A	1	35	24	11	0	0
3	A	1	35	24	11	0	0
3	A	1	35	24	11	0	0
3	A	1	35	24	11	0	0

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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
3	B	1	Total	C	O	0	0
			35	24	11		
3	C	1	Total	C	O	0	0
			35	24	11		
3	C	1	Total	C	O	0	0
			35	24	11		
3	C	1	Total	C	O	0	0
			35	24	11		

- Molecule 4 is GLYCEROL (three-letter code: GOL) (formula: C<sub>3</sub>H<sub>8</sub>O<sub>3</sub>).



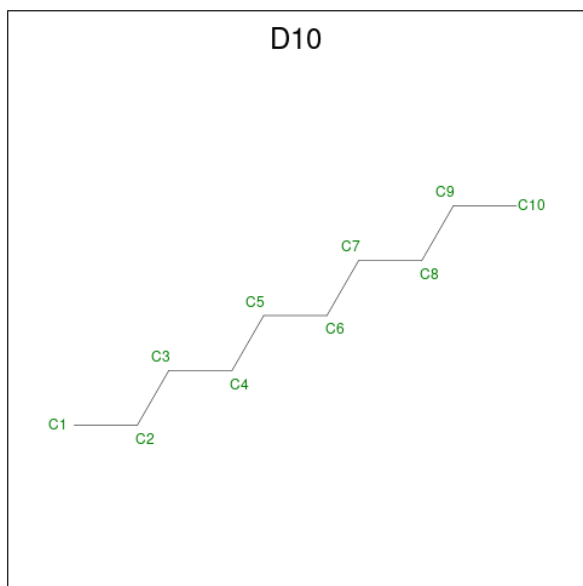
Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
4	A	1	Total	C	O	0	0
			6	3	3		
4	A	1	Total	C	O	0	0
			6	3	3		
4	B	1	Total	C	O	0	0
			6	3	3		
4	B	1	Total	C	O	0	0
			6	3	3		
4	B	1	Total	C	O	0	0
			6	3	3		
4	B	1	Total	C	O	0	0
			6	3	3		
4	B	1	Total	C	O	0	0
			6	3	3		

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
4	C	1	Total C O 6 3 3	0	0
4	C	1	Total C O 6 3 3	0	0
4	C	1	Total C O 6 3 3	0	0
4	C	1	Total C O 6 3 3	0	0
4	C	1	Total C O 6 3 3	0	0
4	C	1	Total C O 6 3 3	0	0
4	C	1	Total C O 6 3 3	0	0
4	C	1	Total C O 6 3 3	0	0
4	C	1	Total C O 6 3 3	0	0
4	C	1	Total C O 6 3 3	0	0

- Molecule 5 is DECANE (three-letter code: D10) (formula: C<sub>10</sub>H<sub>22</sub>).



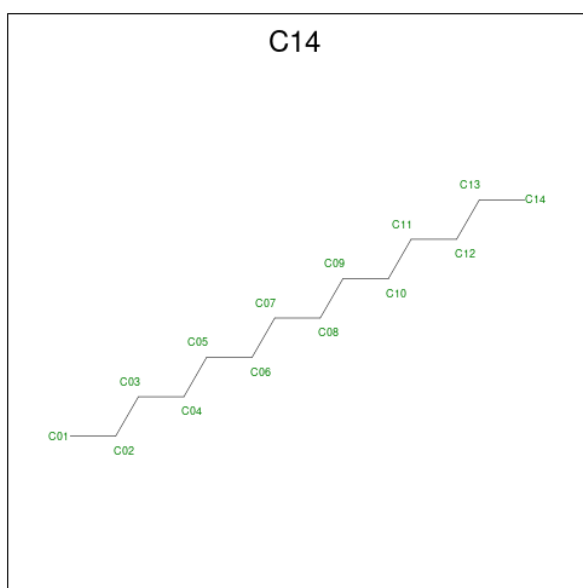
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
5	A	1	Total C 10 10	0	0
5	A	1	Total C 10 10	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
5	B	1	Total C 10 10	0	0
5	B	1	Total C 10 10	0	0
5	C	1	Total C 10 10	0	0
5	C	1	Total C 10 10	0	0
5	C	1	Total C 10 10	0	0

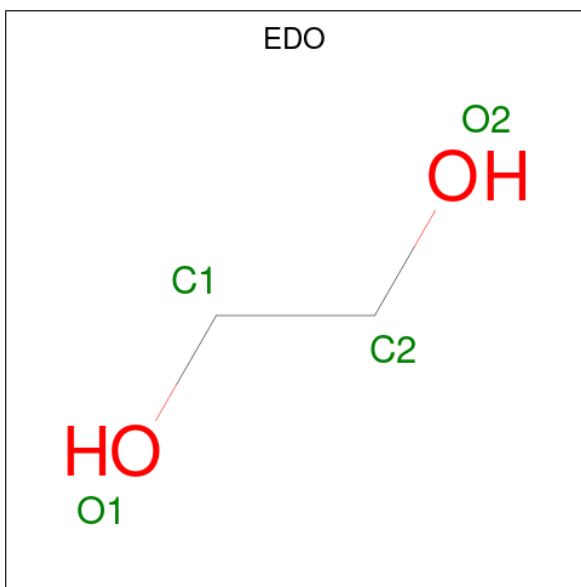
- Molecule 6 is TETRADECANE (three-letter code: C14) (formula:  $C_{14}H_{30}$ ).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
6	A	1	Total C 14 14	0	0
6	C	1	Total C 14 14	0	0

- Molecule 7 is 1,2-ETHANEDIOL (three-letter code: EDO) (formula:  $C_2H_6O_2$ ).

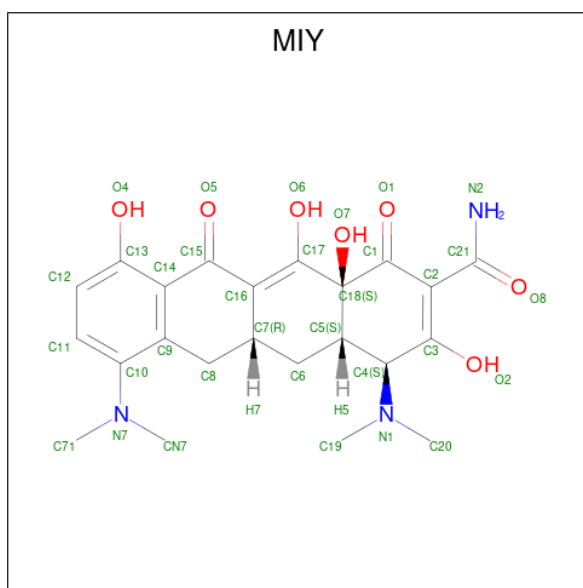




Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
7	A	1	Total C O 4 2 2	0	0
7	A	1	Total C O 4 2 2	0	0
7	B	1	Total C O 4 2 2	0	0
7	B	1	Total C O 4 2 2	0	0
7	B	1	Total C O 4 2 2	0	0
7	B	1	Total C O 4 2 2	0	0
7	C	1	Total C O 4 2 2	0	0
7	C	1	Total C O 4 2 2	0	0
7	D	1	Total C O 4 2 2	0	0
7	D	1	Total C O 4 2 2	0	0
7	D	1	Total C O 4 2 2	0	0
7	E	1	Total C O 4 2 2	0	0

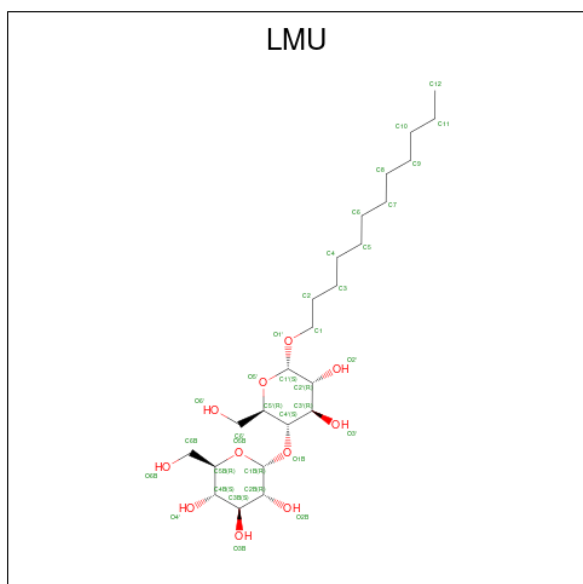
- Molecule 8 is (4S,4AS,5AR,12AS)-4,7-BIS(DIMETHYLAMINO)-3,10,12,12A-TETRAHYDROXY-1,11-DIOXO-1,4,4A,5,5A,6,11,12A-OCTAHYDROTETRACENE-2-CARBOXAMIDE (three-letter code: MIY) (formula: C<sub>23</sub>H<sub>27</sub>N<sub>3</sub>O<sub>7</sub>) (labeled as "Ligand of

Interest" by depositor).



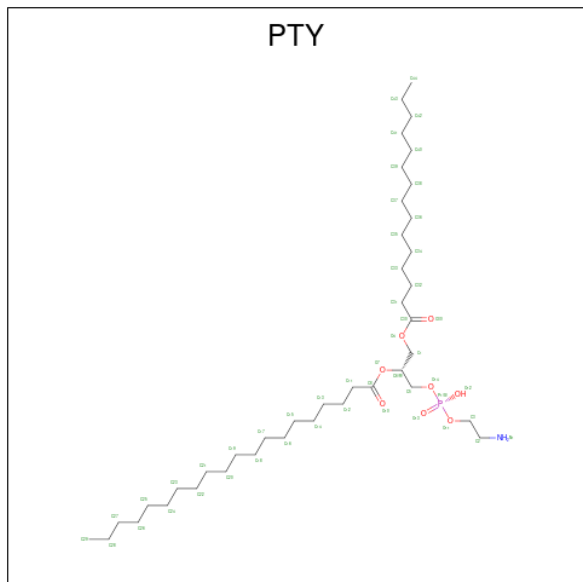
Mol	Chain	Residues	Atoms			ZeroOcc	AltConf	
			Total	C	N			O
8	B	1	33	23	3	7	0	0

- Molecule 9 is DODECYL-ALPHA-D-MALTOSE (three-letter code: LMU) (formula:  $C_{24}H_{46}O_{11}$ ).



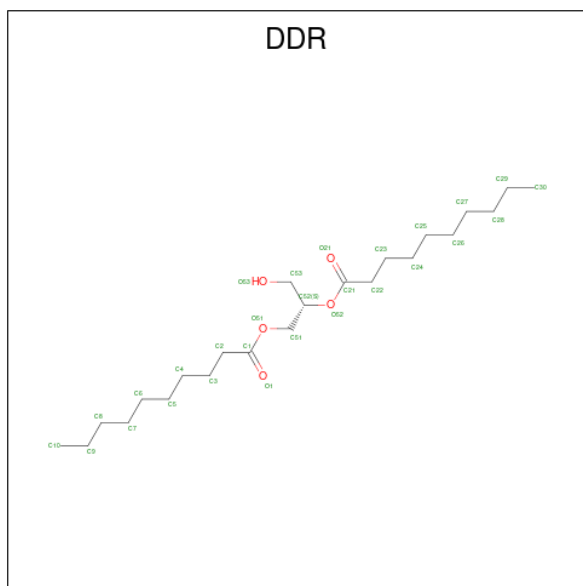
Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
			Total	C	O		
9	B	1	35	24	11	0	0

- Molecule 10 is PHOSPHATIDYLETHANOLAMINE (three-letter code: PTY) (formula:  $C_{40}H_{80}NO_8P$ ).



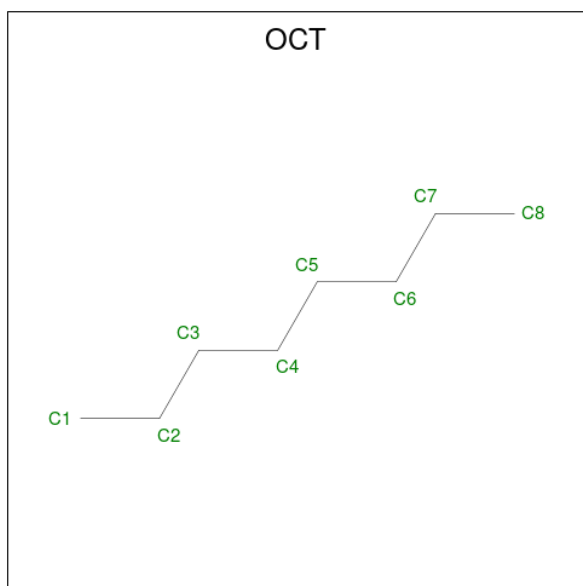
Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
			Total	C	N	O	P		
10	B	1	50	40	1	8	1	0	0
10	C	1	50	40	1	8	1	0	0

- Molecule 11 is (2S)-3-hydroxypropane-1,2-diyl didecanoate (three-letter code: DDR) (formula:  $C_{23}H_{44}O_5$ ).



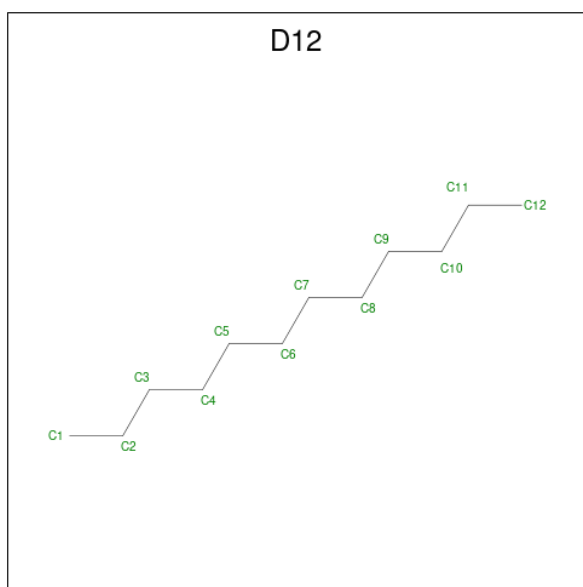
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
11	B	1	Total	C O	0	0
			28	23 5		

- Molecule 12 is N-OCTANE (three-letter code: OCT) (formula:  $C_8H_{18}$ ).



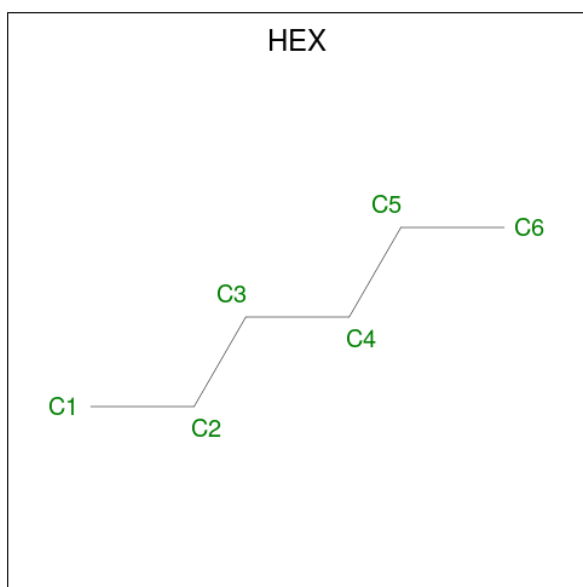
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
12	B	1	Total	C	0	0
			8	8		
12	C	1	Total	C	0	0
			8	8		
12	C	1	Total	C	0	0
			8	8		

- Molecule 13 is DODECANE (three-letter code: D12) (formula:  $C_{12}H_{26}$ ).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
13	B	1	Total C 12 12	0	0
13	C	1	Total C 12 12	0	0
13	C	1	Total C 12 12	0	0

- Molecule 14 is HEXANE (three-letter code: HEX) (formula: C<sub>6</sub>H<sub>14</sub>).



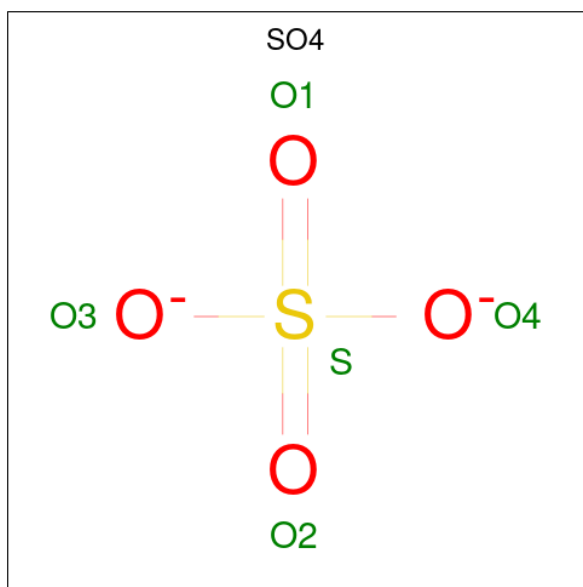
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
14	B	1	Total C 6 6	0	0

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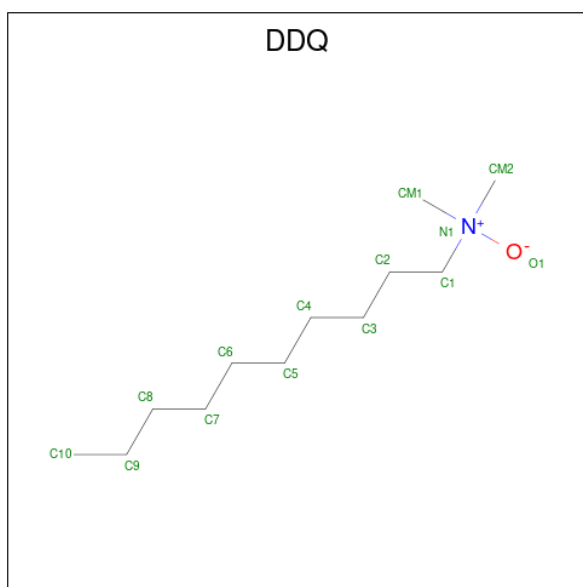
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
14	C	1	Total C 6 6	0	0
14	C	1	Total C 6 6	0	0

- Molecule 15 is SULFATE ION (three-letter code: SO4) (formula: O<sub>4</sub>S).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
15	B	1	Total O S 5 4 1	0	0
15	C	1	Total O S 5 4 1	0	0
15	C	1	Total O S 5 4 1	0	0

- Molecule 16 is DECYLAMINE-N,N-DIMETHYL-N-OXIDE (three-letter code: DDQ) (formula: C<sub>12</sub>H<sub>27</sub>NO).



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
			Total	C	N	O		
16	B	1	14	12	1	1	0	0

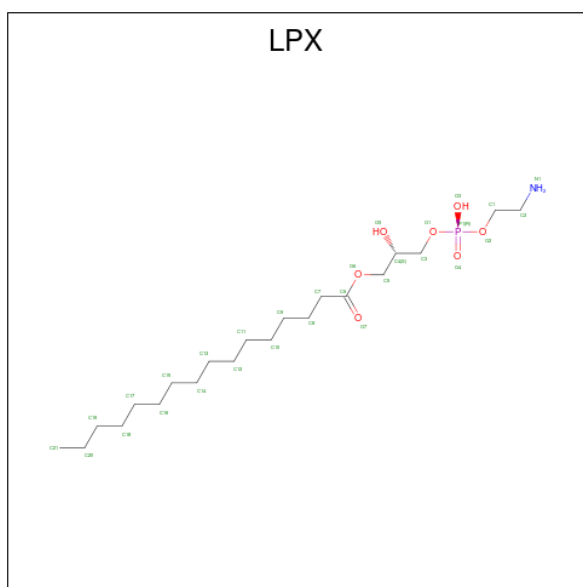
- Molecule 17 is SODIUM ION (three-letter code: NA) (formula: Na).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
			Total	Na		
17	B	1	1	1	0	0

- Molecule 18 is CHLORIDE ION (three-letter code: CL) (formula: Cl).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
			Total	Cl		
18	B	1	1	1	0	0

- Molecule 19 is (2S)-3-[[[(R)-(2-aminoethoxy)(hydroxy)phosphoryl]oxy]-2-hydroxypropyl hexadecanoate (three-letter code: LPX) (formula: C<sub>21</sub>H<sub>44</sub>NO<sub>7</sub>P).



Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
19	C	1	Total	C	N	O	P	0	0
			30	21	1	7	1		
19	C	1	Total	C	N	O	P	0	0
			30	21	1	7	1		

- Molecule 20 is water.

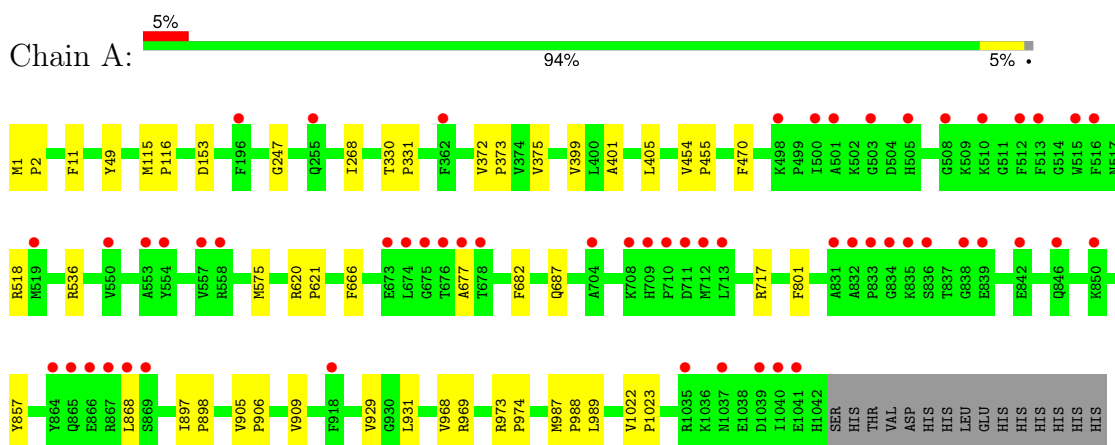
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
20	A	105	Total	O	0	2
			107	107		
20	B	137	Total	O	0	2
			139	139		
20	C	140	Total	O	0	1
			141	141		
20	D	28	Total	O	0	0
			28	28		
20	E	2	Total	O	0	0
			2	2		



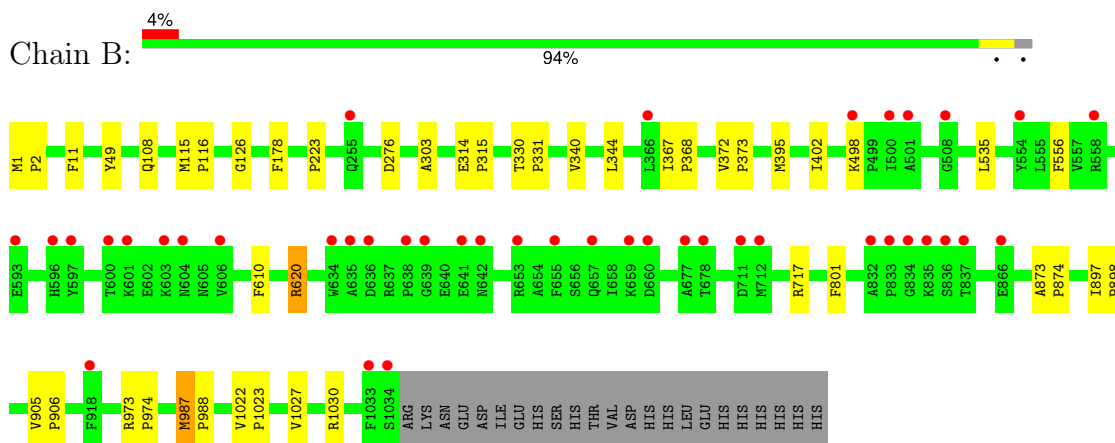
### 3 Residue-property plots i

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 electron 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 dot above a residue indicates a poor fit to the electron density ( $RSRZ > 2$ ). 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.

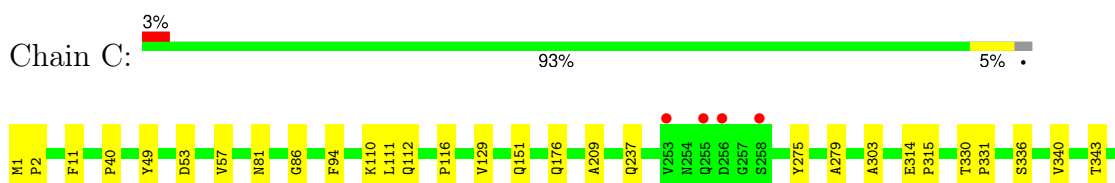
- Molecule 1: Multidrug efflux pump subunit AcrB

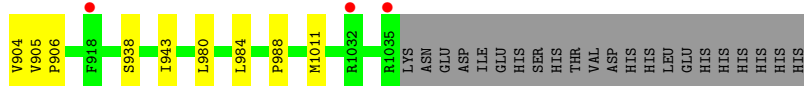
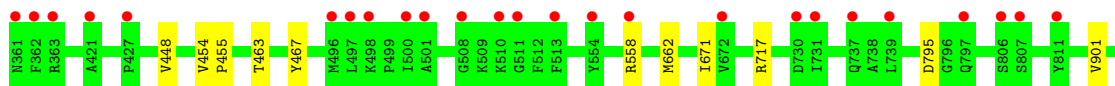


- Molecule 1: Multidrug efflux pump subunit AcrB

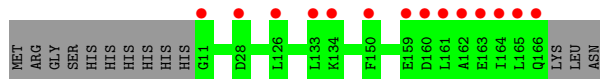


- Molecule 1: Multidrug efflux pump subunit AcrB

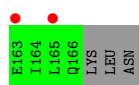
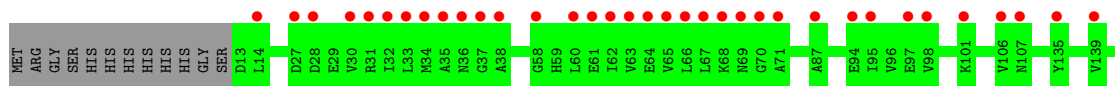




• Molecule 2: DARPIN



• Molecule 2: DARPIN



## 4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, $\alpha$ , $\beta$ , $\gamma$	146.41Å 161.62Å 245.04Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	48.87 – 2.50 48.82 – 2.50	Depositor EDS
% Data completeness (in resolution range)	100.0 (48.87-2.50) 100.0 (48.82-2.50)	Depositor EDS
$R_{merge}$	0.17	Depositor
$R_{sym}$	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ <sup>1</sup>	1.39 (at 2.51Å)	Xtrriage
Refinement program	REFMAC 5.8.0232	Depositor
R, $R_{free}$	0.219 , 0.249 0.223 , 0.252	Depositor DCC
$R_{free}$ test set	9946 reflections (4.96%)	wwPDB-VP
Wilson B-factor (Å <sup>2</sup> )	50.4	Xtrriage
Anisotropy	0.290	Xtrriage
Bulk solvent $k_{sol}$ (e/Å <sup>3</sup> ), $B_{sol}$ (Å <sup>2</sup> )	0.33 , 41.1	EDS
L-test for twinning <sup>2</sup>	$\langle  L  \rangle = 0.49$ , $\langle L^2 \rangle = 0.32$	Xtrriage
Estimated twinning fraction	No twinning to report.	Xtrriage
$F_o, F_c$ correlation	0.93	EDS
Total number of atoms	27356	wwPDB-VP
Average B, all atoms (Å <sup>2</sup> )	55.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 2.01% of the height of the origin peak. No significant pseudotranslation is detected.*

<sup>1</sup>Intensities estimated from amplitudes.

<sup>2</sup>Theoretical values of  $\langle |L| \rangle$ ,  $\langle L^2 \rangle$  for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

## 5 Model quality [i](#)

### 5.1 Standard geometry [i](#)

Bond lengths and bond angles in the following residue types are not validated in this section: LMT, EDO, CL, NA, LMU, PTY, OCT, MIY, C14, SO4, GOL, DDQ, DDR, LPX, D10, HEX, D12

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
1	A	0.66	0/8082	0.70	0/10975
1	B	0.66	0/8009	0.70	0/10878
1	C	0.66	0/8045	0.70	0/10925
2	D	0.67	0/1196	0.70	0/1626
2	E	0.67	0/1186	0.71	0/1613
All	All	0.66	0/26518	0.70	0/36017

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no planarity outliers.

### 5.2 Too-close contacts [i](#)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	7930	0	8076	21	0
1	B	7858	0	8010	23	0
1	C	7885	0	8046	24	0
2	D	1177	0	1159	0	0
2	E	1167	0	1151	0	0
3	A	175	0	230	0	0
3	B	35	0	46	0	0
3	C	105	0	138	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
4	A	12	0	16	0	0
4	B	30	0	40	0	0
4	C	54	0	72	0	0
5	A	20	0	44	0	0
5	B	20	0	44	0	0
5	C	30	0	66	1	0
6	A	14	0	30	0	0
6	C	14	0	30	0	0
7	A	8	0	12	0	0
7	B	16	0	24	0	0
7	C	8	0	12	0	0
7	D	12	0	18	0	0
7	E	4	0	6	0	0
8	B	33	0	24	1	0
9	B	35	0	46	0	0
10	B	50	0	79	0	0
10	C	50	0	79	1	0
11	B	28	0	44	0	0
12	B	8	0	18	0	0
12	C	16	0	36	0	0
13	B	12	0	26	0	0
13	C	24	0	52	0	0
14	B	6	0	14	0	0
14	C	12	0	28	0	0
15	B	5	0	0	0	0
15	C	10	0	0	0	0
16	B	14	0	27	0	0
17	B	1	0	0	0	0
18	B	1	0	0	1	0
19	C	60	0	86	3	0
20	A	107	0	0	0	0
20	B	139	0	0	0	0
20	C	141	0	0	0	0
20	D	28	0	0	0	0
20	E	2	0	0	0	0
All	All	27356	0	27829	69	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 1.

All (69) 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)
1:C:57:VAL:HG21	1:C:86:GLY:HA2	1.69	0.75
1:A:375:VAL:HG11	1:A:405:LEU:HD22	1.79	0.65
1:A:968:VAL:HG11	1:A:1023:PRO:HG3	1.81	0.61
1:B:498:LYS:NZ	18:B:1123:CL:CL	2.74	0.58
1:C:671:ILE:HG13	1:C:671:ILE:O	2.05	0.55
1:B:535:LEU:HD22	1:B:1027:VAL:HG21	1.89	0.55
1:C:111:LEU:HD22	1:C:129:VAL:CG2	2.38	0.53
1:A:247:GLY:HA2	1:A:268:ILE:CD1	2.39	0.52
5:C:1116:D10:H102	19:C:1122:LPX:H7	1.90	0.52
1:A:372:VAL:HB	1:A:373:PRO:HD3	1.92	0.52
1:B:1022:VAL:N	1:B:1023:PRO:HD2	2.26	0.51
1:C:151:GLN:NE2	1:C:279:ALA:O	2.44	0.51
10:C:1104:PTY:H162	10:C:1104:PTY:H331	1.95	0.48
1:C:314:GLU:N	1:C:315:PRO:HD2	2.29	0.48
1:A:575:MET:HG2	1:A:666:PHE:CE1	2.50	0.47
1:B:873:ALA:HB3	1:B:874:PRO:HD3	1.97	0.47
1:C:901:VAL:O	1:C:904:VAL:HG12	2.14	0.47
1:C:53:ASP:O	1:C:57:VAL:HG23	2.14	0.47
1:A:973:ARG:HB3	1:A:974:PRO:HD3	1.98	0.46
1:C:1:MET:HB3	1:C:2:PRO:HD3	1.98	0.46
1:C:336:SER:O	1:C:340:VAL:HG23	2.16	0.46
1:B:108:GLN:OE1	1:C:112[B]:GLN:HG3	2.16	0.46
1:B:897:ILE:N	1:B:898:PRO:CD	2.79	0.46
1:B:897:ILE:N	1:B:898:PRO:HD2	2.32	0.45
1:B:126:GLY:HA3	1:C:116:PRO:CB	2.46	0.45
1:C:463:THR:HG22	1:C:467:TYR:CZ	2.51	0.45
1:C:448:VAL:HG11	1:C:943:ILE:HD11	1.99	0.45
1:B:303:ALA:HB2	1:B:330:THR:HG21	1.99	0.45
1:B:314:GLU:HB2	1:B:315:PRO:HD3	1.99	0.45
1:B:340:VAL:HG21	1:B:395:MET:HB3	1.97	0.45
1:C:303:ALA:HB2	1:C:330:THR:HG21	1.99	0.45
1:A:909:VAL:HA	1:A:931:LEU:HD11	1.99	0.44
1:C:904:VAL:HG13	1:C:938:SER:HB3	1.99	0.44
19:C:1123:LPX:C8	19:C:1123:LPX:H14	2.47	0.44
1:B:223:PRO:HD3	1:C:275:TYR:CD1	2.52	0.44
1:C:330:THR:N	1:C:331:PRO:CD	2.80	0.44
1:B:344:LEU:HD23	1:B:402:ILE:HD11	2.00	0.44
1:A:905:VAL:HB	1:A:906:PRO:HD3	1.99	0.44
1:B:1:MET:HB3	1:B:2:PRO:HD3	1.99	0.43
1:B:367:ILE:HB	1:B:368:PRO:HD3	2.00	0.43
1:C:454:VAL:HB	1:C:455:PRO:HD3	1.99	0.43
1:A:399:VAL:HG11	1:A:989:LEU:HD11	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:980:LEU:HG	1:C:984:LEU:HD13	2.00	0.43
1:A:401:ALA:O	1:A:405:LEU:HG	2.19	0.43
1:A:620:ARG:N	1:A:621:PRO:CD	2.82	0.42
1:A:897:ILE:N	1:A:898:PRO:CD	2.82	0.42
19:C:1123:LPX:H14	19:C:1123:LPX:H8	2.01	0.42
1:C:40:PRO:HB2	1:C:94:PHE:O	2.19	0.42
1:B:372:VAL:HB	1:B:373:PRO:HD3	2.00	0.42
1:A:330:THR:N	1:A:331:PRO:CD	2.82	0.42
1:C:905:VAL:HB	1:C:906:PRO:HD3	2.02	0.42
1:A:1022:VAL:N	1:A:1023:PRO:CD	2.83	0.42
1:A:454:VAL:N	1:A:455:PRO:CD	2.83	0.42
1:C:343:THR:HG23	1:C:988:PRO:HB2	2.02	0.42
1:B:973:ARG:N	1:B:974:PRO:HD2	2.35	0.42
1:A:115:MET:HB2	1:A:116:PRO:HD3	2.02	0.41
1:C:209:ALA:O	1:C:237:GLN:NE2	2.53	0.41
1:A:1:MET:HB3	1:A:2:PRO:HD3	2.03	0.41
1:A:987:MET:N	1:A:988:PRO:CD	2.84	0.41
1:A:470:PHE:CD2	1:A:929:VAL:HG11	2.56	0.41
1:A:682:PHE:CZ	1:A:857:TYR:HB2	2.56	0.41
1:B:178:PHE:CE1	8:B:1101:MIY:H713	2.56	0.41
1:B:987:MET:N	1:B:988:PRO:CD	2.84	0.41
1:C:57:VAL:CG2	1:C:86:GLY:HA2	2.47	0.41
1:B:905:VAL:HB	1:B:906:PRO:HD3	2.03	0.41
1:B:276:ASP:OD2	1:B:620:ARG:NH1	2.54	0.40
1:B:330:THR:N	1:B:331:PRO:CD	2.84	0.40
1:B:115:MET:N	1:B:116:PRO:CD	2.84	0.40
1:A:575:MET:HG2	1:A:666:PHE:HE1	1.86	0.40

There are no symmetry-related clashes.

## 5.3 Torsion angles [i](#)

### 5.3.1 Protein backbone [i](#)

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	1040/1057 (98%)	1013 (97%)	25 (2%)	2 (0%)	47	68
1	B	1032/1057 (98%)	1011 (98%)	21 (2%)	0	100	100
1	C	1036/1057 (98%)	1008 (97%)	28 (3%)	0	100	100
2	D	154/169 (91%)	151 (98%)	3 (2%)	0	100	100
2	E	152/169 (90%)	151 (99%)	1 (1%)	0	100	100
All	All	3414/3509 (97%)	3334 (98%)	78 (2%)	2 (0%)	51	73

All (2) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	868	LEU
1	A	677	ALA

### 5.3.2 Protein sidechains [i](#)

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	849/864 (98%)	840 (99%)	9 (1%)	73	89
1	B	841/864 (97%)	832 (99%)	9 (1%)	73	89
1	C	845/864 (98%)	834 (99%)	11 (1%)	69	87
2	D	120/132 (91%)	120 (100%)	0	100	100
2	E	119/132 (90%)	119 (100%)	0	100	100
All	All	2774/2856 (97%)	2745 (99%)	29 (1%)	76	90

All (29) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	11	PHE
1	A	49	TYR
1	A	153	ASP
1	A	518	ARG
1	A	536	ARG
1	A	687	GLN

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Mol	Chain	Res	Type
1	A	717	ARG
1	A	801	PHE
1	A	969	ARG
1	B	11	PHE
1	B	49	TYR
1	B	556	PHE
1	B	610	PHE
1	B	620	ARG
1	B	717	ARG
1	B	801	PHE
1	B	987	MET
1	B	1030	ARG
1	C	11	PHE
1	C	49	TYR
1	C	81	ASN
1	C	110	LYS
1	C	176	GLN
1	C	558	ARG
1	C	662[A]	MET
1	C	662[B]	MET
1	C	717	ARG
1	C	795	ASP
1	C	1011	MET

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (3) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	361	ASN
1	A	1042	HIS
1	C	68	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 monosaccharides in this entry.

## 5.6 Ligand geometry [i](#)

Of 68 ligands modelled in this entry, 2 are monoatomic - leaving 66 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
19	LPX	C	1123	-	29,29,29	0.30	0	31,33,33	0.35	0
15	SO4	C	1129	-	4,4,4	0.34	0	6,6,6	0.08	0
8	MIY	B	1101	-	36,36,36	1.05	2 (5%)	42,58,58	1.03	2 (4%)
4	GOL	C	1106	-	5,5,5	0.08	0	5,5,5	0.28	0
13	D12	C	1121	-	11,11,11	0.28	0	10,10,10	0.46	0
7	EDO	E	201	-	3,3,3	0.06	0	2,2,2	0.09	0
10	PTY	B	1104	-	49,49,49	0.26	0	52,54,54	0.33	0
16	DDQ	B	1121	-	11,13,13	2.23	2 (18%)	12,15,15	0.51	0
13	D12	C	1120	-	11,11,11	0.25	0	10,10,10	0.50	0
4	GOL	C	1112	-	5,5,5	0.09	0	5,5,5	0.30	0
7	EDO	D	203	-	3,3,3	0.07	0	2,2,2	0.14	0
4	GOL	C	1113	-	5,5,5	0.08	0	5,5,5	0.27	0
4	GOL	C	1107	-	5,5,5	0.10	0	5,5,5	0.26	0
5	D10	B	1112	-	9,9,9	0.08	0	8,8,8	0.07	0
9	LMU	B	1102	-	36,36,36	0.50	1 (2%)	47,47,47	0.87	1 (2%)
14	HEX	C	1124	-	5,5,5	0.12	0	4,4,4	0.10	0
5	D10	B	1111	-	9,9,9	0.09	0	8,8,8	0.06	0
4	GOL	C	1110	-	5,5,5	0.10	0	5,5,5	0.29	0
3	LMT	A	1102	-	36,36,36	0.52	1 (2%)	47,47,47	0.78	2 (4%)
4	GOL	A	1106	-	5,5,5	0.09	0	5,5,5	0.27	0
7	EDO	A	1111	-	3,3,3	0.07	0	2,2,2	0.09	0
7	EDO	B	1116	-	3,3,3	0.07	0	2,2,2	0.08	0
3	LMT	A	1101	-	36,36,36	0.48	0	47,47,47	0.73	0
7	EDO	C	1126	-	3,3,3	0.06	0	2,2,2	0.16	0
14	HEX	C	1125	-	5,5,5	0.13	0	4,4,4	0.09	0
7	EDO	C	1127	-	3,3,3	0.05	0	2,2,2	0.09	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
11	DDR	B	1105	-	27,27,27	1.24	2 (7%)	29,29,29	1.25	2 (6%)
5	D10	C	1114	-	9,9,9	0.09	0	8,8,8	0.06	0
14	HEX	B	1115	-	5,5,5	0.12	0	4,4,4	0.10	0
13	D12	B	1114	-	11,11,11	0.27	0	10,10,10	0.48	0
4	GOL	B	1108	-	5,5,5	0.08	0	5,5,5	0.25	0
3	LMT	C	1101	-	36,36,36	0.46	0	47,47,47	0.56	0
4	GOL	C	1108	-	5,5,5	0.10	0	5,5,5	0.28	0
10	PTY	C	1104	-	49,49,49	0.26	0	52,54,54	0.37	0
7	EDO	B	1117	-	3,3,3	0.05	0	2,2,2	0.09	0
4	GOL	B	1106	-	5,5,5	0.08	0	5,5,5	0.19	0
3	LMT	C	1102	-	36,36,36	0.59	1 (2%)	47,47,47	1.10	3 (6%)
7	EDO	D	202	-	3,3,3	0.07	0	2,2,2	0.11	0
15	SO4	C	1128	-	4,4,4	0.35	0	6,6,6	0.06	0
12	OCT	C	1117	-	7,7,7	0.11	0	6,6,6	0.08	0
15	SO4	B	1120	-	4,4,4	0.34	0	6,6,6	0.08	0
4	GOL	A	1107	-	5,5,5	0.08	0	5,5,5	0.24	0
3	LMT	A	1104	-	36,36,36	0.54	1 (2%)	47,47,47	0.87	2 (4%)
4	GOL	C	1105	-	5,5,5	0.10	0	5,5,5	0.28	0
3	LMT	A	1105	-	36,36,36	0.56	1 (2%)	47,47,47	0.70	1 (2%)
5	D10	C	1116	-	9,9,9	0.09	0	8,8,8	0.08	0
4	GOL	B	1109	-	5,5,5	0.09	0	5,5,5	0.25	0
3	LMT	A	1103	-	36,36,36	0.46	0	47,47,47	0.56	0
6	C14	A	1110	-	13,13,13	0.08	0	12,12,12	0.13	0
4	GOL	C	1109	-	5,5,5	0.09	0	5,5,5	0.26	0
4	GOL	C	1111	-	5,5,5	0.09	0	5,5,5	0.27	0
7	EDO	B	1118	-	3,3,3	0.06	0	2,2,2	0.14	0
19	LPX	C	1122	-	29,29,29	0.29	0	31,33,33	0.36	0
12	OCT	B	1113	-	7,7,7	0.11	0	6,6,6	0.08	0
4	GOL	B	1107	-	5,5,5	0.10	0	5,5,5	0.27	0
5	D10	A	1109	-	9,9,9	0.10	0	8,8,8	0.15	0
3	LMT	B	1103	-	36,36,36	0.48	1 (2%)	47,47,47	0.54	0
7	EDO	A	1112	-	3,3,3	0.07	0	2,2,2	0.17	0
12	OCT	C	1118	-	7,7,7	0.10	0	6,6,6	0.07	0
7	EDO	D	201	-	3,3,3	0.08	0	2,2,2	0.08	0
5	D10	A	1108	-	9,9,9	0.10	0	8,8,8	0.10	0
3	LMT	C	1103	-	36,36,36	0.53	1 (2%)	47,47,47	0.90	2 (4%)
5	D10	C	1115	-	9,9,9	0.09	0	8,8,8	0.06	0
7	EDO	B	1119	-	3,3,3	0.07	0	2,2,2	0.12	0
6	C14	C	1119	-	13,13,13	0.08	0	12,12,12	0.08	0
4	GOL	B	1110	-	5,5,5	0.10	0	5,5,5	0.31	0

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. '2' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
19	LPX	C	1123	-	-	19/31/31/31	-
8	MIY	B	1101	-	-	0/12/70/70	0/4/4/4
4	GOL	C	1106	-	-	0/4/4/4	-
13	D12	C	1121	-	-	3/9/9/9	-
7	EDO	E	201	-	-	1/1/1/1	-
10	PTY	B	1104	-	-	21/53/53/53	-
16	DDQ	B	1121	-	-	3/11/11/11	-
13	D12	C	1120	-	-	2/9/9/9	-
4	GOL	C	1112	-	-	2/4/4/4	-
7	EDO	D	203	-	-	1/1/1/1	-
4	GOL	C	1113	-	-	0/4/4/4	-
4	GOL	C	1107	-	-	2/4/4/4	-
5	D10	B	1112	-	-	2/7/7/7	-
9	LMU	B	1102	-	-	9/21/61/61	0/2/2/2
14	HEX	C	1124	-	-	1/3/3/3	-
5	D10	B	1111	-	-	3/7/7/7	-
4	GOL	C	1110	-	-	2/4/4/4	-
3	LMT	A	1102	-	-	12/21/61/61	0/2/2/2
4	GOL	A	1106	-	-	2/4/4/4	-
7	EDO	A	1111	-	-	1/1/1/1	-
7	EDO	B	1116	-	-	0/1/1/1	-
3	LMT	A	1101	-	-	11/21/61/61	0/2/2/2
7	EDO	C	1126	-	-	1/1/1/1	-
14	HEX	C	1125	-	-	1/3/3/3	-
7	EDO	C	1127	-	-	1/1/1/1	-
11	DDR	B	1105	-	-	13/29/29/29	-
5	D10	C	1114	-	-	2/7/7/7	-
14	HEX	B	1115	-	-	0/3/3/3	-
13	D12	B	1114	-	-	1/9/9/9	-
4	GOL	B	1108	-	-	2/4/4/4	-
3	LMT	C	1101	-	-	7/21/61/61	0/2/2/2
4	GOL	C	1108	-	-	1/4/4/4	-
10	PTY	C	1104	-	-	34/53/53/53	-
7	EDO	B	1117	-	-	1/1/1/1	-
4	GOL	B	1106	-	-	2/4/4/4	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
3	LMT	C	1102	-	-	15/21/61/61	0/2/2/2
7	EDO	D	202	-	-	1/1/1/1	-
12	OCT	C	1117	-	-	0/5/5/5	-
4	GOL	A	1107	-	-	0/4/4/4	-
3	LMT	A	1104	-	-	14/21/61/61	0/2/2/2
4	GOL	C	1105	-	-	2/4/4/4	-
3	LMT	A	1105	-	-	15/21/61/61	0/2/2/2
5	D10	C	1116	-	-	4/7/7/7	-
4	GOL	B	1109	-	-	2/4/4/4	-
3	LMT	A	1103	-	-	11/21/61/61	0/2/2/2
6	C14	A	1110	-	-	6/11/11/11	-
4	GOL	C	1109	-	-	2/4/4/4	-
4	GOL	C	1111	-	-	4/4/4/4	-
7	EDO	B	1118	-	-	0/1/1/1	-
19	LPX	C	1122	-	-	13/31/31/31	-
12	OCT	B	1113	-	-	0/5/5/5	-
4	GOL	B	1107	-	-	4/4/4/4	-
5	D10	A	1109	-	-	2/7/7/7	-
3	LMT	B	1103	-	-	6/21/61/61	0/2/2/2
7	EDO	A	1112	-	-	1/1/1/1	-
12	OCT	C	1118	-	-	1/5/5/5	-
7	EDO	D	201	-	-	1/1/1/1	-
5	D10	A	1108	-	-	4/7/7/7	-
3	LMT	C	1103	-	-	13/21/61/61	0/2/2/2
5	D10	C	1115	-	-	2/7/7/7	-
7	EDO	B	1119	-	-	1/1/1/1	-
6	C14	C	1119	-	-	2/11/11/11	-
4	GOL	B	1110	-	-	2/4/4/4	-

All (13) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
16	B	1121	DDQ	O1-N1	-6.77	1.25	1.42
8	B	1101	MIY	C21-N2	4.99	1.47	1.33
11	B	1105	DDR	O52-C21	4.30	1.46	1.34
11	B	1105	DDR	O51-C1	4.23	1.45	1.33
16	B	1121	DDQ	C1-N1	-2.85	1.48	1.51
3	C	1102	LMT	O1'-C1'	2.55	1.44	1.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	A	1105	LMT	O1'-C1'	2.30	1.44	1.40
3	C	1103	LMT	O1'-C1'	2.29	1.44	1.40
8	B	1101	MIY	O5-C15	2.27	1.28	1.23
3	A	1104	LMT	O1'-C1'	2.18	1.43	1.40
9	B	1102	LMU	O1'-C1'	2.03	1.43	1.40
3	A	1102	LMT	O1'-C1'	2.02	1.43	1.40
3	B	1103	LMT	O1'-C1'	2.00	1.43	1.40

All (15) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
11	B	1105	DDR	O52-C21-C22	4.26	120.69	111.48
3	C	1102	LMT	C1-O1'-C1'	2.93	118.68	113.68
3	A	1104	LMT	C2'-C3'-C4'	2.88	116.21	109.68
11	B	1105	DDR	O51-C1-C2	2.84	120.49	111.83
3	C	1102	LMT	O1'-C1'-C2'	2.76	112.47	108.27
3	C	1103	LMT	O1'-C1'-C2'	2.57	112.18	108.27
3	C	1102	LMT	C1'-O5'-C5'	2.57	118.74	113.72
3	A	1102	LMT	C1B-C2B-C3B	2.46	115.18	110.01
3	A	1104	LMT	C1'-C2'-C3'	2.44	115.14	110.01
8	B	1101	MIY	C18-C5-C4	2.43	114.96	111.64
9	B	1102	LMU	C1'-C2'-C3'	2.33	114.90	110.01
3	A	1102	LMT	O1B-C4'-C3'	2.27	112.99	107.23
3	A	1105	LMT	C1'-O5'-C5'	2.17	117.97	113.72
3	C	1103	LMT	C2'-C3'-C4'	2.14	114.53	109.68
8	B	1101	MIY	O7-C18-C17	-2.08	106.82	110.14

There are no chirality outliers.

All (291) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
3	A	1105	LMT	C2'-C1'-O1'-C1
3	A	1105	LMT	O5'-C1'-O1'-C1
3	C	1102	LMT	O5'-C1'-O1'-C1
3	C	1103	LMT	O5'-C1'-O1'-C1
4	A	1106	GOL	C1-C2-C3-O3
4	B	1107	GOL	C1-C2-C3-O3
4	C	1107	GOL	O1-C1-C2-C3
4	C	1110	GOL	C1-C2-C3-O3
4	C	1111	GOL	O1-C1-C2-C3
4	C	1112	GOL	O1-C1-C2-C3
10	B	1104	PTY	C11-C8-O7-C6

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Mol	Chain	Res	Type	Atoms
10	B	1104	PTY	C3-O11-P1-O12
10	B	1104	PTY	C5-O14-P1-O11
10	B	1104	PTY	C5-O14-P1-O13
10	C	1104	PTY	N1-C2-C3-O11
10	C	1104	PTY	O14-C5-C6-O7
10	C	1104	PTY	C11-C8-O7-C6
10	C	1104	PTY	C5-O14-P1-O11
10	C	1104	PTY	C5-O14-P1-O13
19	C	1122	LPX	C3-O1-P1-O2
19	C	1122	LPX	C3-O1-P1-O4
19	C	1122	LPX	C1-O2-P1-O1
19	C	1122	LPX	C1-O2-P1-O3
19	C	1122	LPX	C1-O2-P1-O4
19	C	1123	LPX	O5-C4-C5-O6
19	C	1123	LPX	C3-O1-P1-O3
19	C	1123	LPX	C1-O2-P1-O1
19	C	1123	LPX	C1-O2-P1-O3
19	C	1123	LPX	C1-O2-P1-O4
19	C	1123	LPX	O2-C1-C2-N1
3	A	1104	LMT	O5B-C1B-O1B-C4'
3	A	1105	LMT	O5B-C1B-O1B-C4'
10	C	1104	PTY	O30-C30-O4-C1
19	C	1123	LPX	O7-C6-O6-C5
3	C	1102	LMT	O5B-C1B-O1B-C4'
10	B	1104	PTY	O10-C8-O7-C6
10	C	1104	PTY	O10-C8-O7-C6
10	C	1104	PTY	C31-C30-O4-C1
19	C	1123	LPX	C7-C6-O6-C5
3	A	1102	LMT	C3'-C4'-O1B-C1B
3	B	1103	LMT	O5'-C5'-C6'-O6'
3	C	1102	LMT	C3'-C4'-O1B-C1B
11	B	1105	DDR	C2-C1-O51-C51
11	B	1105	DDR	C22-C21-O52-C52
3	A	1105	LMT	O5'-C5'-C6'-O6'
11	B	1105	DDR	O1-C1-O51-C51
11	B	1105	DDR	O21-C21-O52-C52
3	A	1104	LMT	C4B-C5B-C6B-O6B
3	B	1103	LMT	C4'-C5'-C6'-O6'
3	A	1101	LMT	O5'-C1'-O1'-C1
3	A	1102	LMT	O5'-C1'-O1'-C1
3	A	1104	LMT	O5'-C1'-O1'-C1
3	C	1101	LMT	C4'-C5'-C6'-O6'

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Mol	Chain	Res	Type	Atoms
3	A	1103	LMT	O5B-C5B-C6B-O6B
3	C	1102	LMT	O5'-C5'-C6'-O6'
9	B	1102	LMU	O5'-C5'-C6'-O6'
10	B	1104	PTY	C31-C30-O4-C1
9	B	1102	LMU	O5B-C5B-C6B-O6B
3	A	1101	LMT	C2'-C1'-O1'-C1
3	A	1102	LMT	C2'-C1'-O1'-C1
3	A	1104	LMT	C2'-C1'-O1'-C1
3	C	1102	LMT	C4'-C5'-C6'-O6'
3	A	1104	LMT	O5B-C5B-C6B-O6B
3	C	1101	LMT	O5'-C5'-C6'-O6'
9	B	1102	LMU	C4'-C5'-C6'-O6'
4	A	1106	GOL	O2-C2-C3-O3
4	B	1108	GOL	O1-C1-C2-O2
4	B	1109	GOL	O1-C1-C2-O2
4	C	1110	GOL	O2-C2-C3-O3
4	C	1111	GOL	O2-C2-C3-O3
3	A	1103	LMT	O1'-C1-C2-C3
10	C	1104	PTY	C30-C31-C32-C33
10	B	1104	PTY	O30-C30-O4-C1
3	C	1103	LMT	O5B-C5B-C6B-O6B
9	B	1102	LMU	O1'-C1-C2-C3
10	C	1104	PTY	C8-C11-C12-C13
3	C	1103	LMT	O1'-C1-C2-C3
3	A	1102	LMT	O5'-C5'-C6'-O6'
19	C	1122	LPX	C7-C6-O6-C5
3	A	1104	LMT	O1'-C1-C2-C3
3	C	1102	LMT	C5'-C4'-O1B-C1B
3	A	1103	LMT	C4B-C5B-C6B-O6B
19	C	1123	LPX	C3-C4-C5-O6
4	B	1106	GOL	O1-C1-C2-C3
4	B	1107	GOL	O1-C1-C2-C3
4	B	1108	GOL	O1-C1-C2-C3
4	B	1109	GOL	O1-C1-C2-C3
4	B	1110	GOL	C1-C2-C3-O3
4	C	1105	GOL	O1-C1-C2-C3
4	C	1109	GOL	O1-C1-C2-C3
4	C	1111	GOL	C1-C2-C3-O3
3	C	1103	LMT	C2-C3-C4-C5
3	A	1103	LMT	C5-C6-C7-C8
3	A	1104	LMT	C6-C7-C8-C9
3	B	1103	LMT	C5-C6-C7-C8

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Mol	Chain	Res	Type	Atoms
3	C	1102	LMT	C2-C3-C4-C5
10	C	1104	PTY	C16-C17-C18-C19
3	C	1103	LMT	C11-C10-C9-C8
19	C	1122	LPX	O7-C6-O6-C5
3	C	1103	LMT	C2-C1-O1'-C1'
4	B	1107	GOL	O1-C1-C2-O2
4	B	1110	GOL	O2-C2-C3-O3
4	C	1107	GOL	O1-C1-C2-O2
4	C	1109	GOL	O1-C1-C2-O2
4	C	1111	GOL	O1-C1-C2-O2
19	C	1122	LPX	C12-C13-C14-C15
3	B	1103	LMT	C6-C7-C8-C9
10	C	1104	PTY	C31-C32-C33-C34
19	C	1123	LPX	C14-C15-C16-C17
10	C	1104	PTY	C40-C41-C42-C43
10	C	1104	PTY	C39-C40-C41-C42
3	A	1102	LMT	C3-C4-C5-C6
3	A	1103	LMT	C2-C3-C4-C5
10	C	1104	PTY	C20-C21-C22-C23
13	C	1120	D12	C7-C8-C9-C10
5	C	1116	D10	C3-C4-C5-C6
7	B	1119	EDO	O1-C1-C2-O2
7	D	202	EDO	O1-C1-C2-O2
7	E	201	EDO	O1-C1-C2-O2
10	C	1104	PTY	C24-C25-C26-C27
10	B	1104	PTY	C32-C33-C34-C35
3	A	1105	LMT	C4-C5-C6-C7
10	B	1104	PTY	C12-C13-C14-C15
3	C	1103	LMT	C5-C6-C7-C8
3	C	1101	LMT	C5-C6-C7-C8
13	B	1114	D12	C2-C3-C4-C5
3	A	1105	LMT	C5-C6-C7-C8
3	A	1105	LMT	C4'-C5'-C6'-O6'
3	C	1101	LMT	C11-C10-C9-C8
19	C	1123	LPX	C9-C10-C11-C12
10	C	1104	PTY	C12-C13-C14-C15
3	A	1101	LMT	C11-C10-C9-C8
3	A	1101	LMT	C1-C2-C3-C4
3	A	1103	LMT	C1-C2-C3-C4
3	A	1105	LMT	C2-C3-C4-C5
10	B	1104	PTY	C39-C40-C41-C42
3	A	1103	LMT	C7-C8-C9-C10

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Mol	Chain	Res	Type	Atoms
19	C	1122	LPX	C11-C12-C13-C14
12	C	1118	OCT	C3-C4-C5-C6
10	C	1104	PTY	C32-C33-C34-C35
4	C	1112	GOL	O1-C1-C2-O2
19	C	1123	LPX	C10-C11-C12-C13
10	B	1104	PTY	C34-C35-C36-C37
3	A	1105	LMT	C4B-C5B-C6B-O6B
19	C	1123	LPX	C11-C12-C13-C14
3	B	1103	LMT	C7-C8-C9-C10
10	C	1104	PTY	C15-C16-C17-C18
3	C	1102	LMT	C2'-C1'-O1'-C1
6	A	1110	C14	C03-C04-C05-C06
19	C	1122	LPX	C16-C17-C18-C19
3	C	1102	LMT	O5B-C5B-C6B-O6B
7	C	1126	EDO	O1-C1-C2-O2
7	D	201	EDO	O1-C1-C2-O2
6	A	1110	C14	C05-C06-C07-C08
3	C	1102	LMT	C7-C8-C9-C10
10	B	1104	PTY	C35-C36-C37-C38
3	A	1101	LMT	O5B-C5B-C6B-O6B
3	C	1103	LMT	O5'-C5'-C6'-O6'
11	B	1105	DDR	C2-C3-C4-C5
10	C	1104	PTY	C33-C34-C35-C36
10	C	1104	PTY	C37-C38-C39-C40
13	C	1120	D12	C5-C6-C7-C8
9	B	1102	LMU	C4-C5-C6-C7
10	B	1104	PTY	C30-C31-C32-C33
11	B	1105	DDR	C4-C5-C6-C7
5	A	1109	D10	C6-C7-C8-C9
16	B	1121	DDQ	C4-C5-C6-C7
3	A	1101	LMT	C3-C4-C5-C6
10	B	1104	PTY	C16-C17-C18-C19
10	C	1104	PTY	C21-C22-C23-C24
11	B	1105	DDR	O51-C51-C52-O52
3	C	1102	LMT	O1'-C1-C2-C3
10	C	1104	PTY	C25-C26-C27-C28
3	A	1102	LMT	C5-C6-C7-C8
6	A	1110	C14	C06-C07-C08-C09
10	B	1104	PTY	C26-C27-C28-C29
19	C	1122	LPX	C11-C10-C9-C8
3	A	1102	LMT	C9-C10-C11-C12
10	C	1104	PTY	C41-C42-C43-C44

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Mol	Chain	Res	Type	Atoms
3	A	1104	LMT	C3-C4-C5-C6
3	C	1102	LMT	C11-C10-C9-C8
3	C	1102	LMT	C2-C1-O1'-C1'
4	C	1105	GOL	O1-C1-C2-O2
4	C	1108	GOL	O2-C2-C3-O3
14	C	1124	HEX	C2-C3-C4-C5
3	C	1103	LMT	C2'-C1'-O1'-C1
13	C	1121	D12	C4-C5-C6-C7
10	C	1104	PTY	C26-C27-C28-C29
10	B	1104	PTY	C17-C18-C19-C20
13	C	1121	D12	C6-C7-C8-C9
3	A	1102	LMT	C7-C8-C9-C10
11	B	1105	DDR	C5-C6-C7-C8
3	C	1101	LMT	C1-C2-C3-C4
9	B	1102	LMU	C4B-C5B-C6B-O6B
5	A	1108	D10	C6-C7-C8-C9
7	D	203	EDO	O1-C1-C2-O2
10	C	1104	PTY	C14-C15-C16-C17
5	C	1114	D10	C4-C5-C6-C7
5	C	1115	D10	C4-C5-C6-C7
16	B	1121	DDQ	C5-C6-C7-C8
5	B	1111	D10	C4-C5-C6-C7
3	C	1103	LMT	C4-C5-C6-C7
3	A	1103	LMT	C3-C4-C5-C6
3	C	1102	LMT	C5-C6-C7-C8
4	B	1107	GOL	O2-C2-C3-O3
3	A	1104	LMT	C3'-C4'-O1B-C1B
7	A	1111	EDO	O1-C1-C2-O2
6	A	1110	C14	C07-C08-C09-C10
10	C	1104	PTY	O4-C1-C6-O7
3	C	1101	LMT	C9-C10-C11-C12
5	A	1108	D10	C1-C2-C3-C4
3	A	1102	LMT	C2-C3-C4-C5
5	C	1116	D10	C2-C3-C4-C5
3	A	1104	LMT	C5'-C4'-O1B-C1B
19	C	1123	LPX	C11-C10-C9-C8
3	B	1103	LMT	C3-C4-C5-C6
3	A	1102	LMT	C5'-C4'-O1B-C1B
10	C	1104	PTY	O14-C5-C6-C1
3	C	1103	LMT	C7-C8-C9-C10
3	A	1102	LMT	C4'-C5'-C6'-O6'
3	A	1103	LMT	C9-C10-C11-C12

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Mol	Chain	Res	Type	Atoms
5	C	1116	D10	C1-C2-C3-C4
3	A	1102	LMT	C4-C5-C6-C7
11	B	1105	DDR	C25-C26-C27-C28
5	C	1114	D10	C1-C2-C3-C4
3	A	1105	LMT	O1'-C1-C2-C3
19	C	1122	LPX	C18-C19-C20-C21
3	A	1104	LMT	C2B-C1B-O1B-C4'
10	B	1104	PTY	C3-O11-P1-O14
19	C	1123	LPX	C3-O1-P1-O2
19	C	1123	LPX	C3-O1-P1-O4
3	A	1101	LMT	C5'-C4'-O1B-C1B
5	C	1116	D10	C4-C5-C6-C7
3	A	1101	LMT	C3'-C4'-O1B-C1B
16	B	1121	DDQ	C1-C2-C3-C4
19	C	1123	LPX	C17-C18-C19-C20
3	A	1103	LMT	C4-C5-C6-C7
10	B	1104	PTY	O14-C5-C6-C1
3	A	1105	LMT	C7-C8-C9-C10
3	A	1105	LMT	C2B-C1B-O1B-C4'
11	B	1105	DDR	O51-C51-C52-C53
10	B	1104	PTY	C19-C20-C21-C22
7	B	1117	EDO	O1-C1-C2-O2
3	A	1101	LMT	C2-C3-C4-C5
9	B	1102	LMU	C5-C6-C7-C8
3	A	1103	LMT	C2-C1-O1'-C1'
3	A	1104	LMT	C2-C1-O1'-C1'
9	B	1102	LMU	C2-C1-O1'-C1'
3	C	1102	LMT	C4-C5-C6-C7
9	B	1102	LMU	C7-C8-C9-C10
6	C	1119	C14	C06-C07-C08-C09
10	C	1104	PTY	C22-C23-C24-C25
10	C	1104	PTY	C11-C12-C13-C14
19	C	1123	LPX	C7-C8-C9-C10
3	A	1101	LMT	C4-C5-C6-C7
10	C	1104	PTY	C19-C20-C21-C22
4	B	1106	GOL	O1-C1-C2-O2
6	C	1119	C14	C02-C03-C04-C05
6	A	1110	C14	C02-C03-C04-C05
3	A	1105	LMT	C9-C10-C11-C12
19	C	1123	LPX	C18-C19-C20-C21
3	A	1104	LMT	C5-C6-C7-C8
5	B	1112	D10	C2-C3-C4-C5

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Mol	Chain	Res	Type	Atoms
11	B	1105	DDR	C24-C25-C26-C27
3	C	1101	LMT	C2-C3-C4-C5
5	C	1115	D10	C3-C4-C5-C6
7	A	1112	EDO	O1-C1-C2-O2
5	B	1111	D10	C2-C3-C4-C5
6	A	1110	C14	C04-C05-C06-C07
3	C	1103	LMT	C6-C7-C8-C9
10	C	1104	PTY	C23-C24-C25-C26
14	C	1125	HEX	C2-C3-C4-C5
7	C	1127	EDO	O1-C1-C2-O2
19	C	1122	LPX	C15-C16-C17-C18
5	A	1109	D10	C5-C6-C7-C8
10	C	1104	PTY	C18-C19-C20-C21
5	A	1108	D10	C7-C8-C9-C10
3	A	1105	LMT	C2-C1-O1'-C1'
10	C	1104	PTY	O4-C1-C6-C5
5	B	1111	D10	C6-C7-C8-C9
13	C	1121	D12	C7-C8-C9-C10
5	A	1108	D10	C3-C4-C5-C6
3	A	1104	LMT	C2-C3-C4-C5
3	A	1101	LMT	C5-C6-C7-C8
3	C	1103	LMT	C3'-C4'-O1B-C1B
10	B	1104	PTY	C8-C11-C12-C13
11	B	1105	DDR	O51-C1-C2-C3
10	B	1104	PTY	C37-C38-C39-C40
5	B	1112	D10	C3-C4-C5-C6
3	A	1105	LMT	O5B-C5B-C6B-O6B
11	B	1105	DDR	O52-C21-C22-C23

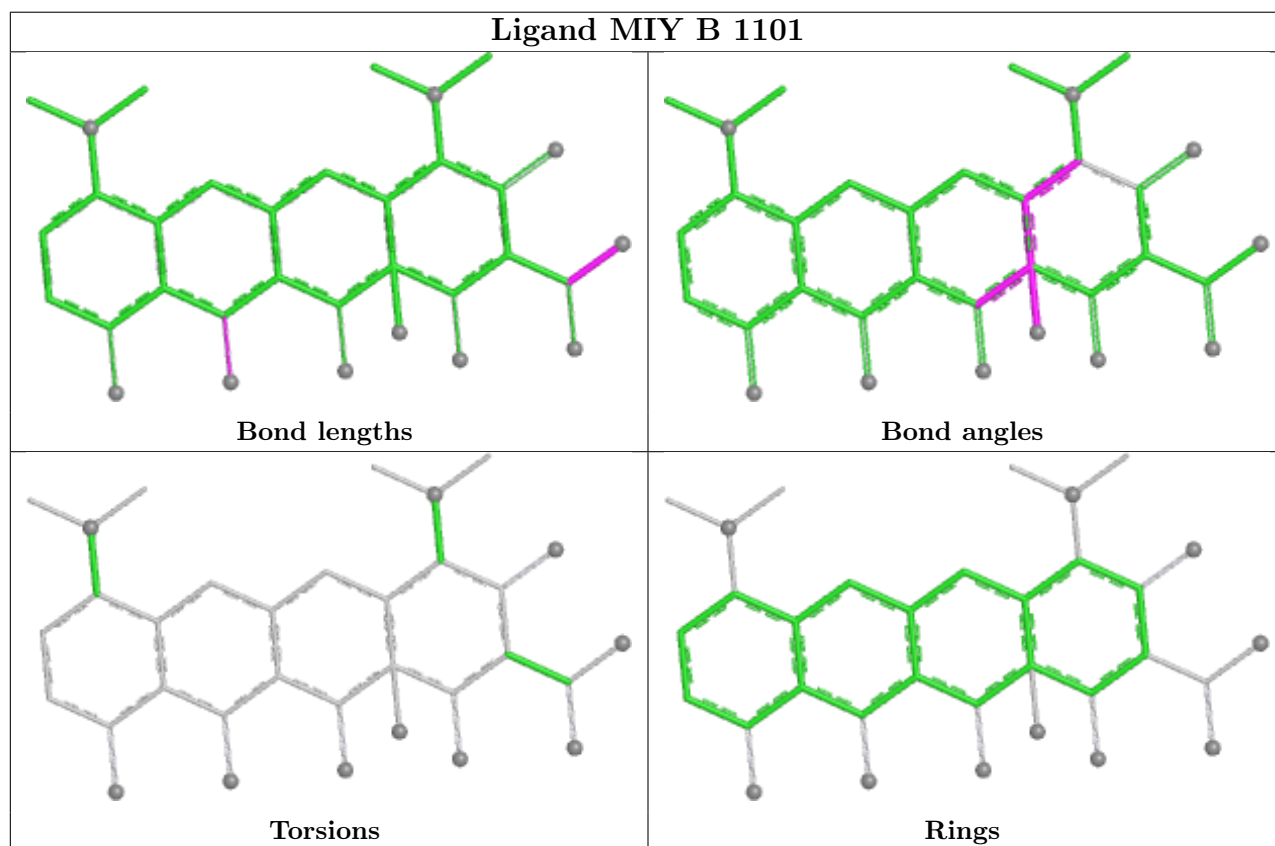
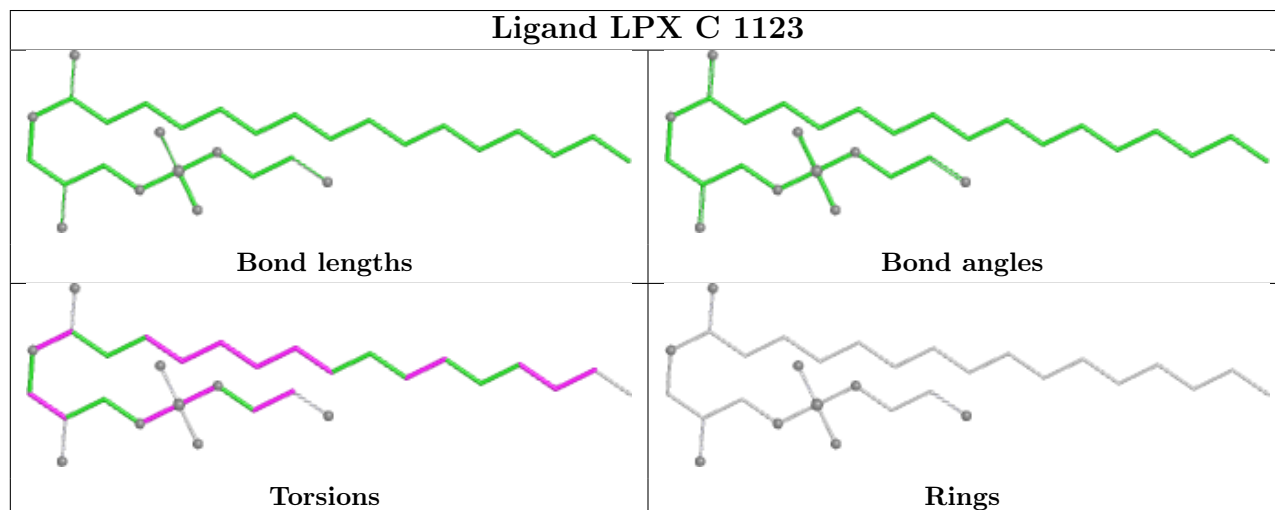
There are no ring outliers.

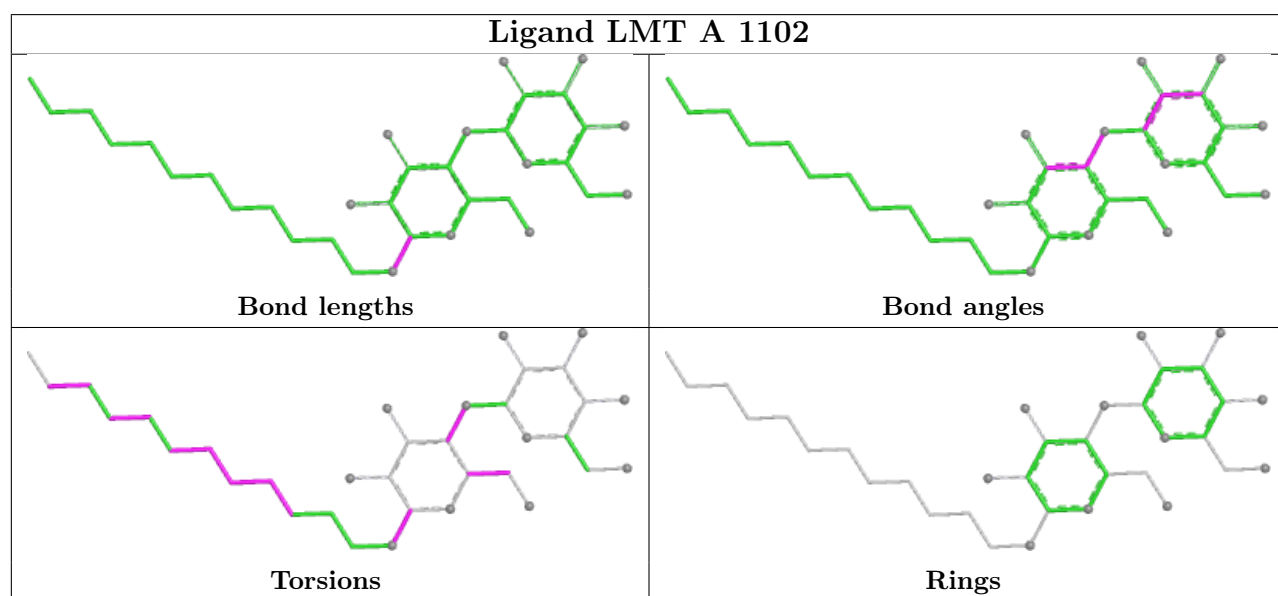
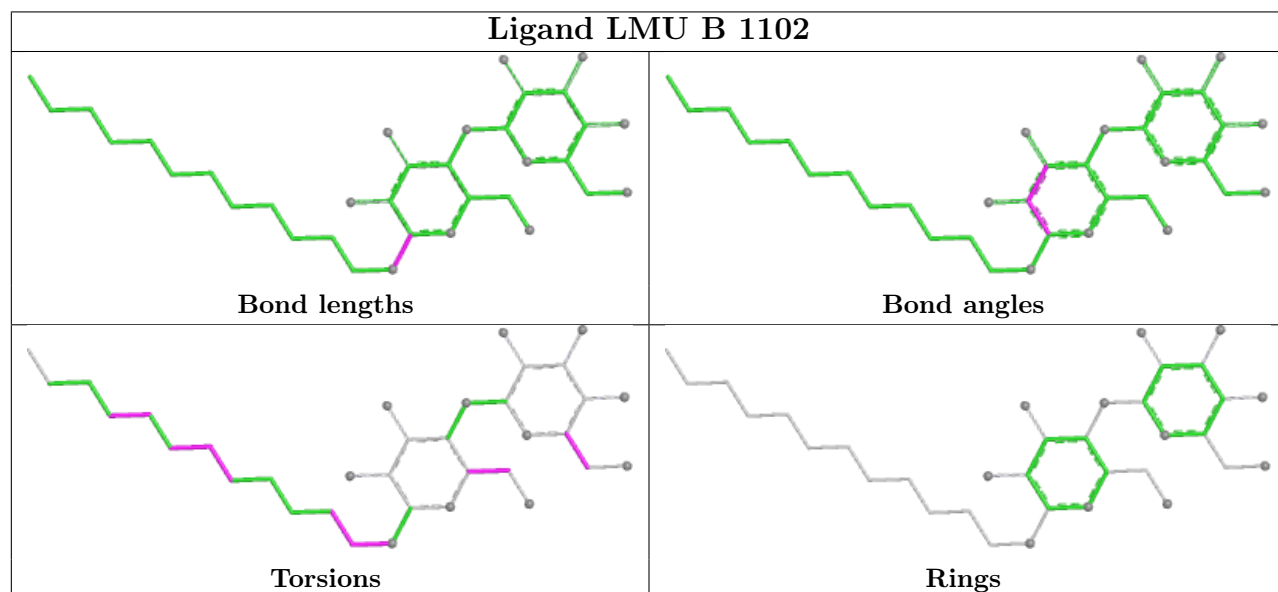
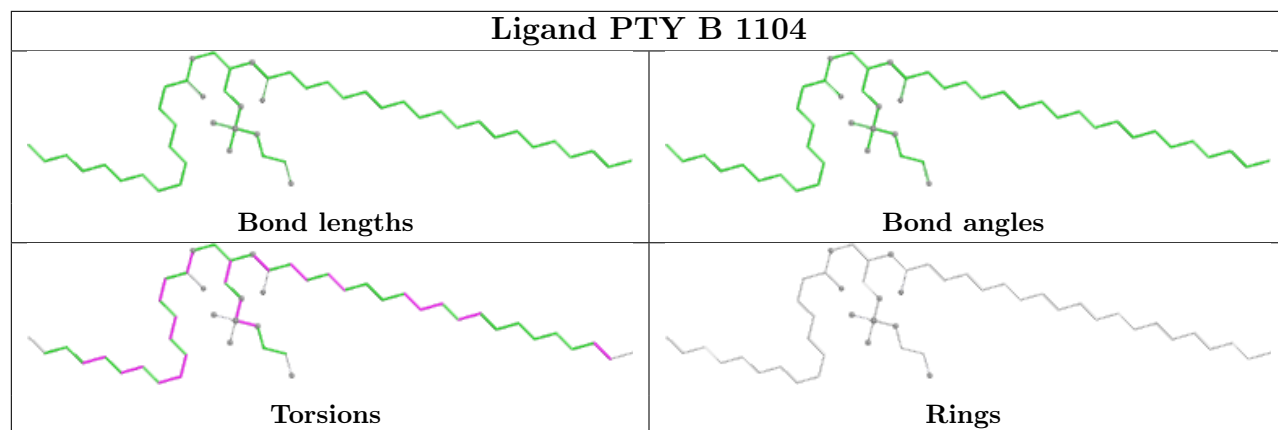
5 monomers are involved in 5 short contacts:

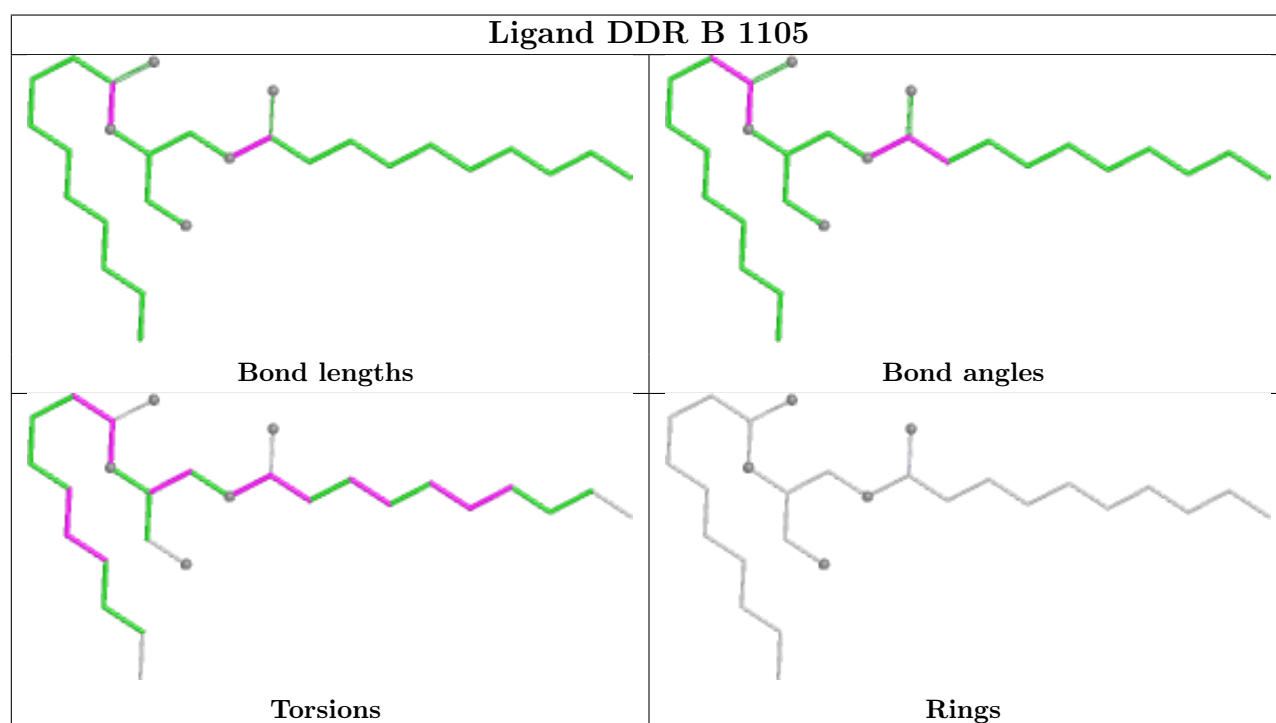
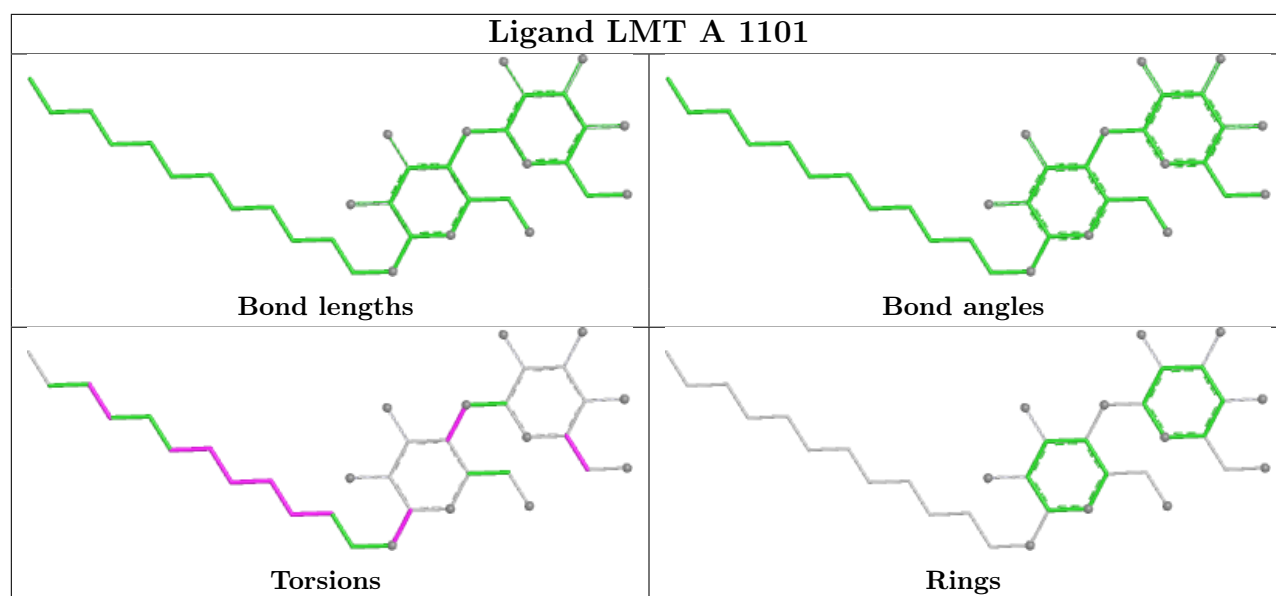
Mol	Chain	Res	Type	Clashes	Symm-Clashes
19	C	1123	LPX	2	0
8	B	1101	MIY	1	0
10	C	1104	PTY	1	0
5	C	1116	D10	1	0
19	C	1122	LPX	1	0

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

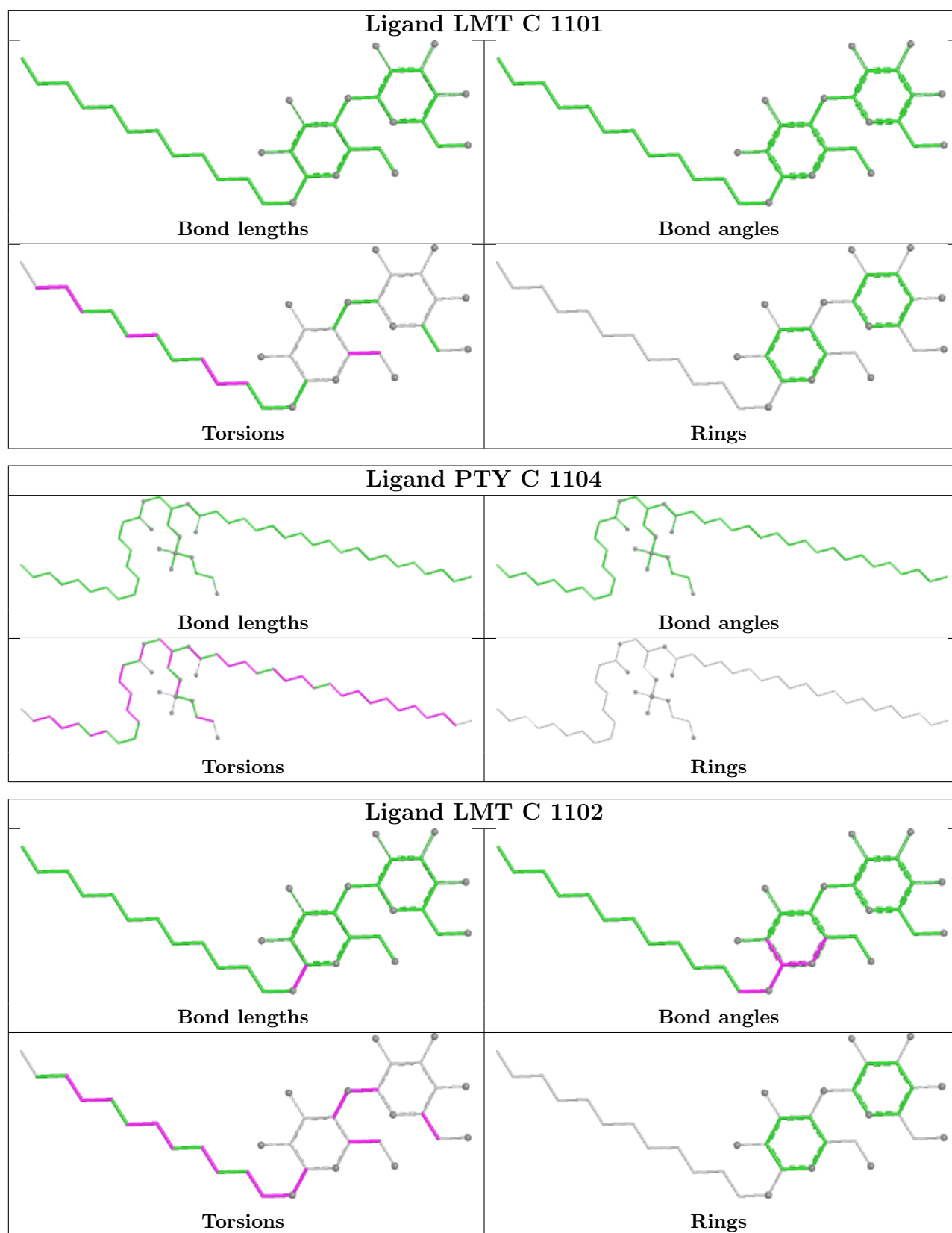
also be included. For torsion angles, if less than 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.

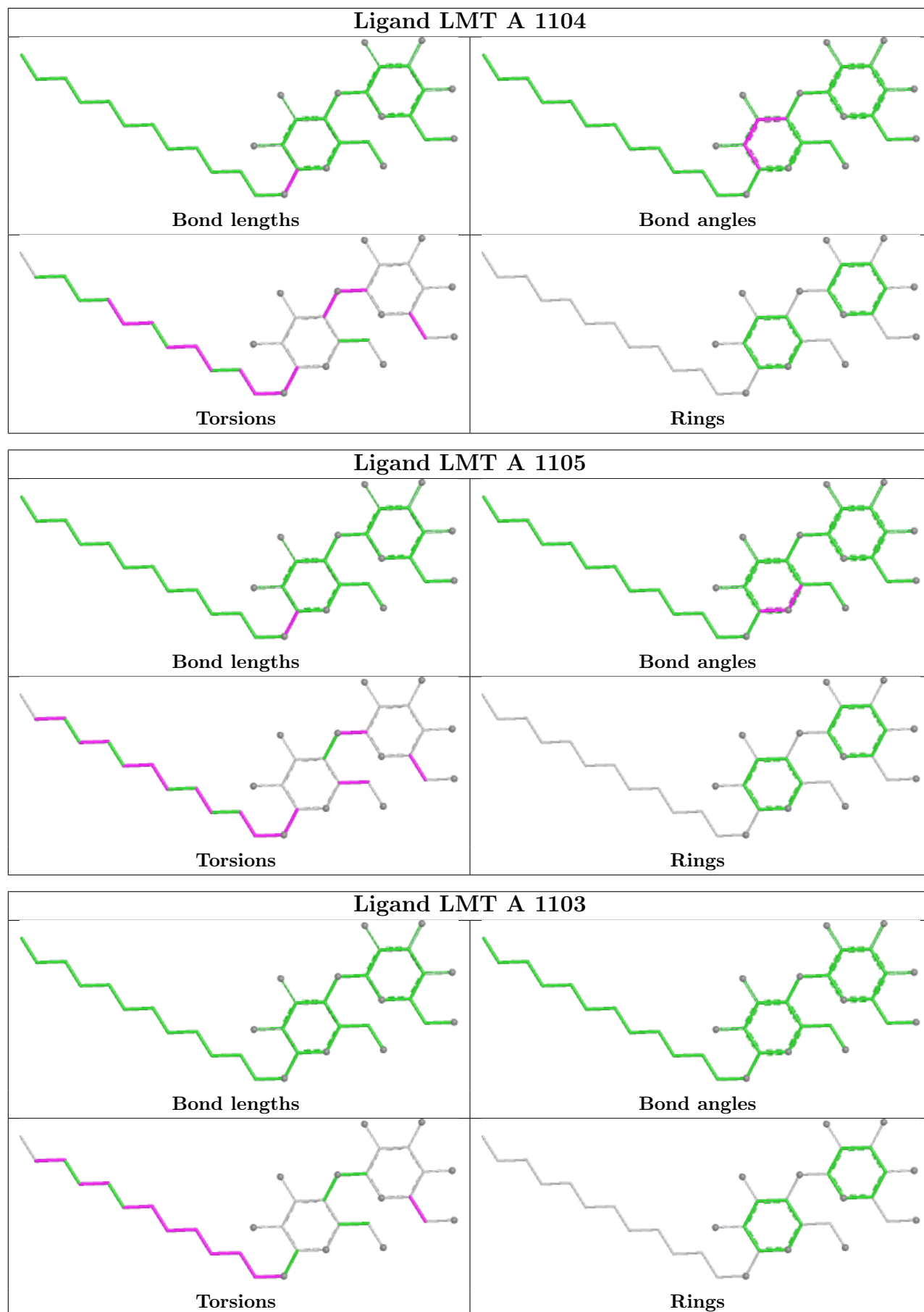


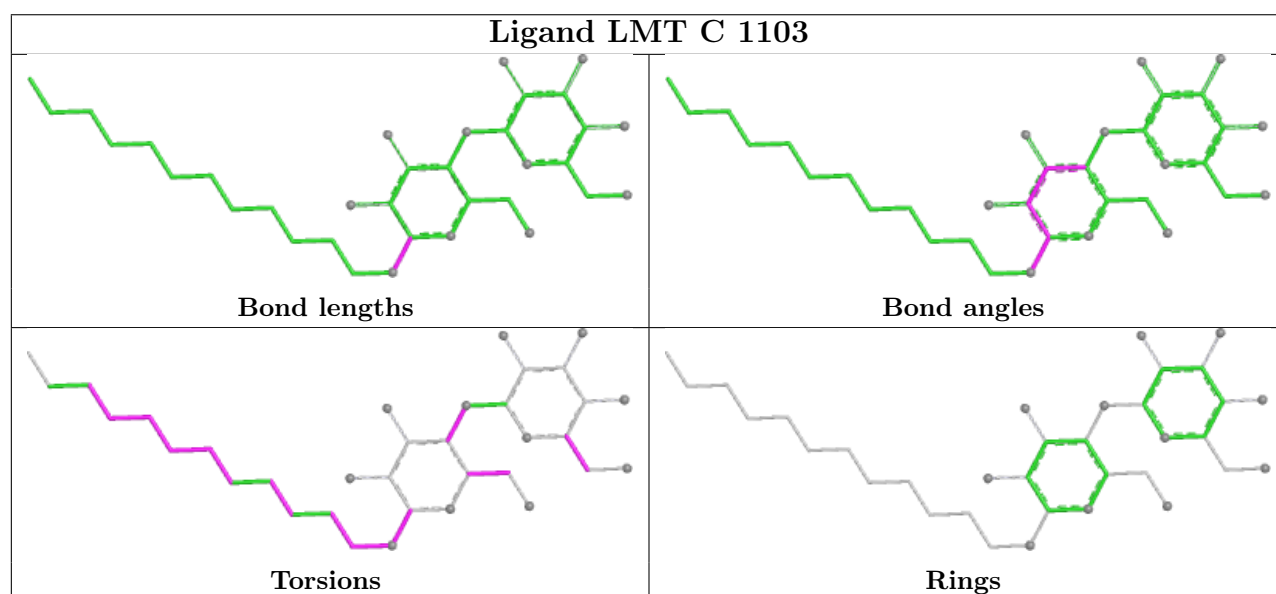
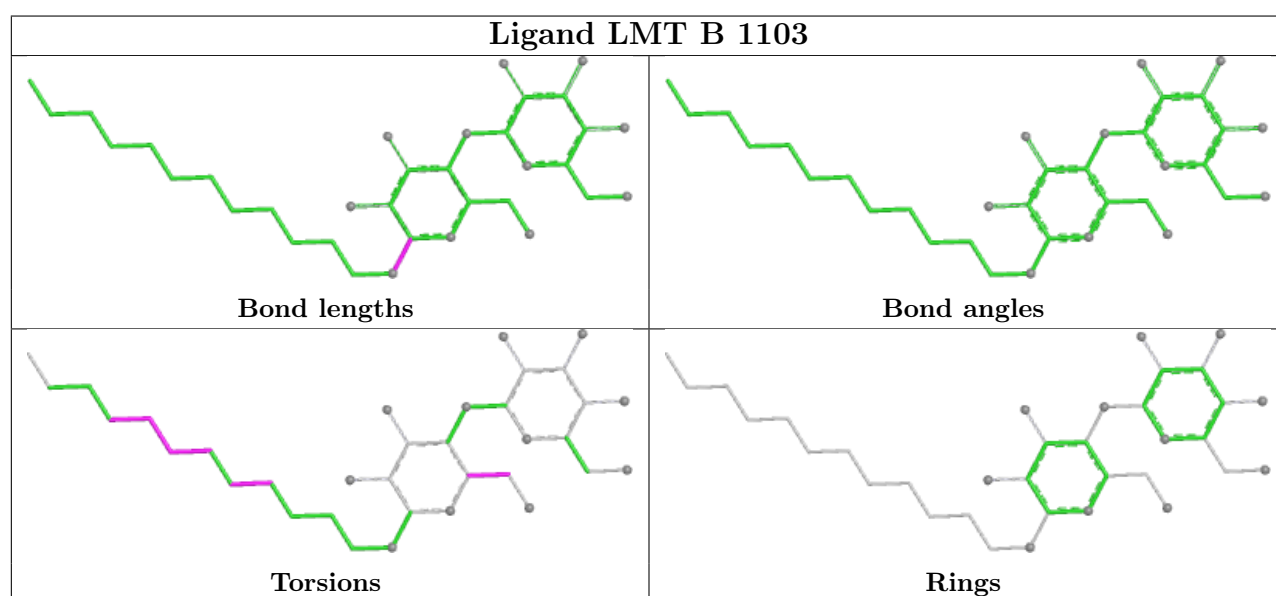
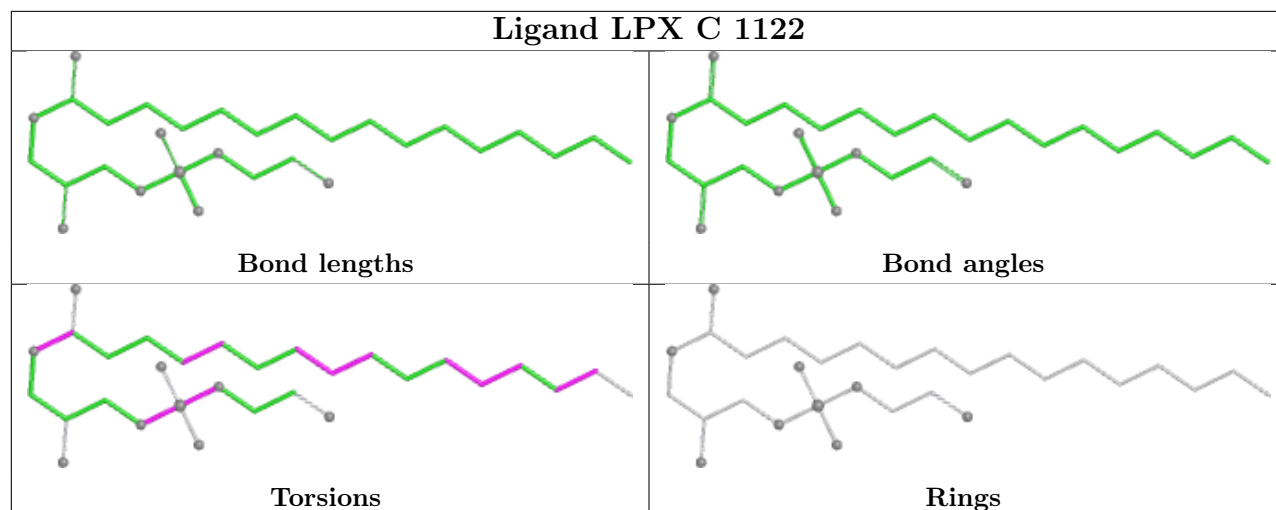












## 5.7 Other polymers [i](#)

There are no such residues in this entry.

## 5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

## 6 Fit of model and data

### 6.1 Protein, DNA and RNA chains

In the following table, the column labelled ‘#RSRZ > 2’ contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95<sup>th</sup> percentile and maximum values of the occupancy-weighted average B-factor per residue. The column labelled ‘Q < 0.9’ lists the number of (and percentage) of residues with an average occupancy less than 0.9.

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
1	A	1042/1057 (98%)	0.29	56 (5%) 25 27	31, 57, 91, 140	5 (0%)
1	B	1034/1057 (97%)	0.13	42 (4%) 37 40	33, 50, 72, 95	0
1	C	1035/1057 (97%)	0.08	32 (3%) 49 52	35, 46, 66, 100	0
2	D	156/169 (92%)	0.38	14 (8%) 9 9	42, 53, 78, 97	0
2	E	154/169 (91%)	1.25	37 (24%) 0 0	51, 68, 93, 100	0
All	All	3421/3509 (97%)	0.23	181 (5%) 26 28	31, 51, 82, 140	5 (0%)

All (181) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
2	E	34	MET	7.2
1	C	510	LYS	7.0
1	A	868	LEU	6.7
1	A	867	ARG	6.6
1	A	678	THR	6.2
2	E	68	LYS	6.1
1	A	674	LEU	5.8
2	E	35	ALA	5.7
2	E	32	ILE	5.7
2	E	33	LEU	5.6
1	B	1034	SER	5.4
1	A	512	PHE	5.4
1	A	835	LYS	5.1
1	B	558	ARG	4.9
2	E	31	ARG	4.8
1	A	673	GLU	4.8
1	A	866	GLU	4.7
1	B	635	ALA	4.7
1	A	1035	ARG	4.6
2	E	27	ASP	4.6

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Mol	Chain	Res	Type	RSRZ
1	C	497	LEU	4.6
2	E	66	LEU	4.6
1	B	657	GLN	4.5
1	A	833	PRO	4.5
1	A	712	MET	4.4
1	B	603	LYS	4.3
2	E	37	GLY	4.3
1	A	677	ALA	4.3
1	A	1040	ILE	4.3
1	A	515	TRP	4.3
1	A	918	PHE	4.3
2	D	150	PHE	4.2
1	B	636	ASP	4.2
2	E	165	LEU	4.2
1	C	498	LYS	4.2
1	B	677	ALA	4.2
1	B	638	PRO	4.1
1	B	641	GLU	4.0
1	A	865	GLN	4.0
2	D	165	LEU	4.0
1	A	834	GLY	4.0
2	E	69	ASN	3.9
1	A	513	PHE	3.9
2	E	67	LEU	3.9
2	E	30	VAL	3.8
1	A	711	ASP	3.8
1	B	597	TYR	3.8
1	B	678	THR	3.8
2	D	163	GLU	3.8
1	A	554	TYR	3.8
1	A	1037	ASN	3.8
1	C	500	ILE	3.8
1	B	596	HIS	3.8
2	E	62	ILE	3.7
1	A	831	ALA	3.7
2	E	61	GLU	3.7
2	E	60	LEU	3.7
1	C	362	PHE	3.7
1	A	838	GLY	3.7
1	A	836	SER	3.7
1	A	558	ARG	3.6
1	C	918	PHE	3.6

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
1	A	846	GLN	3.5
2	D	166	GLN	3.5
2	E	70	GLY	3.5
1	A	255	GLN	3.4
1	A	713	LEU	3.4
2	E	14	LEU	3.4
1	B	655	PHE	3.4
1	B	366	LEU	3.4
1	B	835	LYS	3.3
1	C	511	GLY	3.3
2	E	64	GLU	3.2
1	A	510	LYS	3.2
2	D	161	LEU	3.2
2	E	38	ALA	3.1
1	B	600	THR	3.1
1	C	811	TYR	3.1
1	B	866	GLU	3.1
2	D	126	LEU	3.1
1	B	554	TYR	3.1
2	E	97	GLU	3.1
2	E	163	GLU	3.1
2	E	36	ASN	3.0
1	A	709	HIS	3.0
1	A	676	THR	3.0
1	A	503	GLY	3.0
1	B	642	ASN	3.0
1	C	1032	ARG	3.0
1	A	839	GLU	2.9
1	A	501	ALA	2.9
1	A	362	PHE	2.9
1	C	427	PRO	2.9
2	D	133	LEU	2.9
1	C	513	PHE	2.8
1	B	660	ASP	2.8
1	C	363	ARG	2.8
2	E	101	LYS	2.8
1	C	554	TYR	2.8
2	E	95	ILE	2.8
1	B	498	LYS	2.7
1	A	516	PHE	2.7
1	A	1039	ASP	2.7
2	E	65	VAL	2.7

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Mol	Chain	Res	Type	RSRZ
1	C	558	ARG	2.7
1	B	834	GLY	2.7
1	B	604	ASN	2.7
1	A	498	LYS	2.7
1	A	550	VAL	2.6
2	E	28	ASP	2.6
1	B	593	GLU	2.6
1	B	653	ARG	2.6
1	C	501	ALA	2.6
1	A	710	PRO	2.5
2	E	106	VAL	2.5
2	D	159	GLU	2.5
1	B	639	GLY	2.5
2	E	58	GLY	2.5
1	B	659	LYS	2.5
1	C	255	GLN	2.5
1	B	634	TRP	2.5
2	E	87	ALA	2.5
1	B	500	ILE	2.5
1	A	850	LYS	2.5
1	B	501	ALA	2.5
1	A	675	GLY	2.5
2	D	160	ASP	2.4
2	E	71	ALA	2.4
1	A	500	ILE	2.4
1	A	508	GLY	2.4
1	C	739	LEU	2.4
1	B	711	ASP	2.4
1	C	508	GLY	2.4
1	A	557	VAL	2.4
2	D	11	GLY	2.4
2	E	107	ASN	2.4
1	A	519	MET	2.4
1	A	553	ALA	2.4
1	A	869	SER	2.4
1	B	836	SER	2.4
2	E	98	VAL	2.3
1	A	832	ALA	2.3
2	D	162	ALA	2.3
2	E	139	VAL	2.3
1	C	258	SER	2.3
2	D	134	LYS	2.3

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Mol	Chain	Res	Type	RSRZ
1	A	196	PHE	2.3
1	C	253	VAL	2.3
1	C	496	MET	2.3
1	B	1033	PHE	2.3
1	B	255	GLN	2.3
1	A	505	HIS	2.3
1	B	833	PRO	2.3
1	B	712	MET	2.3
1	B	837	THR	2.3
1	A	1041	GLU	2.2
1	A	864	TYR	2.2
1	B	606	VAL	2.2
1	A	708	LYS	2.2
2	E	63	VAL	2.2
1	A	704	ALA	2.2
1	C	1035	ARG	2.2
1	C	797	GLN	2.2
2	E	94	GLU	2.2
2	D	28	ASP	2.2
1	C	730	ASP	2.2
1	C	361	ASN	2.2
1	B	508	GLY	2.2
1	C	807	SER	2.2
1	C	672	VAL	2.1
1	C	256	ASP	2.1
1	C	421	ALA	2.1
1	C	737	GLN	2.1
2	D	164	ILE	2.1
1	B	918	PHE	2.1
1	C	806	SER	2.1
1	C	731	ILE	2.0
1	B	832	ALA	2.0
1	B	601	LYS	2.0
2	E	135	TYR	2.0
1	A	842	GLU	2.0

## 6.2 Non-standard residues in protein, DNA, RNA chains

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

### 6.3 Carbohydrates [i](#)

There are no monosaccharides in this entry.

### 6.4 Ligands [i](#)

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95<sup>th</sup> percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
3	LMT	C	1102	35/35	0.53	0.34	97,125,136,138	0
16	DDQ	B	1121	14/14	0.53	0.29	86,101,121,121	0
3	LMT	A	1105	35/35	0.56	0.39	112,128,134,134	0
10	PTY	B	1104	50/50	0.58	0.33	73,109,143,147	0
4	GOL	C	1113	6/6	0.63	0.34	78,80,81,81	0
3	LMT	A	1104	35/35	0.66	0.29	88,123,129,130	0
14	HEX	B	1115	6/6	0.66	0.30	70,73,74,75	0
7	EDO	D	201	4/4	0.66	0.53	78,80,80,81	0
4	GOL	C	1107	6/6	0.68	0.37	91,92,93,93	0
12	OCT	C	1117	8/8	0.68	0.34	86,89,90,90	0
5	D10	B	1111	10/10	0.69	0.28	82,85,86,87	0
3	LMT	C	1103	35/35	0.69	0.57	97,117,123,123	0
3	LMT	A	1102	35/35	0.72	0.26	68,91,112,114	0
4	GOL	B	1107	6/6	0.72	0.24	80,83,84,85	0
4	GOL	B	1110	6/6	0.73	0.22	91,92,93,94	0
4	GOL	C	1112	6/6	0.76	0.37	84,85,85,85	0
5	D10	A	1109	10/10	0.76	0.27	79,81,85,85	0
12	OCT	B	1113	8/8	0.77	0.23	72,74,77,78	0
14	HEX	C	1125	6/6	0.77	0.25	72,74,75,75	0
10	PTY	C	1104	50/50	0.77	0.28	85,101,116,118	0
5	D10	C	1116	10/10	0.78	0.32	72,74,79,80	0
14	HEX	C	1124	6/6	0.78	0.24	69,69,70,70	0
4	GOL	B	1109	6/6	0.79	0.30	73,74,76,78	0
4	GOL	A	1106	6/6	0.80	0.30	56,60,61,61	0
4	GOL	C	1109	6/6	0.80	0.21	70,72,73,73	0
5	D10	A	1108	10/10	0.80	0.21	76,76,77,77	0
19	LPX	C	1123	30/30	0.80	0.25	72,80,92,93	0
6	C14	A	1110	14/14	0.81	0.17	67,72,77,77	0
5	D10	C	1115	10/10	0.81	0.28	63,66,71,72	0
13	D12	C	1120	12/12	0.81	0.20	69,72,80,80	0
19	LPX	C	1122	30/30	0.81	0.29	79,87,98,103	0
11	DDR	B	1105	28/28	0.81	0.24	72,86,91,91	0

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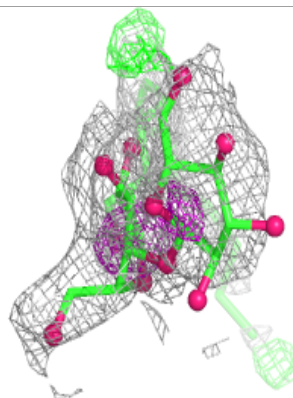
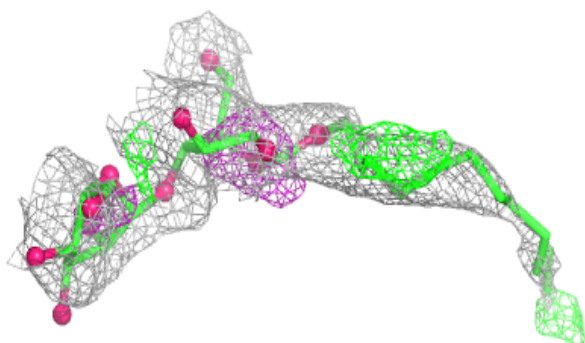
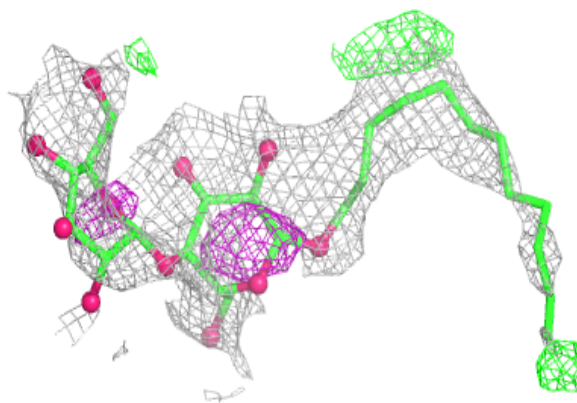
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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
15	SO4	B	1120	5/5	0.82	0.22	118,118,119,120	0
3	LMT	A	1101	35/35	0.82	0.28	66,89,110,111	0
4	GOL	C	1108	6/6	0.83	0.43	95,96,97,98	0
7	EDO	B	1119	4/4	0.83	0.23	69,69,70,71	0
6	C14	C	1119	14/14	0.84	0.26	69,70,72,72	0
9	LMU	B	1102	35/35	0.84	0.18	76,89,92,93	0
5	D10	C	1114	10/10	0.84	0.24	80,81,82,82	0
17	NA	B	1122	1/1	0.85	0.54	67,67,67,67	0
5	D10	B	1112	10/10	0.85	0.20	71,72,73,73	0
4	GOL	C	1111	6/6	0.85	0.34	79,80,81,82	0
7	EDO	A	1112	4/4	0.86	0.17	79,80,81,82	0
12	OCT	C	1118	8/8	0.86	0.24	63,64,64,65	0
13	D12	B	1114	12/12	0.86	0.20	69,71,71,72	0
7	EDO	B	1118	4/4	0.87	0.23	62,62,63,63	0
3	LMT	A	1103	35/35	0.88	0.27	89,92,104,106	0
4	GOL	B	1108	6/6	0.90	0.29	64,66,68,69	0
4	GOL	C	1106	6/6	0.90	0.27	61,65,65,66	0
7	EDO	C	1126	4/4	0.90	0.34	70,72,72,72	0
13	D12	C	1121	12/12	0.90	0.23	68,69,71,71	0
7	EDO	A	1111	4/4	0.90	0.23	64,64,64,65	0
3	LMT	B	1103	35/35	0.90	0.27	65,71,101,102	0
7	EDO	B	1117	4/4	0.91	0.38	71,72,72,73	0
4	GOL	A	1107	6/6	0.93	0.25	62,64,66,67	0
7	EDO	D	202	4/4	0.94	0.35	64,65,65,65	0
8	MIY	B	1101	33/33	0.94	0.14	64,66,67,68	0
4	GOL	C	1105	6/6	0.94	0.18	44,46,48,49	0
7	EDO	C	1127	4/4	0.94	0.47	80,80,80,80	0
3	LMT	C	1101	35/35	0.94	0.23	61,65,88,89	0
7	EDO	E	201	4/4	0.95	0.22	68,69,69,70	0
4	GOL	C	1110	6/6	0.95	0.24	63,64,64,65	0
18	CL	B	1123	1/1	0.95	0.08	57,57,57,57	0
4	GOL	B	1106	6/6	0.95	0.19	52,53,54,55	0
7	EDO	D	203	4/4	0.95	0.10	62,63,63,63	0
15	SO4	C	1129	5/5	0.96	0.17	89,91,92,93	0
7	EDO	B	1116	4/4	0.96	0.43	59,59,60,60	0
15	SO4	C	1128	5/5	0.97	0.10	79,80,80,82	0

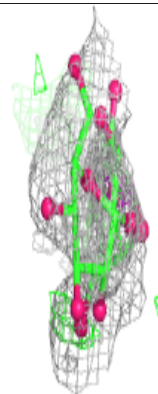
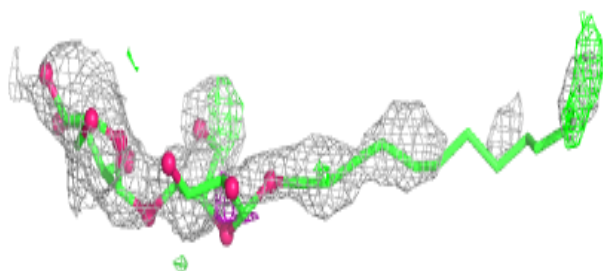
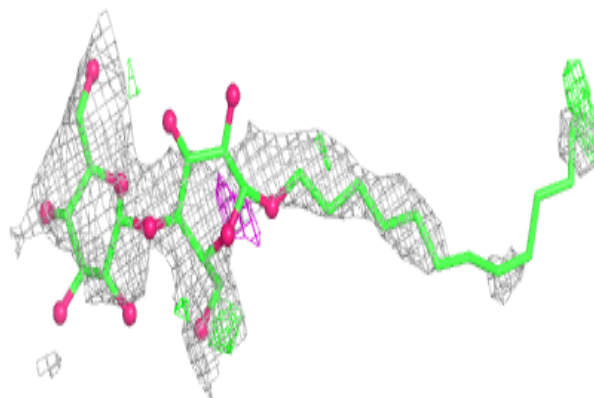
The following is a graphical depiction of the model fit to experimental electron density of all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation to approximate a three-dimensional view.

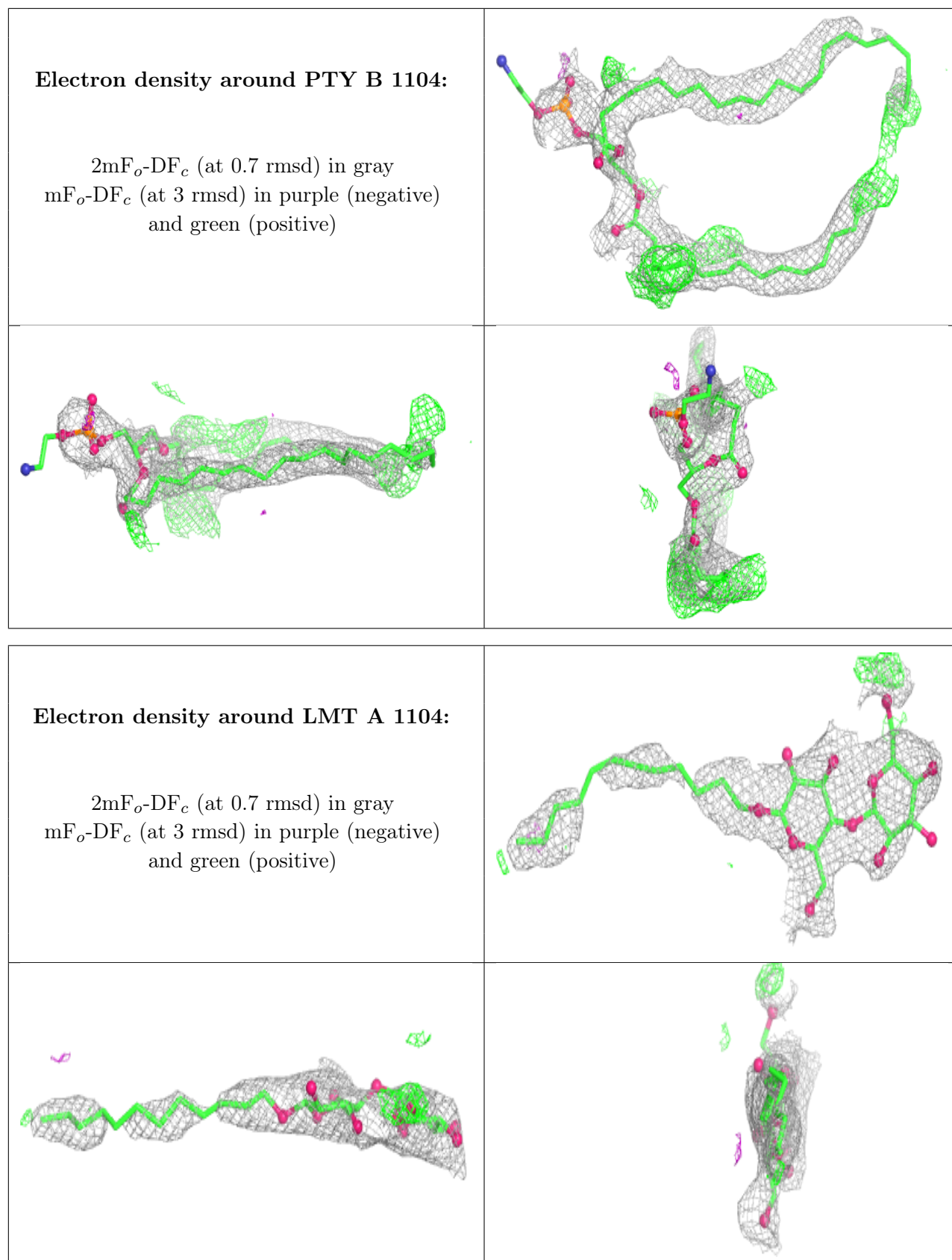
**Electron density around LMT C 1102:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

**Electron density around LMT A 1105:**

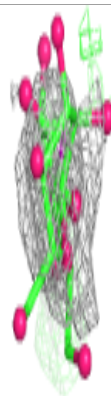
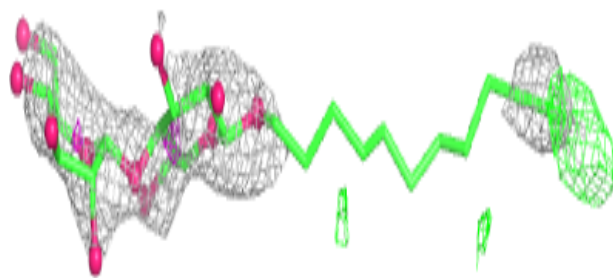
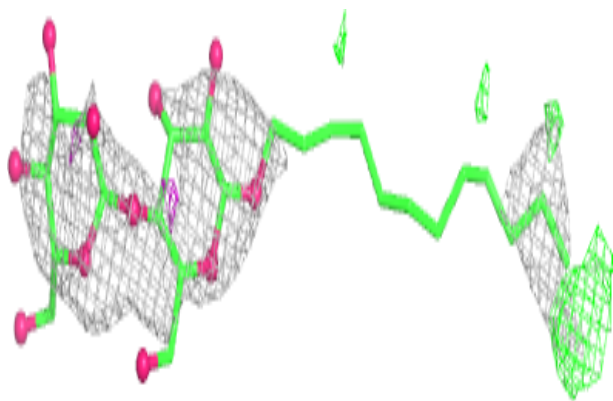
$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



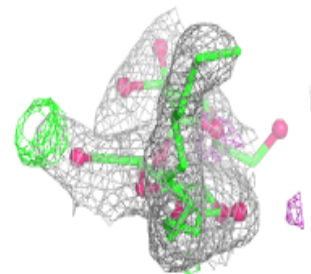
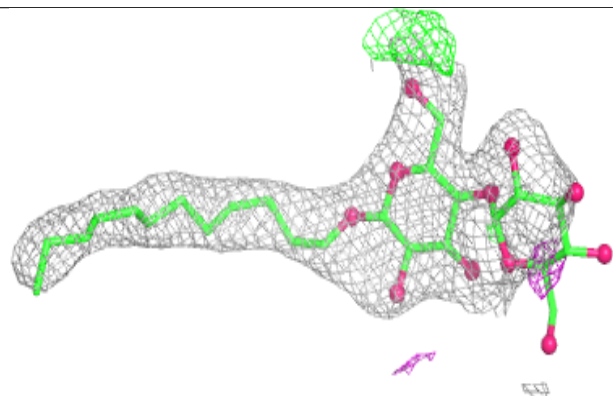
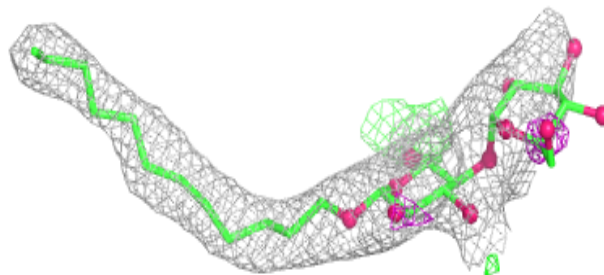


**Electron density around LMT C 1103:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

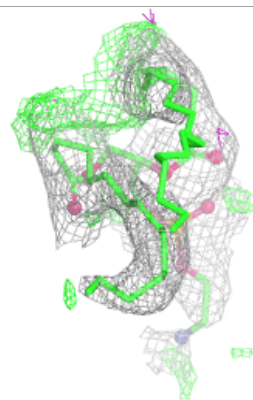
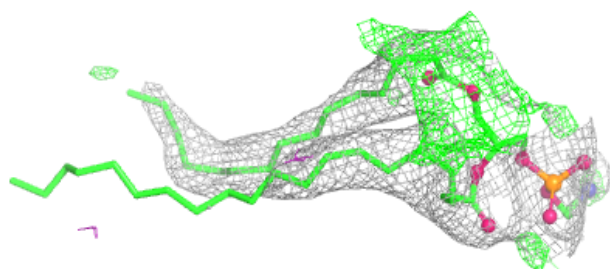
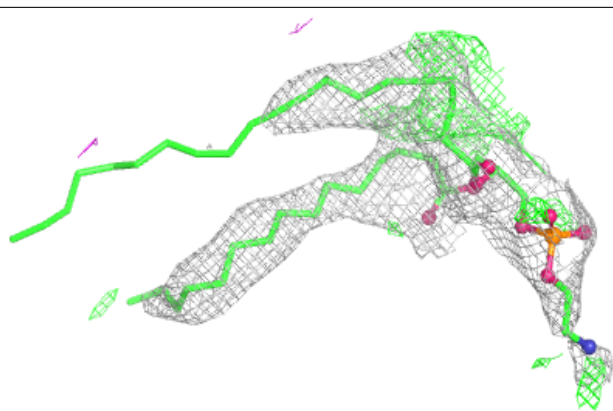
**Electron density around LMT A 1102:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

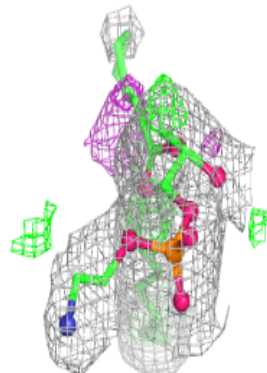
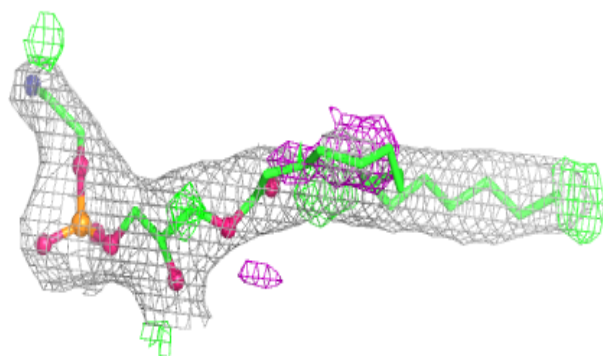
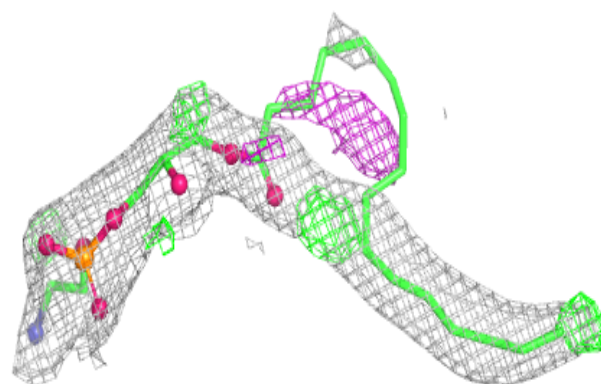


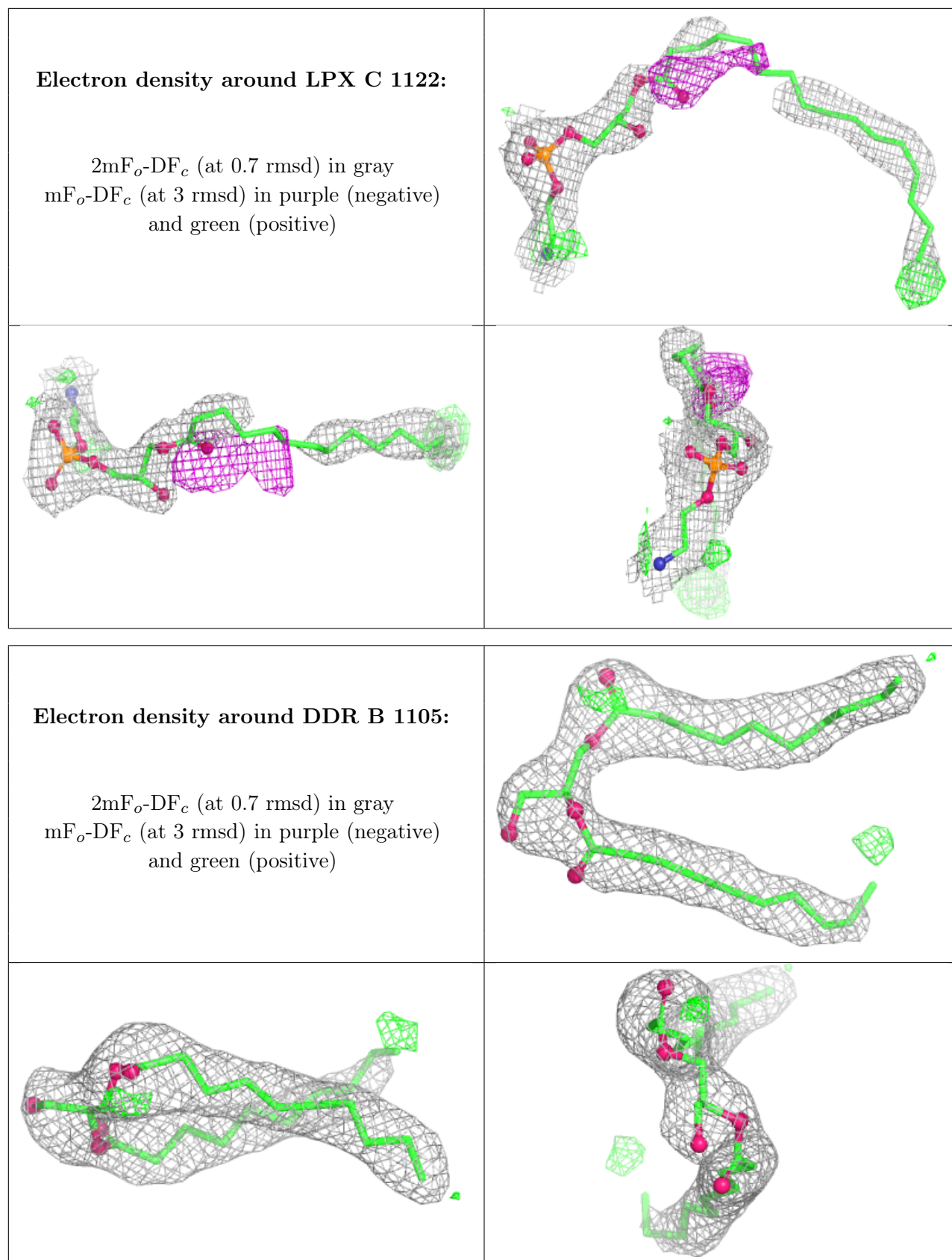
**Electron density around PTY C 1104:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

**Electron density around LPX C 1123:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

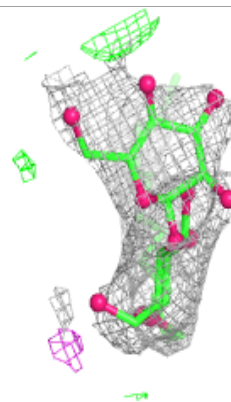
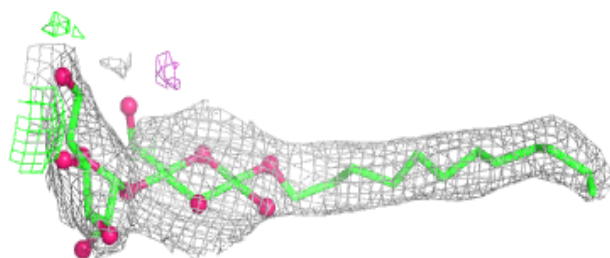
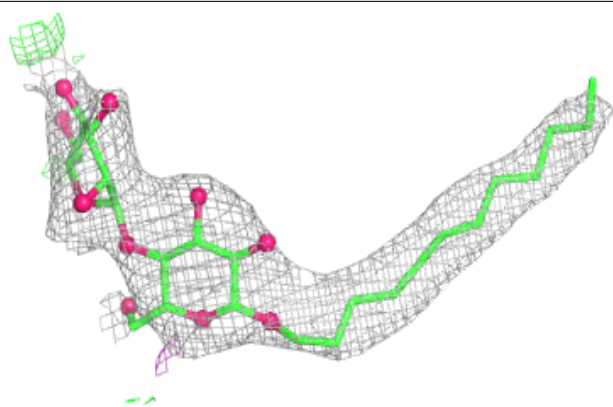




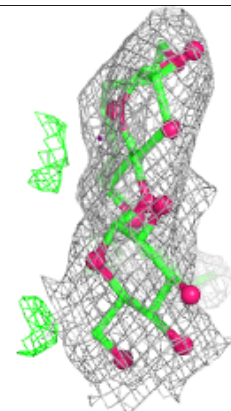
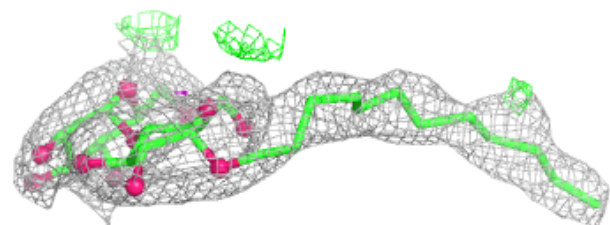
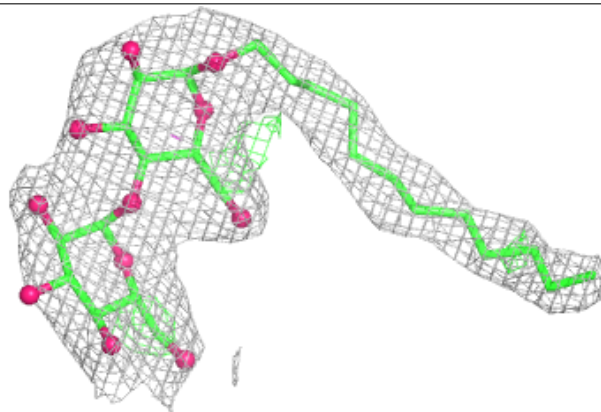


**Electron density around LMT A 1101:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

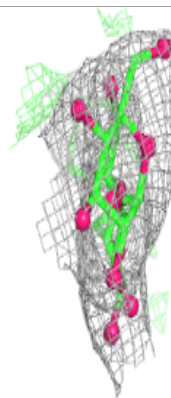
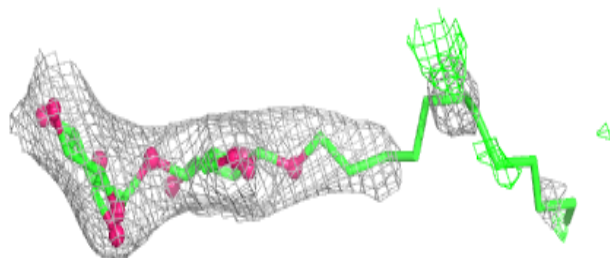
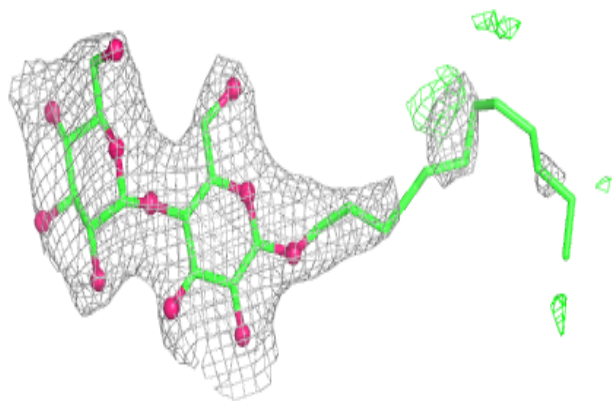
**Electron density around LMU B 1102:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

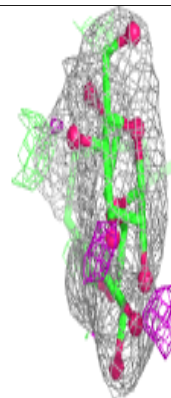
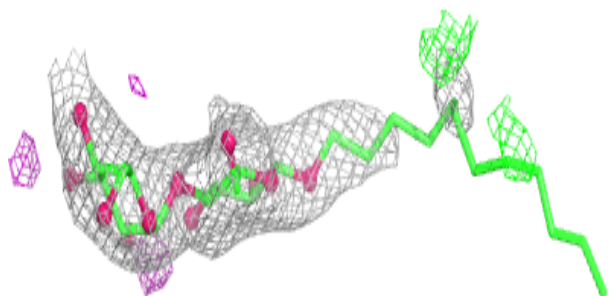
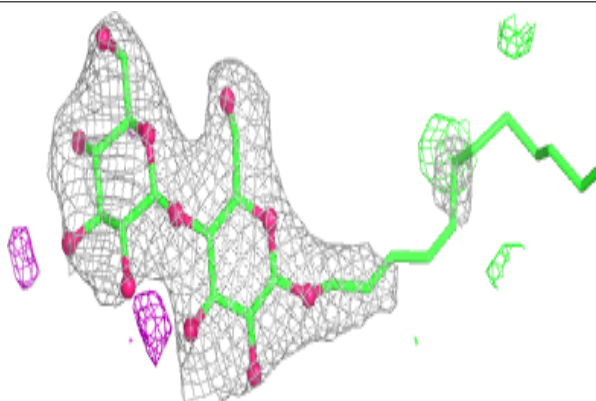


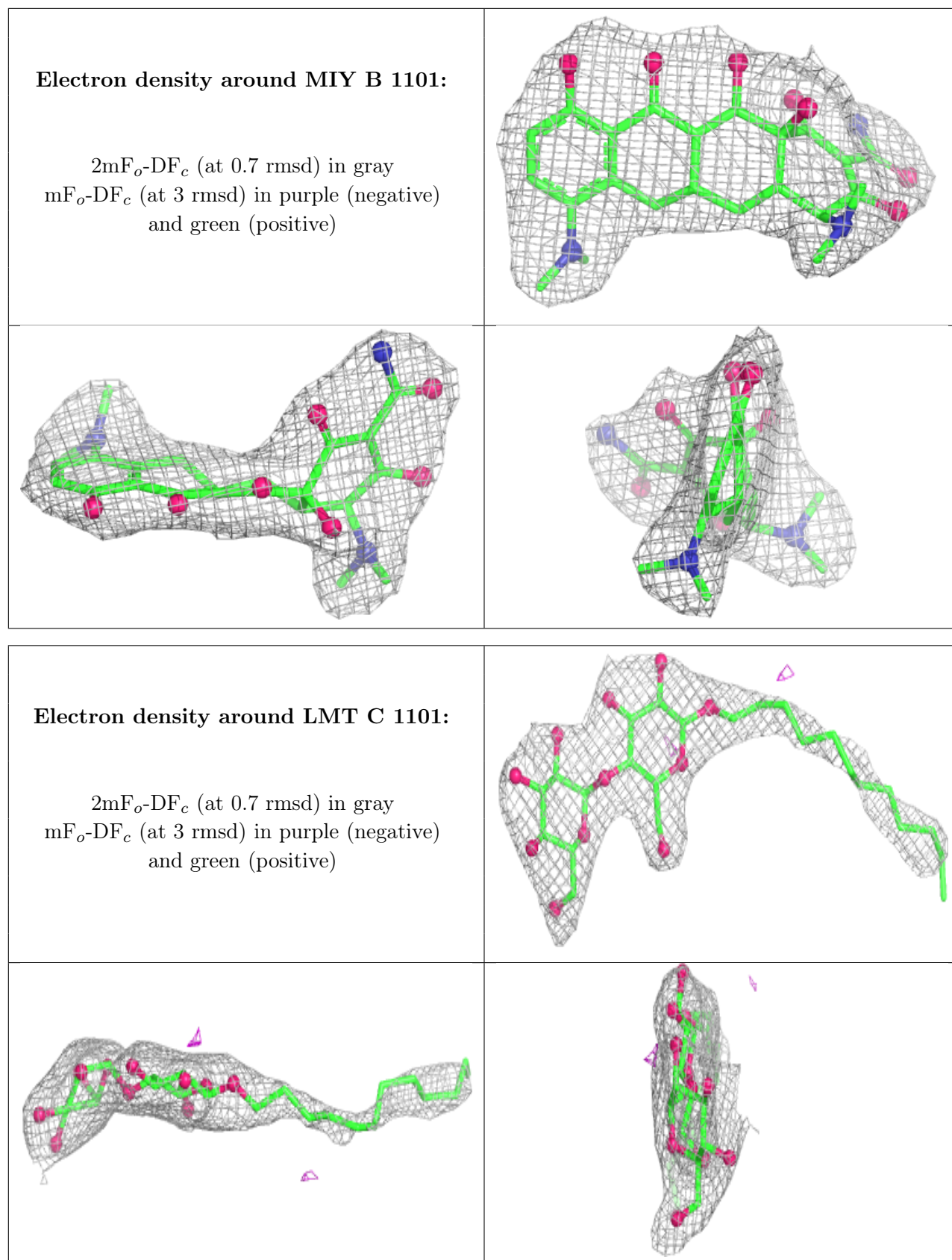
**Electron density around LMT A 1103:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

**Electron density around LMT B 1103:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)





## 6.5 Other polymers [i](#)

There are no such residues in this entry.