



Full wwPDB X-ray Structure Validation Report ⓘ

Jan 13, 2024 – 12:25 pm GMT

PDB ID : 6Y54
Title : Crystal structure of a Neisseria meningitidis serogroup A capsular oligosaccharide bound to a functional Fab
Authors : Dello Iacono, L.; Henriques, P.; Adamo, R.
Deposited on : 2020-02-24
Resolution : 2.67 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

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>.

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

MolProbity : 4.02b-467
Mogul : 1.8.4, CSD as541be (2020)
Xtriage (Phenix) : 1.13
EDS : 2.36
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) : 2.36

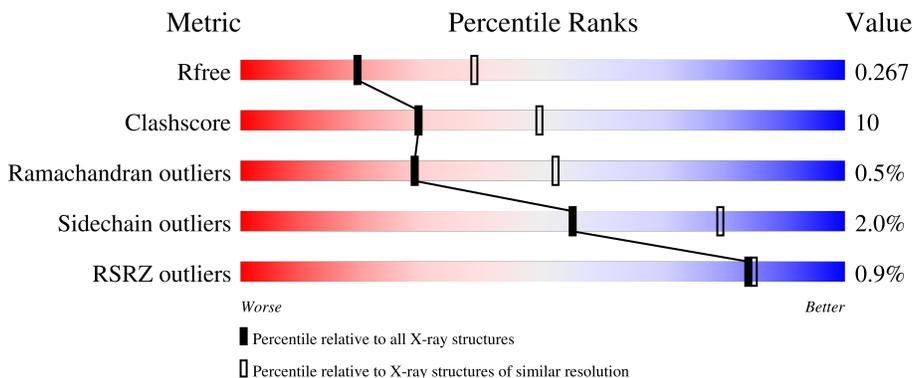
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 2.67 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	3863 (2.70-2.66)
Clashscore	141614	4210 (2.70-2.66)
Ramachandran outliers	138981	4141 (2.70-2.66)
Sidechain outliers	138945	4141 (2.70-2.66)
RSRZ outliers	127900	3780 (2.70-2.66)

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 ≥ 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	H	226	
1	M	226	
1	O	226	
2	L	219	
2	N	219	

Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
2	P	219	 <p>A horizontal bar chart representing the quality of the chain. The bar is divided into four segments: a small red segment at the beginning labeled '2%', followed by a green segment labeled '34%', a yellow segment labeled '11%', and a large grey segment at the end labeled '53%'. A small black dot is visible on the grey segment.</p>

2 Entry composition [i](#)

There are 8 unique types of molecules in this entry. The entry contains 8476 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 Fab A1.1 H chain.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
1	H	211	Total 1603	C 1013	N 265	O 317	S 8	0	1	0
1	M	212	Total 1604	C 1013	N 266	O 317	S 8	0	0	0
1	O	106	Total 837	C 529	N 140	O 163	S 5	0	0	0

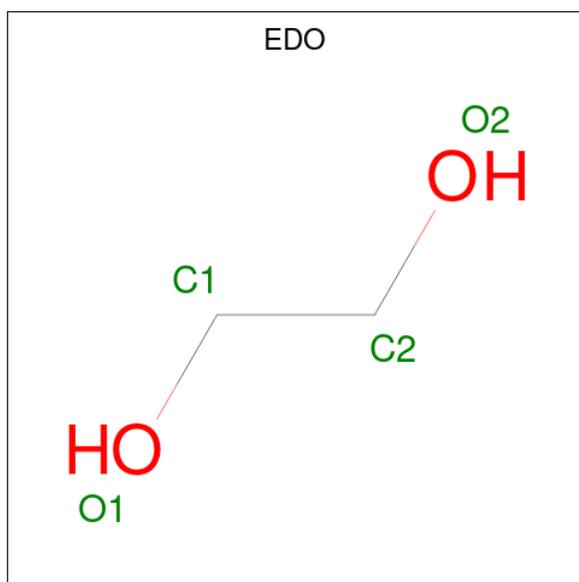
- Molecule 2 is a protein called Fab A1.1 L chain.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
2	L	217	Total 1690	C 1058	N 286	O 340	S 6	1	1	0
2	N	218	Total 1696	C 1061	N 287	O 342	S 6	1	0	0
2	P	102	Total 795	C 506	N 134	O 152	S 3	0	0	0

- Molecule 3 is IODIDE ION (three-letter code: IOD) (formula: I).

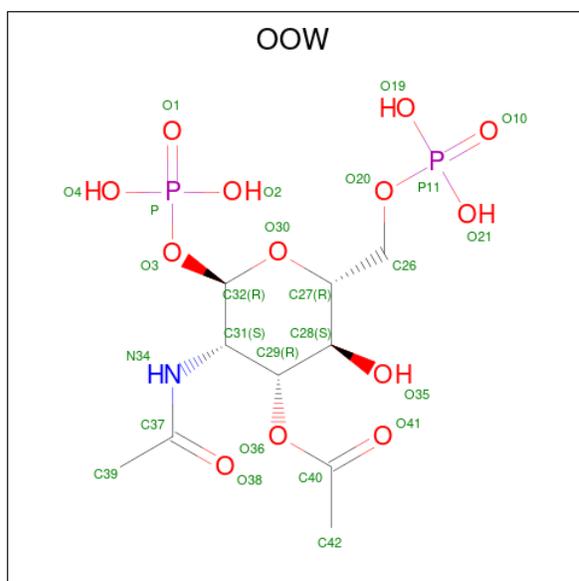
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
3	H	2	Total 2 2	0	0
3	L	2	Total 2 2	0	0
3	M	4	Total 4 4	0	0
3	N	1	Total 1 1	0	0

- Molecule 4 is 1,2-ETHANEDIOL (three-letter code: EDO) (formula: C₂H₆O₂).



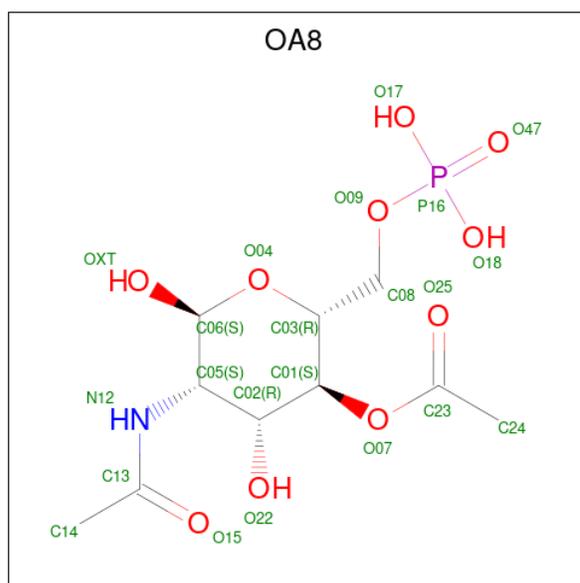
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
4	H	1	Total C O 4 2 2	0	0
4	H	1	Total C O 4 2 2	0	0
4	M	1	Total C O 4 2 2	0	0

- Molecule 5 is $\{[(2R,3S,4R,5S,6R)-5\text{-acetamido-3-hydroxy-4-(2-oxopropyl)-6-(phosphonoxy)oxan-2-yl]methoxy\}$ phosphonic acid (three-letter code: OOW) (formula: $C_{10}H_{19}NO_{13}P_2$).



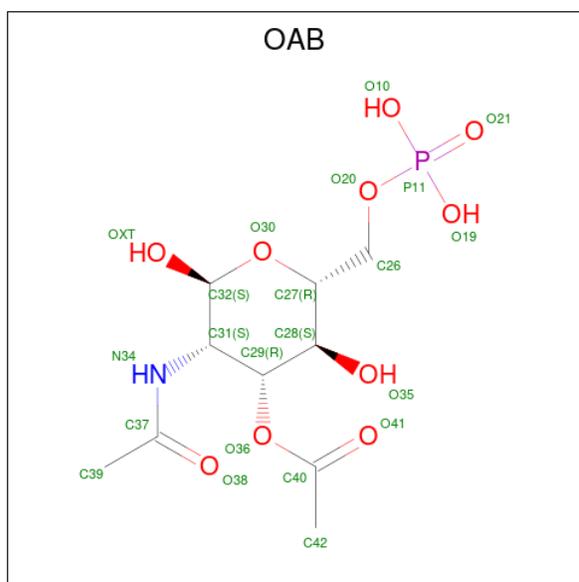
Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
			Total	C	N	O	P		
5	H	1	26	10	1	13	2	0	0
5	M	1	26	10	1	13	2	0	0
5	O	1	26	10	1	13	2	0	0

- Molecule 6 is {[(2R,3S,4R,5S,6S)-3-(acetyloxy)-5-acetamido-4,6-dihydroxyoxan-2-yl]methoxy}phosphonic acid (three-letter code: OA8) (formula: C₁₀H₁₈NO₁₀P).



Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
			Total	C	N	O	P		
6	L	1	21	10	1	9	1	0	0
6	N	1	21	10	1	9	1	0	0
6	P	1	21	10	1	9	1	0	0

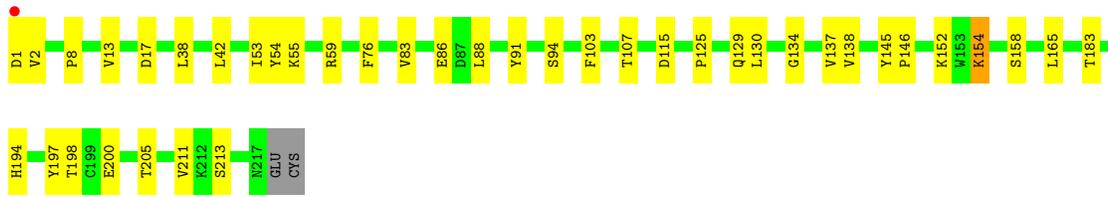
- Molecule 7 is {[(2R,3S,4R,5S,6S)-5-acetamido-3,6-dihydroxy-4-(2-oxopropyl)oxan-2-yl]methoxy}phosphonic acid (three-letter code: OAB) (formula: C₁₀H₁₈NO₁₀P).



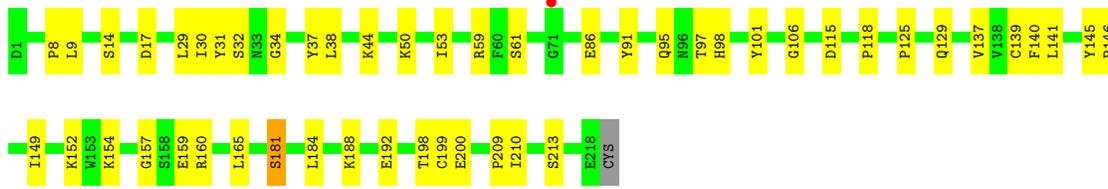
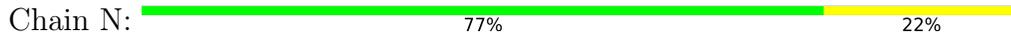
Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
			Total	C	N	O	P		
7	L	1	Total	C	N	O	P	0	0
			21	10	1	9	1		
7	N	1	Total	C	N	O	P	0	0
			21	10	1	9	1		
7	P	1	Total	C	N	O	P	0	0
			21	10	1	9	1		

- Molecule 8 is water.

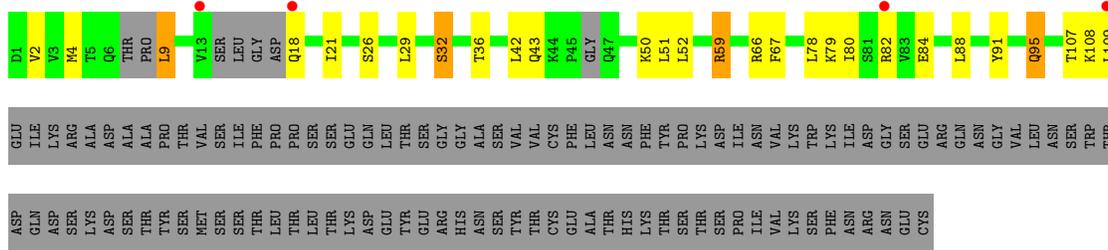
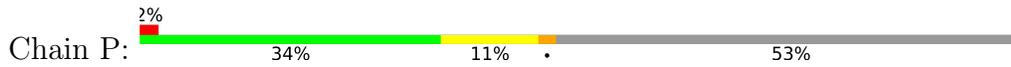
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
8	H	6	Total	O	0	0
			6	6		
8	L	5	Total	O	0	0
			5	5		
8	M	7	Total	O	0	0
			7	7		
8	N	4	Total	O	0	0
			4	4		
8	O	2	Total	O	0	0
			2	2		
8	P	2	Total	O	0	0
			2	2		



• Molecule 2: Fab A1.1 L chain



• Molecule 2: Fab A1.1 L chain



4 Data and refinement statistics

Property	Value	Source
Space group	P 1 21 1	Depositor
Cell constants a, b, c, α , β , γ	52.61Å 153.21Å 101.05Å 90.00° 91.53° 90.00°	Depositor
Resolution (Å)	49.74 – 2.67 49.74 – 2.67	Depositor EDS
% Data completeness (in resolution range)	97.1 (49.74-2.67) 97.2 (49.74-2.67)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.46 (at 2.69Å)	Xtrriage
Refinement program	PHENIX 1.17.1_3660	Depositor
R, R_{free}	0.210 , 0.267 0.210 , 0.267	Depositor DCC
R_{free} test set	2193 reflections (4.97%)	wwPDB-VP
Wilson B-factor (Å ²)	43.4	Xtrriage
Anisotropy	0.533	Xtrriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.27 , 10.2	EDS
L-test for twinning ²	$\langle L \rangle = 0.49$, $\langle L^2 \rangle = 0.32$	Xtrriage
Estimated twinning fraction	0.109 for h,-k,-l	Xtrriage
F_o, F_c correlation	0.91	EDS
Total number of atoms	8476	wwPDB-VP
Average B, all atoms (Å ²)	48.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 4.40% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

²Theoretical 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: OAB, IOD, OOW, OA8, EDO

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	H	0.47	0/1647	0.62	0/2250
1	M	0.46	1/1645 (0.1%)	0.62	0/2247
1	O	0.39	0/857	0.61	0/1162
2	L	0.44	0/1732	0.62	0/2351
2	N	0.52	2/1735 (0.1%)	0.67	0/2355
2	P	0.49	0/811	0.64	0/1094
All	All	0.47	3/8427 (0.0%)	0.63	0/11459

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

Mol	Chain	#Chirality outliers	#Planarity outliers
2	P	0	1

All (3) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	M	96	CYS	CB-SG	-5.73	1.72	1.81
2	N	199	CYS	CB-SG	-5.67	1.72	1.81
2	N	139	CYS	CB-SG	-5.60	1.72	1.81

There are no bond angle outliers.

There are no chirality outliers.

All (1) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
2	P	59	ARG	Sidechain

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	H	1603	0	1569	29	0
1	M	1604	0	1567	29	1
1	O	837	0	800	19	0
2	L	1690	0	1636	23	0
2	N	1696	0	1637	29	1
2	P	795	0	780	31	0
3	H	2	0	0	1	0
3	L	2	0	0	0	0
3	M	4	0	0	0	0
3	N	1	0	0	0	0
4	H	8	0	12	2	0
4	M	4	0	6	1	0
5	H	26	0	0	0	0
5	M	26	0	0	0	0
5	O	26	0	0	0	0
6	L	21	0	0	0	0
6	N	21	0	0	0	0
6	P	21	0	0	3	0
7	L	21	0	0	0	0
7	N	21	0	0	0	0
7	P	21	0	0	3	0
8	H	6	0	0	0	0
8	L	5	0	0	0	0
8	M	7	0	0	0	0
8	N	4	0	0	0	0
8	O	2	0	0	0	0
8	P	2	0	0	0	0
All	All	8476	0	8007	157	1

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 10.

All (157) 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:O:51:ILE:HD11	1:O:70:LEU:HB3	1.53	0.88
1:H:63:LYS:HD3	1:H:64:PHE:CE2	2.09	0.87
1:O:39:GLN:HG3	1:O:45:LEU:HG	1.65	0.78
2:N:95:GLN:HE21	2:N:98:HIS:H	1.28	0.78
1:M:120:PRO:HB3	1:M:146:TYR:HB3	1.66	0.77
2:L:200:GLU:HG2	2:L:211:VAL:HG22	1.67	0.77
1:O:87:THR:HG22	1:O:89:GLU:H	1.49	0.76
1:H:150:PRO:HG3	4:H:304:EDO:H21	1.69	0.75
2:N:31:TYR:HB2	2:N:97:THR:HG22	1.68	0.75
2:P:18:GLN:HE21	2:P:79:LYS:HE2	1.54	0.73
1:H:12:VAL:HG11	1:H:18:VAL:HB	1.73	0.70
2:L:1:ASP:CG	2:L:2:VAL:H	1.96	0.69
1:M:12:VAL:HG21	1:M:86:LEU:HD12	1.74	0.68
2:L:138:VAL:HG22	2:L:183:THR:HG22	1.73	0.68
2:P:29:LEU:HB2	2:P:36:THR:HG23	1.77	0.67
2:P:18:GLN:NE2	2:P:79:LYS:HE2	2.10	0.67
1:O:39:GLN:HE22	2:P:43:GLN:HE22	1.41	0.66
1:M:51:ILE:HD13	1:M:72:VAL:HG13	1.77	0.66
2:N:198:THR:HG22	2:N:213:SER:HB2	1.77	0.65
1:M:50:ASN:OD1	1:M:59:ASN:HB2	1.97	0.65
2:N:29:LEU:HD22	2:N:95:GLN:HG3	1.80	0.64
2:P:42:LEU:HB2	2:P:52:LEU:HD11	1.78	0.63
1:H:115:ALA:HB2	1:H:174:ASP:HB3	1.81	0.63
1:M:189:TRP:CD1	1:M:190:PRO:HA	2.35	0.62
2:N:198:THR:HG22	2:N:213:SER:CB	2.29	0.62
2:P:88:LEU:HD22	2:P:109:LEU:HB3	1.82	0.62
6:P:301:OA8:C24	7:P:302:OAB:O38	2.49	0.61
2:N:125:PRO:HD3	2:N:137:VAL:HG12	1.81	0.61
2:N:95:GLN:NE2	2:N:98:HIS:H	1.96	0.61
1:H:171:LEU:HB2	1:H:176:TYR:CE1	2.35	0.61
1:H:18:VAL:HG12	1:H:86:LEU:HD11	1.83	0.60
2:N:37:TYR:HB2	2:N:97:THR:HG23	1.82	0.60
1:O:17:SER:HA	1:O:86:LEU:HD13	1.84	0.60
1:M:138:THR:OG1	1:M:183:THR:HG22	2.03	0.58
1:H:143:VAL:HB	1:H:178:LEU:HB3	1.85	0.58
2:P:67:PHE:CD1	2:P:80:ILE:HD12	2.38	0.58
2:L:38:LEU:HD13	2:L:76:PHE:CG	2.39	0.57
2:N:200:GLU:HG3	2:N:209:PRO:HB3	1.87	0.57
2:P:88:LEU:HA	2:P:109:LEU:HD23	1.87	0.57
2:P:21:ILE:HG23	2:P:107:THR:HG21	1.85	0.57
2:P:79:LYS:C	2:P:80:ILE:HD13	2.25	0.57
1:H:63:LYS:CD	1:H:64:PHE:CE2	2.87	0.56

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:63:LYS:HD3	1:H:64:PHE:CD2	2.41	0.55
1:M:30:THR:HA	1:M:53:PRO:HB2	1.89	0.54
2:N:188:LYS:O	2:N:192:GLU:HG3	2.07	0.54
1:M:38:LYS:HG3	1:M:94:TYR:CE2	2.43	0.54
1:M:171:LEU:HD11	1:M:174:ASP:HA	1.90	0.54
1:H:88:SER:HB3	4:H:303:EDO:H11	1.89	0.54
2:N:152:LYS:HE3	2:N:159:GLU:HG3	1.90	0.53
1:M:53:PRO:HA	1:M:72:VAL:HG21	1.88	0.53
2:N:30:ILE:HD11	2:N:34:GLY:O	2.08	0.53
2:P:21:ILE:HD12	2:P:107:THR:HG21	1.91	0.53
2:L:194:HIS:HB2	2:L:197:TYR:OH	2.08	0.53
2:P:9:LEU:O	2:P:108:LYS:N	2.38	0.53
2:L:125:PRO:HD3	2:L:137:VAL:HG22	1.89	0.52
2:P:50:LYS:HE3	2:P:51:LEU:O	2.10	0.52
1:M:12:VAL:HG21	1:M:86:LEU:CD1	2.40	0.52
2:P:79:LYS:O	2:P:80:ILE:HD13	2.10	0.52
2:N:154:LYS:HD3	2:N:157:GLY:O	2.10	0.52
2:P:42:LEU:HD13	2:P:91:TYR:CZ	2.45	0.51
2:P:91:TYR:HE2	2:P:109:LEU:HD22	1.74	0.51
2:L:198:THR:HG23	2:L:213:SER:HB2	1.93	0.51
1:H:170:VAL:HG11	2:L:165:LEU:HG	1.92	0.51
2:L:53:ILE:HD13	2:L:59:ARG:HA	1.93	0.51
1:M:47:TRP:CG	2:N:101:TYR:HB2	2.46	0.51
1:M:189:TRP:CG	1:M:190:PRO:HA	2.46	0.51
2:P:59:ARG:HG3	2:P:59:ARG:HH11	1.75	0.50
1:H:144:LYS:HG3	1:H:177:THR:HG23	1.93	0.50
1:O:39:GLN:NE2	2:P:43:GLN:HE22	2.06	0.50
2:L:1:ASP:CG	2:L:2:VAL:N	2.65	0.49
1:O:18:VAL:HG12	1:O:86:LEU:HD21	1.94	0.49
1:O:51:ILE:CD1	1:O:70:LEU:HB3	2.36	0.49
1:M:51:ILE:HG13	1:M:58:THR:HG22	1.95	0.49
2:N:141:LEU:HD23	2:N:149:ILE:HD11	1.94	0.49
1:H:32:TYR:CD2	1:H:100:ARG:HD2	2.49	0.48
1:O:39:GLN:HE22	2:P:43:GLN:NE2	2.10	0.48
2:P:2:VAL:HG13	2:P:26:SER:HB2	1.95	0.48
2:N:145:TYR:CG	2:N:146:PRO:HA	2.49	0.48
2:N:140:PHE:CD1	2:N:181:SER:HB2	2.49	0.48
6:P:301:OA8:C24	7:P:302:OAB:C37	2.92	0.48
1:M:98:VAL:HB	1:M:103:TYR:HB2	1.96	0.47
2:N:118:PRO:HG2	2:N:210:ILE:HD12	1.96	0.47
1:M:171:LEU:HB2	1:M:176:TYR:CE1	2.48	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:N:160:ARG:HG2	2:N:184:LEU:HD21	1.96	0.47
2:P:66:ARG:HD2	2:P:82:ARG:O	2.15	0.47
2:P:29:LEU:HD22	2:P:95:GLN:HG2	1.97	0.47
1:H:125:LEU:HB2	1:H:140:GLY:C	2.34	0.47
2:P:66:ARG:NH1	2:P:84:GLU:HG3	2.29	0.47
1:H:189:TRP:CD1	1:H:190:PRO:HA	2.50	0.46
2:N:14:SER:HB2	2:N:17:ASP:OD2	2.15	0.46
2:L:129:GLN:HG2	2:L:134:GLY:O	2.16	0.46
1:H:189:TRP:CG	1:H:190:PRO:HA	2.51	0.46
2:L:154:LYS:HB2	2:L:198:THR:HB	1.97	0.46
1:M:14:PRO:HB3	4:M:305:EDO:H11	1.98	0.46
2:N:200:GLU:HA	2:N:210:ILE:O	2.16	0.46
1:O:38:LYS:HD2	1:O:94:TYR:CE2	2.51	0.46
2:L:94:SER:HB3	2:L:103:PHE:CD1	2.51	0.46
1:O:50:ASN:OD1	1:O:59:ASN:HB2	2.15	0.46
1:H:60:TYR:HB2	1:H:65:LYS:HD2	1.96	0.46
1:O:90:ASP:HB3	1:O:94:TYR:OH	2.16	0.45
2:P:59:ARG:HH11	2:P:59:ARG:CG	2.29	0.45
1:H:195:THR:HG21	1:H:208:ASP:HB3	1.98	0.45
2:L:13:VAL:HG11	2:L:83:VAL:HG21	1.99	0.45
2:L:152:LYS:HD3	2:L:154:LYS:HE3	1.98	0.45
1:H:32:TYR:HD2	1:H:100:ARG:HD2	1.82	0.45
1:H:125:LEU:HB2	1:H:140:GLY:O	2.16	0.45
1:H:182:VAL:HG13	1:H:182:VAL:O	2.17	0.44
2:L:115:ASP:HB3	2:L:205:THR:HG22	1.98	0.44
1:O:67:LYS:O	1:O:83:LEU:HA	2.18	0.44
2:P:78:LEU:HG	2:P:80:ILE:HD11	1.98	0.44
1:O:47:TRP:CZ2	1:O:49:GLY:HA2	2.52	0.44
2:N:53:ILE:HD13	2:N:59:ARG:HA	1.99	0.44
1:O:23:LYS:HD3	1:O:24:ALA:N	2.33	0.44
1:O:101:MET:HG3	1:O:103:TYR:CE2	2.53	0.43
3:H:302:IOD:I	1:M:201:PRO:HA	2.88	0.43
2:L:145:TYR:CG	2:L:146:PRO:HA	2.53	0.43
1:H:35:HIS:CD2	1:H:99:VAL:HG23	2.54	0.43
2:N:50:LYS:HE3	2:N:50:LYS:HB2	1.62	0.43
2:P:91:TYR:CE2	2:P:109:LEU:HD22	2.53	0.43
2:L:38:LEU:C	2:L:38:LEU:HD23	2.39	0.43
2:P:21:ILE:HB	2:P:78:LEU:HB3	1.99	0.43
1:M:13:ARG:NH2	1:M:115:ALA:O	2.42	0.43
1:M:47:TRP:CH2	1:M:49:GLY:HA2	2.54	0.43
6:P:301:OA8:C24	7:P:302:OAB:C39	2.97	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:M:83:LEU:HB3	1:M:86:LEU:HD21	2.01	0.43
2:P:67:PHE:HA	2:P:80:ILE:HD12	2.01	0.43
1:O:30:THR:HA	1:O:53:PRO:HB2	2.01	0.42
1:H:50:ASN:OD1	1:H:59:ASN:HB2	2.19	0.42
1:M:60:TYR:CE1	1:M:70:LEU:HG	2.54	0.42
2:N:91:TYR:O	2:N:106:GLY:HA2	2.20	0.42
1:M:63:LYS:HD2	1:M:64:PHE:CE2	2.55	0.42
2:P:4:MET:SD	2:P:95:GLN:HB2	2.59	0.42
1:H:91:SER:HA	1:H:110:VAL:O	2.20	0.42
2:L:54:TYR:HD1	2:L:55:LYS:HG3	1.85	0.42
1:M:17:SER:HB2	1:M:84:SER:HA	2.02	0.42
1:M:193:SER:HB2	1:M:210:LYS:HE3	2.02	0.42
2:N:44:LYS:HE2	2:N:86:GLU:O	2.20	0.42
1:M:123:TYR:CZ	2:N:129:GLN:HB2	2.55	0.42
2:L:42:LEU:HD13	2:L:91:TYR:CE1	2.56	0.41
1:M:12:VAL:HG11	1:M:18:VAL:HB	2.02	0.41
2:P:42:LEU:HD13	2:P:91:TYR:CE1	2.54	0.41
1:H:43:GLN:HB3	1:H:44:GLY:H	1.61	0.41
2:P:88:LEU:C	2:P:88:LEU:HD13	2.41	0.41
1:H:63:LYS:NZ	1:H:64:PHE:CE1	2.82	0.41
2:L:8:PRO:O	2:L:107:THR:OG1	2.30	0.41
1:H:124:PRO:HG3	1:H:209:LYS:HG3	2.02	0.41
2:L:125:PRO:HB2	2:L:130:LEU:HD11	2.03	0.41
1:H:35:HIS:HB2	1:H:97:THR:HG23	2.01	0.41
1:H:138:THR:OG1	1:H:183:THR:HG23	2.20	0.41
2:N:8:PRO:O	2:N:9:LEU:HB2	2.21	0.41
1:O:47:TRP:CH2	1:O:49:GLY:HA2	2.55	0.41
2:N:141:LEU:HD23	2:N:149:ILE:CD1	2.51	0.40
2:N:152:LYS:HE2	2:N:154:LYS:HE3	2.03	0.40
1:O:12:VAL:HG21	1:O:86:LEU:HD23	2.04	0.40
2:L:13:VAL:HG22	2:L:17:ASP:HB2	2.03	0.40
1:M:18:VAL:HG12	1:M:86:LEU:HD11	2.02	0.40
1:M:139:LEU:HD12	1:M:194:ILE:HG21	2.02	0.40

All (1) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:M:84:SER:OG	2:N:115:ASP:O[1_455]	2.18	0.02

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	H	208/226 (92%)	199 (96%)	9 (4%)	0	100	100
1	M	208/226 (92%)	196 (94%)	11 (5%)	1 (0%)	29	52
1	O	102/226 (45%)	86 (84%)	13 (13%)	3 (3%)	4	9
2	L	216/219 (99%)	205 (95%)	11 (5%)	0	100	100
2	N	216/219 (99%)	202 (94%)	14 (6%)	0	100	100
2	P	94/219 (43%)	86 (92%)	7 (7%)	1 (1%)	14	31
All	All	1044/1335 (78%)	974 (93%)	65 (6%)	5 (0%)	29	52

All (5) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	M	43	GLN
1	O	55	SER
2	P	32	SER
1	O	90	ASP
1	O	16	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	H	185/198 (93%)	182 (98%)	3 (2%)	62	83
1	M	184/198 (93%)	182 (99%)	2 (1%)	73	89
1	O	92/198 (46%)	90 (98%)	2 (2%)	52	77

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
2	L	196/197 (100%)	192 (98%)	4 (2%)	55	79
2	N	196/197 (100%)	191 (97%)	5 (3%)	46	73
2	P	91/197 (46%)	88 (97%)	3 (3%)	38	64
All	All	944/1185 (80%)	925 (98%)	19 (2%)	55	79

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

Mol	Chain	Res	Type
1	H	10	GLU
1	H	63	LYS
1	H	183	THR
2	L	86	GLU
2	L	88	LEU
2	L	154	LYS
2	L	158	SER
1	M	161	SER
1	M	186	SER
2	N	32	SER
2	N	38	LEU
2	N	61	SER
2	N	165	LEU
2	N	181	SER
1	O	3	GLN
1	O	21	SER
2	P	9	LEU
2	P	32	SER
2	P	95	GLN

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

Mol	Chain	Res	Type
2	L	58	ASN
1	O	39	GLN

5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 21 ligands modelled in this entry, 9 are monoatomic - leaving 12 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
4	EDO	H	303	-	3,3,3	0.68	0	2,2,2	0.30	0
5	OOW	H	305	6	25,26,26	1.89	6 (24%)	37,39,39	1.59	6 (16%)
5	OOW	O	301	6	25,26,26	1.94	9 (36%)	37,39,39	1.87	9 (24%)
6	OA8	P	301	5,7	21,21,22	1.89	6 (28%)	28,30,32	1.73	8 (28%)
7	OAB	N	303	6	21,21,22	1.64	5 (23%)	30,30,32	1.86	7 (23%)
4	EDO	H	304	-	3,3,3	0.76	0	2,2,2	0.29	0
5	OOW	M	306	6	25,26,26	1.96	6 (24%)	37,39,39	1.72	7 (18%)
7	OAB	L	304	6	21,21,22	1.64	5 (23%)	30,30,32	1.72	5 (16%)
7	OAB	P	302	6	21,21,22	1.60	5 (23%)	30,30,32	2.45	9 (30%)
6	OA8	N	302	5,7	21,21,22	1.88	5 (23%)	28,30,32	1.73	6 (21%)
6	OA8	L	303	5,7	21,21,22	1.74	6 (28%)	28,30,32	1.98	10 (35%)
4	EDO	M	305	-	3,3,3	0.68	0	2,2,2	0.41	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. '-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
4	EDO	H	303	-	-	1/1/1/1	-

Continued on next page...

Continued from previous page...

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
5	OOW	H	305	6	-	5/18/39/39	0/1/1/1
5	OOW	O	301	6	-	7/18/39/39	0/1/1/1
6	OA8	P	301	5,7	-	4/14/31/34	0/1/1/1
7	OAB	N	303	6	-	6/14/31/34	0/1/1/1
4	EDO	H	304	-	-	0/1/1/1	-
5	OOW	M	306	6	-	7/18/39/39	0/1/1/1
7	OAB	L	304	6	-	9/14/31/34	0/1/1/1
7	OAB	P	302	6	-	2/14/31/34	0/1/1/1
6	OA8	N	302	5,7	-	1/14/31/34	0/1/1/1
6	OA8	L	303	5,7	-	0/14/31/34	0/1/1/1
4	EDO	M	305	-	-	0/1/1/1	-

All (53) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
6	P	301	OA8	P16-O47	4.88	1.66	1.50
5	H	305	OOW	P11-O10	4.65	1.65	1.50
5	O	301	OOW	P-O1	4.63	1.65	1.50
5	M	306	OOW	P-O1	4.60	1.65	1.50
6	N	302	OA8	P16-O47	4.39	1.64	1.50
6	L	303	OA8	O07-C01	-3.87	1.39	1.44
5	M	306	OOW	P-O3	3.69	1.66	1.59
6	N	302	OA8	O07-C01	-3.60	1.39	1.44
7	P	302	OAB	C37-N34	3.56	1.46	1.34
5	H	305	OOW	O36-C29	-3.56	1.39	1.44
5	M	306	OOW	C37-N34	3.56	1.46	1.34
6	P	301	OA8	C13-N12	3.48	1.46	1.34
7	L	304	OAB	C37-N34	3.42	1.46	1.34
7	N	303	OAB	O36-C29	-3.38	1.39	1.44
5	M	306	OOW	O36-C29	-3.37	1.39	1.44
5	O	301	OOW	C37-N34	3.35	1.45	1.34
6	L	303	OA8	C13-N12	3.35	1.45	1.34
5	O	301	OOW	O36-C29	-3.34	1.39	1.44
5	H	305	OOW	P-O3	3.25	1.65	1.59
7	N	303	OAB	C37-N34	3.23	1.45	1.34
6	N	302	OA8	C13-N12	3.19	1.45	1.34
5	H	305	OOW	C37-N34	3.07	1.44	1.34
6	P	301	OA8	O07-C01	-3.02	1.40	1.44
7	P	302	OAB	O36-C29	-2.84	1.40	1.44
5	H	305	OOW	P-O2	2.79	1.65	1.54
5	O	301	OOW	P-O3	2.75	1.64	1.59

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
5	O	301	OOW	O36-C40	2.69	1.41	1.35
7	L	304	OAB	O36-C29	-2.62	1.40	1.44
5	O	301	OOW	P11-O19	2.62	1.64	1.54
5	M	306	OOW	P11-O19	2.61	1.64	1.54
7	L	304	OAB	O36-C40	2.60	1.41	1.35
6	L	303	OA8	P16-O18	2.52	1.64	1.54
7	P	302	OAB	O36-C40	2.48	1.40	1.35
6	P	301	OA8	P16-O18	-2.40	1.45	1.54
7	N	303	OAB	O36-C40	2.36	1.40	1.35
6	P	301	OA8	O04-C06	-2.26	1.40	1.43
6	L	303	OA8	O07-C23	2.18	1.40	1.35
7	P	302	OAB	P11-O19	-2.17	1.46	1.54
7	N	303	OAB	P11-O10	-2.13	1.46	1.54
6	N	302	OA8	O04-C03	-2.12	1.39	1.43
6	L	303	OA8	O15-C13	-2.11	1.18	1.23
5	M	306	OOW	P11-O21	-2.10	1.46	1.54
6	L	303	OA8	P16-O17	-2.09	1.46	1.54
7	L	304	OAB	P11-O19	-2.09	1.46	1.54
7	P	302	OAB	P11-O10	-2.05	1.46	1.54
7	N	303	OAB	P11-O19	-2.05	1.46	1.54
6	N	302	OA8	P16-O18	-2.05	1.47	1.54
7	L	304	OAB	P11-O10	-2.05	1.47	1.54
5	O	301	OOW	P-O2	-2.03	1.47	1.54
5	O	301	OOW	P11-O21	-2.02	1.47	1.54
5	O	301	OOW	P11-O20	2.01	1.66	1.60
5	H	305	OOW	P11-O21	-2.01	1.47	1.54
6	P	301	OA8	P16-O17	-2.00	1.47	1.54

All (67) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
7	P	302	OAB	C32-O30-C27	9.91	125.62	112.19
5	O	301	OOW	O36-C40-C42	6.43	122.93	111.09
5	M	306	OOW	O36-C40-C42	6.24	122.57	111.09
6	L	303	OA8	O07-C23-C24	5.14	120.54	111.09
7	N	303	OAB	O36-C40-C42	4.98	120.25	111.09
5	H	305	OOW	O36-C40-C42	4.96	120.21	111.09
6	N	302	OA8	O07-C23-C24	4.67	119.68	111.09
7	L	304	OAB	O36-C40-C42	4.59	119.54	111.09
6	P	301	OA8	O07-C23-C24	4.27	118.95	111.09
7	P	302	OAB	O36-C40-C42	4.14	118.71	111.09
7	L	304	OAB	C32-O30-C27	3.83	117.38	112.19

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
7	N	303	OAB	C29-O36-C40	-3.65	112.07	117.72
7	N	303	OAB	C31-N34-C37	-3.55	117.86	122.90
6	L	303	OA8	C01-O07-C23	-3.40	112.46	117.72
6	N	302	OA8	C05-N12-C13	-3.39	118.07	122.90
6	L	303	OA8	C14-C13-N12	3.33	121.74	116.10
6	N	302	OA8	C06-C05-N12	-3.33	104.80	110.49
5	H	305	OOW	C31-N34-C37	-3.27	115.23	123.18
5	M	306	OOW	O36-C40-O41	-3.16	116.69	122.96
5	O	301	OOW	C29-C28-C27	-3.12	103.01	109.66
7	P	302	OAB	O20-P11-O21	3.08	115.11	106.47
7	L	304	OAB	O20-P11-O21	3.05	115.03	106.47
5	H	305	OOW	O4-P-O1	-3.01	98.91	110.68
6	L	303	OA8	O17-P16-O09	3.00	114.72	106.73
7	N	303	OAB	O20-P11-O21	2.99	114.85	106.47
5	O	301	OOW	O36-C29-C31	2.98	113.49	107.91
7	P	302	OAB	O30-C27-C28	2.97	118.05	110.83
6	P	301	OA8	C01-O07-C23	-2.95	113.16	117.72
6	P	301	OA8	C06-C05-N12	-2.89	105.55	110.49
7	N	303	OAB	C32-O30-C27	2.89	116.10	112.19
5	O	301	OOW	O36-C40-O41	-2.86	117.28	122.96
7	L	304	OAB	O10-P11-O20	2.86	114.34	106.73
5	O	301	OOW	C31-N34-C37	-2.84	116.27	123.18
5	M	306	OOW	O3-C32-C31	2.79	113.45	108.40
5	M	306	OOW	O30-C32-C31	-2.79	105.14	110.58
7	P	302	OAB	C29-C28-C27	2.77	115.56	109.66
5	O	301	OOW	O20-P11-O10	2.76	114.22	106.47
6	P	301	OA8	C06-O04-C03	-2.76	108.45	112.19
7	N	303	OAB	O10-P11-O20	2.74	114.03	106.73
5	H	305	OOW	O36-C40-O41	-2.72	117.56	122.96
7	P	302	OAB	O10-P11-O20	2.65	113.77	106.73
6	P	301	OA8	C05-N12-C13	-2.61	119.19	122.90
6	N	302	OA8	O18-P16-O09	2.61	113.67	106.73
6	L	303	OA8	O07-C23-O25	-2.60	117.79	122.96
7	L	304	OAB	O19-P11-O20	2.54	113.48	106.73
5	M	306	OOW	C29-O36-C40	-2.48	113.89	117.72
6	L	303	OA8	C05-N12-C13	-2.42	119.45	122.90
6	L	303	OA8	O17-P16-O47	-2.42	101.20	110.68
6	L	303	OA8	C08-C03-C01	-2.42	107.34	113.33
6	P	301	OA8	C08-C03-C01	-2.35	107.52	113.33
7	N	303	OAB	C39-C37-N34	2.33	120.04	116.10
5	H	305	OOW	C39-C37-N34	2.31	120.00	116.10
5	O	301	OOW	O21-P11-O10	-2.30	101.67	110.68

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
6	N	302	OA8	C08-C03-C01	-2.28	107.67	113.33
7	P	302	OAB	C26-C27-C28	-2.25	107.41	112.09
5	O	301	OOW	O30-C27-C26	2.23	111.16	106.67
7	P	302	OAB	C39-C37-N34	2.20	119.82	116.10
7	P	302	OAB	O19-P11-O20	2.18	112.52	106.73
5	M	306	OOW	O30-C32-O3	-2.14	108.57	111.36
5	H	305	OOW	C26-C27-C28	-2.11	107.69	112.09
6	P	301	OA8	O04-C06-C05	-2.09	107.99	111.29
5	M	306	OOW	C32-O30-C27	-2.07	109.62	113.69
6	P	301	OA8	O18-P16-O17	-2.07	99.72	107.64
5	O	301	OOW	O21-P11-O20	2.03	112.14	106.73
6	N	302	OA8	C01-O07-C23	-2.03	114.58	117.72
6	L	303	OA8	C06-O04-C03	-2.01	109.47	112.19
6	L	303	OA8	O07-C01-C03	-2.01	104.18	108.22

There are no chirality outliers.

All (42) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
5	H	305	OOW	C26-O20-P11-O10
5	H	305	OOW	C26-O20-P11-O21
5	M	306	OOW	O30-C32-O3-P
5	M	306	OOW	C26-O20-P11-O21
5	O	301	OOW	O20-C26-C27-C28
5	O	301	OOW	O20-C26-C27-O30
5	O	301	OOW	C26-O20-P11-O19
5	O	301	OOW	C26-O20-P11-O21
6	P	301	OA8	C01-C03-C08-O09
6	P	301	OA8	O04-C03-C08-O09
6	P	301	OA8	C08-O09-P16-O18
7	L	304	OAB	O20-C26-C27-C28
7	L	304	OAB	O20-C26-C27-O30
7	L	304	OAB	C26-O20-P11-O10
7	L	304	OAB	C26-O20-P11-O19
7	N	303	OAB	O20-C26-C27-C28
7	N	303	OAB	O20-C26-C27-O30
5	M	306	OOW	O41-C40-O36-C29
7	N	303	OAB	C42-C40-O36-C29
5	M	306	OOW	C42-C40-O36-C29
7	L	304	OAB	C42-C40-O36-C29
5	H	305	OOW	C42-C40-O36-C29
5	H	305	OOW	O41-C40-O36-C29

Continued on next page...

Continued from previous page...

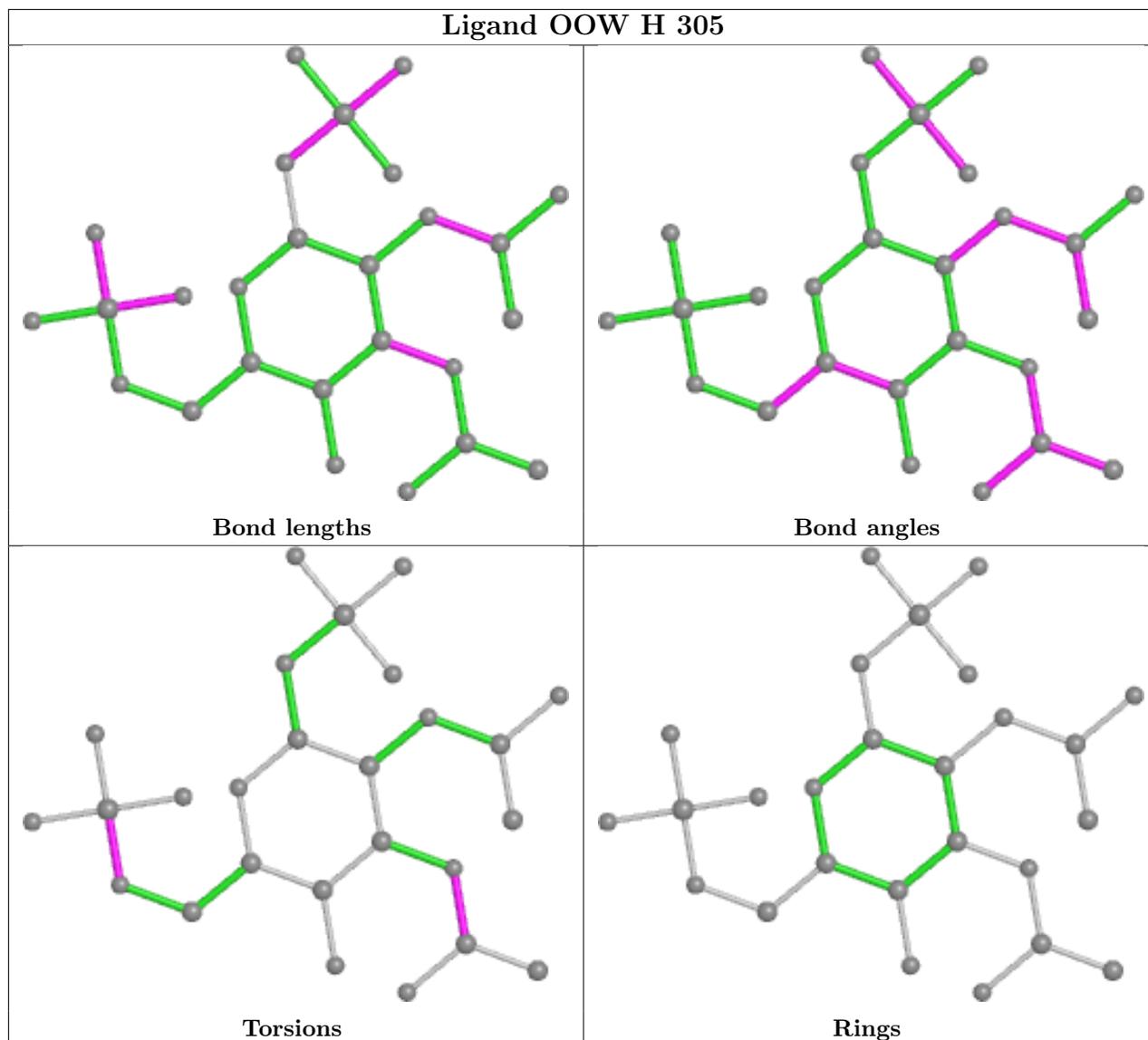
Mol	Chain	Res	Type	Atoms
5	O	301	OOW	C42-C40-O36-C29
5	O	301	OOW	O41-C40-O36-C29
7	N	303	OAB	O41-C40-O36-C29
7	L	304	OAB	C31-C29-O36-C40
7	L	304	OAB	O41-C40-O36-C29
7	L	304	OAB	C28-C29-O36-C40
4	H	303	EDO	O1-C1-C2-O2
5	M	306	OOW	C32-C31-N34-C37
5	O	301	OOW	C26-O20-P11-O10
7	L	304	OAB	C26-O20-P11-O21
7	P	302	OAB	C27-C26-O20-P11
6	N	302	OA8	C01-C03-C08-O09
7	P	302	OAB	O20-C26-C27-C28
7	N	303	OAB	C28-C29-O36-C40
7	N	303	OAB	C31-C29-O36-C40
5	H	305	OOW	C26-O20-P11-O19
6	P	301	OA8	C08-O09-P16-O17
5	M	306	OOW	C29-C31-N34-C37
5	M	306	OOW	C32-O3-P-O1

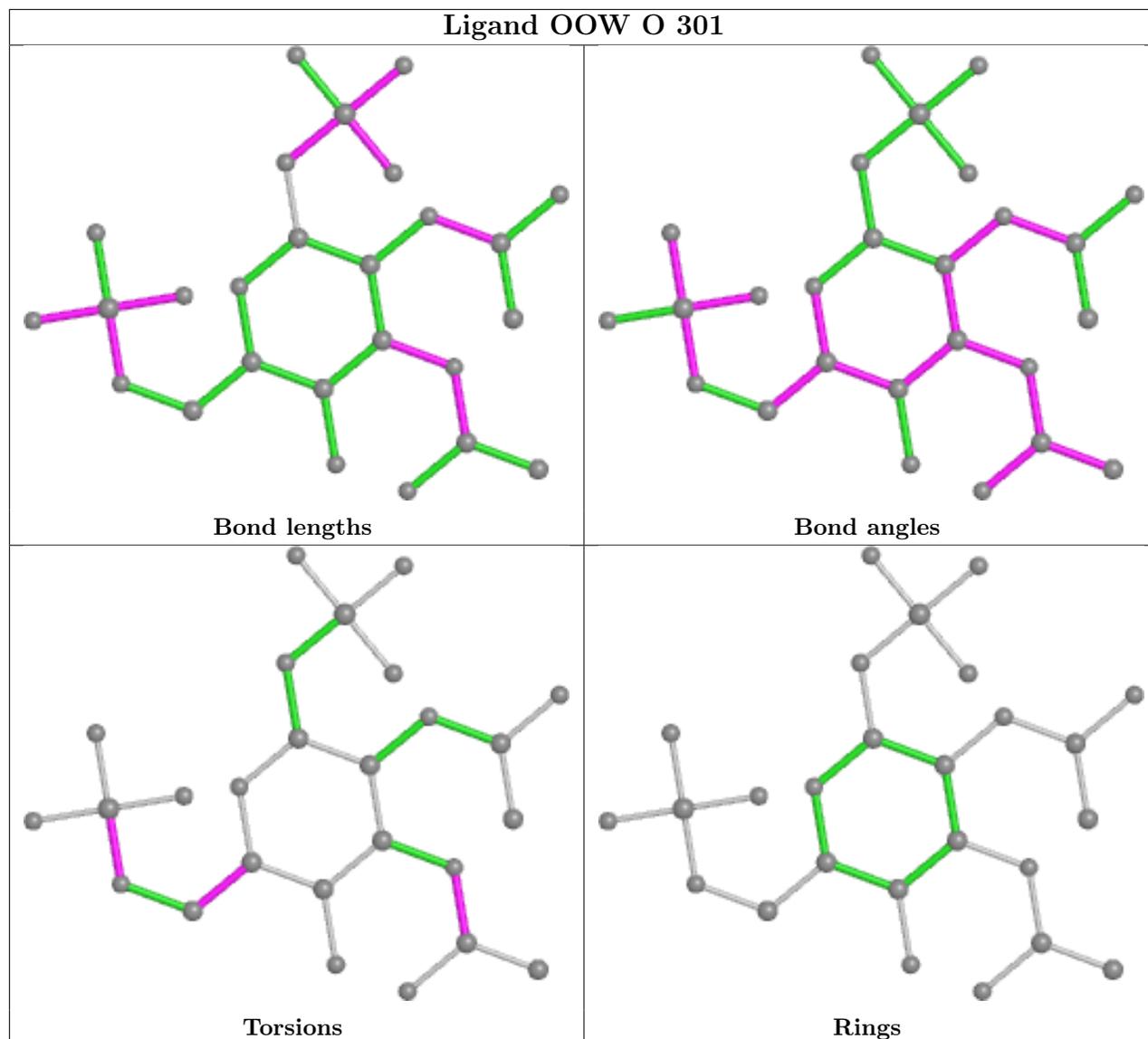
There are no ring outliers.

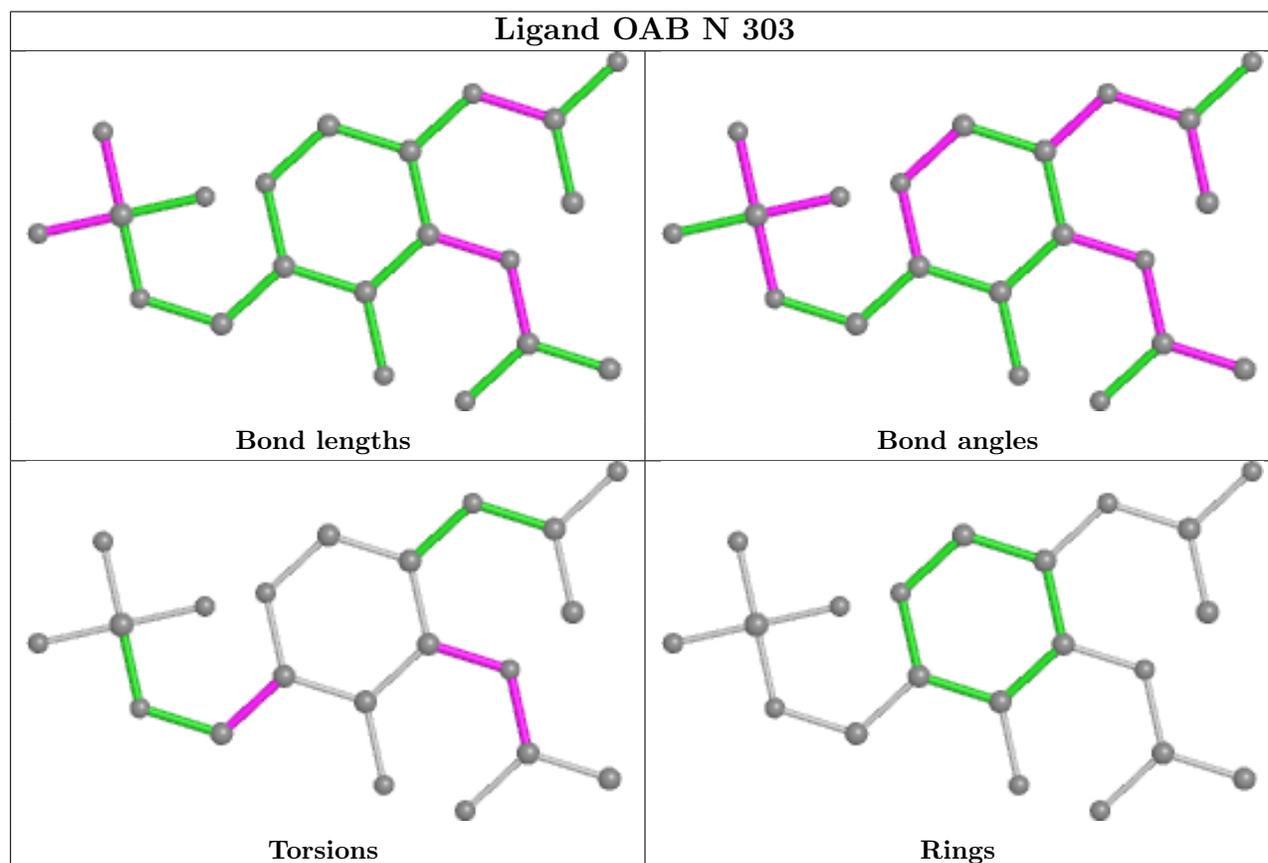
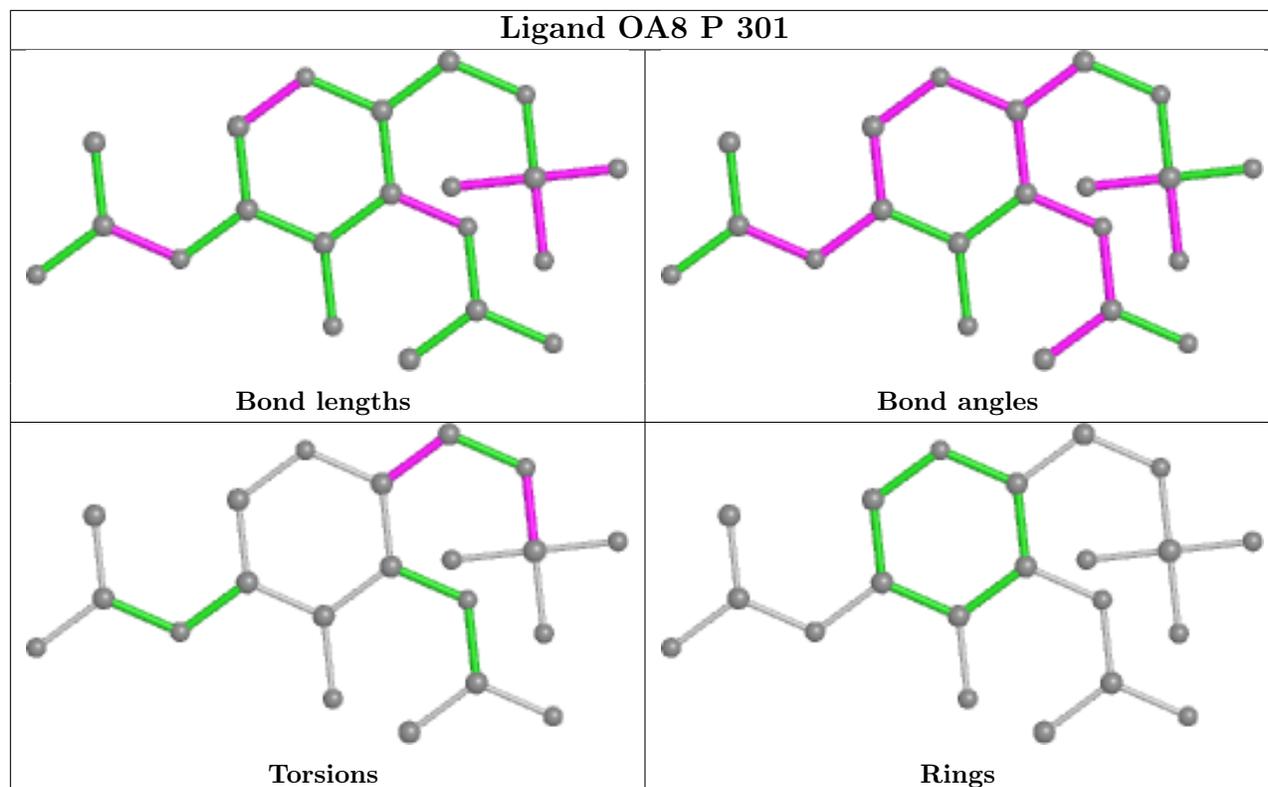
5 monomers are involved in 6 short contacts:

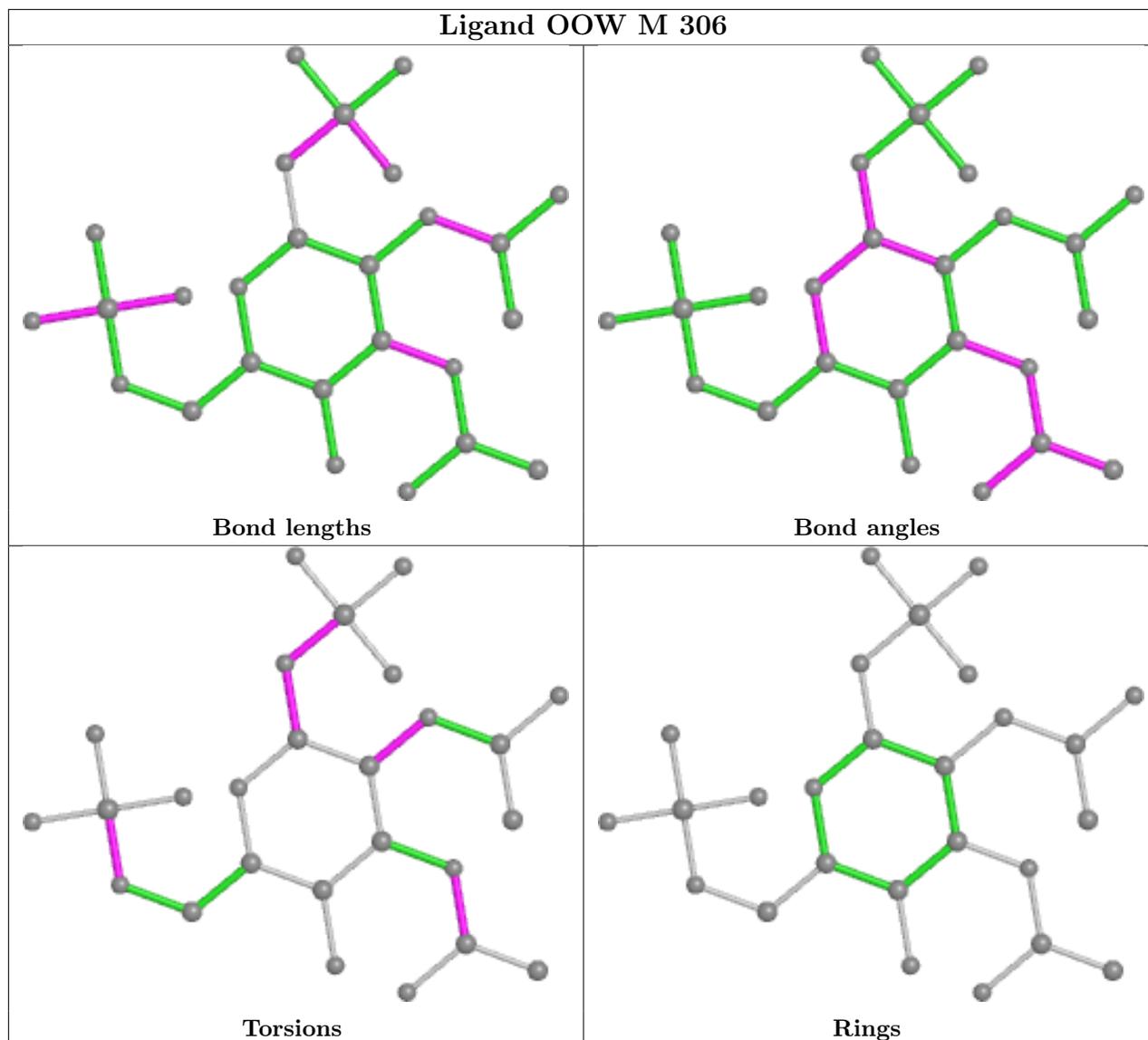
Mol	Chain	Res	Type	Clashes	Symm-Clashes
4	H	303	EDO	1	0
6	P	301	OA8	3	0
4	H	304	EDO	1	0
7	P	302	OAB	3	0
4	M	305	EDO	1	0

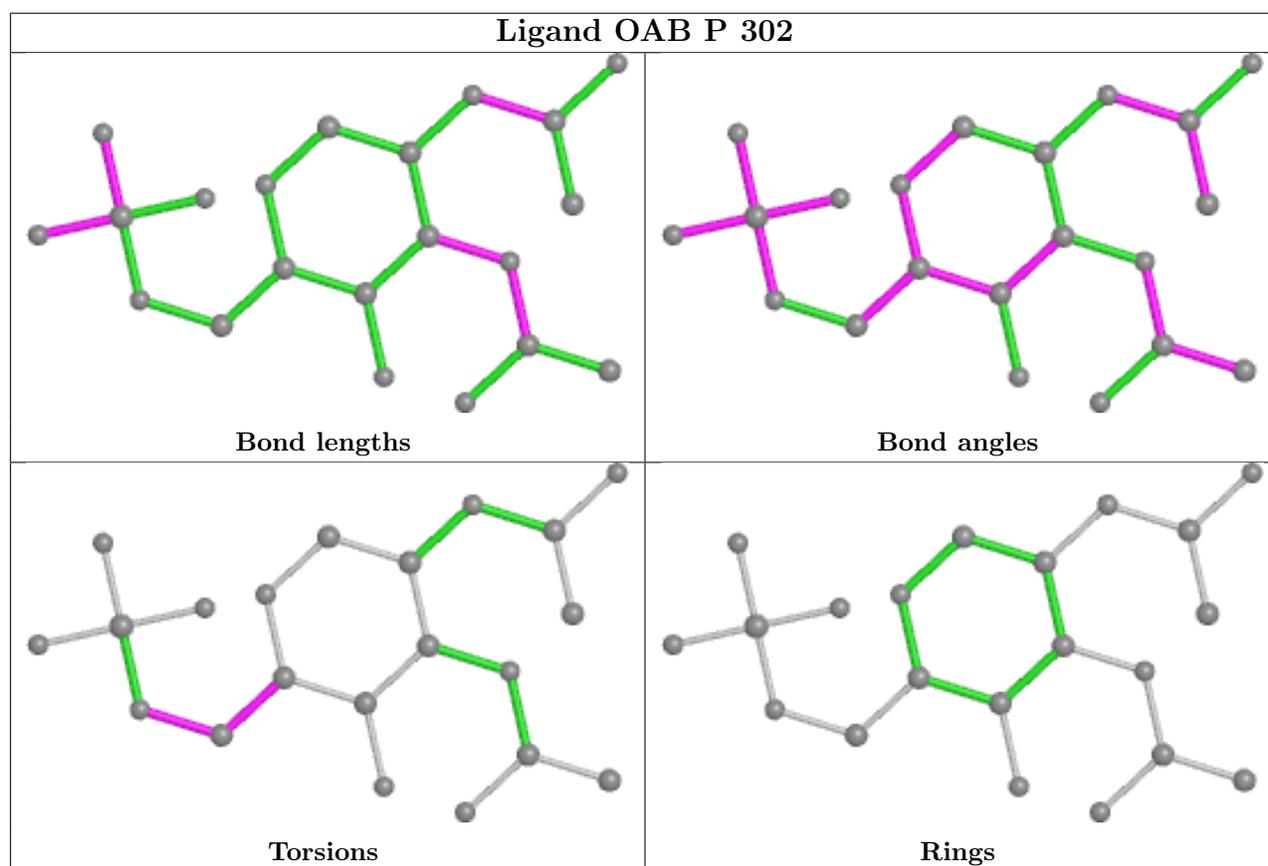
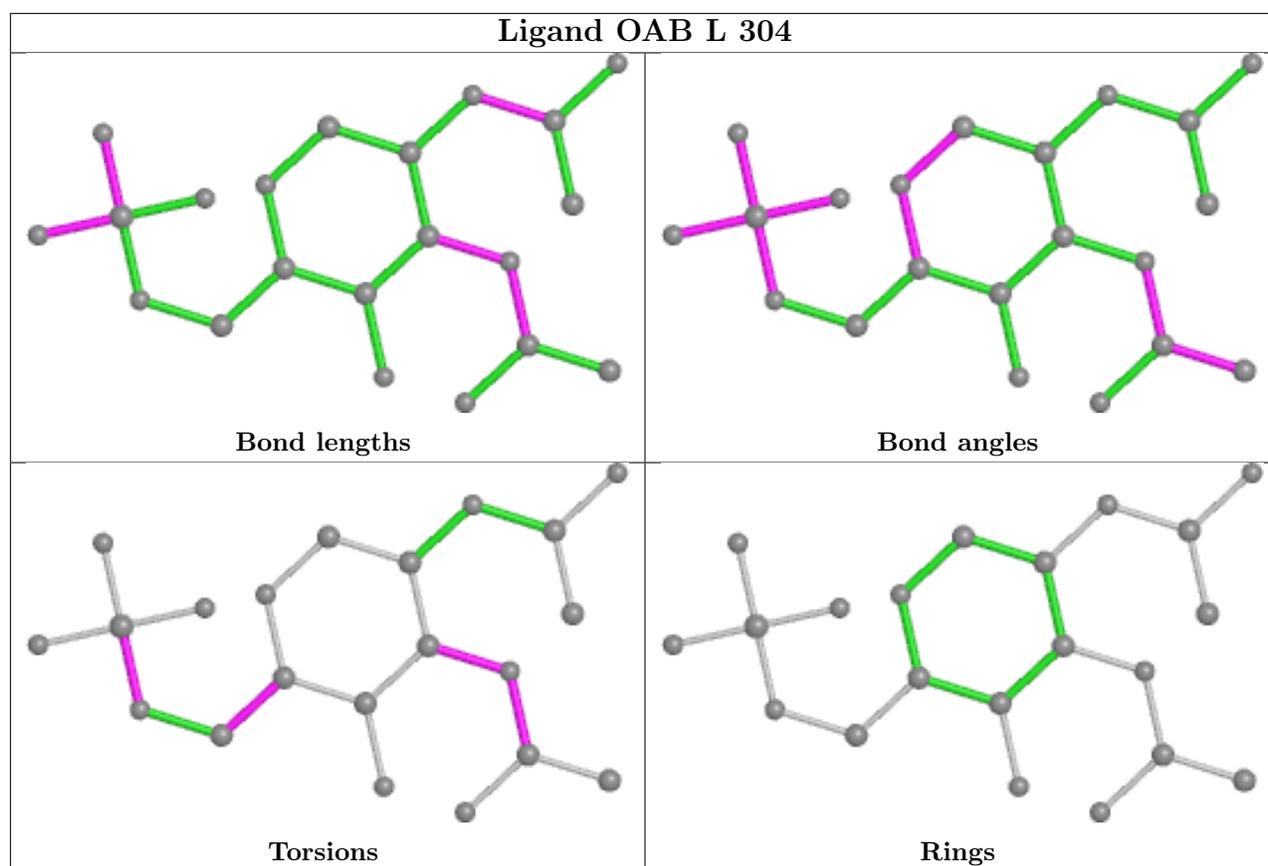
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included.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

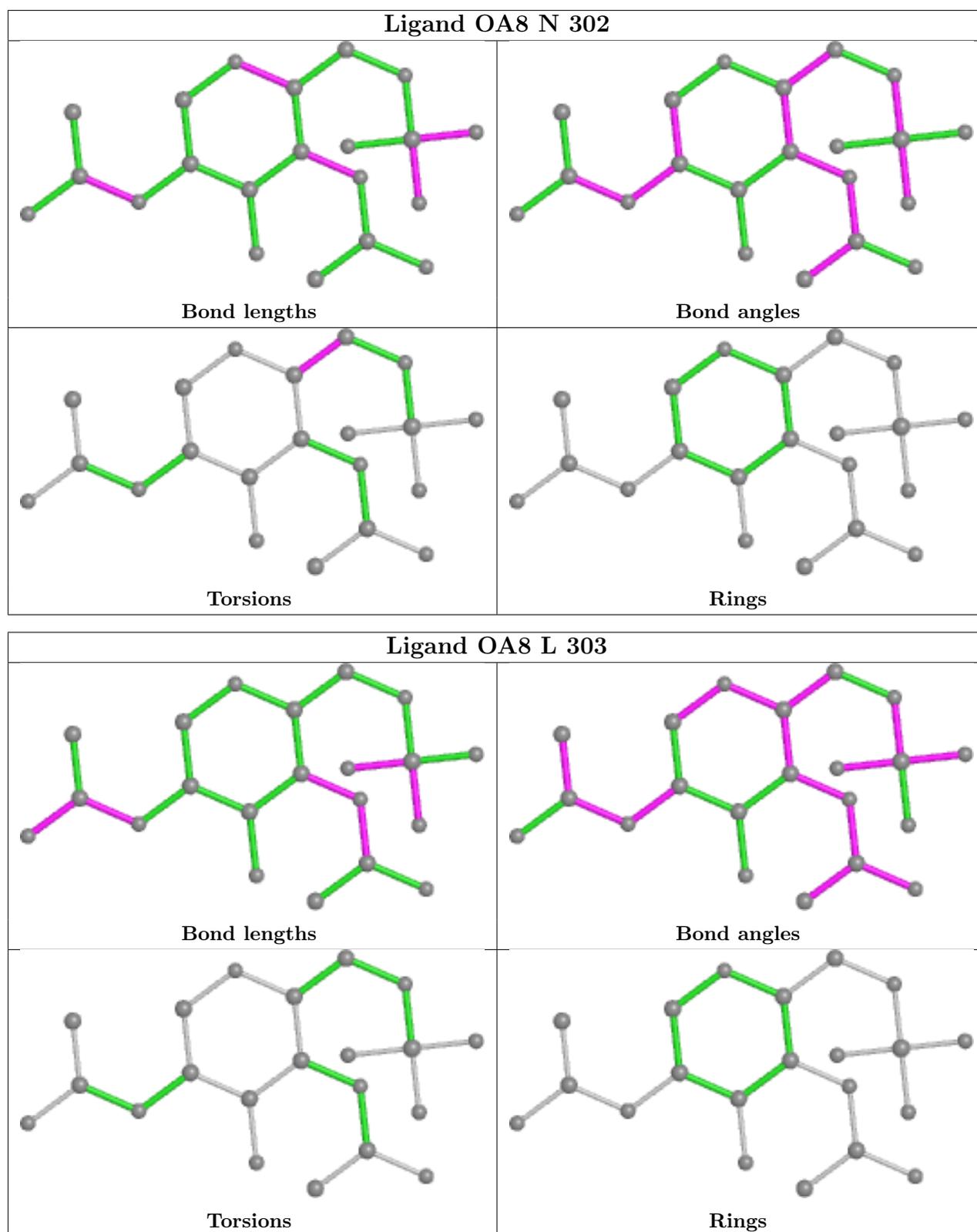












5.7 Other polymers [\(i\)](#)

There are no such residues in this entry.

5.8 Polymer linkage issues

There are no chain breaks in this entry.

6 Fit of model and data [i](#)

6.1 Protein, DNA and RNA chains [i](#)

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, 95th 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 ²)	Q<0.9
1	H	211/226 (93%)	-0.44	1 (0%) 91 92	19, 39, 64, 148	0
1	M	212/226 (93%)	-0.50	1 (0%) 91 92	23, 40, 66, 142	0
1	O	106/226 (46%)	-0.14	2 (1%) 66 67	33, 68, 112, 138	0
2	L	217/219 (99%)	-0.49	1 (0%) 91 92	24, 42, 73, 126	1 (0%)
2	N	218/219 (99%)	-0.37	1 (0%) 91 92	25, 47, 79, 116	1 (0%)
2	P	102/219 (46%)	-0.02	4 (3%) 39 37	28, 57, 102, 127	0
All	All	1066/1335 (79%)	-0.38	10 (0%) 84 85	19, 45, 91, 148	2 (0%)

All (10) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
2	P	13	VAL	4.0
1	M	43	GLN	3.0
1	H	43	GLN	2.7
2	L	1	ASP	2.6
2	P	18	GLN	2.6
1	O	11	LEU	2.5
2	P	82	ARG	2.2
2	N	71	GLY	2.2
2	P	109	LEU	2.1
1	O	32	TYR	2.1

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

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](#)

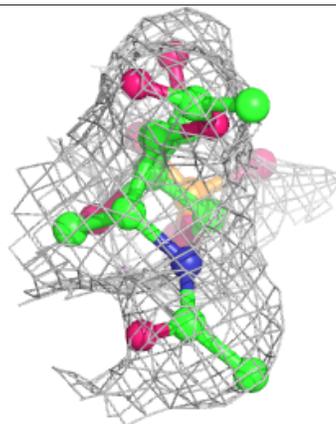
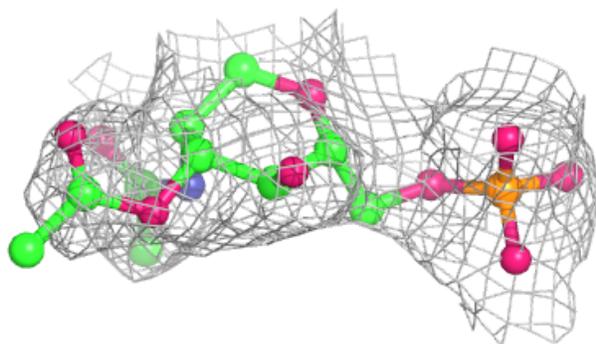
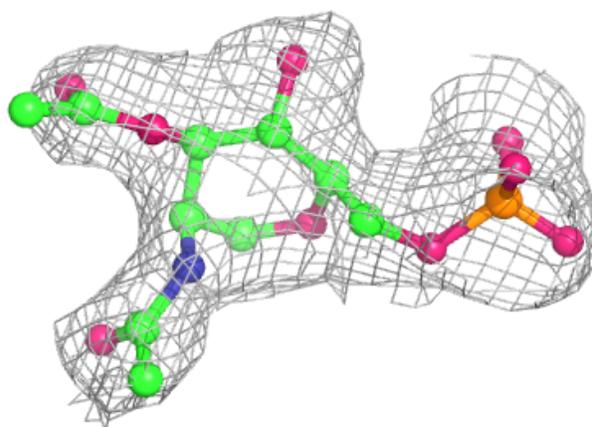
In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists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

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
4	EDO	H	304	4/4	0.89	0.15	20,20,20,20	0
7	OAB	P	302	21/22	0.89	0.24	58,85,123,133	0
7	OAB	N	303	21/22	0.94	0.13	47,65,93,109	0
7	OAB	L	304	21/22	0.94	0.23	47,69,108,126	0
3	IOD	L	302	1/1	0.95	0.08	128,128,128,128	0
4	EDO	H	303	4/4	0.96	0.13	20,20,20,20	0
4	EDO	M	305	4/4	0.97	0.13	20,20,20,20	0
5	OOW	O	301	26/26	0.97	0.14	37,49,76,89	0
6	OA8	P	301	21/22	0.97	0.14	36,45,56,64	0
6	OA8	N	302	21/22	0.98	0.12	24,38,47,54	0
5	OOW	H	305	26/26	0.98	0.11	25,36,50,66	0
5	OOW	M	306	26/26	0.98	0.11	26,37,65,73	0
3	IOD	M	304	1/1	0.98	0.05	58,58,58,58	1
6	OA8	L	303	21/22	0.98	0.12	27,31,43,51	0
3	IOD	M	301	1/1	0.99	0.12	37,37,37,37	1
3	IOD	M	302	1/1	0.99	0.08	38,38,38,38	1
3	IOD	M	303	1/1	0.99	0.13	59,59,59,59	1
3	IOD	L	301	1/1	0.99	0.13	41,41,41,41	0
3	IOD	H	301	1/1	1.00	0.12	46,46,46,46	1
3	IOD	H	302	1/1	1.00	0.11	61,61,61,61	1
3	IOD	N	301	1/1	1.00	0.13	43,43,43,43	0

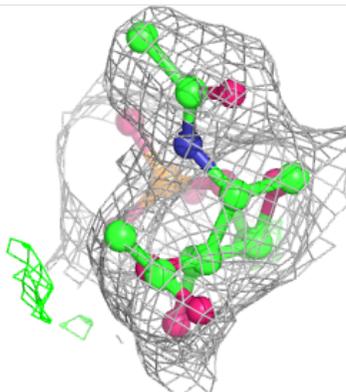
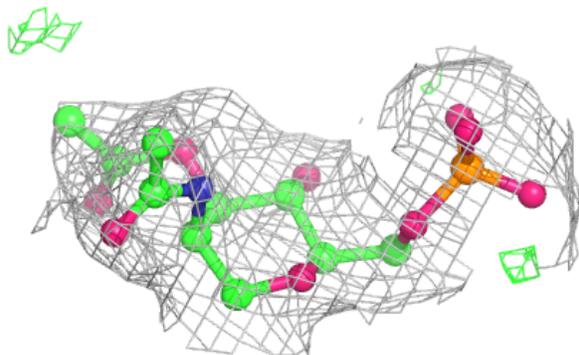
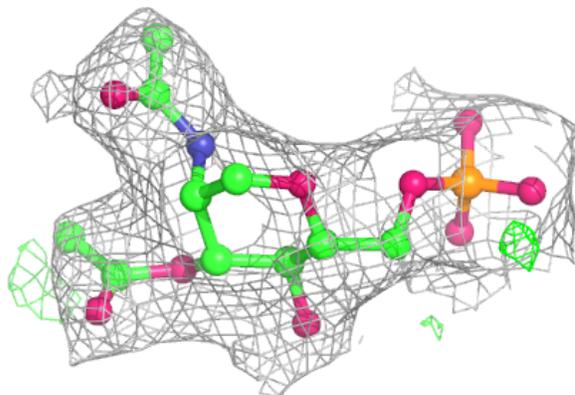
The following is a graphical depiction of the model fit to experimental electron density of all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation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

Electron density around OAB P 302:

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

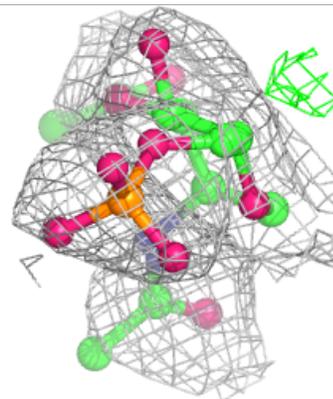
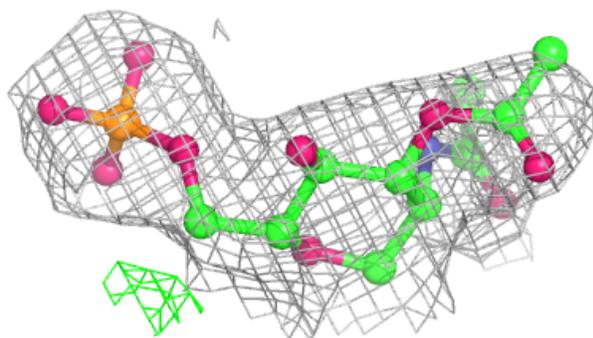
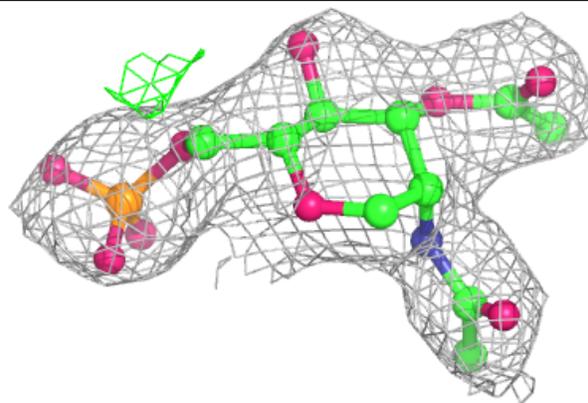
**Electron density around OAB N 303:**

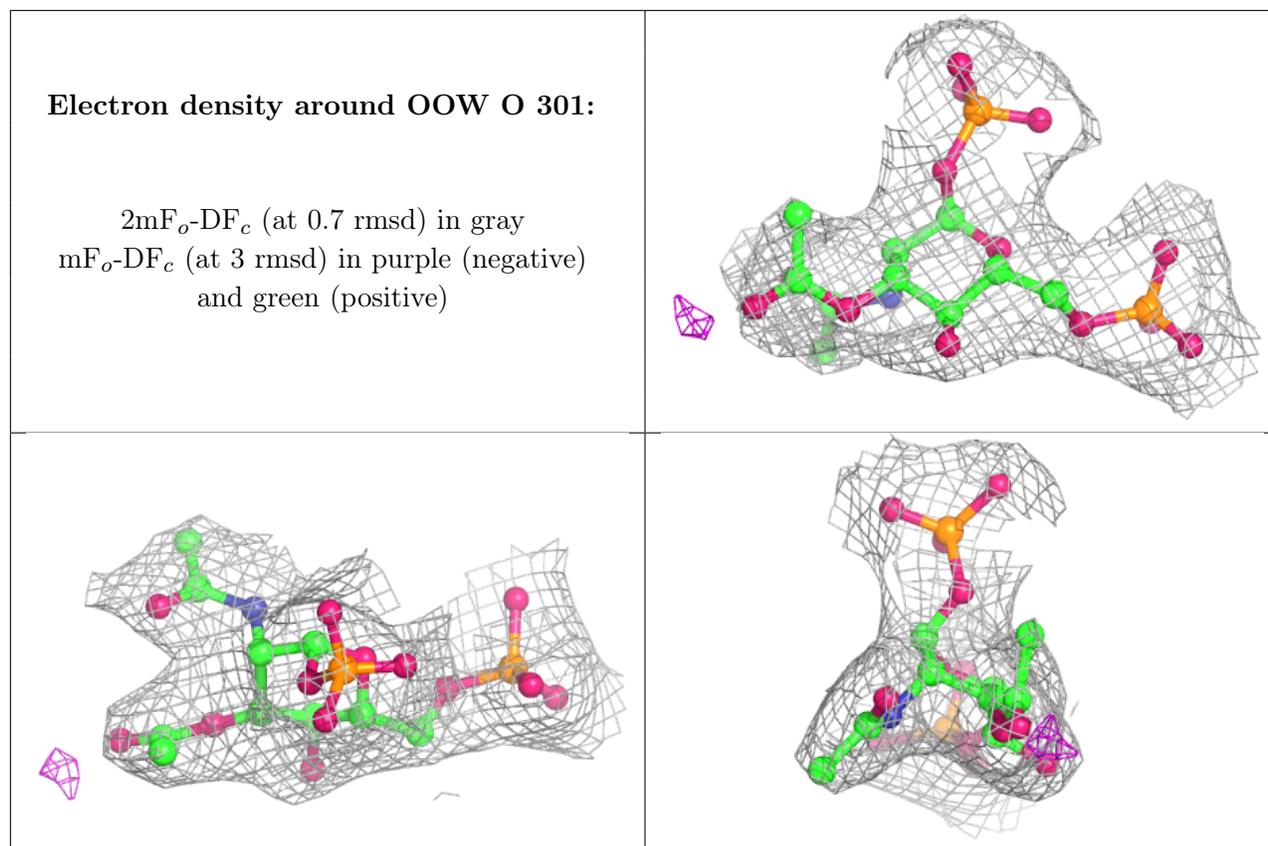
$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



Electron density around OAB L 304:

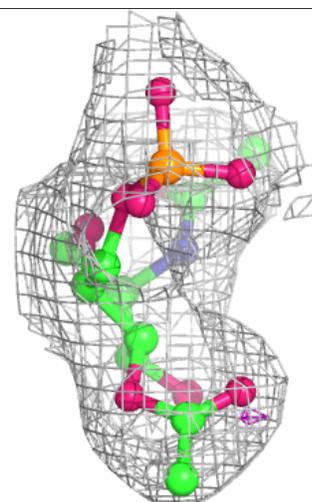
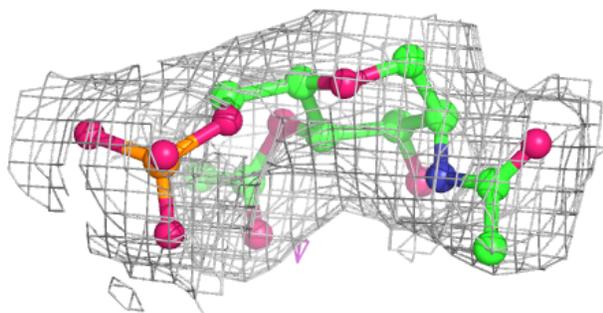
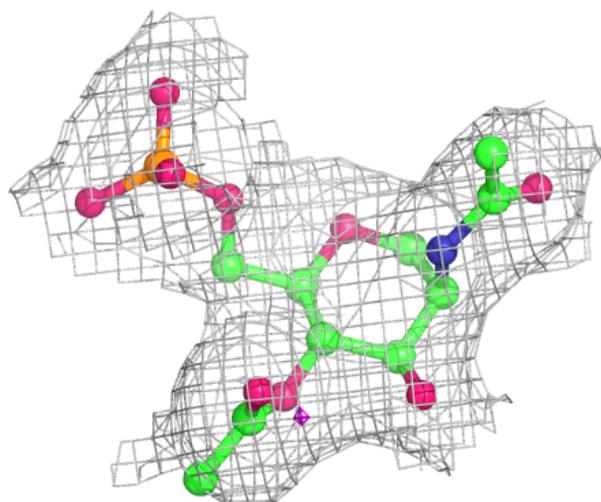
$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)





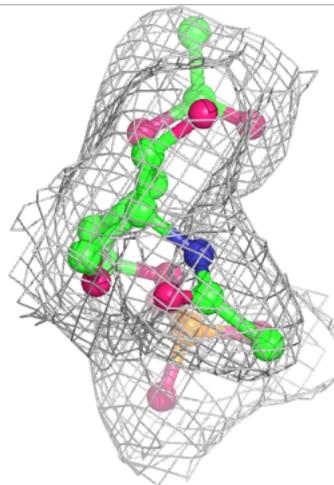
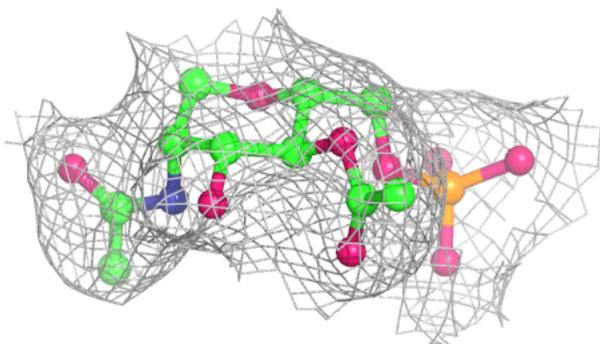
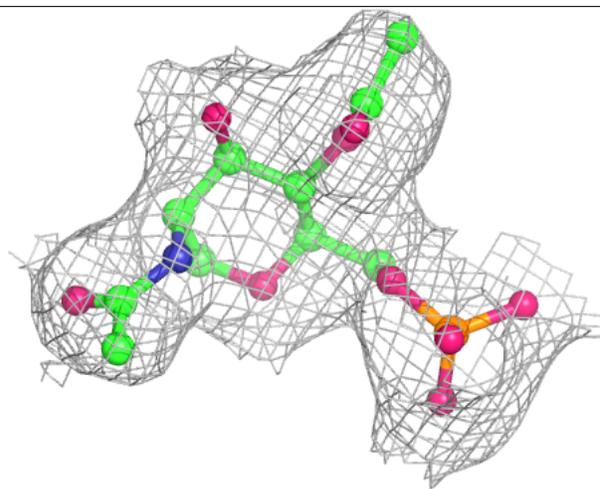
Electron density around OA8 P 301:

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



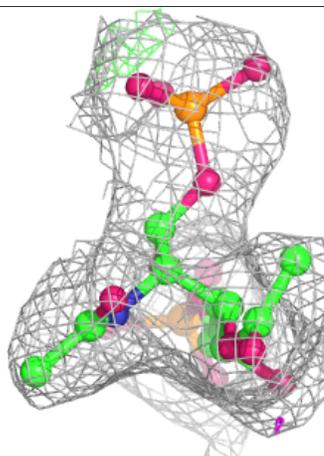
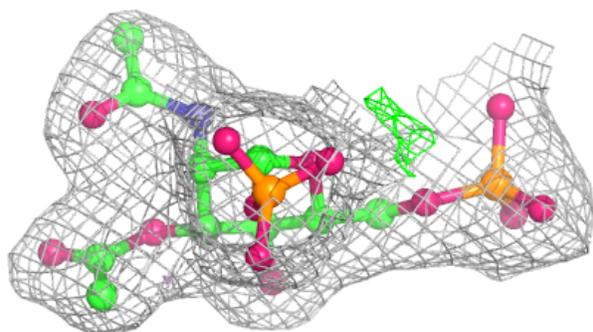
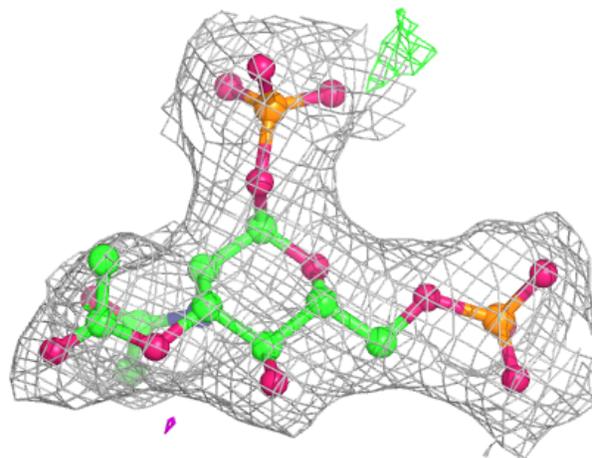
Electron density around OA8 N 302:

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



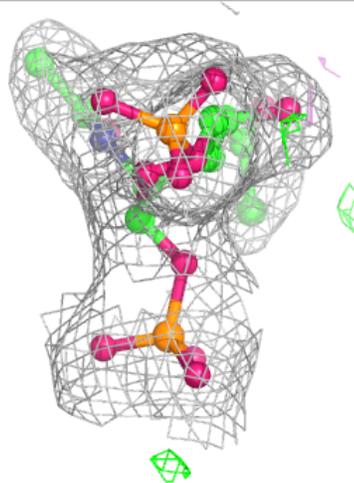
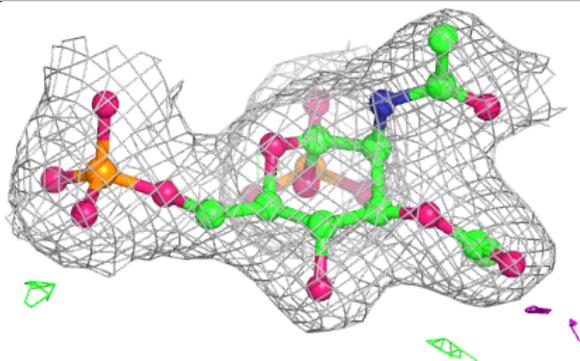
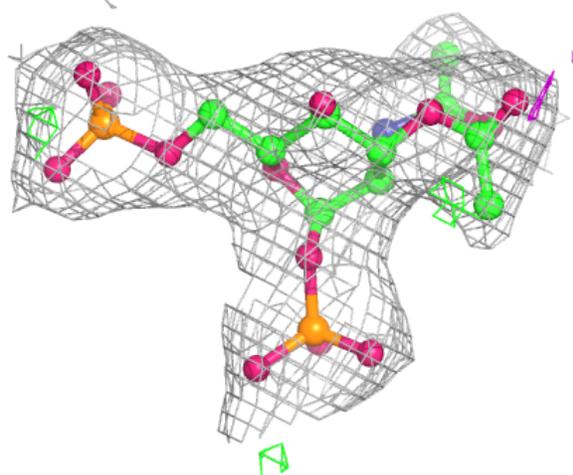
Electron density around OOW H 305:

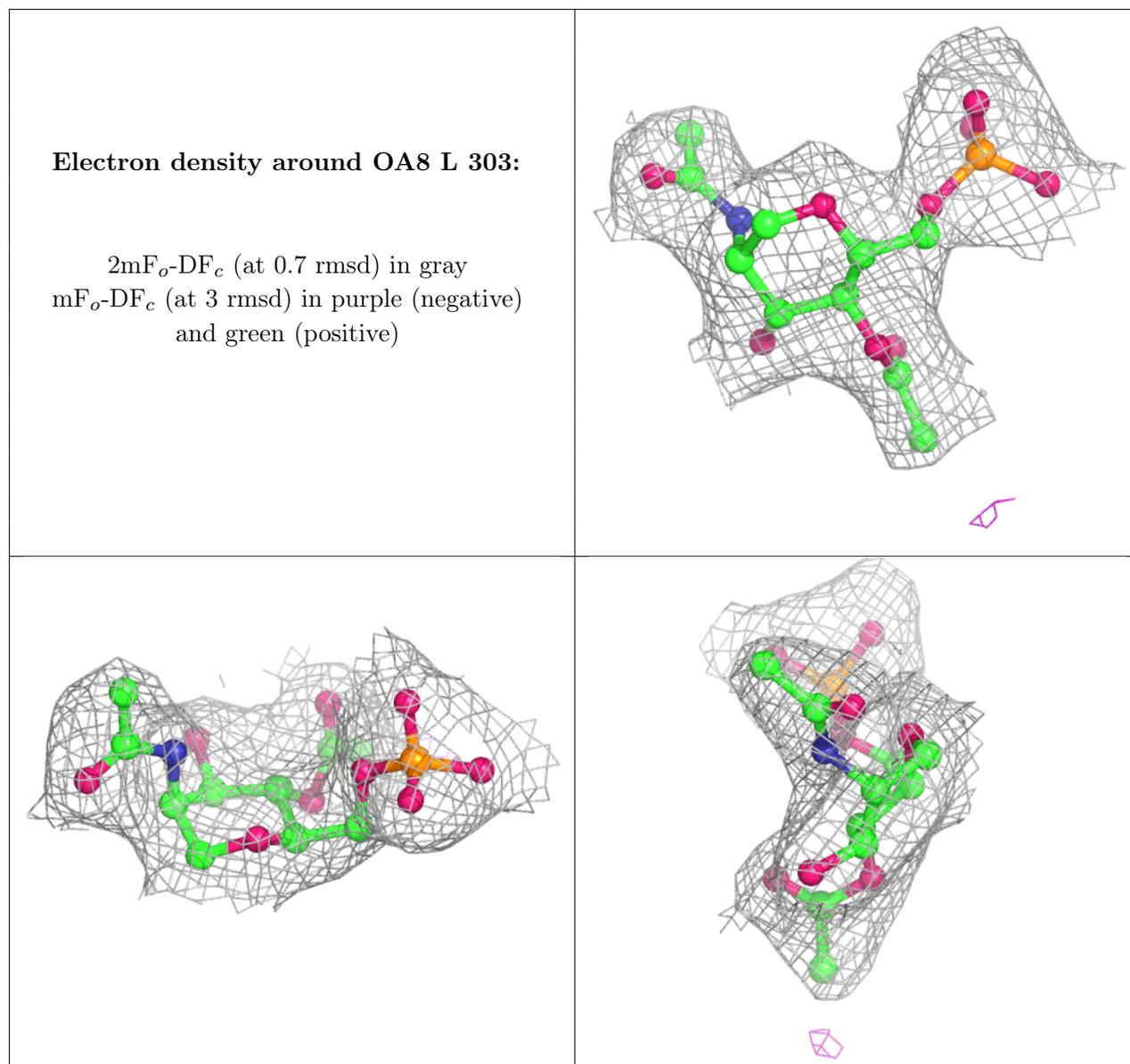
$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



Electron density around OOW M 306:

$2mF_o-DF_c$ (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.