Full wwPDB X-ray Structure Validation Report ⓘ

Nov 29, 2022 – 12:20 AM EST

PDB ID	:	7T1W
Title	:	Crystal structure of human Fab A194-01 in complex with its synthetic tetrasaccharide Ara4 epitope (BSI110886)
Authors	:	Seattle Structural Genomics Center for Infectious Disease (SSGCID)
Deposited on	:	2021-12-02
Resolution	:	2.45 Å(reported)

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

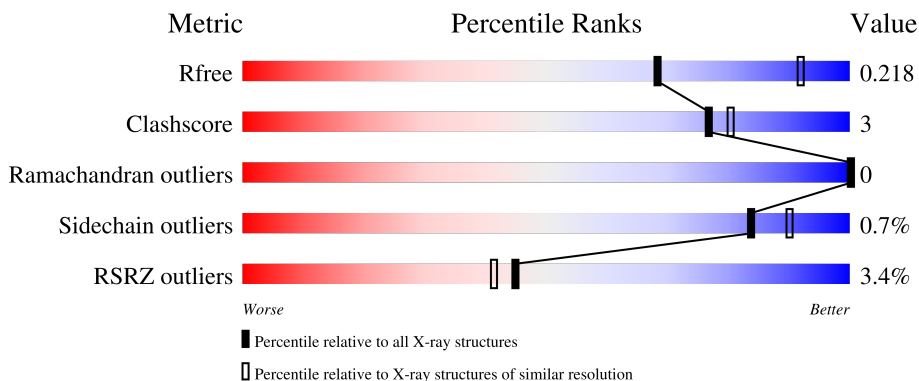|		
MolProbity	:	4.02b-467
Mogul	:	1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix)	:	1.13
EDS	:	2.31.2
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.31.2

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 2.45 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.
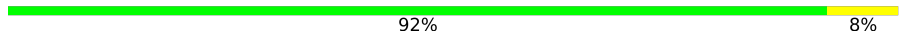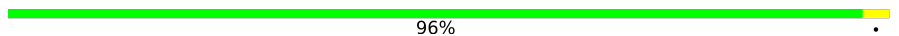
Metric	Percentile Ranks	Value
Rfree		0.218
Clashscore		3
Ramachandran outliers		0
Sidechain outliers		0.7%
RSRZ outliers		3.4%

Worse   *Better*

▌ Percentile relative to all X-ray structures

❚ Percentile relative to X-ray structures of similar resolution
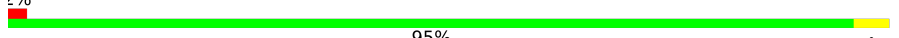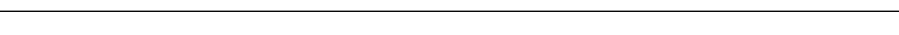
Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R$_{free}$	130704	1544 (2.48-2.44)
Clashscore	141614	1613 (2.48-2.44)
Ramachandran outliers	138981	1598 (2.48-2.44)
Sidechain outliers	138945	1598 (2.48-2.44)
RSRZ outliers	127900	1523 (2.48-2.44)

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 <=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	228	90% • 5%
1	H2	228	2% 85% 11% 5%
1	H3	228	8% 83% 11% 6%
1	H4	228	86% 9% 5%
1	H5	228	9% 85% 10% 5%

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Mol	Chain	Length	Quality of chain
2	L	213	92%　　　　8%
2	L2	213	96%　　　・
2	L3	213	9%　　92%　　8%
2	L4	213	%　　93%　　7%
2	L5	213	2%　　95%　　・
3	A	4	100%
3	B	4	50%　　50%
3	C	4	50%　　50%
3	D	4	75%　　25%
3	E	4	25%　　75%

The following table lists non-polymeric compounds, carbohydrate monomers and non-standard residues in protein, DNA, RNA chains that are outliers for geometric or electron-density-fit criteria:

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
3	BXY	B	1	-	-	-	X
3	BXY	C	1	-	-	-	X

2 Entry composition ⓘ

There are 6 unique types of molecules in this entry. The entry contains 17570 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 A194-01 heavy chain.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	H	216	Total	C	N	O	S	0	3	0
			1648	1042	280	319	7			
1	H2	217	Total	C	N	O	S	0	2	0
			1631	1031	272	321	7			
1	H3	215	Total	C	N	O	S	0	0	0
			1571	991	263	310	7			
1	H4	217	Total	C	N	O	S	0	1	0
			1640	1039	276	318	7			
1	H5	217	Total	C	N	O	S	0	0	0
			1594	1007	265	315	7			

- Molecule 2 is a protein called Fab A194-01 light chain.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	L	213	Total	C	N	O	S	0	1	0
			1624	1014	281	324	5			
2	L2	213	Total	C	N	O	S	0	2	0
			1634	1024	281	324	5			
2	L3	213	Total	C	N	O	S	0	2	0
			1609	1004	281	319	5			
2	L4	212	Total	C	N	O	S	0	1	0
			1615	1008	279	323	5			
2	L5	213	Total	C	N	O	S	0	0	0
			1602	1000	277	320	5			

- Molecule 3 is an oligosaccharide called beta-D-arabinofuranose-(1-2)-alpha-D-arabinofurano se-(1-5)-alpha-D-arabinofuranose-(1-5)-alpha-D-arabinofuranose.

Mol	Chain	Residues	Atoms			ZeroOcc	AltConf	Trace
3	A	4	Total 37	C 20	O 17	0	0	0
3	B	4	Total 37	C 20	O 17	0	0	0
3	C	4	Total 37	C 20	O 17	0	0	0
3	D	4	Total 46	C 25	O 21	0	1	0
3	E	4	Total 37	C 20	O 17	0	0	0

- Molecule 4 is 1,2-ETHANEDIOL (three-letter code: EDO) (formula: $C_2H_6O_2$).
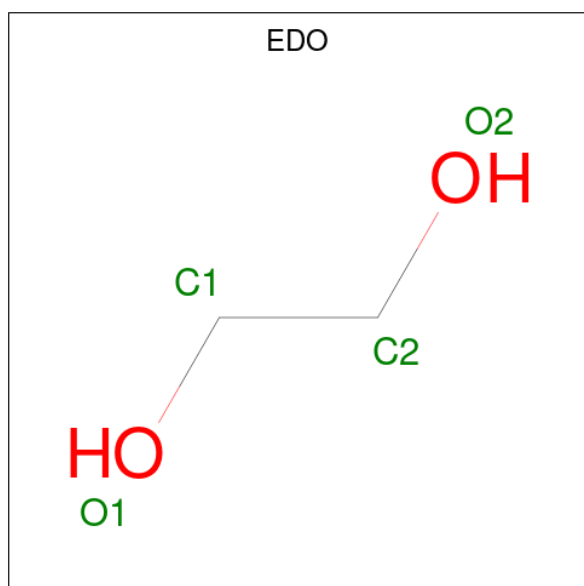
Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
4	H	1	Total 4	C 2	O 2	0	0
4	H	1	Total 8	C 4	O 4	0	1
4	L	1	Total 4	C 2	O 2	0	0
4	H2	1	Total 4	C 2	O 2	0	0
4	H2	1	Total 4	C 2	O 2	0	0
4	H3	1	Total 4	C 2	O 2	0	0
4	H3	1	Total 4	C 2	O 2	0	0

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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
4	L3	1	Total 4	C 2	O 2	0	0
4	L3	1	Total 4	C 2	O 2	0	0
4	H4	1	Total 4	C 2	O 2	0	0
4	H4	1	Total 4	C 2	O 2	0	0
4	L4	1	Total 4	C 2	O 2	0	0
4	H5	1	Total 4	C 2	O 2	0	0

- Molecule 5 is CITRIC ACID (three-letter code: CIT) (formula: $C_6H_8O_7$).
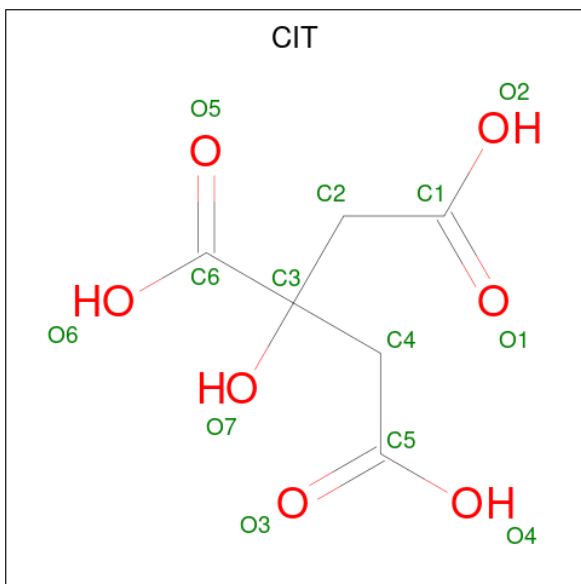
Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
5	L4	1	Total 13	C 6	O 7	0	0

- Molecule 6 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
6	H	141	Total 143	O 143	0	2
6	L	167	Total 168	O 168	0	1

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
6	H2	94	Total 94	O 94	0	0
6	L2	110	Total 110	O 110	0	0
6	H3	59	Total 59	O 59	0	0
6	L3	98	Total 98	O 98	0	0
6	H4	152	Total 156	O 156	0	4
6	L4	111	Total 111	O 111	0	0
6	H5	107	Total 107	O 107	0	0
6	L5	92	Total 93	O 93	0	1

3 Residue-property plots ⓘ

These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and 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: Fab A194-01 heavy chain

Chain H:

• Molecule 1: Fab A194-01 heavy chain

Chain H2:
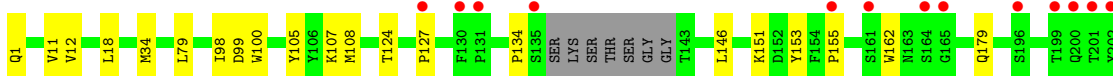
• Molecule 1: Fab A194-01 heavy chain

Chain H3:

• Molecule 1: Fab A194-01 heavy chain
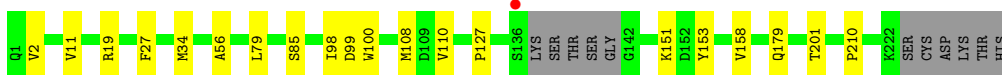
Chain H4:

• Molecule 1: Fab A194-01 heavy chain

Chain H5:
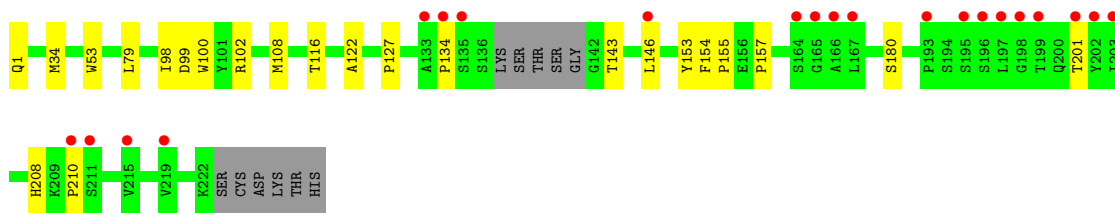
• Molecule 2: Fab A194-01 light chain

Chain L:

• Molecule 2: Fab A194-01 light chain

Chain L2:

• Molecule 2: Fab A194-01 light chain
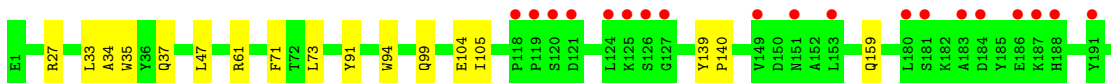
Chain L3:

• Molecule 2: Fab A194-01 light chain

Chain L4:

• Molecule 2: Fab A194-01 light chain

Chain L5:

• Molecule 3: beta-D-arabinofuranose-(1-2)-alpha-D-arabinofuranose-(1-5)-alpha-D-arabinofuranose-(1-5)-alpha-D-arabinofuranose

Chain A:

100%

BXY1 BXY2 BXY3 BXX4

• Molecule 3: beta-D-arabinofuranose-(1-2)-alpha-D-arabinofuranose-(1-5)-alpha-D-arabinofuranose-(1-5)-alpha-D-arabinofuranose

Chain B:

50%   50%

BXY1 BXY2 BXY3 BXX4

• Molecule 3: beta-D-arabinofuranose-(1-2)-alpha-D-arabinofuranose-(1-5)-alpha-D-arabinofuranose-(1-5)-alpha-D-arabinofuranose

Chain C:

50%   50%

BXY1 BXY2 BXY3 BXX4

• Molecule 3: beta-D-arabinofuranose-(1-2)-alpha-D-arabinofuranose-(1-5)-alpha-D-arabinofuranose-(1-5)-alpha-D-arabinofuranose

Chain D:

75%   25%

BXY1 BXY2 BXY3 BXX4

• Molecule 3: beta-D-arabinofuranose-(1-2)-alpha-D-arabinofuranose-(1-5)-alpha-D-arabinofuranose-(1-5)-alpha-D-arabinofuranose

Chain E:

25%   75%

BXY1 BXY2 BXY3 BXX4

4 Data and refinement statistics ⓘ

Property	Value	Source
Space group	P 1 21 1	Depositor
Cell constants a, b, c, α, β, γ	85.62Å 149.01Å 114.53Å 90.00° 99.51° 90.00°	Depositor
Resolution (Å)	45.47 – 2.45 48.25 – 2.45	Depositor EDS
% Data completeness (in resolution range)	99.0 (45.47-2.45) 99.0 (48.25-2.45)	Depositor EDS
R_{merge}	0.09	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	2.08 (at 2.45Å)	Xtriage
Refinement program	PHENIX 1.18rc1 3776	Depositor
R, R_{free}	0.168 , 0.218 0.168 , 0.218	Depositor DCC
R_{free} test set	1983 reflections (1.93%)	wwPDB-VP
Wilson B-factor (Å^2)	36.1	Xtriage
Anisotropy	0.342	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.31 , 52.8	EDS
L-test for twinning[2]	$< |L| > = 0.50, < L^2 > = 0.33$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.95	EDS
Total number of atoms	17570	wwPDB-VP
Average B, all atoms (Å^2)	48.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 3.43% of the height of the origin peak. No significant pseudotranslation is detected.*

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[1]Intensities estimated from amplitudes.
[2]Theoretical values of $< |L| >$, $< L^2 >$ 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: CIT, EDO, BXY, BXX

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	0.31	0/1694	0.55	0/2306
1	H2	0.31	0/1677	0.54	0/2288
1	H3	0.30	0/1611	0.53	0/2204
1	H4	0.32	0/1683	0.54	0/2292
1	H5	0.31	0/1634	0.54	0/2234
2	L	0.32	0/1663	0.55	0/2263
2	L2	0.30	0/1676	0.52	0/2278
2	L3	0.29	0/1651	0.54	0/2250
2	L4	0.32	0/1654	0.52	0/2252
2	L5	0.30	0/1638	0.53	0/2232
All	All	0.31	0/16581	0.54	0/22599

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	H	1648	0	1601	5	0
1	H2	1631	0	1560	14	0
1	H3	1571	0	1448	13	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	H4	1640	0	1594	11	0
1	H5	1594	0	1491	12	0
2	L	1624	0	1549	11	0
2	L2	1634	0	1580	5	0
2	L3	1609	0	1517	10	0
2	L4	1615	0	1536	8	0
2	L5	1602	0	1510	7	0
3	A	37	0	31	0	0
3	B	37	0	31	0	0
3	C	37	0	31	0	0
3	D	46	0	40	2	0
3	E	37	0	31	0	0
4	H	12	0	18	0	0
4	H2	8	0	12	1	0
4	H3	8	0	12	0	0
4	H4	8	0	12	1	0
4	H5	4	0	6	0	0
4	L	4	0	6	0	0
4	L3	8	0	12	1	0
4	L4	4	0	6	0	0
5	L4	13	0	5	1	0
6	H	143	0	0	1	1
6	H2	94	0	0	2	0
6	H3	59	0	0	1	0
6	H4	156	0	0	1	0
6	H5	107	0	0	2	0
6	L	168	0	0	1	0
6	L2	110	0	0	0	0
6	L3	98	0	0	2	1
6	L4	111	0	0	0	0
6	L5	93	0	0	1	0
All	All	17570	0	15639	97	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 3.

All (97) 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:H2:72:ARG:HG3	4:H2:502:EDO:H11	1.69	0.75
1:H2:1:GLN:N	6:H2:601:HOH:O	2.17	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H3:11:VAL:HG22	1:H3:155:PRO:HG3	1.71	0.71
1:H:134:PRO:HG3	1:H:146:LEU:HB3	1.71	0.71
1:H5:134:PRO:HG3	1:H5:146:LEU:HB3	1.74	0.70
1:H3:1:GLN:N	6:H3:601:HOH:O	2.23	0.70
1:H3:134:PRO:HG3	1:H3:146:LEU:HB3	1.74	0.68
1:H:1:GLN:N	6:H:601:HOH:O	2.28	0.67
2:L3:159:GLN:OE1	6:L3:401:HOH:O	2.15	0.65
1:H2:125:LYS:NZ	6:H2:602:HOH:O	2.27	0.64
2:L3:61:ARG:HH21	4:L3:302:EDO:H11	1.64	0.63
1:H4:151:LYS:NZ	1:H4:179:GLN:OE1	2.32	0.63
2:L2:189:LYS:HD2	2:L2:209:ASN:HB3	1.81	0.62
2:L2:13[B]:VAL:HG21	2:L2:19:ALA:HB2	1.82	0.61
2:L4:77:SER:HB3	2:L4:79[B]:ARG:HH21	1.64	0.60
2:L5:99:GLN:NE2	6:L5:301:HOH:O	2.36	0.58
1:H5:98:ILE:O	1:H5:108:MET:HA	2.05	0.56
1:H3:99:ASP:OD1	1:H3:100:TRP:N	2.33	0.53
1:H3:208:HIS:CD2	1:H3:210:PRO:HD2	2.44	0.53
1:H3:12:VAL:HG21	1:H3:18:LEU:HB2	1.90	0.52
2:L3:37:GLN:HB2	2:L3:47:LEU:HD11	1.93	0.51
1:H5:1:GLN:N	6:H5:601:HOH:O	2.08	0.50
1:H2:127:PRO:HB3	1:H2:153:TYR:HB3	1.93	0.50
1:H:11:VAL:HG22	1:H:155:PRO:HG3	1.95	0.48
1:H2:134:PRO:HG3	1:H2:146:LEU:HB3	1.96	0.48
1:H3:127:PRO:HB3	1:H3:153:TYR:HB3	1.94	0.48
1:H:127:PRO:HB3	1:H:153:TYR:HB3	1.95	0.48
2:L:91:TYR:HA	2:L:94:TRP:O	2.14	0.48
1:H4:11:VAL:HG21	1:H4:210:PRO:HB3	1.96	0.47
1:H4:56:ALA:O	3:D:1[A]:BXY:O2	2.33	0.47
2:L:194:GLU:OE1	6:L:401:HOH:O	2.20	0.47
1:H5:127:PRO:HB3	1:H5:153:TYR:HB3	1.97	0.47
1:H2:99:ASP:OD2	1:H2:100:TRP:N	2.43	0.47
1:H4:2:VAL:HG13	1:H4:27:PHE:CD1	2.50	0.47
2:L2:15:PRO:HD3	2:L2:106:LYS:O	2.15	0.46
2:L5:99:GLN:H	2:L5:99:GLN:CD	2.17	0.46
1:H2:12:VAL:HG11	1:H2:86:LEU:HD13	1.96	0.46
2:L5:33:LEU:HD22	2:L5:71:PHE:CG	2.50	0.46
2:L:33:LEU:HD22	2:L:71:PHE:CG	2.51	0.46
2:L3:33:LEU:HD22	2:L3:71:PHE:CG	2.51	0.46
1:H4:19:ARG:NH1	6:H4:601:HOH:O	2.24	0.46
2:L3:27:ARG:NH1	6:L3:406:HOH:O	2.48	0.46
1:H5:34:MET:HB3	1:H5:79:LEU:HD22	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H2:34:MET:HB3	1:H2:79:LEU:HD22	1.97	0.45
2:L4:13:VAL:HG13	2:L4:78:ILE:HG21	1.98	0.45
1:H3:124:THR:HG22	1:H3:211:SER:HB3	1.98	0.45
1:H2:98:ILE:O	1:H2:108:MET:HA	2.16	0.45
1:H5:116:THR:HG21	1:H5:157:PRO:HD3	1.98	0.45
2:L2:99:GLN:CD	2:L2:99:GLN:H	2.20	0.45
1:H3:98:ILE:O	1:H3:108:MET:HA	2.16	0.45
2:L:37:GLN:HB2	2:L:47:LEU:HD11	1.99	0.45
1:H2:121:SER:HB2	6:H5:685:HOH:O	2.16	0.45
1:H5:122:ALA:HB3	1:H5:154:PHE:CE2	2.52	0.44
2:L4:61:ARG:HH21	5:L4:301:CIT:H41	1.82	0.44
2:L2:13[A]:VAL:HG12	2:L2:103:LEU:HD11	1.98	0.44
1:H3:162:TRP:CH2	1:H3:204:CYS:HB3	2.52	0.44
1:H3:34:MET:HB3	1:H3:79:LEU:HD22	1.99	0.44
2:L3:33:LEU:HG	2:L3:34:ALA:N	2.32	0.44
1:H2:40:ALA:HB3	1:H2:43:LYS:HD2	1.98	0.44
1:H4:98:ILE:O	1:H4:108:MET:HA	2.17	0.44
1:H3:151:LYS:NZ	1:H3:179:GLN:OE1	2.50	0.43
2:L5:91:TYR:HA	2:L5:94:TRP:O	2.17	0.43
2:L3:91:TYR:HA	2:L3:94:TRP:O	2.18	0.43
1:H5:154:PHE:HA	1:H5:155:PRO:HA	1.83	0.43
2:L5:185:TYR:O	2:L5:191:TYR:OH	2.31	0.43
2:L:99:GLN:CD	2:L:99:GLN:H	2.20	0.43
2:L:124:LEU:O	2:L:182:LYS:HD2	2.18	0.43
1:H5:53:TRP:CG	1:H5:102:ARG:HA	2.54	0.43
1:H:53:TRP:CD1	1:H:102:ARG:HA	2.54	0.42
2:L:37:GLN:OE1	2:L:45:ARG:NH2	2.51	0.42
1:H2:11:VAL:HG22	1:H2:155:PRO:HG3	2.01	0.42
1:H3:105:TYR:HE1	1:H3:107:LYS:HD3	1.84	0.42
1:H5:208:HIS:CD2	1:H5:210:PRO:HD2	2.55	0.42
1:H2:94:TYR:O	1:H2:114:GLY:HA2	2.20	0.42
1:H4:127:PRO:HB3	1:H4:153:TYR:HB3	2.01	0.42
1:H4:34:MET:HB3	1:H4:79:LEU:HD22	2.02	0.42
2:L3:139:TYR:CG	2:L3:140:PRO:HA	2.54	0.41
2:L:83:SER:HB2	2:L:105:ILE:HG12	2.00	0.41
1:H4:99:ASP:OD1	1:H4:100:TRP:N	2.43	0.41
1:H5:99:ASP:OD2	1:H5:100:TRP:N	2.48	0.41
2:L3:104:GLU:HG2	2:L3:105:ILE:N	2.36	0.41
2:L5:124:LEU:O	2:L5:182:LYS:HD2	2.20	0.41
2:L4:162:VAL:HG22	2:L4:174:LEU:HD12	2.01	0.41
2:L5:33:LEU:HG	2:L5:34:ALA:N	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H4:2:VAL:HG12	1:H4:110:VAL:HG11	2.02	0.41
2:L4:77:SER:CB	2:L4:79[B]:ARG:HH21	2.32	0.41
1:H2:53:TRP:CG	1:H2:102:ARG:HA	2.56	0.41
1:H5:53:TRP:CD1	1:H5:102:ARG:HA	2.56	0.41
2:L4:91:TYR:HA	2:L4:94:TRP:O	2.20	0.41
2:L:11:LEU:HD21	2:L:19:ALA:HB1	2.03	0.41
2:L3:35:TRP:CE2	2:L3:73:LEU:HB2	2.56	0.41
4:H4:502:EDO:H11	2:L4:87:TYR:OH	2.21	0.41
2:L4:33:LEU:HD22	2:L4:71:PHE:CG	2.55	0.40
2:L:118:PRO:HB3	2:L:208:PHE:CE2	2.56	0.40
1:H4:153:TYR:CE2	1:H4:158:VAL:HG13	2.56	0.40
3:D:1[B]:BXY:H5	3:D:2:BXY:H2	1.92	0.40
2:L:33:LEU:HD11	2:L:88:CYS:HB2	2.03	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)
6:H:698:HOH:O	6:L3:480:HOH:O[2_454]	2.16	0.04

5.3 Torsion angles ⓘ

5.3.1 Protein backbone ⓘ

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all 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	215/228 (94%)	210 (98%)	5 (2%)	0	100	100
1	H2	215/228 (94%)	209 (97%)	6 (3%)	0	100	100
1	H3	211/228 (92%)	207 (98%)	4 (2%)	0	100	100
1	H4	214/228 (94%)	210 (98%)	4 (2%)	0	100	100
1	H5	213/228 (93%)	207 (97%)	6 (3%)	0	100	100
2	L	212/213 (100%)	207 (98%)	5 (2%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
2	L2	213/213 (100%)	208 (98%)	5 (2%)	0	100	100
2	L3	213/213 (100%)	208 (98%)	5 (2%)	0	100	100
2	L4	211/213 (99%)	206 (98%)	5 (2%)	0	100	100
2	L5	211/213 (99%)	207 (98%)	4 (2%)	0	100	100
All	All	2128/2205 (96%)	2079 (98%)	49 (2%)	0	100	100

There are no Ramachandran outliers to report.

5.3.2 Protein sidechains ⓘ

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all 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	182/192 (95%)	181 (100%)	1 (0%)	88	93
1	H2	179/192 (93%)	179 (100%)	0	100	100
1	H3	164/192 (85%)	164 (100%)	0	100	100
1	H4	181/192 (94%)	179 (99%)	2 (1%)	73	82
1	H5	170/192 (88%)	167 (98%)	3 (2%)	59	71
2	L	177/183 (97%)	176 (99%)	1 (1%)	86	91
2	L2	180/183 (98%)	179 (99%)	1 (1%)	86	91
2	L3	172/183 (94%)	170 (99%)	2 (1%)	71	81
2	L4	176/183 (96%)	174 (99%)	2 (1%)	73	82
2	L5	172/183 (94%)	171 (99%)	1 (1%)	86	91
All	All	1753/1875 (94%)	1740 (99%)	13 (1%)	84	90

All (13) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	H	113	LYS
2	L	99	GLN
2	L2	99	GLN
2	L3	99	GLN

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Mol	Chain	Res	Type
2	L3	202	SER
1	H4	85	SER
1	H4	201	THR
2	L4	1	GLU
2	L4	155	SER
1	H5	143	THR
1	H5	180	SER
1	H5	201	THR
2	L5	99	GLN

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (1) such sidechains are listed below:

Mol	Chain	Res	Type
2	L5	146	GLN

5.3.3   RNA ⓘ

There are no RNA molecules in this entry.

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

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

5.5   Carbohydrates ⓘ

21 monosaccharides are modelled in this entry.

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	$\#|Z| > 2$
3	BXY	A	1	3	10,10,10	0.71	0	13,14,14	1.38	2 (15%)
3	BXY	A	2	3	9,9,10	0.62	0	10,12,14	1.02	1 (10%)
3	BXY	A	3	3	9,9,10	0.99	1 (11%)	10,12,14	2.09	2 (20%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	#|Z| > 2	Counts	RMSZ	#|Z| > 2
3	BXX	A	4	3	9,9,10	0.54	0	10,12,14	1.17	1 (10%)
3	BXY	B	1	3	10,10,10	0.73	0	13,14,14	1.51	2 (15%)
3	BXY	B	2	3	9,9,10	0.68	0	10,12,14	0.96	0
3	BXY	B	3	3	9,9,10	0.97	1 (11%)	10,12,14	2.26	4 (40%)
3	BXX	B	4	3	9,9,10	0.48	0	10,12,14	0.92	0
3	BXY	C	1	3	10,10,10	0.70	0	13,14,14	3.11	3 (23%)
3	BXY	C	2	3	9,9,10	0.68	0	10,12,14	0.85	0
3	BXY	C	3	3	9,9,10	1.02	1 (11%)	10,12,14	2.06	3 (30%)
3	BXX	C	4	3	9,9,10	0.47	0	10,12,14	0.96	0
3	BXY	D	1[A]	-	10,10,10	0.65	0	13,14,14	2.00	4 (30%)
3	BXY	D	1[B]	-	10,10,10	0.65	0	13,14,14	1.57	3 (23%)
3	BXY	D	2	3	9,9,10	0.68	0	10,12,14	0.90	0
3	BXY	D	3	3	9,9,10	1.02	1 (11%)	10,12,14	1.99	3 (30%)
3	BXX	D	4	3	9,9,10	0.59	0	10,12,14	1.11	1 (10%)
3	BXY	E	1	3	10,10,10	0.66	0	13,14,14	1.66	4 (30%)
3	BXY	E	2	3	9,9,10	0.75	0	10,12,14	1.24	1 (10%)
3	BXY	E	3	3	9,9,10	0.99	1 (11%)	10,12,14	1.96	2 (20%)
3	BXX	E	4	3	9,9,10	0.51	0	10,12,14	0.97	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
3	BXY	A	1	3	-	2/2/18/18	0/1/1/1
3	BXY	A	2	3	-	0/2/15/18	0/1/1/1
3	BXY	A	3	3	-	2/2/15/18	0/1/1/1
3	BXX	A	4	3	-	0/2/15/18	0/1/1/1
3	BXY	B	1	3	-	2/2/18/18	0/1/1/1
3	BXY	B	2	3	-	0/2/15/18	0/1/1/1
3	BXY	B	3	3	-	0/2/15/18	0/1/1/1
3	BXX	B	4	3	-	0/2/15/18	0/1/1/1
3	BXY	C	1	3	-	0/2/18/18	0/1/1/1
3	BXY	C	2	3	-	0/2/15/18	0/1/1/1
3	BXY	C	3	3	-	0/2/15/18	0/1/1/1
3	BXX	C	4	3	-	0/2/15/18	0/1/1/1
3	BXY	D	1[A]	-	-	2/2/18/18	0/1/1/1
3	BXY	D	1[B]	-	-	2/2/18/18	0/1/1/1

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
3	BXY	D	2	3	-	0/2/15/18	0/1/1/1
3	BXY	D	3	3	-	1/2/15/18	0/1/1/1
3	BXX	D	4	3	-	0/2/15/18	0/1/1/1
3	BXY	E	1	3	-	0/2/18/18	0/1/1/1
3	BXY	E	2	3	-	0/2/15/18	0/1/1/1
3	BXY	E	3	3	-	0/2/15/18	0/1/1/1
3	BXX	E	4	3	-	0/2/15/18	0/1/1/1

All (5) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	E	3	BXY	O2-C2	-2.53	1.38	1.43
3	C	3	BXY	O2-C2	-2.52	1.38	1.43
3	D	3	BXY	O2-C2	-2.51	1.38	1.43
3	A	3	BXY	O2-C2	-2.51	1.38	1.43
3	B	3	BXY	O2-C2	-2.47	1.38	1.43

All (36) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	C	1	BXY	O5-C5-C4	10.06	145.79	111.29
3	A	3	BXY	O2-C2-C1	-5.00	96.07	110.97
3	E	3	BXY	O2-C2-C1	-4.72	96.90	110.97
3	C	3	BXY	O2-C2-C1	-4.64	97.14	110.97
3	D	1[A]	BXY	O5-C5-C4	-4.50	95.86	111.29
3	B	3	BXY	O2-C2-C1	-4.38	97.92	110.97
3	D	3	BXY	O2-C2-C1	-4.16	98.56	110.97
3	E	1	BXY	O4-C1-C2	3.43	108.68	104.46
3	B	3	BXY	O2-C2-C3	-3.38	104.86	111.27
3	D	1[A]	BXY	O4-C1-C2	3.24	108.45	104.46
3	B	1	BXY	O4-C1-C2	3.12	108.30	104.46
3	D	1[B]	BXY	C1-C2-C3	2.97	106.02	102.30
3	E	2	BXY	O5-C5-C4	-2.97	101.09	111.29
3	A	1	BXY	O4-C1-C2	2.87	108.00	104.46
3	C	1	BXY	O4-C1-C2	2.76	107.86	104.46
3	B	1	BXY	C1-C2-C3	2.72	105.70	102.30
3	C	3	BXY	O4-C4-C3	2.72	107.11	104.70
3	C	1	BXY	C1-C2-C3	2.72	105.70	102.30
3	D	1[A]	BXY	C1-C2-C3	2.71	105.69	102.30
3	D	1[B]	BXY	O4-C1-C2	2.70	107.79	104.46
3	E	1	BXY	O5-C5-C4	-2.69	102.06	111.29
3	D	3	BXY	O4-C4-C3	2.60	107.01	104.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	A	1	BXY	C1-C2-C3	2.39	105.29	102.30
3	D	4	BXX	O4-C4-C3	2.37	106.80	104.70
3	A	2	BXY	O5-C5-C4	-2.37	103.17	111.29
3	E	1	BXY	C1-C2-C3	2.36	105.25	102.30
3	B	3	BXY	C5-C4-C3	-2.36	109.40	115.09
3	B	3	BXY	O4-C4-C3	2.34	106.78	104.70
3	D	3	BXY	C5-C4-C3	-2.27	109.62	115.09
3	E	1	BXY	C2-C3-C4	2.26	107.04	102.64
3	C	3	BXY	C5-C4-C3	-2.19	109.81	115.09
3	D	1[A]	BXY	O1-C1-O4	-2.12	108.42	111.13
3	E	3	BXY	O3-C3-C2	-2.11	106.96	112.04
3	A	4	BXX	C5-C4-C3	-2.07	110.09	115.09
3	D	1[B]	BXY	O1-C1-O4	-2.06	108.49	111.13
3	A	3	BXY	O2-C2-C3	-2.05	107.37	111.27

There are no chirality outliers.

All (11) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
3	B	1	BXY	O4-C4-C5-O5
3	A	1	BXY	O4-C4-C5-O5
3	A	1	BXY	C3-C4-C5-O5
3	B	1	BXY	C3-C4-C5-O5
3	D	1[B]	BXY	C3-C4-C5-O5
3	D	1[B]	BXY	O4-C4-C5-O5
3	D	1[A]	BXY	O4-C4-C5-O5
3	D	1[A]	BXY	C3-C4-C5-O5
3	A	3	BXY	O4-C4-C5-O5
3	A	3	BXY	C3-C4-C5-O5
3	D	3	BXY	O4-C4-C5-O5

There are no ring outliers.

3 monomers are involved in 2 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
3	D	1[B]	BXY	1	0
3	D	1[A]	BXY	1	0
3	D	2	BXY	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 oligosaccharide.

Oligosaccharide Chain A

Bond lengths

Bond angles

Torsions

Rings

Oligosaccharide Chain B

Bond lengths

Bond angles

Torsions

Rings

Oligosaccharide Chain C

Bond lengths

Bond angles

Torsions

Rings

Oligosaccharide Chain D

Bond lengths

Bond angles

Torsions

Rings

Oligosaccharide Chain E

Bond lengths

Bond angles

Torsions

Rings
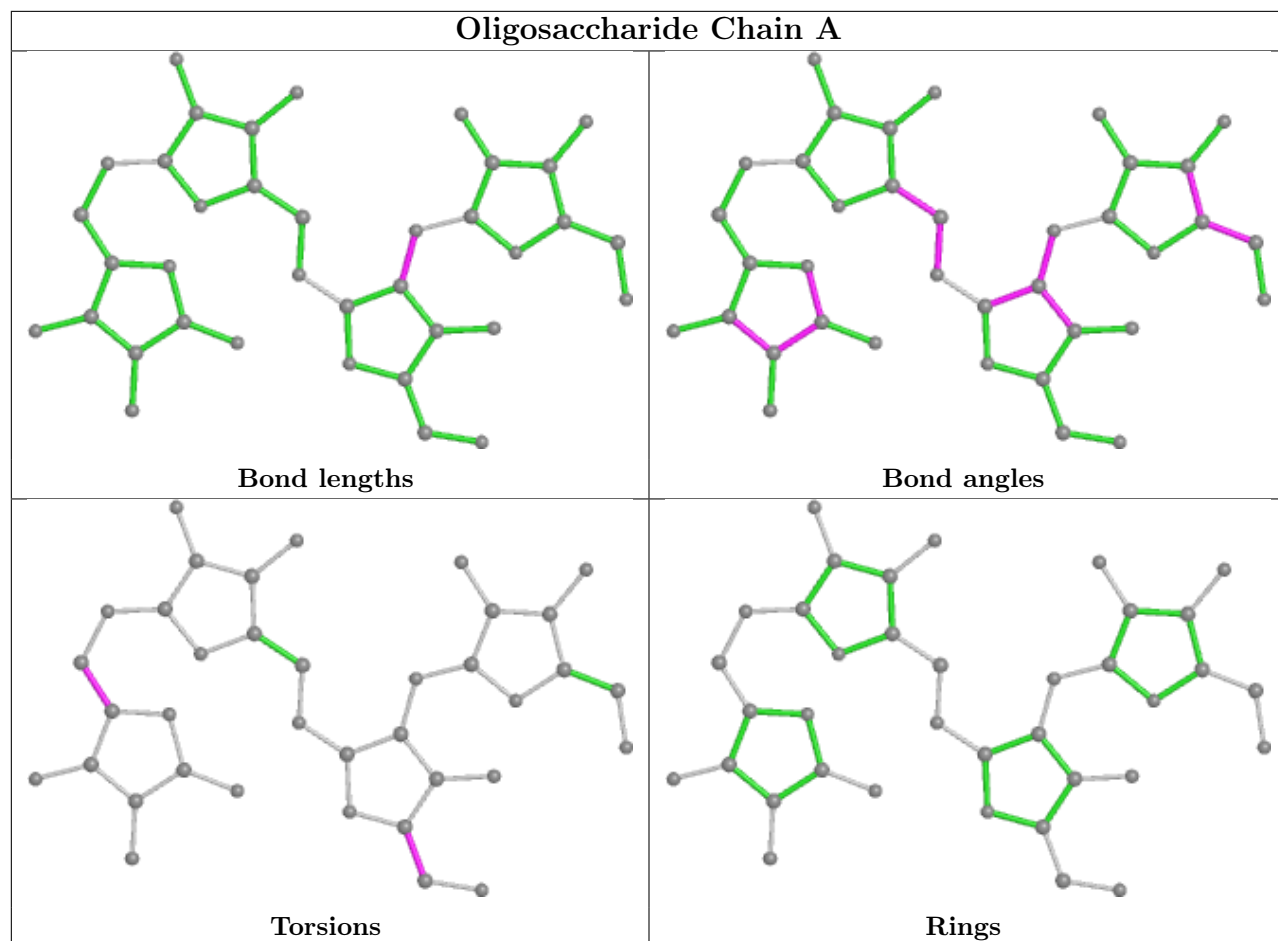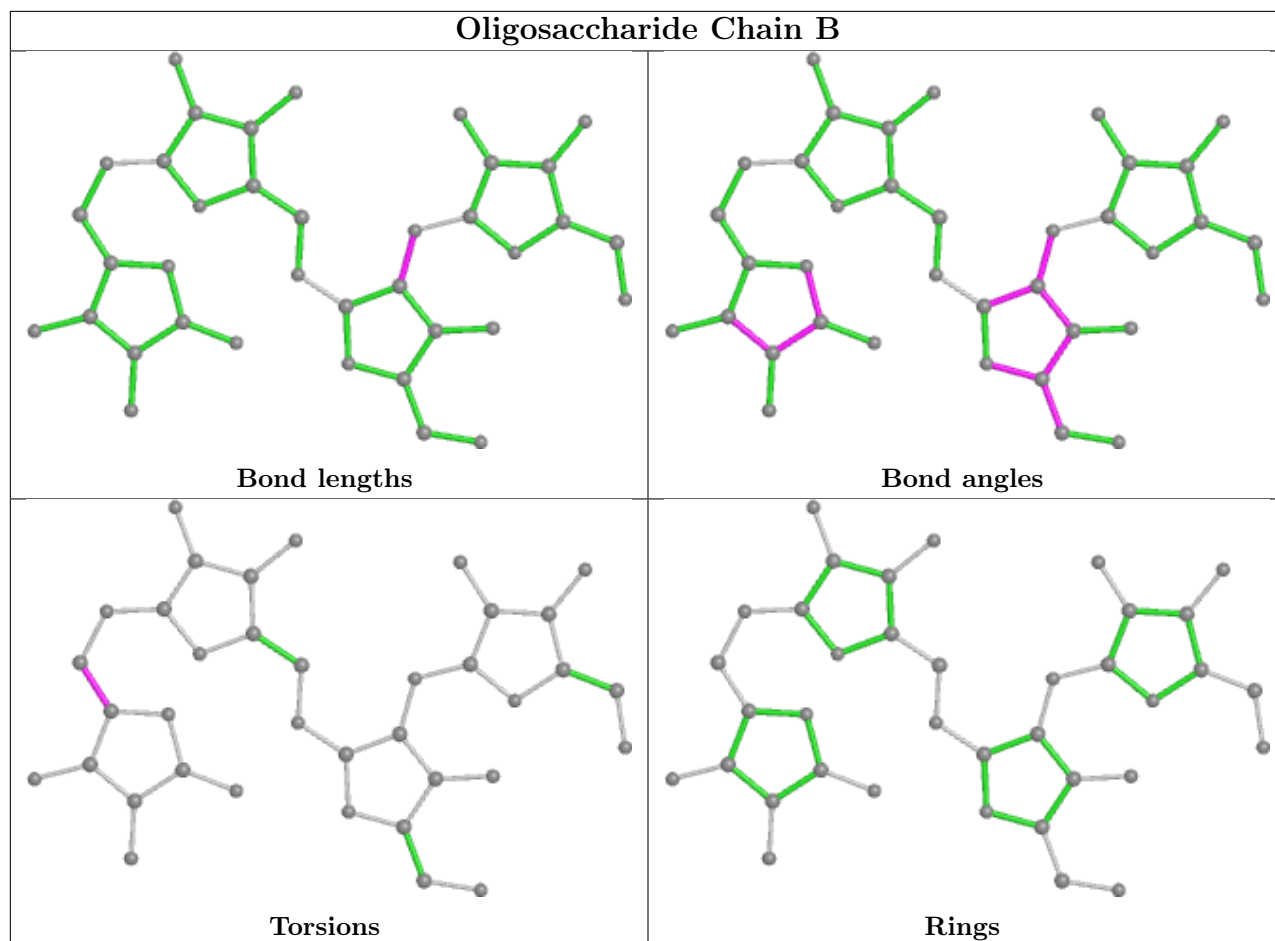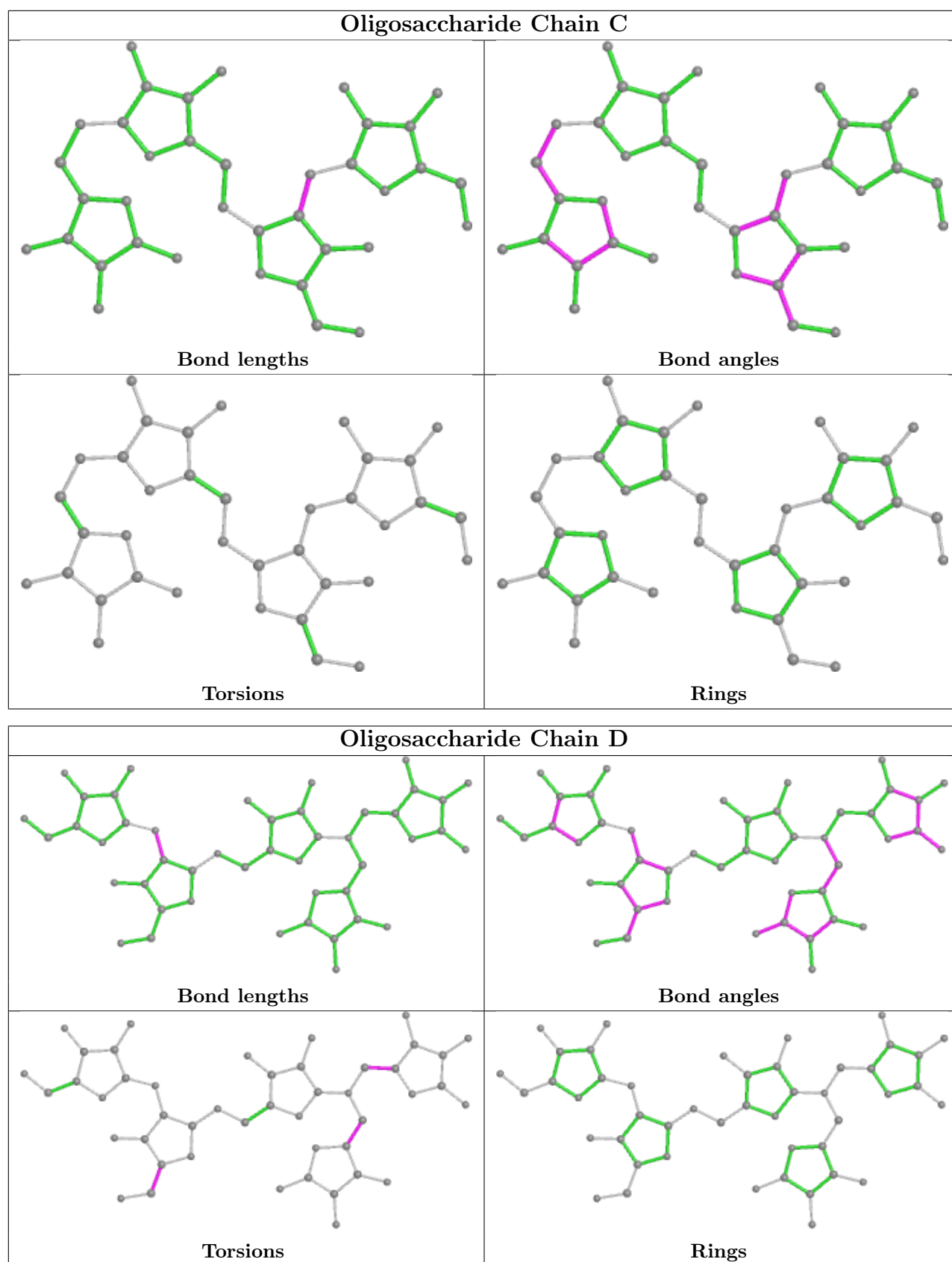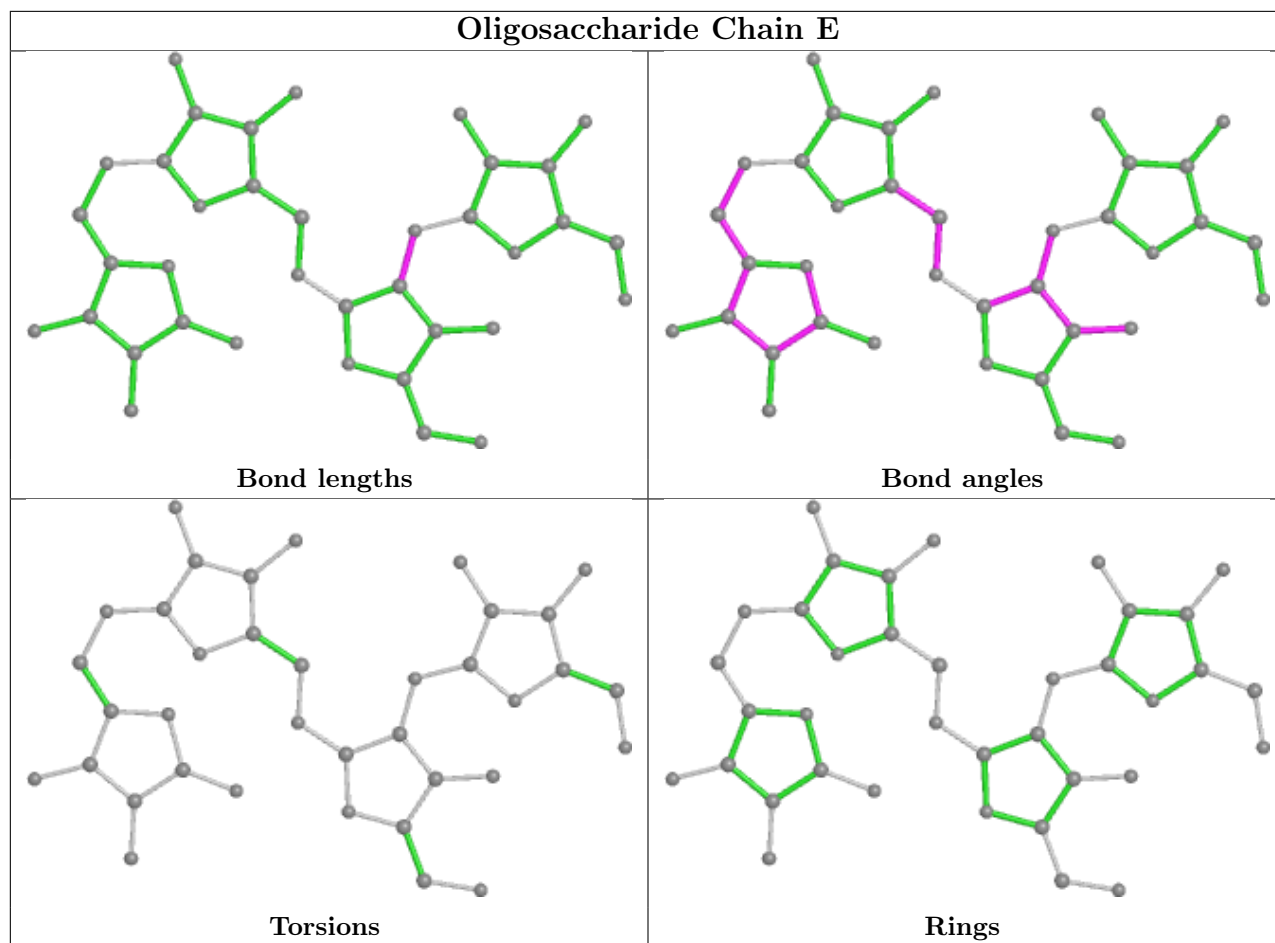
5.6 Ligand geometry ⓘ

15 ligands are modelled in this entry.

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	501	-	3,3,3	0.41	0	2,2,2	0.53	0
4	EDO	H	502[B]	-	3,3,3	0.50	0	2,2,2	0.27	0
4	EDO	H	502[A]	-	3,3,3	0.51	0	2,2,2	0.22	0
4	EDO	H5	501	-	3,3,3	0.43	0	2,2,2	0.72	0
4	EDO	H2	502	-	3,3,3	0.51	0	2,2,2	0.25	0
4	EDO	H4	501	-	3,3,3	0.50	0	2,2,2	0.33	0
4	EDO	L	301	-	3,3,3	0.40	0	2,2,2	0.63	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	#|Z| > 2	Counts	RMSZ	#|Z| > 2
4	EDO	H3	502	-	3,3,3	0.48	0	2,2,2	0.33	0
4	EDO	L3	301	-	3,3,3	0.47	0	2,2,2	0.39	0
4	EDO	L3	302	-	3,3,3	0.55	0	2,2,2	0.15	0
4	EDO	H4	502	-	3,3,3	0.47	0	2,2,2	0.46	0
4	EDO	L4	302	-	3,3,3	0.42	0	2,2,2	0.48	0
5	CIT	L4	301	-	12,12,12	1.01	0	17,17,17	1.81	3 (17%)
4	EDO	H3	501	-	3,3,3	0.47	0	2,2,2	0.42	0
4	EDO	H2	501	-	3,3,3	0.48	0	2,2,2	0.34	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	501	-	-	1/1/1/1	-
4	EDO	H	502[B]	-	-	1/1/1/1	-
4	EDO	H	502[A]	-	-	0/1/1/1	-
4	EDO	H5	501	-	-	0/1/1/1	-
4	EDO	H2	502	-	-	1/1/1/1	-
4	EDO	H4	501	-	-	1/1/1/1	-
4	EDO	L	301	-	-	1/1/1/1	-
4	EDO	H3	502	-	-	1/1/1/1	-
4	EDO	L3	301	-	-	1/1/1/1	-
4	EDO	L3	302	-	-	1/1/1/1	-
4	EDO	H4	502	-	-	1/1/1/1	-
4	EDO	L4	302	-	-	1/1/1/1	-
5	CIT	L4	301	-	-	4/16/16/16	-
4	EDO	H3	501	-	-	1/1/1/1	-
4	EDO	H2	501	-	-	1/1/1/1	-

There are no bond length outliers.

All (3) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	L4	301	CIT	O6-C6-C3	5.15	121.99	113.05
5	L4	301	CIT	O4-C5-O3	-2.14	117.97	123.30
5	L4	301	CIT	C2-C3-C6	2.12	114.67	110.11

There are no chirality outliers.

All (16) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
5	L4	301	CIT	C1-C2-C3-O7
5	L4	301	CIT	C1-C2-C3-C4
5	L4	301	CIT	C1-C2-C3-C6
4	H3	502	EDO	O1-C1-C2-O2
4	L3	301	EDO	O1-C1-C2-O2
4	L4	302	EDO	O1-C1-C2-O2
5	L4	301	CIT	O7-C3-C4-C5
4	H	501	EDO	O1-C1-C2-O2
4	H2	501	EDO	O1-C1-C2-O2
4	H3	501	EDO	O1-C1-C2-O2
4	H4	501	EDO	O1-C1-C2-O2
4	H2	502	EDO	O1-C1-C2-O2
4	L	301	EDO	O1-C1-C2-O2
4	H	502[B]	EDO	O1-C1-C2-O2
4	L3	302	EDO	O1-C1-C2-O2
4	H4	502	EDO	O1-C1-C2-O2

There are no ring outliers.

4 monomers are involved in 4 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
4	H2	502	EDO	1	0
4	L3	302	EDO	1	0
4	H4	502	EDO	1	0
5	L4	301	CIT	1	0

5.7 Other polymers ⓘ

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 ⓘ

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, 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	216/228 (94%)	-0.36	1 (0%)	91	92	23, 35, 68, 106	0
1	H2	217/228 (95%)	-0.24	4 (1%)	68	65	29, 43, 82, 103	0
1	H3	215/228 (94%)	0.24	19 (8%)	10	7	29, 55, 122, 150	0
1	H4	217/228 (95%)	-0.42	1 (0%)	91	92	22, 37, 74, 104	0
1	H5	217/228 (95%)	0.32	21 (9%)	7	5	24, 43, 111, 149	0
2	L	213/213 (100%)	-0.43	0	100	100	21, 33, 63, 108	0
2	L2	213/213 (100%)	-0.38	0	100	100	28, 43, 70, 88	0
2	L3	213/213 (100%)	0.18	20 (9%)	8	5	23, 43, 103, 126	0
2	L4	212/213 (99%)	-0.28	2 (0%)	84	85	20, 38, 81, 96	0
2	L5	213/213 (100%)	0.05	5 (2%)	60	56	28, 48, 96, 117	0
All	All	2146/2205 (97%)	-0.13	73 (3%)	45	41	20, 42, 96, 150	0

All (73) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
2	L3	183	ALA	5.5
1	H5	202	TYR	4.9
1	H5	196	SER	4.8
1	H5	165	GLY	4.5
1	H5	198	GLY	4.1
1	H5	201	THR	4.0
1	H3	127	PRO	4.0
1	H5	199	THR	4.0
2	L3	180	LEU	4.0
1	H5	197	LEU	3.9
1	H3	130	PHE	3.7
2	L3	213	CYS	3.7
1	H5	167	LEU	3.5

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Mol	Chain	Res	Type	RSRZ
1	H3	219	VAL	3.4
2	L3	181	SER	3.4
1	H3	131	PRO	3.4
1	H5	146	LEU	3.2
2	L3	124	LEU	3.2
1	H3	201	THR	3.2
1	H3	215	VAL	3.2
1	H5	215	VAL	3.1
1	H3	161	SER	3.1
2	L3	149	VAL	3.1
1	H5	203	ILE	3.1
1	H3	206	VAL	3.1
1	H5	164	SER	3.0
2	L3	120	SER	2.9
1	H3	218	ARG	2.9
1	H2	199	THR	2.9
2	L3	191	TYR	2.8
1	H3	164	SER	2.7
2	L3	118	PRO	2.7
1	H3	196	SER	2.6
1	H5	166	ALA	2.6
2	L3	121	ASP	2.6
2	L3	126	SER	2.6
2	L5	147	TRP	2.6
1	H5	195	SER	2.6
2	L4	153	LEU	2.6
1	H5	210	PRO	2.6
1	H3	155	PRO	2.5
2	L3	153	LEU	2.5
1	H3	199	THR	2.5
1	H5	135	SER	2.5
1	H5	211	SER	2.5
1	H5	219	VAL	2.5
2	L3	119	PRO	2.4
2	L5	191	TYR	2.4
2	L3	184	ASP	2.4
1	H3	165	GLY	2.3
2	L3	188	HIS	2.3
2	L5	211	GLY	2.3
2	L5	200	LEU	2.3
1	H3	203	ILE	2.3
2	L5	155	SER	2.3

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Mol	Chain	Res	Type	RSRZ
2	L3	151	ASN	2.3
1	H5	133	ALA	2.3
2	L3	187	LYS	2.2
1	H4	136	SER	2.2
1	H5	193	PRO	2.2
1	H2	165	GLY	2.2
2	L3	125	LYS	2.2
2	L3	186	GLU	2.2
1	H3	202	TYR	2.1
2	L3	127	GLY	2.1
1	H2	167	LEU	2.1
1	H3	135	SER	2.1
1	H3	216	ASP	2.1
1	H2	166	ALA	2.1
1	H	197	LEU	2.1
1	H5	134	PRO	2.0
2	L4	151	ASN	2.0
1	H3	200	GLN	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 ⓘ

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.
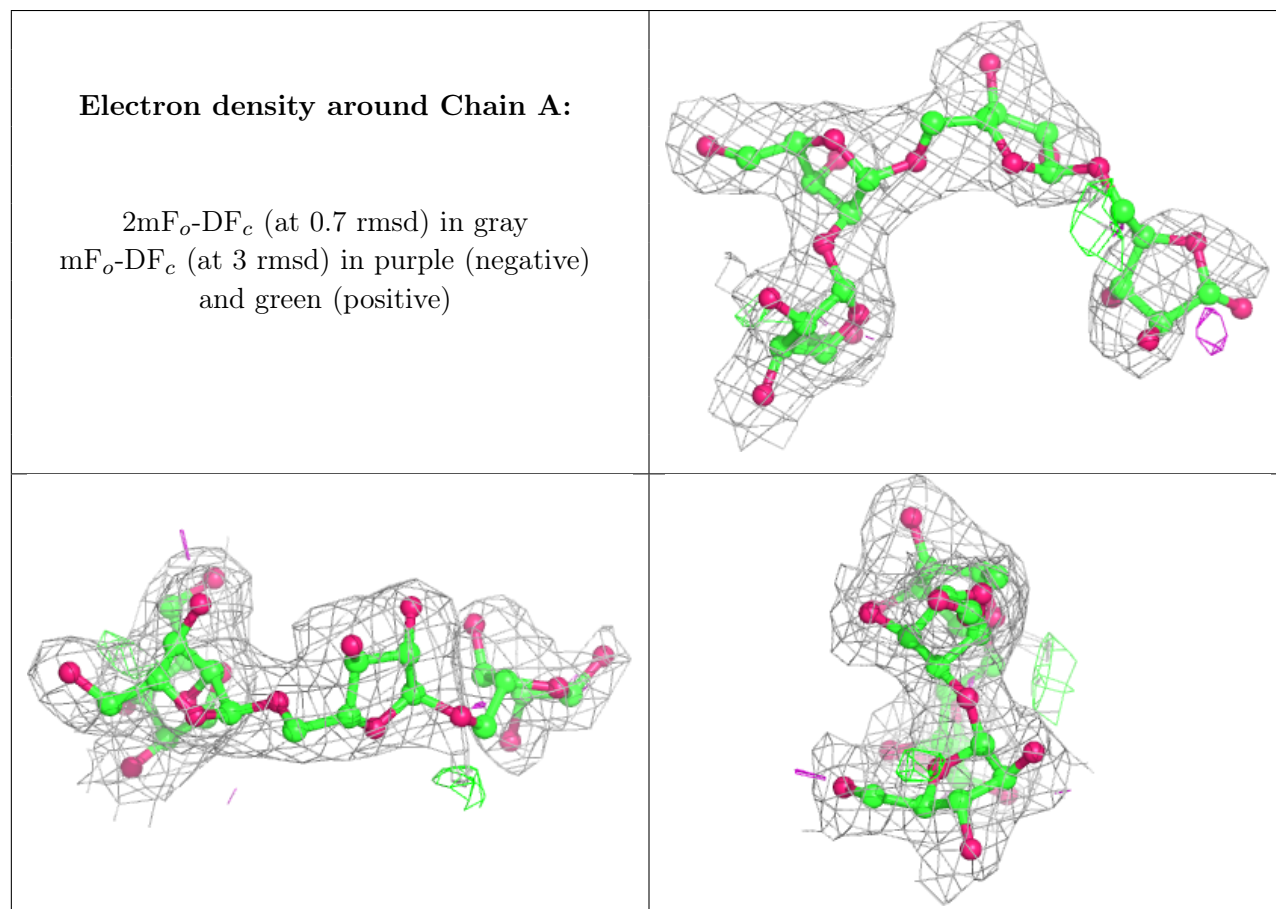
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
3	BXY	C	1	10/10	0.57	0.45	82,101,106,107	0
3	BXY	A	1	10/10	0.63	0.31	91,98,104,104	0
3	BXY	D	1[A]	10/10	0.64	0.40	55,61,66,68	9
3	BXY	D	1[B]	10/10	0.64	0.40	46,60,66,68	9
3	BXY	B	1	10/10	0.68	0.41	91,102,109,110	0
3	BXY	E	1	10/10	0.73	0.38	79,101,107,111	0
3	BXY	B	2	9/10	0.95	0.14	42,53,65,72	0
3	BXY	A	2	9/10	0.95	0.11	30,45,63,71	0
3	BXY	D	2	9/10	0.95	0.10	29,44,55,58	0
3	BXY	C	2	9/10	0.95	0.15	40,59,69,77	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å²)	Q<0.9
3	BXX	C	4	9/10	0.96	0.12	29,36,49,49	0
3	BXY	C	3	9/10	0.97	0.09	31,37,38,38	0
3	BXY	D	3	9/10	0.97	0.11	26,27,29,36	0
3	BXX	B	4	9/10	0.97	0.13	28,32,35,37	0
3	BXY	E	2	9/10	0.97	0.11	33,47,64,65	0
3	BXX	E	4	9/10	0.97	0.12	20,26,28,31	0
3	BXX	D	4	9/10	0.98	0.12	26,27,33,34	0
3	BXY	A	3	9/10	0.98	0.12	25,28,29,30	0
3	BXX	A	4	9/10	0.98	0.14	23,25,32,32	0
3	BXY	E	3	9/10	0.98	0.09	26,29,33,37	0
3	BXY	B	3	9/10	0.98	0.10	30,31,34,35	0

The following is a graphical depiction of the model fit to experimental electron density for oligosaccharide. Each fit is shown from different orientation to approximate a three-dimensional view.
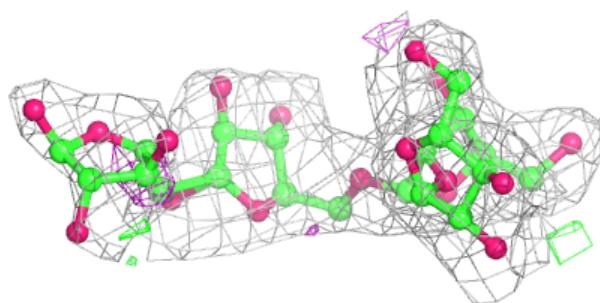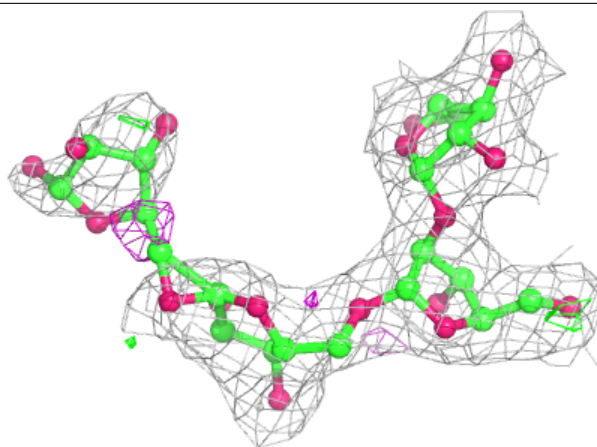
Electron density around Chain A:

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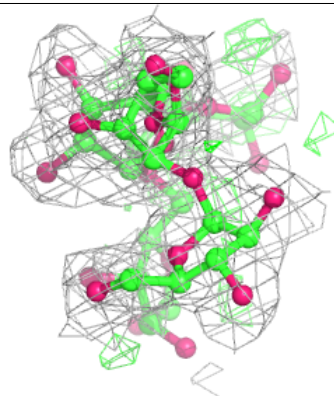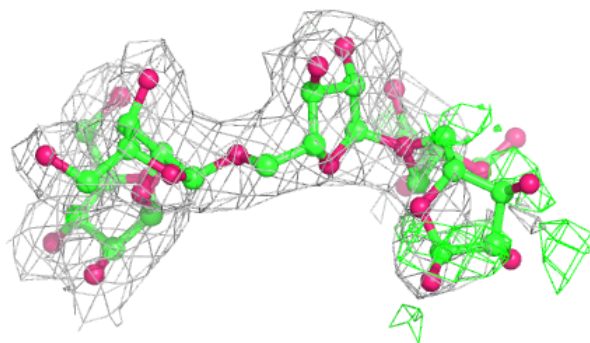and green (positive)

Electron density around Chain B:

2mF$_o$-DF$_c$ (at 0.7 rmsd) in gray
mF$_o$-DF$_c$ (at 3 rmsd) in purple (negative)
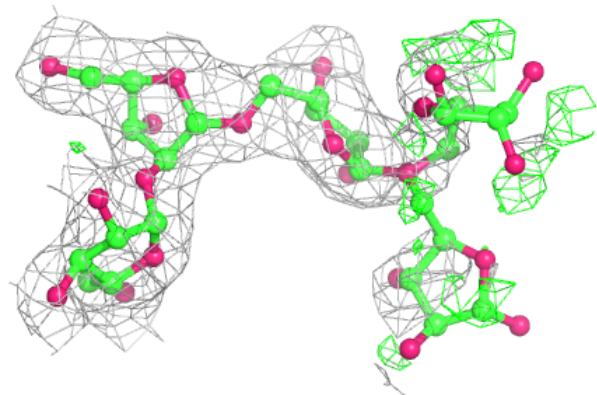and green (positive)
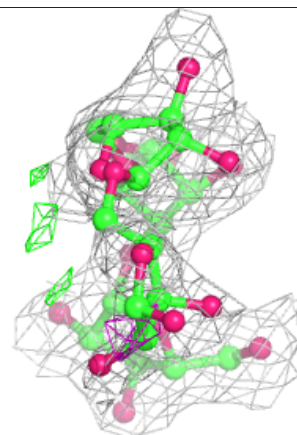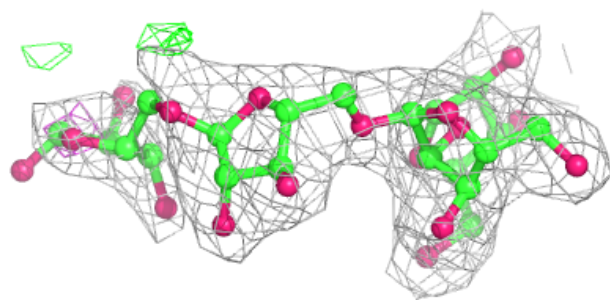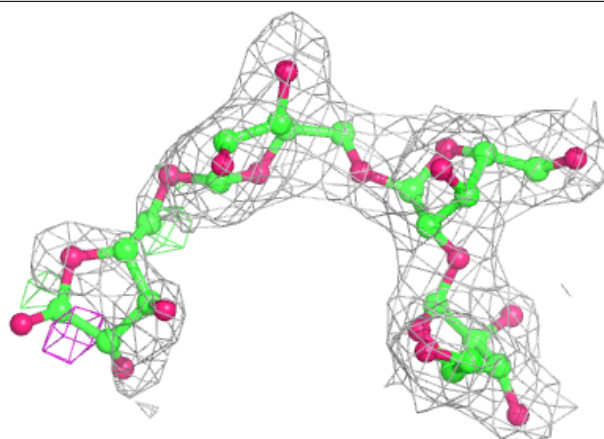
Electron density around Chain C:

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

Electron density around Chain D:

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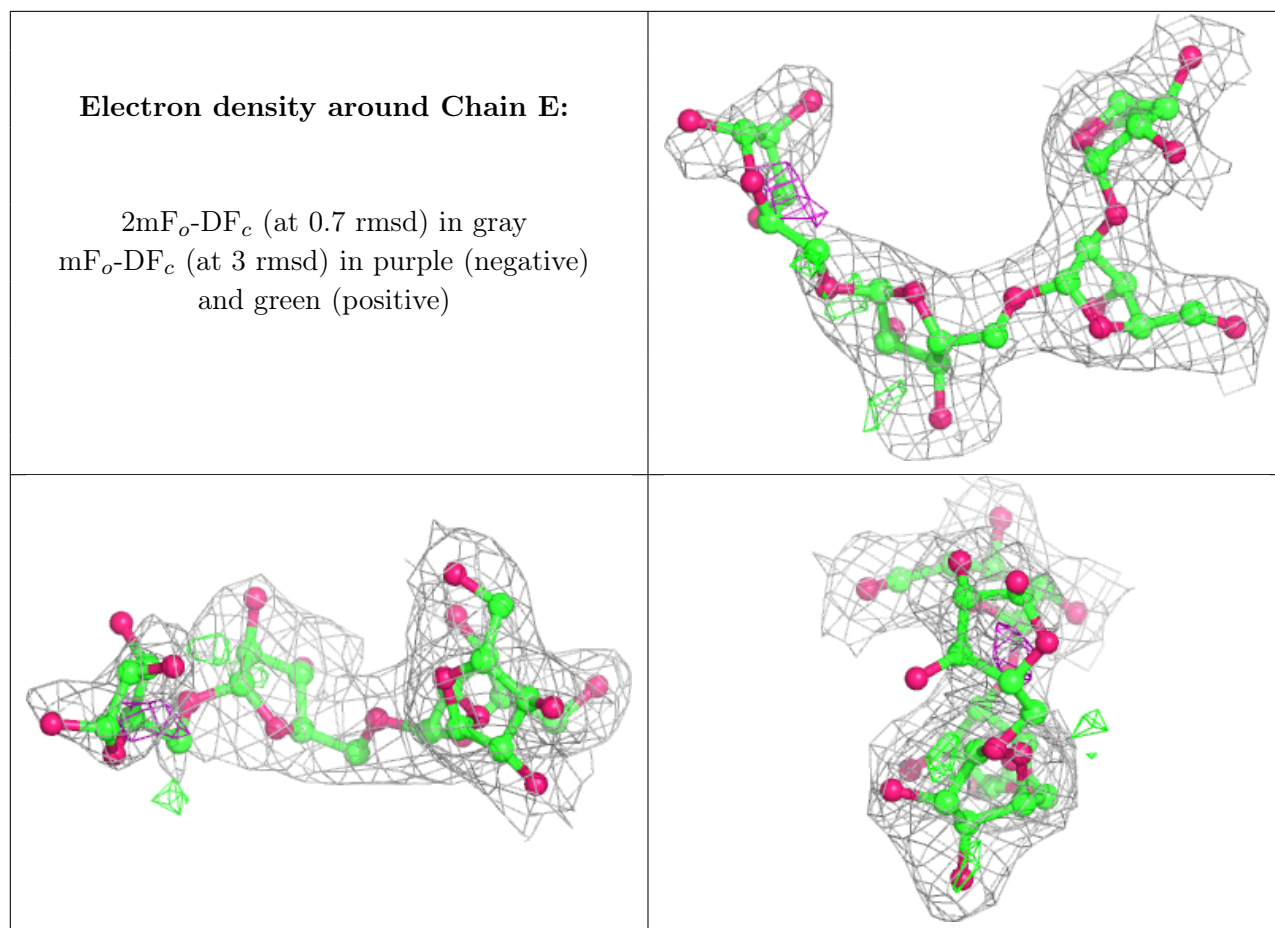mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

Electron density around Chain E:

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

6.4 Ligands ⓘ

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	H3	502	4/4	0.69	0.26	74,77,79,80	0
4	EDO	H	502[B]	4/4	0.77	0.24	61,65,67,68	4
4	EDO	H	502[A]	4/4	0.77	0.24	59,64,67,67	4
5	CIT	L4	301	13/13	0.80	0.27	52,87,94,96	0
4	EDO	H2	502	4/4	0.84	0.29	58,59,66,66	0
4	EDO	L4	302	4/4	0.86	0.30	79,80,82,86	0
4	EDO	H4	501	4/4	0.86	0.13	47,54,57,62	0
4	EDO	H4	502	4/4	0.87	0.24	63,64,71,80	0
4	EDO	L3	302	4/4	0.88	0.21	42,59,68,68	0
4	EDO	L3	301	4/4	0.92	0.26	61,67,68,69	0
4	EDO	H3	501	4/4	0.92	0.10	58,59,63,63	0
4	EDO	H5	501	4/4	0.93	0.19	58,62,64,65	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
4	EDO	L	301	4/4	0.94	0.19	25,27,28,39	0
4	EDO	H2	501	4/4	0.94	0.31	43,53,59,63	0
4	EDO	H	501	4/4	0.96	0.15	40,47,47,53	0

6.5 Other polymers ⓘ

There are no such residues in this entry.