



Full wwPDB X-ray Structure Validation Report ⓘ

Mar 9, 2026 – 04:32 PM UTC

PDB ID : 6RUR / pdb_00006rur
Title : Structure of the SCIN stabilized C3bBb convertase bound to properdin
Authors : Pedersen, D.V.; Gadeberg, T.A.F.; Andersen, G.R.
Deposited on : 2019-05-29
Resolution : 6.00 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	:	4-5-2 with Phenix2.0
Mogul	:	2022.3.0, CSD as543be (2022)
Xtriage (Phenix)	:	2.0
EDS	:	3.0
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
CCP4	:	9.0.010 (Gargrove)
Density-Fitness	:	1.0.12
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.49

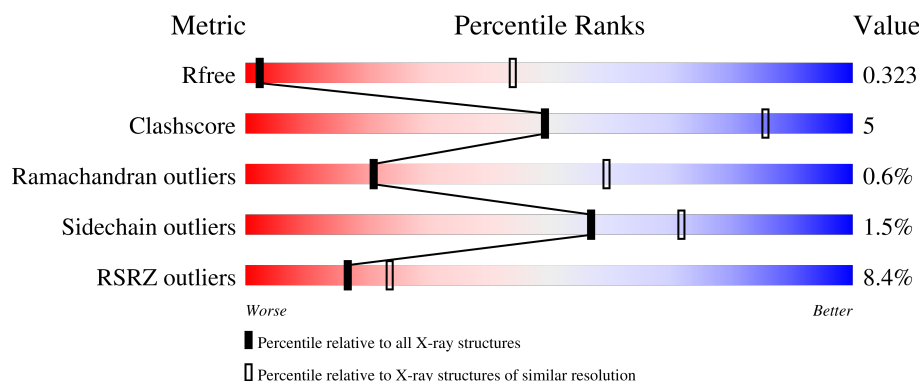
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 6.00 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}	180053	1143 (8.00-4.00)
Clashscore	190562	1210 (8.00-4.00)
Ramachandran outliers	187476	1034 (8.00-4.00)
Sidechain outliers	187428	1000 (8.00-4.00)
RSRZ outliers	180081	1136 (8.00-4.00)

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	U	234	
1	X	234	
2	V	215	
2	Y	215	
3	A	645	

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Mol	Chain	Length	Quality of chain
3	G	645	
4	B	915	
4	H	915	
5	J	505	
5	L	505	
6	N	85	
6	Q	85	
7	C	2	
7	D	2	
7	F	2	
7	I	2	
8	E	3	
8	K	3	
9	M	2	
9	O	2	
9	P	2	
9	R	2	
9	S	2	
9	T	2	
9	W	2	
9	Z	2	

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
8	FUC	E	3	X	-	-	-
8	FUC	K	3	X	-	-	-

2 Entry composition [i](#)

There are 11 unique types of molecules in this entry. The entry contains 39456 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 Properdin.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	U	106	Total	C	N	O	S	0	0	0
			806	495	144	154	13			
1	X	106	Total	C	N	O	S	0	0	0
			806	495	144	154	13			

There are 12 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
U	256	GLU	-	expression tag	UNP P27918
U	257	ASN	-	expression tag	UNP P27918
U	258	LEU	-	expression tag	UNP P27918
U	259	TYR	-	expression tag	UNP P27918
U	260	PHE	-	expression tag	UNP P27918
U	261	GLN	-	expression tag	UNP P27918
X	256	GLU	-	expression tag	UNP P27918
X	257	ASN	-	expression tag	UNP P27918
X	258	LEU	-	expression tag	UNP P27918
X	259	TYR	-	expression tag	UNP P27918
X	260	PHE	-	expression tag	UNP P27918
X	261	GLN	-	expression tag	UNP P27918

- Molecule 2 is a protein called Properdin.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	V	210	Total	C	N	O	S	0	0	0
			1622	1004	308	288	22			
2	Y	210	Total	C	N	O	S	0	0	0
			1622	1004	308	288	22			

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
V	255	GLY	-	expression tag	UNP P27918
Y	255	GLY	-	expression tag	UNP P27918

- Molecule 3 is a protein called Complement C3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	A	645	Total	C	N	O	S	0	0	0
			5025	3198	851	961	15			
3	G	645	Total	C	N	O	S	0	0	0
			5025	3198	851	961	15			

- Molecule 4 is a protein called Complement C3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	B	913	Total	C	N	O	S	0	0	0
			7293	4619	1228	1408	38			
4	H	913	Total	C	N	O	S	0	0	0
			7293	4619	1228	1408	38			

- Molecule 5 is a protein called Complement factor B.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	J	505	Total	C	N	O	S	0	0	0
			4007	2546	689	752	20			
5	L	505	Total	C	N	O	S	0	0	0
			4007	2546	689	752	20			

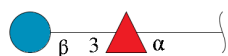
There are 4 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
J	254	GLY	ASP	conflict	UNP P00751
J	674	ALA	SER	conflict	UNP P00751
L	254	GLY	ASP	conflict	UNP P00751
L	674	ALA	SER	conflict	UNP P00751

- Molecule 6 is a protein called Inhibitor.

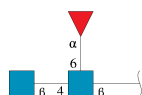
Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
6	N	84	Total	C	N	O	S	0	0	0
			683	432	111	138	2			
6	Q	84	Total	C	N	O	S	0	0	0
			683	432	111	138	2			

- Molecule 7 is an oligosaccharide called beta-D-glucopyranose-(1-3)-alpha-L-fucopyranose.



Mol	Chain	Residues	Atoms			ZeroOcc	AltConf	Trace
7	C	2	Total	C	O	0	0	0
			21	12	9			
7	D	2	Total	C	O	0	0	0
			21	12	9			
7	F	2	Total	C	O	0	0	0
			21	12	9			
7	I	2	Total	C	O	0	0	0
			21	12	9			

- Molecule 8 is an oligosaccharide called 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-[alpha-L-fucopyranose-(1-6)]2-acetamido-2-deoxy-beta-D-glucopyranose.



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
8	E	3	Total	C	N	O	0	0	0
			38	22	2	14			
8	K	3	Total	C	N	O	0	0	0
			38	22	2	14			

- Molecule 9 is an oligosaccharide called 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose.



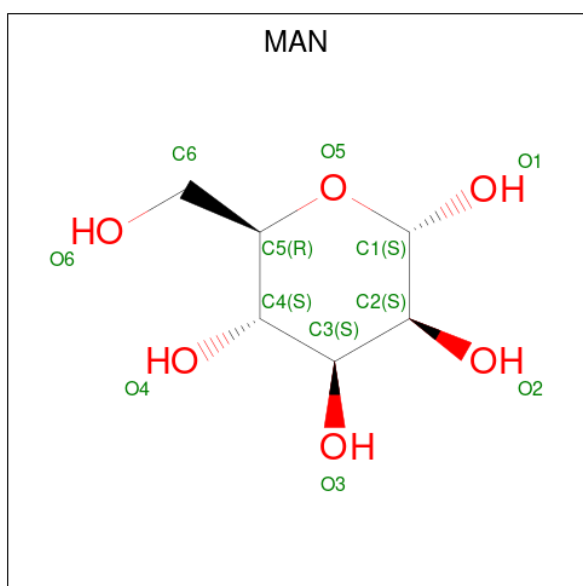
Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
9	M	2	Total	C	N	O	0	0	0
			28	16	2	10			
9	O	2	Total	C	N	O	0	0	0
			28	16	2	10			
9	P	2	Total	C	N	O	0	0	0
			28	16	2	10			

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Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
9	R	2	Total	C	N	O	0	0	0
			28	16	2	10			
9	S	2	Total	C	N	O	0	0	0
			28	16	2	10			
9	T	2	Total	C	N	O	0	0	0
			28	16	2	10			
9	W	2	Total	C	N	O	0	0	0
			28	16	2	10			
9	Z	2	Total	C	N	O	0	0	0
			28	16	2	10			

- Molecule 10 is alpha-D-mannopyranose (CCD ID: MAN) (formula: C₆H₁₂O₆).



Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
10	U	1	Total	C	O	0	0
			11	6	5		
10	U	1	Total	C	O	0	0
			11	6	5		
10	V	1	Total	C	O	0	0
			11	6	5		
10	V	1	Total	C	O	0	0
			11	6	5		
10	V	1	Total	C	O	0	0
			11	6	5		
10	V	1	Total	C	O	0	0
			11	6	5		

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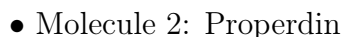
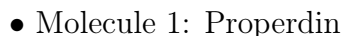
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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
10	V	1	Total C O 11 6 5	0	0
10	V	1	Total C O 11 6 5	0	0
10	V	1	Total C O 11 6 5	0	0
10	X	1	Total C O 11 6 5	0	0
10	X	1	Total C O 11 6 5	0	0
10	Y	1	Total C O 11 6 5	0	0
10	Y	1	Total C O 11 6 5	0	0
10	Y	1	Total C O 11 6 5	0	0
10	Y	1	Total C O 11 6 5	0	0
10	Y	1	Total C O 11 6 5	0	0
10	Y	1	Total C O 11 6 5	0	0
10	Y	1	Total C O 11 6 5	0	0

- Molecule 11 is MAGNESIUM ION (CCD ID: MG) (formula: Mg).


Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
11	B	1	Total Mg 1 1	0	0
11	H	1	Total Mg 1 1	0	0

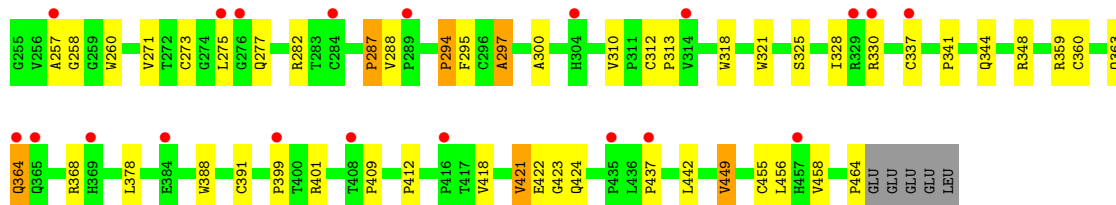
- Molecule 1: Properdin




GLU
GLU
LEU

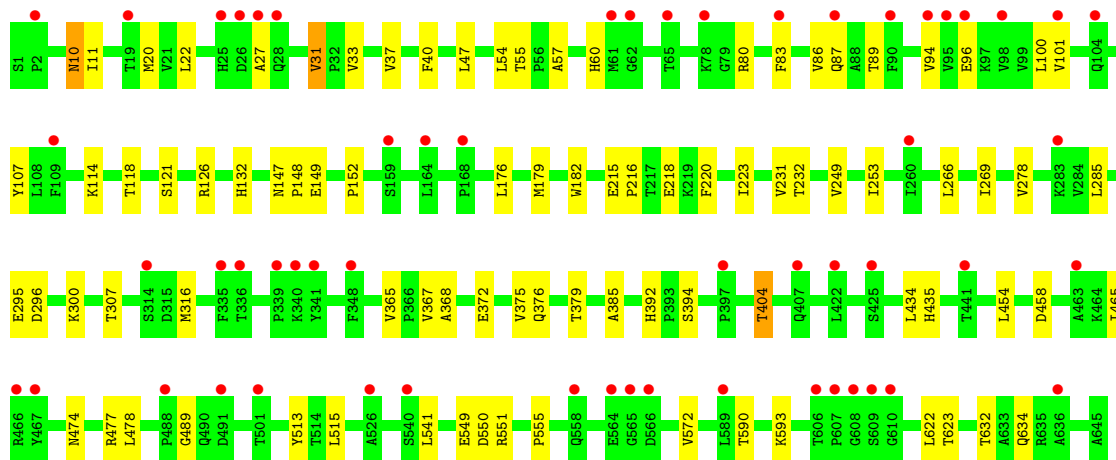
• Molecule 2: Properdin

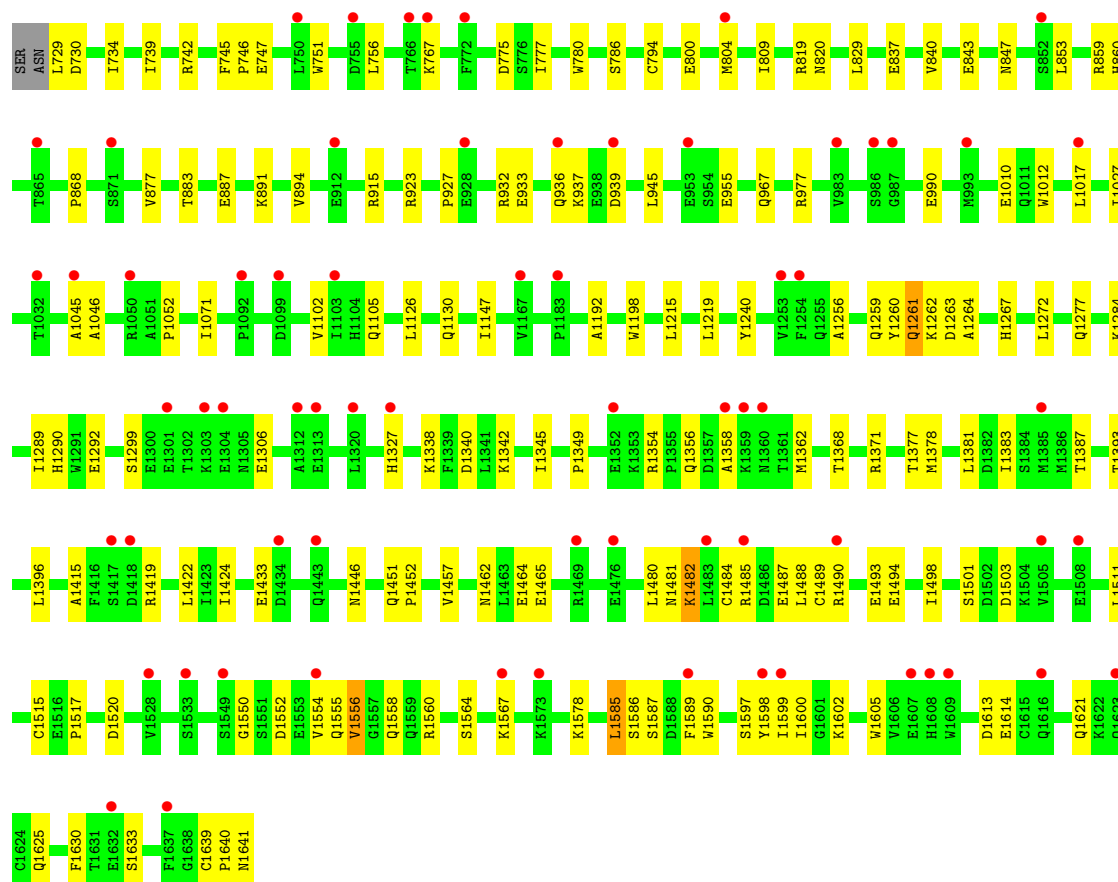
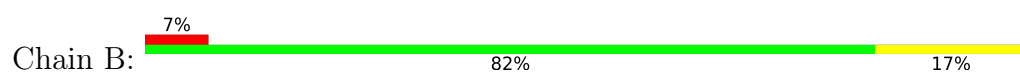
Chain Y: 



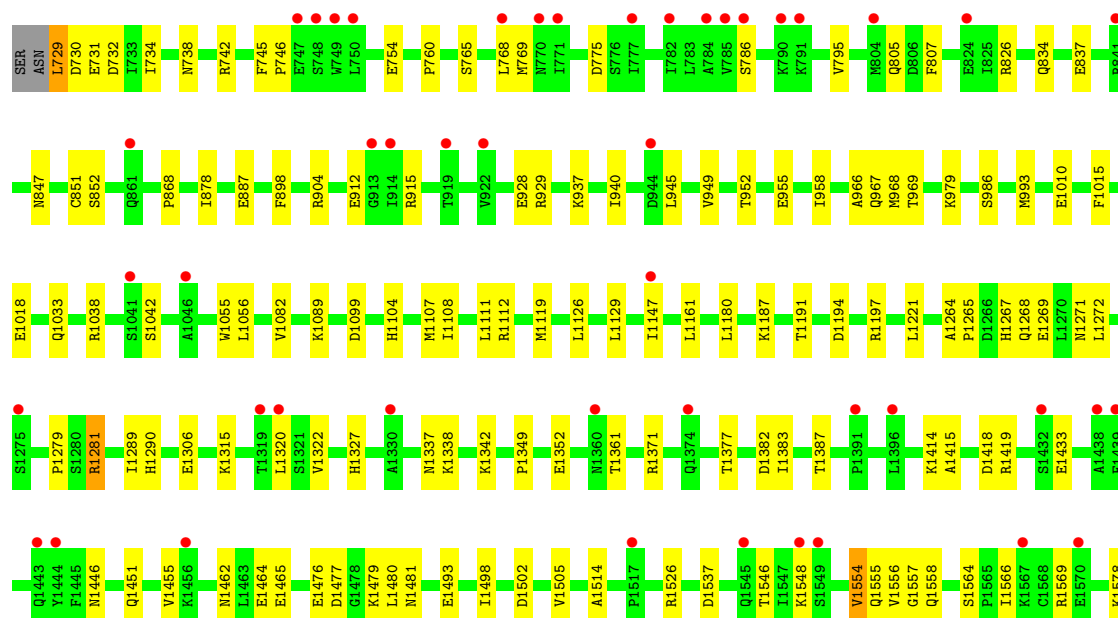
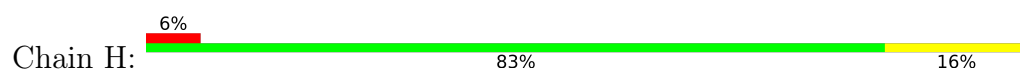
• Molecule 3: Complement C3

Chain A: 



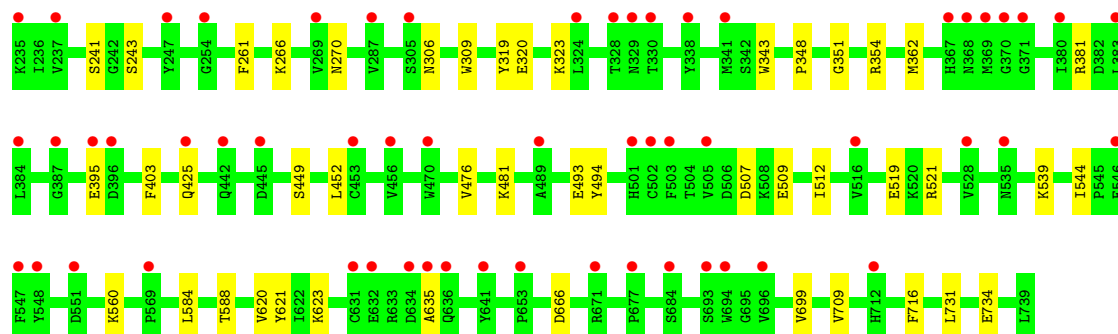
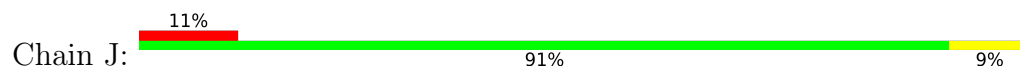


• Molecule 4: Complement C3

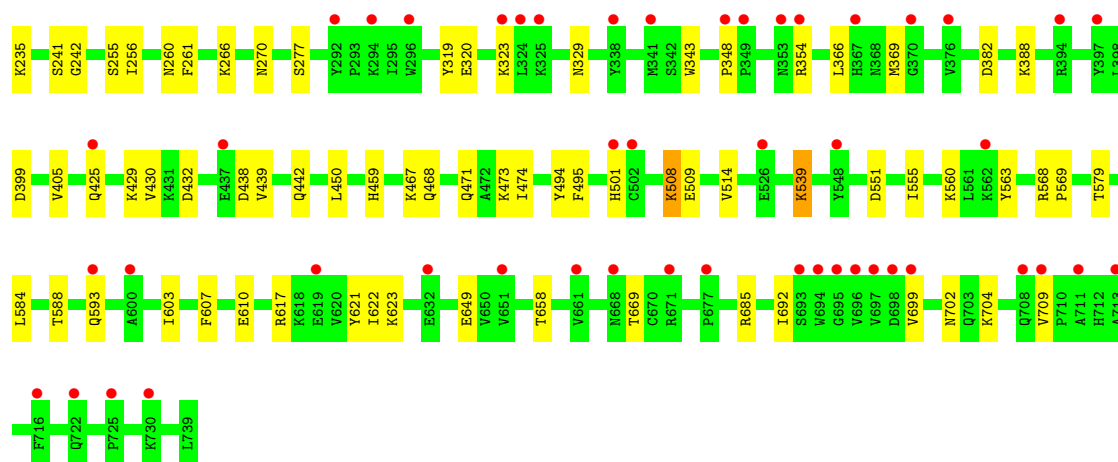
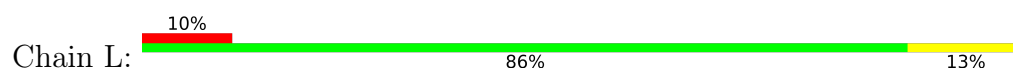




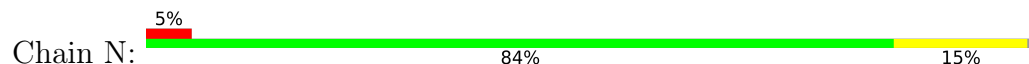
• Molecule 5: Complement factor B



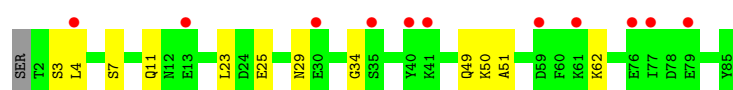
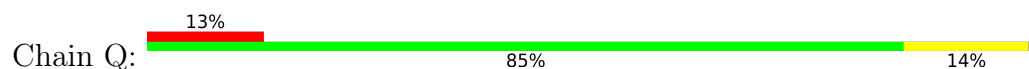
• Molecule 5: Complement factor B



• Molecule 6: Inhibitor



• Molecule 6: Inhibitor



- Molecule 7: beta-D-glucopyranose-(1-3)-alpha-L-fucopyranose



- Molecule 7: beta-D-glucopyranose-(1-3)-alpha-L-fucopyranose



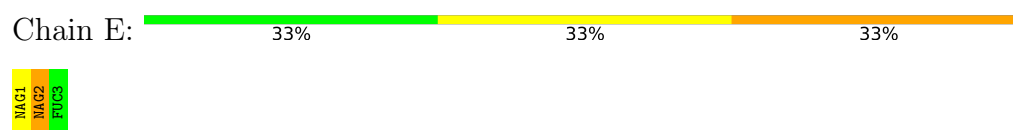
- Molecule 7: beta-D-glucopyranose-(1-3)-alpha-L-fucopyranose



- Molecule 7: beta-D-glucopyranose-(1-3)-alpha-L-fucopyranose



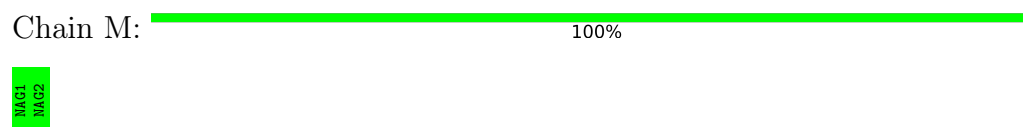
- Molecule 8: 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-[alpha-L-fucopyranose-(1-6)]2-acetamido-2-deoxy-beta-D-glucopyranose



- Molecule 8: 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-[alpha-L-fucopyranose-(1-6)]2-acetamido-2-deoxy-beta-D-glucopyranose



- Molecule 9: 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose



- Molecule 9: 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose

Chain O:  100%

MAG1
MAG2

- Molecule 9: 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose

Chain P:  100%

MAG1
MAG2

- Molecule 9: 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose

Chain R:  50% 50%

MAG1
MAG2

- Molecule 9: 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose

Chain S:  50% 50%

MAG1
MAG2

- Molecule 9: 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose

Chain T:  50% 50%

MAG1
MAG2

- Molecule 9: 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose

Chain W:  100%

MAG1
MAG2

- Molecule 9: 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose

Chain Z:  50% 50%



4 Data and refinement statistics

Property	Value	Source
Space group	C 1 2 1	Depositor
Cell constants a, b, c, α , β , γ	634.87Å 121.98Å 264.42Å 90.00° 112.91° 90.00°	Depositor
Resolution (Å)	48.76 – 6.00 48.76 – 6.00	Depositor EDS
% Data completeness (in resolution range)	98.8 (48.76-6.00) 98.6 (48.76-6.00)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.11 (at 6.15Å)	Xtriage
Refinement program	PHENIX (1.14_3260: ???)	Depositor
R, R_{free}	0.234 , 0.272 0.293 , 0.323	Depositor DCC
R_{free} test set	1174 reflections (2.48%)	wwPDB-VP
Wilson B-factor (Å ²)	301.1	Xtriage
Anisotropy	0.346	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.42 , 647.8	EDS
L-test for twinning ²	$\langle L \rangle = 0.35$, $\langle L^2 \rangle = 0.19$	Xtriage
Estimated twinning fraction	0.048 for -h-2*k,l	Xtriage
F_o, F_c correlation	0.84	EDS
Total number of atoms	39456	wwPDB-VP
Average B, all atoms (Å ²)	397.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 4.16% 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: BGC, NAG, MG, MAN, FUC

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	U	0.09	0/825	0.29	0/1117
1	X	0.08	0/825	0.29	0/1117
2	V	0.11	0/1676	0.34	0/2283
2	Y	0.11	0/1675	0.33	0/2279
3	A	0.11	0/5127	0.31	0/6966
3	G	0.09	0/5127	0.29	0/6966
4	B	0.11	0/7439	0.33	0/10073
4	H	0.10	0/7439	0.33	0/10073
5	J	0.08	0/4095	0.29	0/5542
5	L	0.09	0/4095	0.29	0/5542
6	N	0.07	0/691	0.24	0/923
6	Q	0.07	0/691	0.25	0/923
All	All	0.10	0/39705	0.31	0/53804

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	U	806	0	747	13	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	X	806	0	747	16	0
2	V	1622	0	1538	33	0
2	Y	1622	0	1538	29	0
3	A	5025	0	5084	57	0
3	G	5025	0	5084	44	0
4	B	7293	0	7217	97	0
4	H	7293	0	7217	83	0
5	J	4007	0	3994	27	0
5	L	4007	0	3994	45	0
6	N	683	0	697	12	0
6	Q	683	0	697	10	0
7	C	21	0	19	0	0
7	D	21	0	19	0	0
7	F	21	0	19	2	0
7	I	21	0	19	0	0
8	E	38	0	34	3	0
8	K	38	0	34	2	0
9	M	28	0	25	0	0
9	O	28	0	25	0	0
9	P	28	0	25	0	0
9	R	28	0	25	0	0
9	S	28	0	25	2	0
9	T	28	0	25	0	0
9	W	28	0	25	4	0
9	Z	28	0	25	1	0
10	U	22	0	20	0	0
10	V	77	0	70	0	0
10	X	22	0	20	0	0
10	Y	77	0	70	0	0
11	B	1	0	0	0	0
11	H	1	0	0	0	0
All	All	39456	0	39078	427	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 5.

All (427) 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)
5:L:539:LYS:NZ	5:L:649:GLU:OE1	2.09	0.85
5:J:241:SER:O	5:J:354:ARG:NH2	2.15	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:V:331:ASN:HB2	4:B:1640:PRO:HG2	1.62	0.80
3:A:83:PHE:HD2	3:A:100:LEU:HA	1.47	0.78
5:L:242:GLY:HA2	5:L:354:ARG:HH22	1.51	0.76
3:G:175:GLU:O	4:H:915:ARG:NH1	2.18	0.75
4:H:742:ARG:HB3	4:H:775:ASP:HB3	1.72	0.72
3:G:367:VAL:HA	3:G:404:THR:HA	1.70	0.72
5:J:493:GLU:HB3	5:J:560:LYS:HG3	1.72	0.72
4:B:1585:LEU:HD22	4:B:1587:SER:H	1.55	0.71
4:H:732:ASP:OD2	6:Q:62:LYS:NZ	2.24	0.71
2:Y:359:ARG:HB3	4:H:1616:GLN:HG3	1.72	0.70
4:H:1566:ILE:HG13	4:H:1569:ARG:HH21	1.56	0.70
4:B:1564:SER:HB2	4:B:1600:ILE:HD12	1.74	0.69
5:L:241:SER:O	5:L:354:ARG:NH2	2.24	0.69
5:J:699:VAL:HG11	5:J:709:VAL:HG12	1.75	0.69
5:J:519:GLU:HG3	5:J:521:ARG:H	1.58	0.69
4:B:730:ASP:OD1	6:N:56:LYS:NZ	2.22	0.68
3:A:296:ASP:O	3:A:300:LYS:NZ	2.26	0.68
5:J:351:GLY:HA2	5:J:354:ARG:HB3	1.75	0.67
4:H:1414:LYS:NZ	4:H:1418:ASP:OD2	2.21	0.67
4:B:840:VAL:HG22	4:B:894:VAL:HG12	1.77	0.67
4:H:1194:ASP:OD2	4:H:1197:ARG:NH2	2.27	0.67
4:B:843:GLU:OE2	4:B:859:ARG:NH1	2.24	0.66
4:B:1387:THR:HG22	4:B:1451:GLN:H	1.60	0.66
3:A:10:ASN:HD22	3:A:623:THR:HG23	1.60	0.66
4:H:1279:PRO:HG2	4:H:1306:GLU:HB3	1.77	0.66
4:B:1126:LEU:HD11	4:B:1147:ILE:HG23	1.77	0.66
4:H:940:ILE:HD11	4:H:1320:LEU:HD21	1.77	0.66
2:Y:260:TRP:HB3	2:Y:282:ARG:HD2	1.78	0.66
4:B:1481:ASN:OD1	4:B:1567:LYS:NZ	2.26	0.66
3:G:2:PRO:HB3	3:G:27:ALA:HA	1.77	0.65
5:J:481:LYS:NZ	5:J:507:ASP:OD2	2.30	0.65
4:H:1585:LEU:HD22	4:H:1586:SER:H	1.61	0.65
5:L:473:LYS:NZ	5:L:610:GLU:OE2	2.29	0.65
5:L:584:LEU:HD13	5:L:588:THR:HG21	1.79	0.64
4:B:819:ARG:NH2	4:B:1487:GLU:OE1	2.29	0.64
5:L:450:LEU:HA	5:L:568:ARG:HH21	1.62	0.64
4:B:1520:ASP:OD2	4:B:1586:SER:N	2.32	0.63
5:L:266:LYS:O	5:L:270:ASN:ND2	2.29	0.63
4:H:928:GLU:OE1	4:H:1315:LYS:NZ	2.31	0.62
6:Q:11:GLN:OE1	6:Q:11:GLN:N	2.28	0.62
4:B:847:ASN:ND2	4:B:887:GLU:O	2.32	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:L:699:VAL:HB	5:L:709:VAL:HG11	1.80	0.62
3:A:152:PRO:O	4:B:1299:SER:OG	2.17	0.62
2:Y:388:TRP:HB3	2:Y:401:ARG:HD2	1.82	0.61
6:N:25:GLU:O	6:N:29:ASN:ND2	2.30	0.61
4:B:742:ARG:HB3	4:B:775:ASP:HB3	1.82	0.61
4:H:1446:ASN:ND2	6:N:4:LEU:O	2.33	0.61
4:B:877:VAL:HG21	4:B:1452:PRO:HD2	1.81	0.61
2:V:359:ARG:HD2	4:B:1613:ASP:HB2	1.83	0.61
4:H:1018:GLU:OE2	4:H:1018:GLU:N	2.28	0.61
3:A:541:LEU:HD22	4:B:786:SER:HB3	1.83	0.60
4:B:915:ARG:HE	4:B:1327:HIS:CE1	2.19	0.60
4:B:1261:GLN:O	4:B:1263:ASP:N	2.34	0.60
8:E:2:NAG:H83	8:E:2:NAG:H3	1.84	0.60
2:Y:442:LEU:HD23	2:Y:449:VAL:HG11	1.84	0.60
3:A:83:PHE:CD2	3:A:100:LEU:HA	2.33	0.60
4:H:734:ILE:HG23	6:Q:49:GLN:HE22	1.67	0.60
4:H:1514:ALA:O	4:H:1548:LYS:NZ	2.29	0.60
5:L:439:VAL:HA	6:N:31:LEU:HD21	1.83	0.60
2:V:260:TRP:HB3	2:V:282:ARG:HD2	1.83	0.60
3:A:20:MET:HE2	3:A:22:LEU:HD21	1.84	0.60
5:L:430:VAL:HG11	9:W:1:NAG:HN2	1.67	0.59
5:J:425:GLN:HB2	6:Q:34:GLY:HA3	1.83	0.59
2:V:442:LEU:HD23	2:V:449:VAL:HG11	1.84	0.59
4:B:1511:LEU:HD13	4:B:1630:PHE:HB2	1.82	0.59
3:A:147:ASN:HD21	3:A:149:GLU:HG2	1.68	0.59
3:A:474:ASN:O	3:A:477:ARG:NH1	2.34	0.59
3:G:567:HIS:HB2	4:H:760:PRO:HB3	1.85	0.59
4:B:809:ILE:HG23	4:B:829:LEU:HG	1.85	0.59
8:K:2:NAG:H3	8:K:2:NAG:H83	1.84	0.59
3:A:11:ILE:HG23	3:A:100:LEU:HG	1.85	0.58
3:A:489:GLY:O	3:G:456:ARG:NH1	2.36	0.58
5:J:584:LEU:HD13	5:J:588:THR:HG21	1.84	0.58
5:L:501:HIS:ND1	5:L:551:ASP:OD2	2.33	0.58
9:S:2:NAG:H83	9:S:2:NAG:H3	1.86	0.58
5:L:607:PHE:HB2	5:L:692:ILE:HD11	1.86	0.58
5:J:266:LYS:O	5:J:270:ASN:ND2	2.33	0.57
3:G:161:GLN:O	3:G:163:GLN:NE2	2.37	0.57
5:L:621:TYR:O	5:L:623:LYS:NZ	2.32	0.57
2:V:330:ARG:HH12	2:V:343:GLN:HB2	1.70	0.57
2:V:388:TRP:HB3	2:V:401:ARG:HD2	1.84	0.57
3:A:55:THR:HG22	3:A:57:ALA:H	1.69	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:H:1387:THR:HG22	4:H:1451:GLN:H	1.70	0.57
3:G:434:LEU:HB2	3:G:513:TYR:HE2	1.70	0.57
1:U:78:PRO:HA	1:U:106:GLY:HA3	1.87	0.56
2:V:313:PRO:HA	2:V:355:PHE:HB2	1.88	0.56
4:B:1446:ASN:HB2	6:Q:4:LEU:HB2	1.87	0.56
3:G:368:ALA:HB2	3:G:376:GLN:HG2	1.87	0.56
4:H:1038:ARG:NH2	4:H:1042:SER:OG	2.39	0.56
4:B:777:ILE:HG23	4:B:804:MET:HA	1.87	0.56
4:B:1027:ILE:HG22	4:B:1071:ILE:HD13	1.88	0.56
5:L:320:GLU:HA	5:L:323:LYS:HB2	1.87	0.56
2:V:271:VAL:HG22	2:V:273:CYS:H	1.71	0.55
3:A:434:LEU:HB2	3:A:513:TYR:HE2	1.71	0.55
1:X:74:PRO:HG2	1:X:106:GLY:HA2	1.88	0.55
2:Y:399:PRO:HD2	2:Y:458:VAL:HG21	1.89	0.55
3:A:266:LEU:HD21	4:B:1378:MET:HE2	1.88	0.55
3:A:114:LYS:NZ	4:B:747:GLU:OE1	2.39	0.55
4:B:927:PRO:HA	4:B:936:GLN:HB2	1.89	0.55
9:S:1:NAG:H61	9:S:2:NAG:N2	2.21	0.55
4:B:1338:LYS:HA	4:B:1371:ARG:HB2	1.88	0.55
1:X:78:PRO:HA	1:X:106:GLY:HA3	1.87	0.55
6:N:19:LEU:HD11	6:N:51:ALA:HB1	1.89	0.55
1:X:47:LEU:HD11	2:Y:277:GLN:HB2	1.89	0.55
4:B:1464:GLU:N	4:B:1464:GLU:OE1	2.40	0.55
5:L:508:LYS:HZ2	5:L:508:LYS:HA	1.71	0.55
3:G:338:THR:OG1	3:G:351:MET:O	2.20	0.54
2:Y:271:VAL:HG22	2:Y:273:CYS:H	1.71	0.54
3:G:55:THR:HG22	3:G:57:ALA:H	1.73	0.54
3:G:216:PRO:HA	3:G:231:VAL:HA	1.88	0.54
4:H:898:PHE:HB2	6:Q:50:LYS:HE2	1.90	0.54
2:V:399:PRO:HD2	2:V:458:VAL:HG21	1.89	0.54
2:Y:409:PRO:HG3	2:Y:437:PRO:HB3	1.90	0.54
3:A:37:VAL:HG13	3:A:86:VAL:HG22	1.90	0.54
4:H:969:THR:HG21	4:H:1265:PRO:HB2	1.88	0.54
9:W:2:NAG:H3	9:W:2:NAG:H83	1.90	0.54
3:A:465:ILE:HD11	3:A:515:LEU:HD22	1.89	0.54
4:B:1381:LEU:HB2	4:B:1424:ILE:HB	1.89	0.53
4:H:1089:LYS:NZ	4:H:1099:ASP:OD2	2.32	0.53
1:X:51:VAL:HG21	2:Y:275:LEU:HD21	1.91	0.53
4:H:1546:THR:HG23	4:H:1554:VAL:HG13	1.91	0.53
1:X:56:CYS:HA	2:Y:275:LEU:HD22	1.90	0.53
4:B:1484:CYS:HA	4:B:1489:CYS:HA	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:H:1271:ASN:HA	4:H:1290:HIS:HD1	1.73	0.53
4:H:1338:LYS:HA	4:H:1371:ARG:HB2	1.91	0.53
1:X:34:THR:HG23	1:X:35:GLN:HG3	1.90	0.53
5:L:579:THR:HG23	5:L:584:LEU:HB2	1.91	0.53
5:J:539:LYS:HD3	5:J:544:ILE:HD12	1.91	0.52
4:B:756:LEU:HD23	4:B:767:LYS:HE2	1.92	0.52
4:H:1585:LEU:HD13	4:H:1587:SER:H	1.74	0.52
2:V:344:GLN:OE1	2:V:368:ARG:NH1	2.43	0.52
3:A:148:PRO:HD3	3:A:182:TRP:CE2	2.44	0.52
4:H:1126:LEU:HD11	4:H:1147:ILE:HG23	1.91	0.52
5:L:622:ILE:HA	5:L:658:THR:HG22	1.92	0.52
4:H:852:SER:HB3	4:H:878:ILE:HG22	1.91	0.52
2:Y:344:GLN:OE1	2:Y:368:ARG:NH1	2.43	0.52
3:G:10:ASN:HA	3:G:623:THR:HG23	1.91	0.52
2:V:417:THR:HG22	2:V:426:GLU:HG2	1.92	0.51
4:B:1219:LEU:HD13	4:B:1259:GLN:HG3	1.92	0.51
4:H:1055:TRP:HE1	4:H:1111:LEU:HD12	1.75	0.51
4:B:1102:VAL:O	4:B:1105:GLN:NE2	2.41	0.51
4:B:1550:GLY:C	4:B:1552:ASP:H	2.19	0.51
2:Y:401:ARG:HG3	2:Y:455:CYS:SG	2.51	0.51
4:B:1630:PHE:HA	4:B:1633:SER:HB3	1.93	0.51
5:L:702:ASN:C	5:L:704:LYS:H	2.18	0.51
4:H:826:ARG:NH1	4:H:1382:ASP:OD2	2.34	0.51
5:J:243:SER:N	5:J:354:ARG:HH12	2.09	0.51
3:G:80:ARG:NE	4:H:1010:GLU:OE2	2.41	0.50
4:H:729:LEU:HD22	4:H:730:ASP:H	1.75	0.50
5:L:468:GLN:HB3	5:L:471:GLN:HB2	1.92	0.50
3:A:478:LEU:HD21	3:A:622:LEU:HD21	1.94	0.50
2:Y:260:TRP:CZ3	2:Y:300:ALA:HB2	2.47	0.50
4:H:1383:ILE:HG23	4:H:1455:VAL:HG22	1.93	0.50
5:J:381:ARG:NH2	5:J:395:GLU:OE1	2.37	0.50
3:G:392:HIS:C	3:G:394:SER:H	2.20	0.50
3:A:367:VAL:HA	3:A:404:THR:HA	1.93	0.50
4:B:837:GLU:HB3	4:B:868:PRO:HD3	1.92	0.50
4:H:1502:ASP:HB3	4:H:1505:VAL:HG12	1.92	0.50
4:H:1555:GLN:C	4:H:1557:GLY:H	2.19	0.50
3:A:87:GLN:HG3	3:A:96:GLU:HB3	1.94	0.50
5:L:563:TYR:CE1	5:L:569:PRO:HD3	2.47	0.49
3:A:80:ARG:NE	4:B:1010:GLU:OE2	2.45	0.49
4:B:1554:VAL:O	4:B:1556:VAL:N	2.44	0.49
3:G:458:ASP:OD1	3:G:458:ASP:N	2.45	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:G:541:LEU:HD22	4:H:786:SER:HB3	1.93	0.49
3:A:368:ALA:HB2	3:A:376:GLN:HG2	1.94	0.49
5:J:509:GLU:OE1	5:J:509:GLU:N	2.43	0.49
5:L:425:GLN:HB2	6:N:34:GLY:HA3	1.95	0.49
2:V:348:ARG:NH2	2:V:363:GLN:O	2.37	0.49
2:Y:378:LEU:HD21	2:Y:412:PRO:HD3	1.95	0.49
3:G:100:LEU:HD12	3:G:101:VAL:H	1.76	0.49
3:A:31:VAL:HG13	3:A:54:LEU:HB2	1.94	0.49
4:H:1481:ASN:ND2	4:H:1493:GLU:OE2	2.46	0.49
5:J:635:ALA:HB2	5:J:716:PHE:CZ	2.47	0.49
2:V:401:ARG:HG3	2:V:455:CYS:SG	2.53	0.49
3:A:307:THR:HG23	3:A:316:MET:HE3	1.95	0.49
8:K:1:NAG:O3	8:K:2:NAG:N2	2.46	0.49
4:H:837:GLU:HB3	4:H:868:PRO:HD3	1.95	0.49
4:H:1187:LYS:O	4:H:1191:THR:OG1	2.22	0.49
1:U:130:GLN:NE2	1:U:132:CYS:O	2.38	0.49
2:Y:348:ARG:NH2	2:Y:363:GLN:O	2.35	0.49
4:H:912:GLU:CD	4:H:912:GLU:H	2.20	0.49
1:U:95:GLU:HB3	2:V:456:LEU:HD12	1.94	0.48
4:B:990:GLU:OE2	4:B:1046:ALA:HB2	2.13	0.48
4:H:929:ARG:HH11	4:H:929:ARG:HA	1.78	0.48
4:H:1119:MET:HE2	4:H:1161:LEU:HD21	1.95	0.48
3:A:10:ASN:HA	3:A:623:THR:HG23	1.95	0.48
4:B:1641:ASN:O	5:L:255:SER:N	2.46	0.48
4:H:1564:SER:HB2	4:H:1600:ILE:HD12	1.94	0.48
4:H:734:ILE:HG23	6:Q:49:GLN:NE2	2.29	0.48
3:A:126:ARG:NH1	3:A:572:VAL:HB	2.29	0.48
3:G:84:VAL:HG13	3:G:101:VAL:HG21	1.95	0.48
4:H:754:GLU:HG3	4:H:769:MET:SD	2.53	0.48
3:A:215:GLU:O	3:A:232:THR:N	2.39	0.48
4:B:1621:GLN:O	4:B:1625:GLN:HG3	2.14	0.48
4:B:1511:LEU:HD22	4:B:1630:PHE:CG	2.48	0.48
5:J:320:GLU:HA	5:J:323:LYS:HB2	1.95	0.48
3:G:19:THR:HB	3:G:478:LEU:HB2	1.96	0.48
2:Y:257:ALA:HA	2:Y:294:PRO:HD3	1.95	0.48
4:B:932:ARG:HG2	4:B:933:GLU:HG3	1.95	0.48
4:H:1352:GLU:HG2	4:H:1361:THR:HG21	1.96	0.48
2:V:330:ARG:HH21	4:B:1633:SER:HB2	1.78	0.47
4:B:819:ARG:HD3	4:B:883:THR:HG23	1.96	0.47
5:J:261:PHE:CD2	5:J:319:TYR:HB2	2.49	0.47
8:E:1:NAG:O3	8:E:2:NAG:N2	2.47	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:435:HIS:HB3	3:A:454:LEU:HB3	1.96	0.47
5:J:621:TYR:O	5:J:623:LYS:NZ	2.35	0.47
2:V:385:TRP:CE3	2:V:405:ARG:HG3	2.50	0.47
1:X:34:THR:HG22	1:X:45:GLY:HA3	1.95	0.47
4:H:1617:ASP:O	4:H:1621:GLN:N	2.45	0.47
9:W:1:NAG:O7	9:W:1:NAG:O4	2.31	0.47
3:A:549:GLU:HG2	3:A:550:ASP:H	1.79	0.47
1:X:124:LEU:HB3	2:Y:391:CYS:HB2	1.96	0.47
4:B:745:PHE:N	4:B:746:PRO:HD3	2.30	0.47
4:B:1501:SER:C	4:B:1503:ASP:H	2.22	0.47
5:J:449:SER:HA	5:J:452:LEU:HD13	1.96	0.47
2:Y:258:GLY:HA2	2:Y:287:PRO:HB2	1.96	0.47
3:A:434:LEU:HB2	3:A:513:TYR:CE2	2.49	0.47
4:B:843:GLU:OE2	4:B:859:ARG:HD3	2.15	0.47
4:B:1396:LEU:HD12	4:B:1419:ARG:NH1	2.30	0.47
3:G:514:THR:OG1	3:G:522:ARG:NH1	2.42	0.47
3:G:624:PHE:HB3	3:G:632:THR:HG23	1.95	0.47
5:L:235:LYS:N	5:L:399:ASP:OD2	2.48	0.47
4:B:1490:ARG:HB2	4:B:1590:TRP:CH2	2.49	0.47
3:G:475:LYS:HE2	3:G:477:ARG:HH12	1.80	0.47
5:L:607:PHE:CE2	5:L:669:THR:HG22	2.50	0.47
3:A:549:GLU:HG3	3:A:551:ARG:NH1	2.30	0.47
4:B:1498:ILE:HD11	4:B:1605:TRP:HB2	1.97	0.47
4:H:958:ILE:HG23	4:H:1322:VAL:HG22	1.97	0.47
4:H:1464:GLU:OE1	4:H:1464:GLU:N	2.38	0.47
8:E:1:NAG:H4	8:E:2:NAG:H2	1.80	0.47
2:V:318:TRP:CE2	2:V:360:CYS:HB3	2.50	0.46
4:B:923:ARG:NH2	4:B:939:ASP:O	2.45	0.46
4:B:1590:TRP:N	4:B:1597:SER:O	2.47	0.46
3:G:126:ARG:NH1	3:G:572:VAL:HB	2.29	0.46
4:H:738:ASN:HD22	6:Q:49:GLN:CD	2.23	0.46
1:U:80:TRP:HZ2	1:U:115:VAL:HG21	1.80	0.46
2:V:258:GLY:HA2	2:V:287:PRO:HB2	1.96	0.46
4:B:1485:ARG:HH21	4:B:1488:LEU:HD23	1.81	0.46
4:H:1415:ALA:HA	4:H:1419:ARG:HH12	1.79	0.46
4:H:847:ASN:ND2	4:H:887:GLU:O	2.49	0.46
5:J:731:LEU:HD22	5:J:734:GLU:HG3	1.98	0.46
3:A:458:ASP:N	3:A:458:ASP:OD1	2.47	0.46
4:H:966:ALA:HB2	4:H:1268:GLN:HA	1.96	0.46
6:N:50:LYS:HG2	6:N:66:ALA:HB2	1.97	0.46
3:G:295:GLU:OE1	3:G:295:GLU:N	2.46	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:L:382:ASP:HB2	5:L:388:LYS:HZ1	1.80	0.46
5:L:438:ASP:OD2	5:L:459:HIS:HB2	2.16	0.46
2:V:321:TRP:CD2	2:V:348:ARG:HG3	2.50	0.46
2:V:409:PRO:HG3	2:V:437:PRO:HB3	1.97	0.46
4:B:1277:GLN:HG3	4:B:1284:LYS:HE3	1.97	0.46
3:G:434:LEU:HB2	3:G:513:TYR:CE2	2.49	0.46
4:B:1192:ALA:HB2	4:B:1198:TRP:CE2	2.50	0.46
5:L:467:LYS:HB3	5:L:617:ARG:HH21	1.81	0.46
3:A:555:PRO:HB3	4:B:775:ASP:HA	1.98	0.45
4:H:979:LYS:HG2	4:H:1015:PHE:CE1	2.51	0.45
4:H:1271:ASN:HA	4:H:1290:HIS:ND1	2.31	0.45
3:G:591:GLN:HB2	4:H:795:VAL:HB	1.98	0.45
4:H:1281:ARG:HE	4:H:1281:ARG:HB2	1.36	0.45
5:L:256:ILE:HD12	5:L:405:VAL:HG23	1.97	0.45
5:L:509:GLU:N	5:L:509:GLU:OE1	2.46	0.45
3:G:565:GLY:O	4:H:765:SER:N	2.42	0.45
4:H:1621:GLN:O	4:H:1625:GLN:HG3	2.15	0.45
5:J:635:ALA:HB2	5:J:716:PHE:HZ	1.82	0.45
2:V:295:PHE:C	2:V:297:ALA:H	2.25	0.45
2:Y:295:PHE:C	2:Y:297:ALA:H	2.24	0.45
4:B:1462:ASN:CG	4:B:1465:GLU:HG2	2.41	0.45
3:A:295:GLU:OE1	3:A:295:GLU:N	2.45	0.45
5:L:260:ASN:ND2	9:W:1:NAG:H62	2.32	0.45
4:B:739:ILE:HB	4:B:891:LYS:HD3	1.97	0.45
4:H:1104:HIS:O	4:H:1107:MET:HG2	2.17	0.45
5:L:508:LYS:HA	5:L:508:LYS:NZ	2.31	0.45
3:G:562:LYS:HE2	4:H:768:LEU:HD21	1.99	0.45
4:H:1526:ARG:HD3	4:H:1579:HIS:CE1	2.51	0.45
3:A:87:GLN:OE1	3:A:94:VAL:HG21	2.17	0.44
1:U:103:ARG:CZ	1:U:120:LEU:HD21	2.46	0.44
2:Y:312:CYS:SG	2:Y:313:PRO:HD3	2.58	0.44
2:Y:325:SER:O	2:Y:344:GLN:NE2	2.48	0.44
4:B:1272:LEU:HB2	4:B:1289:ILE:HB	1.98	0.44
3:G:147:ASN:HD21	3:G:149:GLU:HG2	1.82	0.44
3:G:148:PRO:HD3	3:G:182:TRP:CE2	2.52	0.44
4:H:1632:GLU:O	4:H:1636:VAL:HG12	2.17	0.44
3:G:312:SER:O	4:H:826:ARG:NH2	2.50	0.44
4:H:968:MET:SD	4:H:968:MET:N	2.91	0.44
5:L:343:TRP:CE2	5:L:348:PRO:HG3	2.53	0.44
2:V:313:PRO:HB3	2:V:355:PHE:O	2.18	0.44
1:X:94:SER:OG	1:X:95:GLU:N	2.51	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:G:111:GLN:OE1	3:G:126:ARG:NH2	2.45	0.44
4:H:729:LEU:HD13	4:H:731:GLU:H	1.81	0.44
5:J:476:VAL:HG22	5:J:512:ILE:HG12	1.99	0.44
4:H:1272:LEU:HB2	4:H:1289:ILE:HB	1.99	0.44
1:U:33:PHE:CD2	1:U:43:CYS:HB3	2.53	0.44
2:V:294:PRO:HB2	2:V:295:PHE:H	1.68	0.44
2:Y:421:VAL:O	2:Y:423:GLY:N	2.50	0.44
1:U:97:SER:HB3	1:U:124:LEU:HD11	2.00	0.44
5:L:603:ILE:HB	5:L:622:ILE:HB	1.99	0.44
2:V:325:SER:O	2:V:344:GLN:NE2	2.47	0.43
3:A:33:VAL:HA	3:A:89:THR:O	2.17	0.43
3:A:269:ILE:HD13	3:A:278:VAL:HB	2.00	0.43
4:B:977:ARG:HD3	4:B:1240:TYR:CZ	2.53	0.43
4:B:1482:LYS:H	4:B:1482:LYS:HD3	1.82	0.43
4:B:1517:PRO:HG2	5:L:366:LEU:HD22	1.98	0.43
4:B:1586:SER:HA	4:B:1589:PHE:CE2	2.52	0.43
1:U:34:THR:HG23	1:U:35:GLN:HG3	1.99	0.43
3:A:126:ARG:HG3	4:B:751:TRP:CZ2	2.53	0.43
3:G:591:GLN:HE21	3:G:595:TRP:NE1	2.15	0.43
5:J:243:SER:H	5:J:354:ARG:HH12	1.65	0.43
5:J:343:TRP:CE2	5:J:348:PRO:HG3	2.53	0.43
3:G:218:GLU:C	3:G:220:PHE:H	2.27	0.43
4:B:819:ARG:NH1	4:B:820:ASN:OD1	2.52	0.43
4:B:1215:LEU:HD23	4:B:1256:ALA:HB1	1.99	0.43
1:X:130:GLN:NE2	1:X:132:CYS:O	2.40	0.43
3:A:107:TYR:CE2	3:A:132:HIS:HA	2.54	0.43
3:A:253:ILE:HD11	3:A:285:LEU:HD11	1.99	0.43
4:B:1261:GLN:HA	4:B:1264:ALA:HB2	2.01	0.43
4:H:949:VAL:HB	4:H:952:THR:HG21	2.01	0.43
2:Y:318:TRP:CH2	2:Y:364:GLN:HB3	2.53	0.43
3:A:27:ALA:HB3	3:A:60:HIS:CE1	2.54	0.43
4:B:1383:ILE:HB	4:B:1422:LEU:HB3	2.00	0.43
3:A:379:THR:HG22	3:A:385:ALA:HB2	2.01	0.43
5:L:495:PHE:HA	5:L:555:ILE:O	2.19	0.43
3:A:126:ARG:CZ	3:A:572:VAL:HB	2.49	0.43
3:G:284:VAL:O	3:G:288:GLY:N	2.46	0.43
4:H:1462:ASN:HB3	4:H:1465:GLU:HG2	2.00	0.43
5:J:620:VAL:HG12	5:J:666:ASP:HB3	2.01	0.43
5:L:429:LYS:HG2	5:L:432:ASP:OD2	2.18	0.43
2:V:257:ALA:HA	2:V:294:PRO:HD3	2.00	0.43
3:A:40:PHE:HB3	3:A:83:PHE:O	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:853:LEU:HD12	4:B:860:HIS:CE1	2.54	0.43
4:B:1345:ILE:HD11	4:B:1362:MET:HB3	2.01	0.43
5:J:494:TYR:CZ	5:J:560:LYS:HB2	2.54	0.43
2:V:321:TRP:CE3	2:V:348:ARG:HG3	2.54	0.42
1:X:78:PRO:HG2	1:X:109:GLY:C	2.44	0.42
4:H:1180:LEU:HD23	4:H:1221:LEU:HD11	2.01	0.42
3:A:218:GLU:HB3	3:A:220:PHE:CE1	2.55	0.42
1:X:95:GLU:HB3	2:Y:456:LEU:HD12	2.00	0.42
4:B:1480:LEU:HD22	4:B:1493:GLU:OE2	2.19	0.42
4:B:1490:ARG:HE	4:B:1599:ILE:HG21	1.83	0.42
4:B:1589:PHE:HA	4:B:1598:TYR:HA	2.02	0.42
3:G:506:SER:HB2	3:G:530:TRP:HE1	1.84	0.42
4:H:1578:LYS:HB3	4:H:1608:HIS:CE1	2.55	0.42
5:L:474:ILE:HG12	5:L:514:VAL:HG22	2.00	0.42
4:H:805:GLN:NE2	4:H:807:PHE:O	2.38	0.42
4:H:837:GLU:HG2	6:N:64:SER:OG	2.19	0.42
5:L:494:TYR:CZ	5:L:560:LYS:HB3	2.54	0.42
4:H:1636:VAL:HG13	4:H:1637:PHE:CD2	2.55	0.42
7:F:1:FUC:H3	7:F:2:BGC:H2	1.77	0.42
2:V:407:CYS:SG	2:V:437:PRO:HB2	2.59	0.42
4:B:786:SER:OG	4:B:794:CYS:HB3	2.19	0.42
4:B:840:VAL:HA	4:B:894:VAL:HA	2.02	0.42
5:J:362:MET:HG2	5:J:403:PHE:HB2	2.02	0.42
5:L:261:PHE:CD2	5:L:319:TYR:HB2	2.55	0.42
2:V:335:ILE:HB	2:V:340:ILE:HB	2.02	0.42
4:B:1260:TYR:O	4:B:1264:ALA:HA	2.20	0.42
4:H:1337:ASN:N	4:H:1337:ASN:OD1	2.52	0.42
3:A:249:VAL:HG11	3:A:278:VAL:HG11	2.01	0.41
4:B:1130:GLN:HG2	4:B:1147:ILE:HD13	2.02	0.41
4:B:1578:LYS:NZ	4:B:1614:GLU:OE1	2.53	0.41
1:U:71:LEU:HD11	1:U:118:GLY:HA2	2.02	0.41
1:X:131:GLN:CD	1:X:131:GLN:H	2.28	0.41
3:A:590:THR:HG23	3:A:593:LYS:H	1.84	0.41
3:A:179:MET:SD	3:A:179:MET:N	2.93	0.41
3:A:634:GLN:NE2	4:B:1017:LEU:H	2.18	0.41
3:G:540:SER:O	3:G:565:GLY:HA2	2.20	0.41
4:H:1108:ILE:HD11	4:H:1112:ARG:HA	2.03	0.41
4:H:1477:ASP:CG	4:H:1479:LYS:HD3	2.45	0.41
5:J:306:ASN:HB3	5:J:309:TRP:HB3	2.01	0.41
6:Q:23:LEU:HD21	6:Q:51:ALA:HB3	2.02	0.41
6:Q:25:GLU:O	6:Q:29:ASN:ND2	2.46	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:U:33:PHE:CG	1:U:43:CYS:HB3	2.54	0.41
2:V:256:VAL:HB	2:V:290:GLN:H	1.86	0.41
2:Y:341:PRO:HG3	2:Y:418:VAL:HG21	2.03	0.41
4:B:1340:ASP:O	4:B:1368:THR:HA	2.19	0.41
4:B:1354:ARG:C	4:B:1356:GLN:H	2.28	0.41
2:Y:421:VAL:O	2:Y:424:GLN:N	2.51	0.41
4:B:780:TRP:O	4:B:800:GLU:HA	2.21	0.41
3:A:100:LEU:HD12	3:A:101:VAL:H	1.85	0.41
4:B:1381:LEU:HD23	4:B:1457:VAL:HG12	2.03	0.41
4:H:745:PHE:N	4:H:746:PRO:HD3	2.34	0.41
5:L:277:SER:O	5:L:685:ARG:NH1	2.53	0.41
2:V:419:SER:HB3	2:V:426:GLU:HG3	2.02	0.41
2:V:421:VAL:O	2:V:423:GLY:N	2.53	0.41
1:X:103:ARG:HH12	2:Y:464:PRO:HG2	1.85	0.41
3:A:176:LEU:HD13	4:B:955:GLU:HG2	2.01	0.41
4:B:1494:GLU:HB3	4:B:1602:LYS:HB3	2.02	0.41
4:H:986:SER:HA	4:H:1033:GLN:HE22	1.84	0.41
5:L:382:ASP:HB2	5:L:388:LYS:NZ	2.36	0.41
5:L:442:GLN:HG3	6:N:31:LEU:HG	2.02	0.41
5:L:501:HIS:N	5:L:551:ASP:OD1	2.47	0.41
2:Y:318:TRP:CE2	2:Y:360:CYS:HB3	2.56	0.41
3:A:37:VAL:HB	3:A:47:LEU:HB3	2.03	0.41
3:A:392:HIS:C	3:A:394:SER:H	2.29	0.41
3:A:634:GLN:CD	4:B:1017:LEU:H	2.28	0.41
4:B:1290:HIS:HB2	4:B:1292:GLU:OE2	2.20	0.41
4:B:1393:THR:HG22	4:B:1415:ALA:HB1	2.02	0.41
3:G:445:PRO:HB3	3:G:500:THR:C	2.45	0.41
4:H:1082:VAL:HG13	4:H:1129:LEU:HD22	2.03	0.41
4:H:1537:ASP:CG	4:H:1569:ARG:HD3	2.45	0.41
5:L:579:THR:OG1	5:L:593:GLN:OE1	2.33	0.41
4:B:1511:LEU:HB3	4:B:1630:PHE:CD1	2.56	0.40
3:G:392:HIS:O	3:G:394:SER:N	2.48	0.40
4:H:729:LEU:HD22	4:H:730:ASP:N	2.36	0.40
1:X:133:CYS:SG	7:F:2:BGC:H4	2.62	0.40
3:A:216:PRO:HA	3:A:231:VAL:HA	2.04	0.40
4:B:734:ILE:HG23	6:N:49:GLN:HE22	1.86	0.40
5:L:329:ASN:HB2	5:L:369:MET:HB2	2.03	0.40
1:X:103:ARG:CZ	1:X:120:LEU:HD21	2.51	0.40
3:A:118:THR:O	3:A:121:SER:OG	2.38	0.40
3:G:472:ILE:N	3:G:480:LYS:O	2.54	0.40
4:H:887:GLU:OE2	4:H:904:ARG:HD2	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:H:993:MET:HG3	4:H:1056:LEU:HD11	2.03	0.40
9:Z:1:NAG:HN2	9:Z:1:NAG:H5	1.85	0.40
1:U:37:GLU:O	1:U:39:SER:N	2.50	0.40
1:U:58:LEU:HD13	2:V:309:ALA:HA	2.04	0.40
4:B:1012:TRP:HB3	4:B:1017:LEU:HD23	2.03	0.40
4:B:1045:ALA:HB2	4:B:1052:PRO:HA	2.04	0.40
4:B:1639:CYS:HA	4:B:1640:PRO:HD3	1.89	0.40
3:G:329:SER:HA	3:G:330:PRO:HD3	1.97	0.40
1:U:47:LEU:O	2:V:305:ILE:HD11	2.21	0.40
2:Y:321:TRP:CE3	2:Y:348:ARG:HG3	2.57	0.40
4:B:734:ILE:HG23	6:N:49:GLN:NE2	2.36	0.40
4:B:775:ASP:OD1	6:N:42:ARG:NH2	2.55	0.40
3:G:20:MET:HE2	3:G:22:LEU:HD21	2.03	0.40
3:G:34:THR:HG22	3:G:51:LYS:HE3	2.02	0.40
3:G:179:MET:SD	3:G:179:MET:N	2.95	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	U	104/234 (44%)	95 (91%)	9 (9%)	0	100	100
1	X	104/234 (44%)	96 (92%)	8 (8%)	0	100	100
2	V	208/215 (97%)	188 (90%)	14 (7%)	6 (3%)	3	23
2	Y	206/215 (96%)	187 (91%)	13 (6%)	6 (3%)	3	23
3	A	643/645 (100%)	622 (97%)	20 (3%)	1 (0%)	43	77
3	G	643/645 (100%)	618 (96%)	22 (3%)	3 (0%)	24	63
4	B	911/915 (100%)	867 (95%)	37 (4%)	7 (1%)	16	54
4	H	911/915 (100%)	867 (95%)	39 (4%)	5 (0%)	24	63

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
5	J	503/505 (100%)	484 (96%)	19 (4%)	0	100	100
5	L	503/505 (100%)	480 (95%)	23 (5%)	0	100	100
6	N	82/85 (96%)	81 (99%)	1 (1%)	0	100	100
6	Q	82/85 (96%)	80 (98%)	0	2 (2%)	4	27
All	All	4900/5198 (94%)	4665 (95%)	205 (4%)	30 (1%)	21	59

All (30) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	V	294	PRO
2	Y	294	PRO
4	B	1261	GLN
4	B	1262	LYS
4	B	1358	ALA
2	V	421	VAL
2	V	422	GLU
2	Y	421	VAL
2	Y	422	GLU
4	B	1349	PRO
4	B	1555	GLN
3	G	372	GLU
4	H	1377	THR
4	H	1476	GLU
4	H	1556	VAL
2	V	288	VAL
2	Y	288	VAL
3	A	372	GLU
4	B	1377	THR
3	G	642	GLN
4	H	1349	PRO
6	Q	3	SER
2	V	287	PRO
2	V	297	ALA
2	Y	287	PRO
2	Y	297	ALA
4	B	1556	VAL
3	G	45	LEU
6	Q	7	SER
4	H	1264	ALA

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	U	89/193 (46%)	86 (97%)	3 (3%)	32	54
1	X	89/193 (46%)	86 (97%)	3 (3%)	32	54
2	V	179/184 (97%)	173 (97%)	6 (3%)	32	54
2	Y	179/184 (97%)	173 (97%)	6 (3%)	32	54
3	A	567/567 (100%)	560 (99%)	7 (1%)	63	75
3	G	567/567 (100%)	560 (99%)	7 (1%)	63	75
4	B	808/810 (100%)	795 (98%)	13 (2%)	55	70
4	H	808/810 (100%)	789 (98%)	19 (2%)	43	63
5	J	444/444 (100%)	444 (100%)	0	100	100
5	L	444/444 (100%)	442 (100%)	2 (0%)	81	83
6	N	76/77 (99%)	76 (100%)	0	100	100
6	Q	76/77 (99%)	76 (100%)	0	100	100
All	All	4326/4550 (95%)	4260 (98%)	66 (2%)	57	72

All (66) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	U	93	CYS
1	U	119	THR
1	U	131	GLN
2	V	310	VAL
2	V	312	CYS
2	V	328	ILE
2	V	330	ARG
2	V	337	CYS
2	V	449	VAL
1	X	93	CYS
1	X	119	THR
1	X	131	GLN
2	Y	310	VAL
2	Y	328	ILE

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Mol	Chain	Res	Type
2	Y	330	ARG
2	Y	337	CYS
2	Y	364	GLN
2	Y	449	VAL
3	A	10	ASN
3	A	31	VAL
3	A	223	ILE
3	A	365	VAL
3	A	375	VAL
3	A	404	THR
3	A	632	THR
4	B	729	LEU
4	B	937	LYS
4	B	945	LEU
4	B	967	GLN
4	B	1267	HIS
4	B	1306	GLU
4	B	1342	LYS
4	B	1433	GLU
4	B	1482	LYS
4	B	1515	CYS
4	B	1558	GLN
4	B	1560	ARG
4	B	1585	LEU
3	G	6	ILE
3	G	31	VAL
3	G	223	ILE
3	G	365	VAL
3	G	375	VAL
3	G	404	THR
3	G	632	THR
4	H	729	LEU
4	H	834	GLN
4	H	851	CYS
4	H	937	LYS
4	H	945	LEU
4	H	955	GLU
4	H	967	GLN
4	H	1267	HIS
4	H	1269	GLU
4	H	1281	ARG
4	H	1327	HIS

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Mol	Chain	Res	Type
4	H	1342	LYS
4	H	1433	GLU
4	H	1480	LEU
4	H	1498	ILE
4	H	1554	VAL
4	H	1558	GLN
4	H	1585	LEU
4	H	1612	GLU
5	L	508	LYS
5	L	539	LYS

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (41) such sidechains are listed below:

Mol	Chain	Res	Type
2	V	331	ASN
2	Y	286	HIS
2	Y	331	ASN
2	Y	343	GLN
2	Y	364	GLN
3	A	10	ASN
3	A	60	HIS
3	A	435	HIS
3	A	452	ASN
3	A	490	GLN
4	B	770	ASN
4	B	886	GLN
4	B	1021	GLN
4	B	1277	GLN
4	B	1305	ASN
4	B	1499	GLN
4	B	1620	ASN
3	G	28	GLN
3	G	60	HIS
3	G	162	ASN
3	G	392	HIS
3	G	490	GLN
3	G	558	GLN
4	H	738	ASN
4	H	752	ASN
4	H	862	GLN
4	H	886	GLN
4	H	1130	GLN

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Mol	Chain	Res	Type
4	H	1176	GLN
4	H	1255	GLN
4	H	1277	GLN
4	H	1356	GLN
4	H	1442	HIS
4	H	1451	GLN
4	H	1495	ASN
4	H	1555	GLN
4	H	1625	GLN
5	L	591	GLN
5	L	702	ASN
6	N	71	GLN
6	Q	69	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 ⓘ

30 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	$\# Z > 2$
7	FUC	C	1	7,1	10,10,11	0.84	0	14,14,16	0.82	0
7	BGC	C	2	7	11,11,12	1.68	2 (18%)	15,15,17	0.99	1 (6%)
7	FUC	D	1	7,2	10,10,11	0.67	0	14,14,16	0.80	0
7	BGC	D	2	7	11,11,12	1.70	3 (27%)	15,15,17	0.77	0
8	NAG	E	1	8,2	14,14,15	0.23	0	17,19,21	0.55	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
8	NAG	E	2	8	14,14,15	0.69	1 (7%)	17,19,21	1.33	2 (11%)
8	FUC	E	3	8	10,10,11	0.71	0	14,14,16	0.80	0
7	FUC	F	1	7,1	10,10,11	0.79	0	14,14,16	0.85	0
7	BGC	F	2	7	11,11,12	1.68	2 (18%)	15,15,17	0.96	1 (6%)
7	FUC	I	1	7,2	10,10,11	0.73	0	14,14,16	0.80	0
7	BGC	I	2	7	11,11,12	1.73	3 (27%)	15,15,17	0.98	2 (13%)
8	NAG	K	1	8,2	14,14,15	0.27	0	17,19,21	0.55	0
8	NAG	K	2	8	14,14,15	0.70	1 (7%)	17,19,21	1.34	2 (11%)
8	FUC	K	3	8	10,10,11	0.67	0	14,14,16	0.80	0
9	NAG	M	1	9,3	14,14,15	0.31	0	17,19,21	0.44	0
9	NAG	M	2	9	14,14,15	0.41	0	17,19,21	0.42	0
9	NAG	O	1	4,9	14,14,15	0.35	0	17,19,21	0.55	0
9	NAG	O	2	9	14,14,15	0.22	0	17,19,21	0.48	0
9	NAG	P	1	9,3	14,14,15	0.26	0	17,19,21	0.55	0
9	NAG	P	2	9	14,14,15	0.30	0	17,19,21	0.43	0
9	NAG	R	1	4,9	14,14,15	0.32	0	17,19,21	0.91	1 (5%)
9	NAG	R	2	9	14,14,15	0.44	0	17,19,21	0.58	0
9	NAG	S	1	5,9	14,14,15	0.28	0	17,19,21	0.54	0
9	NAG	S	2	9	14,14,15	0.61	1 (7%)	17,19,21	1.37	2 (11%)
9	NAG	T	1	5,9	14,14,15	0.90	2 (14%)	17,19,21	0.99	1 (5%)
9	NAG	T	2	9	14,14,15	0.29	0	17,19,21	0.42	0
9	NAG	W	1	5,9	14,14,15	0.85	2 (14%)	17,19,21	1.71	3 (17%)
9	NAG	W	2	9	14,14,15	0.73	1 (7%)	17,19,21	1.38	2 (11%)
9	NAG	Z	1	5,9	14,14,15	0.96	2 (14%)	17,19,21	0.99	1 (5%)
9	NAG	Z	2	9	14,14,15	0.21	0	17,19,21	0.43	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
7	FUC	C	1	7,1	-	-	0/1/1/1
7	BGC	C	2	7	-	0/2/19/22	0/1/1/1
7	FUC	D	1	7,2	-	-	0/1/1/1
7	BGC	D	2	7	-	1/2/19/22	0/1/1/1
8	NAG	E	1	8,2	-	4/6/23/26	0/1/1/1
8	NAG	E	2	8	-	6/6/23/26	0/1/1/1
8	FUC	E	3	8	1/1/4/5	-	0/1/1/1
7	FUC	F	1	7,1	-	-	0/1/1/1

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
7	BGC	F	2	7	-	0/2/19/22	0/1/1/1
7	FUC	I	1	7,2	-	-	0/1/1/1
7	BGC	I	2	7	-	2/2/19/22	0/1/1/1
8	NAG	K	1	8,2	-	3/6/23/26	0/1/1/1
8	NAG	K	2	8	-	6/6/23/26	0/1/1/1
8	FUC	K	3	8	1/1/4/5	-	0/1/1/1
9	NAG	M	1	9,3	-	2/6/23/26	0/1/1/1
9	NAG	M	2	9	-	2/6/23/26	0/1/1/1
9	NAG	O	1	4,9	-	1/6/23/26	0/1/1/1
9	NAG	O	2	9	-	4/6/23/26	0/1/1/1
9	NAG	P	1	9,3	-	4/6/23/26	0/1/1/1
9	NAG	P	2	9	-	2/6/23/26	0/1/1/1
9	NAG	R	1	4,9	-	3/6/23/26	0/1/1/1
9	NAG	R	2	9	-	2/6/23/26	0/1/1/1
9	NAG	S	1	5,9	-	2/6/23/26	0/1/1/1
9	NAG	S	2	9	-	6/6/23/26	0/1/1/1
9	NAG	T	1	5,9	-	2/6/23/26	0/1/1/1
9	NAG	T	2	9	-	4/6/23/26	0/1/1/1
9	NAG	W	1	5,9	-	3/6/23/26	0/1/1/1
9	NAG	W	2	9	-	6/6/23/26	0/1/1/1
9	NAG	Z	1	5,9	-	4/6/23/26	0/1/1/1
9	NAG	Z	2	9	-	4/6/23/26	0/1/1/1

All (20) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
7	F	2	BGC	O5-C1	4.39	1.51	1.43
7	C	2	BGC	O5-C1	4.35	1.51	1.43
7	D	2	BGC	O5-C1	4.23	1.50	1.43
7	I	2	BGC	O5-C1	4.12	1.50	1.43
7	I	2	BGC	C2-C3	-2.72	1.48	1.52
7	D	2	BGC	C2-C3	-2.57	1.48	1.52
9	T	1	NAG	O5-C1	2.54	1.48	1.43
9	Z	1	NAG	O5-C1	2.50	1.47	1.43
7	I	2	BGC	O5-C5	2.40	1.48	1.43
8	K	2	NAG	C1-C2	2.38	1.55	1.52
9	Z	1	NAG	C1-C2	2.37	1.55	1.52
8	E	2	NAG	C1-C2	2.35	1.55	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
9	W	1	NAG	C1-C2	2.31	1.55	1.52
7	C	2	BGC	C2-C3	-2.29	1.49	1.52
7	F	2	BGC	C2-C3	-2.23	1.49	1.52
9	W	2	NAG	C1-C2	2.19	1.55	1.52
7	D	2	BGC	O5-C5	2.16	1.47	1.43
9	S	2	NAG	C1-C2	2.06	1.55	1.52
9	T	1	NAG	C1-C2	2.04	1.55	1.52
9	W	1	NAG	O5-C1	2.00	1.47	1.43

All (18) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
9	W	1	NAG	C1-O5-C5	5.51	119.56	112.19
9	W	2	NAG	C2-N2-C7	4.72	129.22	122.90
8	E	2	NAG	C2-N2-C7	4.56	129.01	122.90
8	K	2	NAG	C2-N2-C7	4.54	128.98	122.90
9	S	2	NAG	C2-N2-C7	4.53	128.97	122.90
9	T	1	NAG	C1-O5-C5	3.65	117.07	112.19
9	Z	1	NAG	C1-O5-C5	3.56	116.96	112.19
9	W	1	NAG	C2-N2-C7	2.80	126.66	122.90
9	W	1	NAG	C1-C2-N2	2.59	114.52	110.43
9	R	1	NAG	C1-O5-C5	2.53	115.57	112.19
9	W	2	NAG	C1-C2-N2	2.46	114.30	110.43
7	I	2	BGC	C3-C4-C5	2.18	114.19	110.23
9	S	2	NAG	C1-C2-N2	2.13	113.78	110.43
7	I	2	BGC	C6-C5-C4	-2.10	107.87	113.02
8	E	2	NAG	C1-C2-N2	2.06	113.69	110.43
7	F	2	BGC	C1-C2-C3	2.03	112.60	109.64
7	C	2	BGC	C1-C2-C3	2.02	112.59	109.64
8	K	2	NAG	C1-C2-N2	2.02	113.62	110.43

All (2) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
8	E	3	FUC	C1
8	K	3	FUC	C1

All (73) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
9	W	1	NAG	C1-C2-N2-C7
9	W	2	NAG	O5-C5-C6-O6

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Mol	Chain	Res	Type	Atoms
9	W	1	NAG	C4-C5-C6-O6
9	P	2	NAG	O5-C5-C6-O6
9	S	1	NAG	O5-C5-C6-O6
9	R	2	NAG	C4-C5-C6-O6
9	S	1	NAG	C4-C5-C6-O6
9	W	2	NAG	C4-C5-C6-O6
9	Z	1	NAG	O5-C5-C6-O6
9	Z	2	NAG	O5-C5-C6-O6
9	R	2	NAG	O5-C5-C6-O6
9	Z	1	NAG	C4-C5-C6-O6
9	M	1	NAG	O5-C5-C6-O6
9	P	1	NAG	O5-C5-C6-O6
9	W	1	NAG	O5-C5-C6-O6
9	Z	2	NAG	C4-C5-C6-O6
9	P	1	NAG	C4-C5-C6-O6
9	T	2	NAG	O5-C5-C6-O6
9	M	1	NAG	C4-C5-C6-O6
9	T	2	NAG	C4-C5-C6-O6
8	E	2	NAG	C8-C7-N2-C2
8	E	2	NAG	O7-C7-N2-C2
8	K	2	NAG	C8-C7-N2-C2
8	K	2	NAG	O7-C7-N2-C2
9	O	2	NAG	C8-C7-N2-C2
9	O	2	NAG	O7-C7-N2-C2
9	S	2	NAG	C8-C7-N2-C2
9	S	2	NAG	O7-C7-N2-C2
9	T	1	NAG	C8-C7-N2-C2
9	T	1	NAG	O7-C7-N2-C2
9	T	2	NAG	C8-C7-N2-C2
9	T	2	NAG	O7-C7-N2-C2
9	W	2	NAG	C8-C7-N2-C2
9	W	2	NAG	O7-C7-N2-C2
9	Z	1	NAG	C8-C7-N2-C2
9	Z	1	NAG	O7-C7-N2-C2
9	Z	2	NAG	C8-C7-N2-C2
9	Z	2	NAG	O7-C7-N2-C2
7	I	2	BGC	O5-C5-C6-O6
9	P	2	NAG	C4-C5-C6-O6
9	O	2	NAG	C4-C5-C6-O6
9	M	2	NAG	O5-C5-C6-O6
9	S	2	NAG	O5-C5-C6-O6
9	M	2	NAG	C4-C5-C6-O6

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Mol	Chain	Res	Type	Atoms
9	R	1	NAG	O5-C5-C6-O6
9	O	2	NAG	O5-C5-C6-O6
8	K	2	NAG	C4-C5-C6-O6
8	E	2	NAG	C4-C5-C6-O6
8	E	1	NAG	C4-C5-C6-O6
7	D	2	BGC	O5-C5-C6-O6
9	P	1	NAG	C1-C2-N2-C7
9	W	2	NAG	C1-C2-N2-C7
8	E	1	NAG	O5-C5-C6-O6
8	E	1	NAG	C3-C2-N2-C7
8	K	1	NAG	C3-C2-N2-C7
9	P	1	NAG	C3-C2-N2-C7
9	R	1	NAG	C3-C2-N2-C7
9	W	2	NAG	C3-C2-N2-C7
8	K	2	NAG	O5-C5-C6-O6
7	I	2	BGC	C4-C5-C6-O6
8	E	2	NAG	O5-C5-C6-O6
8	K	1	NAG	C4-C5-C6-O6
8	E	1	NAG	C1-C2-N2-C7
8	E	2	NAG	C1-C2-N2-C7
8	K	1	NAG	C1-C2-N2-C7
8	K	2	NAG	C1-C2-N2-C7
9	O	1	NAG	C1-C2-N2-C7
9	R	1	NAG	C1-C2-N2-C7
9	S	2	NAG	C1-C2-N2-C7
8	E	2	NAG	C3-C2-N2-C7
8	K	2	NAG	C3-C2-N2-C7
9	S	2	NAG	C3-C2-N2-C7
9	S	2	NAG	C4-C5-C6-O6

There are no ring outliers.

11 monomers are involved in 14 short contacts:

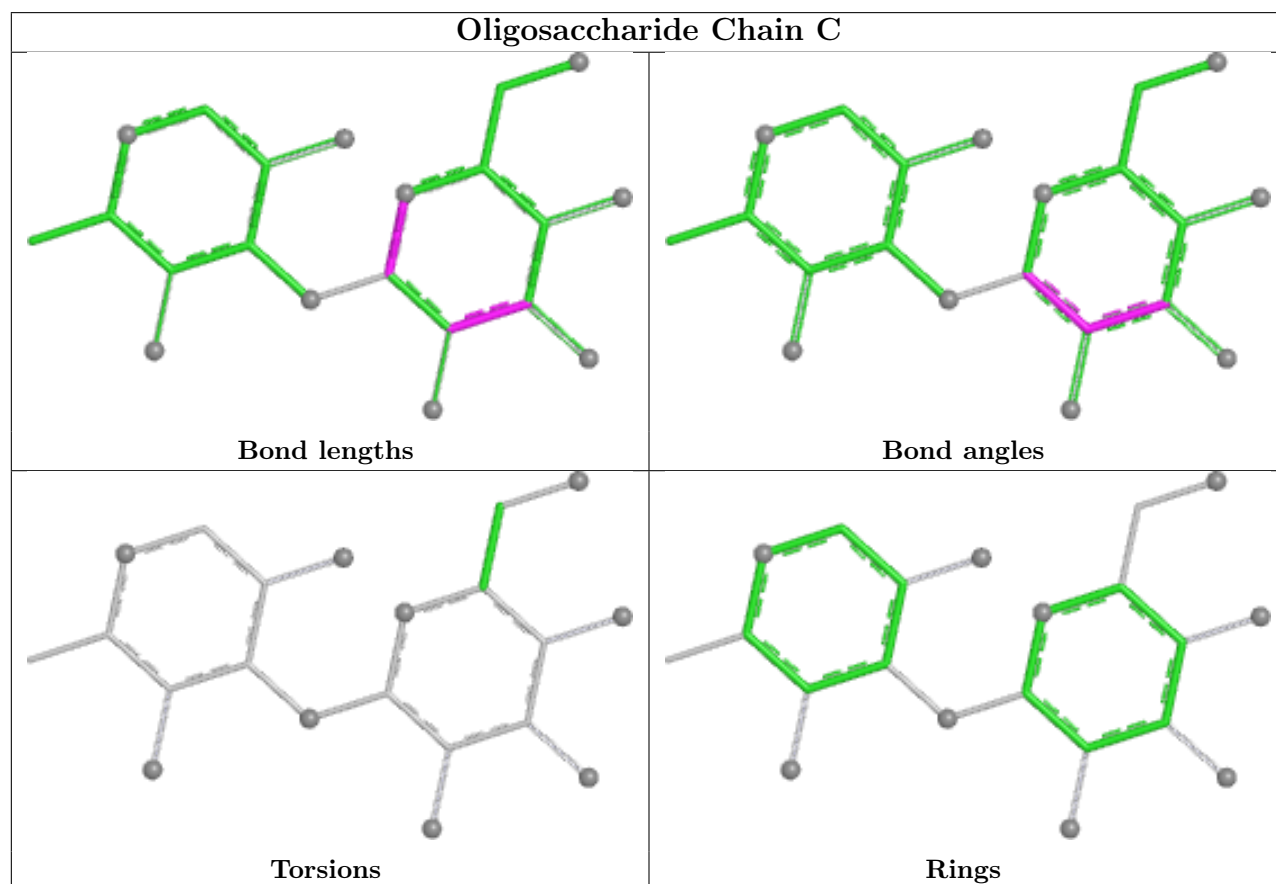
Mol	Chain	Res	Type	Clashes	Symm-Clashes
9	W	2	NAG	1	0
7	F	2	BGC	2	0
9	S	2	NAG	2	0
9	W	1	NAG	3	0
8	K	1	NAG	1	0
8	K	2	NAG	2	0
8	E	2	NAG	3	0
7	F	1	FUC	1	0

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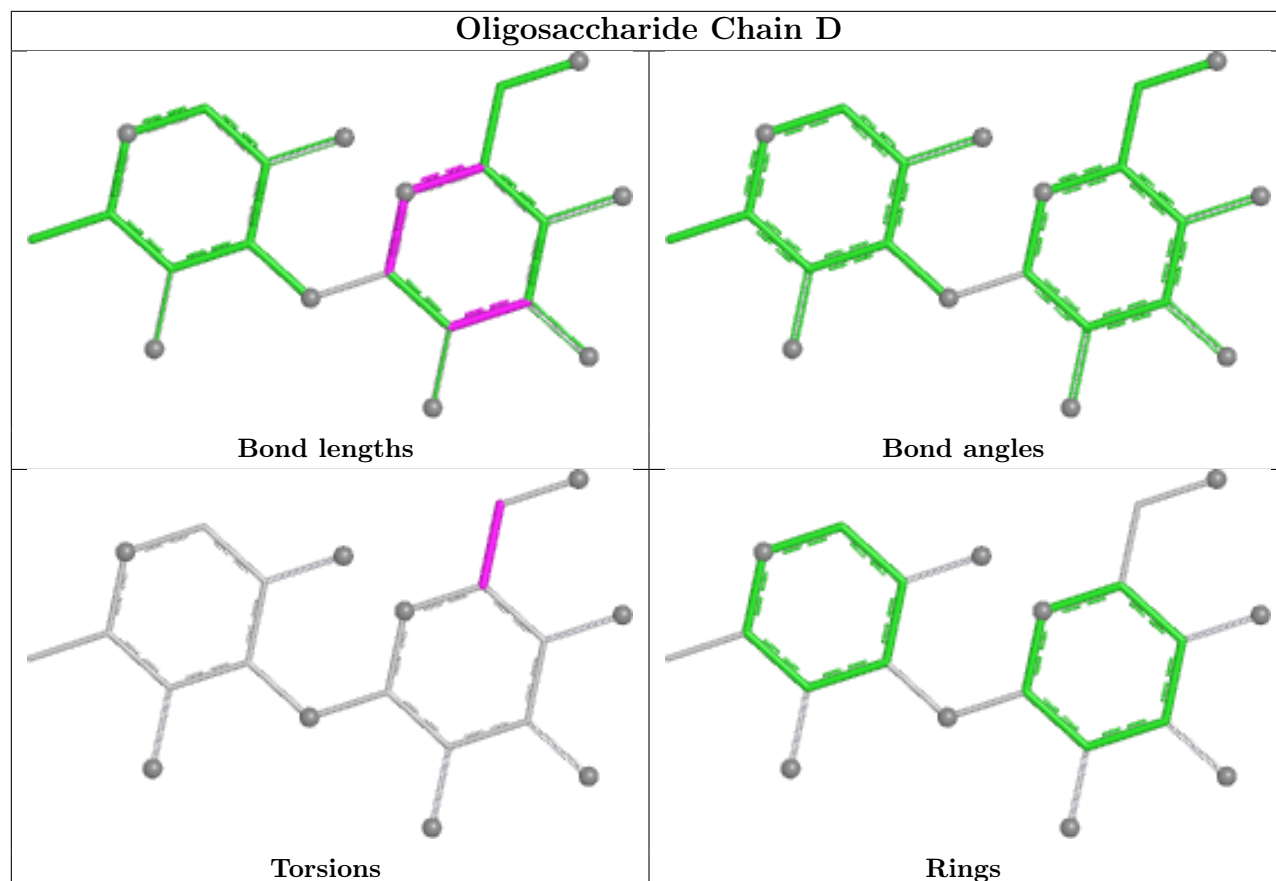
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Mol	Chain	Res	Type	Clashes	Symm-Clashes
9	S	1	NAG	1	0
8	E	1	NAG	2	0
9	Z	1	NAG	1	0

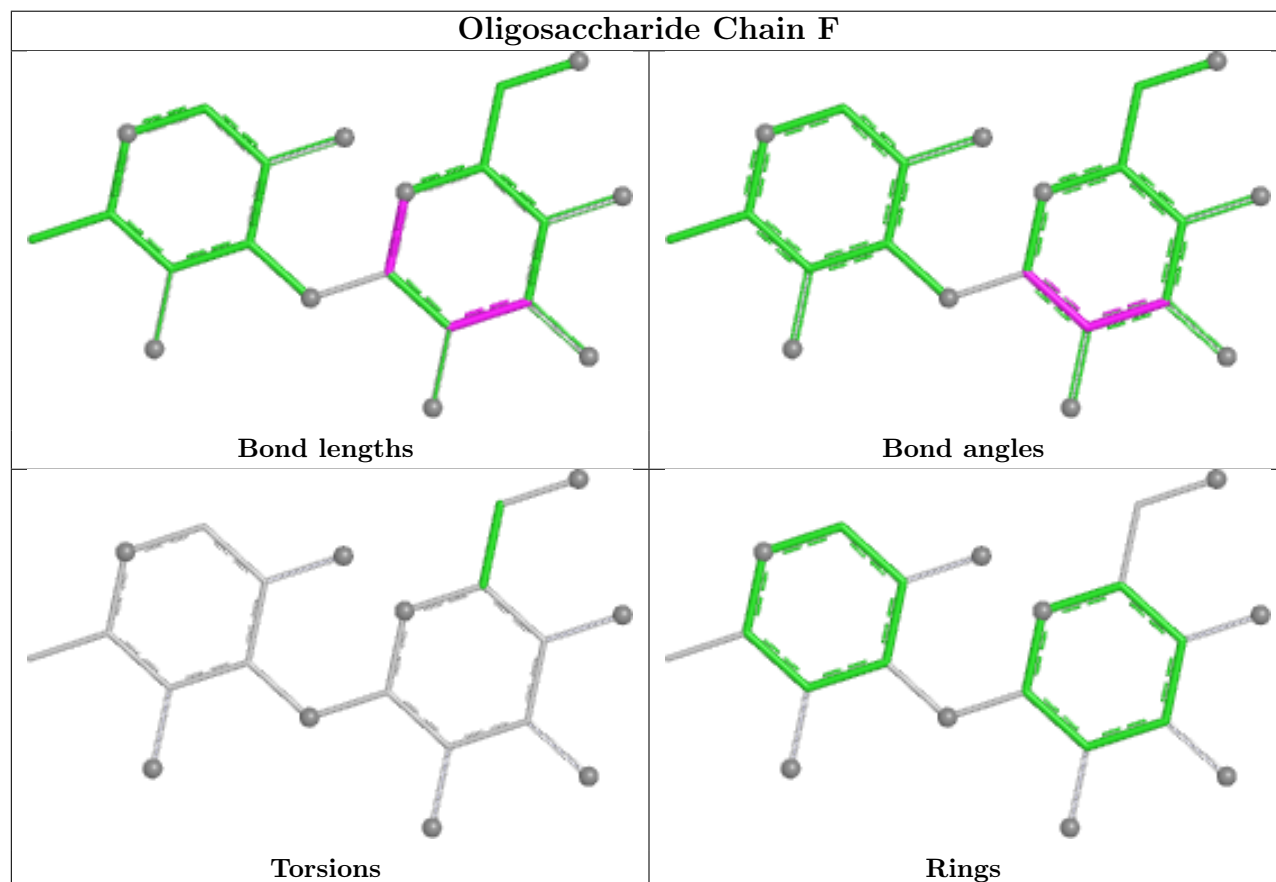
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for oligosaccharide.

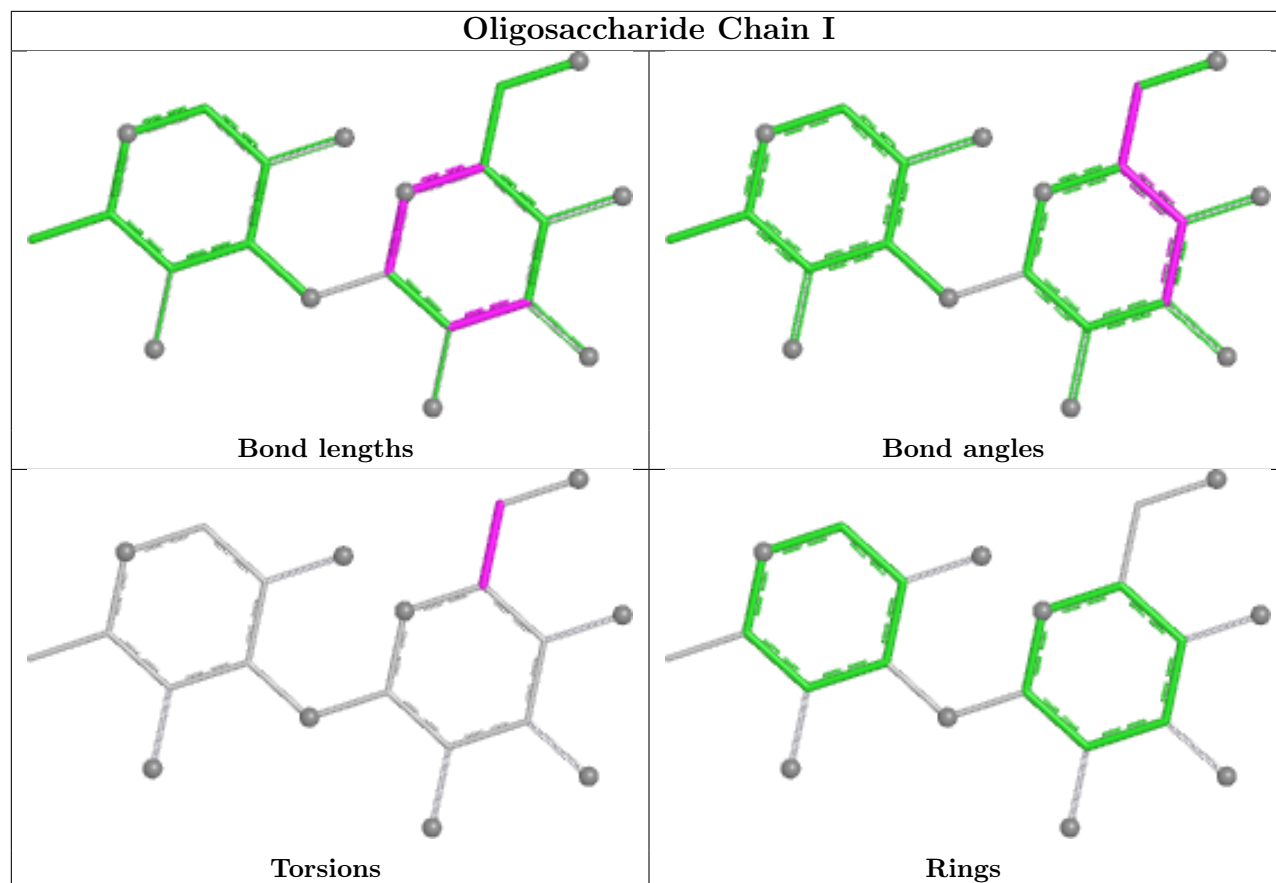


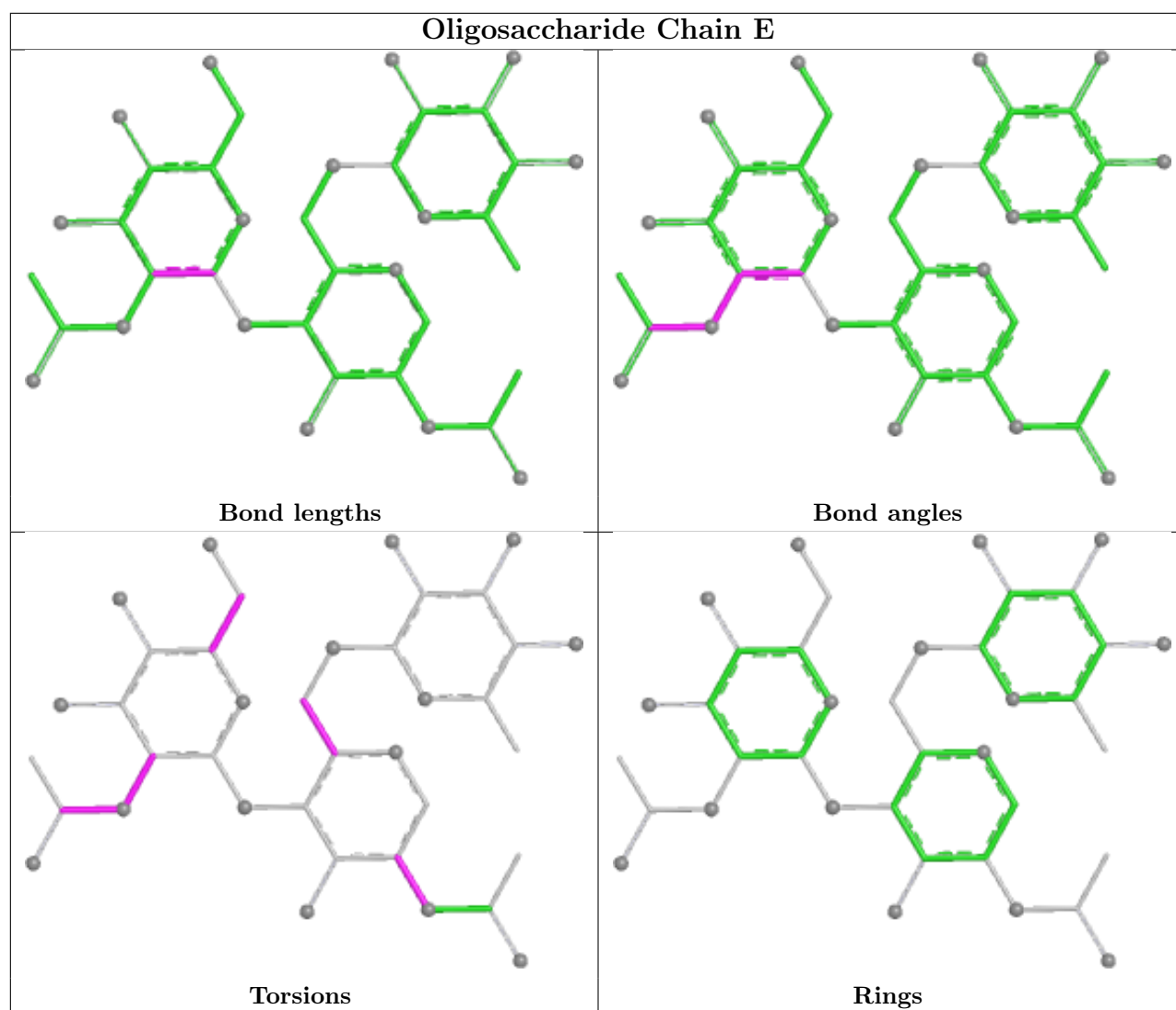
Oligosaccharide Chain D

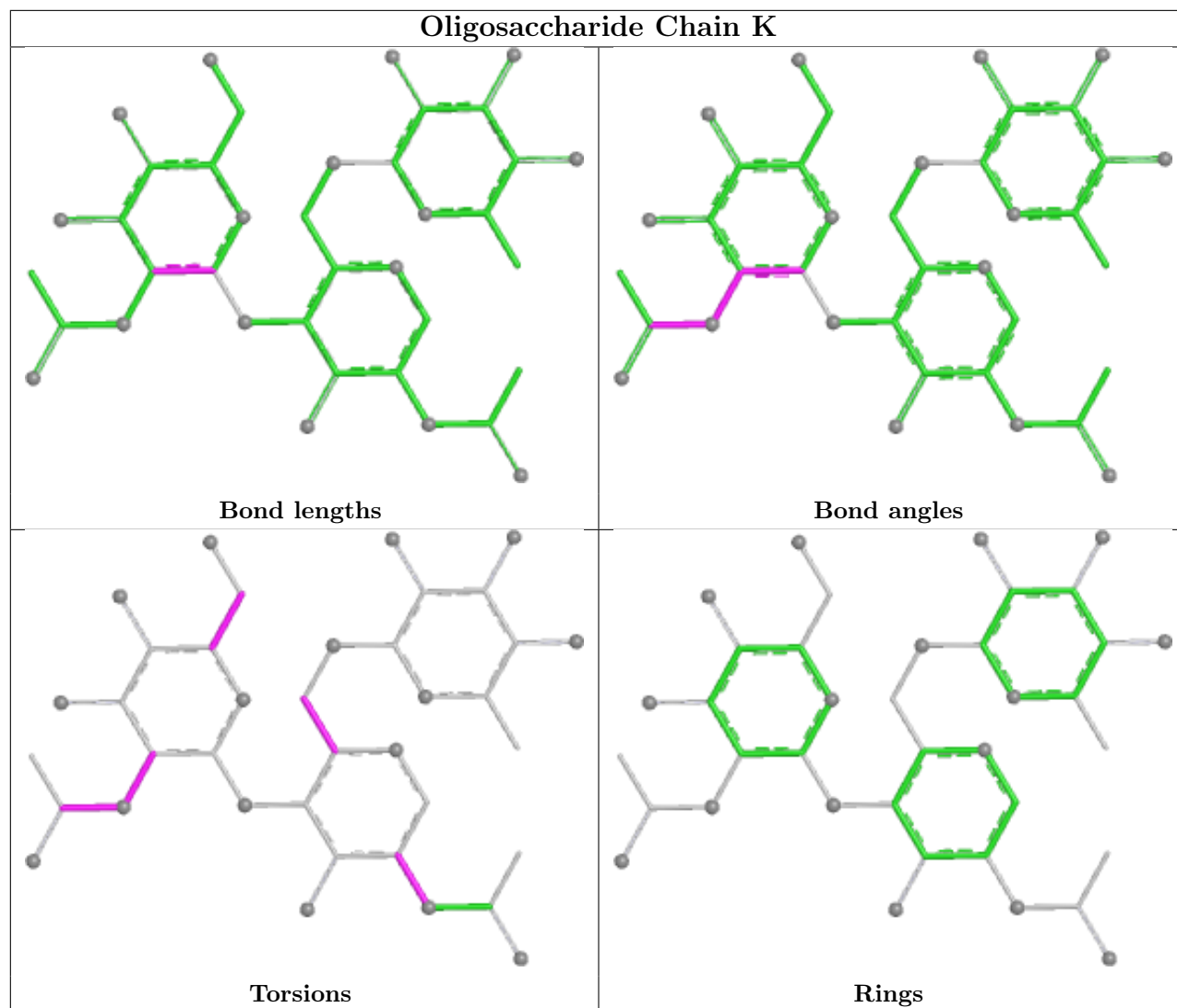


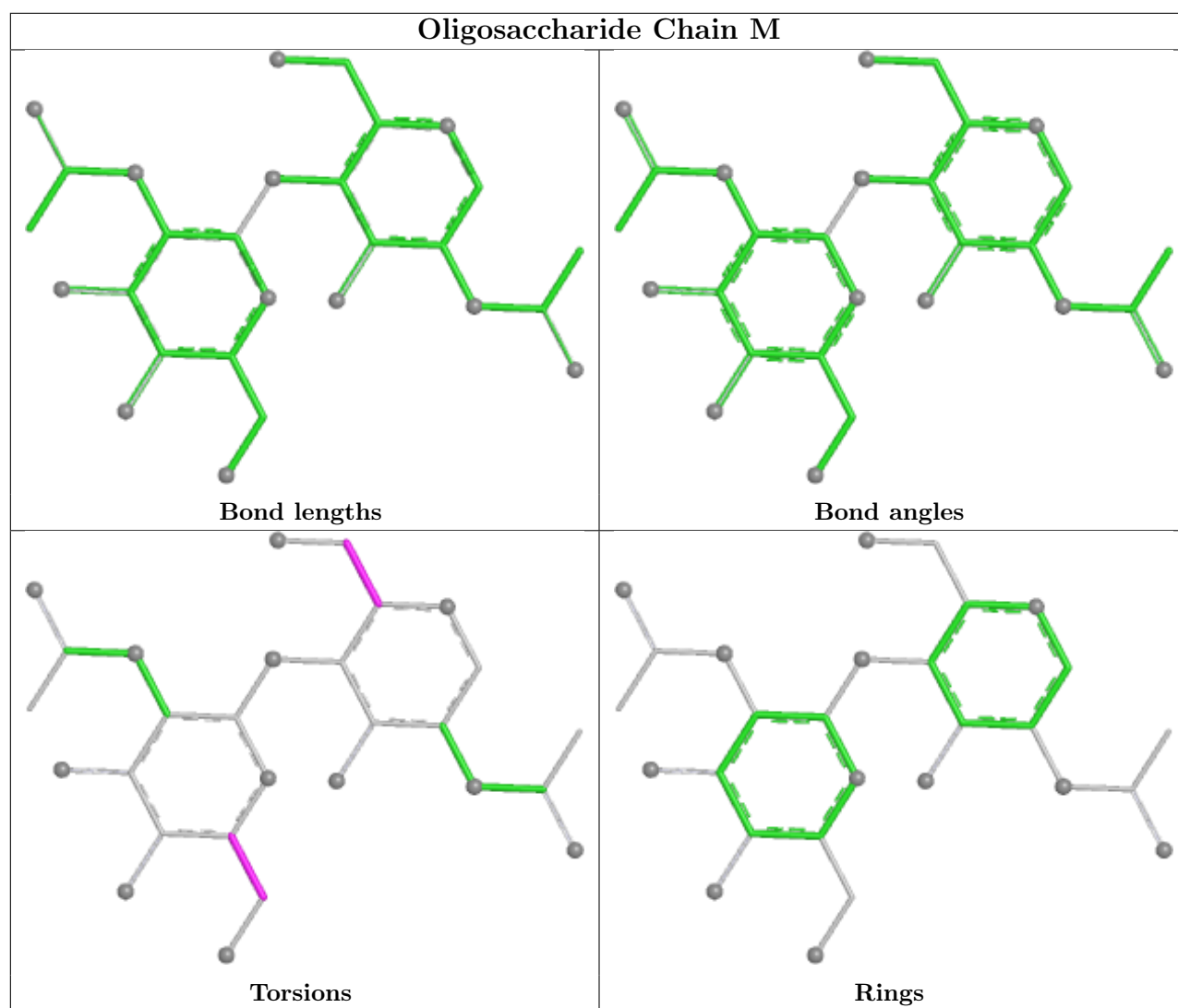
Oligosaccharide Chain F

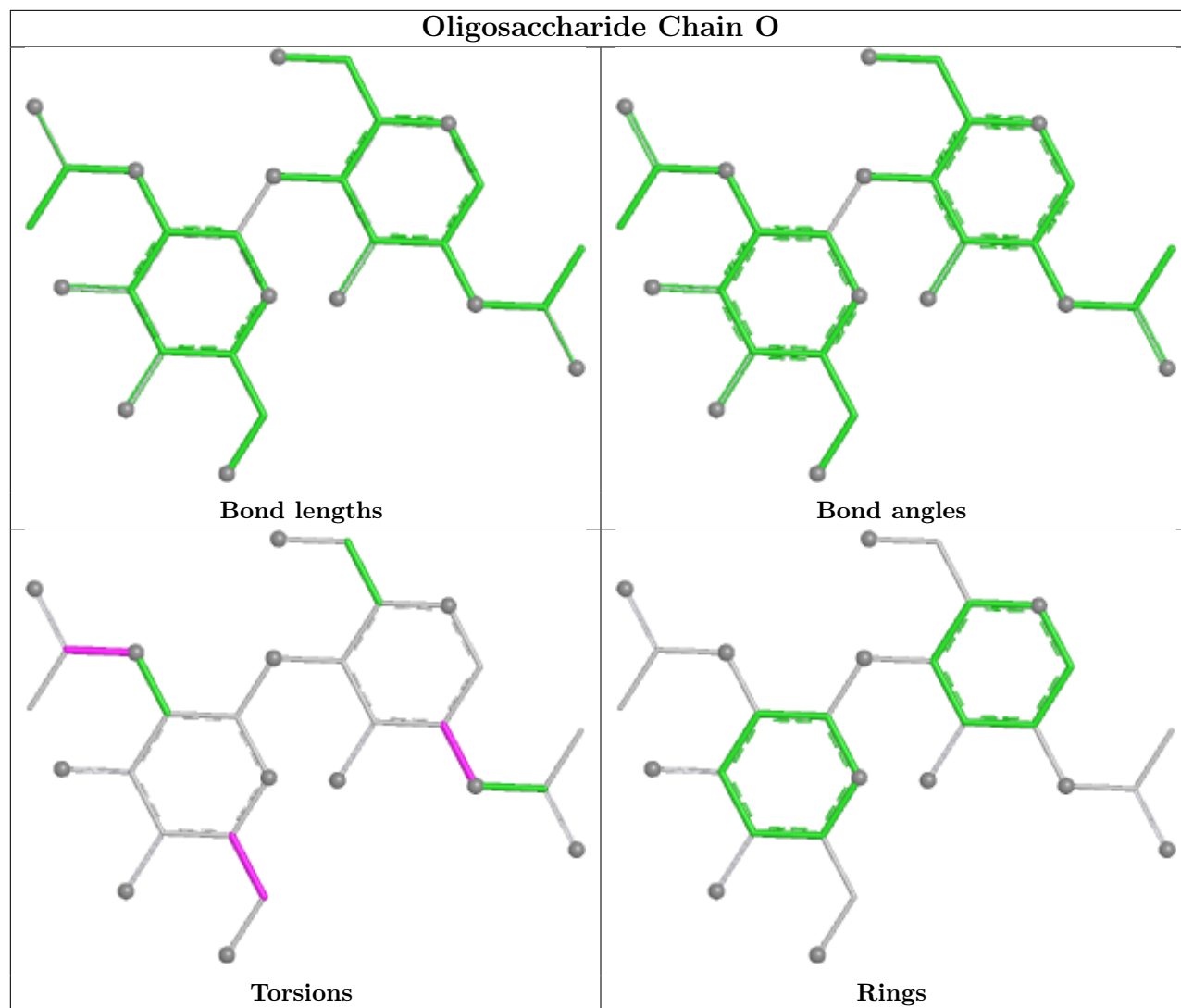


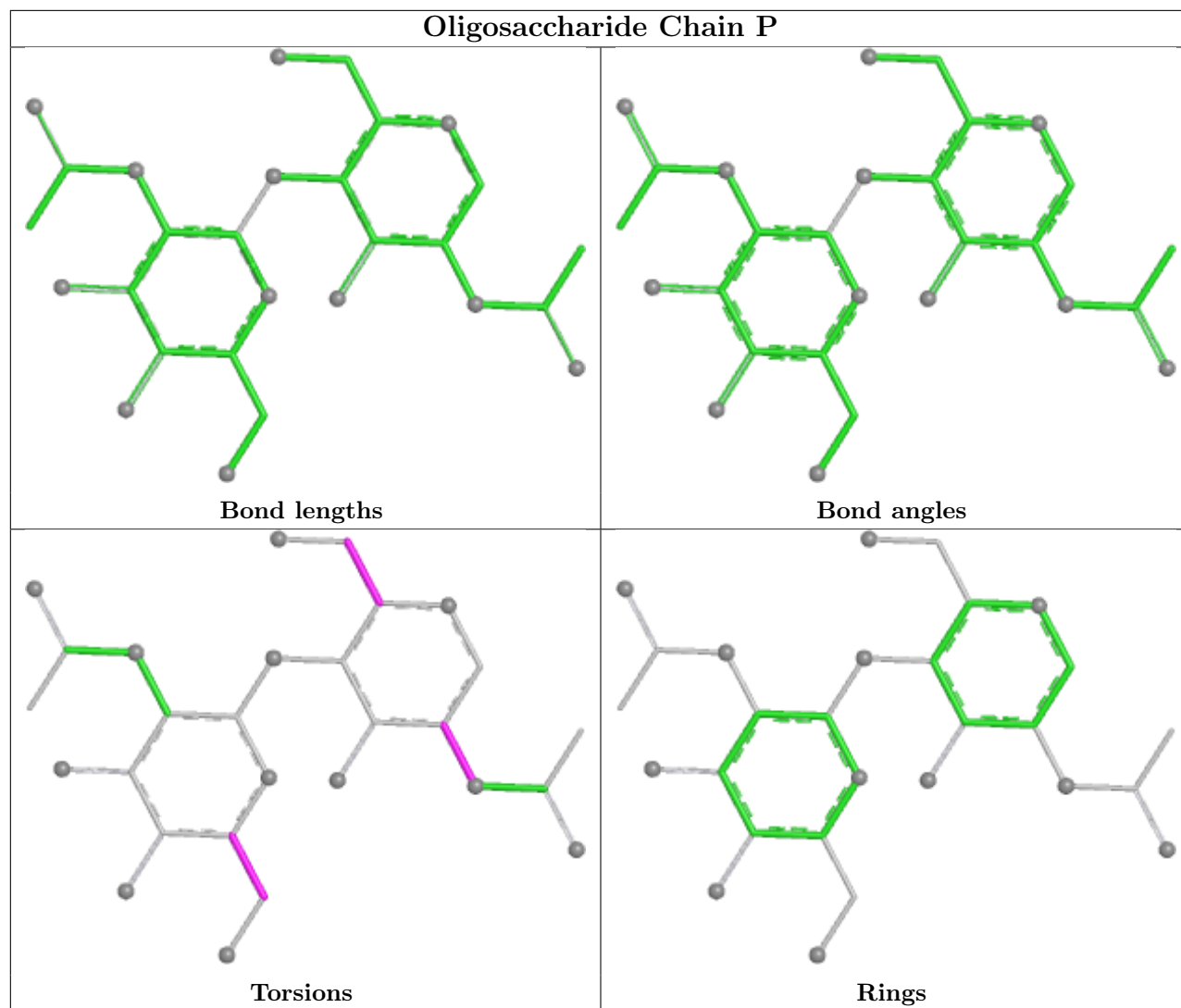


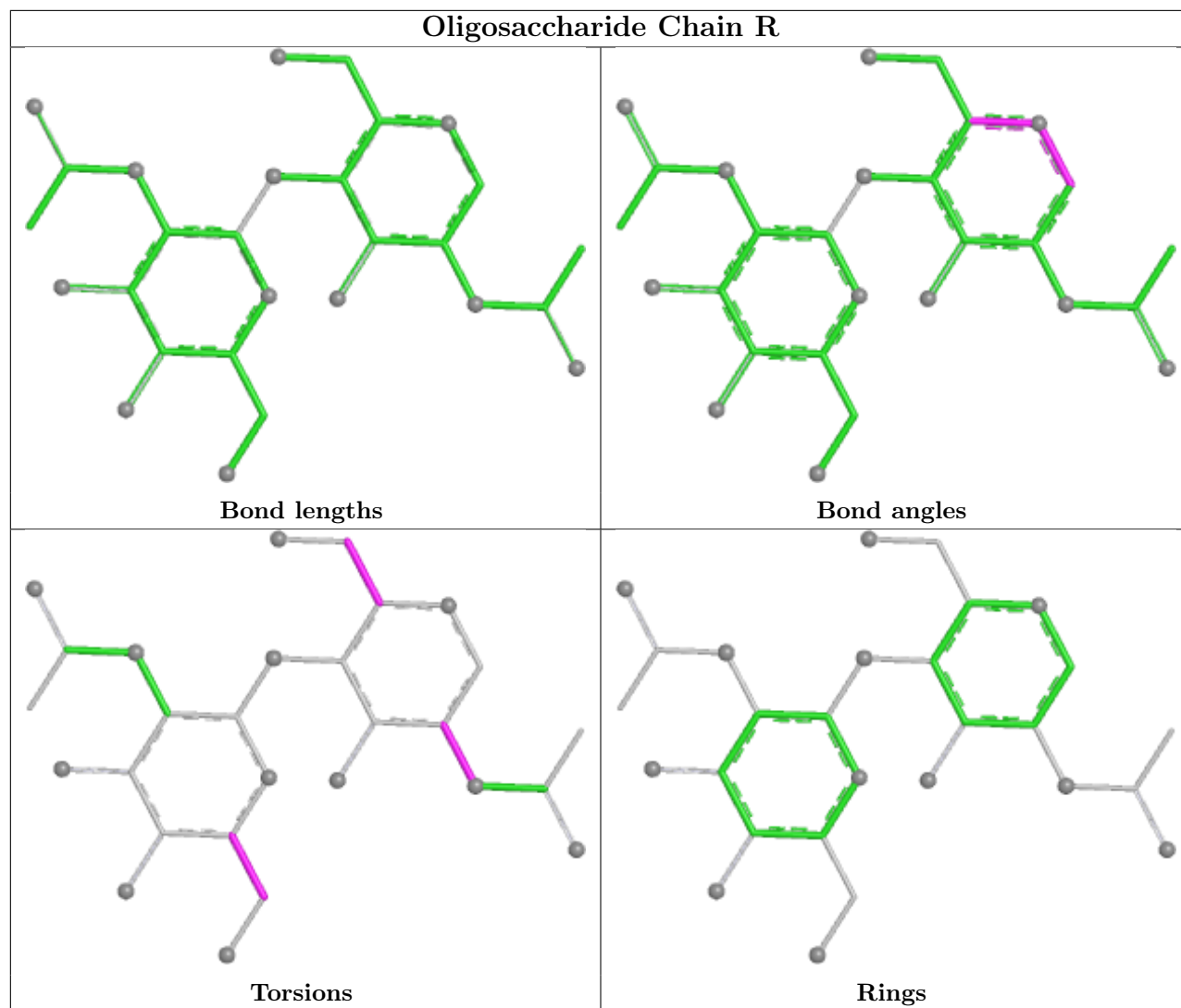


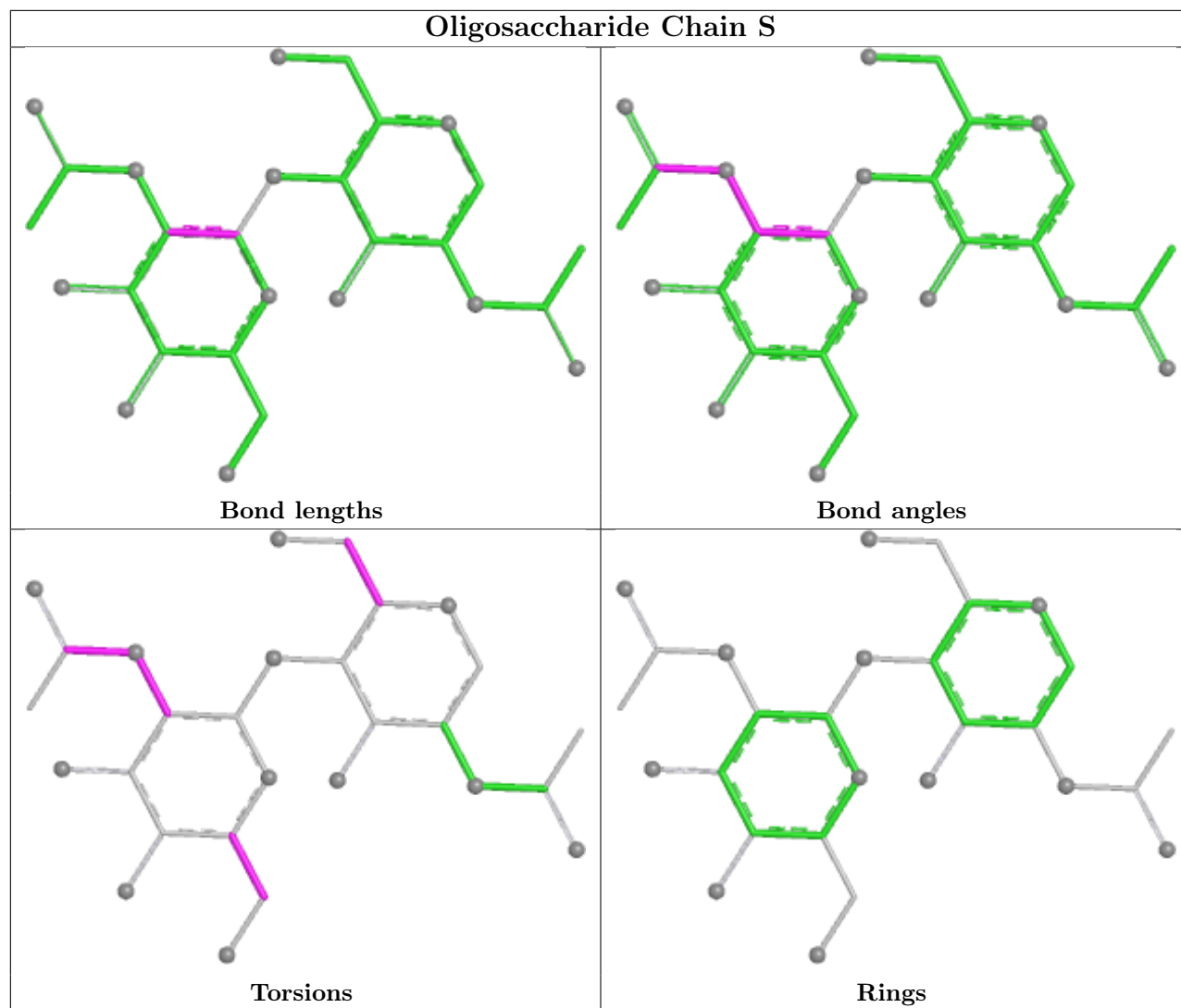


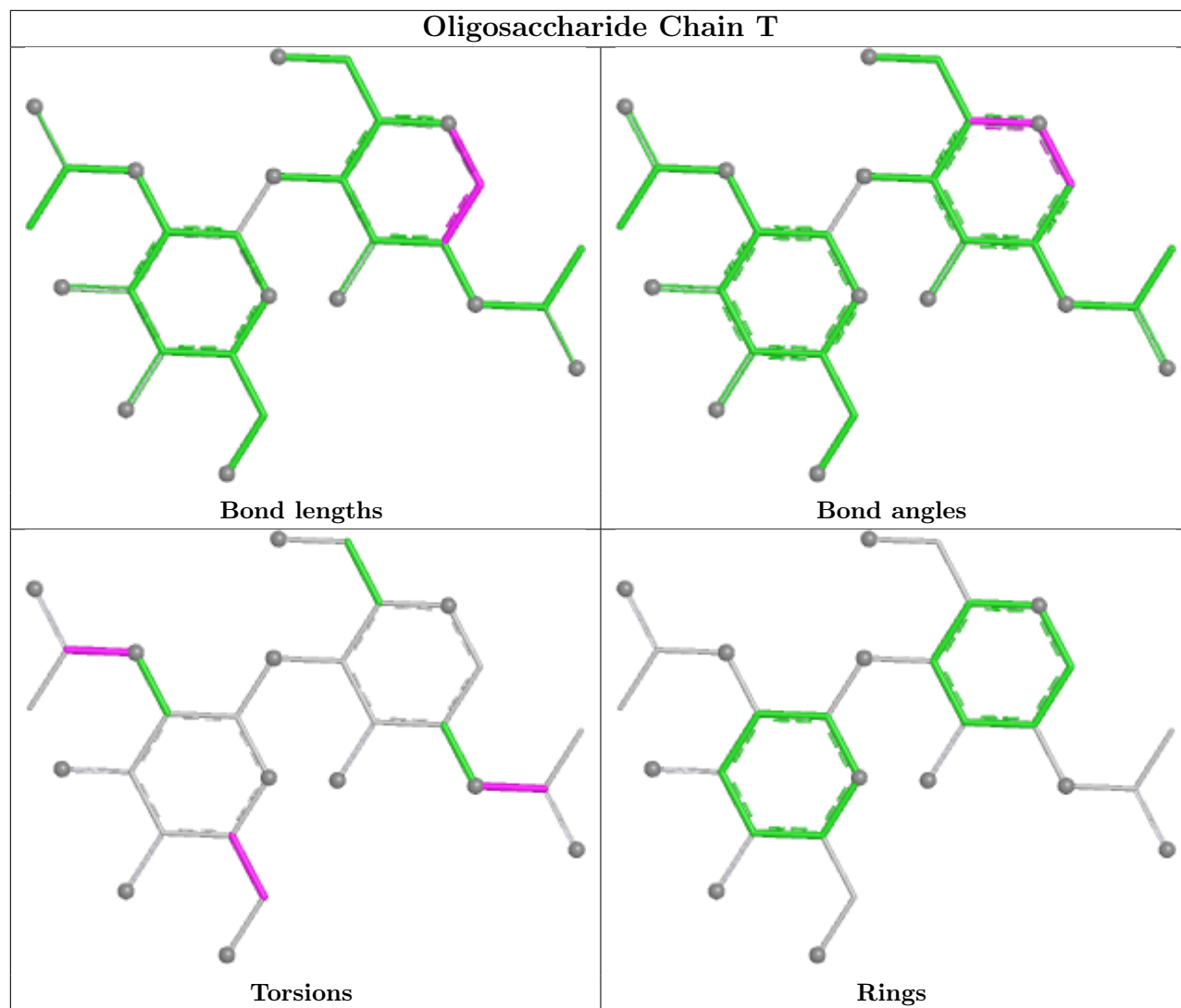


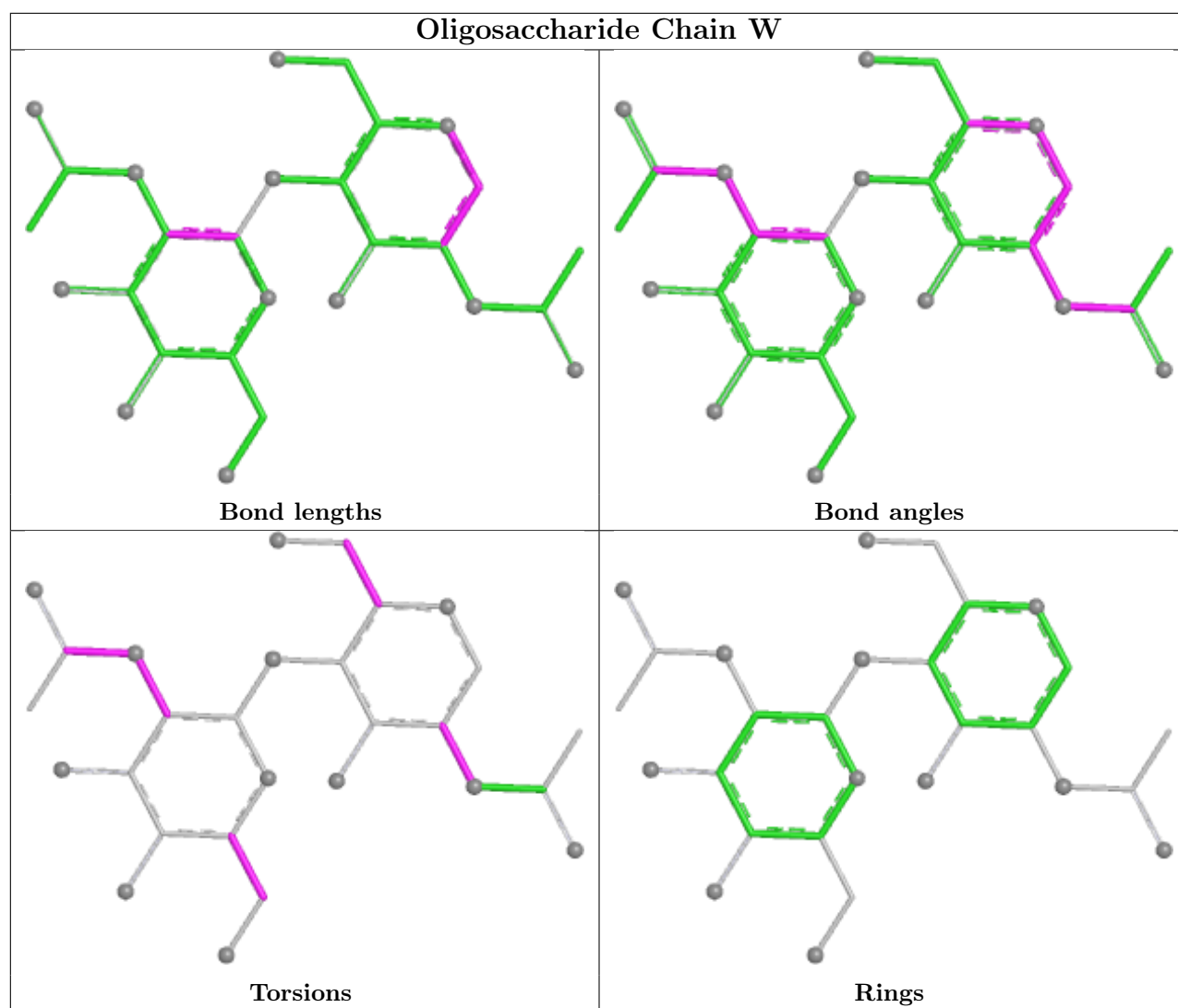


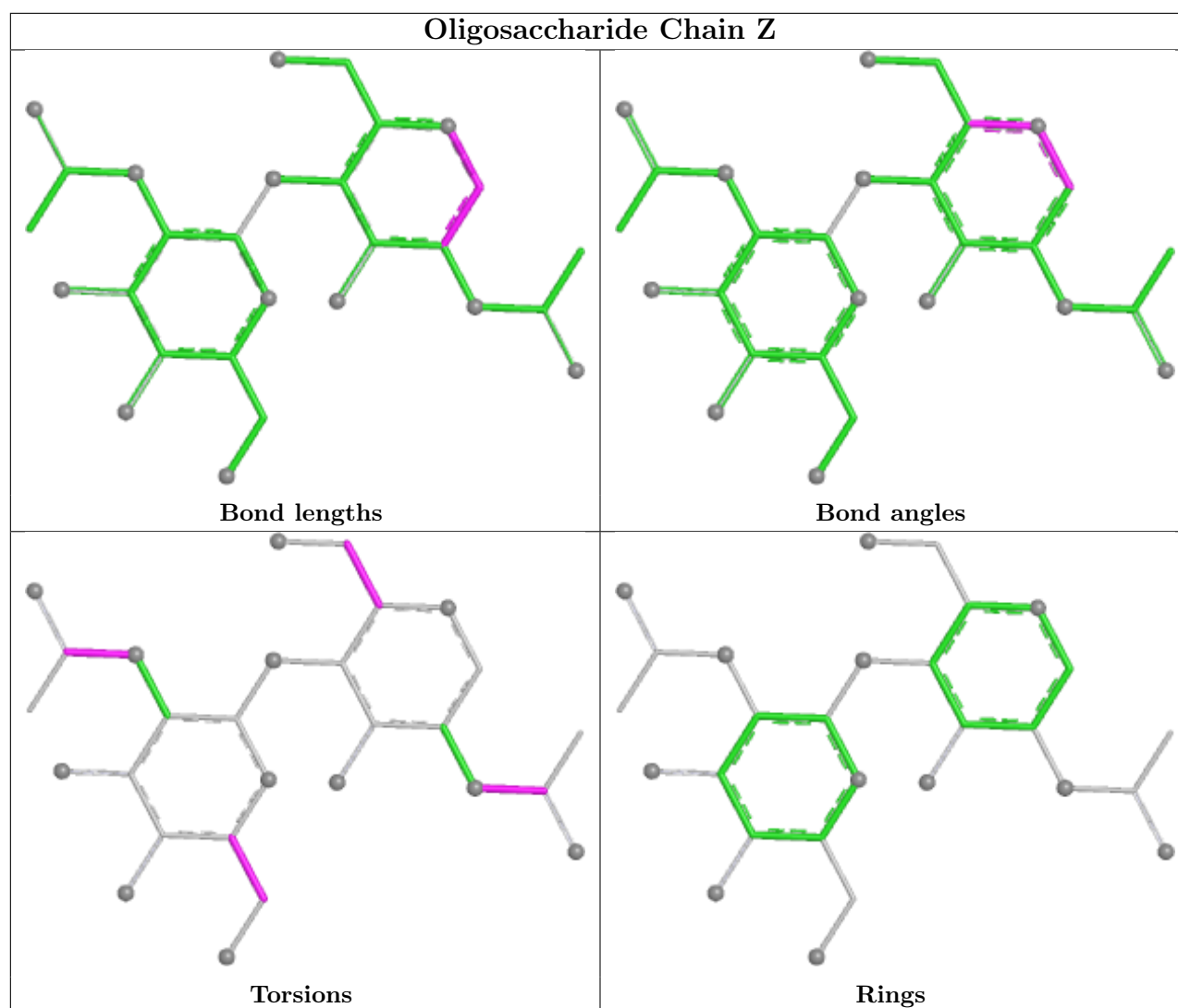












5.6 Ligand geometry [i](#)

Of 20 ligands modelled in this entry, 2 are monoatomic - leaving 18 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	$\# Z > 2$
10	MAN	Y	503	2	11,11,12	0.79	0	15,15,17	1.52	2 (13%)
10	MAN	V	512	2	11,11,12	0.76	0	15,15,17	1.49	2 (13%)
10	MAN	Y	510	2	11,11,12	0.79	0	15,15,17	1.48	2 (13%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
10	MAN	V	504	2	11,11,12	0.79	0	15,15,17	1.56	2 (13%)
10	MAN	Y	511	2	11,11,12	0.80	0	15,15,17	1.49	2 (13%)
10	MAN	V	510	2	11,11,12	0.75	0	15,15,17	1.55	2 (13%)
10	MAN	Y	504	2	11,11,12	0.79	0	15,15,17	1.51	2 (13%)
10	MAN	X	302	1	11,11,12	0.77	0	15,15,17	1.50	2 (13%)
10	MAN	U	301	1	11,11,12	0.73	0	15,15,17	1.53	2 (13%)
10	MAN	X	301	1	11,11,12	0.76	0	15,15,17	1.47	2 (13%)
10	MAN	Y	505	2	11,11,12	0.76	0	15,15,17	1.53	2 (13%)
10	MAN	Y	509	2	11,11,12	0.77	0	15,15,17	1.49	2 (13%)
10	MAN	Y	512	2	11,11,12	0.77	0	15,15,17	1.47	2 (13%)
10	MAN	V	505	2	11,11,12	0.80	0	15,15,17	1.51	2 (13%)
10	MAN	V	511	2	11,11,12	0.79	0	15,15,17	1.52	2 (13%)
10	MAN	V	503	2	11,11,12	0.77	0	15,15,17	1.53	2 (13%)
10	MAN	U	302	1	11,11,12	0.75	0	15,15,17	1.53	2 (13%)
10	MAN	V	509	2	11,11,12	0.78	0	15,15,17	1.53	2 (13%)

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
10	MAN	Y	503	2	-	0/2/19/22	0/1/1/1
10	MAN	V	512	2	-	0/2/19/22	0/1/1/1
10	MAN	Y	510	2	-	0/2/19/22	0/1/1/1
10	MAN	V	504	2	-	0/2/19/22	0/1/1/1
10	MAN	Y	511	2	-	0/2/19/22	0/1/1/1
10	MAN	V	510	2	-	0/2/19/22	0/1/1/1
10	MAN	Y	504	2	-	0/2/19/22	0/1/1/1
10	MAN	X	302	1	-	0/2/19/22	0/1/1/1
10	MAN	U	301	1	-	0/2/19/22	0/1/1/1
10	MAN	X	301	1	-	0/2/19/22	0/1/1/1
10	MAN	Y	505	2	-	0/2/19/22	0/1/1/1
10	MAN	Y	509	2	-	0/2/19/22	0/1/1/1
10	MAN	Y	512	2	-	0/2/19/22	0/1/1/1
10	MAN	V	505	2	-	1/2/19/22	0/1/1/1
10	MAN	V	511	2	-	0/2/19/22	0/1/1/1
10	MAN	V	503	2	-	0/2/19/22	0/1/1/1
10	MAN	U	302	1	-	0/2/19/22	0/1/1/1

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
10	MAN	V	509	2	-	0/2/19/22	0/1/1/1

There are no bond length outliers.

All (36) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
10	V	504	MAN	C1-O5-C5	4.71	118.49	112.19
10	V	510	MAN	C1-O5-C5	4.69	118.47	112.19
10	V	503	MAN	C1-O5-C5	4.61	118.37	112.19
10	U	302	MAN	C1-O5-C5	4.60	118.35	112.19
10	V	509	MAN	C1-O5-C5	4.59	118.33	112.19
10	U	301	MAN	C1-O5-C5	4.54	118.27	112.19
10	Y	505	MAN	C1-O5-C5	4.52	118.25	112.19
10	Y	503	MAN	C1-O5-C5	4.50	118.22	112.19
10	Y	504	MAN	C1-O5-C5	4.47	118.18	112.19
10	V	512	MAN	C1-O5-C5	4.44	118.14	112.19
10	V	511	MAN	C1-O5-C5	4.42	118.12	112.19
10	Y	509	MAN	C1-O5-C5	4.38	118.06	112.19
10	Y	511	MAN	C1-O5-C5	4.34	118.00	112.19
10	X	302	MAN	C1-O5-C5	4.34	118.00	112.19
10	X	301	MAN	C1-O5-C5	4.33	117.99	112.19
10	Y	510	MAN	C1-O5-C5	4.24	117.88	112.19
10	Y	512	MAN	C1-O5-C5	4.24	117.86	112.19
10	V	505	MAN	C1-O5-C5	4.13	117.73	112.19
10	V	505	MAN	O2-C2-C3	-3.11	103.70	110.15
10	Y	505	MAN	O2-C2-C3	-2.63	104.70	110.15
10	X	302	MAN	O2-C2-C3	-2.51	104.96	110.15
10	U	301	MAN	O2-C2-C3	-2.48	105.00	110.15
10	Y	510	MAN	O2-C2-C3	-2.40	105.17	110.15
10	Y	512	MAN	O2-C2-C3	-2.35	105.28	110.15
10	V	512	MAN	O2-C2-C3	-2.35	105.29	110.15
10	V	511	MAN	O2-C2-C3	-2.34	105.30	110.15
10	X	301	MAN	O2-C2-C3	-2.34	105.31	110.15
10	Y	509	MAN	O2-C2-C3	-2.29	105.40	110.15
10	V	510	MAN	O2-C2-C3	-2.29	105.40	110.15
10	U	302	MAN	O2-C2-C3	-2.29	105.42	110.15
10	Y	511	MAN	O2-C2-C3	-2.23	105.54	110.15
10	V	509	MAN	O2-C2-C3	-2.22	105.55	110.15
10	Y	504	MAN	O2-C2-C3	-2.21	105.56	110.15
10	Y	503	MAN	O2-C2-C3	-2.17	105.66	110.15
10	V	504	MAN	O2-C2-C3	-2.17	105.66	110.15
10	V	503	MAN	O2-C2-C3	-2.10	105.81	110.15

There are no chirality outliers.

All (1) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
10	V	505	MAN	O5-C5-C6-O6

There are no ring outliers.

No monomer is involved in short contacts.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

The following chains have linkage breaks:

Mol	Chain	Number of breaks
2	Y	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	Y	312:CYS	C	313:PRO	N	3.24

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	U	106/234 (45%)	0.65	7 (6%) 24 29	352, 487, 611, 725	0
1	X	106/234 (45%)	0.76	14 (13%) 7 15	358, 477, 598, 642	0
2	V	210/215 (97%)	0.69	23 (10%) 10 18	332, 470, 617, 695	0
2	Y	210/215 (97%)	0.60	20 (9%) 14 21	297, 461, 570, 718	0
3	A	645/645 (100%)	0.56	56 (8%) 16 22	233, 328, 445, 584	0
3	G	645/645 (100%)	0.52	51 (7%) 18 25	259, 352, 482, 696	0
4	B	913/915 (99%)	0.57	68 (7%) 20 26	233, 378, 510, 675	0
4	H	913/915 (99%)	0.50	55 (6%) 27 32	263, 421, 623, 759	0
5	J	505/505 (100%)	0.63	57 (11%) 10 17	273, 417, 552, 641	0
5	L	505/505 (100%)	0.54	48 (9%) 14 21	206, 345, 468, 633	0
6	N	84/85 (98%)	0.46	4 (4%) 35 36	272, 340, 475, 531	0
6	Q	84/85 (98%)	0.66	11 (13%) 7 15	264, 383, 520, 581	0
All	All	4926/5198 (94%)	0.56	414 (8%) 17 24	206, 383, 565, 759	0

All (414) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
4	H	791	LYS	9.2
3	A	26	ASP	7.3
5	L	713	ALA	6.8
5	L	697	VAL	6.4
4	B	912	GLU	6.4
5	L	696	VAL	6.2
5	J	546	GLU	6.1
5	J	395	GLU	6.0
5	J	635	ALA	5.8
5	J	338	TYR	5.8
5	J	502	CYS	5.8

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Mol	Chain	Res	Type	RSRZ
3	A	636	ALA	5.7
3	G	564	GLU	5.6
2	V	341	PRO	5.2
5	J	696	VAL	5.1
3	G	538	VAL	5.0
5	J	501	HIS	5.0
2	V	337	CYS	5.0
5	J	548	TYR	5.0
5	J	367	HIS	4.8
5	J	341	MET	4.8
2	Y	257	ALA	4.8
2	V	407	CYS	4.7
3	G	78	LYS	4.7
3	A	564	GLU	4.7
2	Y	329	ARG	4.6
5	L	668	ASN	4.6
3	G	501	THR	4.5
1	X	130	GLN	4.5
4	B	936	GLN	4.4
3	G	15	GLU	4.4
3	A	28	GLN	4.4
3	A	609	SER	4.3
4	H	1319	THR	4.2
5	J	383	LEU	4.2
5	L	437	GLU	4.2
3	A	62	GLY	4.2
4	B	865	THR	4.2
4	B	1092	PRO	4.2
4	B	1103	ILE	4.2
3	G	399	SER	4.2
3	A	558	GLN	4.0
1	U	52	SER	4.0
3	G	491	ASP	4.0
4	B	767	LYS	4.0
4	H	1631	THR	4.0
4	B	1505	VAL	3.9
5	J	269	VAL	3.9
1	X	101	TYR	3.8
5	J	641	TYR	3.8
3	G	95	VAL	3.8
4	B	1358	ALA	3.8
4	H	1597	SER	3.8

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Mol	Chain	Res	Type	RSRZ
3	A	78	LYS	3.7
3	A	397	PRO	3.7
4	B	1254	PHE	3.7
4	B	1485	ARG	3.7
3	G	420	GLN	3.7
3	A	87	GLN	3.7
5	L	338	TYR	3.7
4	H	1438	ALA	3.6
3	A	95	VAL	3.6
4	B	1050	ARG	3.6
3	A	608	GLY	3.6
4	H	1444	TYR	3.6
5	L	600	ALA	3.6
6	N	30	GLU	3.6
1	U	55	ASP	3.6
3	A	463	ALA	3.6
4	H	1590	TRP	3.6
6	Q	41	LYS	3.6
5	J	235	LYS	3.5
4	B	1443	GLN	3.5
4	H	1456	LYS	3.5
5	L	548	TYR	3.4
2	V	352	GLY	3.4
5	L	324	LEU	3.4
6	Q	4	LEU	3.4
5	J	442	GLN	3.4
3	G	1	SER	3.4
4	B	1549	SER	3.4
2	Y	364	GLN	3.4
5	J	636	GLN	3.4
4	H	790	LYS	3.4
4	B	1327	HIS	3.3
3	G	630	GLN	3.3
4	B	987	GLY	3.3
4	B	1589	PHE	3.3
4	B	1017	LEU	3.3
4	H	1374	GLN	3.3
3	G	561	LEU	3.3
1	X	69	GLY	3.3
5	J	370	GLY	3.3
6	Q	79	GLU	3.3
3	A	98	VAL	3.3

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Mol	Chain	Res	Type	RSRZ
1	X	125	GLN	3.3
4	B	1359	LYS	3.3
4	B	1599	ILE	3.3
5	J	684	SER	3.3
1	X	93	CYS	3.2
5	J	631	CYS	3.2
2	Y	365	GLN	3.2
5	J	677	PRO	3.2
3	A	339	PRO	3.2
3	G	571	VAL	3.2
4	B	1490	ARG	3.2
4	H	784	ALA	3.2
6	Q	35	SER	3.1
4	H	1641	ASN	3.1
1	U	71	LEU	3.1
1	X	103	ARG	3.1
3	A	96	GLU	3.1
4	B	1607	GLU	3.1
3	A	19	THR	3.1
4	H	1637	PHE	3.1
5	J	425	GLN	3.1
5	J	387	GLY	3.1
2	Y	416	PRO	3.1
4	B	993	MET	3.1
3	A	27	ALA	3.1
4	B	772	PHE	3.1
5	L	677	PRO	3.0
2	Y	284	CYS	3.0
2	V	342	GLY	3.0
4	B	1301	GLU	3.0
3	A	340	LYS	3.0
5	L	699	VAL	3.0
5	J	653	PRO	3.0
4	B	1313	GLU	3.0
3	G	562	LYS	3.0
4	H	747	GLU	3.0
2	V	343	GLN	3.0
5	J	694	TRP	3.0
5	L	661	VAL	3.0
4	B	766	THR	3.0
3	A	610	GLY	2.9
3	G	489	GLY	2.9

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Mol	Chain	Res	Type	RSRZ
3	G	62	GLY	2.9
3	G	542	VAL	2.9
4	B	1508	GLU	2.9
5	L	711	ALA	2.9
5	L	501	HIS	2.9
4	B	1352	GLU	2.9
3	G	506	SER	2.9
5	J	380	ILE	2.8
5	L	367	HIS	2.8
3	G	543	VAL	2.8
4	H	770	ASN	2.8
5	L	722	GLN	2.8
4	H	1632	GLU	2.8
5	J	551	ASP	2.8
1	U	77	SER	2.8
1	X	94	SER	2.8
2	V	339	GLU	2.8
3	A	566	ASP	2.8
5	L	698	ASP	2.8
5	L	632	GLU	2.8
1	X	120	LEU	2.8
3	G	563	ILE	2.7
2	Y	330	ARG	2.7
5	L	502	CYS	2.7
5	L	695	GLY	2.7
3	A	589	LEU	2.7
3	A	314	SER	2.7
4	B	1032	THR	2.7
4	B	983	VAL	2.7
5	J	671	ARG	2.7
2	V	340	ILE	2.7
3	A	65	THR	2.7
1	X	131	GLN	2.7
3	G	340	LYS	2.7
4	H	1330	ALA	2.6
2	V	437	PRO	2.6
5	J	712	HIS	2.6
5	L	353	ASN	2.6
2	V	447	LEU	2.6
3	G	416	THR	2.6
5	J	453	CYS	2.6
5	L	354	ARG	2.6

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Mol	Chain	Res	Type	RSRZ
2	Y	275	LEU	2.6
4	H	749	TRP	2.6
2	Y	337	CYS	2.6
4	B	1598	TYR	2.6
5	L	376	VAL	2.6
5	J	634	ASP	2.6
5	L	694	TRP	2.6
2	Y	276	GLY	2.6
3	A	90	PHE	2.6
3	A	159	SER	2.6
3	G	48	SER	2.6
4	B	1623	GLN	2.6
3	G	541	LEU	2.6
2	V	349	THR	2.6
4	B	1533	SER	2.6
6	Q	30	GLU	2.6
5	L	725	PRO	2.6
4	H	914	ILE	2.6
5	J	330	THR	2.6
3	A	348	PHE	2.5
3	G	544	LYS	2.5
4	H	777	ILE	2.5
5	J	329	ASN	2.5
4	B	1632	GLU	2.5
5	L	593	GLN	2.5
2	V	431	PHE	2.5
3	G	333	ILE	2.5
4	H	786	SER	2.5
3	A	109	PHE	2.5
4	H	1439	PHE	2.5
2	V	430	THR	2.5
3	G	198	THR	2.5
5	L	693	SER	2.5
3	A	164	LEU	2.5
2	Y	399	PRO	2.5
3	A	2	PRO	2.5
4	H	1391	PRO	2.5
4	H	824	GLU	2.5
5	L	619	GLU	2.5
6	Q	40	TYR	2.5
2	V	377	PRO	2.4
5	J	396	ASP	2.4

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Mol	Chain	Res	Type	RSRZ
5	J	503	PHE	2.4
2	V	314	VAL	2.4
3	A	607	PRO	2.4
3	G	352	VAL	2.4
5	J	254	GLY	2.4
3	A	25	HIS	2.4
3	A	341	TYR	2.4
4	H	1567	LYS	2.4
4	B	1045	ALA	2.4
3	G	335	PHE	2.4
5	J	535	ASN	2.4
5	L	709	VAL	2.4
4	B	1418	ASP	2.4
6	N	25	GLU	2.4
3	A	565	GLY	2.4
3	G	602	ASP	2.4
4	B	1099	ASP	2.4
4	H	944	ASP	2.4
6	Q	59	ASP	2.4
2	Y	314	VAL	2.4
3	A	283	LYS	2.4
3	G	115	THR	2.4
5	J	445	ASP	2.4
4	B	1385	MET	2.4
2	Y	457	HIS	2.4
5	L	325	LYS	2.4
3	A	422	LEU	2.4
4	H	1320	LEU	2.4
3	G	96	GLU	2.3
4	B	1417	SER	2.3
5	J	528	VAL	2.3
4	B	804	MET	2.3
3	A	168	PRO	2.3
5	L	348	PRO	2.3
4	B	928	GLU	2.3
4	B	1554	VAL	2.3
4	H	804	MET	2.3
5	L	296	TRP	2.3
2	Y	369	HIS	2.3
4	B	1476	GLU	2.3
3	G	97	LYS	2.3
4	B	1253	VAL	2.3

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Mol	Chain	Res	Type	RSRZ
2	V	336	SER	2.3
3	G	103	LEU	2.3
4	H	1549	SER	2.3
1	U	88	PRO	2.3
3	A	335	PHE	2.3
4	B	1637	PHE	2.3
5	L	370	GLY	2.3
5	J	489	ALA	2.3
3	G	475	LYS	2.3
4	B	1567	LYS	2.3
3	A	336	THR	2.3
4	H	1396	LEU	2.3
4	H	1041	SER	2.3
2	V	329	ARG	2.3
3	G	218	GLU	2.3
4	B	871	SER	2.3
5	J	547	PHE	2.3
2	Y	437	PRO	2.3
5	J	569	PRO	2.3
1	U	61	ALA	2.3
4	B	1434	ASP	2.3
5	L	425	GLN	2.3
5	L	397	TYR	2.3
4	B	986	SER	2.3
3	G	88	ALA	2.3
4	B	750	LEU	2.3
4	B	1312	ALA	2.3
5	J	384	LEU	2.3
5	L	341	MET	2.3
3	A	260	ILE	2.2
4	H	782	ILE	2.2
2	V	409	PRO	2.2
4	B	1320	LEU	2.2
5	L	394	ARG	2.2
5	L	671	ARG	2.2
4	H	1443	GLN	2.2
5	L	292	TYR	2.2
4	H	919	THR	2.2
5	J	324	LEU	2.2
3	A	94	VAL	2.2
1	U	103	ARG	2.2
5	J	305	SER	2.2

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Mol	Chain	Res	Type	RSRZ
5	J	693	SER	2.2
3	G	535	ASP	2.2
4	B	953	GLU	2.2
4	H	1545	GLN	2.2
5	J	632	GLU	2.2
1	X	88	PRO	2.2
4	H	922	VAL	2.2
4	B	1469	ARG	2.2
5	J	328	THR	2.2
5	J	369	MET	2.2
4	H	1147	ILE	2.2
4	B	1303	LYS	2.2
3	G	176	LEU	2.2
3	A	101	VAL	2.2
3	G	168	PRO	2.2
5	J	368	ASN	2.2
3	A	501	THR	2.2
3	G	112	THR	2.2
1	X	132	CYS	2.2
5	L	730	LYS	2.2
2	V	390	LEU	2.2
5	L	651	VAL	2.2
3	G	476	GLY	2.2
4	H	913	GLY	2.2
2	Y	289	PRO	2.2
3	G	390	ASN	2.2
2	V	452	LYS	2.2
6	Q	77	ILE	2.2
4	H	768	LEU	2.2
5	L	526	GLU	2.2
2	V	311	PRO	2.2
3	G	90	PHE	2.2
5	L	716	PHE	2.2
4	B	1167	VAL	2.2
5	J	247	TYR	2.2
4	H	1570	GLU	2.2
4	H	1360	ASN	2.1
4	H	1548	LYS	2.1
5	L	294	LYS	2.1
3	A	606	THR	2.1
2	V	334	SER	2.1
4	H	1275	SER	2.1

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Mol	Chain	Res	Type	RSRZ
5	J	505	VAL	2.1
3	A	466	ARG	2.1
1	X	49	GLY	2.1
2	Y	435	PRO	2.1
3	A	488	PRO	2.1
4	B	1183	PRO	2.1
3	A	83	PHE	2.1
4	B	1573	LYS	2.1
4	H	750	LEU	2.1
2	Y	408	THR	2.1
3	G	311	HIS	2.1
3	G	570	ARG	2.1
4	B	852	SER	2.1
4	H	841	ARG	2.1
2	Y	384	GLU	2.1
4	B	1609	TRP	2.1
5	J	371	GLY	2.1
6	Q	13	GLU	2.1
4	H	1627	LEU	2.1
4	B	1608	HIS	2.1
4	H	1432	SER	2.1
4	H	1046	ALA	2.1
6	N	65	GLU	2.1
5	J	237	VAL	2.1
3	A	441	THR	2.1
5	L	708	GLN	2.1
5	L	349	PRO	2.1
3	G	566	ASP	2.1
4	H	785	VAL	2.1
4	B	1360	ASN	2.1
4	B	1483	LEU	2.1
4	H	771	ILE	2.1
1	X	107	TRP	2.1
3	A	540	SER	2.1
4	H	748	SER	2.1
4	H	1517	PRO	2.1
5	J	470	TRP	2.1
5	L	323	LYS	2.1
6	Q	61	LYS	2.1
2	Y	304	HIS	2.1
2	V	285	ASN	2.1
4	H	1599	ILE	2.1

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Mol	Chain	Res	Type	RSRZ
3	A	104	GLN	2.1
4	B	1616	GLN	2.1
5	J	287	VAL	2.1
3	A	61	MET	2.0
5	L	562	LYS	2.0
4	B	939	ASP	2.0
3	A	425	SER	2.0
5	J	456	VAL	2.0
1	X	71	LEU	2.0
3	G	239	TYR	2.0
3	A	526	ALA	2.0
3	A	407	GLN	2.0
3	G	402	VAL	2.0
4	B	1304	GLU	2.0
6	Q	76	GLU	2.0
3	G	425	SER	2.0
6	N	61	LYS	2.0
3	A	467	TYR	2.0
3	G	109	PHE	2.0
3	A	491	ASP	2.0
4	B	755	ASP	2.0
4	B	1528	VAL	2.0
4	H	861	GLN	2.0
5	J	516	VAL	2.0
4	H	1607	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 ⓘ

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
7	FUC	C	1	10/11	-	-	627,637,648,650	0
7	BGC	C	2	11/12	-	-	589,595,596,596	0
7	FUC	D	1	10/11	-	-	513,521,529,532	0

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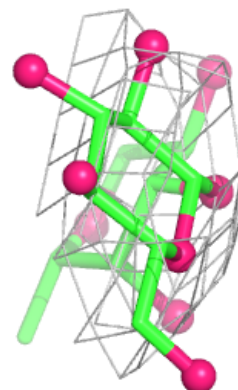
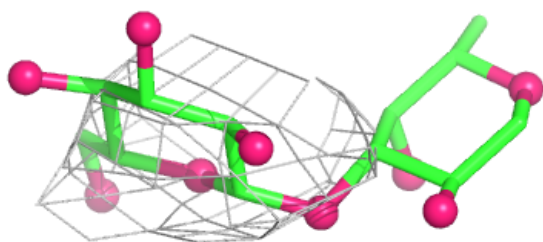
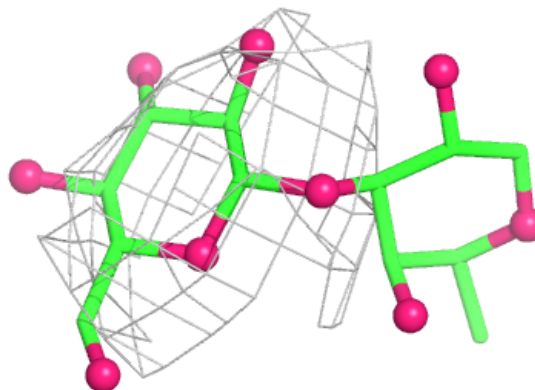
Continued from previous page...

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
7	BGC	D	2	11/12	-	-	500,505,515,519	0
7	FUC	F	1	10/11	-	-	542,545,547,548	0
7	BGC	F	2	11/12	-	-	540,547,551,554	0
7	FUC	I	1	10/11	-	-	533,542,545,549	0
7	BGC	I	2	11/12	-	-	527,537,555,558	0
8	NAG	E	1	14/15	-	-	512,516,520,524	0
8	NAG	E	2	14/15	-	-	492,496,502,502	0
8	FUC	E	3	10/11	-	-	516,519,522,523	0
8	NAG	K	1	14/15	-	-	628,631,635,638	0
8	NAG	K	2	14/15	-	-	624,626,630,631	0
8	FUC	K	3	10/11	-	-	564,568,571,574	0
9	NAG	M	1	14/15	-	-	350,359,374,376	0
9	NAG	M	2	14/15	-	-	341,344,350,352	0
9	NAG	Z	2	14/15	0.54	0.14	445,450,455,456	0
9	NAG	T	2	14/15	0.55	0.13	355,371,383,389	0
9	NAG	P	1	14/15	-	-	338,342,346,346	0
9	NAG	P	2	14/15	-	-	358,361,364,364	0
9	NAG	S	2	14/15	0.58	0.11	432,445,452,453	0
9	NAG	W	2	14/15	0.70	0.07	393,395,399,400	0
9	NAG	O	2	14/15	0.76	0.08	434,439,444,444	0
9	NAG	R	2	14/15	0.77	0.08	401,438,475,483	0
9	NAG	S	1	14/15	0.78	0.13	342,348,355,359	0
9	NAG	T	1	14/15	0.82	0.10	374,388,396,402	0
9	NAG	W	1	14/15	0.87	0.09	529,535,543,547	0
9	NAG	O	1	14/15	0.88	0.11	375,379,381,384	0
9	NAG	Z	1	14/15	0.93	0.15	430,439,444,446	0
9	NAG	R	1	14/15	0.94	0.10	426,447,453,454	0

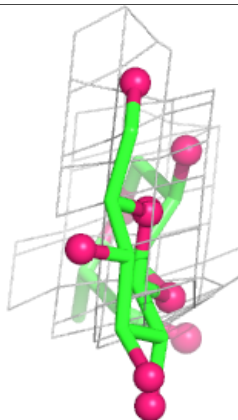
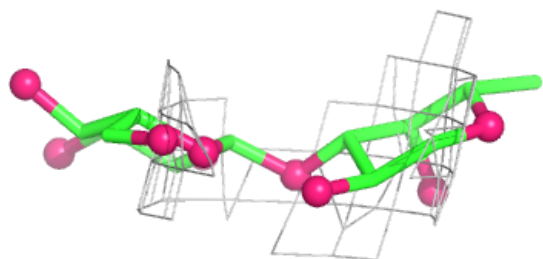
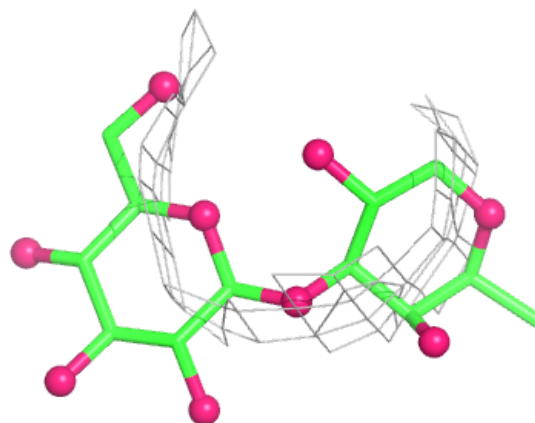
The following is a graphical depiction of the model fit to experimental electron density for oligosaccharide. Each fit is shown from different orientation to approximate a three-dimensional view.

Electron density around Chain C:

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

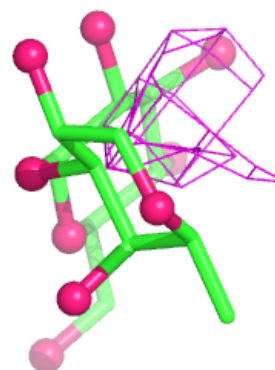
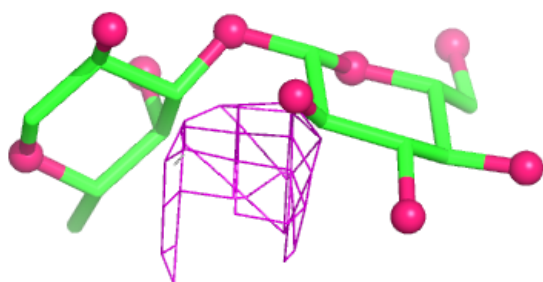
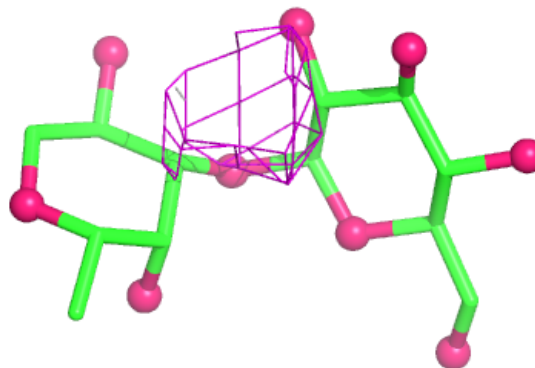
**Electron density around Chain D:**

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

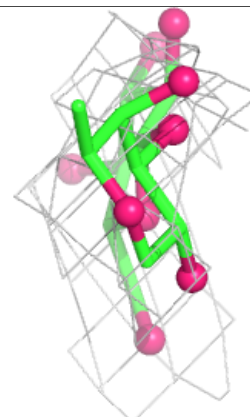
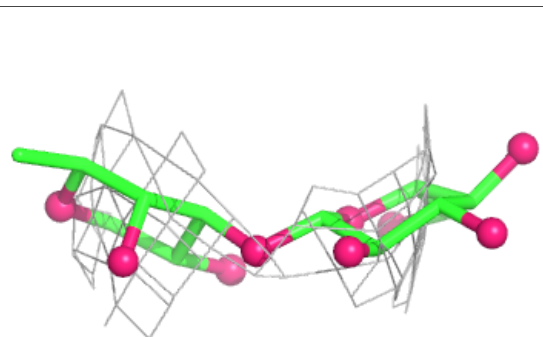
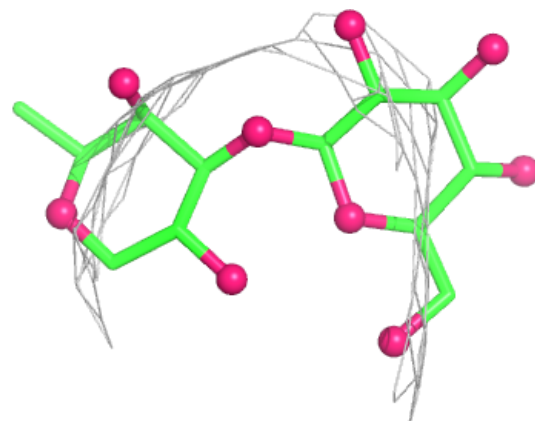


Electron density around Chain F:

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

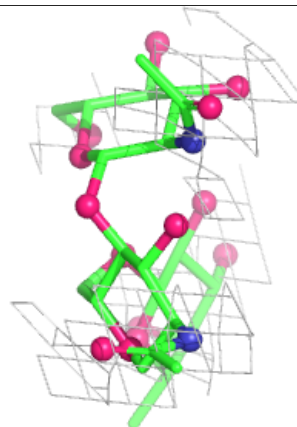
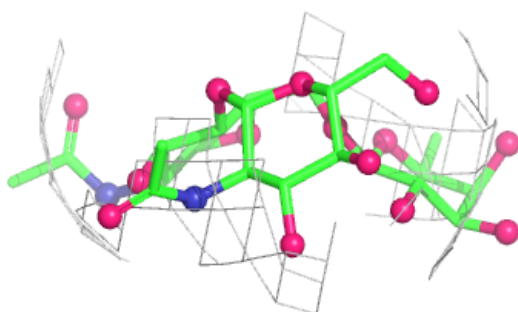
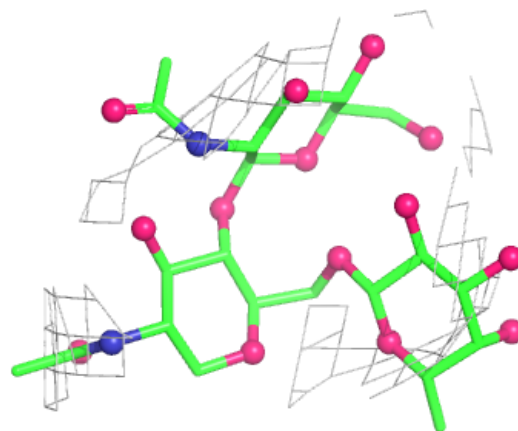
**Electron density around Chain I:**

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



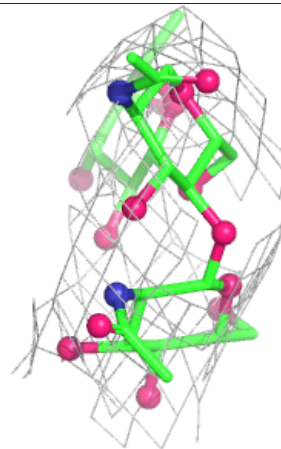
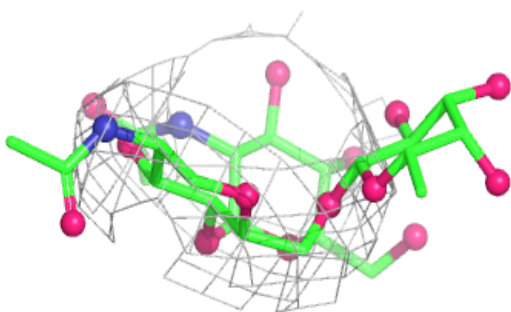
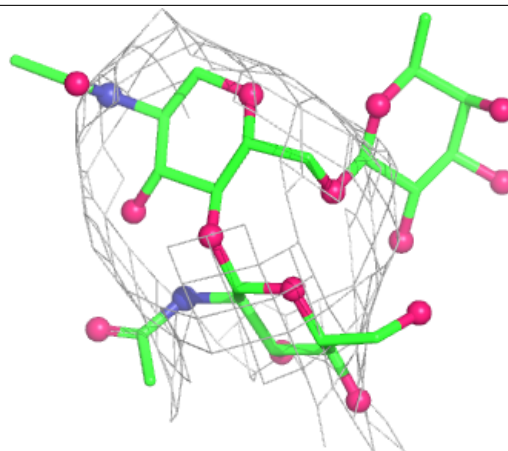
Electron density around Chain E:

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



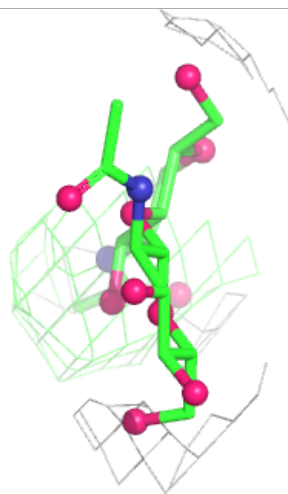
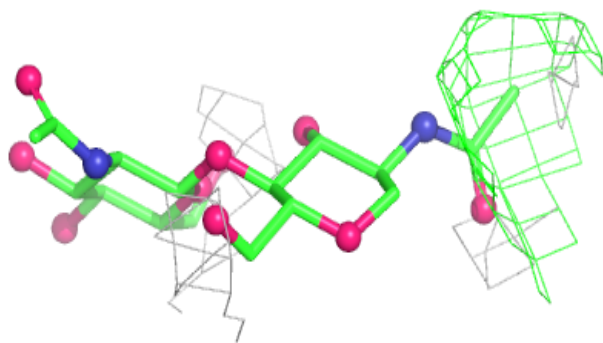
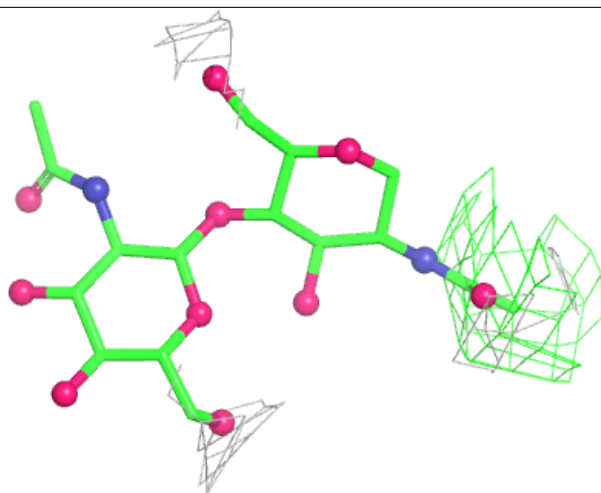
Electron density around Chain K:

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



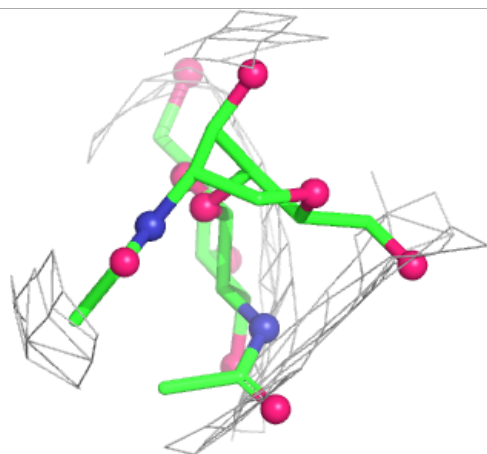
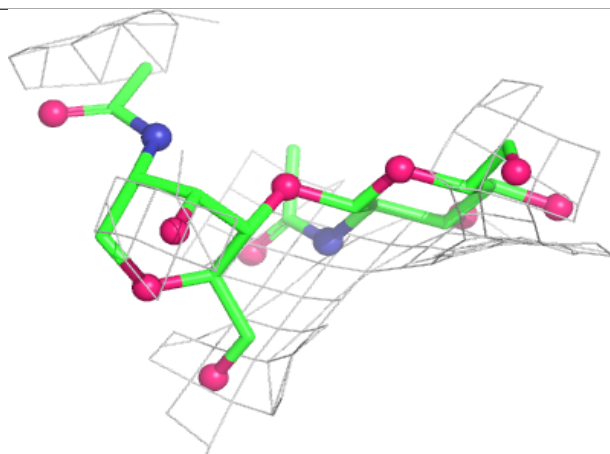
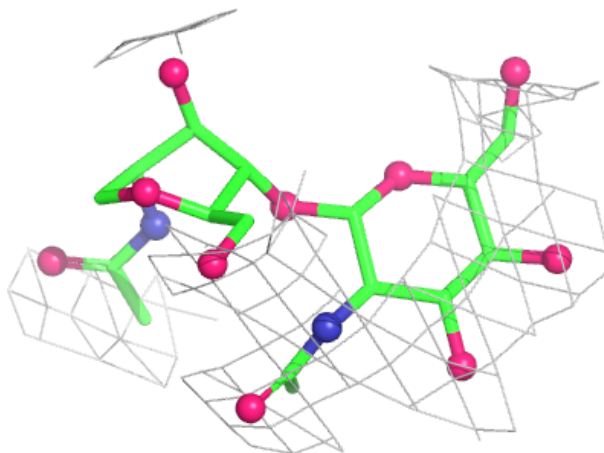
Electron density around Chain M:

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



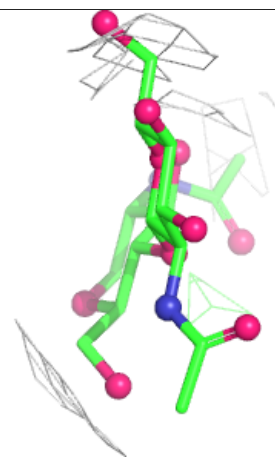
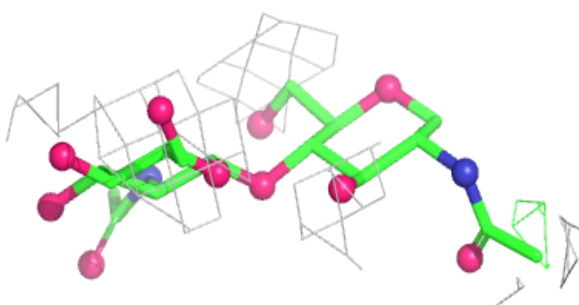
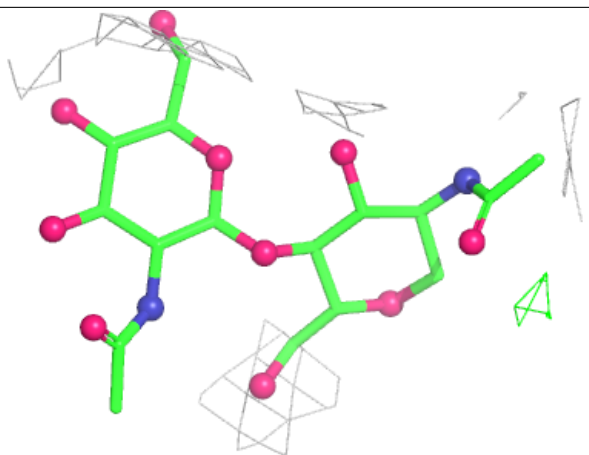
Electron density around Chain O:

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



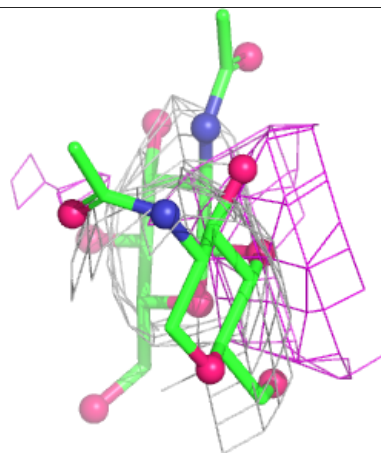
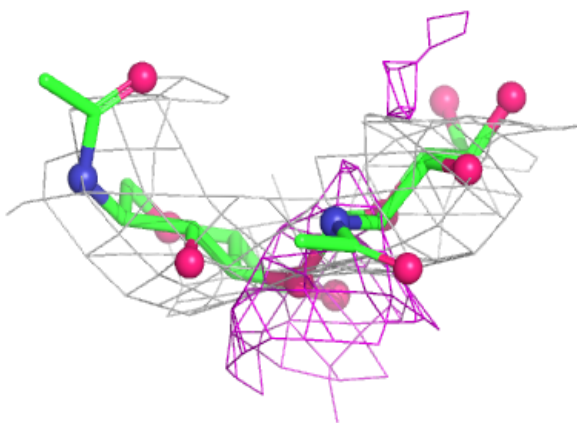
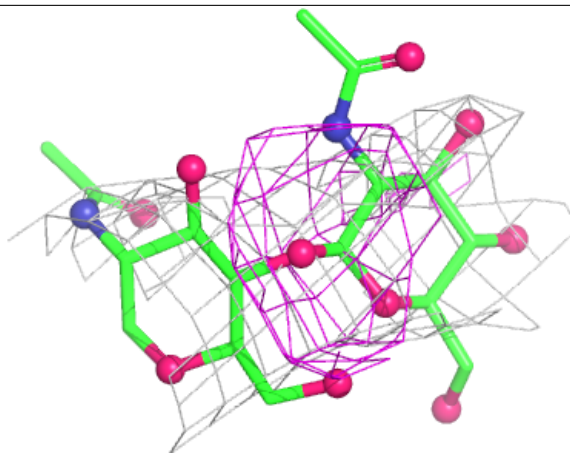
Electron density around Chain P:

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



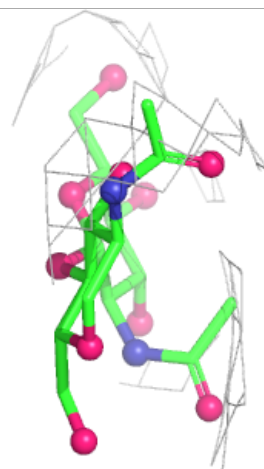
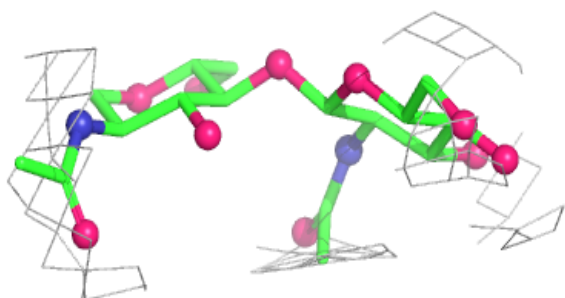
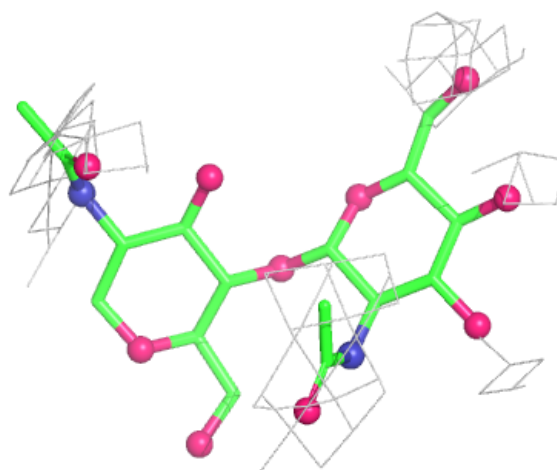
Electron density around Chain R:

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



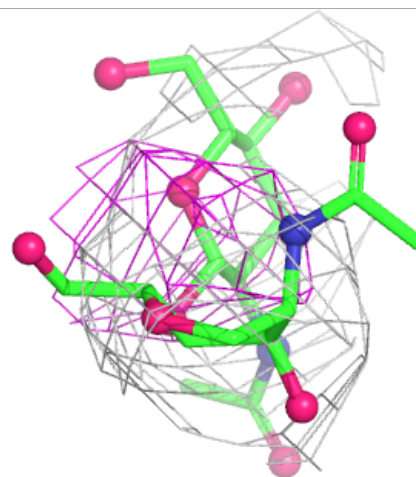
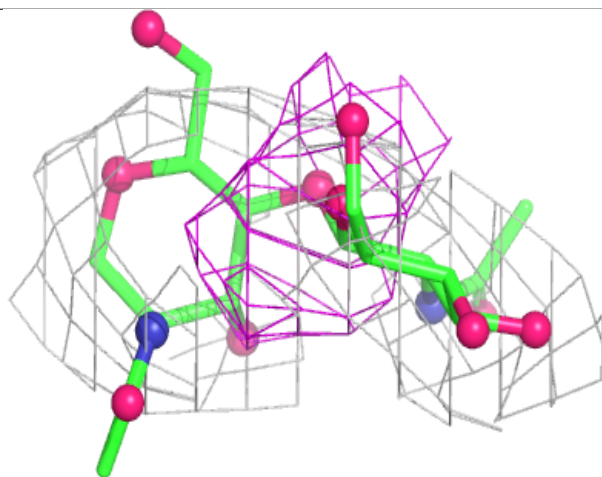
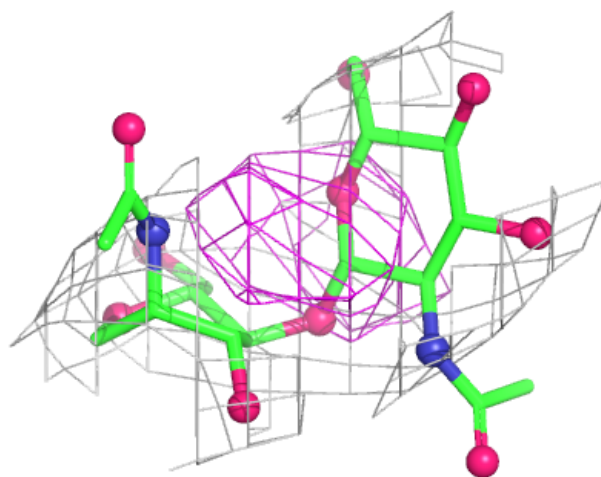
Electron density around Chain S:

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



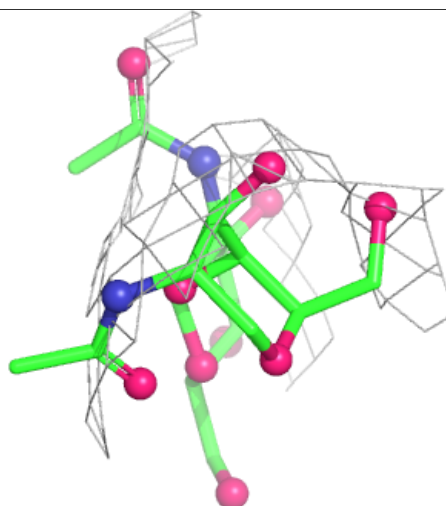
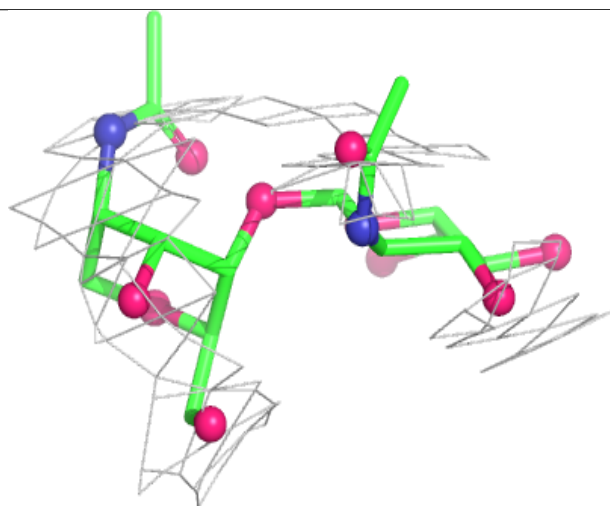
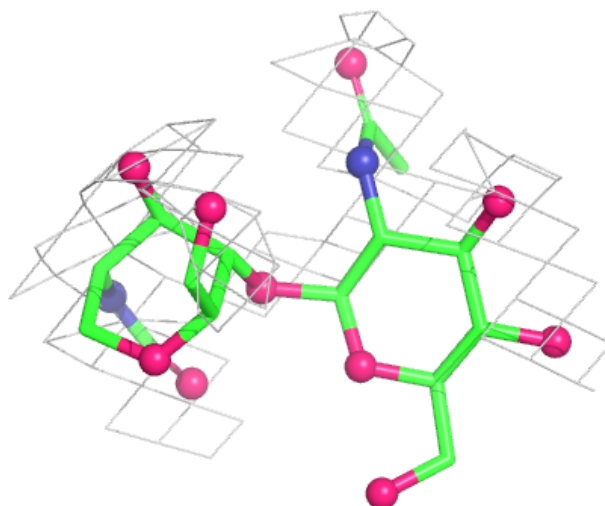
Electron density around Chain T:

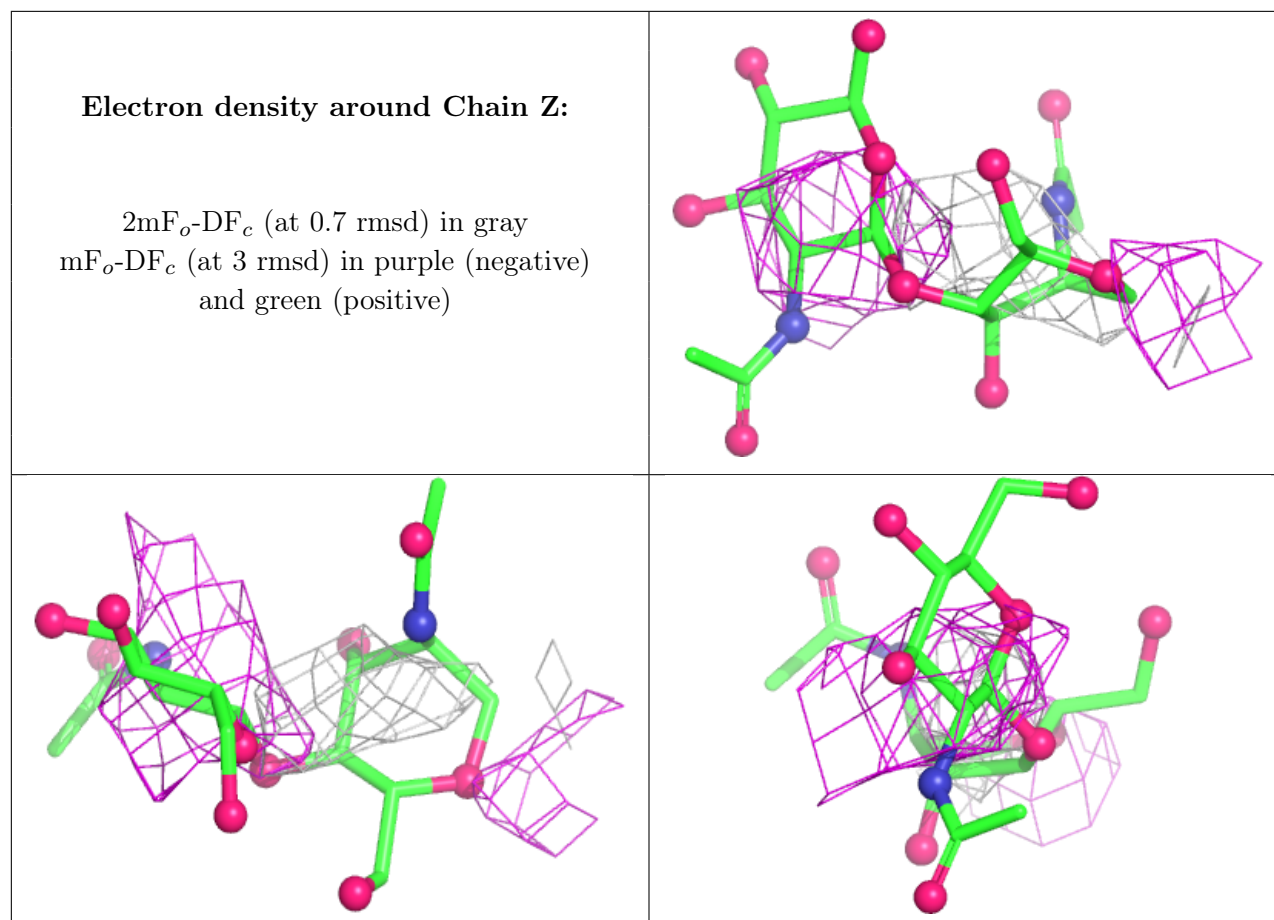
$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



Electron density around Chain W:

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





6.4 Ligands [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
10	MAN	Y	510	11/12	0.44	0.14	443,448,452,455	0
10	MAN	X	301	11/12	0.47	0.13	443,450,456,464	0
10	MAN	X	302	11/12	0.54	0.13	492,497,503,507	0
10	MAN	U	301	11/12	0.60	0.12	483,486,494,497	0
10	MAN	V	510	11/12	0.68	0.11	438,451,460,464	0
10	MAN	Y	503	11/12	0.70	0.10	442,448,465,469	0
10	MAN	Y	509	11/12	0.74	0.21	541,548,554,554	0
10	MAN	Y	505	11/12	0.76	0.12	409,413,415,419	0
10	MAN	Y	512	11/12	0.77	0.11	483,490,500,501	0
10	MAN	V	504	11/12	0.78	0.10	462,472,482,490	0
10	MAN	V	505	11/12	0.78	0.11	474,480,490,493	0
10	MAN	V	512	11/12	0.79	0.08	464,471,475,479	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
10	MAN	Y	504	11/12	0.82	0.14	406,430,443,449	0
10	MAN	V	503	11/12	0.83	0.06	403,419,425,429	0
11	MG	B	2003	1/1	0.86	0.24	269,269,269,269	0
10	MAN	V	511	11/12	0.88	0.16	508,514,518,518	0
10	MAN	V	509	11/12	0.90	0.10	472,479,485,493	0
10	MAN	U	302	11/12	0.91	0.09	488,490,501,507	0
11	MG	H	2003	1/1	0.93	0.21	302,302,302,302	0
10	MAN	Y	511	11/12	0.94	0.09	472,479,485,485	0

6.5 Other polymers [i](#)

There are no such residues in this entry.