



Full wwPDB X-ray Structure Validation Report ⓘ

Mar 4, 2026 – 06:30 PM UTC

PDB ID : 2BGN / pdb_00002bgn
Title : HIV-1 Tat protein derived N-terminal nonapeptide Trp2-Tat(1-9) bound to the active site of Dipeptidyl peptidase IV (CD26)
Authors : Weihofen, W.A.; Liu, J.; Reutter, W.; Saenger, W.; Fan, H.
Deposited on : 2005-01-03
Resolution : 3.15 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:

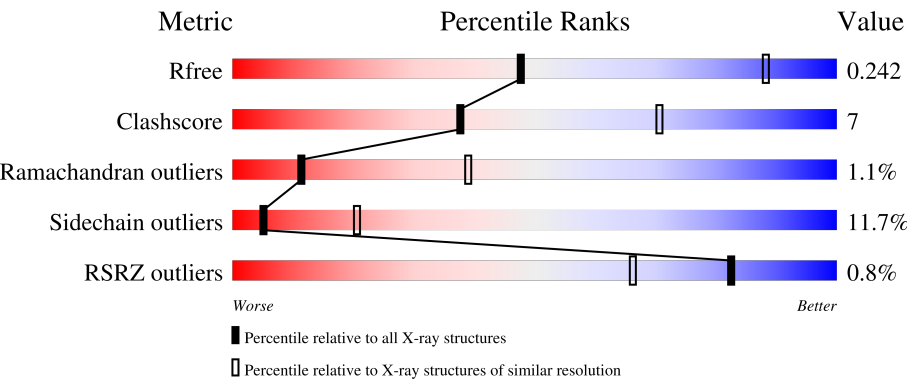
MolProbity : 4-5-2 with Phenix2.0
Mogul : 2022.3.0, CSD as543be (2022)
Xtriage (Phenix) : 2.0
EDS : 3.0
Percentile statistics : 20250101.v01 (using entries in the PDB archive January 1st 2025)
CCP4 : 9.0.010 (Gargrove)
Density-Fitness : 1.0.12
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.49

1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:
X-RAY DIFFRACTION

The reported resolution of this entry is 3.15 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	2361 (3.20-3.12)
Clashscore	190562	2486 (3.20-3.12)
Ramachandran outliers	187476	2405 (3.20-3.12)
Sidechain outliers	187428	2404 (3.20-3.12)
RSRZ outliers	180081	2361 (3.20-3.12)

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	A	728	82%16%.
1	B	728	% 81%17%.
1	C	728	80%17%.
1	D	728	80%17%.
2	E	363	5% 64%27%...

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Mol	Chain	Length	Quality of chain
2	F	363	
2	G	363	
2	H	363	
3	W	9	
3	X	9	
3	Y	9	
3	Z	9	
4	I	3	
4	R	3	
5	J	2	
5	K	2	
5	M	2	
5	O	2	
5	Q	2	
5	S	2	
5	T	2	
5	V	2	
5	b	2	
5	d	2	
6	L	4	
6	P	4	
6	U	4	
6	c	4	
7	N	2	
7	a	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	NAG	A	801	X	-	-	-
8	NAG	B	803	X	-	-	-
8	NAG	D	803	X	-	-	-

2 Entry composition

There are 9 unique types of molecules in this entry. The entry contains 36096 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 DIPEPTIDYL PEPTIDASE IV.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	728	Total	C	N	O	S	0	0	0
			5963	3827	982	1128	26			
1	B	728	Total	C	N	O	S	0	0	0
			5963	3827	982	1128	26			
1	C	728	Total	C	N	O	S	0	0	0
			5963	3827	982	1128	26			
1	D	728	Total	C	N	O	S	0	0	0
			5963	3827	982	1128	26			

- Molecule 2 is a protein called ADENOSINE DEAMINASE.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	E	352	Total	C	N	O	S	0	0	0
			2809	1786	473	537	13			
2	F	352	Total	C	N	O	S	0	0	0
			2809	1786	473	537	13			
2	G	352	Total	C	N	O	S	0	0	0
			2809	1786	473	537	13			
2	H	352	Total	C	N	O	S	0	0	0
			2809	1786	473	537	13			

There are 64 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
E	8	ASP	ASN	conflict	UNP P56658
E	32	LYS	ARG	conflict	UNP P56658
E	33	ARG	LYS	conflict	UNP P56658
E	47	LEU	GLN	conflict	UNP P56658
E	57	THR	SER	conflict	UNP P56658
E	60	ASP	GLU	conflict	UNP P56658
E	77	ASP	GLU	conflict	UNP P56658
E	79	ILE	VAL	conflict	UNP P56658

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Chain	Residue	Modelled	Actual	Comment	Reference
E	199	GLN	LYS	variant	UNP P56658
E	246	THR	ALA	variant	UNP P56658
E	261	ILE	VAL	conflict	UNP P56658
E	279	ALA	PRO	conflict	UNP P56658
E	281	ILE	VAL	conflict	UNP P56658
E	313	LYS	ASN	conflict	UNP P56658
E	314	ASP	GLU	conflict	UNP P56658
E	352	ARG	GLY	variant	UNP P56658
F	8	ASP	ASN	conflict	UNP P56658
F	32	LYS	ARG	conflict	UNP P56658
F	33	ARG	LYS	conflict	UNP P56658
F	47	LEU	GLN	conflict	UNP P56658
F	57	THR	SER	conflict	UNP P56658
F	60	ASP	GLU	conflict	UNP P56658
F	77	ASP	GLU	conflict	UNP P56658
F	79	ILE	VAL	conflict	UNP P56658
F	199	GLN	LYS	variant	UNP P56658
F	246	THR	ALA	variant	UNP P56658
F	261	ILE	VAL	conflict	UNP P56658
F	279	ALA	PRO	conflict	UNP P56658
F	281	ILE	VAL	conflict	UNP P56658
F	313	LYS	ASN	conflict	UNP P56658
F	314	ASP	GLU	conflict	UNP P56658
F	352	ARG	GLY	variant	UNP P56658
G	8	ASP	ASN	conflict	UNP P56658
G	32	LYS	ARG	conflict	UNP P56658
G	33	ARG	LYS	conflict	UNP P56658
G	47	LEU	GLN	conflict	UNP P56658
G	57	THR	SER	conflict	UNP P56658
G	60	ASP	GLU	conflict	UNP P56658
G	77	ASP	GLU	conflict	UNP P56658
G	79	ILE	VAL	conflict	UNP P56658
G	199	GLN	LYS	variant	UNP P56658
G	246	THR	ALA	variant	UNP P56658
G	261	ILE	VAL	conflict	UNP P56658
G	279	ALA	PRO	conflict	UNP P56658
G	281	ILE	VAL	conflict	UNP P56658
G	313	LYS	ASN	conflict	UNP P56658
G	314	ASP	GLU	conflict	UNP P56658
G	352	ARG	GLY	variant	UNP P56658
H	8	ASP	ASN	conflict	UNP P56658
H	32	LYS	ARG	conflict	UNP P56658

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Chain	Residue	Modelled	Actual	Comment	Reference
H	33	ARG	LYS	conflict	UNP P56658
H	47	LEU	GLN	conflict	UNP P56658
H	57	THR	SER	conflict	UNP P56658
H	60	ASP	GLU	conflict	UNP P56658
H	77	ASP	GLU	conflict	UNP P56658
H	79	ILE	VAL	conflict	UNP P56658
H	199	GLN	LYS	variant	UNP P56658
H	246	THR	ALA	variant	UNP P56658
H	261	ILE	VAL	conflict	UNP P56658
H	279	ALA	PRO	conflict	UNP P56658
H	281	ILE	VAL	conflict	UNP P56658
H	313	LYS	ASN	conflict	UNP P56658
H	314	ASP	GLU	conflict	UNP P56658
H	352	ARG	GLY	variant	UNP P56658

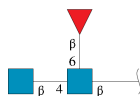
- Molecule 3 is a protein called TAT PROTEIN.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	W	6	Total	C	N	O	S	0	0	0
			51	35	7	8	1			
3	X	6	Total	C	N	O	S	0	0	0
			51	35	7	8	1			
3	Y	6	Total	C	N	O	S	0	0	0
			51	35	7	8	1			
3	Z	6	Total	C	N	O	S	0	0	0
			51	35	7	8	1			

There are 4 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
W	2	TRP	ASP	engineered mutation	UNP P12506
X	2	TRP	ASP	engineered mutation	UNP P12506
Y	2	TRP	ASP	engineered mutation	UNP P12506
Z	2	TRP	ASP	engineered mutation	UNP P12506

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



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
4	I	3	Total	C	N	O	0	0	0
			38	22	2	14			
4	R	3	Total	C	N	O	0	0	0
			38	22	2	14			

- Molecule 5 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
5	J	2	Total	C	N	O	0	0	0
			28	16	2	10			
5	K	2	Total	C	N	O	0	0	0
			28	16	2	10			
5	M	2	Total	C	N	O	0	0	0
			28	16	2	10			
5	O	2	Total	C	N	O	0	0	0
			28	16	2	10			
5	Q	2	Total	C	N	O	0	0	0
			28	16	2	10			
5	S	2	Total	C	N	O	0	0	0
			28	16	2	10			
5	T	2	Total	C	N	O	0	0	0
			28	16	2	10			
5	V	2	Total	C	N	O	0	0	0
			28	16	2	10			
5	b	2	Total	C	N	O	0	0	0
			28	16	2	10			
5	d	2	Total	C	N	O	0	0	0
			28	16	2	10			

- Molecule 6 is an oligosaccharide called alpha-D-mannopyranose-(1-3)-beta-D-mannopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose.



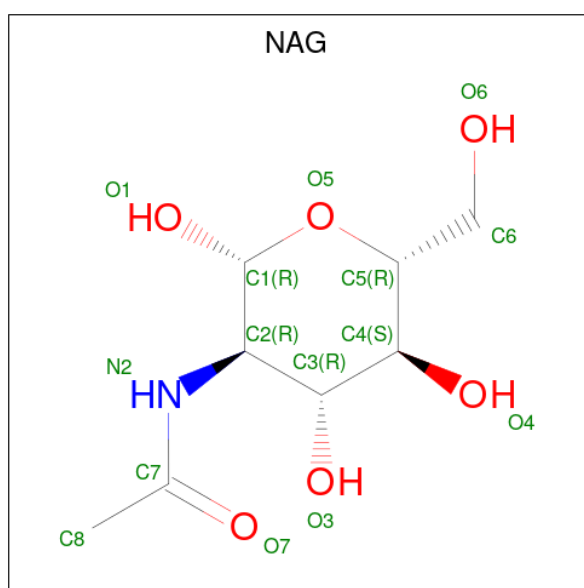
Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
6	L	4	Total	C	N	O	0	0	0
			50	28	2	20			
6	P	4	Total	C	N	O	0	0	0
			50	28	2	20			
6	U	4	Total	C	N	O	0	0	0
			50	28	2	20			
6	c	4	Total	C	N	O	0	0	0
			50	28	2	20			

- Molecule 7 is an oligosaccharide called beta-L-fucopyranose-(1-6)-2-acetamido-2-deoxy-beta-D-glucopyranose.



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
7	N	2	Total	C	N	O	0	0	0
			24	14	1	9			
7	a	2	Total	C	N	O	0	0	0
			24	14	1	9			

- Molecule 8 is 2-acetamido-2-deoxy-beta-D-glucopyranose (CCD ID: NAG) (formula: $C_8H_{15}NO_6$).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
8	A	1	Total C N O 14 8 1 5	0	0
8	A	1	Total C N O 14 8 1 5	0	0
8	A	1	Total C N O 14 8 1 5	0	0
8	B	1	Total C N O 14 8 1 5	0	0
8	B	1	Total C N O 14 8 1 5	0	0
8	B	1	Total C N O 14 8 1 5	0	0
8	B	1	Total C N O 14 8 1 5	0	0
8	C	1	Total C N O 14 8 1 5	0	0
8	C	1	Total C N O 14 8 1 5	0	0
8	C	1	Total C N O 14 8 1 5	0	0
8	D	1	Total C N O 14 8 1 5	0	0
8	D	1	Total C N O 14 8 1 5	0	0
8	D	1	Total C N O 14 8 1 5	0	0
8	D	1	Total C N O 14 8 1 5	0	0

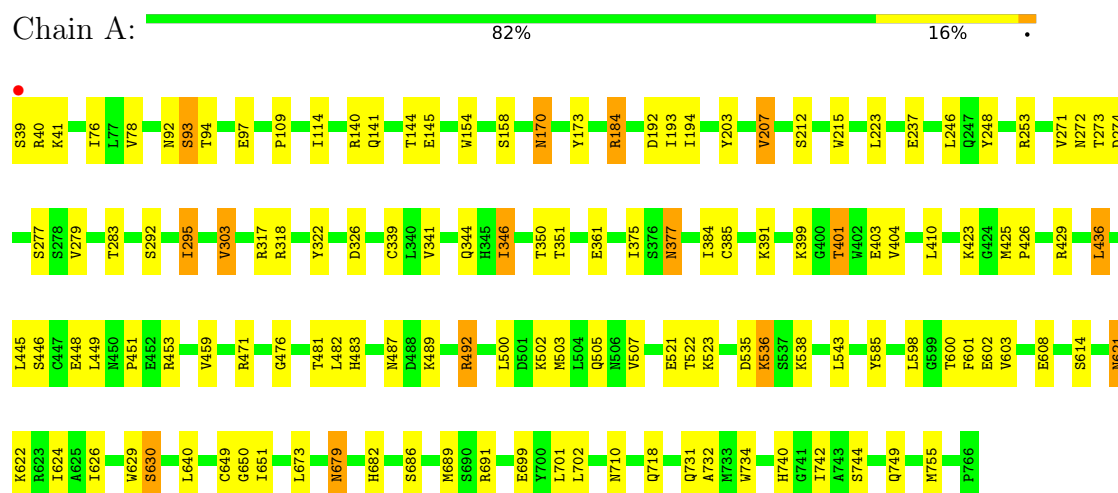
- Molecule 9 is ZINC ION (CCD ID: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
9	E	1	Total Zn 1 1	0	0
9	F	1	Total Zn 1 1	0	0
9	G	1	Total Zn 1 1	0	0
9	H	1	Total Zn 1 1	0	0

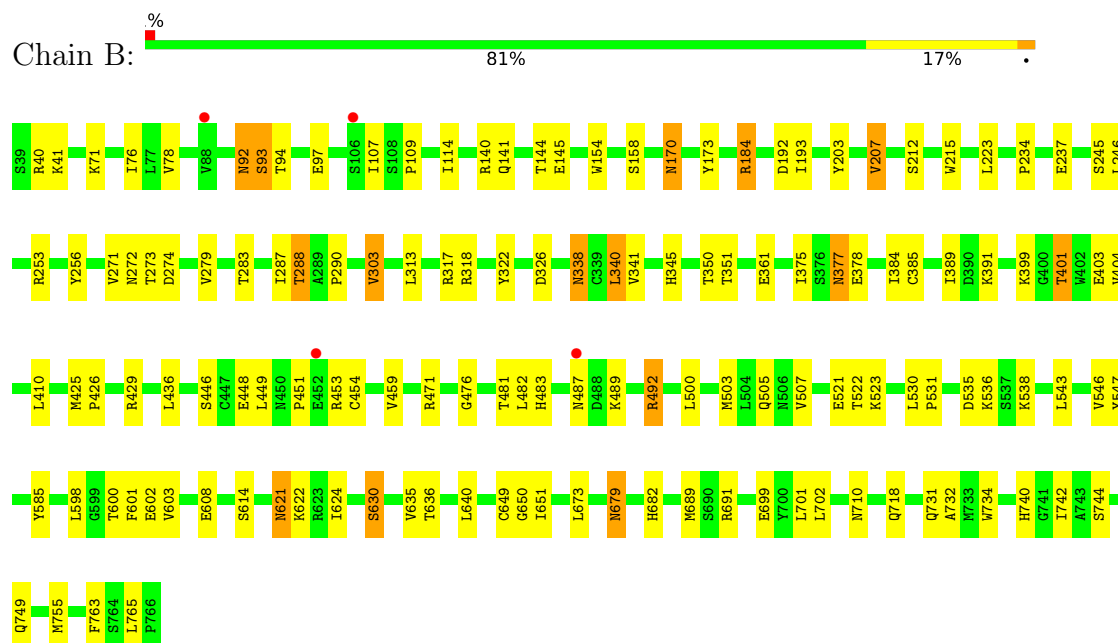
3 Residue-property plots

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: DIPEPTIDYL PEPTIDASE IV

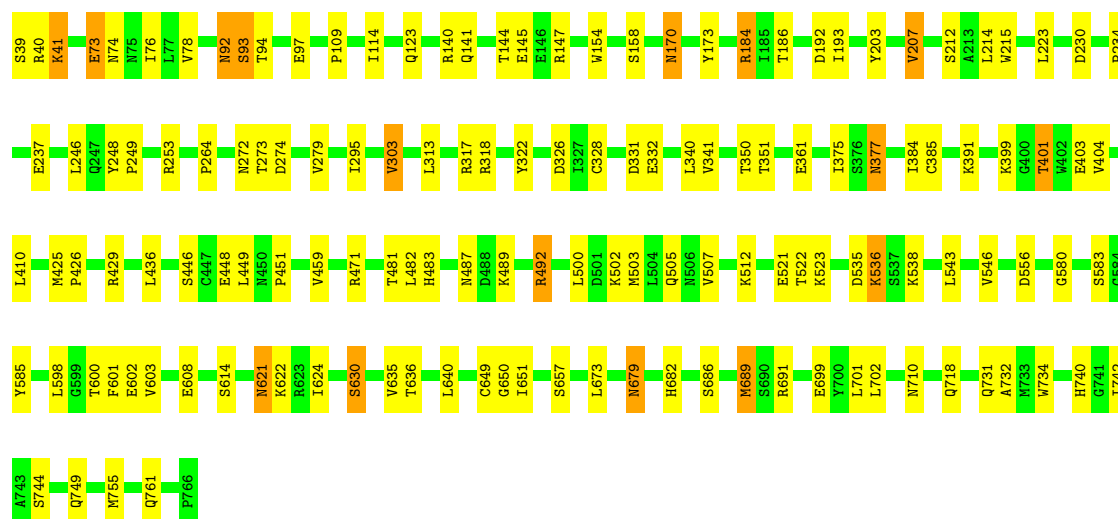


• Molecule 1: DIPEPTIDYL PEPTIDASE IV



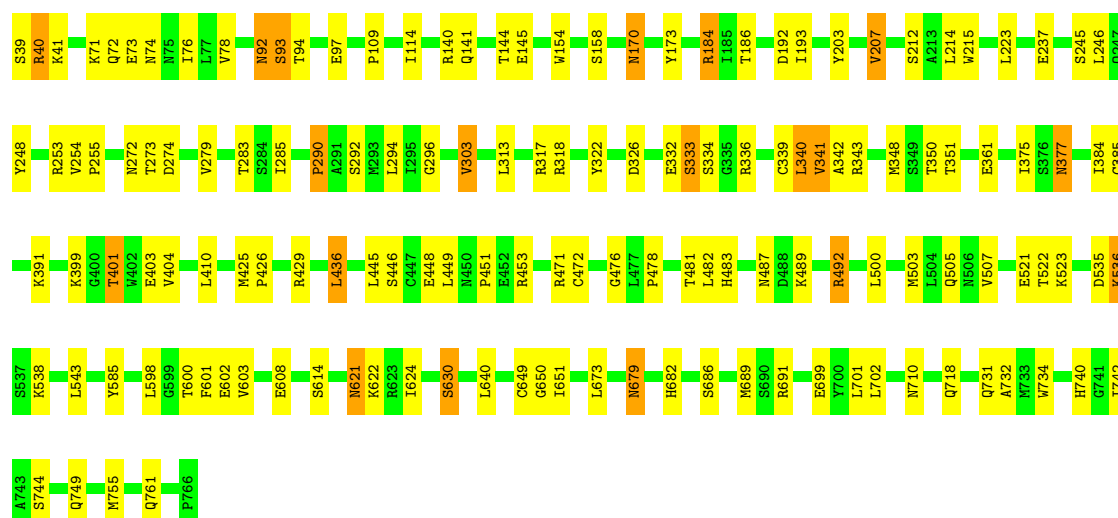
• Molecule 1: DIPEPTIDYL PEPTIDASE IV

Chain C:



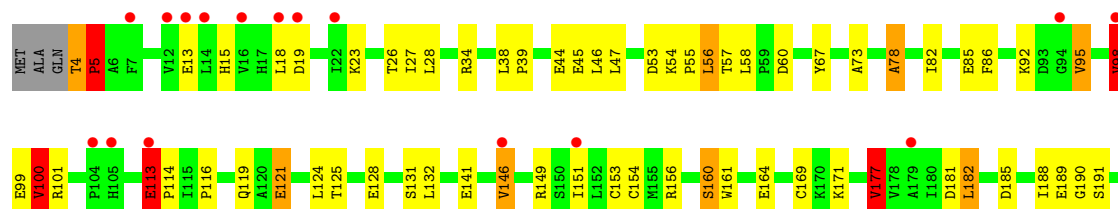
- Molecule 1: DIPEPTIDYL PEPTIDASE IV

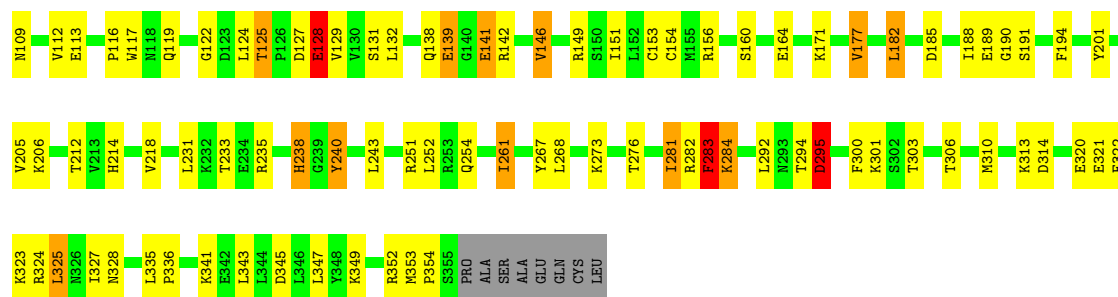
Chain D:



- Molecule 2: ADENOSINE DEAMINASE

Chain E:





• Molecule 3: TAT PROTEIN

Chain W: 44% 22% 33%



• Molecule 3: TAT PROTEIN

Chain X: 22% 33% 11% 33%



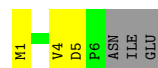
• Molecule 3: TAT PROTEIN

Chain Y: 22% 33% 11% 33%



• Molecule 3: TAT PROTEIN

Chain Z: 33% 33% 33%



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

Chain I: 100%



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

Chain R: 100%



- Molecule 5: 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose

Chain J:  100%

MAG1
MAG2

- Molecule 5: 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose

Chain K:  100%

MAG1
MAG2

- Molecule 5: 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose

Chain M:  100%

MAG1
MAG2

- Molecule 5: 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose

Chain O:  100%

MAG1
MAG2

- Molecule 5: 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose

Chain Q:  100%

MAG1
MAG2

- Molecule 5: 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose

Chain S:  50%  50%

MAG1
MAG2

- Molecule 5: 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose

Chain T:  100%

MAG1
MAG2

- Molecule 5: 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose

Chain V:  100%

MAG1
MAG2

- Molecule 5: 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose

Chain b:  50% 50%

MAG1
MAG2

- Molecule 5: 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose

Chain d:  50% 50%

MAG1
MAG2

- Molecule 6: alpha-D-mannopyranose-(1-3)-beta-D-mannopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose

Chain L:  75% 25%

MAG1
MAG2
BMA3
MAN4

- Molecule 6: alpha-D-mannopyranose-(1-3)-beta-D-mannopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose

Chain P:  100%

MAG1
MAG2
BMA3
MAN4

- Molecule 6: alpha-D-mannopyranose-(1-3)-beta-D-mannopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose

Chain U:  100%

MAG1
MAG2
BMA3
MAN4

- Molecule 6: alpha-D-mannopyranose-(1-3)-beta-D-mannopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose

Chain c:  100%

MAG1
MAG2
BMA3
MAN4

- Molecule 7: beta-L-fucopyranose-(1-6)-2-acetamido-2-deoxy-beta-D-glucopyranose

Chain N:  100%

MAG1
FUL2

- Molecule 7: beta-L-fucopyranose-(1-6)-2-acetamido-2-deoxy-beta-D-glucopyranose

Chain a:  100%

MAG1
FUL2

4 Data and refinement statistics

Property	Value	Source
Space group	C 1 2 1	Depositor
Cell constants a, b, c, α , β , γ	158.94Å 170.27Å 239.20Å 90.00° 100.93° 90.00°	Depositor
Resolution (Å)	30.00 – 3.15 30.00 – 3.15	Depositor EDS
% Data completeness (in resolution range)	89.6 (30.00-3.15) 89.5 (30.00-3.15)	Depositor EDS
R_{merge}	0.11	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.73 (at 3.18Å)	Xtriage
Refinement program	REFMAC 5.1.9999	Depositor
R, R_{free}	0.227 , 0.247 0.221 , 0.242	Depositor DCC
R_{free} test set	1925 reflections (1.99%)	wwPDB-VP
Wilson B-factor (Å ²)	71.5	Xtriage
Anisotropy	0.101	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.30 , 21.2	EDS
L-test for twinning ²	$\langle L \rangle = 0.49$, $\langle L^2 \rangle = 0.32$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o, F_c correlation	0.92	EDS
Total number of atoms	36096	wwPDB-VP
Average B, all atoms (Å ²)	67.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 3.03% 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

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: BMA, FUL, NAG, MAN, ZN

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\# Z > 5$	RMSZ	$\# Z > 5$
1	A	0.58	0/6135	0.98	9/8344 (0.1%)
1	B	0.59	0/6135	0.98	9/8344 (0.1%)
1	C	0.53	1/6135 (0.0%)	0.97	10/8344 (0.1%)
1	D	0.53	0/6135	0.97	7/8344 (0.1%)
2	E	0.64	0/2874	1.17	16/3896 (0.4%)
2	F	0.81	2/2874 (0.1%)	1.31	21/3896 (0.5%)
2	G	0.62	0/2874	1.16	16/3896 (0.4%)
2	H	0.64	0/2874	1.15	10/3896 (0.3%)
3	W	0.63	0/54	1.11	0/75
3	X	0.91	0/54	1.32	1/75 (1.3%)
3	Y	0.79	0/54	1.30	1/75 (1.3%)
3	Z	0.84	0/54	0.97	0/75
All	All	0.60	3/36252 (0.0%)	1.05	100/49260 (0.2%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
2	E	0	1
2	F	1	1
2	H	0	1
3	X	0	1
3	Y	0	1
All	All	1	5

All (3) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	F	351	TYR	N-CA	-22.59	1.03	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	F	350	ALA	C-N	13.83	1.52	1.33
1	C	123	GLN	CA-C	5.27	1.55	1.52

All (100) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	F	350	ALA	O-C-N	-25.15	81.92	122.42
2	F	351	TYR	N-CA-CB	17.88	140.90	110.50
2	F	350	ALA	CA-C-N	15.54	149.68	121.70
2	F	350	ALA	C-N-CA	15.54	149.68	121.70
2	G	5	PRO	N-CA-C	9.43	131.89	112.47
2	G	280	VAL	N-CA-C	8.10	118.19	110.42
1	A	279	VAL	N-CA-C	-7.59	106.50	113.71
1	B	279	VAL	N-CA-C	-7.52	106.56	113.71
1	D	279	VAL	N-CA-C	-7.50	106.59	113.71
2	F	280	VAL	N-CA-C	7.33	118.12	110.72
1	C	279	VAL	N-CA-C	-7.17	106.90	113.71
2	E	280	VAL	N-CA-C	6.86	117.62	110.62
2	E	57	THR	N-CA-C	6.65	119.27	109.69
2	H	240	TYR	N-CA-C	6.61	118.28	111.14
2	F	77	ASP	N-CA-C	-6.54	104.08	111.07
2	G	119	GLN	N-CA-C	-6.41	101.90	110.55
1	D	141	GLN	N-CA-C	6.33	118.69	109.07
1	B	141	GLN	N-CA-C	6.33	118.69	109.07
2	E	5	PRO	N-CA-C	6.31	125.47	112.47
1	A	141	GLN	N-CA-C	6.28	118.61	109.07
2	E	27	ILE	N-CA-C	-6.24	104.77	110.82
2	F	119	GLN	N-CA-C	-6.20	102.18	110.55
2	E	78	ALA	N-CA-C	6.15	117.99	111.28
1	C	141	GLN	N-CA-C	6.11	118.36	109.07
3	X	5	ASP	N-CA-C	6.07	123.22	109.81
2	F	95	VAL	N-CA-C	6.05	117.54	109.37
2	G	95	VAL	N-CA-C	6.00	117.46	109.37
1	A	459	VAL	N-CA-C	5.93	117.22	108.45
2	E	240	TYR	N-CA-C	5.88	117.38	110.97
1	B	630	SER	CB-CA-C	-5.87	109.25	117.23
2	F	57	THR	N-CA-C	5.85	118.38	109.95
1	C	686	SER	N-CA-C	5.79	119.66	112.59
2	G	261	ILE	N-CA-C	5.77	116.24	108.17
1	C	744	SER	N-CA-C	-5.77	102.88	110.43
2	E	95	VAL	N-CA-C	5.76	117.14	109.37
2	H	27	ILE	N-CA-C	-5.74	105.14	110.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	C	502	LYS	N-CA-C	-5.74	104.72	110.97
2	H	95	VAL	N-CA-C	5.73	117.11	109.37
2	F	261	ILE	N-CA-C	5.71	116.17	108.17
2	H	261	ILE	N-CA-C	5.69	116.14	108.17
2	E	121	GLU	N-CA-C	-5.68	102.86	110.24
2	F	294	THR	N-CA-C	-5.65	100.11	108.99
1	A	686	SER	N-CA-C	5.64	119.47	112.59
2	F	177	VAL	N-CA-CB	5.60	116.83	110.72
1	A	744	SER	N-CA-C	-5.60	103.10	110.43
2	E	100	VAL	CB-CA-C	-5.59	102.28	110.62
2	G	27	ILE	N-CA-C	-5.59	105.27	110.53
2	E	261	ILE	N-CA-C	5.58	115.98	108.17
2	G	73	ALA	N-CA-C	5.58	119.18	112.38
2	G	5	PRO	CB-CA-C	-5.57	102.37	111.56
2	F	354	PRO	N-CA-C	5.56	123.93	112.47
2	F	27	ILE	N-CA-C	-5.56	105.31	110.53
3	Y	4	VAL	N-CA-C	5.54	120.86	109.34
2	F	98	VAL	CB-CA-C	-5.52	101.85	110.69
2	E	177	VAL	N-CA-CB	5.51	116.73	110.72
2	E	98	VAL	CB-CA-C	-5.50	101.88	110.69
1	D	744	SER	N-CA-C	-5.49	103.24	110.43
1	D	630	SER	CB-CA-C	-5.48	109.77	117.23
2	E	153	CYS	N-CA-C	5.48	119.17	109.96
2	F	153	CYS	N-CA-C	5.47	119.14	109.96
2	H	129	VAL	CB-CA-C	-5.45	105.00	111.97
2	G	354	PRO	N-CA-C	5.45	123.69	112.47
2	G	297	PRO	N-CA-C	5.44	123.68	112.47
1	B	744	SER	N-CA-C	-5.42	103.33	110.43
2	E	315	MET	N-CA-C	5.41	118.95	111.71
1	A	502	LYS	N-CA-C	-5.38	105.10	110.97
2	G	315	MET	N-CA-C	5.37	119.07	112.03
1	C	459	VAL	N-CA-C	5.33	117.44	108.81
2	G	100	VAL	CB-CA-C	-5.31	102.70	110.62
2	G	177	VAL	N-CA-CB	5.30	117.04	111.00
1	A	630	SER	CB-CA-C	-5.29	110.03	117.23
1	B	459	VAL	N-CA-C	5.29	117.37	108.81
2	H	98	VAL	CB-CA-C	-5.28	102.24	110.69
1	C	630	SER	CB-CA-C	-5.25	110.08	117.23
2	E	277	GLU	N-CA-C	-5.25	102.52	110.28
2	F	100	VAL	CB-CA-C	-5.24	102.81	110.62
2	H	177	VAL	N-CA-CB	5.24	116.97	111.00
1	D	686	SER	N-CA-C	5.22	118.96	112.59

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	D	445	LEU	N-CA-C	5.22	119.64	113.28
2	H	100	VAL	CB-CA-C	-5.21	102.85	110.62
1	B	454	CYS	N-CA-C	5.21	117.14	108.02
2	F	113	GLU	N-CA-C	5.17	121.23	109.81
1	C	328	CYS	N-CA-C	5.15	117.80	109.40
1	D	40	ARG	CB-CA-C	-5.13	109.68	117.07
1	A	445	LEU	N-CA-C	5.13	119.54	113.28
2	F	5	PRO	CA-C-N	5.12	127.39	120.38
2	F	5	PRO	C-N-CA	5.12	127.39	120.38
1	B	107	ILE	N-CA-C	5.11	115.21	107.80
1	B	546	VAL	N-CA-C	5.10	115.92	108.53
2	G	98	VAL	CB-CA-C	-5.10	102.53	110.69
1	B	378	GLU	N-CA-C	5.10	117.50	111.33
1	C	73	GLU	N-CA-C	-5.08	103.99	111.81
2	G	153	CYS	N-CA-C	5.07	118.48	109.96
2	F	303	THR	N-CA-C	-5.07	102.52	110.17
2	E	290	TYR	N-CA-C	5.06	116.53	108.79
2	H	128	GLU	N-CA-C	-5.06	105.77	111.28
1	C	546	VAL	N-CA-C	5.02	115.81	108.53
1	A	277	SER	N-CA-C	5.01	119.26	112.04
2	H	153	CYS	N-CA-C	5.01	118.38	109.96
2	G	337	GLU	N-CA-C	5.01	116.43	110.97

All (1) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
2	F	351	TYR	CA

All (5) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
2	E	113	GLU	Peptide
2	F	350	ALA	Mainchain
2	H	113	GLU	Peptide
3	X	5	ASP	Peptide
3	Y	3	PRO	Peptide

5.2 Too-close contacts

In the following table, the Non-H and H(model) columns list the number of non-hydrogen atoms and hydrogen atoms in the chain respectively. The H(added) column lists the number of hydrogen

atoms added and optimized by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit, whereas Symm-Clashes lists symmetry-related clashes.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	5963	0	5677	60	1
1	B	5963	0	5677	61	0
1	C	5963	0	5676	62	0
1	D	5963	0	5677	72	0
2	E	2809	0	2767	54	1
2	F	2809	0	2767	74	0
2	G	2809	0	2767	67	0
2	H	2809	0	2767	54	0
3	W	51	0	48	3	0
3	X	51	0	48	3	0
3	Y	51	0	48	1	0
3	Z	51	0	48	1	0
4	I	38	0	34	0	0
4	R	38	0	34	0	0
5	J	28	0	25	0	0
5	K	28	0	25	0	0
5	M	28	0	25	4	0
5	O	28	0	25	0	0
5	Q	28	0	25	0	0
5	S	28	0	25	1	0
5	T	28	0	25	0	0
5	V	28	0	25	0	0
5	b	28	0	25	1	0
5	d	28	0	25	1	0
6	L	50	0	43	1	0
6	P	50	0	43	0	0
6	U	50	0	43	0	0
6	c	50	0	43	0	0
7	N	24	0	22	0	0
7	a	24	0	22	0	0
8	A	42	0	39	0	0
8	B	56	0	52	0	0
8	C	42	0	39	0	0
8	D	56	0	52	0	0
9	E	1	0	0	0	0
9	F	1	0	0	0	0
9	G	1	0	0	0	0
9	H	1	0	0	0	0
All	All	36096	0	34683	495	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 7.

All (495) 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:A:253:ARG:HH22	1:B:253:ARG:HH22	1.09	0.94
2:E:13:GLU:OE1	2:E:294:THR:HG22	1.71	0.90
1:D:340:LEU:HD13	1:D:343:ARG:HD2	1.53	0.89
5:M:1:NAG:O3	5:M:2:NAG:H82	1.74	0.88
2:F:283:PHE:HD2	2:F:288:VAL:HG11	1.40	0.84
1:B:377:ASN:C	1:B:377:ASN:HD22	1.86	0.84
1:C:377:ASN:C	1:C:377:ASN:HD22	1.85	0.82
1:D:377:ASN:C	1:D:377:ASN:HD22	1.88	0.81
1:D:340:LEU:HD12	1:D:340:LEU:H	1.45	0.80
1:A:377:ASN:C	1:A:377:ASN:HD22	1.88	0.80
2:F:109:ASN:O	2:F:122:GLY:HA2	1.82	0.79
2:G:283:PHE:HD1	2:G:288:VAL:HG11	1.50	0.75
2:F:283:PHE:CD2	2:F:288:VAL:HG11	2.21	0.74
2:G:110:SER:O	2:G:111:LYS:HB2	1.88	0.74
1:D:340:LEU:HD12	1:D:340:LEU:N	2.02	0.74
2:H:261:ILE:HD11	2:H:283:PHE:HE2	1.54	0.73
1:B:547:TYR:CZ	3:X:3:PRO:HD3	2.25	0.71
1:A:401:THR:O	1:A:401:THR:HG22	1.89	0.71
2:G:4:THR:N	2:G:5:PRO:HD2	2.06	0.70
2:G:20:GLY:HA3	2:G:296:ASP:HB3	1.75	0.69
1:D:401:THR:O	1:D:401:THR:HG22	1.92	0.69
1:C:401:THR:HG22	1:C:401:THR:O	1.92	0.68
1:B:272:ASN:C	1:B:272:ASN:HD22	2.01	0.68
1:B:401:THR:HG22	1:B:401:THR:O	1.91	0.68
2:F:240:TYR:CE2	2:F:266:SER:OG	2.45	0.68
1:D:272:ASN:HD22	1:D:272:ASN:C	2.02	0.68
2:G:141:GLU:HG3	2:G:146:VAL:O	1.94	0.68
2:F:240:TYR:HE2	2:F:266:SER:OG	1.75	0.68
1:D:500:LEU:HA	1:D:503:MET:HE3	1.77	0.67
2:H:65:PHE:HB3	2:H:117:TRP:CH2	2.29	0.67
2:F:156:ARG:HD2	2:F:185:ASP:O	1.94	0.67
1:D:340:LEU:O	1:D:342:ALA:N	2.28	0.66
2:G:283:PHE:CD1	2:G:288:VAL:HG11	2.31	0.66
1:C:734:TRP:CZ3	1:D:732:ALA:HB1	2.30	0.66
1:D:630:SER:HB3	3:Z:1:MET:SD	2.36	0.65
1:C:651:ILE:HD13	1:C:755:MET:HG2	1.79	0.65
1:A:272:ASN:C	1:A:272:ASN:HD22	2.02	0.65
1:B:500:LEU:HA	1:B:503:MET:HE3	1.78	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:271:VAL:HG23	1:A:283:THR:O	1.97	0.65
1:C:73:GLU:O	1:C:74:ASN:HB2	1.96	0.65
2:G:128:GLU:O	2:G:132:LEU:HD12	1.97	0.65
2:G:353:MET:HB2	2:G:354:PRO:HD2	1.78	0.65
2:H:156:ARG:HD2	2:H:185:ASP:O	1.96	0.65
1:A:253:ARG:HH22	1:B:253:ARG:NH2	1.91	0.65
1:C:272:ASN:C	1:C:272:ASN:HD22	2.03	0.64
3:Y:5:ASP:HB2	3:Y:6:PRO:HD2	1.79	0.64
2:G:156:ARG:HD2	2:G:185:ASP:O	1.97	0.64
1:A:500:LEU:HA	1:A:503:MET:HE3	1.78	0.64
2:F:13:GLU:OE1	2:F:294:THR:HG22	1.97	0.63
2:E:113:GLU:OE2	2:E:160:SER:HB2	1.98	0.63
2:E:113:GLU:HB2	2:E:161:TRP:HE1	1.63	0.63
2:F:280:VAL:HA	2:F:283:PHE:HD1	1.63	0.63
2:F:323:LYS:O	2:F:327:ILE:HG12	1.99	0.63
1:B:338:ASN:HD21	1:B:340:LEU:HD23	1.65	0.62
1:C:500:LEU:HA	1:C:503:MET:HE3	1.79	0.62
1:A:651:ILE:HD13	1:A:755:MET:HG2	1.80	0.62
2:G:34:ARG:HH12	2:G:74:GLY:HA3	1.63	0.62
2:G:294:THR:HG23	2:G:297:PRO:HD3	1.81	0.62
5:M:1:NAG:O3	5:M:2:NAG:C8	2.48	0.62
2:E:156:ARG:HD2	2:E:185:ASP:O	2.01	0.61
2:E:15:HIS:CD2	2:E:295:ASP:OD1	2.52	0.61
1:D:651:ILE:HD13	1:D:755:MET:HG2	1.80	0.61
2:F:39:PRO:HG3	2:F:67:TYR:HD2	1.66	0.61
1:C:710:ASN:C	1:C:710:ASN:HD22	2.09	0.61
1:C:170:ASN:N	1:C:170:ASN:HD22	2.00	0.60
2:F:109:ASN:O	2:F:122:GLY:CA	2.49	0.60
2:G:39:PRO:HG3	2:G:67:TYR:HD2	1.66	0.60
1:B:651:ILE:HD13	1:B:755:MET:HG2	1.84	0.60
1:C:640:LEU:HD11	1:C:650:GLY:HA3	1.84	0.60
2:F:130:VAL:HG11	2:F:172:TYR:CD2	2.36	0.60
2:H:261:ILE:HD11	2:H:283:PHE:CE2	2.35	0.60
2:H:34:ARG:NH2	2:H:73:ALA:O	2.35	0.60
2:H:125:THR:HG23	2:H:128:GLU:HB2	1.83	0.60
2:H:39:PRO:HG3	2:H:67:TYR:HD2	1.67	0.60
1:D:640:LEU:HD11	1:D:650:GLY:HA3	1.84	0.59
1:C:253:ARG:HH22	1:D:253:ARG:HH22	1.48	0.59
1:B:345:HIS:HE1	1:B:389:ILE:O	1.85	0.59
1:B:640:LEU:HD11	1:B:650:GLY:HA3	1.84	0.59
2:F:240:TYR:HE2	2:F:266:SER:HG	1.39	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:283:PHE:CD1	2:E:288:VAL:HG11	2.38	0.59
1:A:170:ASN:N	1:A:170:ASN:HD22	2.01	0.59
1:A:710:ASN:HD22	1:A:710:ASN:C	2.11	0.58
5:M:1:NAG:HO3	5:M:2:NAG:H82	1.68	0.58
2:E:39:PRO:HG3	2:E:67:TYR:HD2	1.69	0.58
1:A:253:ARG:NH2	1:B:253:ARG:HH22	1.92	0.58
1:A:272:ASN:HD22	1:A:273:THR:N	2.02	0.58
1:D:170:ASN:N	1:D:170:ASN:HD22	2.02	0.57
2:F:278:HIS:O	2:F:281:ILE:HG22	2.04	0.57
1:B:272:ASN:HD22	1:B:273:THR:N	2.02	0.57
1:C:234:PRO:HB2	1:D:248:TYR:CZ	2.39	0.57
2:F:75:CYS:O	2:F:76:ARG:HG2	2.04	0.57
2:G:5:PRO:HG2	2:G:8:ASP:OD1	2.05	0.57
1:B:173:TYR:CE2	1:B:184:ARG:HG3	2.39	0.57
2:F:295:ASP:HB3	2:F:300:PHE:HE2	1.70	0.57
2:H:15:HIS:CD2	2:H:295:ASP:OD1	2.57	0.57
2:H:139:GLU:HG3	2:H:142:ARG:NH2	2.19	0.57
1:A:377:ASN:C	1:A:377:ASN:ND2	2.62	0.57
2:F:322:PHE:HA	2:F:325:LEU:HD13	1.85	0.57
1:A:173:TYR:CE2	1:A:184:ARG:HG3	2.41	0.56
2:E:272:TRP:NE1	2:E:278:HIS:HA	2.19	0.56
1:C:272:ASN:HD22	1:C:273:THR:N	2.02	0.56
1:D:340:LEU:C	1:D:342:ALA:N	2.63	0.56
1:A:640:LEU:HD11	1:A:650:GLY:HA3	1.86	0.56
1:D:710:ASN:C	1:D:710:ASN:HD22	2.13	0.56
2:E:323:LYS:O	2:E:327:ILE:HG12	2.06	0.56
2:F:114:PRO:HG3	2:F:158:GLN:NE2	2.21	0.56
1:B:710:ASN:C	1:B:710:ASN:HD22	2.13	0.56
2:F:191:SER:HA	2:F:194:PHE:CD2	2.41	0.56
2:G:191:SER:HA	2:G:194:PHE:CD2	2.40	0.56
1:B:170:ASN:N	1:B:170:ASN:HD22	2.04	0.55
1:D:272:ASN:HD22	1:D:273:THR:N	2.03	0.55
1:C:679:ASN:HD21	1:C:682:HIS:CD2	2.24	0.55
1:C:377:ASN:C	1:C:377:ASN:ND2	2.59	0.55
2:H:65:PHE:HB3	2:H:117:TRP:HH2	1.72	0.55
1:D:602:GLU:N	1:D:602:GLU:OE2	2.40	0.55
1:A:248:TYR:OH	1:B:256:TYR:O	2.18	0.55
1:B:630:SER:HB3	3:X:1:MET:SD	2.47	0.55
1:A:732:ALA:HB1	1:B:734:TRP:CZ3	2.42	0.54
1:B:602:GLU:N	1:B:602:GLU:OE2	2.39	0.54
1:C:173:TYR:CE2	1:C:184:ARG:HG3	2.42	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:295:ASP:HB3	2:F:300:PHE:CE2	2.42	0.54
1:D:377:ASN:C	1:D:377:ASN:ND2	2.61	0.54
2:E:4:THR:N	2:E:5:PRO:HD2	2.23	0.54
1:D:173:TYR:CE2	1:D:184:ARG:HG3	2.43	0.54
2:G:4:THR:N	2:G:5:PRO:CD	2.71	0.54
2:H:191:SER:HA	2:H:194:PHE:CD2	2.43	0.54
2:E:191:SER:HA	2:E:194:PHE:CD2	2.43	0.53
2:H:54:LYS:HB2	2:H:56:LEU:HD23	1.90	0.53
1:B:679:ASN:HD21	1:B:682:HIS:CD2	2.27	0.53
1:B:487:ASN:CB	1:B:489:LYS:HB2	2.39	0.53
1:A:401:THR:O	1:A:401:THR:CG2	2.58	0.52
2:E:348:TYR:CD1	2:E:353:MET:HE2	2.44	0.52
2:G:73:ALA:O	2:G:107:LEU:O	2.27	0.52
2:G:113:GLU:HB2	2:G:114:PRO:CD	2.39	0.52
1:B:377:ASN:C	1:B:377:ASN:ND2	2.59	0.52
1:D:487:ASN:CB	1:D:489:LYS:HB2	2.40	0.52
1:A:322:TYR:OH	1:A:346:ILE:HD13	2.10	0.52
1:C:602:GLU:OE2	1:C:602:GLU:N	2.42	0.52
2:E:188:ILE:O	2:E:191:SER:OG	2.28	0.52
2:G:114:PRO:HG3	2:G:158:GLN:NE2	2.25	0.52
1:A:203:TYR:HA	1:A:207:VAL:HG13	1.92	0.51
1:D:446:SER:HA	1:D:449:LEU:HG	1.92	0.51
1:B:341:VAL:HG12	1:B:341:VAL:O	2.11	0.51
1:C:487:ASN:CB	1:C:489:LYS:HB2	2.40	0.51
2:F:116:PRO:HB2	2:F:117:TRP:CD1	2.45	0.51
2:F:188:ILE:O	2:F:191:SER:OG	2.28	0.51
2:G:26:THR:HG21	2:G:85:GLU:OE2	2.10	0.51
1:A:629:TRP:CG	3:W:4:VAL:CG1	2.94	0.51
2:E:281:ILE:HD13	2:E:315:MET:HB2	1.92	0.51
1:D:340:LEU:O	1:D:341:VAL:C	2.53	0.51
2:G:188:ILE:O	2:G:191:SER:OG	2.29	0.51
1:A:602:GLU:N	1:A:602:GLU:OE2	2.44	0.51
1:C:446:SER:HA	1:C:449:LEU:HG	1.93	0.51
1:D:679:ASN:HD21	1:D:682:HIS:CD2	2.28	0.51
2:G:280:VAL:O	2:G:283:PHE:N	2.44	0.51
1:C:630:SER:OG	1:C:740:HIS:NE2	2.35	0.50
1:A:614:SER:HB2	1:A:621:ASN:HD22	1.77	0.50
1:A:679:ASN:HD21	1:A:682:HIS:CD2	2.29	0.50
2:H:321:GLU:OE1	2:H:324:ARG:NH2	2.44	0.50
5:b:2:NAG:H5	5:b:2:NAG:H82	1.93	0.50
1:B:271:VAL:HG23	1:B:283:THR:O	2.10	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:203:TYR:HA	1:C:207:VAL:HG13	1.92	0.50
2:H:116:PRO:O	2:H:119:GLN:HG2	2.10	0.50
2:H:281:ILE:O	2:H:284:LYS:HB3	2.11	0.50
1:A:194:ILE:HD12	6:L:1:NAG:H82	1.93	0.50
1:A:487:ASN:CB	1:A:489:LYS:HB2	2.42	0.50
1:B:203:TYR:HA	1:B:207:VAL:HG13	1.93	0.50
1:D:203:TYR:HA	1:D:207:VAL:HG13	1.94	0.50
2:F:4:THR:HG22	2:F:5:PRO:HD2	1.93	0.50
2:G:323:LYS:O	2:G:327:ILE:HG12	2.12	0.50
2:F:26:THR:HG21	2:F:85:GLU:OE2	2.11	0.50
1:C:580:GLY:O	1:C:583:SER:OG	2.28	0.50
2:F:322:PHE:HA	2:F:325:LEU:CD1	2.41	0.50
1:D:630:SER:OG	1:D:740:HIS:NE2	2.40	0.49
2:F:240:TYR:C	2:F:242:THR:H	2.19	0.49
2:H:188:ILE:O	2:H:191:SER:OG	2.30	0.49
2:F:337:GLU:O	2:F:340:LYS:N	2.45	0.49
2:G:99:GLU:OE2	2:G:235:ARG:NH1	2.45	0.49
2:G:101:ARG:HA	2:G:151:ILE:O	2.13	0.49
2:G:116:PRO:HB2	2:G:117:TRP:CD1	2.48	0.49
1:A:446:SER:HA	1:A:449:LEU:HG	1.94	0.49
2:G:95:VAL:HG11	2:G:98:VAL:HG22	1.94	0.49
2:G:100:VAL:O	2:G:151:ILE:N	2.43	0.49
2:H:26:THR:HG21	2:H:85:GLU:OE2	2.13	0.49
1:B:614:SER:HB2	1:B:621:ASN:HD22	1.77	0.49
2:H:95:VAL:HG11	2:H:98:VAL:HG22	1.95	0.49
1:B:487:ASN:HB3	1:B:489:LYS:HB2	1.95	0.49
2:E:26:THR:HG21	2:E:85:GLU:OE2	2.12	0.49
2:F:101:ARG:HA	2:F:151:ILE:O	2.13	0.49
2:H:99:GLU:OE2	2:H:235:ARG:NH1	2.46	0.49
1:A:629:TRP:CG	3:W:4:VAL:HG11	2.48	0.49
1:C:448:GLU:HA	1:C:451:PRO:HG3	1.94	0.49
1:C:535:ASP:HB3	1:C:538:LYS:HD2	1.94	0.49
1:D:487:ASN:HB3	1:D:489:LYS:HB2	1.95	0.49
1:B:718:GLN:HA	1:B:718:GLN:NE2	2.28	0.48
2:F:95:VAL:HG11	2:F:98:VAL:HG22	1.94	0.48
2:H:233:THR:OG1	2:H:235:ARG:O	2.30	0.48
1:C:147:ARG:NH2	5:S:2:NAG:H83	2.27	0.48
2:E:4:THR:N	2:E:5:PRO:CD	2.77	0.48
1:D:535:ASP:HB3	1:D:538:LYS:HD2	1.95	0.48
2:E:95:VAL:HG11	2:E:98:VAL:HG22	1.95	0.48
1:C:614:SER:HB2	1:C:621:ASN:HD22	1.77	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:243:LEU:HD22	2:H:282:ARG:NH2	2.29	0.48
1:D:290:PRO:O	1:D:294:LEU:HG	2.13	0.48
2:F:75:CYS:O	2:F:76:ARG:CG	2.62	0.48
2:F:156:ARG:HD2	2:F:185:ASP:C	2.38	0.48
2:G:240:TYR:C	2:G:242:THR:H	2.20	0.48
1:B:446:SER:HA	1:B:449:LEU:HG	1.95	0.48
2:H:218:VAL:O	2:H:218:VAL:HG13	2.14	0.48
1:B:649:CYS:HB3	1:B:699:GLU:HB2	1.95	0.47
2:E:218:VAL:O	2:E:218:VAL:HG13	2.13	0.47
2:F:99:GLU:OE2	2:F:235:ARG:NH1	2.45	0.47
1:C:403:GLU:OE1	1:C:585:TYR:HA	2.14	0.47
1:B:535:ASP:HB3	1:B:538:LYS:HD2	1.96	0.47
1:C:649:CYS:HB3	1:C:699:GLU:HB2	1.97	0.47
2:F:28:LEU:HD13	2:F:46:LEU:HD22	1.96	0.47
2:E:99:GLU:OE2	2:E:235:ARG:NH1	2.46	0.47
2:G:110:SER:O	2:G:111:LYS:CB	2.60	0.47
1:A:272:ASN:C	1:A:272:ASN:ND2	2.72	0.47
1:A:487:ASN:HB3	1:A:489:LYS:HB2	1.97	0.47
1:A:649:CYS:HB3	1:A:699:GLU:HB2	1.96	0.47
1:C:487:ASN:HB3	1:C:489:LYS:HB2	1.96	0.47
1:C:512:LYS:NZ	1:C:556:ASP:O	2.47	0.47
2:F:15:HIS:CE1	2:F:214:HIS:CE1	3.03	0.47
2:F:114:PRO:O	2:F:115:ILE:C	2.57	0.47
2:F:218:VAL:O	2:F:218:VAL:HG13	2.15	0.47
2:F:267:TYR:CD1	2:F:268:LEU:HD12	2.50	0.47
2:G:76:ARG:O	2:G:77:ASP:C	2.57	0.47
2:H:55:PRO:HG3	2:H:267:TYR:CZ	2.50	0.47
2:H:100:VAL:O	2:H:151:ILE:N	2.43	0.47
2:H:156:ARG:HD2	2:H:185:ASP:C	2.39	0.47
1:A:341:VAL:HA	1:A:344:GLN:HG3	1.97	0.47
1:B:718:GLN:HA	1:B:718:GLN:HE21	1.80	0.47
1:B:718:GLN:CA	1:B:718:GLN:HE21	2.27	0.47
1:D:109:PRO:HG2	1:D:158:SER:O	2.15	0.47
2:E:113:GLU:HB2	2:E:114:PRO:HD2	1.97	0.47
1:A:734:TRP:CZ3	1:B:732:ALA:HB1	2.49	0.46
1:C:425:MET:HA	1:C:426:PRO:HD3	1.79	0.46
1:D:649:CYS:HB3	1:D:699:GLU:HB2	1.96	0.46
2:G:325:LEU:C	2:G:325:LEU:HD22	2.40	0.46
2:H:101:ARG:HA	2:H:151:ILE:O	2.14	0.46
1:A:535:ASP:HB3	1:A:538:LYS:HD2	1.97	0.46
2:G:20:GLY:CA	2:G:296:ASP:HB3	2.45	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:28:LEU:HD13	2:G:46:LEU:HD22	1.97	0.46
2:G:156:ARG:HD2	2:G:185:ASP:C	2.40	0.46
2:E:34:ARG:NH2	2:E:73:ALA:O	2.48	0.46
2:E:321:GLU:OE1	2:E:324:ARG:NH2	2.48	0.46
2:F:55:PRO:HG3	2:F:267:TYR:CZ	2.50	0.46
2:H:28:LEU:HD13	2:H:46:LEU:HD22	1.97	0.46
1:C:481:THR:OG1	1:C:483:HIS:HE1	1.98	0.46
2:E:55:PRO:HG3	2:E:267:TYR:CZ	2.50	0.46
1:C:614:SER:HB2	1:C:621:ASN:ND2	2.31	0.46
1:D:492:ARG:HH11	1:D:492:ARG:HB3	1.81	0.46
1:D:614:SER:HB2	1:D:621:ASN:HD22	1.80	0.46
2:E:113:GLU:HG3	2:E:161:TRP:CD1	2.50	0.46
1:D:448:GLU:HA	1:D:451:PRO:HG3	1.96	0.46
1:C:92:ASN:OD1	1:C:92:ASN:N	2.48	0.46
2:E:233:THR:OG1	2:E:235:ARG:O	2.32	0.46
3:X:5:ASP:CG	3:X:5:ASP:O	2.58	0.46
1:A:492:ARG:HH11	1:A:492:ARG:HB3	1.81	0.46
2:H:86:PHE:CZ	2:H:100:VAL:HG13	2.51	0.46
2:H:99:GLU:HA	2:H:149:ARG:O	2.15	0.46
1:A:109:PRO:HG2	1:A:158:SER:O	2.16	0.46
1:A:215:TRP:CD2	1:A:303:VAL:HG21	2.51	0.46
1:A:192:ASP:O	1:A:193:ILE:HD13	2.16	0.45
1:A:448:GLU:HA	1:A:451:PRO:HG3	1.97	0.45
1:A:614:SER:HB2	1:A:621:ASN:ND2	2.31	0.45
1:D:481:THR:OG1	1:D:483:HIS:HE1	1.99	0.45
2:E:322:PHE:HA	2:E:325:LEU:HD13	1.98	0.45
1:C:425:MET:HE2	1:C:425:MET:HB3	1.91	0.45
2:G:291:SER:HA	2:G:325:LEU:HD23	1.98	0.45
2:G:322:PHE:HA	2:G:325:LEU:CD1	2.47	0.45
2:H:267:TYR:CD1	2:H:268:LEU:HD12	2.51	0.45
1:A:630:SER:OG	1:A:740:HIS:NE2	2.35	0.45
1:B:403:GLU:OE1	1:B:585:TYR:HA	2.16	0.45
1:C:331:ASP:O	1:C:332:GLU:C	2.58	0.45
1:C:401:THR:O	1:C:401:THR:CG2	2.60	0.45
2:E:28:LEU:HD13	2:E:46:LEU:HD22	1.98	0.45
2:F:15:HIS:O	2:F:294:THR:O	2.34	0.45
1:B:742:ILE:O	1:B:742:ILE:HG22	2.16	0.45
2:F:17:HIS:HD2	2:F:295:ASP:O	1.99	0.45
2:H:39:PRO:HG3	2:H:67:TYR:CD2	2.50	0.45
1:B:287:ILE:C	1:B:288:THR:O	2.55	0.45
1:C:657:SER:OG	1:C:689:MET:HE1	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:145:GLU:OE2	1:D:145:GLU:N	2.50	0.45
1:B:492:ARG:HH11	1:B:492:ARG:HB3	1.81	0.45
1:B:614:SER:HB2	1:B:621:ASN:ND2	2.32	0.45
1:D:336:ARG:NH1	2:H:128:GLU:HG2	2.32	0.45
2:E:267:TYR:CD1	2:E:268:LEU:HD12	2.52	0.45
1:C:332:GLU:OE1	1:C:332:GLU:HA	2.17	0.45
2:G:233:THR:OG1	2:G:235:ARG:O	2.30	0.45
1:A:436:LEU:HD12	1:A:436:LEU:HA	1.90	0.45
1:B:215:TRP:CD2	1:B:303:VAL:HG21	2.52	0.45
2:E:101:ARG:HA	2:E:151:ILE:O	2.17	0.45
2:F:87:VAL:HG11	2:F:140:GLY:C	2.42	0.45
2:G:218:VAL:O	2:G:218:VAL:HG13	2.16	0.45
2:G:280:VAL:HA	2:G:283:PHE:CD2	2.52	0.45
1:C:154:TRP:CE2	1:C:212:SER:HB2	2.51	0.45
1:D:154:TRP:CE2	1:D:212:SER:HB2	2.52	0.45
2:E:322:PHE:HA	2:E:325:LEU:CD1	2.47	0.45
2:G:267:TYR:CD1	2:G:268:LEU:HD12	2.51	0.45
1:B:630:SER:OG	1:B:740:HIS:NE2	2.39	0.44
1:C:192:ASP:O	1:C:193:ILE:HD13	2.17	0.44
2:F:272:TRP:NE1	2:F:278:HIS:HA	2.32	0.44
1:A:145:GLU:OE2	1:A:145:GLU:N	2.50	0.44
1:A:403:GLU:OE1	1:A:585:TYR:HA	2.17	0.44
2:E:141:GLU:HG3	2:E:146:VAL:O	2.17	0.44
2:F:233:THR:OG1	2:F:235:ARG:O	2.32	0.44
2:H:294:THR:O	2:H:295:ASP:HB2	2.16	0.44
1:A:630:SER:HB3	3:W:1:MET:SD	2.57	0.44
1:D:73:GLU:O	1:D:74:ASN:HB2	2.18	0.44
1:D:403:GLU:OE1	1:D:585:TYR:HA	2.16	0.44
2:F:353:MET:HB2	2:F:354:PRO:HD2	1.99	0.44
2:G:15:HIS:CE1	2:G:214:HIS:CE1	3.06	0.44
2:G:23:LYS:HE2	2:G:23:LYS:HB3	1.80	0.44
1:B:154:TRP:CE2	1:B:212:SER:HB2	2.53	0.44
2:E:86:PHE:CZ	2:E:100:VAL:HG13	2.52	0.44
2:F:267:TYR:HD1	2:F:268:LEU:HD12	1.83	0.44
2:G:99:GLU:HA	2:G:149:ARG:O	2.17	0.44
1:A:600:THR:OG1	1:A:601:PHE:N	2.50	0.44
1:B:145:GLU:N	1:B:145:GLU:OE2	2.50	0.44
1:D:215:TRP:CD2	1:D:303:VAL:HG21	2.52	0.44
1:D:317:ARG:HD2	1:D:322:TYR:HB3	2.00	0.44
1:D:333:SER:OG	1:D:334:SER:N	2.51	0.44
1:D:340:LEU:HD13	1:D:343:ARG:CD	2.36	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:99:GLU:HA	2:E:149:ARG:O	2.18	0.44
2:F:281:ILE:HD12	2:F:284:LYS:HD2	1.98	0.44
2:F:295:ASP:CB	2:F:300:PHE:HE2	2.31	0.44
1:A:317:ARG:HD2	1:A:322:TYR:HB3	2.00	0.44
1:B:600:THR:OG1	1:B:601:PHE:N	2.51	0.44
2:G:154:CYS:HB2	2:G:182:LEU:HD23	2.00	0.44
2:H:23:LYS:HE2	2:H:23:LYS:HB3	1.81	0.44
1:B:481:THR:OG1	1:B:483:HIS:HE1	2.00	0.44
2:E:156:ARG:HD2	2:E:185:ASP:C	2.42	0.44
2:F:86:PHE:CZ	2:F:100:VAL:HG13	2.53	0.44
2:H:15:HIS:CE1	2:H:214:HIS:CE1	3.06	0.44
2:H:322:PHE:HA	2:H:325:LEU:HD13	2.00	0.44
1:A:93:SER:O	1:A:94:THR:C	2.61	0.43
1:A:481:THR:OG1	1:A:483:HIS:HE1	2.00	0.43
1:B:448:GLU:HA	1:B:451:PRO:HG3	1.98	0.43
1:D:192:ASP:O	1:D:193:ILE:HD13	2.18	0.43
1:D:340:LEU:O	1:D:343:ARG:N	2.35	0.43
1:D:600:THR:OG1	1:D:601:PHE:N	2.51	0.43
2:F:181:ASP:CG	2:F:182:LEU:H	2.26	0.43
2:G:76:ARG:O	2:G:79:ILE:N	2.50	0.43
1:B:92:ASN:OD1	1:B:92:ASN:N	2.51	0.43
1:B:317:ARG:HD2	1:B:322:TYR:HB3	2.00	0.43
2:E:240:TYR:C	2:E:242:THR:H	2.26	0.43
1:C:761:GLN:HE22	1:D:761:GLN:NE2	2.16	0.43
2:E:15:HIS:CE1	2:E:214:HIS:CE1	3.06	0.43
2:H:13:GLU:HB3	2:H:98:VAL:HG13	2.00	0.43
1:C:215:TRP:CD2	1:C:303:VAL:HG21	2.53	0.43
1:C:718:GLN:HA	1:C:718:GLN:NE2	2.33	0.43
1:D:92:ASN:OD1	1:D:92:ASN:N	2.51	0.43
1:D:384:ILE:HG13	1:D:404:VAL:HG21	1.99	0.43
1:D:614:SER:HB2	1:D:621:ASN:ND2	2.33	0.43
1:D:742:ILE:O	1:D:742:ILE:HG22	2.18	0.43
2:G:55:PRO:HG3	2:G:267:TYR:CZ	2.53	0.43
1:A:718:GLN:NE2	1:A:718:GLN:HA	2.33	0.43
2:E:330:ALA:HB1	2:E:343:LEU:HD13	2.00	0.43
1:C:492:ARG:HB3	1:C:492:ARG:HH11	1.83	0.43
1:D:272:ASN:C	1:D:272:ASN:ND2	2.72	0.43
2:F:191:SER:HA	2:F:194:PHE:CE2	2.54	0.43
2:G:294:THR:HG23	2:G:297:PRO:CD	2.48	0.43
2:H:323:LYS:O	2:H:327:ILE:HG12	2.19	0.43
1:C:317:ARG:HD2	1:C:322:TYR:HB3	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:742:ILE:HG22	1:C:742:ILE:O	2.18	0.43
2:H:238:HIS:HB3	2:H:240:TYR:CE2	2.53	0.43
1:B:109:PRO:HG2	1:B:158:SER:O	2.18	0.43
1:C:732:ALA:HB1	1:D:734:TRP:CZ3	2.54	0.43
1:D:184:ARG:HD3	1:D:186:THR:O	2.19	0.43
2:E:113:GLU:HB2	2:E:161:TRP:NE1	2.33	0.43
2:H:300:PHE:O	2:H:301:LYS:C	2.62	0.43
1:D:336:ARG:CZ	2:H:128:GLU:HG2	2.49	0.43
1:D:340:LEU:C	1:D:342:ALA:H	2.25	0.43
2:E:13:GLU:HB3	2:E:98:VAL:HG13	2.01	0.43
2:F:109:ASN:HB3	2:F:119:GLN:CD	2.44	0.43
2:G:86:PHE:CZ	2:G:100:VAL:HG13	2.54	0.43
2:G:113:GLU:CB	2:G:114:PRO:CD	2.96	0.43
2:H:86:PHE:O	2:H:89:MET:HG2	2.19	0.43
1:B:635:VAL:O	1:B:636:THR:C	2.62	0.43
1:B:763:PHE:HB3	1:B:765:LEU:HD13	2.00	0.43
2:E:181:ASP:CG	2:E:182:LEU:H	2.26	0.43
2:F:13:GLU:HB3	2:F:98:VAL:HG13	2.01	0.43
2:F:353:MET:HE3	2:F:354:PRO:HB2	2.01	0.43
1:C:536:LYS:HE2	1:C:536:LYS:HB3	1.89	0.42
1:D:401:THR:O	1:D:401:THR:CG2	2.61	0.42
2:F:169:CYS:HA	2:F:177:VAL:HG21	2.01	0.42
1:B:272:ASN:ND2	1:B:274:ASP:H	2.17	0.42
2:G:17:HIS:CD2	2:G:296:ASP:OD1	2.72	0.42
2:G:34:ARG:NH1	2:G:74:GLY:HA3	2.30	0.42
2:G:191:SER:HA	2:G:194:PHE:CE2	2.54	0.42
2:G:201:TYR:O	2:G:205:VAL:HG23	2.19	0.42
1:A:154:TRP:CE2	1:A:212:SER:HB2	2.55	0.42
1:B:93:SER:O	1:B:94:THR:C	2.61	0.42
1:D:341:VAL:HG21	2:H:138:GLN:HB2	2.02	0.42
2:F:240:TYR:O	2:F:242:THR:N	2.50	0.42
1:B:384:ILE:HG13	1:B:404:VAL:HG21	2.01	0.42
1:B:401:THR:O	1:B:401:THR:CG2	2.60	0.42
1:A:272:ASN:ND2	1:A:274:ASP:H	2.18	0.42
1:D:294:LEU:C	1:D:296:GLY:H	2.27	0.42
2:G:13:GLU:OE1	2:G:294:THR:HB	2.19	0.42
1:A:536:LYS:HE2	1:A:536:LYS:HB3	1.88	0.42
1:A:718:GLN:HE21	1:A:718:GLN:CA	2.32	0.42
1:D:436:LEU:HD12	1:D:436:LEU:HA	1.91	0.42
2:H:201:TYR:O	2:H:205:VAL:HG23	2.20	0.42
2:E:325:LEU:C	2:E:325:LEU:HD22	2.45	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:99:GLU:HA	2:F:149:ARG:O	2.19	0.42
2:F:283:PHE:HB3	2:F:288:VAL:CG1	2.48	0.42
1:C:93:SER:O	1:C:94:THR:C	2.62	0.42
1:C:600:THR:OG1	1:C:601:PHE:N	2.52	0.42
2:E:283:PHE:HB3	2:E:288:VAL:CG1	2.49	0.42
2:H:141:GLU:HA	2:H:146:VAL:O	2.19	0.42
1:B:453:ARG:HG3	1:B:476:GLY:HA3	2.01	0.42
2:F:39:PRO:HG3	2:F:67:TYR:CD2	2.49	0.42
2:F:100:VAL:O	2:F:151:ILE:N	2.45	0.42
2:G:267:TYR:HD1	2:G:268:LEU:HD12	1.85	0.42
2:H:109:ASN:OD1	2:H:122:GLY:HA2	2.20	0.42
1:B:530:LEU:HA	1:B:531:PRO:HD3	1.96	0.41
1:C:230:ASP:OD1	1:C:264:PRO:HB3	2.20	0.41
1:C:272:ASN:ND2	1:C:274:ASP:H	2.17	0.41
2:E:116:PRO:O	2:E:119:GLN:HG2	2.19	0.41
2:F:86:PHE:O	2:F:89:MET:HG2	2.20	0.41
2:G:273:LYS:HA	2:G:274:PRO:HD3	1.95	0.41
2:H:154:CYS:HB2	2:H:182:LEU:HD23	2.00	0.41
1:A:425:MET:HA	1:A:426:PRO:HD3	1.81	0.41
1:C:109:PRO:HG2	1:C:158:SER:O	2.20	0.41
1:C:145:GLU:OE2	1:C:145:GLU:N	2.53	0.41
2:E:201:TYR:O	2:E:205:VAL:HG23	2.20	0.41
2:H:324:ARG:HH11	2:H:328:ASN:HD21	1.68	0.41
1:C:718:GLN:CA	1:C:718:GLN:HE21	2.32	0.41
2:E:154:CYS:HB2	2:E:182:LEU:HD23	2.02	0.41
2:F:325:LEU:HD22	2:F:326:ASN:N	2.35	0.41
1:A:626:ILE:O	1:A:650:GLY:HA2	2.21	0.41
2:E:267:TYR:HD1	2:E:268:LEU:HD12	1.86	0.41
2:F:23:LYS:HB3	2:F:23:LYS:HE2	1.81	0.41
2:F:26:THR:HG21	2:F:85:GLU:CD	2.45	0.41
2:G:16:VAL:HG23	2:G:295:ASP:O	2.20	0.41
2:G:169:CYS:HA	2:G:177:VAL:HG21	2.02	0.41
2:H:294:THR:O	2:H:295:ASP:CB	2.68	0.41
1:D:272:ASN:ND2	1:D:274:ASP:H	2.19	0.41
1:D:453:ARG:HG3	1:D:476:GLY:HA3	2.03	0.41
2:E:113:GLU:CB	2:E:114:PRO:CD	2.99	0.41
2:G:13:GLU:HB3	2:G:98:VAL:HG13	2.02	0.41
2:G:39:PRO:HG3	2:G:67:TYR:CD2	2.50	0.41
1:D:348:MET:HE3	5:d:1:NAG:H81	2.03	0.41
2:E:78:ALA:O	2:E:82:ILE:HG23	2.21	0.41
2:F:150:SER:N	2:F:176:THR:O	2.29	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:4:THR:N	2:H:5:PRO:HD2	2.35	0.41
2:H:4:THR:O	2:H:5:PRO:C	2.63	0.41
1:C:248:TYR:HA	1:C:249:PRO:HD3	1.97	0.41
1:D:93:SER:O	1:D:94:THR:C	2.63	0.41
2:E:313:LYS:HD2	2:E:313:LYS:N	2.36	0.41
2:F:113:GLU:CB	2:F:114:PRO:HD3	2.51	0.41
2:G:86:PHE:O	2:G:89:MET:HG2	2.20	0.41
1:C:41:LYS:HB2	1:C:41:LYS:HE2	1.91	0.41
2:E:23:LYS:HE2	2:E:23:LYS:HB3	1.83	0.41
2:H:310:MET:O	2:H:314:ASP:HB2	2.21	0.41
1:A:248:TYR:CZ	1:B:234:PRO:HB2	2.55	0.41
1:A:453:ARG:HG3	1:A:476:GLY:HA3	2.03	0.41
1:B:192:ASP:O	1:B:193:ILE:HD13	2.20	0.41
1:D:254:VAL:HA	1:D:255:PRO:HD3	1.97	0.41
1:D:472:CYS:O	1:D:478:PRO:HA	2.21	0.41
2:E:169:CYS:HA	2:E:177:VAL:HG21	2.02	0.41
2:F:154:CYS:HB2	2:F:182:LEU:HD23	2.02	0.41
2:F:201:TYR:O	2:F:205:VAL:HG23	2.21	0.41
2:F:273:LYS:HA	2:F:274:PRO:HD3	1.92	0.41
2:G:109:ASN:O	2:G:122:GLY:HA2	2.21	0.41
2:G:181:ASP:CG	2:G:182:LEU:H	2.29	0.41
2:H:267:TYR:HD1	2:H:268:LEU:HD12	1.85	0.41
5:M:1:NAG:O3	5:M:2:NAG:C7	2.69	0.41
1:A:384:ILE:HG13	1:A:404:VAL:HG21	2.02	0.41
2:F:20:GLY:O	2:F:298:LEU:HB3	2.21	0.41
2:F:114:PRO:HD2	2:F:161:TRP:HZ2	1.86	0.41
2:F:280:VAL:HA	2:F:283:PHE:CD1	2.51	0.41
2:G:26:THR:HG21	2:G:85:GLU:CD	2.45	0.41
1:A:742:ILE:HG22	1:A:742:ILE:O	2.21	0.40
1:D:536:LYS:HB3	1:D:536:LYS:HE2	1.88	0.40
2:E:100:VAL:O	2:E:151:ILE:N	2.47	0.40
2:G:278:HIS:ND1	2:G:279:ALA:N	2.70	0.40
1:C:184:ARG:HD3	1:C:186:THR:O	2.22	0.40
2:F:64:LYS:HA	2:F:67:TYR:HD1	1.87	0.40
1:C:761:GLN:HE22	1:D:761:GLN:HE22	1.69	0.40
2:G:79:ILE:N	2:G:79:ILE:HD13	2.37	0.40
1:D:425:MET:HA	1:D:426:PRO:HD3	1.80	0.40
2:E:26:THR:HG21	2:E:85:GLU:OE1	2.21	0.40
2:E:113:GLU:CB	2:E:161:TRP:HE1	2.32	0.40
2:H:273:LYS:HE2	2:H:273:LYS:HB3	1.94	0.40
1:B:425:MET:HA	1:B:426:PRO:HD3	1.81	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:384:ILE:HG13	1:C:404:VAL:HG21	2.02	0.40
1:C:635:VAL:O	1:C:636:THR:C	2.64	0.40
1:D:718:GLN:NE2	1:D:718:GLN:HA	2.37	0.40
2:F:26:THR:HG21	2:F:85:GLU:OE1	2.21	0.40
2:F:69:MET:N	2:F:70:PRO:CD	2.85	0.40
2:G:283:PHE:HB3	2:G:288:VAL:CG1	2.50	0.40

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

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:423:LYS:NZ	2:E:121:GLU:OE2[4_546]	1.77	0.43

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	A	726/728 (100%)	669 (92%)	55 (8%)	2 (0%)	36	64
1	B	726/728 (100%)	672 (93%)	52 (7%)	2 (0%)	36	64
1	C	726/728 (100%)	670 (92%)	55 (8%)	1 (0%)	48	76
1	D	726/728 (100%)	667 (92%)	55 (8%)	4 (1%)	21	52
2	E	350/363 (96%)	309 (88%)	34 (10%)	7 (2%)	6	27
2	F	350/363 (96%)	301 (86%)	37 (11%)	12 (3%)	3	16
2	G	350/363 (96%)	306 (87%)	34 (10%)	10 (3%)	3	20
2	H	350/363 (96%)	307 (88%)	36 (10%)	7 (2%)	6	27
3	W	4/9 (44%)	4 (100%)	0	0	100	100
3	X	4/9 (44%)	2 (50%)	2 (50%)	0	100	100
3	Y	4/9 (44%)	2 (50%)	1 (25%)	1 (25%)	0	0

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
3	Z	4/9 (44%)	3 (75%)	1 (25%)	0	100	100
All	All	4320/4400 (98%)	3912 (91%)	362 (8%)	46 (1%)	11	39

All (46) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	B	288	THR
1	D	341	VAL
2	E	113	GLU
2	F	351	TYR
2	F	354	PRO
2	G	5	PRO
2	G	111	LYS
2	G	354	PRO
2	H	283	PHE
2	H	354	PRO
3	Y	4	VAL
1	D	332	GLU
2	E	354	PRO
2	F	5	PRO
2	F	76	ARG
2	F	118	ASN
2	G	76	ARG
2	G	113	GLU
2	H	295	ASP
1	A	140	ARG
1	B	140	ARG
1	C	140	ARG
1	D	140	ARG
1	D	290	PRO
2	E	5	PRO
2	E	56	LEU
2	F	190	GLY
2	G	190	GLY
2	H	190	GLY
2	H	238	HIS
2	E	190	GLY
2	G	77	ASP
2	G	118	ASN
2	G	295	ASP
2	E	238	HIS
2	E	295	ASP

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Mol	Chain	Res	Type
2	F	115	ILE
2	F	238	HIS
2	F	241	HIS
2	H	336	PRO
2	F	114	PRO
2	F	189	GLU
2	F	296	ASP
2	G	297	PRO
1	A	295	ILE
2	H	353	MET

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	A	653/653 (100%)	594 (91%)	59 (9%)	9	30
1	B	653/653 (100%)	593 (91%)	60 (9%)	8	30
1	C	653/653 (100%)	593 (91%)	60 (9%)	8	30
1	D	653/653 (100%)	587 (90%)	66 (10%)	7	26
2	E	307/315 (98%)	256 (83%)	51 (17%)	2	10
2	F	307/315 (98%)	262 (85%)	45 (15%)	3	14
2	G	307/315 (98%)	256 (83%)	51 (17%)	2	10
2	H	307/315 (98%)	252 (82%)	55 (18%)	2	8
3	W	6/9 (67%)	6 (100%)	0	100	100
3	X	6/9 (67%)	4 (67%)	2 (33%)	0	1
3	Y	6/9 (67%)	5 (83%)	1 (17%)	2	10
3	Z	6/9 (67%)	4 (67%)	2 (33%)	0	1
All	All	3864/3908 (99%)	3412 (88%)	452 (12%)	5	20

All (452) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	39	SER
1	A	40	ARG
1	A	41	LYS
1	A	76	ILE
1	A	78	VAL
1	A	92	ASN
1	A	93	SER
1	A	97	GLU
1	A	114	ILE
1	A	144	THR
1	A	170	ASN
1	A	184	ARG
1	A	207	VAL
1	A	223	LEU
1	A	237	GLU
1	A	246	LEU
1	A	292	SER
1	A	295	ILE
1	A	303	VAL
1	A	318	ARG
1	A	326	ASP
1	A	339	CYS
1	A	346	ILE
1	A	350	THR
1	A	351	THR
1	A	361	GLU
1	A	375	ILE
1	A	377	ASN
1	A	385	CYS
1	A	391	LYS
1	A	399	LYS
1	A	401	THR
1	A	410	LEU
1	A	429	ARG
1	A	436	LEU
1	A	471	ARG
1	A	482	LEU
1	A	492	ARG
1	A	505	GLN
1	A	507	VAL
1	A	521	GLU
1	A	522	THR
1	A	523	LYS

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Mol	Chain	Res	Type
1	A	536	LYS
1	A	543	LEU
1	A	598	LEU
1	A	603	VAL
1	A	608	GLU
1	A	621	ASN
1	A	622	LYS
1	A	624	ILE
1	A	673	LEU
1	A	679	ASN
1	A	689	MET
1	A	691	ARG
1	A	701	LEU
1	A	702	LEU
1	A	731	GLN
1	A	749	GLN
1	B	40	ARG
1	B	41	LYS
1	B	71	LYS
1	B	76	ILE
1	B	78	VAL
1	B	92	ASN
1	B	93	SER
1	B	97	GLU
1	B	114	ILE
1	B	144	THR
1	B	170	ASN
1	B	184	ARG
1	B	207	VAL
1	B	223	LEU
1	B	237	GLU
1	B	245	SER
1	B	246	LEU
1	B	290	PRO
1	B	303	VAL
1	B	313	LEU
1	B	318	ARG
1	B	326	ASP
1	B	338	ASN
1	B	340	LEU
1	B	350	THR
1	B	351	THR

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Mol	Chain	Res	Type
1	B	361	GLU
1	B	375	ILE
1	B	377	ASN
1	B	385	CYS
1	B	391	LYS
1	B	399	LYS
1	B	401	THR
1	B	410	LEU
1	B	429	ARG
1	B	436	LEU
1	B	471	ARG
1	B	482	LEU
1	B	492	ARG
1	B	505	GLN
1	B	507	VAL
1	B	521	GLU
1	B	522	THR
1	B	523	LYS
1	B	536	LYS
1	B	543	LEU
1	B	598	LEU
1	B	603	VAL
1	B	608	GLU
1	B	621	ASN
1	B	622	LYS
1	B	624	ILE
1	B	673	LEU
1	B	679	ASN
1	B	689	MET
1	B	691	ARG
1	B	701	LEU
1	B	702	LEU
1	B	731	GLN
1	B	749	GLN
1	C	39	SER
1	C	40	ARG
1	C	41	LYS
1	C	76	ILE
1	C	78	VAL
1	C	92	ASN
1	C	93	SER
1	C	97	GLU

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Mol	Chain	Res	Type
1	C	114	ILE
1	C	144	THR
1	C	170	ASN
1	C	184	ARG
1	C	207	VAL
1	C	214	LEU
1	C	223	LEU
1	C	237	GLU
1	C	246	LEU
1	C	295	ILE
1	C	303	VAL
1	C	313	LEU
1	C	318	ARG
1	C	326	ASP
1	C	340	LEU
1	C	341	VAL
1	C	350	THR
1	C	351	THR
1	C	361	GLU
1	C	375	ILE
1	C	377	ASN
1	C	385	CYS
1	C	391	LYS
1	C	399	LYS
1	C	401	THR
1	C	410	LEU
1	C	429	ARG
1	C	436	LEU
1	C	471	ARG
1	C	482	LEU
1	C	492	ARG
1	C	505	GLN
1	C	507	VAL
1	C	521	GLU
1	C	522	THR
1	C	523	LYS
1	C	536	LYS
1	C	543	LEU
1	C	598	LEU
1	C	603	VAL
1	C	608	GLU
1	C	621	ASN

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Mol	Chain	Res	Type
1	C	622	LYS
1	C	624	ILE
1	C	673	LEU
1	C	679	ASN
1	C	689	MET
1	C	691	ARG
1	C	701	LEU
1	C	702	LEU
1	C	731	GLN
1	C	749	GLN
1	D	39	SER
1	D	40	ARG
1	D	41	LYS
1	D	71	LYS
1	D	72	GLN
1	D	76	ILE
1	D	78	VAL
1	D	92	ASN
1	D	93	SER
1	D	97	GLU
1	D	114	ILE
1	D	144	THR
1	D	170	ASN
1	D	184	ARG
1	D	207	VAL
1	D	214	LEU
1	D	223	LEU
1	D	237	GLU
1	D	245	SER
1	D	246	LEU
1	D	283	THR
1	D	285	ILE
1	D	292	SER
1	D	303	VAL
1	D	313	LEU
1	D	318	ARG
1	D	326	ASP
1	D	333	SER
1	D	339	CYS
1	D	340	LEU
1	D	350	THR
1	D	351	THR

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Mol	Chain	Res	Type
1	D	361	GLU
1	D	375	ILE
1	D	377	ASN
1	D	385	CYS
1	D	391	LYS
1	D	399	LYS
1	D	401	THR
1	D	410	LEU
1	D	429	ARG
1	D	436	LEU
1	D	471	ARG
1	D	482	LEU
1	D	492	ARG
1	D	505	GLN
1	D	507	VAL
1	D	521	GLU
1	D	522	THR
1	D	523	LYS
1	D	536	LYS
1	D	543	LEU
1	D	598	LEU
1	D	603	VAL
1	D	608	GLU
1	D	621	ASN
1	D	622	LYS
1	D	624	ILE
1	D	673	LEU
1	D	679	ASN
1	D	689	MET
1	D	691	ARG
1	D	701	LEU
1	D	702	LEU
1	D	731	GLN
1	D	749	GLN
2	E	4	THR
2	E	5	PRO
2	E	18	LEU
2	E	19	ASP
2	E	38	LEU
2	E	44	GLU
2	E	45	GLU
2	E	47	LEU

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Mol	Chain	Res	Type
2	E	53	ASP
2	E	54	LYS
2	E	56	LEU
2	E	58	LEU
2	E	60	ASP
2	E	92	LYS
2	E	98	VAL
2	E	100	VAL
2	E	124	LEU
2	E	125	THR
2	E	128	GLU
2	E	131	SER
2	E	132	LEU
2	E	146	VAL
2	E	160	SER
2	E	164	GLU
2	E	171	LYS
2	E	177	VAL
2	E	182	LEU
2	E	189	GLU
2	E	206	LYS
2	E	212	THR
2	E	231	LEU
2	E	251	ARG
2	E	252	LEU
2	E	254	GLN
2	E	276	THR
2	E	282	ARG
2	E	292	LEU
2	E	306	THR
2	E	311	THR
2	E	313	LYS
2	E	320	GLU
2	E	324	ARG
2	E	325	LEU
2	E	335	LEU
2	E	341	LYS
2	E	343	LEU
2	E	345	ASP
2	E	347	LEU
2	E	349	LYS
2	E	353	MET

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Mol	Chain	Res	Type
2	E	355	SER
2	F	4	THR
2	F	18	LEU
2	F	19	ASP
2	F	38	LEU
2	F	44	GLU
2	F	45	GLU
2	F	47	LEU
2	F	53	ASP
2	F	54	LYS
2	F	58	LEU
2	F	60	ASP
2	F	92	LYS
2	F	98	VAL
2	F	100	VAL
2	F	112	VAL
2	F	124	LEU
2	F	125	THR
2	F	146	VAL
2	F	160	SER
2	F	164	GLU
2	F	171	LYS
2	F	177	VAL
2	F	182	LEU
2	F	189	GLU
2	F	206	LYS
2	F	212	THR
2	F	231	LEU
2	F	251	ARG
2	F	252	LEU
2	F	254	GLN
2	F	276	THR
2	F	292	LEU
2	F	306	THR
2	F	311	THR
2	F	313	LYS
2	F	320	GLU
2	F	325	LEU
2	F	335	LEU
2	F	341	LYS
2	F	343	LEU
2	F	345	ASP

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Mol	Chain	Res	Type
2	F	347	LEU
2	F	349	LYS
2	F	351	TYR
2	F	354	PRO
2	G	4	THR
2	G	5	PRO
2	G	18	LEU
2	G	19	ASP
2	G	38	LEU
2	G	44	GLU
2	G	45	GLU
2	G	47	LEU
2	G	53	ASP
2	G	54	LYS
2	G	56	LEU
2	G	58	LEU
2	G	60	ASP
2	G	92	LYS
2	G	98	VAL
2	G	100	VAL
2	G	112	VAL
2	G	124	LEU
2	G	125	THR
2	G	131	SER
2	G	146	VAL
2	G	160	SER
2	G	164	GLU
2	G	171	LYS
2	G	177	VAL
2	G	182	LEU
2	G	189	GLU
2	G	206	LYS
2	G	212	THR
2	G	231	LEU
2	G	251	ARG
2	G	252	LEU
2	G	254	GLN
2	G	276	THR
2	G	282	ARG
2	G	292	LEU
2	G	295	ASP
2	G	296	ASP

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Mol	Chain	Res	Type
2	G	303	THR
2	G	306	THR
2	G	311	THR
2	G	320	GLU
2	G	324	ARG
2	G	325	LEU
2	G	335	LEU
2	G	341	LYS
2	G	343	LEU
2	G	345	ASP
2	G	347	LEU
2	G	349	LYS
2	G	355	SER
2	H	18	LEU
2	H	19	ASP
2	H	38	LEU
2	H	44	GLU
2	H	45	GLU
2	H	47	LEU
2	H	53	ASP
2	H	54	LYS
2	H	56	LEU
2	H	58	LEU
2	H	60	ASP
2	H	75	CYS
2	H	92	LYS
2	H	98	VAL
2	H	100	VAL
2	H	112	VAL
2	H	124	LEU
2	H	125	THR
2	H	127	ASP
2	H	128	GLU
2	H	131	SER
2	H	132	LEU
2	H	139	GLU
2	H	141	GLU
2	H	146	VAL
2	H	160	SER
2	H	164	GLU
2	H	171	LYS
2	H	177	VAL

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Mol	Chain	Res	Type
2	H	182	LEU
2	H	189	GLU
2	H	206	LYS
2	H	212	THR
2	H	231	LEU
2	H	251	ARG
2	H	252	LEU
2	H	254	GLN
2	H	276	THR
2	H	281	ILE
2	H	283	PHE
2	H	284	LYS
2	H	292	LEU
2	H	295	ASP
2	H	303	THR
2	H	306	THR
2	H	313	LYS
2	H	320	GLU
2	H	325	LEU
2	H	335	LEU
2	H	341	LYS
2	H	343	LEU
2	H	345	ASP
2	H	347	LEU
2	H	349	LYS
2	H	352	ARG
3	X	4	VAL
3	X	5	ASP
3	Y	4	VAL
3	Z	4	VAL
3	Z	5	ASP

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (134) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	51	ASN
1	A	74	ASN
1	A	75	ASN
1	A	80	ASN
1	A	103	ASN
1	A	169	ASN
1	A	170	ASN

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Mol	Chain	Res	Type
1	A	247	GLN
1	A	263	ASN
1	A	272	ASN
1	A	286	GLN
1	A	314	GLN
1	A	338	ASN
1	A	369	ASN
1	A	377	ASN
1	A	388	GLN
1	A	483	HIS
1	A	533	HIS
1	A	586	GLN
1	A	621	ASN
1	A	679	ASN
1	A	694	ASN
1	A	710	ASN
1	A	718	GLN
1	A	731	GLN
1	A	749	GLN
1	A	757	HIS
1	A	761	GLN
1	B	51	ASN
1	B	75	ASN
1	B	80	ASN
1	B	103	ASN
1	B	169	ASN
1	B	170	ASN
1	B	247	GLN
1	B	272	ASN
1	B	314	GLN
1	B	338	ASN
1	B	377	ASN
1	B	388	GLN
1	B	483	HIS
1	B	533	HIS
1	B	586	GLN
1	B	621	ASN
1	B	679	ASN
1	B	682	HIS
1	B	694	ASN
1	B	710	ASN
1	B	718	GLN

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Mol	Chain	Res	Type
1	B	731	GLN
1	B	749	GLN
1	B	757	HIS
1	C	51	ASN
1	C	72	GLN
1	C	74	ASN
1	C	75	ASN
1	C	80	ASN
1	C	103	ASN
1	C	112	GLN
1	C	170	ASN
1	C	247	GLN
1	C	272	ASN
1	C	314	GLN
1	C	338	ASN
1	C	344	GLN
1	C	345	HIS
1	C	369	ASN
1	C	377	ASN
1	C	388	GLN
1	C	483	HIS
1	C	533	HIS
1	C	586	GLN
1	C	621	ASN
1	C	679	ASN
1	C	682	HIS
1	C	694	ASN
1	C	710	ASN
1	C	718	GLN
1	C	731	GLN
1	C	749	GLN
1	C	754	HIS
1	C	757	HIS
1	C	761	GLN
1	D	51	ASN
1	D	75	ASN
1	D	80	ASN
1	D	103	ASN
1	D	112	GLN
1	D	169	ASN
1	D	170	ASN
1	D	247	GLN

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Mol	Chain	Res	Type
1	D	272	ASN
1	D	314	GLN
1	D	369	ASN
1	D	377	ASN
1	D	388	GLN
1	D	483	HIS
1	D	586	GLN
1	D	621	ASN
1	D	679	ASN
1	D	682	HIS
1	D	694	ASN
1	D	710	ASN
1	D	718	GLN
1	D	731	GLN
1	D	749	GLN
1	D	754	HIS
1	D	757	HIS
1	D	761	GLN
2	E	48	ASN
2	E	135	GLN
2	E	197	HIS
2	E	199	GLN
2	E	309	GLN
2	F	48	ASN
2	F	119	GLN
2	F	134	ASN
2	F	197	HIS
2	F	199	GLN
2	F	210	HIS
2	G	48	ASN
2	G	118	ASN
2	G	134	ASN
2	G	197	HIS
2	G	199	GLN
2	G	309	GLN
2	H	48	ASN
2	H	134	ASN
2	H	138	GLN
2	H	197	HIS
2	H	199	GLN
2	H	241	HIS
2	H	309	GLN

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Mol	Chain	Res	Type
2	H	328	ASN

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 ⓘ

46 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	$\# Z > 2$
4	NAG	I	1	4,1	14,14,15	0.52	0	17,19,21	1.74	3 (17%)
4	NAG	I	2	4	14,14,15	0.53	0	17,19,21	2.53	8 (47%)
4	FUL	I	3	4	10,10,11	0.60	0	14,14,16	2.03	4 (28%)
5	NAG	J	1	5,1	14,14,15	0.58	0	17,19,21	1.86	6 (35%)
5	NAG	J	2	5	14,14,15	0.69	0	17,19,21	1.79	6 (35%)
5	NAG	K	1	5,1	14,14,15	0.60	0	17,19,21	2.21	5 (29%)
5	NAG	K	2	5	14,14,15	0.57	0	17,19,21	1.62	2 (11%)
6	NAG	L	1	6,1	14,14,15	0.74	0	17,19,21	1.69	3 (17%)
6	NAG	L	2	6	14,14,15	0.61	0	17,19,21	1.55	3 (17%)
6	BMA	L	3	6	11,11,12	0.68	0	15,15,17	2.18	3 (20%)
6	MAN	L	4	6	11,11,12	0.63	0	15,15,17	1.94	4 (26%)
5	NAG	M	1	5,1	14,14,15	0.60	0	17,19,21	1.54	3 (17%)
5	NAG	M	2	5	14,14,15	0.74	0	17,19,21	1.69	3 (17%)
7	NAG	N	1	7,1	14,14,15	0.48	0	17,19,21	2.75	5 (29%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
7	FUL	N	2	7	10,10,11	0.88	0	14,14,16	2.02	4 (28%)
5	NAG	O	1	5,1	14,14,15	0.48	0	17,19,21	2.75	7 (41%)
5	NAG	O	2	5	14,14,15	0.66	0	17,19,21	1.65	4 (23%)
6	NAG	P	1	6,1	14,14,15	0.74	0	17,19,21	2.06	5 (29%)
6	NAG	P	2	6	14,14,15	0.75	0	17,19,21	1.19	2 (11%)
6	BMA	P	3	6	11,11,12	0.73	0	15,15,17	2.08	5 (33%)
6	MAN	P	4	6	11,11,12	0.58	0	15,15,17	1.56	2 (13%)
5	NAG	Q	1	5,1	14,14,15	0.92	0	17,19,21	2.23	7 (41%)
5	NAG	Q	2	5	14,14,15	0.47	0	17,19,21	2.04	2 (11%)
4	NAG	R	1	4,1	14,14,15	0.60	0	17,19,21	1.31	1 (5%)
4	NAG	R	2	4	14,14,15	0.56	0	17,19,21	2.26	4 (23%)
4	FUL	R	3	4	10,10,11	0.64	0	14,14,16	1.69	2 (14%)
5	NAG	S	1	5,1	14,14,15	0.74	0	17,19,21	3.07	5 (29%)
5	NAG	S	2	5	14,14,15	0.50	0	17,19,21	1.71	5 (29%)
5	NAG	T	1	5,1	14,14,15	0.47	0	17,19,21	2.41	6 (35%)
5	NAG	T	2	5	14,14,15	0.57	0	17,19,21	1.87	6 (35%)
6	NAG	U	1	6,1	14,14,15	0.68	0	17,19,21	2.49	6 (35%)
6	NAG	U	2	6	14,14,15	0.65	0	17,19,21	1.29	3 (17%)
6	BMA	U	3	6	11,11,12	0.50	0	15,15,17	1.38	3 (20%)
6	MAN	U	4	6	11,11,12	0.50	0	15,15,17	2.25	4 (26%)
5	NAG	V	1	5,1	14,14,15	0.68	0	17,19,21	2.49	6 (35%)
5	NAG	V	2	5	14,14,15	0.56	0	17,19,21	1.61	3 (17%)
7	NAG	a	1	7,1	14,14,15	0.75	1 (7%)	17,19,21	2.29	7 (41%)
7	FUL	a	2	7	10,10,11	0.92	0	14,14,16	2.54	5 (35%)
5	NAG	b	1	5,1	14,14,15	0.68	0	17,19,21	1.61	3 (17%)
5	NAG	b	2	5	14,14,15	0.77	1 (7%)	17,19,21	1.99	8 (47%)
6	NAG	c	1	6,1	14,14,15	0.68	0	17,19,21	2.91	5 (29%)
6	NAG	c	2	6	14,14,15	0.58	0	17,19,21	1.48	2 (11%)
6	BMA	c	3	6	11,11,12	0.57	0	15,15,17	2.10	5 (33%)
6	MAN	c	4	6	11,11,12	0.63	0	15,15,17	1.79	3 (20%)
5	NAG	d	1	5,1	14,14,15	0.57	0	17,19,21	2.61	5 (29%)
5	NAG	d	2	5	14,14,15	0.68	0	17,19,21	1.98	4 (23%)

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	NAG	I	1	4,1	-	4/6/23/26	0/1/1/1
4	NAG	I	2	4	-	4/6/23/26	0/1/1/1
4	FUL	I	3	4	-	-	0/1/1/1
5	NAG	J	1	5,1	-	4/6/23/26	0/1/1/1
5	NAG	J	2	5	-	4/6/23/26	0/1/1/1
5	NAG	K	1	5,1	-	3/6/23/26	0/1/1/1
5	NAG	K	2	5	-	4/6/23/26	0/1/1/1
6	NAG	L	1	6,1	-	2/6/23/26	0/1/1/1
6	NAG	L	2	6	-	3/6/23/26	0/1/1/1
6	BMA	L	3	6	-	2/2/19/22	0/1/1/1
6	MAN	L	4	6	-	1/2/19/22	0/1/1/1
5	NAG	M	1	5,1	-	3/6/23/26	0/1/1/1
5	NAG	M	2	5	-	2/6/23/26	0/1/1/1
7	NAG	N	1	7,1	-	2/6/23/26	0/1/1/1
7	FUL	N	2	7	-	-	0/1/1/1
5	NAG	O	1	5,1	-	3/6/23/26	0/1/1/1
5	NAG	O	2	5	-	2/6/23/26	0/1/1/1
6	NAG	P	1	6,1	-	2/6/23/26	0/1/1/1
6	NAG	P	2	6	-	0/6/23/26	0/1/1/1
6	BMA	P	3	6	-	0/2/19/22	0/1/1/1
6	MAN	P	4	6	-	2/2/19/22	0/1/1/1
5	NAG	Q	1	5,1	-	5/6/23/26	0/1/1/1
5	NAG	Q	2	5	-	3/6/23/26	0/1/1/1
4	NAG	R	1	4,1	-	4/6/23/26	0/1/1/1
4	NAG	R	2	4	-	3/6/23/26	0/1/1/1
4	FUL	R	3	4	-	-	0/1/1/1
5	NAG	S	1	5,1	-	4/6/23/26	0/1/1/1
5	NAG	S	2	5	-	2/6/23/26	0/1/1/1
5	NAG	T	1	5,1	-	2/6/23/26	0/1/1/1
5	NAG	T	2	5	-	3/6/23/26	0/1/1/1
6	NAG	U	1	6,1	-	3/6/23/26	0/1/1/1
6	NAG	U	2	6	-	3/6/23/26	0/1/1/1
6	BMA	U	3	6	-	2/2/19/22	0/1/1/1
6	MAN	U	4	6	-	2/2/19/22	1/1/1/1

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
5	NAG	V	1	5,1	-	3/6/23/26	0/1/1/1
5	NAG	V	2	5	-	3/6/23/26	0/1/1/1
7	NAG	a	1	7,1	-	5/6/23/26	0/1/1/1
7	FUL	a	2	7	-	-	0/1/1/1
5	NAG	b	1	5,1	-	2/6/23/26	0/1/1/1
5	NAG	b	2	5	-	3/6/23/26	0/1/1/1
6	NAG	c	1	6,1	-	2/6/23/26	0/1/1/1
6	NAG	c	2	6	-	1/6/23/26	0/1/1/1
6	BMA	c	3	6	-	2/2/19/22	0/1/1/1
6	MAN	c	4	6	-	2/2/19/22	0/1/1/1
5	NAG	d	1	5,1	-	0/6/23/26	0/1/1/1
5	NAG	d	2	5	-	4/6/23/26	0/1/1/1

All (2) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
7	a	1	NAG	C1-C2	2.27	1.55	1.52
5	b	2	NAG	C1-C2	2.16	1.55	1.52

All (197) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
6	c	1	NAG	C1-C2-N2	-9.49	95.49	110.43
7	N	1	NAG	C1-O5-C5	9.00	124.25	112.19
5	S	1	NAG	C1-O5-C5	8.46	123.52	112.19
5	d	1	NAG	C1-O5-C5	7.64	122.42	112.19
5	O	1	NAG	C1-O5-C5	7.58	122.34	112.19
5	Q	2	NAG	C1-O5-C5	7.24	121.89	112.19
4	R	2	NAG	C1-O5-C5	7.08	121.67	112.19
5	T	1	NAG	C1-O5-C5	6.46	120.85	112.19
4	I	2	NAG	O5-C1-C2	-6.03	101.96	111.29
6	U	4	MAN	C1-O5-C5	6.02	120.25	112.19
6	L	3	BMA	O3-C3-C2	5.86	122.02	110.05
4	I	3	FUL	C1-C2-C3	-5.58	101.52	109.64
5	K	1	NAG	C1-O5-C5	5.45	119.49	112.19
6	c	3	BMA	C3-C4-C5	5.43	120.08	110.23
5	S	1	NAG	C3-C4-C5	5.41	120.05	110.23
7	a	2	FUL	C3-C4-C5	5.29	117.85	109.81
5	K	2	NAG	C1-O5-C5	5.24	119.20	112.19
5	d	2	NAG	C8-C7-N2	5.15	124.67	116.12

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
6	U	1	NAG	C1-C2-N2	5.13	118.52	110.43
5	V	1	NAG	C1-C2-N2	5.13	118.52	110.43
5	S	1	NAG	O5-C1-C2	4.88	118.85	111.29
5	V	1	NAG	C1-O5-C5	4.68	118.45	112.19
6	U	1	NAG	C1-O5-C5	4.67	118.45	112.19
5	Q	1	NAG	C2-N2-C7	4.64	129.12	122.90
7	a	2	FUL	C1-C2-C3	-4.61	102.93	109.64
6	P	1	NAG	O4-C4-C5	-4.60	97.98	109.32
5	O	1	NAG	O5-C1-C2	4.59	118.39	111.29
4	I	1	NAG	O5-C5-C6	4.56	116.54	107.66
5	T	1	NAG	O5-C1-C2	4.55	118.34	111.29
4	I	2	NAG	C1-C2-N2	4.47	117.48	110.43
7	a	1	NAG	O5-C5-C6	4.44	116.30	107.66
4	R	3	FUL	C1-C2-C3	4.40	116.05	109.64
6	L	4	MAN	C1-O5-C5	4.39	118.08	112.19
5	S	2	NAG	C1-O5-C5	4.35	118.02	112.19
5	d	1	NAG	C2-N2-C7	4.21	128.54	122.90
7	N	2	FUL	C3-C4-C5	4.18	116.17	109.81
6	U	1	NAG	O5-C1-C2	-4.16	104.85	111.29
5	V	1	NAG	O5-C1-C2	-4.16	104.86	111.29
5	V	2	NAG	C4-C3-C2	-4.10	105.01	111.02
5	b	1	NAG	C4-C3-C2	4.04	116.94	111.02
5	J	2	NAG	C1-O5-C5	4.04	117.60	112.19
4	I	2	NAG	C1-O5-C5	4.03	117.59	112.19
6	P	3	BMA	O3-C3-C4	3.92	119.62	110.38
7	a	1	NAG	C2-N2-C7	3.92	128.15	122.90
5	d	1	NAG	C3-C4-C5	3.88	117.26	110.23
5	S	1	NAG	O4-C4-C3	3.87	119.49	110.38
6	P	3	BMA	O3-C3-C2	3.77	117.75	110.05
4	R	1	NAG	C4-C3-C2	3.75	116.52	111.02
6	P	1	NAG	C2-N2-C7	-3.72	117.91	122.90
5	T	2	NAG	O5-C1-C2	-3.71	105.55	111.29
5	Q	1	NAG	C1-O5-C5	3.68	117.11	112.19
5	K	1	NAG	O5-C1-C2	-3.62	105.70	111.29
5	K	1	NAG	C8-C7-N2	3.57	122.03	116.12
5	Q	1	NAG	C8-C7-N2	3.54	121.99	116.12
5	M	2	NAG	O5-C1-C2	-3.52	105.84	111.29
6	L	1	NAG	O5-C1-C2	-3.52	105.85	111.29
5	O	2	NAG	C1-C2-N2	-3.51	104.89	110.43
7	N	1	NAG	C2-N2-C7	-3.51	118.20	122.90
7	a	2	FUL	C6-C5-C4	3.51	119.49	113.08
6	P	4	MAN	O5-C1-C2	-3.50	102.44	110.79

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
6	P	1	NAG	C1-O5-C5	3.49	116.86	112.19
7	a	2	FUL	C1-O5-C5	-3.46	104.80	112.97
7	a	1	NAG	C1-C2-N2	3.43	115.84	110.43
6	c	4	MAN	O2-C2-C3	3.42	117.23	110.15
4	I	1	NAG	C3-C4-C5	-3.38	104.10	110.23
5	J	1	NAG	C4-C3-C2	3.38	115.97	111.02
6	U	4	MAN	C1-C2-C3	-3.37	104.74	109.64
6	c	4	MAN	C2-C3-C4	3.36	116.78	110.86
6	L	4	MAN	O5-C5-C6	3.36	114.19	107.66
6	c	1	NAG	O4-C4-C3	-3.32	102.56	110.38
6	c	4	MAN	C1-O5-C5	3.30	116.60	112.19
6	c	3	BMA	C1-O5-C5	3.29	116.60	112.19
5	b	1	NAG	C3-C4-C5	3.28	116.19	110.23
5	b	2	NAG	O7-C7-C8	-3.28	116.22	122.05
6	c	1	NAG	O7-C7-C8	3.27	127.89	122.05
5	b	2	NAG	O5-C1-C2	3.24	116.30	111.29
6	L	2	NAG	C1-O5-C5	3.23	116.52	112.19
5	M	2	NAG	C1-O5-C5	3.22	116.51	112.19
5	M	1	NAG	C1-O5-C5	3.22	116.50	112.19
5	O	2	NAG	C4-C3-C2	3.21	115.73	111.02
5	S	1	NAG	C4-C3-C2	3.20	115.71	111.02
6	L	1	NAG	C1-O5-C5	3.20	116.48	112.19
5	T	1	NAG	C4-C3-C2	3.17	115.66	111.02
5	T	2	NAG	C3-C4-C5	-3.15	104.53	110.23
5	T	1	NAG	O5-C5-C4	3.13	118.44	110.83
7	N	1	NAG	C3-C4-C5	-3.12	104.58	110.23
5	O	1	NAG	O5-C5-C4	3.11	118.39	110.83
5	J	1	NAG	C1-O5-C5	3.09	116.33	112.19
6	L	3	BMA	O5-C5-C6	3.09	113.68	107.66
7	a	1	NAG	C4-C3-C2	-3.08	106.50	111.02
5	V	2	NAG	C2-N2-C7	3.05	126.99	122.90
6	L	4	MAN	O3-C3-C2	3.05	116.27	110.05
6	U	1	NAG	O7-C7-N2	-3.02	116.64	121.98
5	d	2	NAG	O7-C7-C8	-3.02	116.68	122.05
5	V	1	NAG	O7-C7-N2	-3.01	116.66	121.98
6	U	4	MAN	C2-C3-C4	-3.01	105.58	110.86
6	c	2	NAG	C4-C3-C2	-3.00	106.62	111.02
4	I	2	NAG	C3-C4-C5	3.00	115.67	110.23
7	N	2	FUL	C6-C5-C4	2.99	118.56	113.08
6	P	3	BMA	C1-C2-C3	-2.99	105.29	109.64
5	J	2	NAG	O4-C4-C5	2.97	116.63	109.32
7	N	2	FUL	O3-C3-C4	2.95	117.33	110.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
6	L	2	NAG	O5-C1-C2	-2.95	106.73	111.29
5	O	1	NAG	C1-C2-N2	-2.95	105.79	110.43
6	P	3	BMA	O5-C5-C6	2.94	113.39	107.66
5	J	2	NAG	O7-C7-C8	-2.94	116.82	122.05
5	M	1	NAG	O5-C1-C2	-2.93	106.75	111.29
6	U	3	BMA	O5-C5-C6	2.93	113.37	107.66
5	Q	1	NAG	O5-C5-C6	-2.93	101.96	107.66
6	c	2	NAG	O3-C3-C2	2.91	115.45	109.40
6	L	4	MAN	C1-C2-C3	2.90	113.86	109.64
5	J	1	NAG	O4-C4-C5	-2.88	102.23	109.32
5	Q	1	NAG	C4-C3-C2	2.88	115.23	111.02
5	T	2	NAG	C2-N2-C7	2.83	126.69	122.90
6	U	2	NAG	C2-N2-C7	-2.79	119.16	122.90
4	I	3	FUL	O3-C3-C4	2.79	116.94	110.38
5	b	2	NAG	C8-C7-N2	2.79	120.74	116.12
6	P	2	NAG	O4-C4-C3	-2.76	103.88	110.38
4	R	3	FUL	O5-C5-C6	2.74	113.34	107.40
4	R	2	NAG	C2-N2-C7	2.74	126.57	122.90
7	a	1	NAG	O5-C1-C2	2.71	115.48	111.29
7	N	2	FUL	O2-C2-C1	2.70	115.40	109.22
6	P	1	NAG	C8-C7-N2	2.69	120.58	116.12
6	U	1	NAG	O4-C4-C3	-2.69	104.04	110.38
5	V	1	NAG	O4-C4-C3	-2.68	104.05	110.38
7	a	2	FUL	O2-C2-C3	2.68	115.70	110.15
5	O	1	NAG	C3-C4-C5	2.67	115.07	110.23
5	J	1	NAG	C2-N2-C7	2.66	126.47	122.90
6	L	2	NAG	C3-C4-C5	-2.66	105.42	110.23
5	K	1	NAG	O7-C7-C8	-2.65	117.33	122.05
6	P	4	MAN	C1-O5-C5	2.64	115.73	112.19
5	M	1	NAG	C3-C4-C5	-2.63	105.46	110.23
5	T	2	NAG	O4-C4-C5	2.61	115.74	109.32
5	T	2	NAG	O3-C3-C2	2.60	114.81	109.40
5	b	2	NAG	C1-O5-C5	2.60	115.67	112.19
7	N	1	NAG	O4-C4-C5	2.56	115.62	109.32
5	S	2	NAG	O7-C7-C8	-2.55	117.52	122.05
6	P	3	BMA	C6-C5-C4	2.53	119.24	113.02
5	V	1	NAG	C8-C7-N2	2.53	120.31	116.12
5	d	1	NAG	C4-C3-C2	2.53	114.72	111.02
5	V	2	NAG	C1-O5-C5	2.52	115.57	112.19
6	U	1	NAG	C8-C7-N2	2.51	120.28	116.12
5	K	1	NAG	O5-C5-C6	-2.50	102.79	107.66
5	T	2	NAG	O5-C5-C6	2.50	112.53	107.66

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
5	J	2	NAG	C1-C2-N2	2.48	114.35	110.43
5	d	2	NAG	C4-C3-C2	-2.47	107.40	111.02
6	c	1	NAG	O5-C1-C2	2.46	115.09	111.29
4	R	2	NAG	C4-C3-C2	2.44	114.60	111.02
6	L	3	BMA	O6-C6-C5	2.43	119.62	111.33
5	J	2	NAG	C8-C7-N2	2.43	120.15	116.12
5	O	1	NAG	O4-C4-C3	-2.43	104.65	110.38
5	b	1	NAG	C2-N2-C7	-2.41	119.67	122.90
5	b	2	NAG	C2-N2-C7	2.40	126.12	122.90
5	Q	1	NAG	O7-C7-C8	-2.40	117.78	122.05
5	O	1	NAG	C4-C3-C2	2.40	114.53	111.02
5	Q	2	NAG	O5-C5-C6	2.39	112.32	107.66
6	U	3	BMA	O5-C1-C2	-2.39	105.10	110.79
5	d	2	NAG	O5-C5-C6	2.38	112.30	107.66
5	M	2	NAG	O7-C7-C8	-2.38	117.81	122.05
6	c	1	NAG	C8-C7-N2	-2.37	112.18	116.12
6	L	1	NAG	O7-C7-C8	-2.37	117.83	122.05
5	J	1	NAG	O5-C1-C2	2.36	114.94	111.29
5	Q	1	NAG	C6-C5-C4	2.33	118.74	113.02
5	b	2	NAG	O5-C5-C6	2.33	112.19	107.66
4	R	2	NAG	O5-C1-C2	2.32	114.88	111.29
4	I	2	NAG	C4-C3-C2	-2.28	107.67	111.02
5	O	2	NAG	O4-C4-C5	2.27	114.92	109.32
5	d	1	NAG	O7-C7-N2	2.27	125.98	121.98
6	c	3	BMA	O3-C3-C2	2.26	114.66	110.05
7	N	1	NAG	C4-C3-C2	-2.24	107.73	111.02
6	U	3	BMA	O3-C3-C2	2.24	114.62	110.05
6	U	4	MAN	O3-C3-C4	2.24	115.65	110.38
5	K	2	NAG	C1-C2-N2	2.23	113.94	110.43
5	S	2	NAG	C8-C7-N2	2.23	119.81	116.12
5	O	2	NAG	C1-O5-C5	-2.22	109.21	112.19
6	P	1	NAG	O5-C5-C6	2.22	111.98	107.66
5	T	1	NAG	O4-C4-C3	-2.21	105.16	110.38
6	U	2	NAG	O5-C5-C4	-2.21	105.44	110.83
5	b	2	NAG	C3-C4-C5	-2.21	106.23	110.23
4	I	2	NAG	O6-C6-C5	2.21	118.85	111.33
4	I	1	NAG	O6-C6-C5	2.20	118.83	111.33
5	J	1	NAG	C6-C5-C4	2.17	118.35	113.02
4	I	3	FUL	O2-C2-C1	2.16	114.17	109.22
5	b	2	NAG	O5-C5-C4	-2.15	105.60	110.83
6	c	3	BMA	O4-C4-C5	-2.14	104.06	109.32
7	a	1	NAG	O3-C3-C2	2.13	113.83	109.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
4	I	2	NAG	O5-C5-C6	2.11	111.78	107.66
5	J	2	NAG	O3-C3-C4	-2.11	105.39	110.38
5	S	2	NAG	O5-C5-C6	2.11	111.76	107.66
4	I	2	NAG	O3-C3-C2	2.10	113.77	109.40
4	I	3	FUL	C3-C4-C5	2.07	112.97	109.81
7	a	1	NAG	O6-C6-C5	2.07	118.38	111.33
6	P	2	NAG	C4-C3-C2	-2.06	108.00	111.02
5	S	2	NAG	C4-C3-C2	-2.04	108.03	111.02
5	T	1	NAG	C3-C4-C5	2.04	113.93	110.23
6	U	2	NAG	C4-C3-C2	-2.03	108.05	111.02
6	c	3	BMA	C1-C2-C3	-2.00	106.72	109.64

There are no chirality outliers.

All (110) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
4	I	1	NAG	C8-C7-N2-C2
4	I	1	NAG	O7-C7-N2-C2
5	J	2	NAG	C8-C7-N2-C2
5	J	2	NAG	O7-C7-N2-C2
5	K	1	NAG	C8-C7-N2-C2
5	K	1	NAG	O7-C7-N2-C2
5	K	2	NAG	C8-C7-N2-C2
5	K	2	NAG	O7-C7-N2-C2
5	O	1	NAG	O7-C7-N2-C2
5	Q	1	NAG	C8-C7-N2-C2
5	Q	1	NAG	O7-C7-N2-C2
5	Q	2	NAG	C8-C7-N2-C2
5	Q	2	NAG	O7-C7-N2-C2
5	S	2	NAG	C8-C7-N2-C2
5	S	2	NAG	O7-C7-N2-C2
5	T	1	NAG	C8-C7-N2-C2
5	T	1	NAG	O7-C7-N2-C2
5	T	2	NAG	C1-C2-N2-C7
5	V	1	NAG	C1-C2-N2-C7
5	V	1	NAG	C8-C7-N2-C2
5	V	1	NAG	O7-C7-N2-C2
5	V	2	NAG	C3-C2-N2-C7
5	b	1	NAG	C8-C7-N2-C2
5	b	1	NAG	O7-C7-N2-C2
5	b	2	NAG	C1-C2-N2-C7
5	b	2	NAG	C8-C7-N2-C2

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Mol	Chain	Res	Type	Atoms
5	b	2	NAG	O7-C7-N2-C2
5	d	2	NAG	C8-C7-N2-C2
5	d	2	NAG	O7-C7-N2-C2
6	U	1	NAG	C1-C2-N2-C7
6	U	1	NAG	C8-C7-N2-C2
6	U	1	NAG	O7-C7-N2-C2
6	U	2	NAG	C8-C7-N2-C2
6	U	2	NAG	O7-C7-N2-C2
6	c	1	NAG	C8-C7-N2-C2
6	c	1	NAG	O7-C7-N2-C2
7	a	1	NAG	C8-C7-N2-C2
7	a	1	NAG	O7-C7-N2-C2
4	R	1	NAG	C8-C7-N2-C2
4	R	1	NAG	O7-C7-N2-C2
5	O	1	NAG	C8-C7-N2-C2
5	O	2	NAG	C8-C7-N2-C2
5	O	2	NAG	O7-C7-N2-C2
5	S	1	NAG	C8-C7-N2-C2
5	S	1	NAG	O7-C7-N2-C2
6	U	4	MAN	O5-C5-C6-O6
5	d	2	NAG	O5-C5-C6-O6
7	N	1	NAG	O5-C5-C6-O6
4	I	2	NAG	C4-C5-C6-O6
6	U	4	MAN	C4-C5-C6-O6
5	T	2	NAG	O7-C7-N2-C2
4	I	1	NAG	O5-C5-C6-O6
5	J	1	NAG	O5-C5-C6-O6
5	J	1	NAG	C4-C5-C6-O6
5	J	2	NAG	O5-C5-C6-O6
5	V	2	NAG	O5-C5-C6-O6
4	I	2	NAG	O5-C5-C6-O6
7	N	1	NAG	C4-C5-C6-O6
6	c	3	BMA	O5-C5-C6-O6
4	R	2	NAG	C8-C7-N2-C2
4	R	2	NAG	O7-C7-N2-C2
5	J	1	NAG	C8-C7-N2-C2
5	T	2	NAG	C8-C7-N2-C2
6	c	4	MAN	O5-C5-C6-O6
4	I	1	NAG	C4-C5-C6-O6
6	c	4	MAN	C4-C5-C6-O6
6	P	4	MAN	C4-C5-C6-O6
6	c	3	BMA	C4-C5-C6-O6

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Mol	Chain	Res	Type	Atoms
5	J	1	NAG	O7-C7-N2-C2
6	P	4	MAN	O5-C5-C6-O6
5	V	2	NAG	C4-C5-C6-O6
5	d	2	NAG	C4-C5-C6-O6
6	P	1	NAG	C4-C5-C6-O6
4	R	1	NAG	O5-C5-C6-O6
6	P	1	NAG	O5-C5-C6-O6
5	S	1	NAG	C4-C5-C6-O6
5	M	1	NAG	C4-C5-C6-O6
6	L	2	NAG	C4-C5-C6-O6
6	L	2	NAG	O5-C5-C6-O6
5	M	1	NAG	O5-C5-C6-O6
5	Q	1	NAG	O5-C5-C6-O6
5	J	2	NAG	C4-C5-C6-O6
5	K	2	NAG	C4-C5-C6-O6
6	L	3	BMA	C4-C5-C6-O6
7	a	1	NAG	O5-C5-C6-O6
6	U	3	BMA	O5-C5-C6-O6
4	R	2	NAG	C4-C5-C6-O6
6	L	4	MAN	O5-C5-C6-O6
5	K	1	NAG	O5-C5-C6-O6
5	M	2	NAG	C8-C7-N2-C2
6	L	1	NAG	C8-C7-N2-C2
5	Q	1	NAG	C3-C2-N2-C7
4	R	1	NAG	C4-C5-C6-O6
5	Q	2	NAG	C4-C5-C6-O6
4	I	2	NAG	C8-C7-N2-C2
5	Q	1	NAG	C4-C5-C6-O6
7	a	1	NAG	C1-C2-N2-C7
4	I	2	NAG	O7-C7-N2-C2
6	U	3	BMA	C4-C5-C6-O6
5	M	2	NAG	O7-C7-N2-C2
6	L	1	NAG	O7-C7-N2-C2
5	O	1	NAG	C3-C2-N2-C7
6	U	2	NAG	O5-C5-C6-O6
5	K	2	NAG	O5-C5-C6-O6
7	a	1	NAG	C4-C5-C6-O6
5	S	1	NAG	O5-C5-C6-O6
5	M	1	NAG	C1-C2-N2-C7
6	L	2	NAG	C1-C2-N2-C7
6	c	2	NAG	O5-C5-C6-O6
6	L	3	BMA	O5-C5-C6-O6

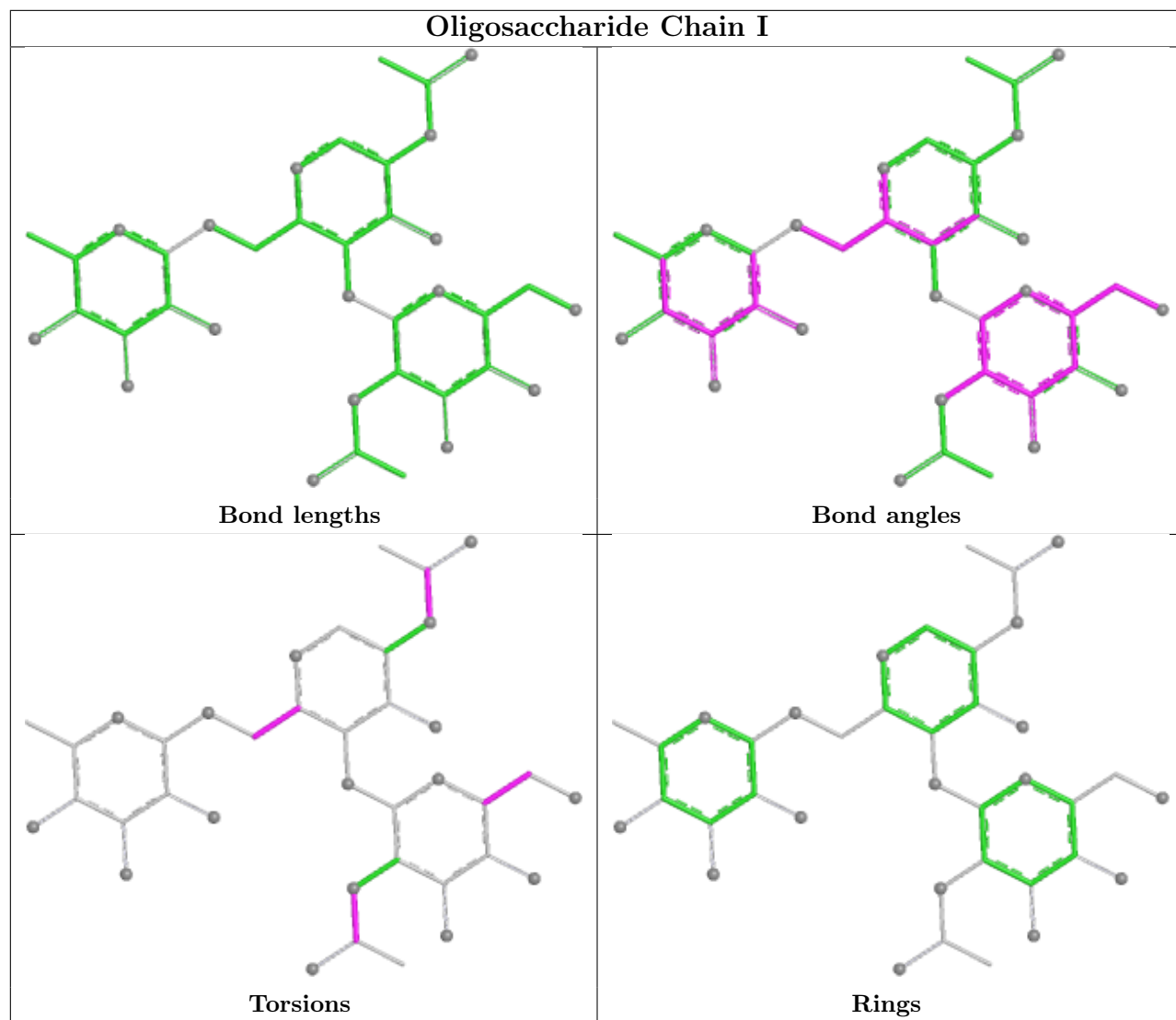
All (1) ring outliers are listed below:

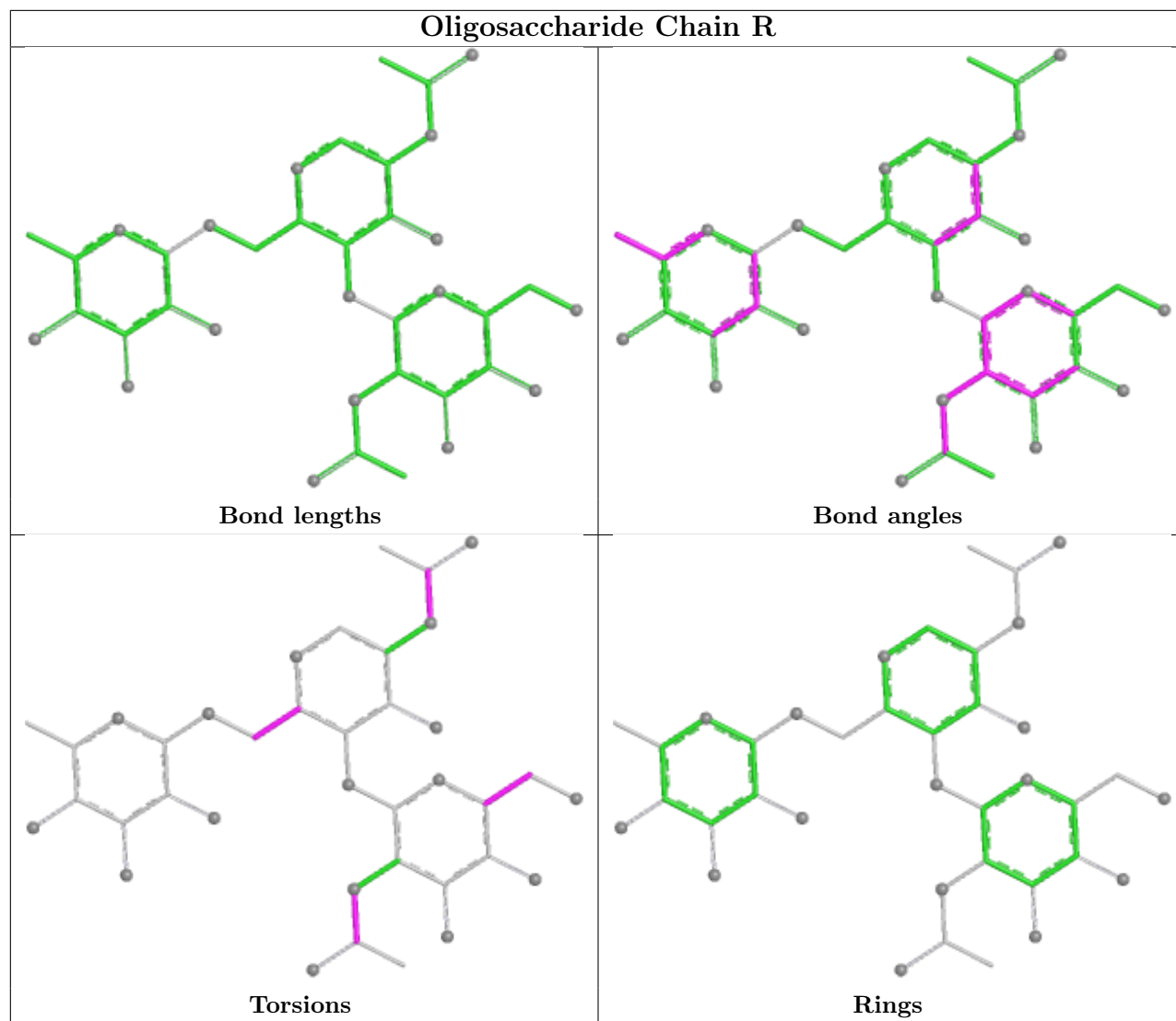
Mol	Chain	Res	Type	Atoms
6	U	4	MAN	C1-C2-C3-C4-C5-O5

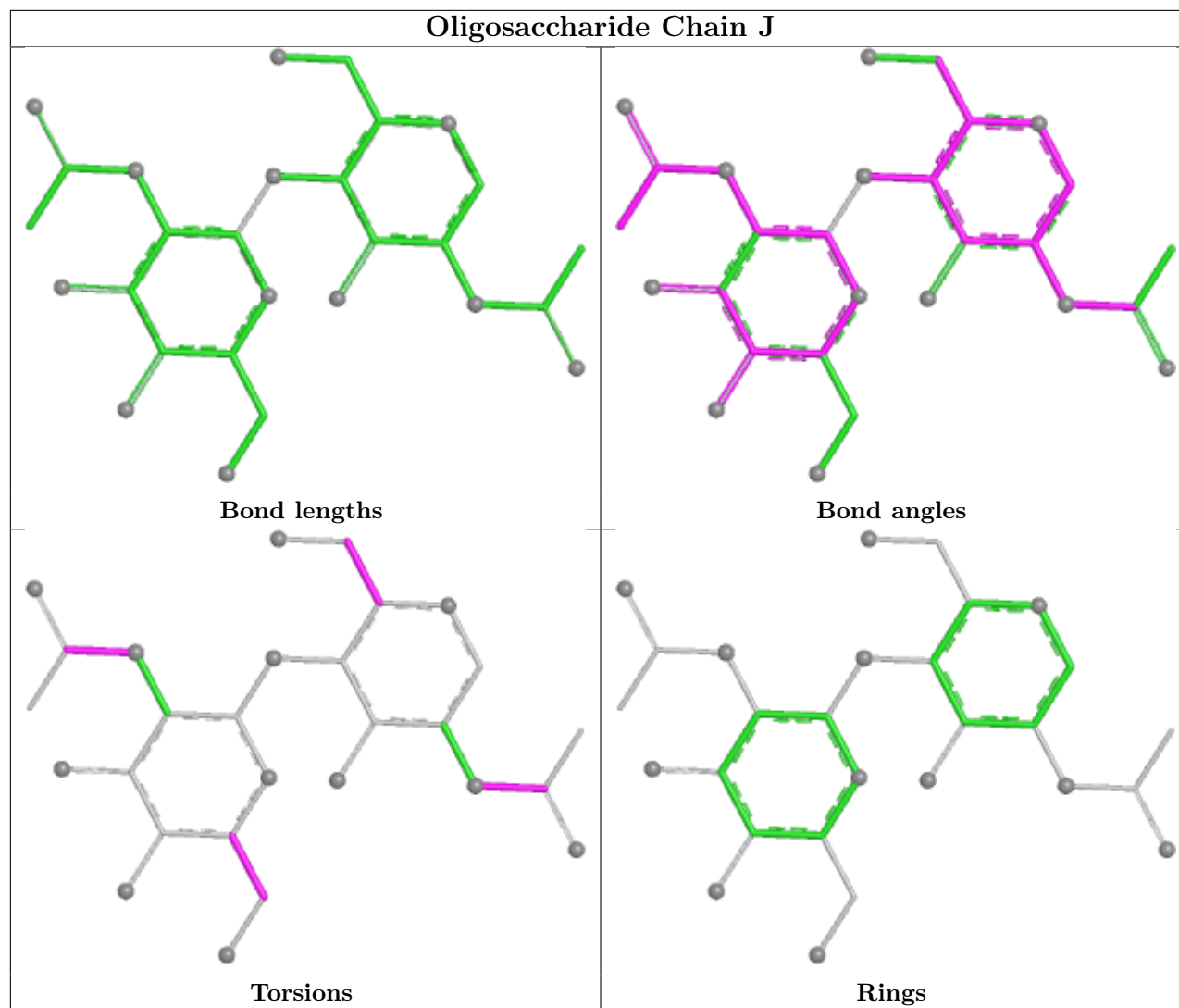
6 monomers are involved in 8 short contacts:

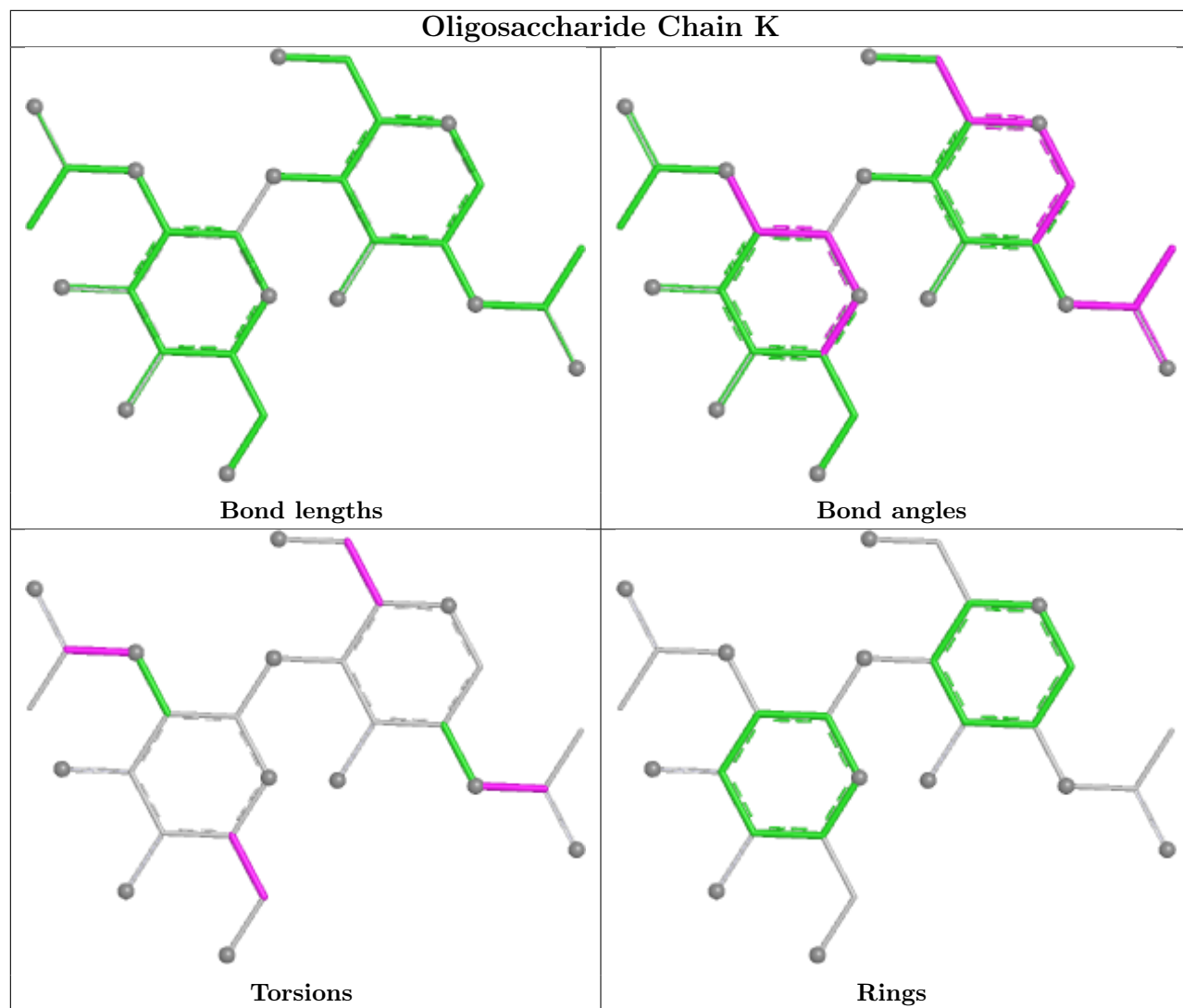
Mol	Chain	Res	Type	Clashes	Symm-Clashes
5	S	2	NAG	1	0
5	b	2	NAG	1	0
5	M	1	NAG	4	0
5	M	2	NAG	4	0
6	L	1	NAG	1	0
5	d	1	NAG	1	0

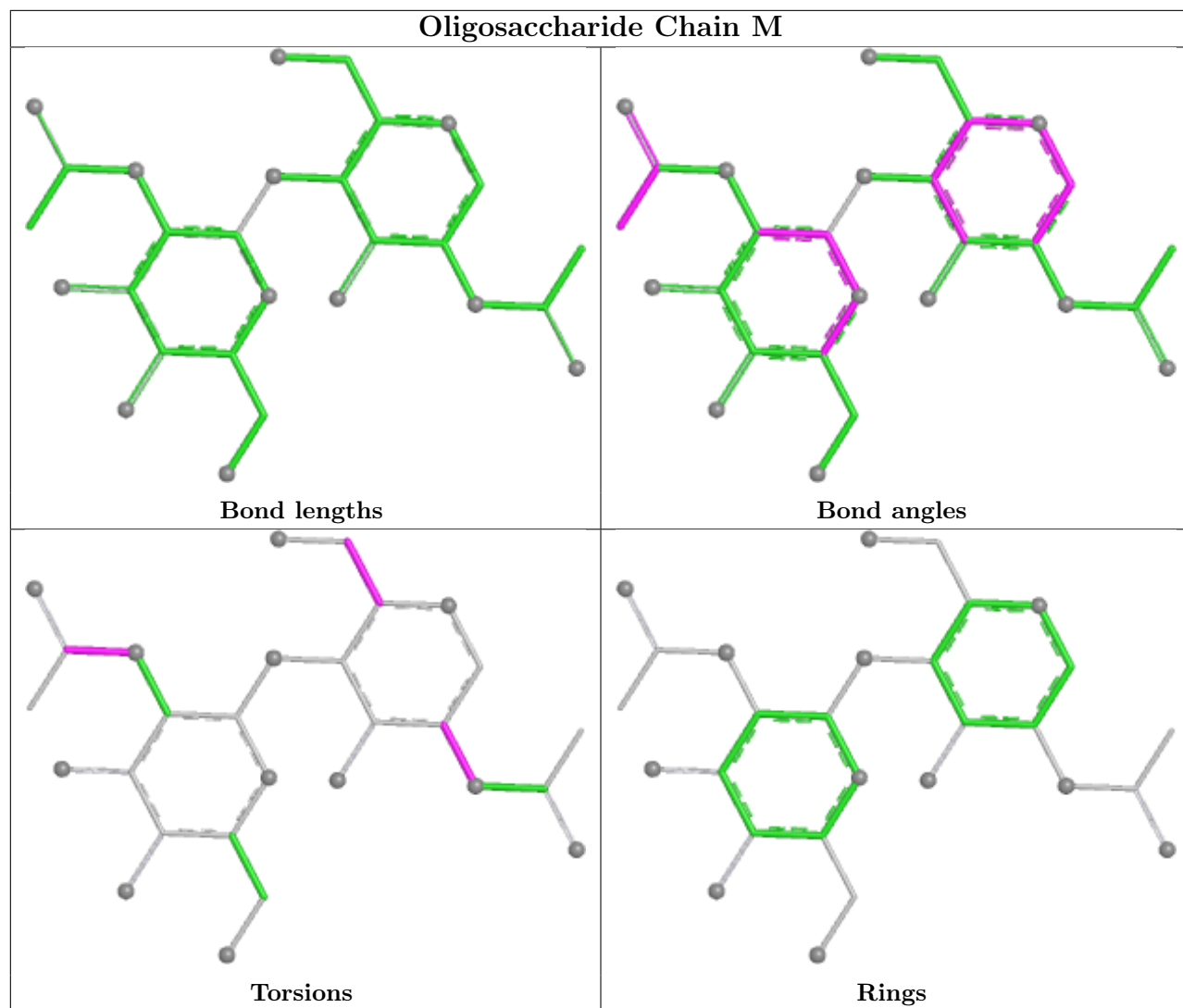
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for oligosaccharide.

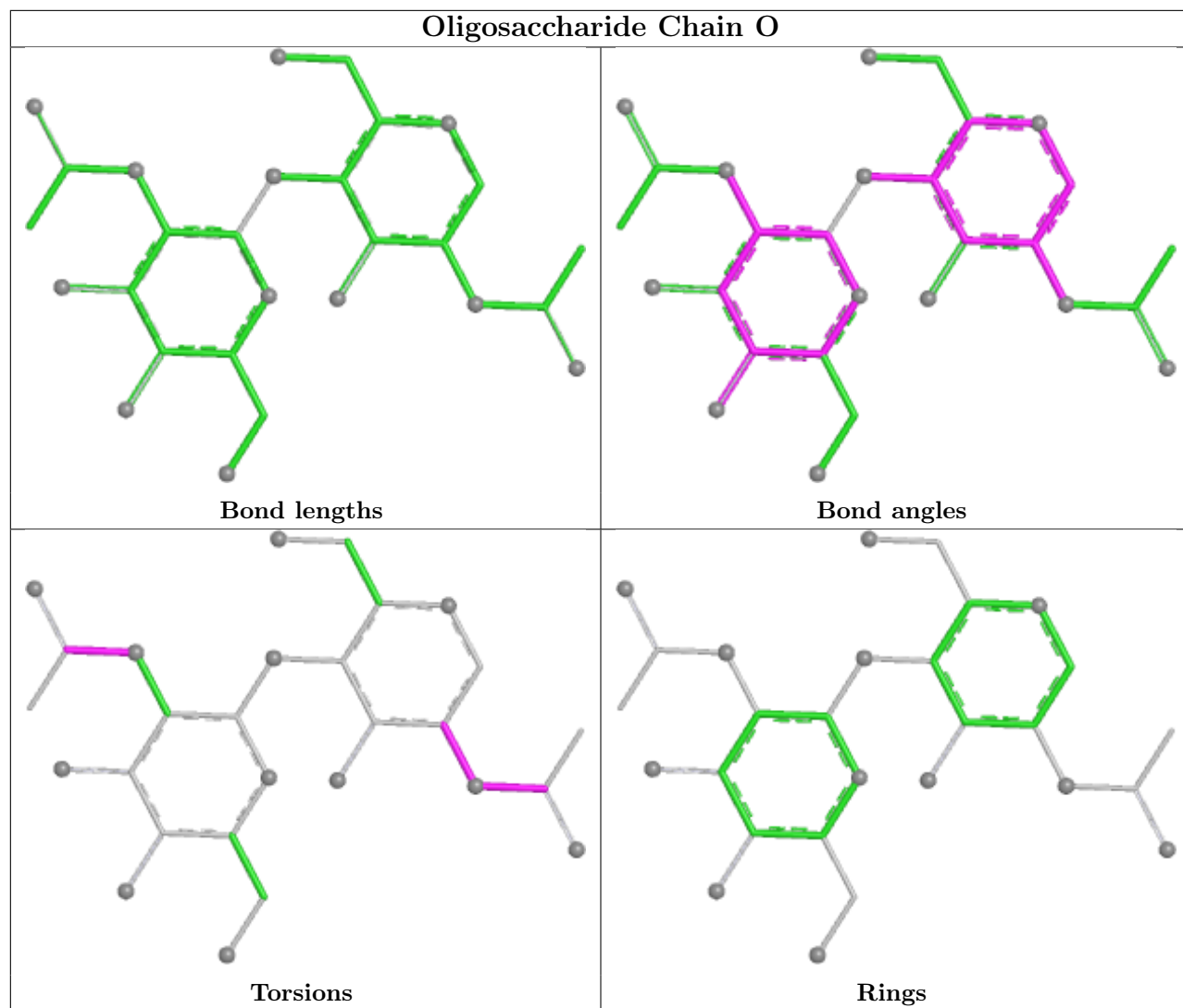


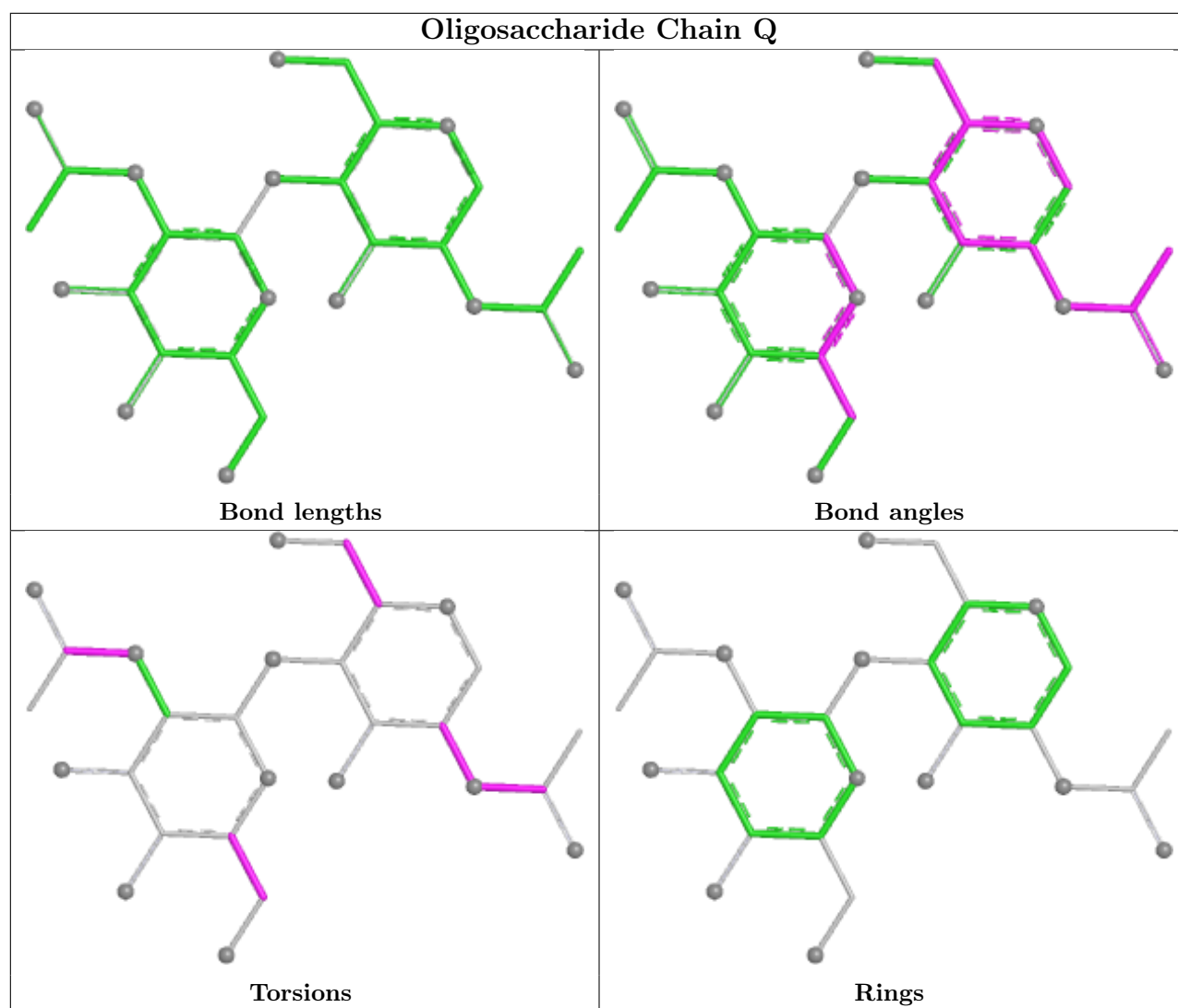


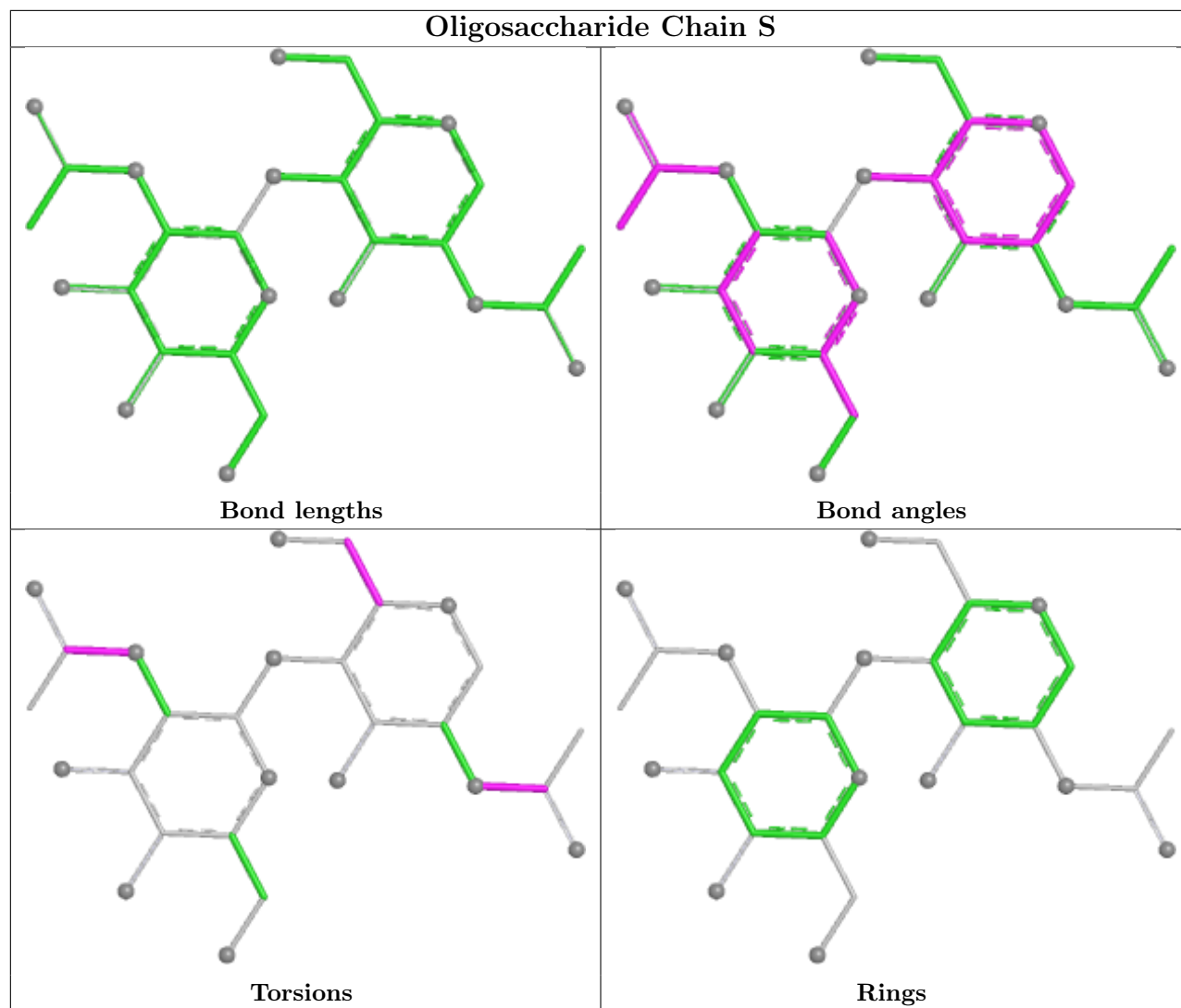


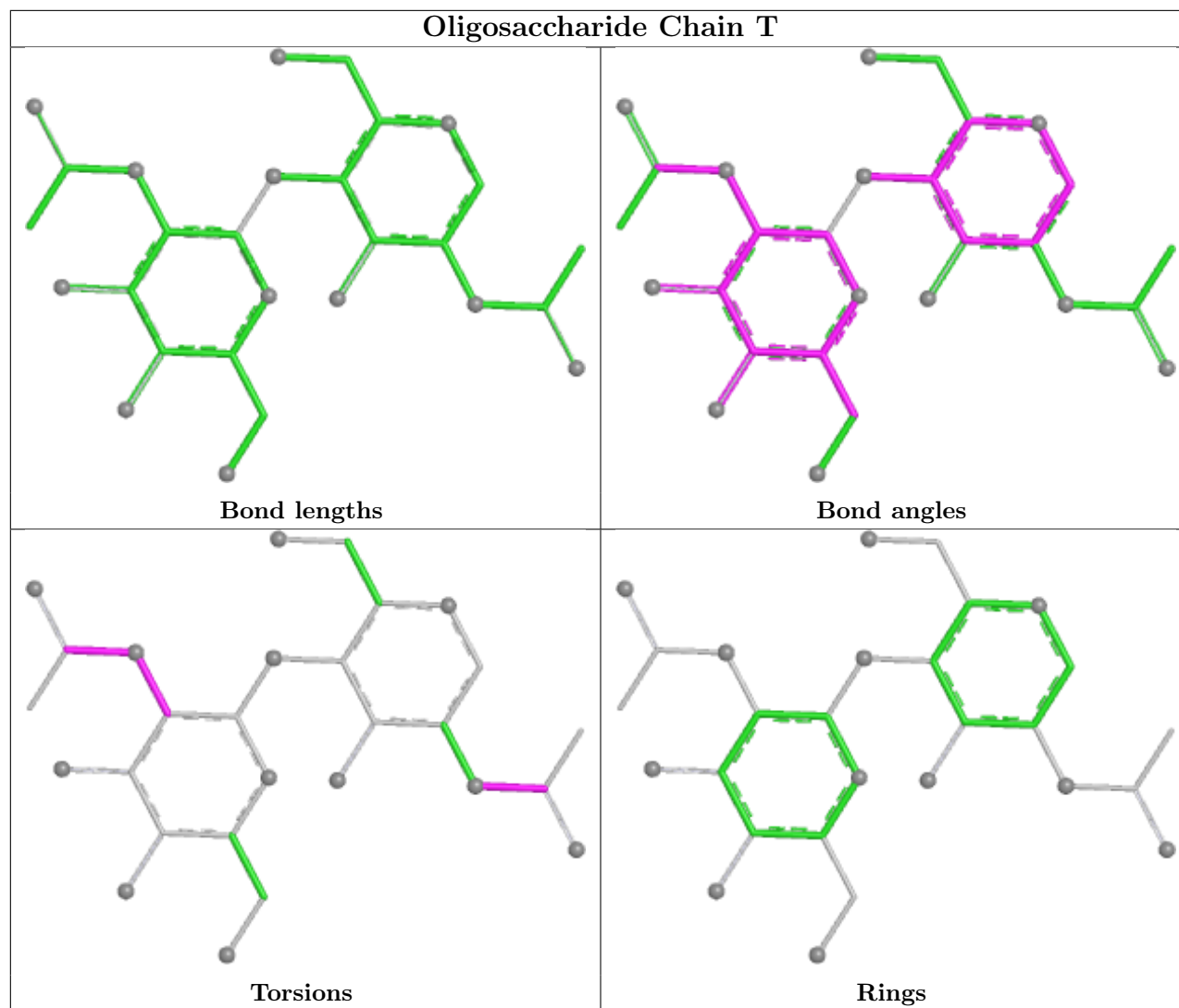


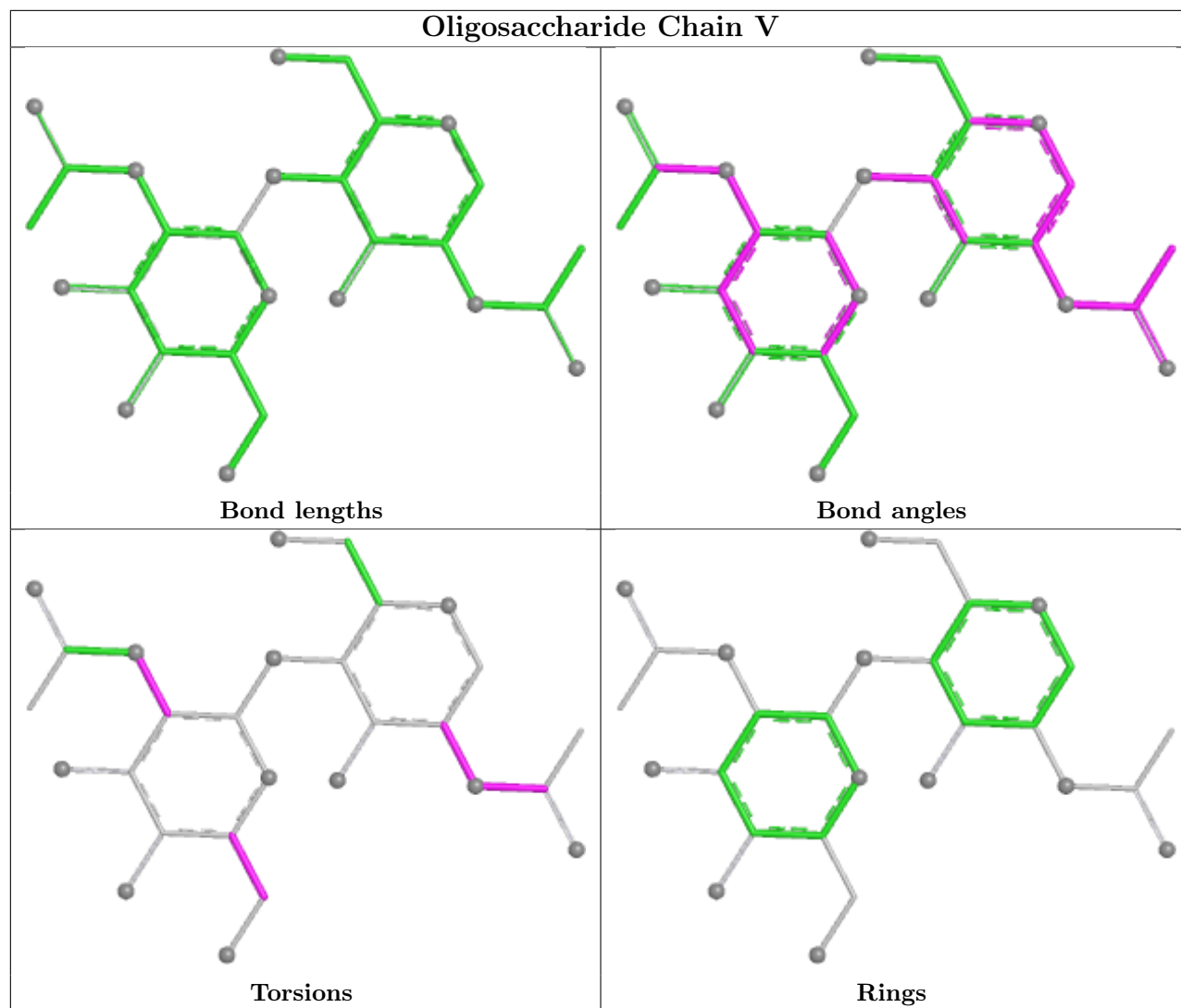


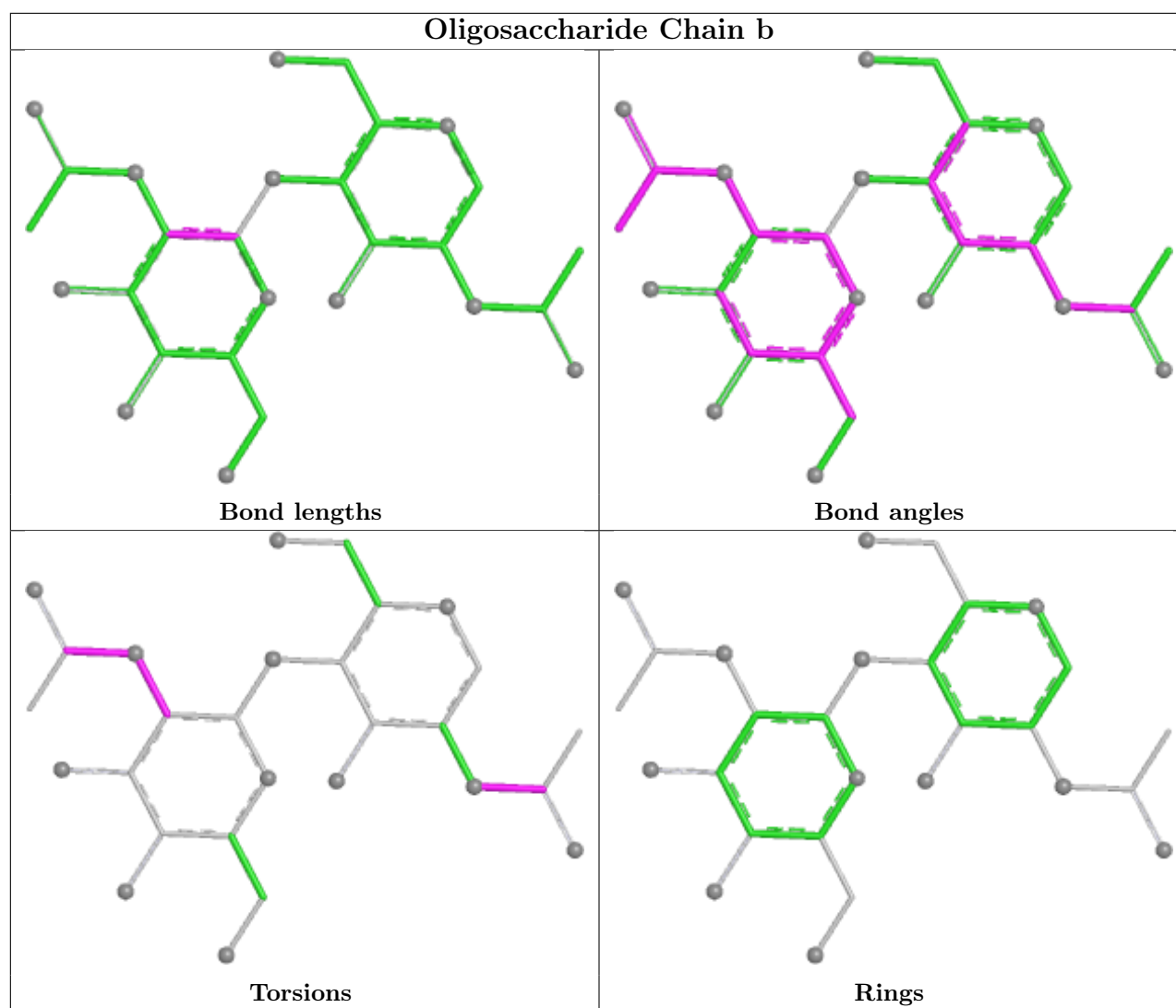


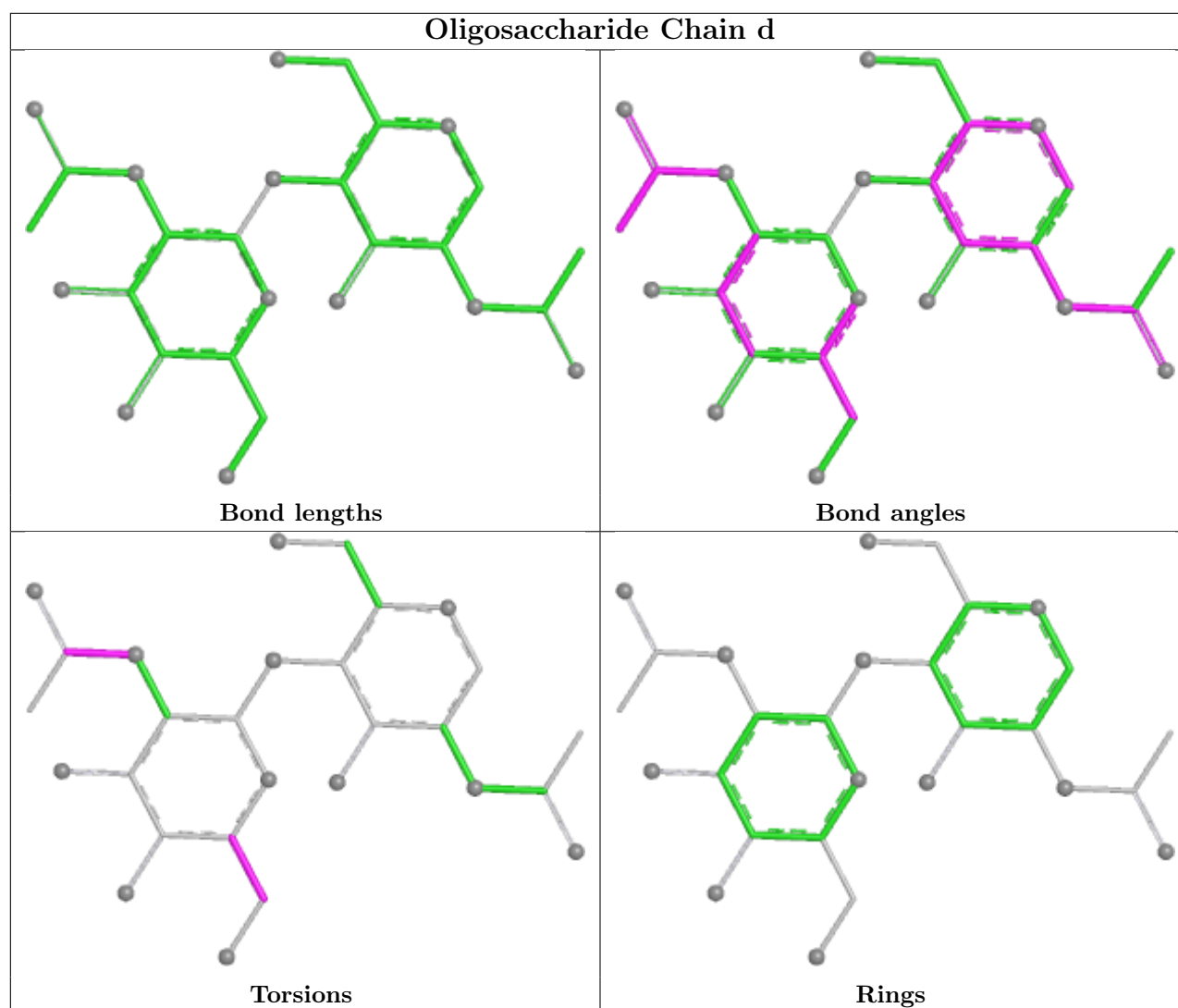


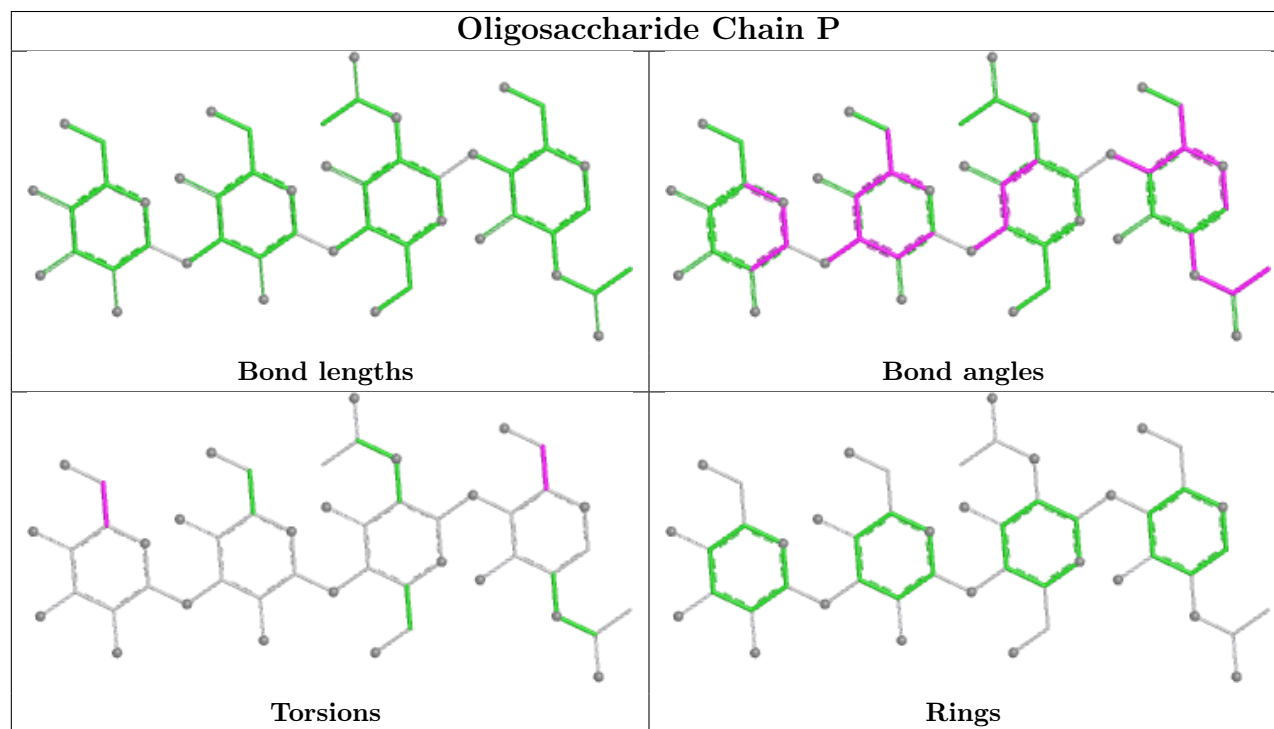
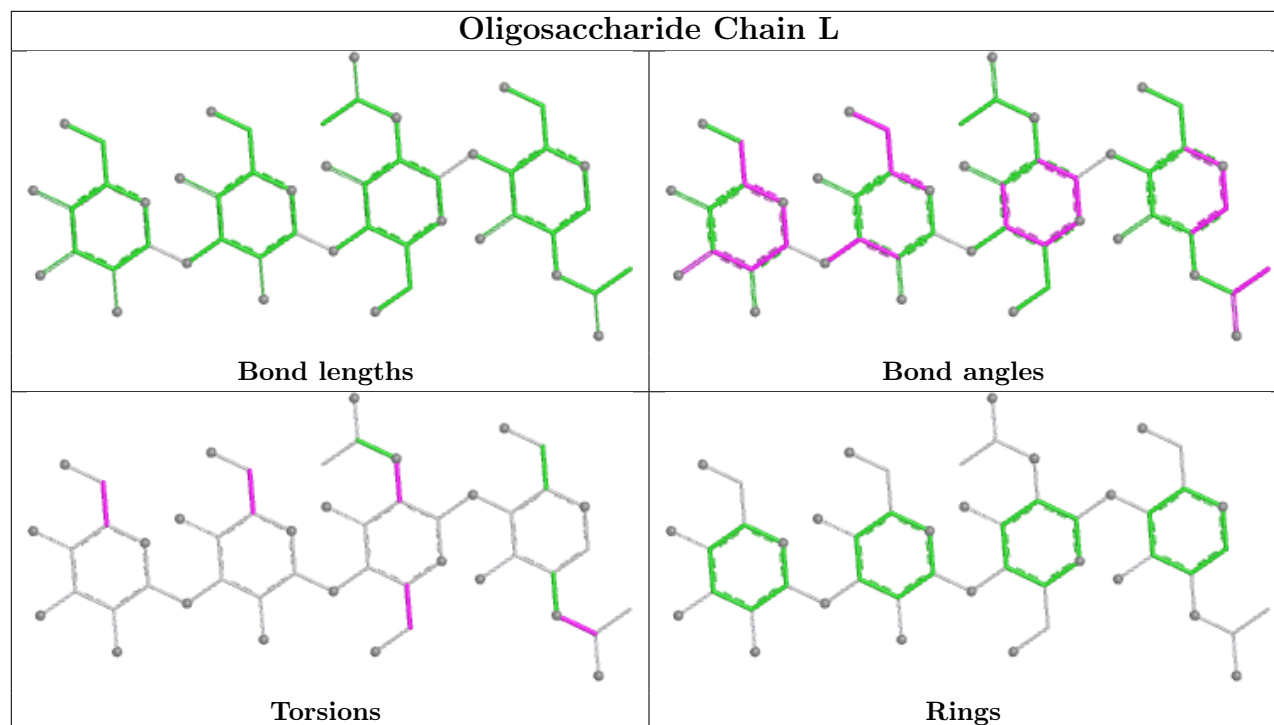




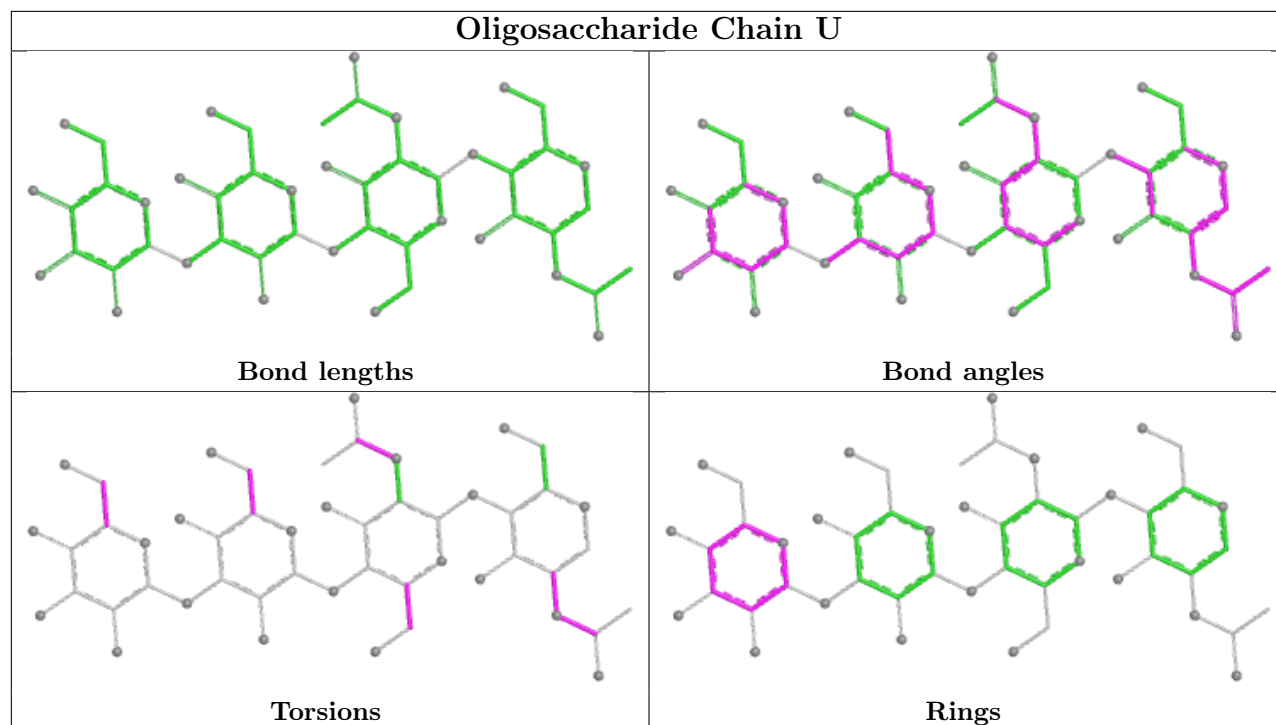




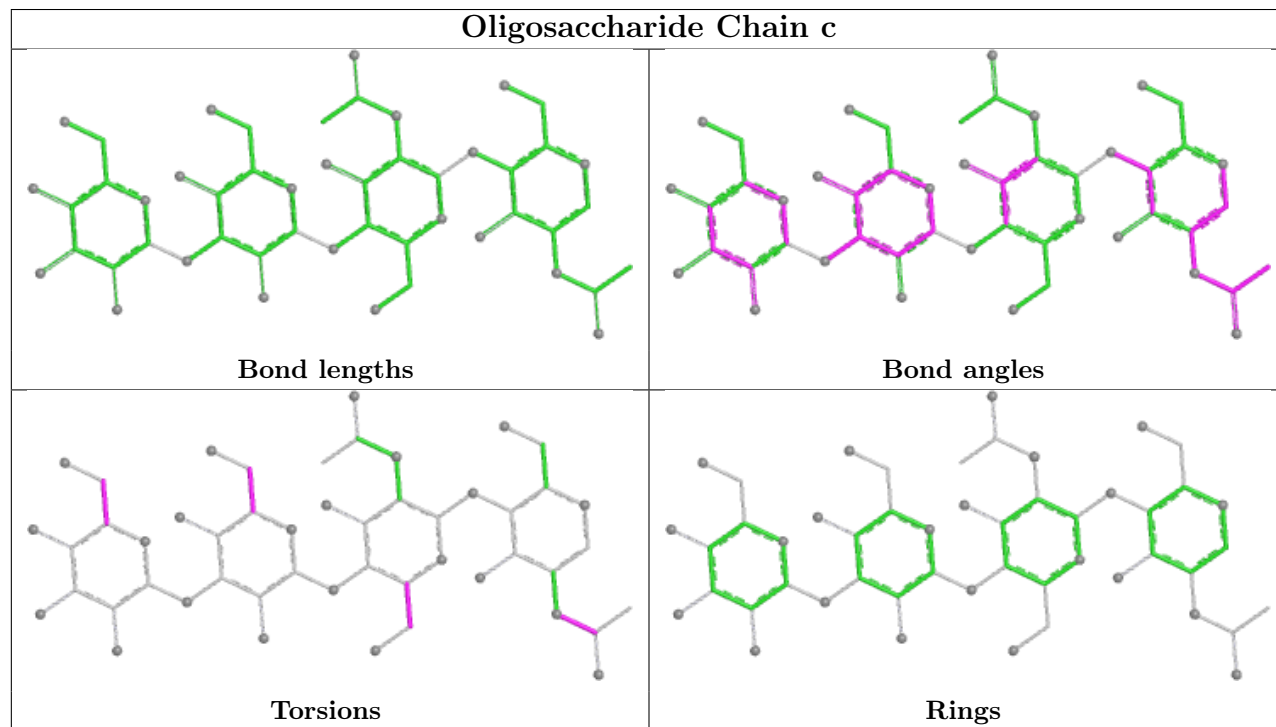


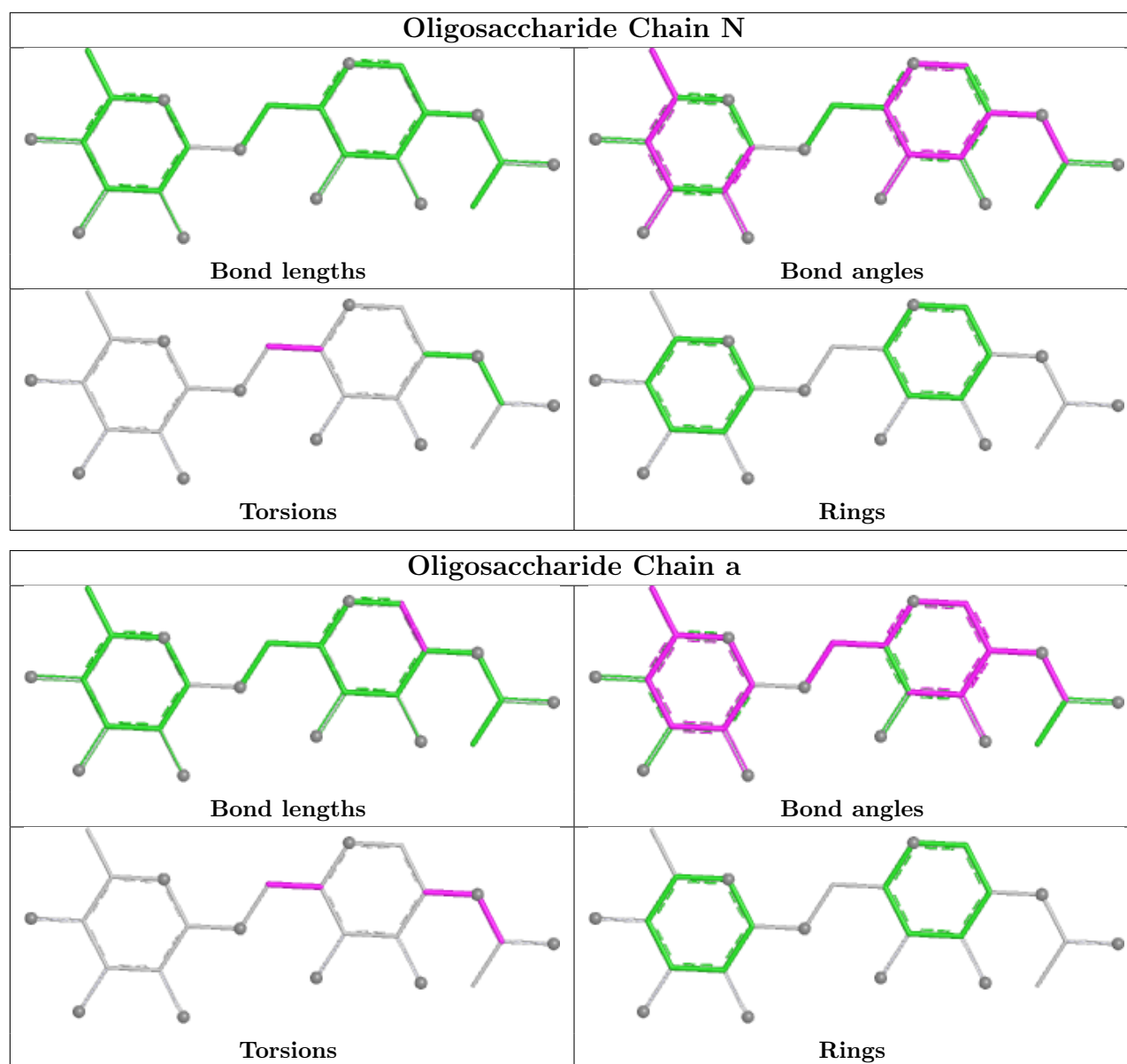


Oligosaccharide Chain U



Oligosaccharide Chain c





5.6 Ligand geometry [i](#)

Of 18 ligands modelled in this entry, 4 are monoatomic - leaving 14 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
8	NAG	A	801	1	14,14,15	0.93	1 (7%)	17,19,21	2.64	6 (35%)
8	NAG	D	801	1	14,14,15	0.69	1 (7%)	17,19,21	2.29	6 (35%)
8	NAG	D	802	1	14,14,15	0.91	1 (7%)	17,19,21	3.06	5 (29%)
8	NAG	D	803	1	14,14,15	0.67	0	17,19,21	2.51	8 (47%)
8	NAG	A	803	1	14,14,15	0.52	0	17,19,21	2.18	3 (17%)
8	NAG	B	803	1	14,14,15	0.73	0	17,19,21	2.16	6 (35%)
8	NAG	C	801	1	14,14,15	0.82	1 (7%)	17,19,21	1.66	5 (29%)
8	NAG	B	804	1	14,14,15	0.45	0	17,19,21	1.91	3 (17%)
8	NAG	B	801	1	14,14,15	0.71	0	17,19,21	2.17	6 (35%)
8	NAG	D	804	1	14,14,15	0.66	0	17,19,21	1.83	5 (29%)
8	NAG	C	802	1	14,14,15	0.92	1 (7%)	17,19,21	3.41	7 (41%)
8	NAG	C	803	1	14,14,15	0.53	0	17,19,21	1.51	3 (17%)
8	NAG	B	802	1	14,14,15	0.67	0	17,19,21	3.06	7 (41%)
8	NAG	A	802	1	14,14,15	0.82	1 (7%)	17,19,21	2.43	7 (41%)

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
8	NAG	A	801	1	1/1/5/7	6/6/23/26	0/1/1/1
8	NAG	D	803	1	1/1/5/7	4/6/23/26	0/1/1/1
8	NAG	D	801	1	-	2/6/23/26	0/1/1/1
8	NAG	D	802	1	-	4/6/23/26	0/1/1/1
8	NAG	A	803	1	-	4/6/23/26	0/1/1/1
8	NAG	B	803	1	1/1/5/7	4/6/23/26	0/1/1/1
8	NAG	C	801	1	-	0/6/23/26	0/1/1/1
8	NAG	B	804	1	-	4/6/23/26	0/1/1/1
8	NAG	B	801	1	-	1/6/23/26	0/1/1/1
8	NAG	D	804	1	-	5/6/23/26	0/1/1/1
8	NAG	C	802	1	-	5/6/23/26	0/1/1/1
8	NAG	C	803	1	-	4/6/23/26	0/1/1/1
8	NAG	B	802	1	-	5/6/23/26	0/1/1/1

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
8	NAG	A	802	1	-	4/6/23/26	0/1/1/1

All (6) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
8	A	801	NAG	C1-C2	2.75	1.56	1.52
8	C	801	NAG	C1-C2	2.21	1.55	1.52
8	A	802	NAG	C1-C2	2.16	1.55	1.52
8	D	802	NAG	C1-C2	2.15	1.55	1.52
8	C	802	NAG	C1-C2	2.07	1.55	1.52
8	D	801	NAG	C1-C2	2.04	1.55	1.52

All (77) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
8	D	802	NAG	C1-O5-C5	9.36	124.74	112.19
8	B	802	NAG	C1-O5-C5	8.97	124.21	112.19
8	C	802	NAG	C1-O5-C5	8.57	123.68	112.19
8	A	803	NAG	C1-O5-C5	7.57	122.33	112.19
8	C	802	NAG	O5-C1-C2	6.29	121.02	111.29
8	D	803	NAG	C1-O5-C5	6.17	120.45	112.19
8	B	804	NAG	C1-O5-C5	5.51	119.56	112.19
8	A	802	NAG	C2-N2-C7	5.44	130.18	122.90
8	C	802	NAG	C3-C4-C5	5.24	119.74	110.23
8	C	802	NAG	C2-N2-C7	5.07	129.70	122.90
8	B	803	NAG	C2-N2-C7	5.03	129.64	122.90
8	D	801	NAG	C1-O5-C5	4.81	118.63	112.19
8	A	801	NAG	O4-C4-C5	4.77	121.07	109.32
8	D	802	NAG	O4-C4-C5	4.64	120.76	109.32
8	A	801	NAG	O3-C3-C2	4.61	118.98	109.40
8	A	802	NAG	C1-C2-N2	4.57	117.63	110.43
8	A	801	NAG	C1-O5-C5	4.48	118.19	112.19
8	D	801	NAG	O5-C1-C2	4.45	118.18	111.29
8	D	804	NAG	C4-C3-C2	4.45	117.54	111.02
8	B	801	NAG	O5-C5-C6	4.42	116.26	107.66
8	A	801	NAG	O3-C3-C4	-4.30	100.24	110.38
8	D	802	NAG	O3-C3-C2	3.92	117.53	109.40
8	D	803	NAG	C3-C4-C5	3.88	117.27	110.23
8	B	802	NAG	O7-C7-N2	3.83	128.76	121.98
8	A	801	NAG	O5-C1-C2	-3.82	105.38	111.29
8	B	802	NAG	C2-N2-C7	3.75	127.92	122.90
8	B	803	NAG	O7-C7-C8	-3.61	115.62	122.05

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
8	D	802	NAG	C2-N2-C7	3.59	127.71	122.90
8	B	802	NAG	O4-C4-C5	3.58	118.14	109.32
8	D	801	NAG	O7-C7-C8	-3.51	115.80	122.05
8	B	802	NAG	O3-C3-C4	-3.37	102.44	110.38
8	B	801	NAG	C6-C5-C4	-3.36	104.78	113.02
8	C	803	NAG	O5-C1-C2	3.29	116.38	111.29
8	A	802	NAG	O5-C5-C6	3.24	113.97	107.66
8	B	801	NAG	C1-O5-C5	3.15	116.41	112.19
8	B	804	NAG	C3-C4-C5	3.11	115.87	110.23
8	B	803	NAG	C1-C2-N2	3.11	115.33	110.43
8	C	801	NAG	C1-C2-N2	3.08	115.28	110.43
8	A	801	NAG	O5-C5-C6	3.02	113.53	107.66
8	A	802	NAG	C1-O5-C5	2.99	116.20	112.19
8	D	801	NAG	C1-C2-N2	2.99	115.15	110.43
8	C	801	NAG	C4-C3-C2	2.93	115.31	111.02
8	D	804	NAG	C1-O5-C5	2.88	116.05	112.19
8	D	803	NAG	C1-C2-N2	-2.85	105.94	110.43
8	D	803	NAG	C4-C3-C2	2.82	115.15	111.02
8	C	803	NAG	C2-N2-C7	-2.76	119.20	122.90
8	D	803	NAG	C8-C7-N2	2.74	120.66	116.12
8	C	802	NAG	O5-C5-C4	2.72	117.46	110.83
8	B	804	NAG	O5-C1-C2	-2.70	107.11	111.29
8	B	801	NAG	O4-C4-C5	2.69	115.94	109.32
8	D	803	NAG	O3-C3-C2	2.61	114.83	109.40
8	C	801	NAG	C2-N2-C7	2.60	126.39	122.90
8	D	801	NAG	C8-C7-N2	2.59	120.41	116.12
8	A	803	NAG	C4-C3-C2	-2.54	107.29	111.02
8	A	802	NAG	O3-C3-C2	2.54	114.68	109.40
8	D	802	NAG	C1-C2-N2	2.53	114.42	110.43
8	D	804	NAG	C3-C4-C5	2.49	114.75	110.23
8	A	802	NAG	O3-C3-C4	-2.47	104.56	110.38
8	D	804	NAG	C2-N2-C7	2.45	126.19	122.90
8	D	801	NAG	O4-C4-C3	2.44	116.12	110.38
8	C	801	NAG	O4-C4-C5	2.43	115.32	109.32
8	D	803	NAG	O7-C7-C8	-2.39	117.79	122.05
8	B	802	NAG	O5-C5-C4	2.39	116.64	110.83
8	D	804	NAG	C8-C7-N2	2.38	120.06	116.12
8	B	803	NAG	O3-C3-C2	2.36	114.31	109.40
8	C	803	NAG	C1-O5-C5	2.33	115.31	112.19
8	B	803	NAG	O7-C7-N2	2.28	126.01	121.98
8	B	801	NAG	C1-C2-N2	-2.23	106.92	110.43
8	C	802	NAG	O3-C3-C2	2.22	114.02	109.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
8	C	801	NAG	C1-O5-C5	2.22	115.17	112.19
8	B	801	NAG	C4-C3-C2	2.19	114.23	111.02
8	B	802	NAG	C8-C7-N2	-2.17	112.52	116.12
8	B	803	NAG	C1-O5-C5	2.15	115.07	112.19
8	A	802	NAG	O4-C4-C3	-2.15	105.31	110.38
8	D	803	NAG	C2-N2-C7	2.10	125.71	122.90
8	C	802	NAG	C6-C5-C4	2.08	118.13	113.02
8	A	803	NAG	O5-C1-C2	2.00	114.39	111.29

All (3) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
8	A	801	NAG	C5
8	B	803	NAG	C1
8	D	803	NAG	C1

All (52) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
8	A	801	NAG	C1-C2-N2-C7
8	A	802	NAG	C1-C2-N2-C7
8	A	802	NAG	O7-C7-N2-C2
8	A	803	NAG	C8-C7-N2-C2
8	A	803	NAG	O7-C7-N2-C2
8	B	802	NAG	C1-C2-N2-C7
8	B	802	NAG	O7-C7-N2-C2
8	B	803	NAG	C8-C7-N2-C2
8	B	803	NAG	O7-C7-N2-C2
8	B	804	NAG	C8-C7-N2-C2
8	B	804	NAG	O7-C7-N2-C2
8	C	802	NAG	C3-C2-N2-C7
8	C	803	NAG	C8-C7-N2-C2
8	C	803	NAG	O7-C7-N2-C2
8	D	802	NAG	C1-C2-N2-C7
8	D	802	NAG	C8-C7-N2-C2
8	D	802	NAG	O7-C7-N2-C2
8	D	803	NAG	C3-C2-N2-C7
8	D	803	NAG	C8-C7-N2-C2
8	D	803	NAG	O7-C7-N2-C2
8	D	804	NAG	C1-C2-N2-C7
8	D	804	NAG	C8-C7-N2-C2
8	D	804	NAG	O7-C7-N2-C2

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Mol	Chain	Res	Type	Atoms
8	A	803	NAG	C4-C5-C6-O6
8	A	801	NAG	C8-C7-N2-C2
8	A	801	NAG	O7-C7-N2-C2
8	A	802	NAG	C8-C7-N2-C2
8	B	802	NAG	C8-C7-N2-C2
8	C	803	NAG	O5-C5-C6-O6
8	B	802	NAG	C4-C5-C6-O6
8	C	803	NAG	C4-C5-C6-O6
8	A	803	NAG	O5-C5-C6-O6
8	A	801	NAG	O5-C5-C6-O6
8	A	801	NAG	C4-C5-C6-O6
8	C	802	NAG	C4-C5-C6-O6
8	B	804	NAG	C4-C5-C6-O6
8	C	802	NAG	C8-C7-N2-C2
8	C	802	NAG	O7-C7-N2-C2
8	D	801	NAG	C8-C7-N2-C2
8	D	801	NAG	O7-C7-N2-C2
8	B	802	NAG	O5-C5-C6-O6
8	B	804	NAG	O5-C5-C6-O6
8	B	801	NAG	O5-C5-C6-O6
8	D	804	NAG	C4-C5-C6-O6
8	C	802	NAG	O5-C5-C6-O6
8	D	804	NAG	O5-C5-C6-O6
8	D	802	NAG	O5-C5-C6-O6
8	A	801	NAG	C3-C2-N2-C7
8	B	803	NAG	C1-C2-N2-C7
8	D	803	NAG	C4-C5-C6-O6
8	B	803	NAG	C3-C2-N2-C7
8	A	802	NAG	C4-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](#)

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	A	728/728 (100%)	-0.17	1 (0%) 92 88	38, 57, 86, 106	0
1	B	728/728 (100%)	-0.07	4 (0%) 87 75	36, 57, 86, 106	0
1	C	728/728 (100%)	-0.26	0 100 100	38, 57, 86, 106	0
1	D	728/728 (100%)	-0.25	0 100 100	38, 58, 87, 106	0
2	E	352/363 (96%)	0.66	19 (5%) 31 18	40, 82, 90, 93	0
2	F	352/363 (96%)	0.36	7 (1%) 65 44	67, 83, 91, 100	0
2	G	352/363 (96%)	0.19	5 (1%) 73 53	71, 84, 92, 95	0
2	H	352/363 (96%)	0.22	0 100 100	65, 83, 91, 104	0
3	W	6/9 (66%)	0.63	0 100 100	72, 82, 94, 95	0
3	X	6/9 (66%)	0.36	0 100 100	64, 73, 82, 85	0
3	Y	6/9 (66%)	0.43	0 100 100	84, 92, 99, 100	0
3	Z	6/9 (66%)	0.58	0 100 100	86, 92, 99, 100	0
All	All	4344/4400 (98%)	-0.01	36 (0%) 82 66	36, 67, 90, 106	0

All (36) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
2	G	239	GLY	3.0
2	E	13	GLU	2.8
2	E	14	LEU	2.8
1	B	88	VAL	2.8
2	F	96	VAL	2.7
2	E	261	ILE	2.6
2	G	242	THR	2.6
2	F	354	PRO	2.5
2	E	22	ILE	2.5
2	E	292	LEU	2.5
2	E	98	VAL	2.5

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Mol	Chain	Res	Type	RSRZ
2	G	354	PRO	2.4
2	E	19	ASP	2.4
2	E	200	ALA	2.4
2	E	7	PHE	2.4
2	E	12	VAL	2.4
1	B	452	GLU	2.3
2	E	94	GLY	2.3
2	E	113	GLU	2.2
2	F	240	TYR	2.2
2	F	58	LEU	2.2
2	F	11	LYS	2.2
2	G	261	ILE	2.1
2	E	179	ALA	2.1
2	G	215	ALA	2.1
2	E	146	VAL	2.1
2	E	16	VAL	2.1
1	B	487	ASN	2.1
2	E	151	ILE	2.1
2	F	189	GLU	2.1
1	A	39	SER	2.0
2	F	243	LEU	2.0
2	E	105	HIS	2.0
2	E	104	PRO	2.0
1	B	106	SER	2.0
2	E	18	LEU	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
4	NAG	I	1	14/15	-	-	92,95,99,100	0
4	NAG	I	2	14/15	-	-	97,102,103,104	0
4	FUL	I	3	10/11	-	-	98,99,99,100	0

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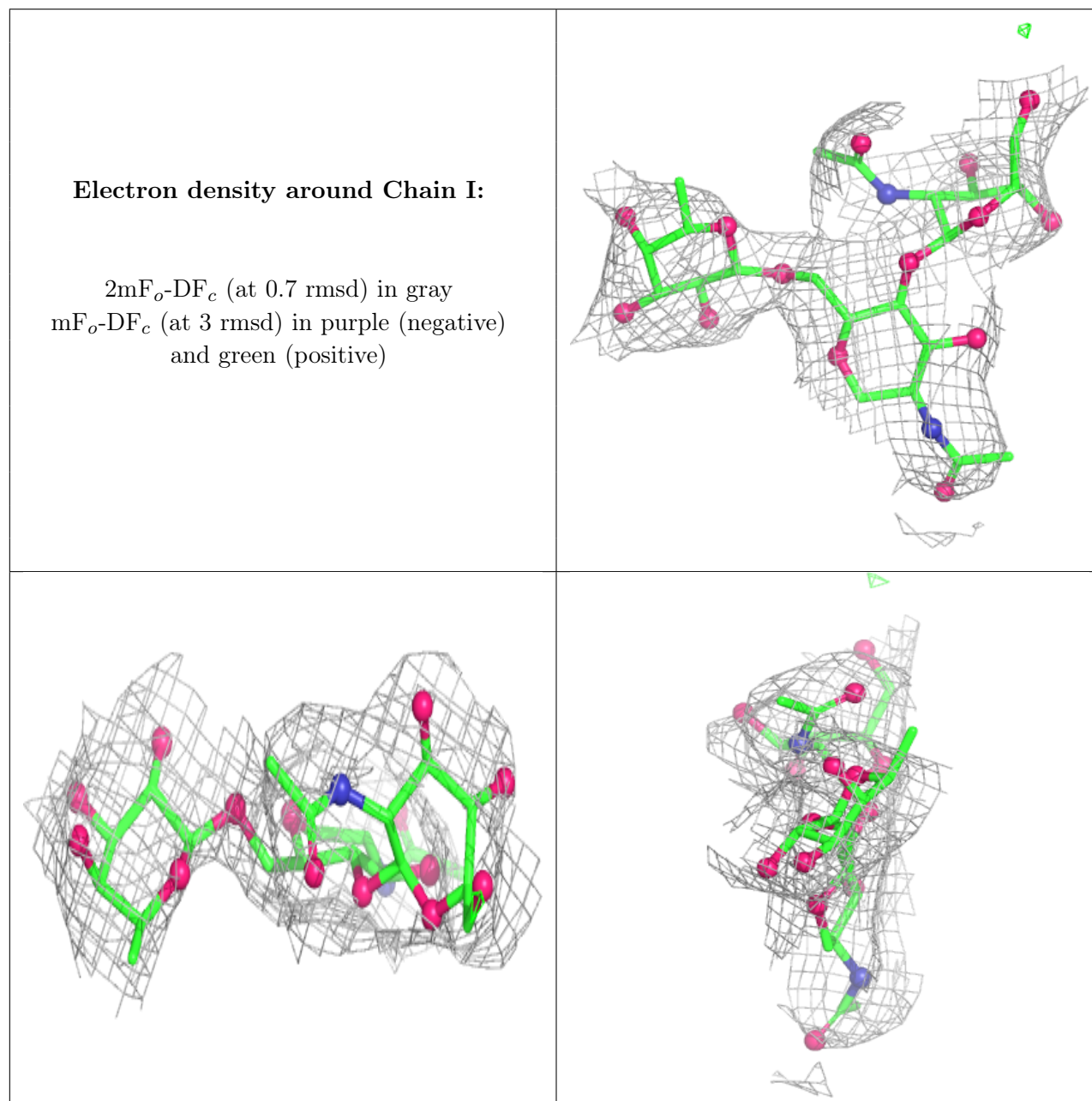
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
5	NAG	Q	2	14/15	0.64	0.13	87,88,89,89	0
4	NAG	R	2	14/15	-	-	110,111,111,112	0
4	FUL	R	3	10/11	-	-	106,106,107,107	0
5	NAG	J	1	14/15	-	-	77,82,85,90	0
5	NAG	J	2	14/15	-	-	92,93,96,96	0
5	NAG	K	1	14/15	-	-	77,81,83,84	0
5	NAG	K	2	14/15	-	-	82,86,87,87	0
5	NAG	M	2	14/15	0.65	0.11	86,88,90,90	0
5	NAG	V	2	14/15	0.69	0.10	99,102,106,107	0
6	BMA	P	3	11/12	0.75	0.08	57,60,61,64	0
6	MAN	P	4	11/12	0.79	0.09	68,69,72,73	0
7	NAG	N	1	14/15	0.79	0.09	80,86,88,89	0
5	NAG	Q	1	14/15	0.81	0.14	75,82,86,86	0
4	NAG	R	1	14/15	0.81	0.10	99,102,105,108	0
6	NAG	U	1	14/15	0.83	0.10	46,52,58,61	0
5	NAG	O	2	14/15	0.83	0.10	67,76,78,81	0
5	NAG	M	1	14/15	0.85	0.09	73,76,80,84	0
6	NAG	U	2	14/15	0.86	0.08	66,69,74,80	0
5	NAG	O	1	14/15	0.87	0.09	70,71,72,74	0
5	NAG	b	1	14/15	-	-	78,82,83,85	0
5	NAG	b	2	14/15	-	-	84,87,89,90	0
5	NAG	d	1	14/15	-	-	75,80,82,83	0
5	NAG	d	2	14/15	-	-	98,99,100,101	0
6	NAG	L	1	14/15	-	-	44,47,52,54	0
6	NAG	L	2	14/15	-	-	58,60,63,68	0
6	BMA	L	3	11/12	-	-	74,76,77,79	0
6	MAN	L	4	11/12	-	-	82,84,85,85	0
5	NAG	S	1	14/15	0.88	0.07	91,96,99,104	0
5	NAG	S	2	14/15	0.89	0.09	106,107,108,109	0
5	NAG	V	1	14/15	0.90	0.09	71,75,78,79	0
6	NAG	P	2	14/15	0.93	0.07	42,45,51,52	0
5	NAG	T	1	14/15	0.94	0.07	79,83,85,88	0
5	NAG	T	2	14/15	0.94	0.07	91,93,94,94	0
6	BMA	U	3	11/12	-	-	85,88,89,90	0
6	MAN	U	4	11/12	-	-	91,92,94,95	0
6	NAG	c	1	14/15	-	-	55,60,62,67	0
6	NAG	c	2	14/15	-	-	68,74,79,83	0
6	BMA	c	3	11/12	-	-	84,87,89,92	0
6	MAN	c	4	11/12	-	-	91,93,93,94	0
6	NAG	P	1	14/15	0.95	0.07	38,39,42,43	0
7	FUL	N	2	10/11	-	-	78,83,83,83	0
7	NAG	a	1	14/15	-	-	100,102,103,103	0

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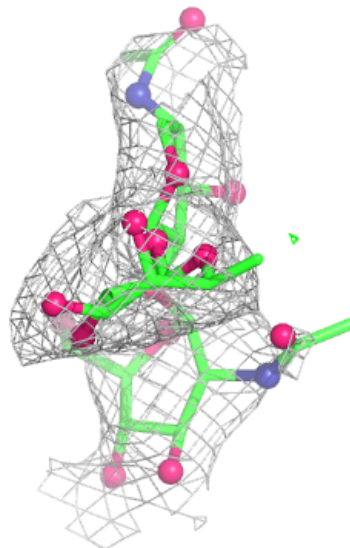
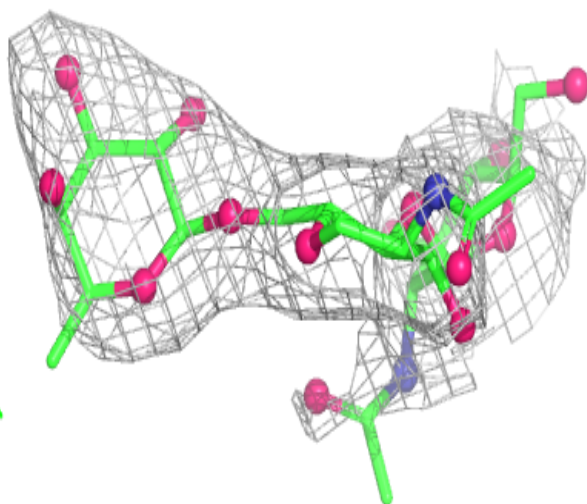
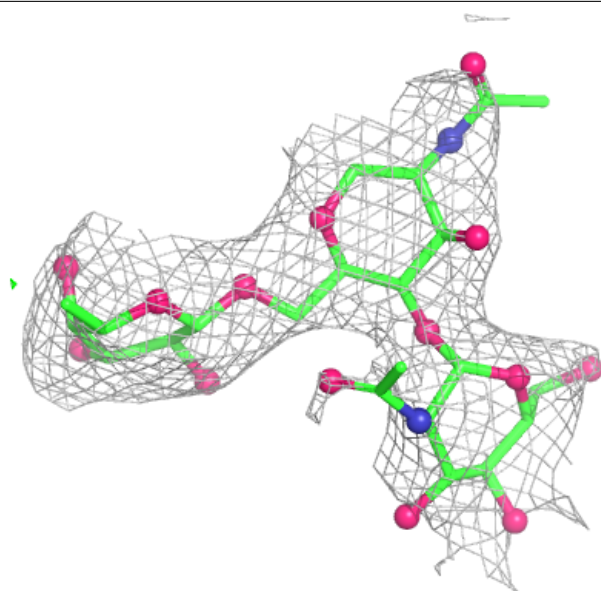
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
7	FUL	a	2	10/11	-	-	107,109,110,111	0

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.



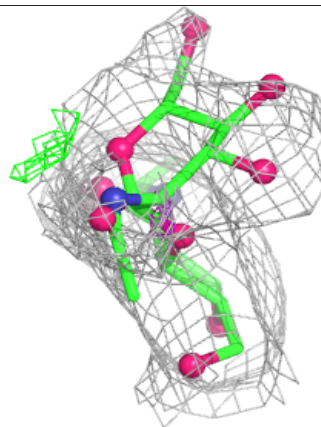
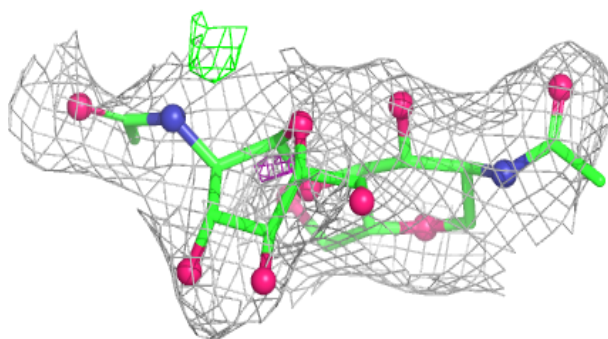
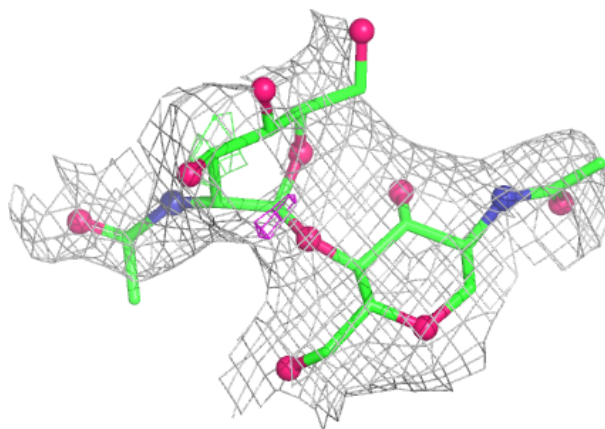
Electron density around Chain R:

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



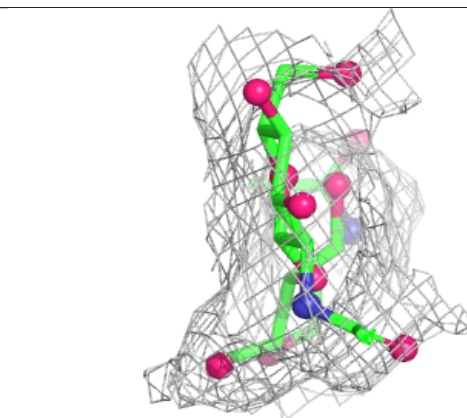
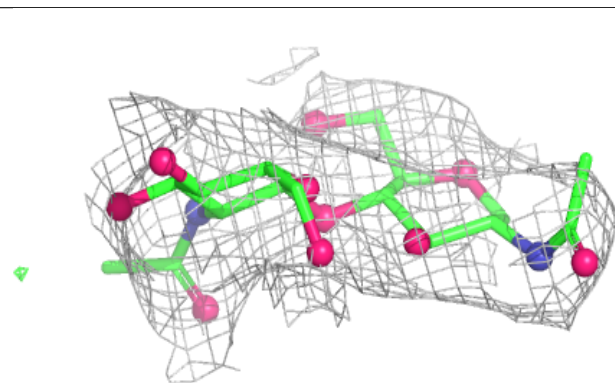
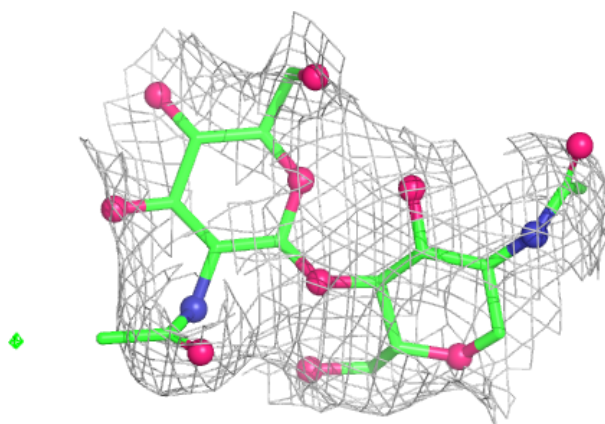
Electron density around Chain J:

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

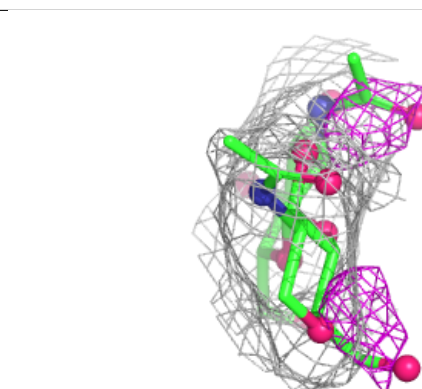
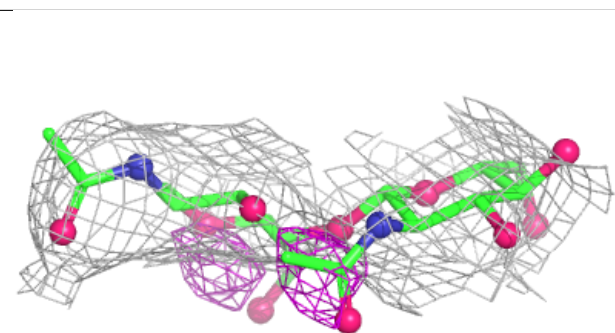
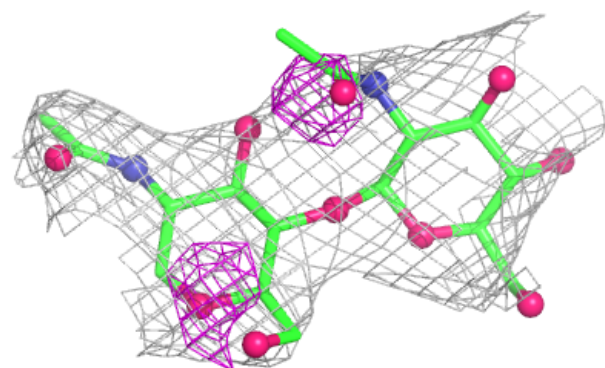


Electron density around Chain K:

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

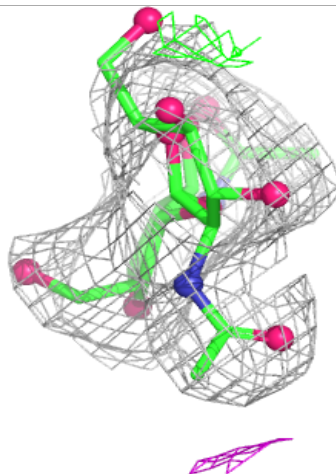
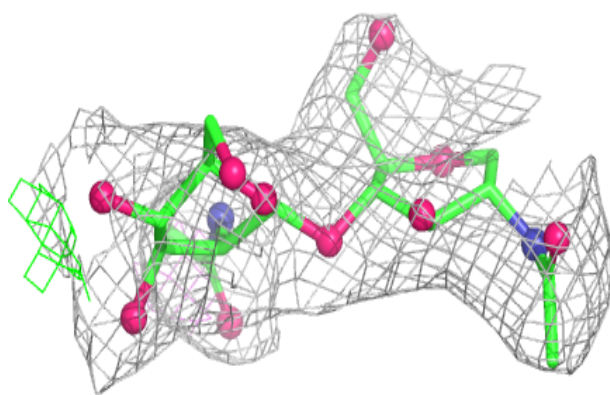
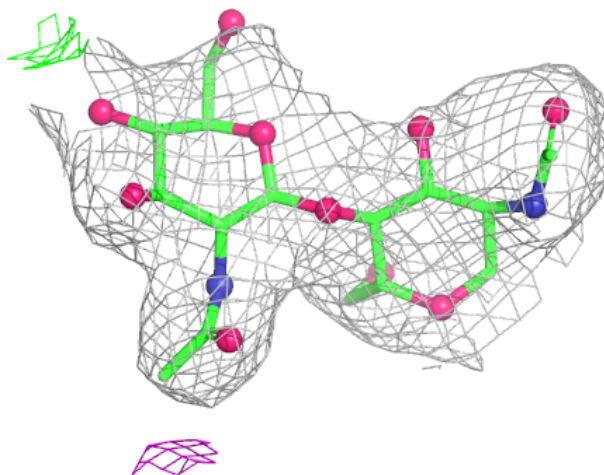
**Electron density around Chain M:**

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



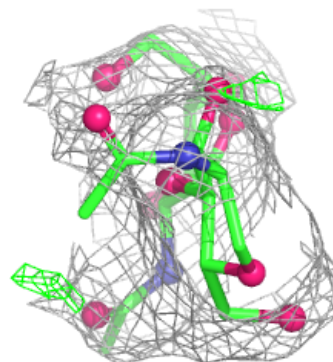
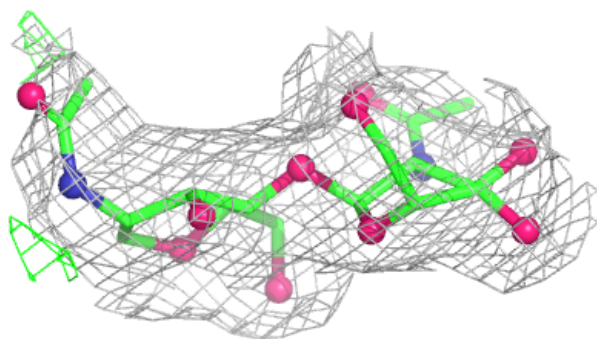
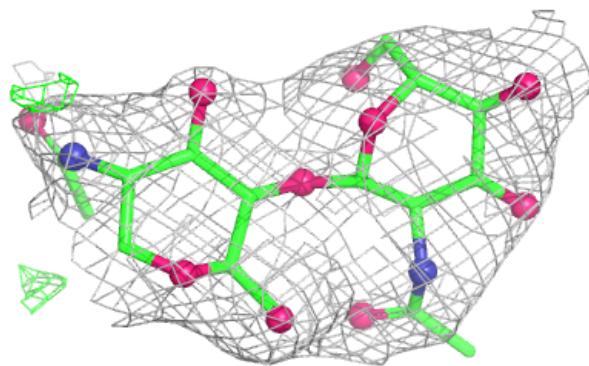
Electron density around Chain O:

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



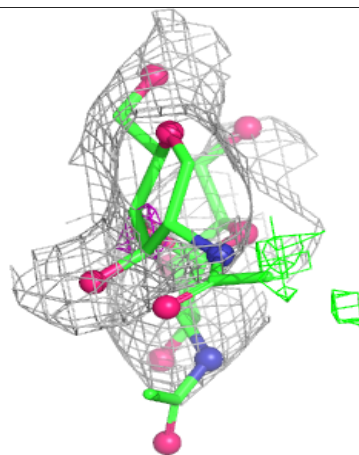
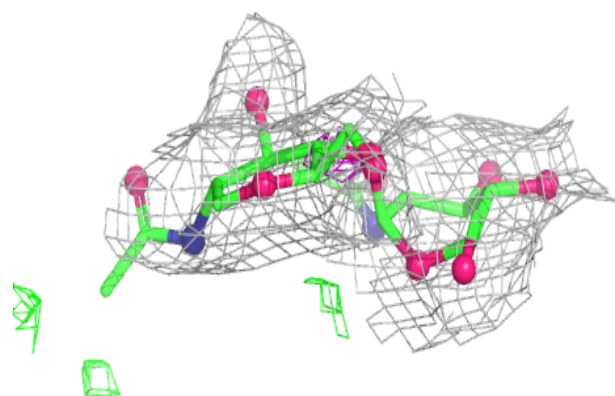
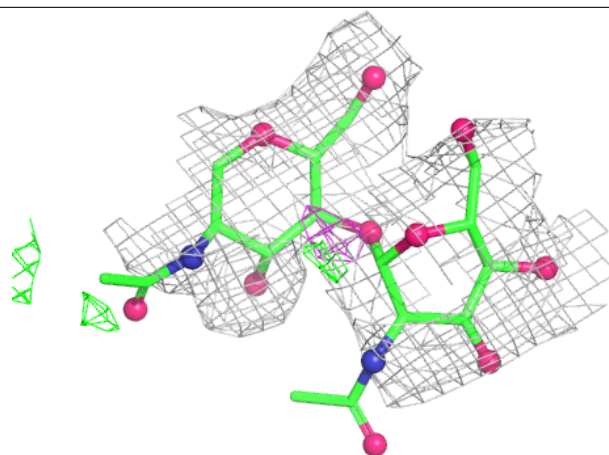
Electron density around Chain Q:

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



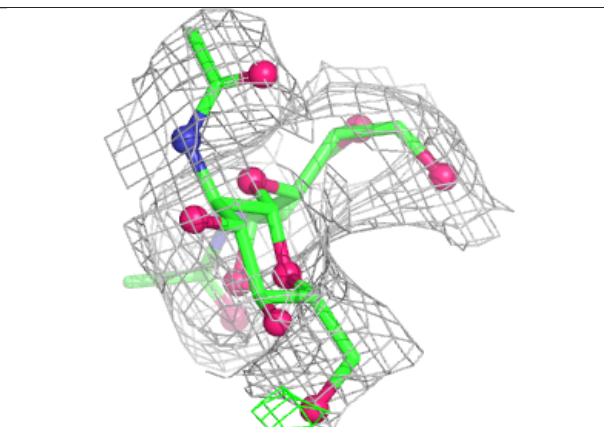
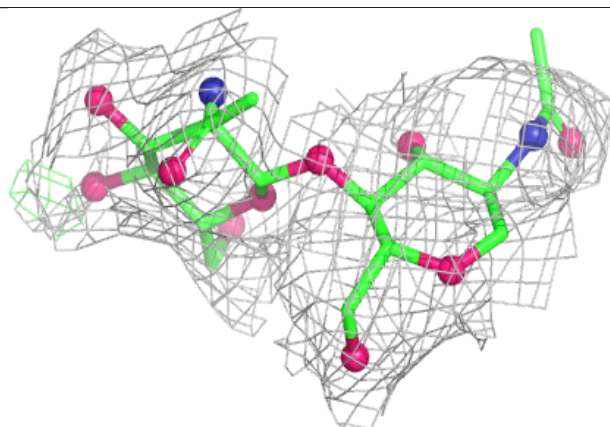
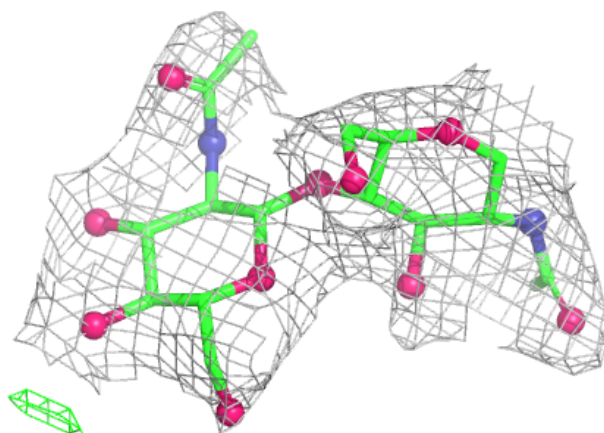
Electron density around Chain S:

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

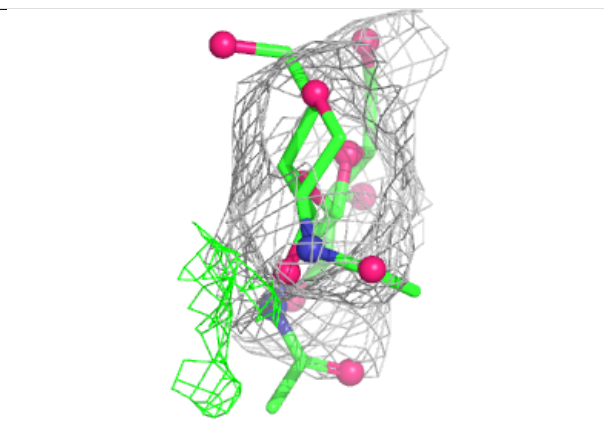
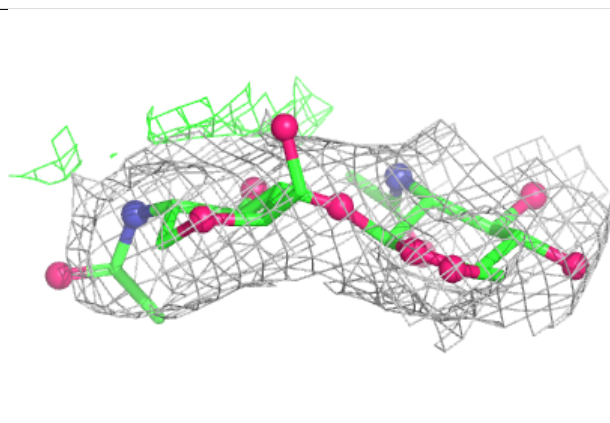
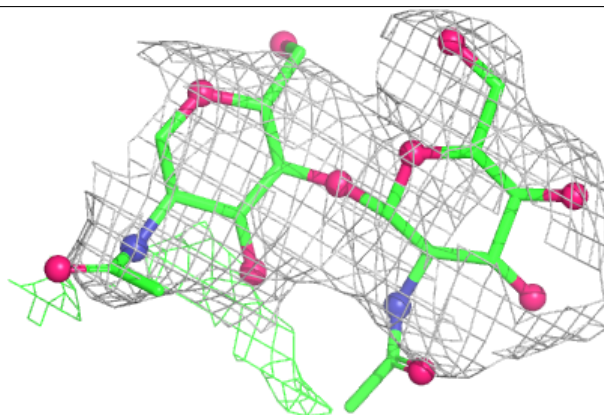


Electron density around Chain T:

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

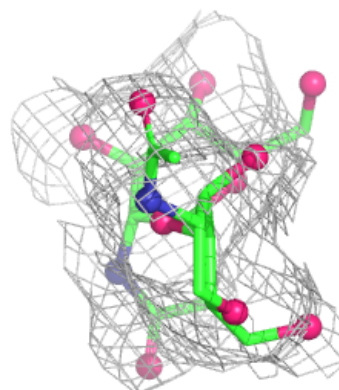
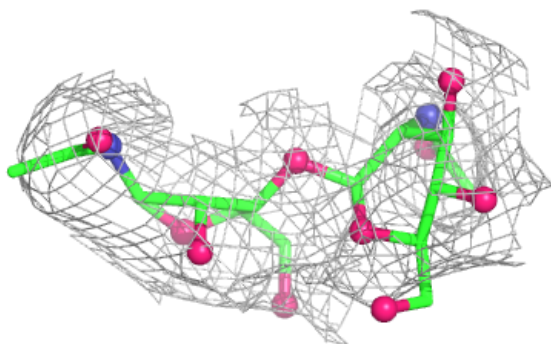
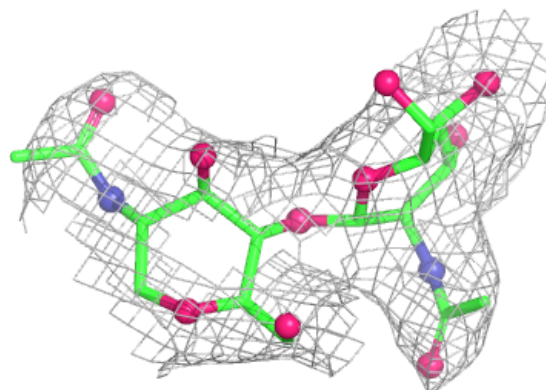
**Electron density around Chain V:**

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



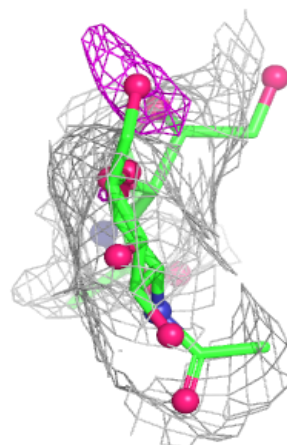
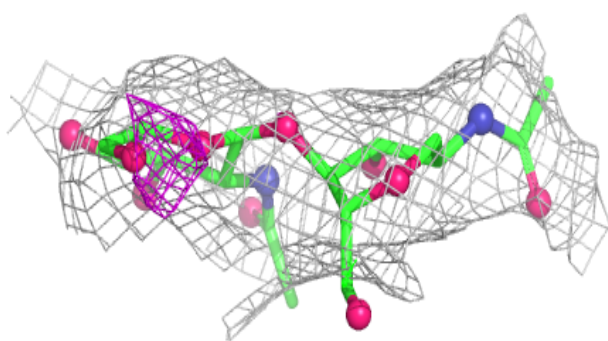
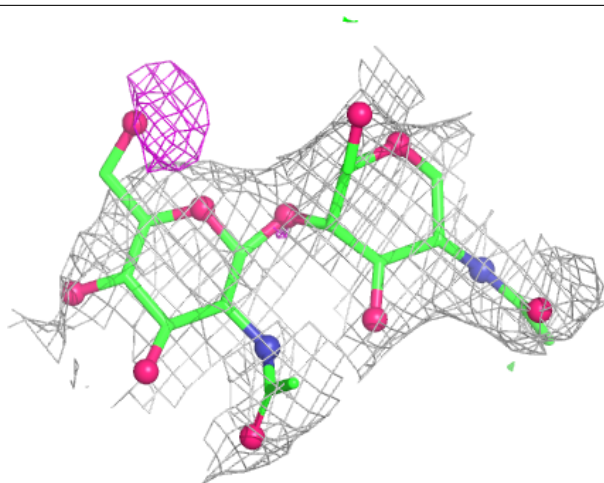
Electron density around Chain b:

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



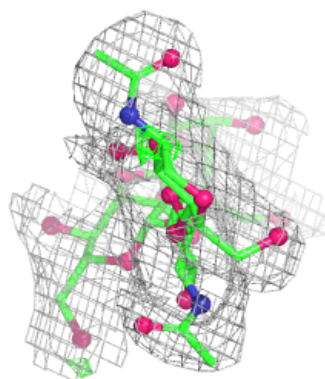
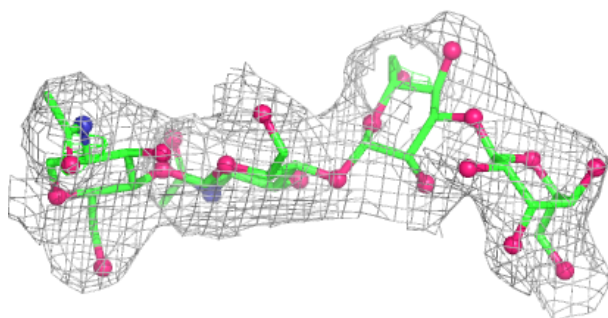
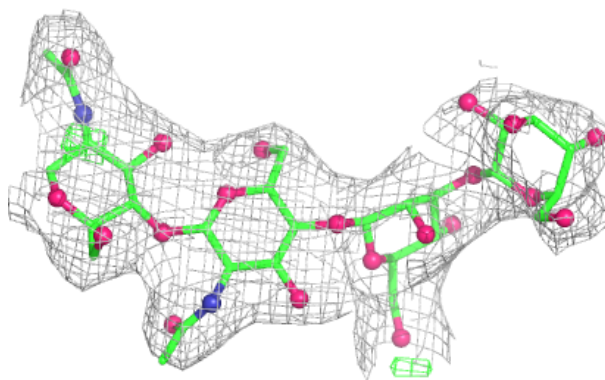
Electron density around Chain d:

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

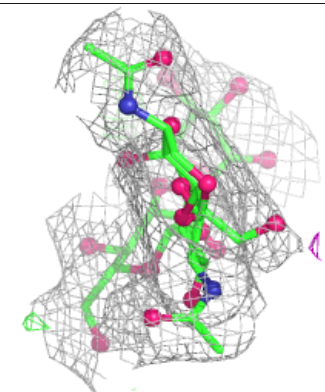
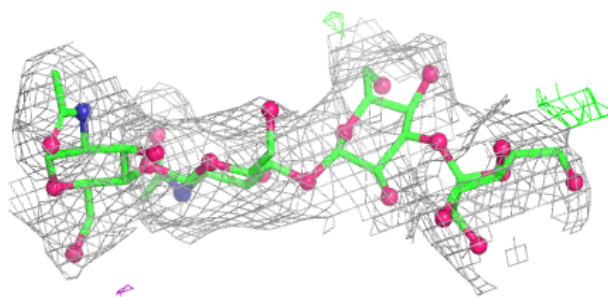
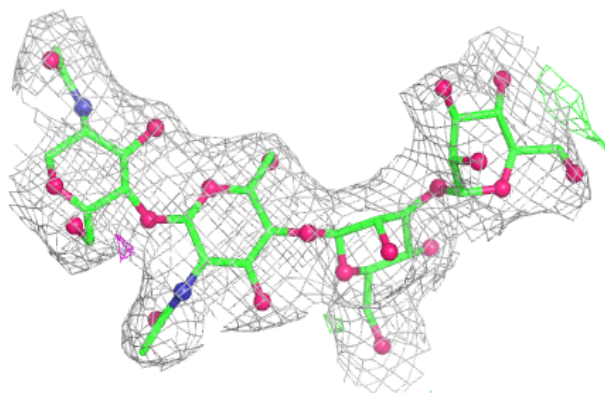


Electron density around Chain L:

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

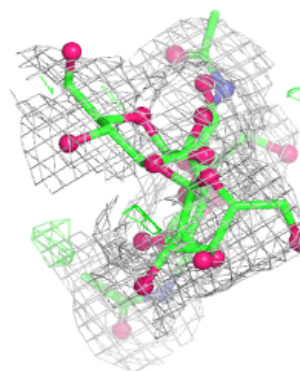
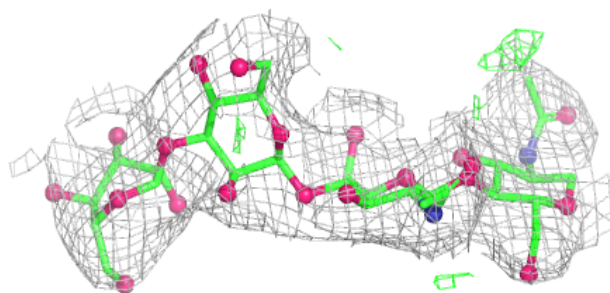
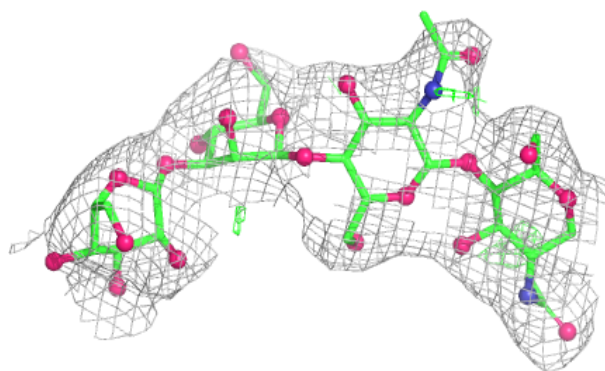
**Electron density around Chain P:**

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

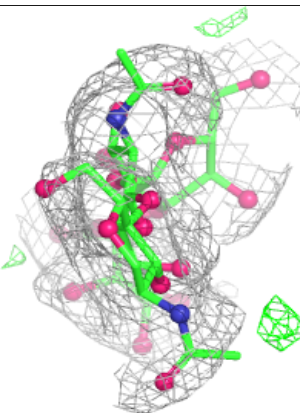
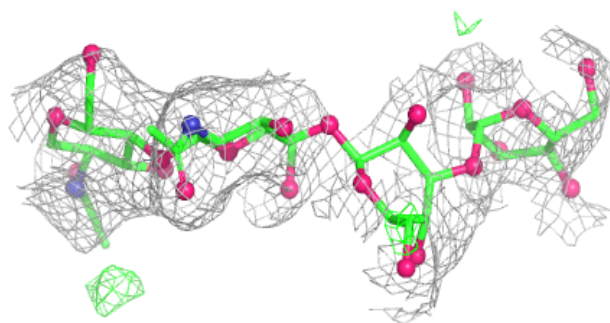
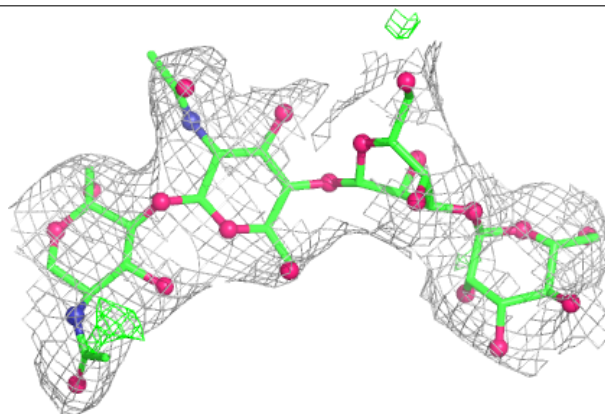


Electron density around Chain U:

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

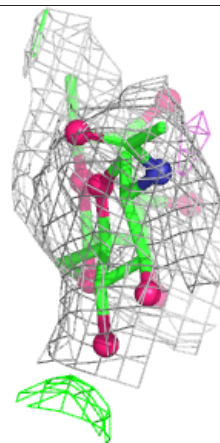
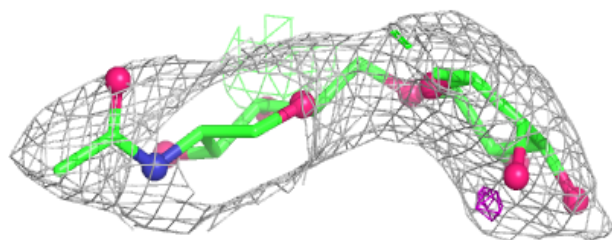
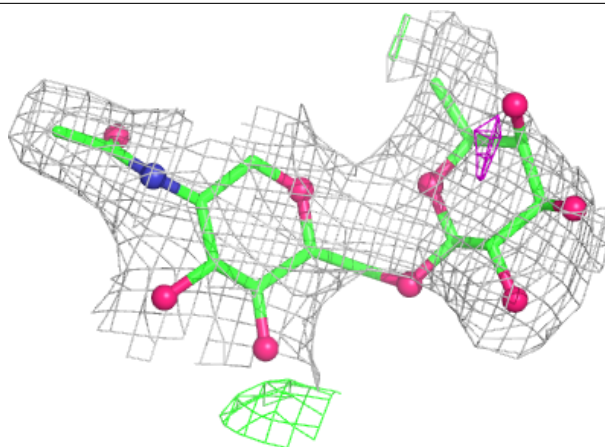
**Electron density around Chain c:**

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

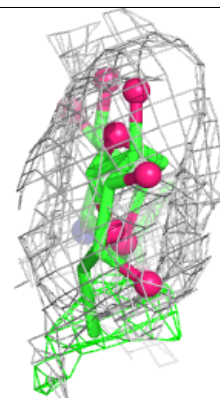
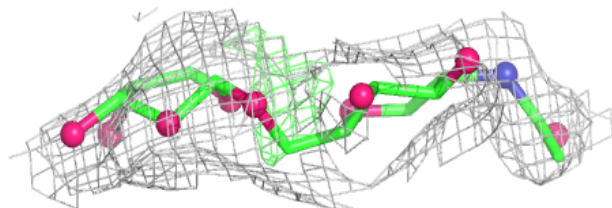
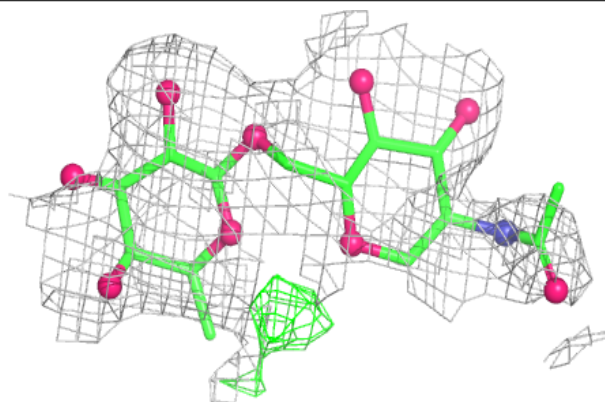


Electron density around Chain N:

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

**Electron density around Chain a:**

$2mF_o-DF_c$ (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
8	NAG	A	802	14/15	0.57	0.15	89,92,96,97	0
8	NAG	C	802	14/15	0.58	0.15	92,94,95,96	0
8	NAG	D	802	14/15	0.64	0.11	64,67,69,69	0
8	NAG	D	804	14/15	0.67	0.11	101,103,104,104	0
8	NAG	D	801	14/15	0.73	0.12	90,94,95,96	0
8	NAG	C	803	14/15	0.75	0.11	101,104,106,106	0
8	NAG	A	803	14/15	0.76	0.09	93,97,99,99	0
8	NAG	B	804	14/15	0.78	0.10	98,102,103,103	0
8	NAG	D	803	14/15	0.78	0.12	87,89,90,91	0
8	NAG	B	802	14/15	0.78	0.11	61,64,66,67	0
8	NAG	B	803	14/15	0.79	0.11	84,90,93,93	0
8	NAG	A	801	14/15	0.79	0.11	69,71,72,72	0
8	NAG	C	801	14/15	0.79	0.10	70,72,76,76	0
8	NAG	B	801	14/15	0.83	0.09	74,82,85,85	0
9	ZN	F	501	1/1	0.93	0.06	83,83,83,83	0
9	ZN	H	501	1/1	0.96	0.05	83,83,83,83	0
9	ZN	G	501	1/1	0.98	0.03	85,85,85,85	0
9	ZN	E	501	1/1	0.98	0.09	66,66,66,66	0

6.5 Other polymers

There are no such residues in this entry.