



Full wwPDB X-ray Structure Validation Report ⓘ

Mar 15, 2026 – 01:40 AM UTC

PDB ID : 1TK3 / pdb_00001tk3
Title : Crystal Structure Of Human Apo Dipeptidyl Peptidase IV/CD26
Authors : Bjelke, J.R.; Christensen, J.; Branner, S.; Wagtmann, N.; Olsen, C.; Kanstrup, A.B.; Rasmussen, H.B.
Deposited on : 2004-06-08
Resolution : 2.00 Å(reported)

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

We welcome your comments at validation@mail.wwpdb.org

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

<http://www.wwpdb.org/validation/2017/FAQs#types>.

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

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

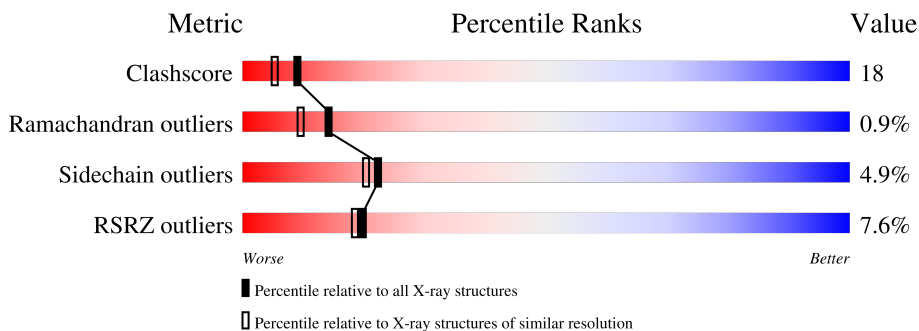
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

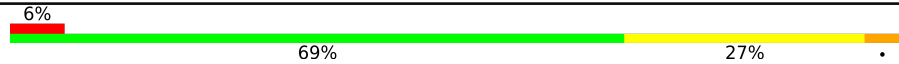





The reported resolution of this entry is 2.00 Å.

Percentile scores (ranging between 0-100) for global validation metrics of the entry are shown in the following graphic. The table shows the number of entries on which the scores are based.



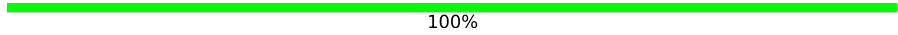



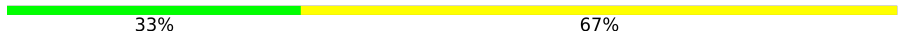
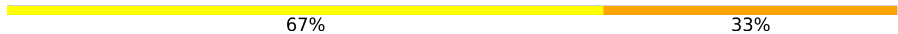

Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
Clashscore	190562	11152 (2.00-2.00)
Ramachandran outliers	187476	11031 (2.00-2.00)
Sidechain outliers	187428	11029 (2.00-2.00)
RSRZ outliers	180081	10067 (2.00-2.00)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments of the lower bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions $\leq 5\%$. The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density. The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	A	728	
1	B	728	
2	C	3	
2	D	3	
2	I	3	
3	E	2	

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Mol	Chain	Length	Quality of chain
3	G	2	 100%
3	H	2	 50% 50%
3	J	2	 50% 50%
4	F	3	 33% 67%
5	K	3	 33% 67%
5	L	3	 67% 33%
6	M	2	 100%

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
2	NAG	D	1	X	-	-	-
3	NAG	J	1	X	-	-	-
6	NAG	M	1	X	-	-	-

2 Entry composition i

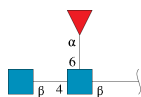
There are 8 unique types of molecules in this entry. The entry contains 13536 atoms, of which 0 are hydrogens and 0 are deuteriums.

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
			Total	C	N	O	S			
1	A	726	Total	C	N	O	S	0	0	0
			5948	3816	980	1126	26			
1	B	728	Total	C	N	O	S	0	0	0
			5964	3827	982	1129	26			

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



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

- Molecule 3 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
			Total	C	N	O			
3	E	2	Total	C	N	O	0	0	0
			28	16	2	10			
3	G	2	Total	C	N	O	0	0	0
			28	16	2	10			

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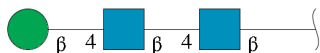
Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
3	H	2	Total	C	N	O	0	0	0
			28	16	2	10			
3	J	2	Total	C	N	O	0	0	0
			28	16	2	10			

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



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
4	F	3	Total	C	N	O	0	0	0
			39	22	2	15			

- Molecule 5 is an oligosaccharide called 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
5	K	3	Total	C	N	O	0	0	0
			39	22	2	15			
5	L	3	Total	C	N	O	0	0	0
			39	22	2	15			

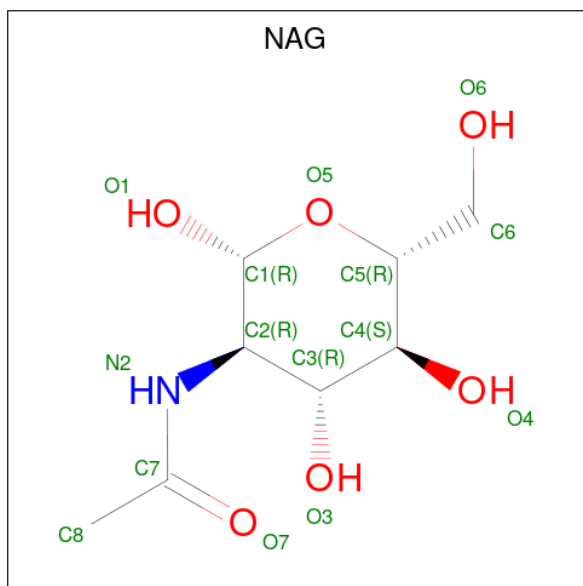
- Molecule 6 is an oligosaccharide called 2-acetamido-2-deoxy-alpha-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose.



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

- Molecule 7 is 2-acetamido-2-deoxy-beta-D-glucopyranose (CCD ID: NAG) (formula:

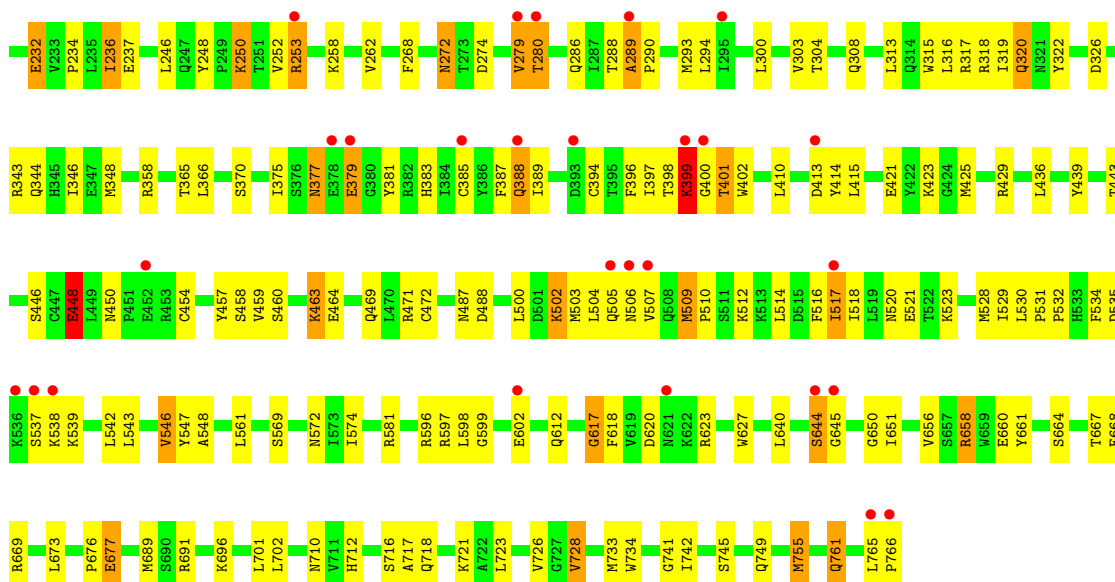
C₈H₁₅NO₆).



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

- Molecule 8 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
8	A	627	Total	O	0	0
			627	627		
8	B	584	Total	O	0	0
			584	584		



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

Chain C: 67% 33%



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

Chain D: 33% 67%



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

Chain I: 33% 67%



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

Chain E: 50% 50%



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

Chain G:  100%


MAG1
MAG2

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

Chain H:  50% 50%

MAG1
MAG2

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

Chain J:  50% 50%


MAG1
MAG2

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

Chain F:  33% 67%

MAG1
MAG2
MAN3

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

Chain K:  33% 67%

MAG1
MAG2
BMA3

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

Chain L:  67% 33%

MAG1
MAG2
BMA3

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

Chain M:  100%

MAG1
MAG2

4 Data and refinement statistics i

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α , β , γ	119.26Å 122.36Å 129.82Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	40.68 – 2.00 40.68 – 2.00	Depositor EDS
% Data completeness (in resolution range)	90.6 (40.68-2.00) 90.7 (40.68-2.00)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	3.14 (at 2.00Å)	Xtrriage
Refinement program	CNX 2000.1	Depositor
R, R_{free}	0.229 , 0.272 0.219 , (Not available)	Depositor DCC
R_{free} test set	No test flags present.	wwPDB-VP
Wilson B-factor (Å ²)	20.9	Xtrriage
Anisotropy	0.469	Xtrriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.33 , 47.8	EDS
L-test for twinning ²	$\langle L \rangle = 0.49$, $\langle L^2 \rangle = 0.32$	Xtrriage
Estimated twinning fraction	0.014 for k,h,-l	Xtrriage
F_o, F_c correlation	0.93	EDS
Total number of atoms	13536	wwPDB-VP
Average B, all atoms (Å ²)	26.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 2.63% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

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

5 Model quality i

5.1 Standard geometry i

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

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	0.41	0/6119	0.93	23/8321 (0.3%)
1	B	0.41	1/6136 (0.0%)	0.92	26/8344 (0.3%)
All	All	0.41	1/12255 (0.0%)	0.92	49/16665 (0.3%)

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
1	A	0	1

All (1) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	B	755	MET	SD-CE	-5.66	1.65	1.79

All (49) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	454	CYS	N-CA-C	7.26	120.73	108.02
1	A	485	SER	N-CA-C	6.94	118.85	111.28
1	B	300	LEU	N-CA-C	-6.87	97.53	108.73
1	A	205	GLU	N-CA-C	6.79	120.04	111.69
1	B	546	VAL	N-CA-C	6.76	119.27	108.85
1	A	279	VAL	N-CA-C	-6.63	106.20	113.43
1	B	656	VAL	N-CA-C	-6.61	98.83	108.87
1	A	300	LEU	N-CA-C	-6.52	98.59	108.96
1	B	158	SER	N-CA-C	-6.50	100.84	110.20
1	A	656	VAL	N-CA-C	-6.39	99.16	108.87

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	B	205	GLU	N-CA-C	6.21	117.85	111.14
1	B	399	LYS	N-CA-C	6.20	124.00	110.80
1	A	320	GLN	N-CA-C	6.12	123.84	110.80
1	A	319	ILE	N-CA-C	-6.11	98.69	107.37
1	A	388	GLN	N-CA-C	-6.10	98.96	108.90
1	B	388	GLN	N-CA-C	-6.05	99.32	109.07
1	B	548	ALA	N-CA-C	6.05	120.24	112.86
1	A	160	VAL	N-CA-C	6.00	121.81	109.34
1	A	458	SER	N-CA-C	-5.93	100.32	109.52
1	A	98	PHE	N-CA-C	-5.93	105.54	112.89
1	B	448	GLU	N-CA-C	5.88	120.46	113.16
1	A	616	MET	N-CA-C	5.83	117.63	111.28
1	A	546	VAL	N-CA-C	5.73	118.41	108.95
1	B	236	ILE	N-CA-C	-5.71	100.20	108.36
1	B	454	CYS	N-CA-C	5.69	118.15	108.02
1	A	91	GLU	N-CA-C	5.68	119.30	112.93
1	B	148	ILE	N-CA-C	-5.68	103.73	109.02
1	B	201	TRP	N-CA-C	5.67	117.13	111.07
1	B	209	SER	N-CA-C	-5.55	104.25	111.74
1	B	667	THR	N-CA-C	5.55	117.00	111.07
1	B	450	ASN	CA-C-N	5.41	125.74	119.47
1	B	450	ASN	C-N-CA	5.41	125.74	119.47
1	B	279	VAL	N-CA-C	5.37	118.79	113.53
1	A	448	GLU	N-CA-C	5.35	119.96	113.38
1	B	617	GLY	N-CA-C	5.34	122.46	115.36
1	A	530	LEU	CA-C-N	5.33	123.55	119.66
1	A	530	LEU	C-N-CA	5.33	123.55	119.66
1	B	463	LYS	N-CA-C	5.32	117.77	111.33
1	A	93	SER	N-CA-C	-5.30	106.51	112.87
1	B	206	GLU	N-CA-C	5.29	119.73	113.12
1	B	458	SER	N-CA-C	-5.27	101.34	109.52
1	B	664	SER	N-CA-C	5.27	116.71	111.07
1	A	360	SER	N-CA-C	5.25	117.31	110.43
1	B	150	ASN	N-CA-C	-5.23	103.62	110.53
1	A	630	SER	CB-CA-C	-5.11	110.28	117.23
1	B	365	THR	N-CA-C	-5.08	103.82	110.53
1	A	547	TYR	N-CA-C	-5.08	99.99	110.80
1	B	200	ASP	N-CA-C	-5.06	101.90	109.79
1	A	744	SER	N-CA-C	-5.01	103.43	110.50

There are no chirality outliers.

All (1) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	700	TYR	Sidechain

5.2 Too-close contacts [i](#)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	5948	0	5660	199	0
1	B	5964	0	5677	235	0
2	C	38	0	34	0	0
2	D	38	0	34	6	0
2	I	38	0	34	1	0
3	E	28	0	25	0	0
3	G	28	0	25	0	0
3	H	28	0	25	1	0
3	J	28	0	25	3	0
4	F	39	0	33	5	0
5	K	39	0	34	0	0
5	L	39	0	34	1	0
6	M	28	0	24	3	0
7	A	14	0	13	4	0
7	B	28	0	26	7	0
8	A	627	0	0	22	0
8	B	584	0	0	13	0
All	All	13536	0	11703	441	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 18.

All (441) 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:B:289:ALA:HB1	1:B:290:PRO:HA	1.44	0.98
1:A:492:ARG:HH11	1:A:492:ARG:HB3	1.25	0.97
1:A:172:ILE:H	1:A:186:THR:HG22	1.29	0.96
1:A:176:ILE:HD11	1:A:276:LEU:HD21	1.49	0.94
1:B:72:GLN:HE21	1:B:77:LEU:HD21	1.35	0.90
1:A:253:ARG:NH2	1:B:253:ARG:HH22	1.71	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:77:LEU:HD23	1:B:77:LEU:H	1.40	0.86
1:A:581:ARG:CZ	7:A:782:NAG:H62	2.07	0.84
1:A:184:ARG:NH1	1:A:187:TRP:HA	1.93	0.83
1:A:289:ALA:HB1	1:A:290:PRO:HA	1.59	0.83
1:B:733:MET:HE2	1:B:734:TRP:O	1.79	0.83
1:B:91:GLU:HG2	1:B:94:THR:OG1	1.79	0.82
1:B:502:LYS:O	1:B:505:GLN:HG2	1.81	0.81
1:A:312:SER:HB2	1:A:325:MET:HE3	1.64	0.80
7:B:781:NAG:O7	7:B:781:NAG:H3	1.78	0.80
1:B:289:ALA:HB1	1:B:290:PRO:CA	2.12	0.79
1:B:528:MET:HE3	1:B:574:ILE:HG21	1.63	0.79
1:B:528:MET:HE2	1:B:530:LEU:HD21	1.64	0.79
1:B:184:ARG:HD2	1:B:187:TRP:CE2	2.18	0.78
1:A:253:ARG:HH22	1:B:253:ARG:HH22	1.30	0.78
1:B:272:ASN:C	1:B:272:ASN:HD22	1.93	0.76
1:B:509:MET:HG3	1:B:510:PRO:HD2	1.65	0.76
1:B:702:LEU:HD11	1:B:716:SER:HB3	1.67	0.76
1:B:90:LEU:HD11	1:B:94:THR:HG21	1.66	0.75
1:A:388:GLN:HB3	1:A:391:LYS:HD3	1.69	0.75
1:B:76:ILE:CG2	1:B:90:LEU:HB3	2.17	0.74
1:B:399:LYS:HG3	8:B:817:HOH:O	1.88	0.74
1:B:184:ARG:HD3	1:B:186:THR:O	1.88	0.73
1:A:289:ALA:HB1	1:A:290:PRO:CA	2.18	0.73
1:B:69:LEU:HB3	1:B:76:ILE:HD11	1.71	0.73
1:B:279:VAL:O	1:B:280:THR:HG22	1.90	0.72
1:A:325:MET:HE2	1:A:327:ILE:HG12	1.69	0.72
1:B:399:LYS:HB2	1:B:402:TRP:CZ2	2.25	0.72
1:A:173:TYR:CE2	1:A:184:ARG:HG2	2.25	0.71
1:A:153:GLN:HE22	1:A:170:ASN:ND2	1.89	0.71
1:B:401:THR:HG22	1:B:401:THR:O	1.89	0.71
4:F:2:NDG:H6C2	4:F:3:MAN:H2	1.71	0.71
1:A:596:ARG:O	1:A:597:ARG:HD2	1.90	0.71
1:B:95:PHE:O	1:B:98:PHE:HB2	1.91	0.71
1:B:510:PRO:HD3	1:B:569:SER:HB2	1.71	0.71
1:B:377:ASN:C	1:B:377:ASN:HD22	1.99	0.70
1:A:751:ILE:HG12	1:A:755:MET:HE2	1.73	0.70
1:B:41:LYS:H	1:B:41:LYS:HD3	1.56	0.70
2:D:1:NAG:H4	2:D:2:NAG:N2	2.05	0.70
1:A:76:ILE:HD12	1:A:90:LEU:HD11	1.72	0.70
1:A:736:THR:HG21	1:B:717:ALA:O	1.90	0.70
1:B:76:ILE:HG23	1:B:90:LEU:HB3	1.73	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:676:PRO:HG2	1:A:677:GLU:OE2	1.91	0.69
1:B:72:GLN:HE21	1:B:77:LEU:CD2	2.05	0.69
1:A:500:LEU:HA	1:A:503:MET:HE3	1.74	0.69
1:A:272:ASN:ND2	1:A:274:ASP:H	1.91	0.69
1:B:156:THR:HG21	8:B:1035:HOH:O	1.93	0.68
1:B:154:TRP:NE1	1:B:156:THR:HG23	2.08	0.68
1:A:658:ARG:HG2	1:A:661:TYR:CE2	2.29	0.67
1:B:348:MET:HE2	6:M:1:NAG:C8	2.25	0.67
1:A:172:ILE:H	1:A:186:THR:CG2	2.07	0.67
1:B:596:ARG:O	1:B:597:ARG:HD2	1.95	0.67
1:A:248:TYR:CZ	1:B:234:PRO:HB2	2.30	0.66
1:A:194:ILE:HD13	4:F:1:NAG:H82	1.78	0.66
1:B:272:ASN:ND2	1:B:274:ASP:H	1.94	0.65
1:A:156:THR:HG21	1:A:214:LEU:HD11	1.78	0.65
1:B:153:GLN:HE22	1:B:170:ASN:ND2	1.93	0.65
1:B:581:ARG:CZ	7:B:781:NAG:H5	2.26	0.65
1:A:388:GLN:CB	1:A:391:LYS:HD3	2.26	0.65
1:A:149:PRO:HA	2:D:1:NAG:H82	1.78	0.65
1:B:112:GLN:HB3	1:B:138:ASN:HD21	1.61	0.65
2:D:2:NAG:O7	2:D:2:NAG:H3	1.95	0.65
1:B:258:LYS:NZ	1:B:712:HIS:HD2	1.95	0.64
1:A:171:ASP:OD1	1:A:186:THR:HG23	1.98	0.64
1:A:492:ARG:HB3	1:A:492:ARG:NH1	2.06	0.64
1:A:502:LYS:HB2	8:A:1161:HOH:O	1.98	0.64
1:B:414:TYR:HA	1:B:436:LEU:HD13	1.78	0.64
1:B:125:ARG:HG2	1:B:126:HIS:CE1	2.32	0.64
1:A:272:ASN:C	1:A:272:ASN:HD22	2.05	0.64
1:B:658:ARG:HG2	1:B:661:TYR:CE2	2.33	0.64
1:B:528:MET:HE1	1:B:618:PHE:CE1	2.33	0.63
1:B:139:LYS:HG3	1:B:141:GLN:HB2	1.80	0.63
1:B:640:LEU:HD11	1:B:650:GLY:HA3	1.80	0.63
1:A:756:SER:O	1:A:760:LYS:HG2	1.99	0.62
1:B:114:ILE:CG2	1:B:135:TYR:HB3	2.29	0.62
1:A:640:LEU:HD11	1:A:650:GLY:HA3	1.80	0.61
1:A:410:LEU:HD13	1:A:415:LEU:HD23	1.81	0.61
1:A:510:PRO:HD3	1:A:569:SER:HB2	1.82	0.61
1:B:105:TYR:HB2	1:B:114:ILE:HD11	1.80	0.61
1:A:341:VAL:C	1:A:343:ARG:H	2.08	0.61
1:B:733:MET:HE3	1:B:733:MET:HA	1.82	0.61
2:D:1:NAG:H4	2:D:2:NAG:HN2	1.66	0.61
1:B:318:ARG:HD3	1:B:668:GLU:OE1	2.00	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:139:LYS:NZ	1:B:139:LYS:HB3	2.16	0.60
1:B:232:GLU:HB3	1:B:262:VAL:HG11	1.84	0.60
4:F:2:NDG:C6	4:F:3:MAN:H2	2.31	0.60
1:B:55:LEU:HD11	1:B:561:LEU:HD12	1.82	0.60
1:A:91:GLU:O	1:A:93:SER:N	2.32	0.60
1:B:91:GLU:HG2	1:B:94:THR:HG1	1.63	0.60
1:A:320:GLN:OE1	1:A:669:ARG:HD3	2.02	0.59
1:A:504:LEU:HA	1:A:507:VAL:HG12	1.85	0.59
1:A:377:ASN:ND2	8:A:946:HOH:O	2.34	0.59
1:A:492:ARG:HH11	1:A:492:ARG:CB	2.08	0.59
1:B:348:MET:HE2	6:M:1:NAG:H83	1.83	0.59
1:B:651:ILE:HG21	1:B:755:MET:CE	2.33	0.59
1:B:138:ASN:HA	8:B:1178:HOH:O	2.03	0.59
1:B:529:ILE:HD11	8:B:800:HOH:O	2.02	0.59
1:A:579:ASP:HB3	1:A:583:SER:OG	2.02	0.58
1:B:503:MET:HE1	8:B:1185:HOH:O	2.01	0.58
1:A:197:GLY:C	1:A:213:ALA:HB3	2.29	0.58
1:B:723:LEU:HD22	1:B:728:VAL:HG11	1.85	0.58
1:A:75:ASN:HB3	1:A:91:GLU:HA	1.85	0.58
1:B:658:ARG:HD3	1:B:660:GLU:HB2	1.86	0.58
1:A:74:ASN:O	1:A:92:ASN:HB2	2.04	0.58
5:L:2:NAG:O3	5:L:3:BMA:H2	2.04	0.58
1:A:234:PRO:HB2	1:B:248:TYR:CZ	2.39	0.57
1:A:325:MET:HE2	1:A:327:ILE:CG1	2.34	0.57
1:B:658:ARG:O	1:B:658:ARG:HG3	2.03	0.57
1:B:272:ASN:HD22	1:B:274:ASP:H	1.51	0.57
1:B:676:PRO:HG2	1:B:677:GLU:OE2	2.04	0.57
1:B:290:PRO:HG3	1:B:326:ASP:OD2	2.04	0.57
1:B:399:LYS:HB2	1:B:402:TRP:HZ2	1.70	0.57
1:A:253:ARG:HH22	1:B:253:ARG:NH2	2.02	0.57
1:B:170:ASN:N	1:B:170:ASN:HD22	2.03	0.57
1:A:272:ASN:HD22	1:A:274:ASP:H	1.51	0.57
1:B:733:MET:HE3	1:B:734:TRP:H	1.69	0.57
1:B:723:LEU:HB3	1:B:728:VAL:HG13	1.86	0.56
1:A:546:VAL:HG22	1:A:547:TYR:N	2.21	0.56
1:B:40:ARG:HG3	1:B:506:ASN:O	2.05	0.56
1:B:49:LEU:HD22	1:B:749:GLN:HA	1.88	0.56
1:A:312:SER:CB	1:A:325:MET:HE3	2.35	0.56
1:B:289:ALA:CB	1:B:290:PRO:HA	2.28	0.56
1:B:512:LYS:HD3	8:B:1099:HOH:O	2.04	0.56
1:A:392:LYS:HG2	8:A:1291:HOH:O	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:320:GLN:OE1	1:B:669:ARG:HD3	2.06	0.56
1:B:377:ASN:ND2	1:B:379:GLU:H	2.04	0.56
1:A:377:ASN:HB3	8:A:946:HOH:O	2.06	0.56
1:B:691:ARG:HD2	8:B:1130:HOH:O	2.04	0.56
1:B:710:ASN:C	1:B:710:ASN:HD22	2.14	0.56
1:B:520:ASN:HD22	7:B:781:NAG:H4	1.70	0.56
1:A:76:ILE:HB	1:A:90:LEU:CD1	2.36	0.56
1:B:385:CYS:HB3	1:B:396:PHE:CD1	2.42	0.55
1:A:72:GLN:HB3	8:A:1057:HOH:O	2.07	0.55
1:B:446:SER:HB2	1:B:457:TYR:CE2	2.41	0.55
1:B:504:LEU:HD22	1:B:509:MET:CE	2.37	0.55
1:B:90:LEU:HD21	1:B:95:PHE:HE2	1.72	0.54
1:B:154:TRP:HE1	1:B:156:THR:CG2	2.21	0.54
1:B:286:GLN:NE2	1:B:288:THR:HG22	2.22	0.54
1:A:341:VAL:O	1:A:342:ALA:HB3	2.06	0.54
1:A:194:ILE:CD1	4:F:1:NAG:H82	2.38	0.54
1:B:620:ASP:OD2	1:B:623:ARG:HD3	2.07	0.54
1:A:542:LEU:HD23	1:A:542:LEU:C	2.32	0.54
1:A:613:PHE:HA	1:A:616:MET:HG3	1.90	0.54
1:B:504:LEU:HA	1:B:507:VAL:HG12	1.90	0.54
1:A:312:SER:C	1:A:313:LEU:HD12	2.31	0.54
1:A:350:THR:HG22	3:H:1:NAG:H81	1.89	0.54
1:A:704:HIS:HE1	1:A:711:VAL:O	1.91	0.54
1:B:64:SER:O	1:B:463:LYS:HG2	2.08	0.54
1:A:481:THR:OG1	1:A:483:HIS:HE1	1.89	0.54
1:A:507:VAL:HG13	1:A:509:MET:HG2	1.90	0.54
1:B:139:LYS:O	1:B:141:GLN:HG2	2.08	0.54
1:A:171:ASP:OD2	1:A:184:ARG:NH1	2.41	0.54
1:A:502:LYS:O	1:A:505:GLN:HG2	2.08	0.53
1:A:581:ARG:HG2	1:A:593:ALA:HB1	1.90	0.53
1:B:72:GLN:C	1:B:74:ASN:H	2.16	0.53
1:A:236:ILE:CG2	1:A:254:VAL:HG13	2.38	0.53
1:A:293:MET:HG3	1:A:298:HIS:CB	2.39	0.53
1:B:77:LEU:HD23	1:B:77:LEU:N	2.18	0.53
1:B:415:LEU:C	1:B:415:LEU:HD23	2.34	0.52
1:B:528:MET:HE2	1:B:530:LEU:CD2	2.36	0.52
1:A:183:TYR:CE1	1:A:277:SER:O	2.61	0.52
1:A:459:VAL:HG22	1:A:460:SER:N	2.24	0.52
1:A:622:LYS:HB2	1:A:622:LYS:NZ	2.25	0.52
1:B:377:ASN:ND2	1:B:381:TYR:H	2.06	0.52
1:B:74:ASN:O	1:B:92:ASN:HA	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:183:TYR:HE1	1:A:277:SER:O	1.93	0.52
1:B:74:ASN:HB3	1:B:92:ASN:CG	2.35	0.52
1:A:108:SER:C	1:A:110:ASP:N	2.67	0.52
1:A:140:ARG:HG2	1:A:140:ARG:HH11	1.75	0.52
1:B:154:TRP:NE1	1:B:156:THR:CG2	2.73	0.52
1:B:346:ILE:HD12	1:B:346:ILE:N	2.25	0.52
1:B:98:PHE:CD1	1:B:100:HIS:HB2	2.45	0.52
1:B:258:LYS:HZ1	1:B:712:HIS:HD2	1.56	0.52
1:A:108:SER:C	1:A:110:ASP:H	2.17	0.52
1:A:489:LYS:HD2	8:A:932:HOH:O	2.10	0.52
1:A:91:GLU:C	1:A:93:SER:H	2.17	0.51
1:A:93:SER:HB2	1:A:96:ASP:OD2	2.10	0.51
1:A:273:THR:O	1:A:276:LEU:HD22	2.10	0.51
1:A:726:VAL:HG12	1:A:726:VAL:O	2.10	0.51
1:A:242:SER:HB3	1:A:246:LEU:HD12	1.91	0.51
1:A:314:GLN:HE22	1:A:373:LYS:HZ1	1.59	0.51
1:A:106:SER:HB3	1:A:115:LEU:HB3	1.92	0.51
1:A:377:ASN:OD1	1:A:378:GLU:N	2.44	0.51
1:B:319:ILE:HD11	1:B:673:LEU:HD13	1.93	0.51
1:A:358:ARG:HD2	8:A:961:HOH:O	2.09	0.51
1:A:377:ASN:CB	8:A:946:HOH:O	2.57	0.51
1:B:41:LYS:H	1:B:41:LYS:CD	2.22	0.51
1:B:598:LEU:HA	1:B:602:GLU:OE2	2.11	0.51
2:I:1:NAG:H61	2:I:3:FUC:O2	2.11	0.51
1:A:39:SER:O	1:A:40:ARG:HB2	2.10	0.51
1:A:92:ASN:C	1:A:94:THR:N	2.67	0.51
1:A:177:GLU:CG	1:A:180:LEU:HD22	2.41	0.51
1:A:75:ASN:CB	1:A:91:GLU:HA	2.41	0.50
1:B:69:LEU:CD1	1:B:107:ILE:HD12	2.41	0.50
1:B:250:LYS:HZ2	1:B:250:LYS:HB2	1.76	0.50
1:A:289:ALA:CB	1:A:290:PRO:CA	2.89	0.50
1:A:718:GLN:HE21	1:A:718:GLN:HA	1.75	0.50
1:B:165:ALA:HB2	1:B:216:TRP:CZ2	2.47	0.50
1:B:448:GLU:HG3	8:B:1180:HOH:O	2.11	0.50
1:B:651:ILE:HG21	1:B:755:MET:HE3	1.92	0.50
1:A:581:ARG:NH1	7:A:782:NAG:H62	2.25	0.50
1:A:60:LEU:HD12	1:A:60:LEU:C	2.35	0.50
1:B:443:THR:HG21	8:B:974:HOH:O	2.11	0.50
1:B:538:LYS:HD3	1:B:539:LYS:N	2.26	0.50
1:B:279:VAL:O	1:B:280:THR:CG2	2.60	0.50
1:A:392:LYS:HG3	1:A:393:ASP:N	2.27	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:250:LYS:HB2	1:B:250:LYS:NZ	2.27	0.50
1:A:75:ASN:HB2	1:A:90:LEU:O	2.12	0.49
1:A:95:PHE:HB3	1:A:98:PHE:HB2	1.93	0.49
1:B:60:LEU:HD23	1:B:60:LEU:O	2.11	0.49
1:B:741:GLY:O	1:B:742:ILE:C	2.54	0.49
1:B:765:LEU:HB3	1:B:766:PRO:HA	1.93	0.49
1:B:546:VAL:HG22	1:B:547:TYR:N	2.27	0.49
1:A:276:LEU:HD23	1:A:276:LEU:O	2.12	0.49
1:A:704:HIS:CE1	1:A:711:VAL:O	2.66	0.49
1:A:193:ILE:HG22	1:A:194:ILE:HG13	1.94	0.49
1:B:236:ILE:HG12	1:B:712:HIS:CE1	2.48	0.49
1:A:92:ASN:C	1:A:94:THR:H	2.19	0.49
1:A:581:ARG:HG2	1:A:593:ALA:CB	2.43	0.49
7:A:782:NAG:O7	7:A:782:NAG:H3	2.11	0.49
1:B:272:ASN:C	1:B:272:ASN:ND2	2.65	0.49
1:A:40:ARG:HB3	1:A:506:ASN:O	2.13	0.48
1:A:492:ARG:NE	8:A:1381:HOH:O	2.45	0.48
1:A:503:MET:HE1	8:A:1287:HOH:O	2.12	0.48
1:A:150:ASN:O	1:A:151:ASN:HB2	2.13	0.48
1:A:214:LEU:O	1:A:214:LEU:HD12	2.13	0.48
1:A:275:SER:HB2	8:A:1253:HOH:O	2.13	0.48
1:A:581:ARG:HB2	1:A:605:ASP:OD2	2.12	0.48
1:B:761:GLN:HG3	8:B:1341:HOH:O	2.12	0.48
1:A:542:LEU:HD23	1:A:543:LEU:N	2.28	0.48
1:B:293:MET:HE3	1:B:315:TRP:HB2	1.94	0.48
1:B:529:ILE:HD13	8:B:864:HOH:O	2.13	0.48
1:B:733:MET:HE3	1:B:734:TRP:N	2.29	0.48
1:B:387:PHE:CE1	1:B:394:CYS:HB3	2.49	0.48
1:B:500:LEU:HA	1:B:503:MET:HE3	1.96	0.48
1:A:69:LEU:HD13	1:A:107:ILE:HD12	1.95	0.48
1:A:170:ASN:N	1:A:170:ASN:HD22	2.11	0.48
1:B:520:ASN:HD22	7:B:781:NAG:H61	1.78	0.48
1:B:55:LEU:CD1	1:B:561:LEU:HD12	2.44	0.48
1:A:613:PHE:O	1:A:616:MET:HG3	2.12	0.47
1:B:532:PRO:HD3	1:B:569:SER:HA	1.96	0.47
1:B:268:PHE:CD2	1:B:313:LEU:HD21	2.49	0.47
1:B:114:ILE:HG23	1:B:135:TYR:HB3	1.96	0.47
2:D:2:NAG:O7	2:D:2:NAG:C3	2.63	0.47
1:A:110:ASP:HB2	1:A:161:GLY:O	2.14	0.47
1:B:308:GLN:HB3	3:J:1:NAG:H61	1.96	0.47
1:B:69:LEU:HD11	1:B:107:ILE:HD12	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:93:SER:HA	1:B:96:ASP:OD2	2.15	0.47
1:B:139:LYS:HG3	1:B:141:GLN:CB	2.44	0.47
1:B:397:ILE:HG22	1:B:439:TYR:CE2	2.49	0.47
1:B:651:ILE:HG21	1:B:755:MET:HE2	1.96	0.47
1:A:370:SER:HB2	1:A:387:PHE:O	2.14	0.47
1:B:272:ASN:HD21	1:B:274:ASP:HB2	1.79	0.47
1:B:184:ARG:HD2	1:B:187:TRP:NE1	2.30	0.47
1:A:718:GLN:NE2	8:A:818:HOH:O	2.48	0.47
1:B:93:SER:O	1:B:94:THR:C	2.57	0.47
1:B:399:LYS:HB3	1:B:400:GLY:H	1.44	0.47
1:A:285:ILE:N	1:A:285:ILE:HD12	2.30	0.46
1:A:291:ALA:O	1:A:295:ILE:HG23	2.14	0.46
1:B:51:ASN:ND2	1:B:54:ARG:NE	2.62	0.46
1:B:75:ASN:ND2	1:B:92:ASN:H	2.12	0.46
1:B:139:LYS:HB3	1:B:139:LYS:HZ2	1.80	0.46
1:B:308:GLN:HB3	3:J:1:NAG:C6	2.45	0.46
1:A:39:SER:O	1:A:40:ARG:CB	2.62	0.46
2:D:1:NAG:C4	2:D:2:NAG:N2	2.75	0.46
1:A:377:ASN:CG	1:A:378:GLU:N	2.74	0.46
1:B:504:LEU:HD22	1:B:509:MET:HE2	1.97	0.46
1:B:106:SER:HB3	1:B:115:LEU:HB3	1.97	0.46
1:B:344:GLN:HE21	1:B:346:ILE:HD11	1.80	0.46
1:A:184:ARG:HH12	1:A:187:TRP:HA	1.74	0.46
1:A:290:PRO:HG3	1:A:326:ASP:OD2	2.15	0.46
1:A:340:LEU:O	1:A:343:ARG:HB3	2.16	0.46
1:B:136:ASP:CG	1:B:139:LYS:HG2	2.41	0.46
1:B:199:THR:HG21	1:B:208:PHE:HD2	1.80	0.46
1:B:401:THR:O	1:B:401:THR:CG2	2.61	0.46
1:A:140:ARG:HG2	1:A:140:ARG:NH1	2.31	0.46
1:A:177:GLU:HG3	1:A:180:LEU:HD22	1.96	0.46
1:A:677:GLU:H	1:A:677:GLU:CD	2.23	0.46
1:A:742:ILE:HG22	1:A:742:ILE:O	2.16	0.46
1:B:135:TYR:CE2	1:B:137:LEU:HD23	2.50	0.46
1:B:377:ASN:HD21	1:B:381:TYR:H	1.63	0.46
1:B:77:LEU:H	1:B:77:LEU:CD2	2.20	0.46
1:B:446:SER:HB2	1:B:457:TYR:CD2	2.50	0.46
1:A:123:GLN:HG2	1:A:124:TRP:CD2	2.51	0.46
1:A:590:ILE:HG12	8:A:1015:HOH:O	2.15	0.46
1:B:114:ILE:HG22	1:B:135:TYR:HB3	1.98	0.46
1:A:314:GLN:HE22	1:A:373:LYS:NZ	2.14	0.45
1:B:147:ARG:NH2	7:B:770:NAG:HN2	2.14	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:520:ASN:HB2	7:B:781:NAG:H61	1.98	0.45
1:A:741:GLY:O	1:A:742:ILE:C	2.58	0.45
1:B:90:LEU:HD21	1:B:95:PHE:CE2	2.50	0.45
1:B:718:GLN:HE22	1:B:721:LYS:NZ	2.14	0.45
1:A:272:ASN:HD22	1:A:273:THR:N	2.14	0.45
1:A:415:LEU:C	1:A:415:LEU:HD13	2.41	0.45
1:B:377:ASN:C	1:B:377:ASN:ND2	2.69	0.45
1:B:542:LEU:C	1:B:542:LEU:HD23	2.41	0.45
1:B:72:GLN:O	1:B:74:ASN:N	2.44	0.45
1:B:69:LEU:HD23	1:B:78:VAL:HB	1.97	0.45
1:A:402:TRP:CD2	1:A:421:GLU:HB2	2.52	0.45
1:A:600:THR:O	1:A:603:VAL:CG1	2.64	0.45
1:A:600:THR:O	1:A:603:VAL:HG13	2.16	0.45
1:A:159:PRO:HD3	1:A:216:TRP:CB	2.47	0.45
1:A:718:GLN:HA	1:A:718:GLN:NE2	2.31	0.45
1:B:599:GLY:H	1:B:602:GLU:CD	2.24	0.45
1:A:340:LEU:C	1:A:341:VAL:O	2.57	0.45
1:A:622:LYS:HB2	1:A:622:LYS:HZ2	1.82	0.45
1:B:46:THR:HG23	8:B:993:HOH:O	2.16	0.45
1:A:519:LEU:O	1:A:520:ASN:C	2.60	0.45
1:B:535:ASP:OD1	1:B:537:SER:HB2	2.17	0.45
1:A:184:ARG:HH11	1:A:187:TRP:HA	1.77	0.44
1:A:341:VAL:HG22	1:A:342:ALA:H	1.82	0.44
1:B:627:TRP:CE3	1:B:755:MET:HE1	2.52	0.44
1:A:302:ASP:HB3	1:A:314:GLN:HB2	1.98	0.44
1:A:658:ARG:HD2	1:A:661:TYR:CE1	2.52	0.44
1:B:60:LEU:HD23	1:B:60:LEU:C	2.42	0.44
1:B:517:ILE:HG12	1:B:518:ILE:N	2.33	0.44
1:A:341:VAL:C	1:A:343:ARG:N	2.73	0.44
1:B:487:ASN:O	1:B:488:ASP:HB2	2.17	0.44
1:B:516:PHE:CD2	1:B:523:LYS:HE3	2.52	0.44
1:B:96:ASP:O	1:B:97:GLU:HB2	2.18	0.44
1:A:114:ILE:HG13	1:A:137:LEU:HD11	2.00	0.44
1:B:139:LYS:HG3	1:B:141:GLN:CG	2.48	0.44
1:B:207:VAL:O	1:B:358:ARG:HD3	2.18	0.44
1:A:691:ARG:HH11	1:A:691:ARG:HG3	1.82	0.44
1:A:654:ALA:HA	1:A:704:HIS:CD2	2.52	0.44
1:B:92:ASN:C	1:B:92:ASN:HD22	2.24	0.44
1:B:279:VAL:O	1:B:280:THR:CB	2.66	0.44
1:A:544:LEU:HD21	1:A:606:GLN:HE21	1.83	0.44
1:B:293:MET:HG2	1:B:315:TRP:HB3	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:680:LEU:HD11	1:A:684:ARG:CZ	2.48	0.43
1:A:720:SER:O	1:A:724:VAL:HG23	2.18	0.43
1:B:469:GLN:OE1	1:B:471:ARG:NE	2.51	0.43
1:B:546:VAL:CG2	1:B:547:TYR:N	2.81	0.43
1:A:177:GLU:HB2	1:A:180:LEU:HD22	2.00	0.43
1:B:517:ILE:CD1	1:B:612:GLN:HG3	2.48	0.43
1:B:402:TRP:CD2	1:B:421:GLU:HB2	2.53	0.43
1:B:184:ARG:HH11	1:B:187:TRP:HA	1.83	0.43
1:B:193:ILE:HG22	1:B:194:ILE:HG12	2.01	0.43
1:A:520:ASN:C	1:A:521:GLU:HG2	2.44	0.43
1:B:644:SER:OG	1:B:645:GLY:N	2.50	0.43
1:A:41:LYS:HD3	1:A:41:LYS:H	1.83	0.43
6:M:1:NAG:H4	6:M:2:NDG:C5	2.48	0.43
1:A:332:GLU:HG3	8:A:1271:HOH:O	2.19	0.43
1:B:343:ARG:HA	1:B:389:ILE:O	2.19	0.43
1:B:208:PHE:O	1:B:209:SER:HB2	2.19	0.43
1:B:56:LYS:NZ	1:B:56:LYS:HB3	2.34	0.43
1:A:277:SER:OG	1:A:280:THR:HB	2.19	0.43
1:A:289:ALA:CB	1:A:290:PRO:HA	2.39	0.43
1:A:325:MET:HE1	1:A:364:PHE:HZ	1.84	0.43
1:A:546:VAL:CG2	1:A:547:TYR:N	2.82	0.43
1:B:219:ASN:ND2	3:J:1:NAG:C7	2.82	0.43
1:A:278:SER:HB3	8:A:1301:HOH:O	2.18	0.42
1:B:459:VAL:HG22	1:B:460:SER:N	2.34	0.42
1:B:658:ARG:HG2	1:B:661:TYR:CD2	2.53	0.42
1:A:77:LEU:HD23	1:A:88:VAL:HA	2.02	0.42
1:A:91:GLU:C	1:A:93:SER:N	2.77	0.42
1:A:128:TYR:CD1	1:A:128:TYR:C	2.97	0.42
1:B:70:TYR:O	1:B:77:LEU:HD23	2.19	0.42
1:B:289:ALA:HA	1:B:294:LEU:HD11	2.01	0.42
1:A:186:THR:HG21	1:A:196:ASN:CB	2.50	0.42
1:B:530:LEU:HA	1:B:531:PRO:HD3	1.92	0.42
1:A:562:ASN:HB2	8:A:1343:HOH:O	2.20	0.42
1:B:41:LYS:HD3	1:B:41:LYS:N	2.30	0.42
1:B:520:ASN:HD22	7:B:781:NAG:C4	2.28	0.42
1:A:75:ASN:HD21	1:A:77:LEU:HD21	1.84	0.42
1:A:581:ARG:CZ	7:A:782:NAG:C6	2.89	0.42
1:B:115:LEU:HD11	1:B:132:TYR:HB3	2.02	0.42
1:A:626:ILE:O	1:A:650:GLY:HA2	2.19	0.42
1:B:65:ASP:HB3	1:B:66:HIS:CE1	2.55	0.42
1:B:75:ASN:OD1	1:B:92:ASN:HB2	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:528:MET:HE3	1:B:574:ILE:CG2	2.42	0.42
1:B:531:PRO:HB3	1:B:572:ASN:HD22	1.84	0.42
1:B:726:VAL:HG23	1:B:728:VAL:HG12	2.01	0.42
1:A:62:TRP:CG	1:A:462:SER:HA	2.55	0.42
1:B:423:LYS:HB3	1:B:425:MET:HG3	2.01	0.42
1:A:148:ILE:HA	1:A:149:PRO:HD3	1.94	0.42
1:A:538:LYS:HG3	8:A:1162:HOH:O	2.19	0.42
1:B:375:ILE:HD11	1:B:385:CYS:SG	2.59	0.42
1:A:90:LEU:HD22	1:A:92:ASN:H	1.85	0.42
1:A:377:ASN:CG	8:A:946:HOH:O	2.63	0.42
1:A:470:LEU:HD23	1:A:470:LEU:HA	1.92	0.42
1:B:80:ASN:OD1	1:B:82:GLU:HB3	2.20	0.42
1:B:112:GLN:HB3	1:B:138:ASN:ND2	2.33	0.42
1:B:317:ARG:HD2	1:B:322:TYR:HB3	2.02	0.42
1:A:312:SER:O	1:A:313:LEU:HD12	2.20	0.41
1:A:452:GLU:HA	1:A:452:GLU:OE1	2.20	0.41
1:B:65:ASP:OD1	1:B:464:GLU:HB2	2.20	0.41
1:B:154:TRP:HE1	1:B:156:THR:HG21	1.85	0.41
1:B:40:ARG:HG3	1:B:506:ASN:C	2.46	0.41
1:A:461:PHE:CD2	1:A:468:TYR:HB3	2.54	0.41
1:B:65:ASP:CG	1:B:464:GLU:HB2	2.45	0.41
1:B:289:ALA:CB	1:B:290:PRO:CA	2.86	0.41
1:A:125:ARG:HD3	8:A:934:HOH:O	2.19	0.41
1:A:658:ARG:O	1:A:658:ARG:HG3	2.19	0.41
1:B:55:LEU:HD12	1:B:55:LEU:N	2.36	0.41
1:B:93:SER:O	1:B:95:PHE:N	2.53	0.41
1:B:237:GLU:HA	1:B:252:VAL:O	2.21	0.41
1:B:322:TYR:HD1	1:B:348:MET:HE3	1.84	0.41
1:A:51:ASN:OD1	1:A:54:ARG:NH1	2.54	0.41
1:A:627:TRP:HB2	1:A:651:ILE:HB	2.02	0.41
1:B:383:HIS:HB3	1:B:398:THR:OG1	2.20	0.41
1:B:530:LEU:HD13	1:B:534:PHE:CD2	2.56	0.41
1:A:520:ASN:O	1:A:521:GLU:CB	2.69	0.41
1:B:521:GLU:OE2	1:B:521:GLU:HA	2.20	0.41
1:B:745:SER:O	1:B:749:GLN:HG3	2.21	0.41
4:F:2:NDG:H6C2	4:F:3:MAN:C2	2.46	0.41
1:A:289:ALA:HB3	8:A:1251:HOH:O	2.21	0.41
1:B:696:LYS:HE2	1:B:696:LYS:HB3	1.90	0.41
1:A:206:GLU:OE2	1:A:663:ASP:OD2	2.39	0.41
1:B:77:LEU:CD2	1:B:77:LEU:N	2.82	0.41
1:B:250:LYS:NZ	1:B:250:LYS:CB	2.83	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:41:LYS:O	1:B:507:VAL:HG23	2.21	0.41
1:B:289:ALA:HA	1:B:294:LEU:CD1	2.51	0.41
1:A:481:THR:OG1	1:A:483:HIS:CE1	2.73	0.41
1:A:671:MET:HE1	1:A:682:HIS:CD2	2.56	0.41
1:A:221:THR:HB	8:A:901:HOH:O	2.21	0.40
1:A:485:SER:O	1:A:486:VAL:C	2.63	0.40
1:B:90:LEU:CD1	1:B:94:THR:HG21	2.43	0.40
1:B:316:LEU:HD12	1:B:322:TYR:O	2.20	0.40
1:A:286:GLN:NE2	1:A:288:THR:HG22	2.36	0.40
1:A:322:TYR:CE2	1:A:348:MET:HE2	2.57	0.40
1:A:516:PHE:CE2	1:A:523:LYS:HE2	2.56	0.40
1:A:561:LEU:HD12	1:A:561:LEU:HA	1.91	0.40
1:A:51:ASN:OD1	1:A:54:ARG:CZ	2.69	0.40
1:A:308:GLN:HG2	8:A:1386:HOH:O	2.21	0.40
1:A:325:MET:HE1	1:A:364:PHE:CZ	2.57	0.40
1:B:51:ASN:HD21	1:B:54:ARG:NE	2.19	0.40
1:A:718:GLN:HE21	1:A:718:GLN:CA	2.34	0.40
1:B:139:LYS:O	1:B:140:ARG:C	2.64	0.40
1:B:280:THR:HA	8:B:963:HOH:O	2.22	0.40
1:B:370:SER:HB2	1:B:387:PHE:O	2.21	0.40
1:B:517:ILE:HD11	1:B:612:GLN:OE1	2.21	0.40
1:B:539:LYS:HE3	1:B:617:GLY:O	2.21	0.40
1:B:159:PRO:HD3	1:B:216:TRP:CB	2.51	0.40
1:B:258:LYS:HZ3	1:B:712:HIS:HD2	1.66	0.40
1:B:413:ASP:HB3	1:B:414:TYR:CD1	2.56	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
1	A	724/728 (100%)	676 (93%)	43 (6%)	5 (1%)	18 14

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	B	726/728 (100%)	684 (94%)	34 (5%)	8 (1%)	11	7
All	All	1450/1456 (100%)	1360 (94%)	77 (5%)	13 (1%)	14	9

All (13) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	278	SER
1	B	399	LYS
1	A	289	ALA
1	A	520	ASN
1	B	280	THR
1	B	289	ALA
1	B	320	GLN
1	B	401	THR
1	A	320	GLN
1	B	94	THR
1	A	277	SER
1	B	40	ARG
1	B	73	GLU

5.3.2 Protein sidechains [i](#)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	651/653 (100%)	623 (96%)	28 (4%)	26	25
1	B	653/653 (100%)	617 (94%)	36 (6%)	19	17
All	All	1304/1306 (100%)	1240 (95%)	64 (5%)	22	20

All (64) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	90	LEU
1	A	145	GLU
1	A	170	ASN

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Mol	Chain	Res	Type
1	A	184	ARG
1	A	246	LEU
1	A	254	VAL
1	A	276	LEU
1	A	303	VAL
1	A	390	ASP
1	A	415	LEU
1	A	436	LEU
1	A	440	THR
1	A	448	GLU
1	A	482	LEU
1	A	492	ARG
1	A	536	LYS
1	A	543	LEU
1	A	561	LEU
1	A	581	ARG
1	A	603	VAL
1	A	616	MET
1	A	622	LYS
1	A	679	ASN
1	A	689	MET
1	A	701	LEU
1	A	702	LEU
1	A	736	THR
1	A	760	LYS
1	B	60	LEU
1	B	66	HIS
1	B	73	GLU
1	B	76	ILE
1	B	77	LEU
1	B	78	VAL
1	B	139	LYS
1	B	170	ASN
1	B	223	LEU
1	B	232	GLU
1	B	246	LEU
1	B	250	LYS
1	B	253	ARG
1	B	272	ASN
1	B	303	VAL
1	B	304	THR
1	B	366	LEU

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Mol	Chain	Res	Type
1	B	377	ASN
1	B	379	GLU
1	B	388	GLN
1	B	410	LEU
1	B	429	ARG
1	B	448	GLU
1	B	472	CYS
1	B	502	LYS
1	B	509	MET
1	B	514	LEU
1	B	517	ILE
1	B	543	LEU
1	B	644	SER
1	B	658	ARG
1	B	677	GLU
1	B	689	MET
1	B	701	LEU
1	B	728	VAL
1	B	761	GLN

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (52) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	72	GLN
1	A	74	ASN
1	A	75	ASN
1	A	92	ASN
1	A	169	ASN
1	A	170	ASN
1	A	247	GLN
1	A	272	ASN
1	A	286	GLN
1	A	314	GLN
1	A	338	ASN
1	A	345	HIS
1	A	369	ASN
1	A	435	GLN
1	A	455	GLN
1	A	483	HIS
1	A	505	GLN
1	A	572	ASN
1	A	606	GLN

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Mol	Chain	Res	Type
1	A	612	GLN
1	A	679	ASN
1	A	694	ASN
1	A	704	HIS
1	A	718	GLN
1	B	51	ASN
1	B	72	GLN
1	B	75	ASN
1	B	103	ASN
1	B	112	GLN
1	B	138	ASN
1	B	169	ASN
1	B	170	ASN
1	B	227	GLN
1	B	272	ASN
1	B	286	GLN
1	B	314	GLN
1	B	338	ASN
1	B	344	GLN
1	B	345	HIS
1	B	377	ASN
1	B	533	HIS
1	B	572	ASN
1	B	595	ASN
1	B	621	ASN
1	B	679	ASN
1	B	685	ASN
1	B	694	ASN
1	B	710	ASN
1	B	712	HIS
1	B	718	GLN
1	B	731	GLN
1	B	761	GLN

5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates i

28 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
2	NAG	C	1	1,2	14,14,15	0.58	0	17,19,21	0.69	0
2	NAG	C	2	2	14,14,15	0.52	0	17,19,21	0.72	1 (5%)
2	FUC	C	3	2	10,10,11	0.50	0	14,14,16	0.30	0
2	NAG	D	1	1,2	14,14,15	0.77	1 (7%)	17,19,21	0.74	1 (5%)
2	NAG	D	2	2	14,14,15	0.76	1 (7%)	17,19,21	0.59	0
2	FUC	D	3	2	10,10,11	0.52	0	14,14,16	0.31	0
3	NAG	E	1	3,1	14,14,15	0.49	0	17,19,21	0.78	1 (5%)
3	NAG	E	2	3	14,14,15	0.53	0	17,19,21	0.66	0
4	NAG	F	1	1,4	14,14,15	0.52	0	17,19,21	0.83	1 (5%)
4	NDG	F	2	4	14,14,15	0.74	0	17,19,21	0.94	1 (5%)
4	MAN	F	3	4	11,11,12	0.64	0	15,15,17	0.32	0
3	NAG	G	1	3,1	14,14,15	0.50	0	17,19,21	0.76	0
3	NAG	G	2	3	14,14,15	0.55	0	17,19,21	0.61	0
3	NAG	H	1	3,1	14,14,15	0.57	0	17,19,21	0.74	1 (5%)
3	NAG	H	2	3	14,14,15	0.55	0	17,19,21	0.72	0
2	NAG	I	1	1,2	14,14,15	0.54	0	17,19,21	0.73	0
2	NAG	I	2	2	14,14,15	0.60	0	17,19,21	0.73	0
2	FUC	I	3	2	10,10,11	0.53	0	14,14,16	0.43	0
3	NAG	J	1	3,1	14,14,15	0.79	0	17,19,21	1.03	2 (11%)
3	NAG	J	2	3	14,14,15	0.58	0	17,19,21	0.79	1 (5%)
5	NAG	K	1	1,5	14,14,15	0.45	0	17,19,21	0.83	1 (5%)
5	NAG	K	2	5	14,14,15	0.49	0	17,19,21	0.68	1 (5%)
5	BMA	K	3	5	11,11,12	0.50	0	15,15,17	0.22	0
5	NAG	L	1	1,5	14,14,15	0.65	0	17,19,21	0.87	1 (5%)
5	NAG	L	2	5	14,14,15	0.76	0	17,19,21	1.08	2 (11%)
5	BMA	L	3	5	11,11,12	0.49	0	15,15,17	0.33	0
6	NAG	M	1	1,6	14,14,15	0.65	0	17,19,21	0.82	1 (5%)
6	NDG	M	2	6	14,14,15	0.73	1 (7%)	17,19,21	0.99	1 (5%)

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
2	NAG	C	1	1,2	-	0/6/23/26	0/1/1/1
2	NAG	C	2	2	-	2/6/23/26	0/1/1/1
2	FUC	C	3	2	-	-	0/1/1/1
2	NAG	D	1	1,2	1/1/5/7	0/6/23/26	0/1/1/1
2	NAG	D	2	2	-	3/6/23/26	0/1/1/1
2	FUC	D	3	2	-	-	0/1/1/1
3	NAG	E	1	3,1	-	0/6/23/26	0/1/1/1
3	NAG	E	2	3	-	2/6/23/26	0/1/1/1
4	NAG	F	1	1,4	-	0/6/23/26	0/1/1/1
4	NDG	F	2	4	-	2/6/23/26	0/1/1/1
4	MAN	F	3	4	-	2/2/19/22	0/1/1/1
3	NAG	G	1	3,1	-	0/6/23/26	0/1/1/1
3	NAG	G	2	3	-	2/6/23/26	0/1/1/1
3	NAG	H	1	3,1	-	0/6/23/26	0/1/1/1
3	NAG	H	2	3	-	2/6/23/26	0/1/1/1
2	NAG	I	1	1,2	-	2/6/23/26	0/1/1/1
2	NAG	I	2	2	-	0/6/23/26	0/1/1/1
2	FUC	I	3	2	-	-	0/1/1/1
3	NAG	J	1	3,1	1/1/5/7	2/6/23/26	0/1/1/1
3	NAG	J	2	3	-	1/6/23/26	0/1/1/1
5	NAG	K	1	1,5	-	2/6/23/26	0/1/1/1
5	NAG	K	2	5	-	2/6/23/26	0/1/1/1
5	BMA	K	3	5	-	2/2/19/22	0/1/1/1
5	NAG	L	1	1,5	-	0/6/23/26	0/1/1/1
5	NAG	L	2	5	-	0/6/23/26	0/1/1/1
5	BMA	L	3	5	-	2/2/19/22	0/1/1/1
6	NAG	M	1	1,6	1/1/5/7	2/6/23/26	0/1/1/1
6	NDG	M	2	6	-	0/6/23/26	0/1/1/1

All (3) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	D	2	NAG	C1-C2	2.21	1.55	1.52
6	M	2	NDG	C1-C2	2.08	1.55	1.52
2	D	1	NAG	C1-C2	2.05	1.55	1.52

All (16) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
4	F	1	NAG	C2-N2-C7	-2.76	119.21	122.90
5	L	1	NAG	C2-N2-C7	-2.57	119.46	122.90
5	L	2	NAG	C2-N2-C7	-2.49	119.56	122.90
6	M	1	NAG	C2-N2-C7	-2.42	119.65	122.90
5	L	2	NAG	C4-C3-C2	-2.34	107.59	111.02
3	J	1	NAG	C2-N2-C7	-2.32	119.79	122.90
3	E	1	NAG	C2-N2-C7	-2.31	119.81	122.90
5	K	1	NAG	C2-N2-C7	-2.27	119.86	122.90
2	C	2	NAG	C2-N2-C7	-2.23	119.91	122.90
3	H	1	NAG	C2-N2-C7	-2.09	120.10	122.90
5	K	2	NAG	C2-N2-C7	-2.07	120.13	122.90
4	F	2	NDG	C2-N2-C7	-2.05	120.15	122.90
2	D	1	NAG	C2-N2-C7	-2.05	120.16	122.90
3	J	1	NAG	C4-C3-C2	-2.03	108.04	111.02
3	J	2	NAG	C2-N2-C7	-2.02	120.20	122.90
6	M	2	NDG	O5-C1-C2	2.01	114.40	111.29

All (3) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
2	D	1	NAG	C1
3	J	1	NAG	C1
6	M	1	NAG	C1

All (30) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	D	2	NAG	C3-C2-N2-C7
3	G	2	NAG	C1-C2-N2-C7
2	D	2	NAG	O5-C5-C6-O6
3	E	2	NAG	O5-C5-C6-O6
5	K	3	BMA	O5-C5-C6-O6
2	I	1	NAG	C4-C5-C6-O6
3	E	2	NAG	C4-C5-C6-O6
5	K	3	BMA	C4-C5-C6-O6
2	I	1	NAG	O5-C5-C6-O6
6	M	1	NAG	O5-C5-C6-O6
2	D	2	NAG	C4-C5-C6-O6
3	J	1	NAG	O5-C5-C6-O6
5	K	2	NAG	O5-C5-C6-O6
5	K	2	NAG	C4-C5-C6-O6

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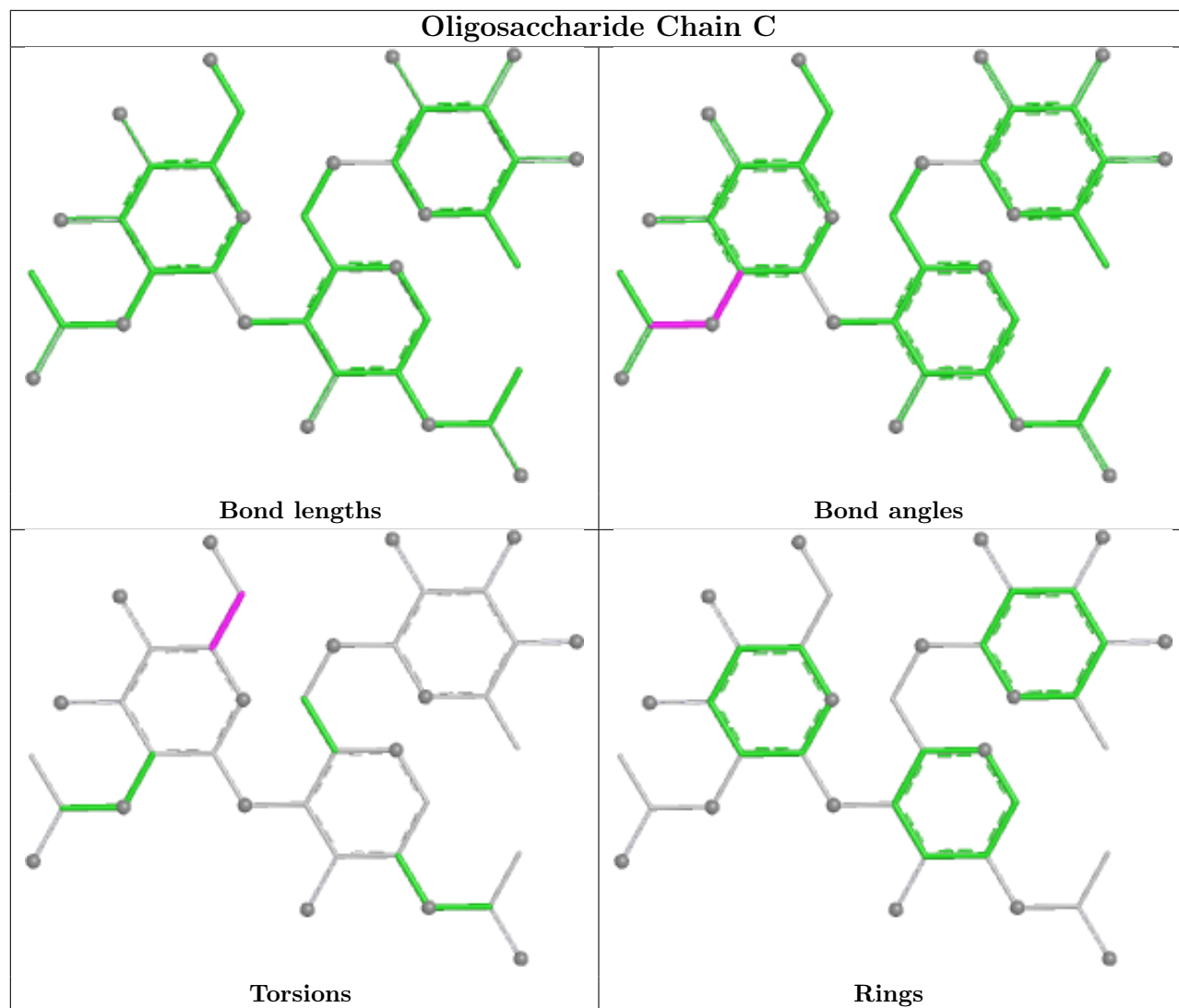
Mol	Chain	Res	Type	Atoms
3	J	1	NAG	C4-C5-C6-O6
5	K	1	NAG	C4-C5-C6-O6
2	C	2	NAG	O5-C5-C6-O6
6	M	1	NAG	C4-C5-C6-O6
5	K	1	NAG	O5-C5-C6-O6
4	F	3	MAN	C4-C5-C6-O6
2	C	2	NAG	C4-C5-C6-O6
4	F	2	NDG	C4-C5-C6-O6
4	F	3	MAN	O5-C5-C6-O6
3	H	2	NAG	C3-C2-N2-C7
4	F	2	NDG	O5-C5-C6-O6
5	L	3	BMA	C4-C5-C6-O6
3	J	2	NAG	C4-C5-C6-O6
3	H	2	NAG	C1-C2-N2-C7
3	G	2	NAG	C3-C2-N2-C7
5	L	3	BMA	O5-C5-C6-O6

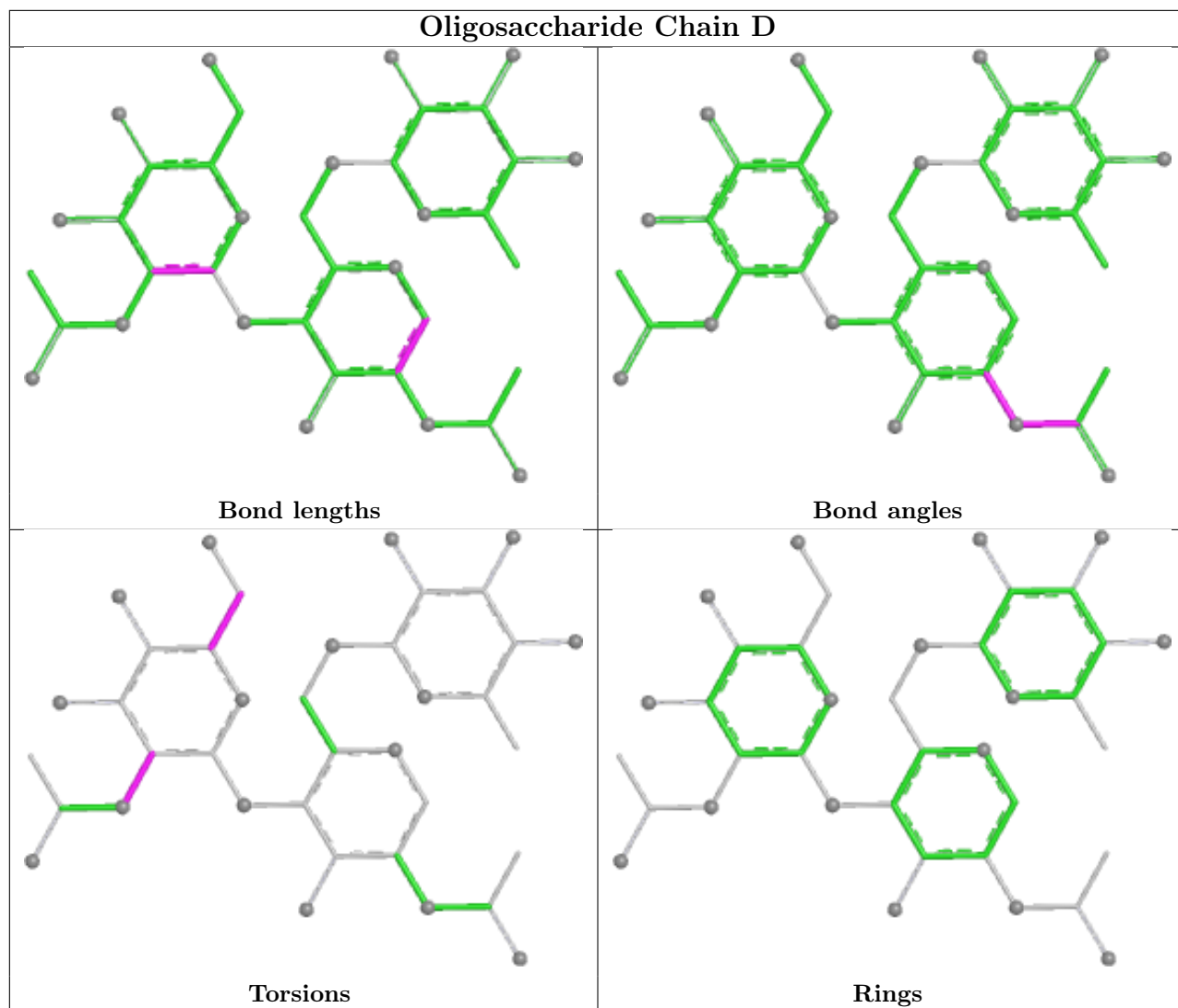
There are no ring outliers.

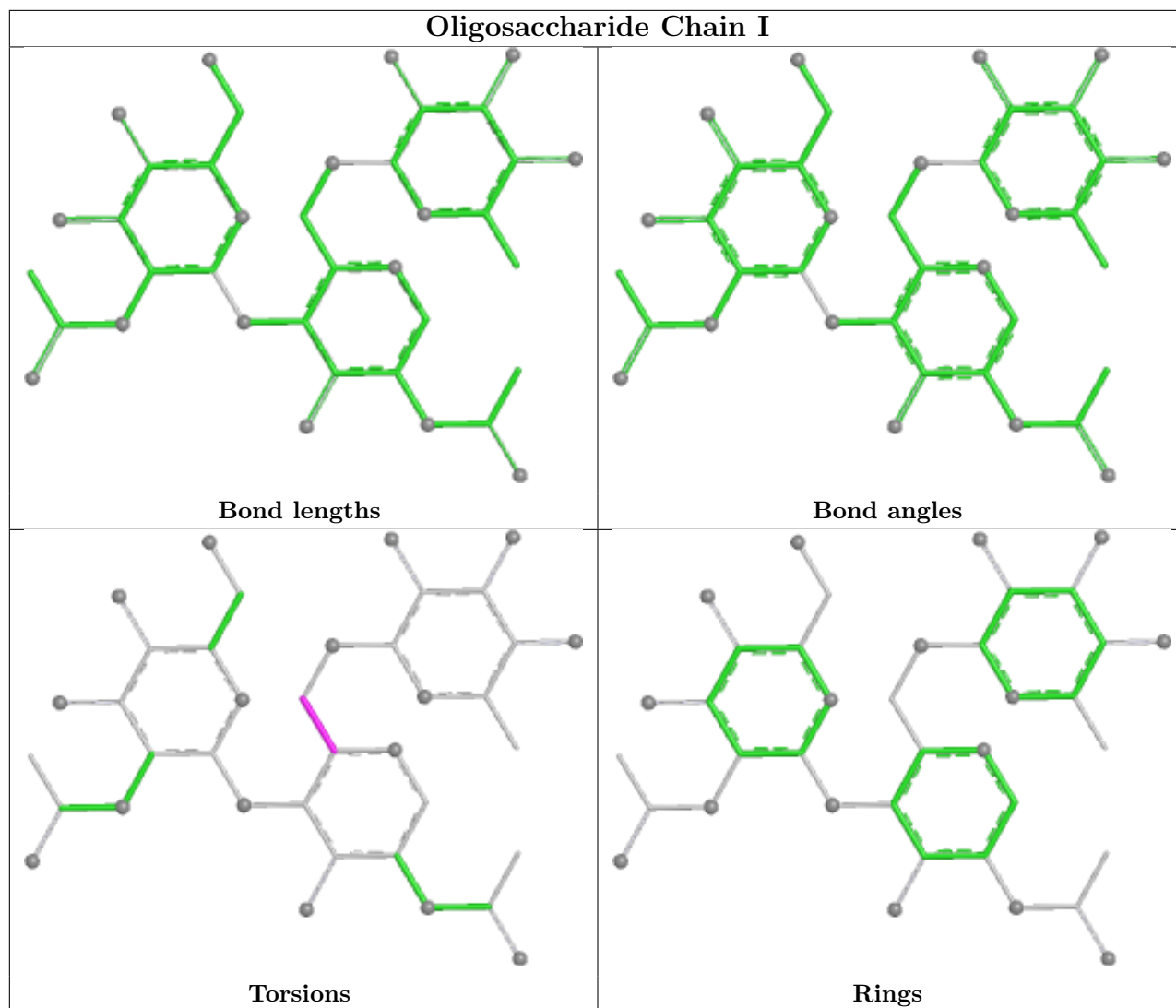
13 monomers are involved in 20 short contacts:

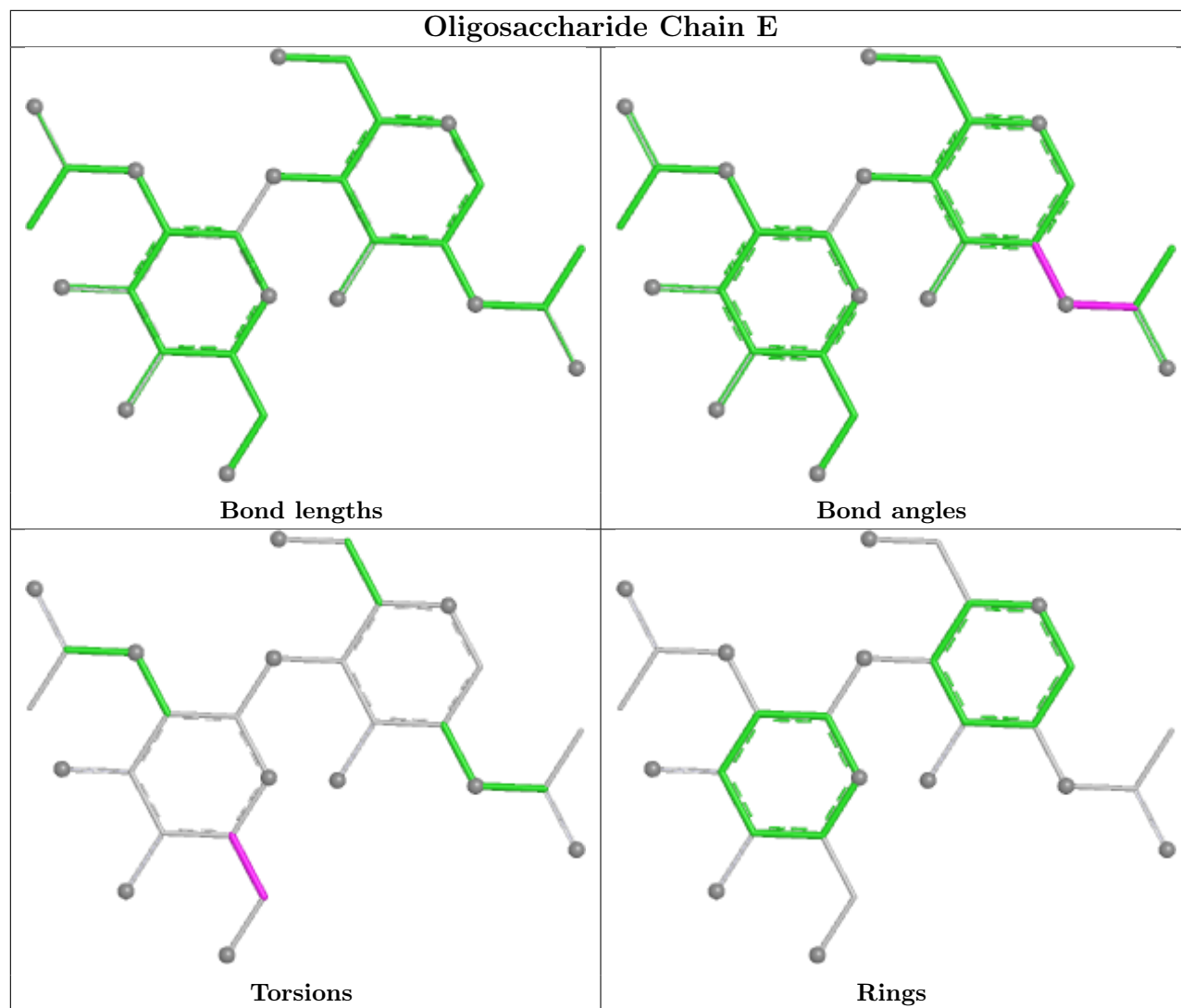
Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	I	3	FUC	1	0
6	M	2	NDG	1	0
5	L	2	NAG	1	0
2	D	2	NAG	5	0
4	F	1	NAG	2	0
2	I	1	NAG	1	0
5	L	3	BMA	1	0
3	J	1	NAG	3	0
4	F	3	MAN	3	0
6	M	1	NAG	3	0
3	H	1	NAG	1	0
2	D	1	NAG	4	0
4	F	2	NDG	3	0

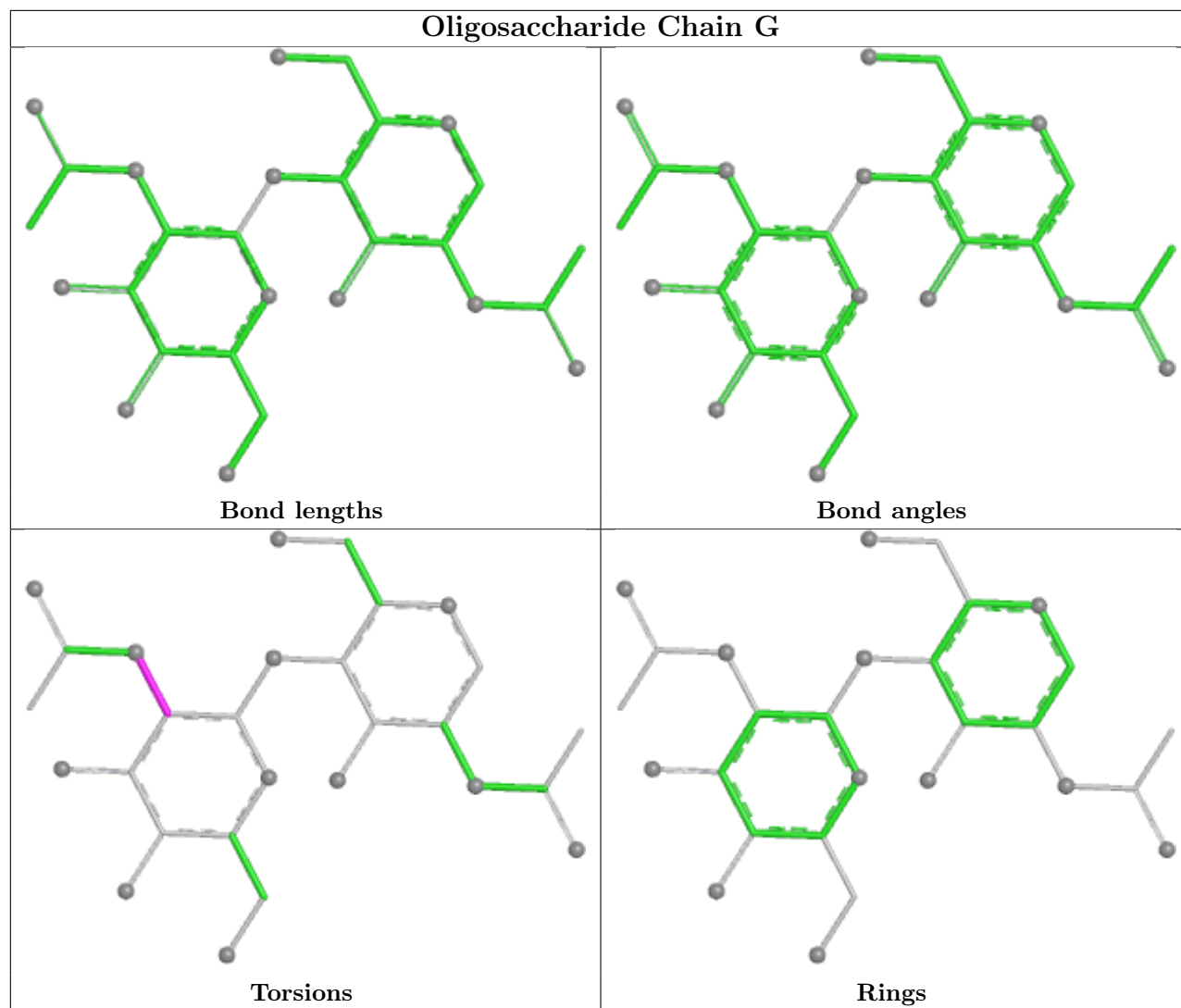
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for oligosaccharide.

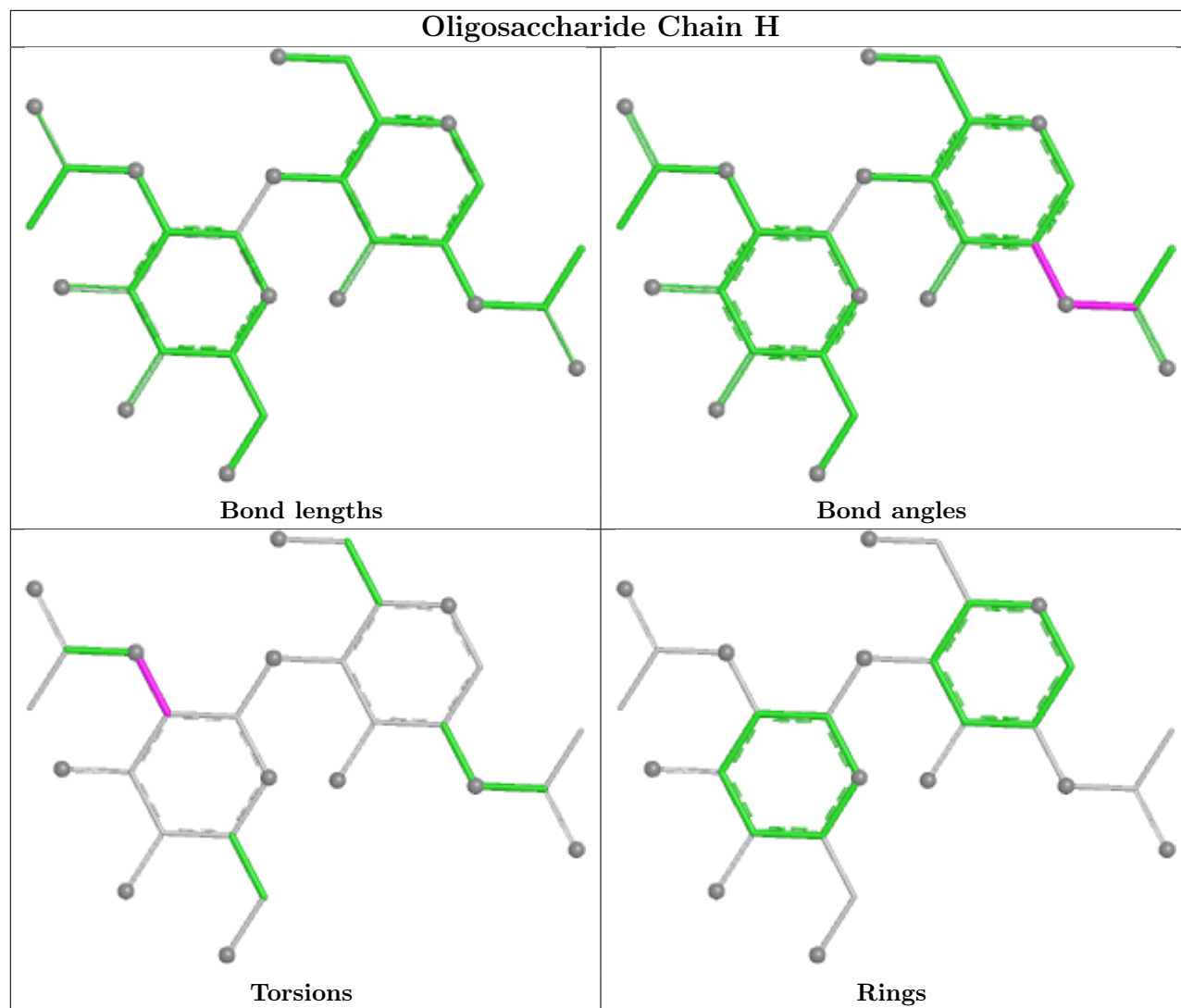


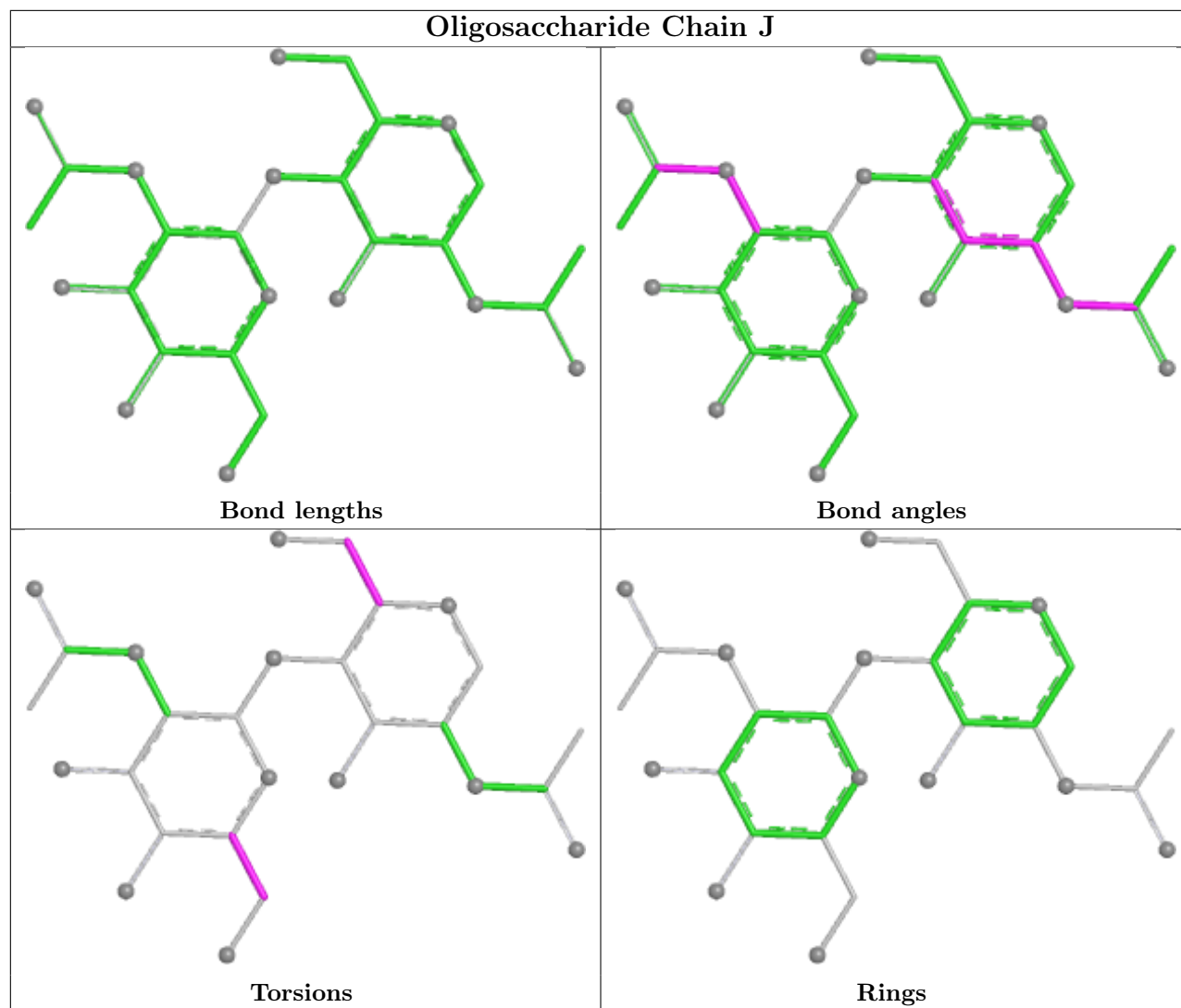


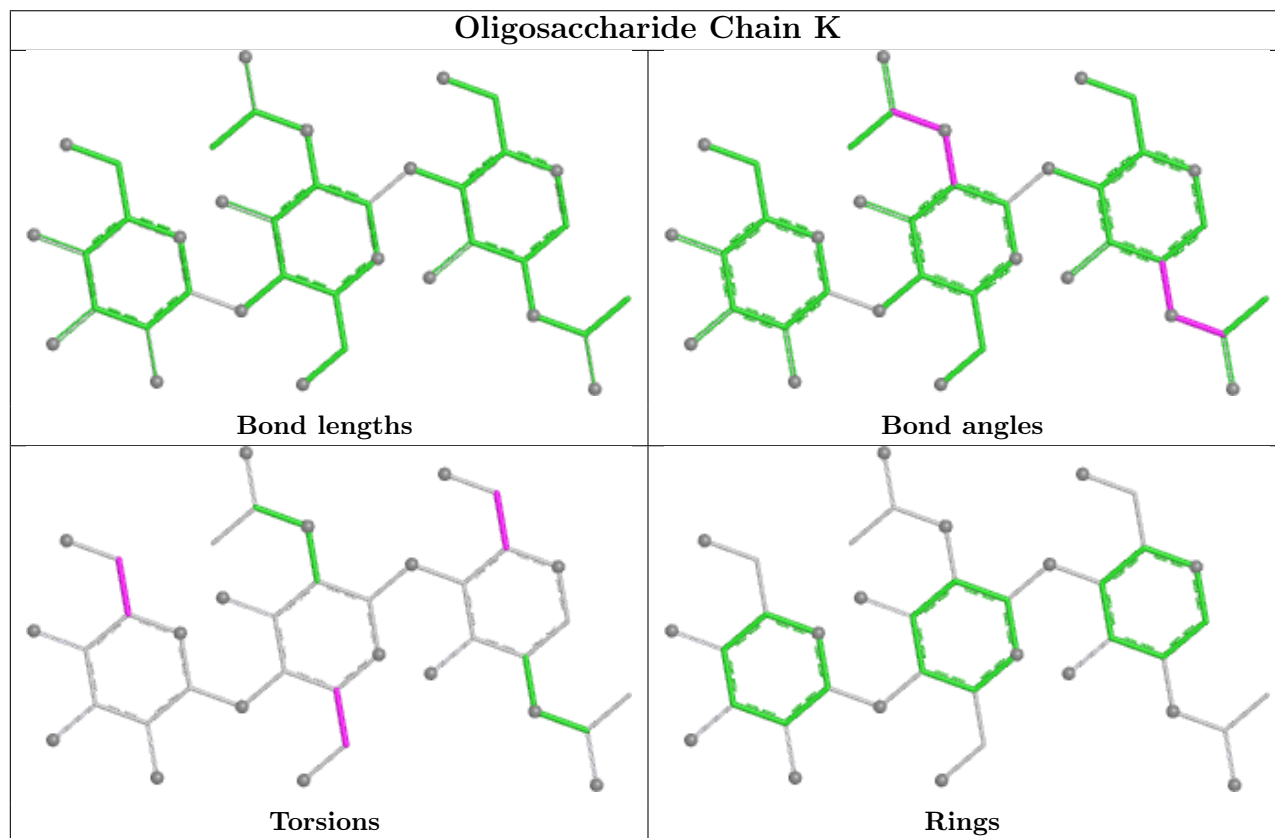
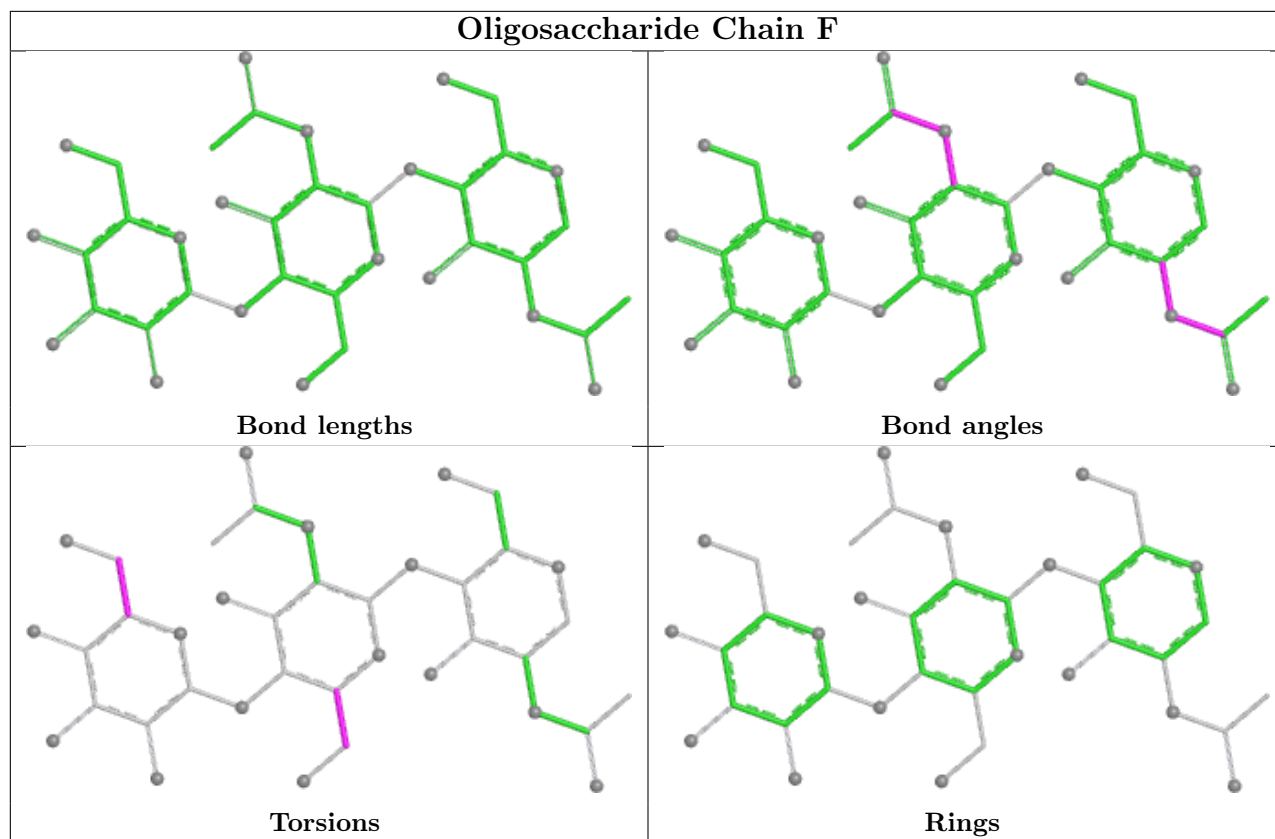


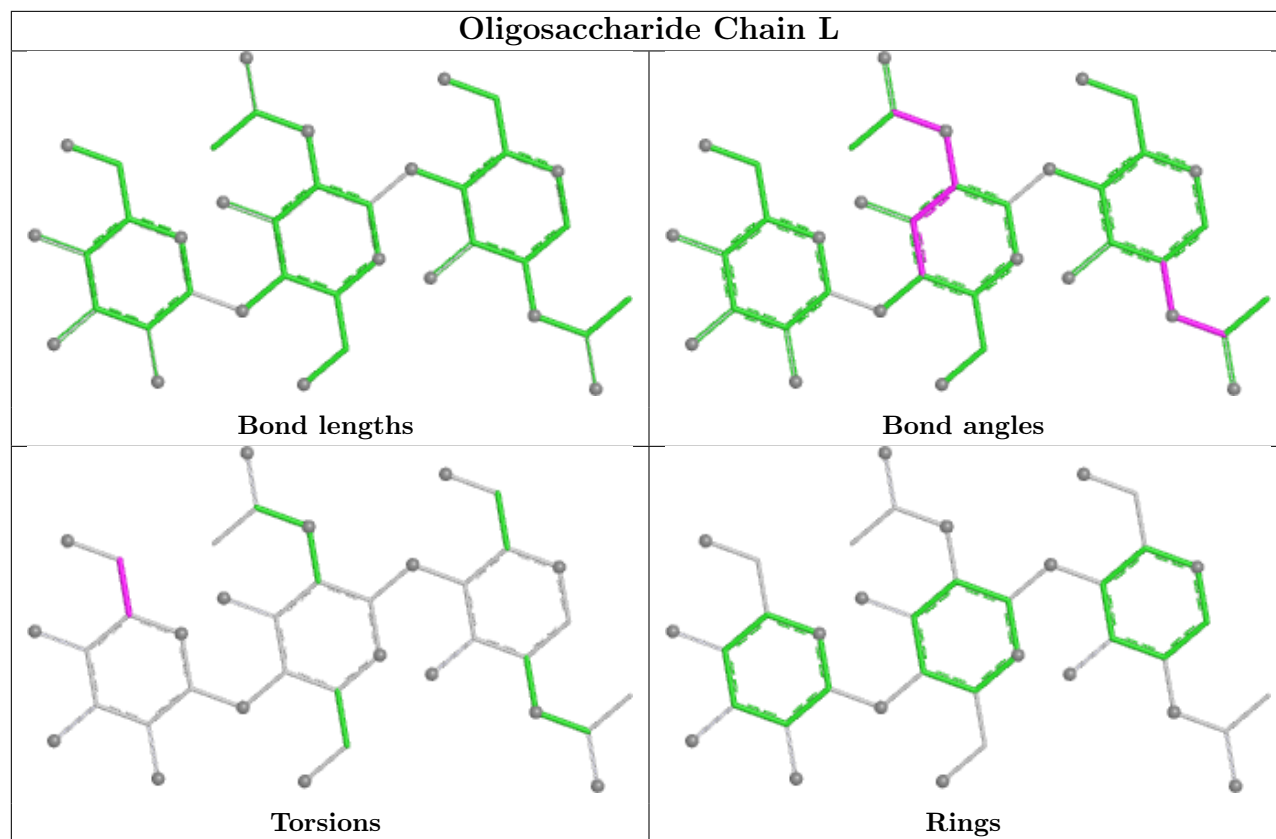


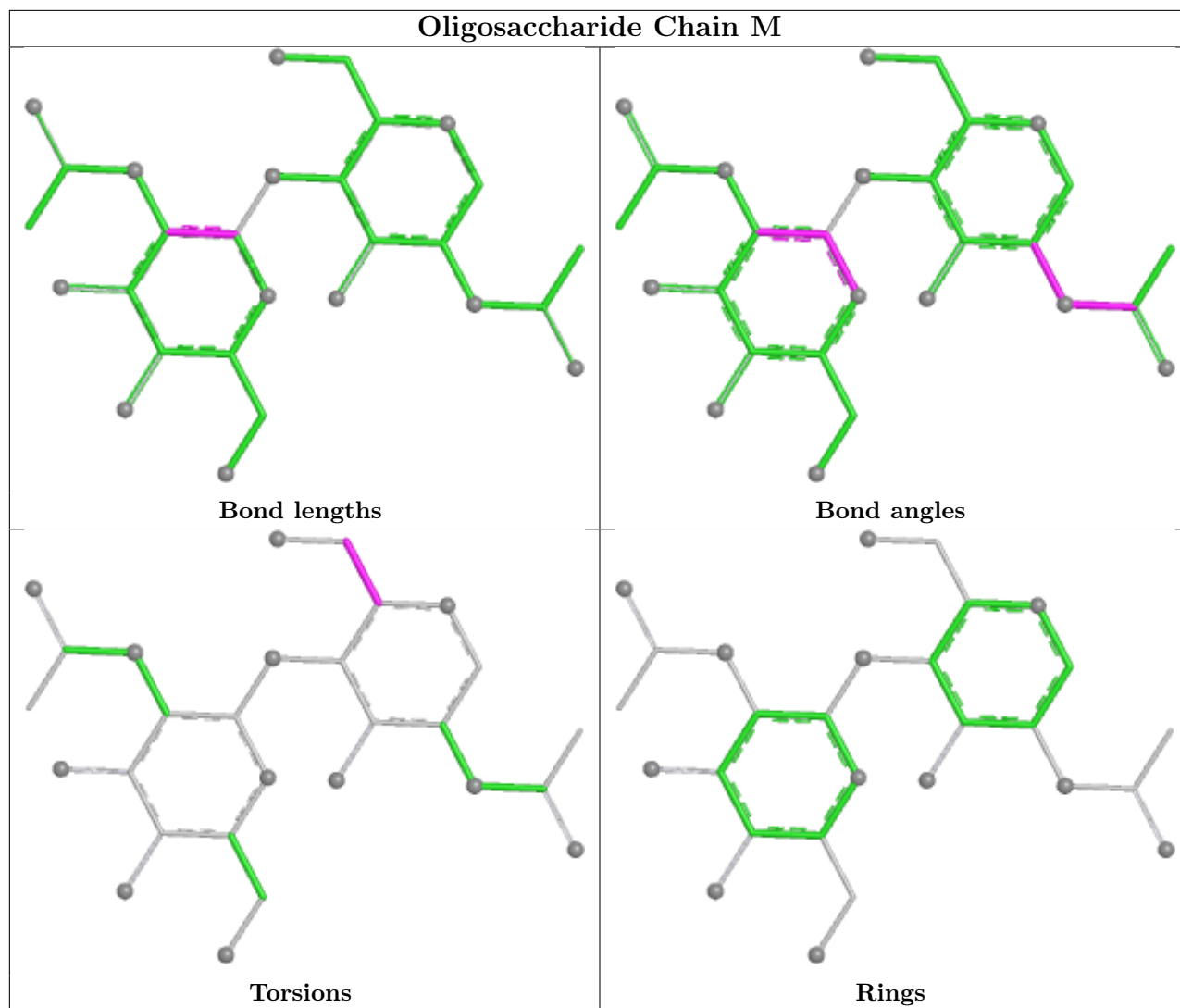












5.6 Ligand geometry [i](#)

3 ligands are modelled in this entry.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\# Z > 2$	Counts	RMSZ	$\# Z > 2$
7	NAG	A	782	1	14,14,15	0.56	0	17,19,21	0.63	0
7	NAG	B	770	1	14,14,15	0.54	0	17,19,21	0.71	1 (5%)
7	NAG	B	781	1	14,14,15	0.76	0	17,19,21	0.64	0

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
7	NAG	A	782	1	-	3/6/23/26	0/1/1/1
7	NAG	B	770	1	-	0/6/23/26	0/1/1/1
7	NAG	B	781	1	-	1/6/23/26	0/1/1/1

There are no bond length outliers.

All (1) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
7	B	770	NAG	C2-N2-C7	-2.16	120.01	122.90

There are no chirality outliers.

All (4) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
7	B	781	NAG	C3-C2-N2-C7
7	A	782	NAG	O5-C5-C6-O6
7	A	782	NAG	C4-C5-C6-O6
7	A	782	NAG	C3-C2-N2-C7

There are no ring outliers.

3 monomers are involved in 11 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
7	A	782	NAG	4	0
7	B	770	NAG	1	0
7	B	781	NAG	6	0

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	726/728 (99%)	0.33	45 (6%) 26 25	10, 22, 44, 59	0
1	B	728/728 (100%)	0.49	66 (9%) 15 13	10, 24, 50, 70	0
All	All	1454/1456 (99%)	0.41	111 (7%) 20 18	10, 23, 47, 70	0

All (111) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	A	289	ALA	5.8
1	A	276	LEU	5.0
1	A	39	SER	5.0
1	A	342	ALA	4.9
1	B	289	ALA	4.8
1	B	76	ILE	4.7
1	B	105	TYR	4.6
1	B	399	LYS	4.4
1	B	766	PRO	4.4
1	B	73	GLU	4.4
1	A	92	ASN	4.1
1	B	765	LEU	4.0
1	A	90	LEU	3.9
1	B	98	PHE	3.8
1	B	385	CYS	3.8
1	B	95	PHE	3.8
1	B	388	GLN	3.7
1	A	393	ASP	3.7
1	A	764	SER	3.6
1	A	341	VAL	3.6
1	A	277	SER	3.4
1	B	99	GLY	3.4
1	A	392	LYS	3.4
1	B	90	LEU	3.4

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Mol	Chain	Res	Type	RSRZ
1	A	377	ASN	3.4
1	B	94	THR	3.3
1	B	142	LEU	3.3
1	B	280	THR	3.3
1	B	100	HIS	3.2
1	B	154	TRP	3.2
1	A	103	ASN	3.2
1	B	89	PHE	3.2
1	B	537	SER	3.2
1	A	520	ASN	3.1
1	B	77	LEU	3.1
1	B	379	GLU	3.1
1	B	39	SER	3.0
1	B	140	ARG	2.9
1	A	74	ASN	2.9
1	A	73	GLU	2.8
1	B	91	GLU	2.8
1	A	93	SER	2.8
1	B	75	ASN	2.8
1	B	72	GLN	2.8
1	B	452	GLU	2.8
1	B	102	ILE	2.8
1	A	89	PHE	2.8
1	B	400	GLY	2.8
1	A	147	ARG	2.7
1	B	40	ARG	2.7
1	A	279	VAL	2.7
1	B	621	ASN	2.6
1	A	110	ASP	2.6
1	B	139	LYS	2.6
1	B	507	VAL	2.6
1	B	78	VAL	2.6
1	A	521	GLU	2.6
1	A	94	THR	2.6
1	B	141	GLN	2.6
1	A	413	ASP	2.6
1	A	507	VAL	2.5
1	B	92	ASN	2.5
1	B	138	ASN	2.5
1	A	72	GLN	2.5
1	B	517	ILE	2.5
1	B	506	ASN	2.5

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Mol	Chain	Res	Type	RSRZ
1	B	66	HIS	2.5
1	B	88	VAL	2.4
1	B	279	VAL	2.4
1	B	71	LYS	2.4
1	A	505	GLN	2.4
1	B	134	ILE	2.4
1	B	378	GLU	2.4
1	B	413	ASP	2.4
1	B	87	SER	2.4
1	A	280	THR	2.4
1	A	519	LEU	2.3
1	A	95	PHE	2.3
1	B	253	ARG	2.3
1	A	697	GLN	2.3
1	A	726	VAL	2.3
1	A	83	TYR	2.3
1	B	645	GLY	2.3
1	B	393	ASP	2.2
1	B	83	TYR	2.2
1	B	209	SER	2.2
1	A	98	PHE	2.2
1	B	208	PHE	2.2
1	A	71	LYS	2.2
1	A	275	SER	2.2
1	B	536	LYS	2.2
1	B	74	ASN	2.2
1	A	336	ARG	2.2
1	A	437	SER	2.2
1	A	145	GLU	2.1
1	B	97	GLU	2.1
1	B	143	ILE	2.1
1	B	295	ILE	2.1
1	B	137	LEU	2.1
1	B	118	TYR	2.1
1	A	288	THR	2.1
1	A	390	ASP	2.1
1	A	617	GLY	2.1
1	B	538	LYS	2.1
1	A	51	ASN	2.1
1	A	96	ASP	2.1
1	B	602	GLU	2.0
1	B	644	SER	2.1

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Mol	Chain	Res	Type	RSRZ
1	B	219	ASN	2.0
1	B	505	GLN	2.0
1	A	91	GLU	2.0

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

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

6.3 Carbohydrates [i](#)

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.

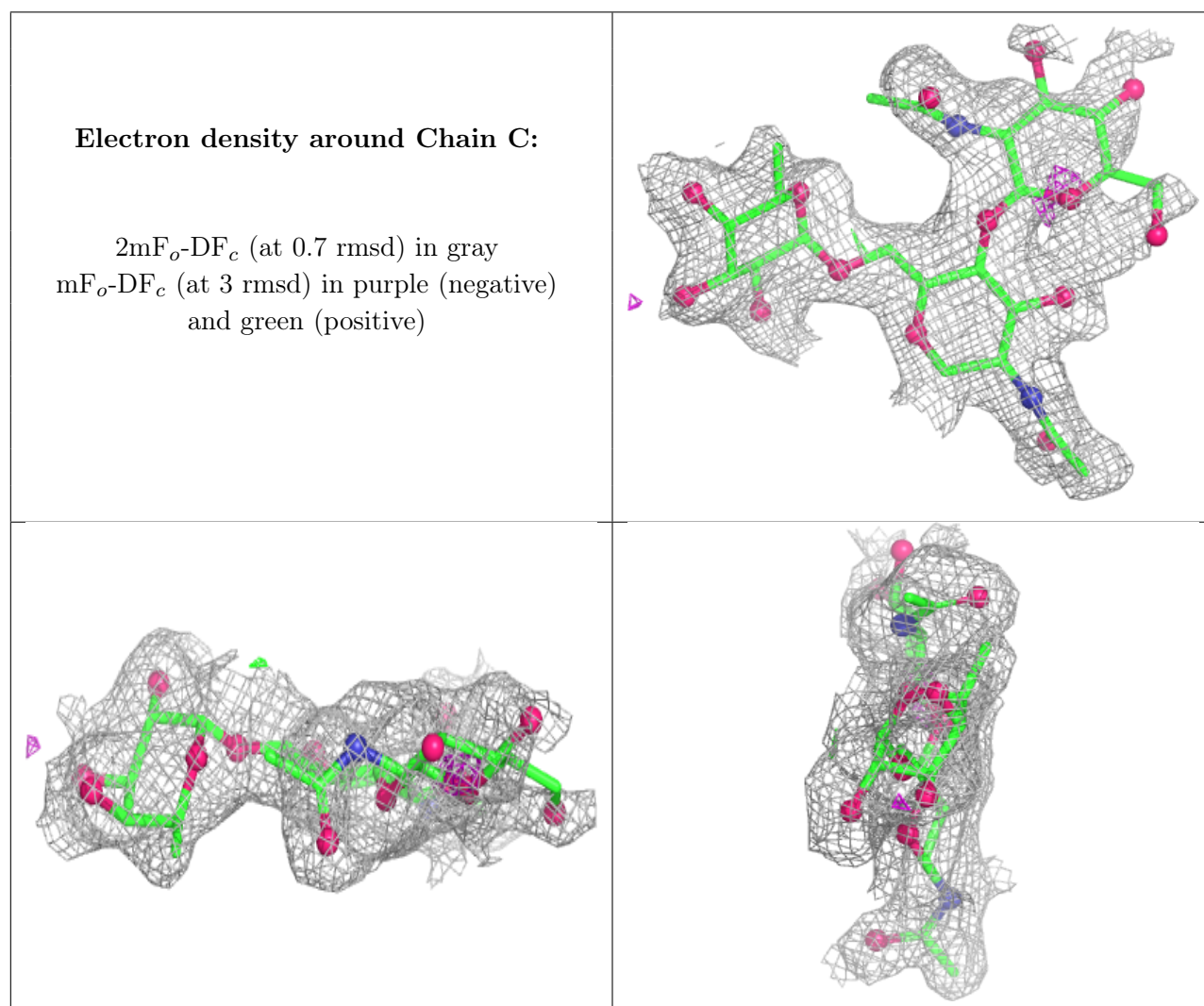
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
2	FUC	D	3	10/11	0.33	0.19	71,72,73,73	0
4	MAN	F	3	11/12	0.35	0.20	69,70,71,71	0
5	BMA	K	3	11/12	0.37	0.17	60,62,63,63	0
2	NAG	D	2	14/15	0.47	0.20	73,74,75,76	0
4	NDG	F	2	14/15	0.51	0.19	56,60,62,66	0
6	NDG	M	2	14/15	0.53	0.20	63,65,67,67	0
2	NAG	I	2	14/15	0.54	0.17	67,69,70,70	0
5	BMA	L	3	11/12	0.54	0.18	57,60,61,61	0
3	NAG	J	2	14/15	0.54	0.19	63,65,65,66	0
2	NAG	C	2	14/15	0.56	0.17	61,63,64,64	0
2	FUC	I	3	10/11	0.57	0.18	64,65,65,65	0
2	NAG	D	1	14/15	0.59	0.20	62,66,70,70	0
3	NAG	H	2	14/15	0.59	0.19	49,52,53,54	0
3	NAG	J	1	14/15	0.60	0.20	52,57,58,61	0
3	NAG	G	2	14/15	0.61	0.18	63,64,65,65	0
6	NAG	M	1	14/15	0.68	0.20	50,53,56,60	0
5	NAG	K	2	14/15	0.70	0.14	46,50,53,57	0
3	NAG	E	2	14/15	0.73	0.15	49,52,53,53	0
2	FUC	C	3	10/11	0.76	0.14	53,54,54,54	0
3	NAG	G	1	14/15	0.78	0.15	55,56,58,60	0
5	NAG	L	2	14/15	0.79	0.16	44,46,49,53	0
2	NAG	I	1	14/15	0.81	0.14	58,60,63,65	0
2	NAG	C	1	14/15	0.82	0.13	50,51,54,57	0
4	NAG	F	1	14/15	0.86	0.12	37,39,44,50	0
3	NAG	E	1	14/15	0.87	0.11	36,39,41,45	0

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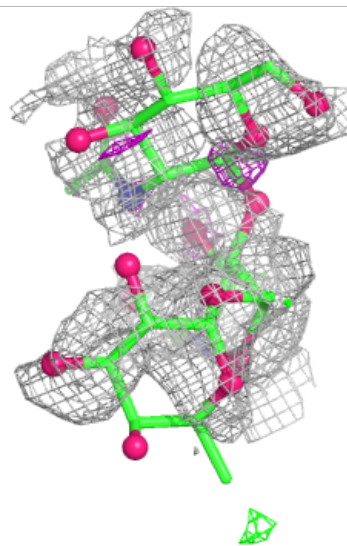
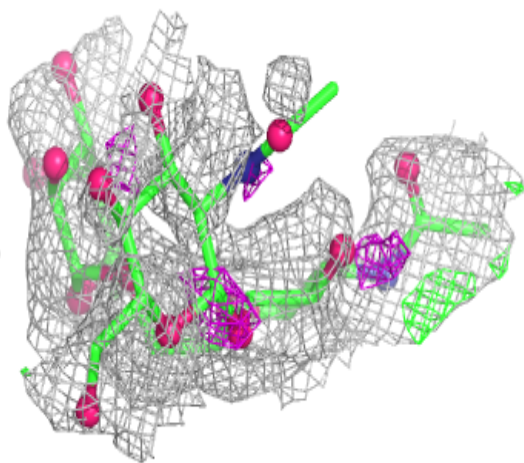
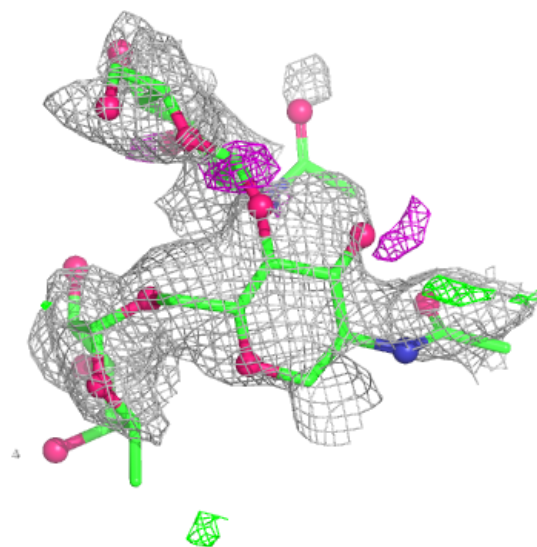
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
3	NAG	H	1	14/15	0.88	0.10	38,41,44,48	0
5	NAG	K	1	14/15	0.90	0.10	28,31,35,41	0
5	NAG	L	1	14/15	0.90	0.09	29,32,36,40	0

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.



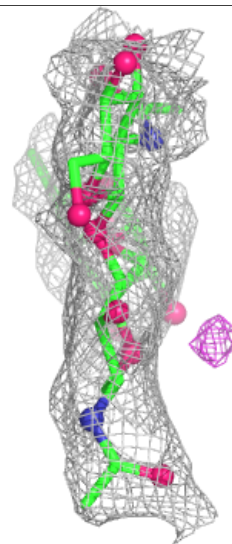
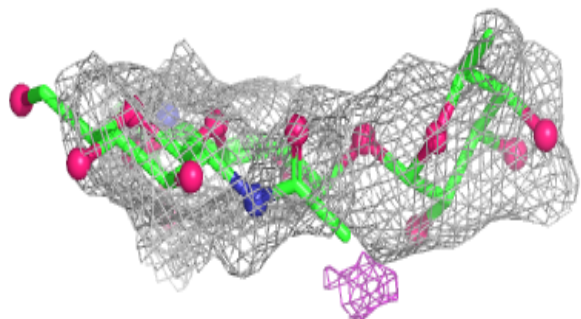
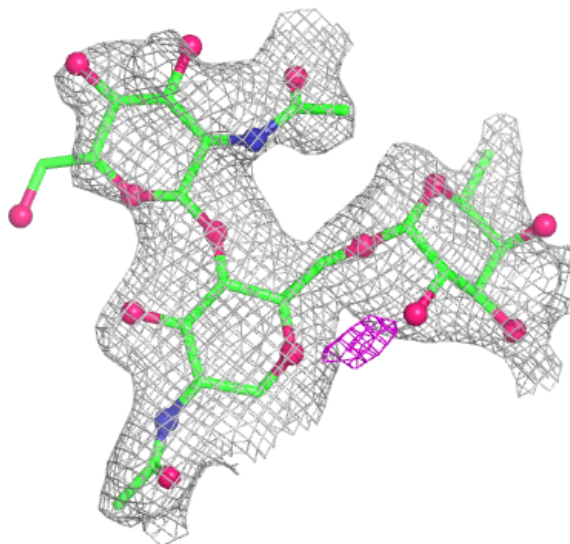
Electron density around Chain D:

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



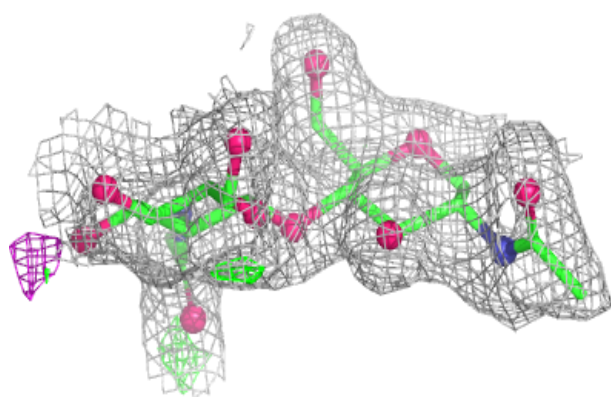
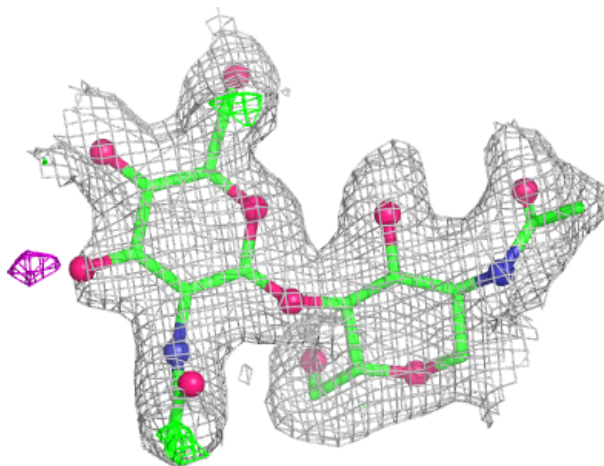
Electron density around Chain I:

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



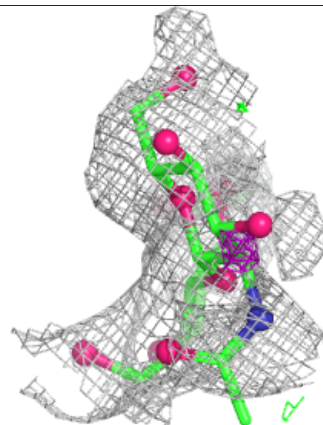
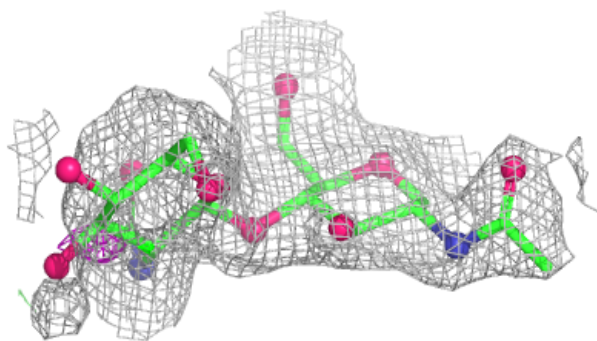
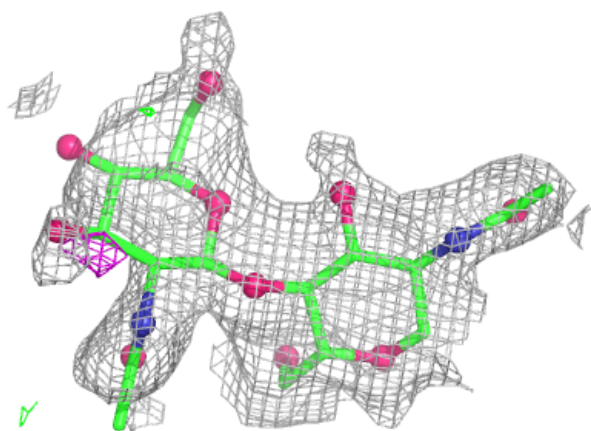
Electron density around Chain E:

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

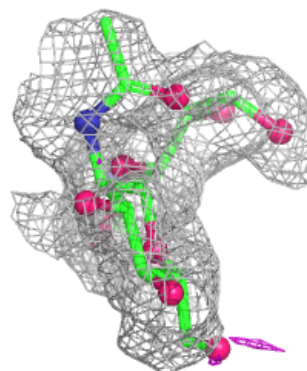
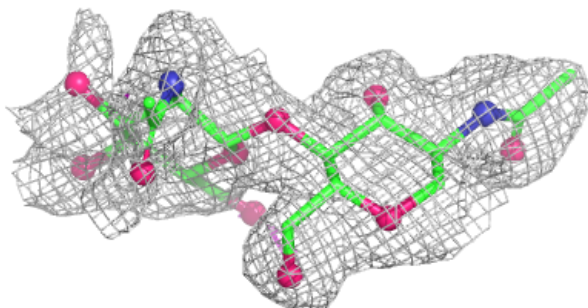
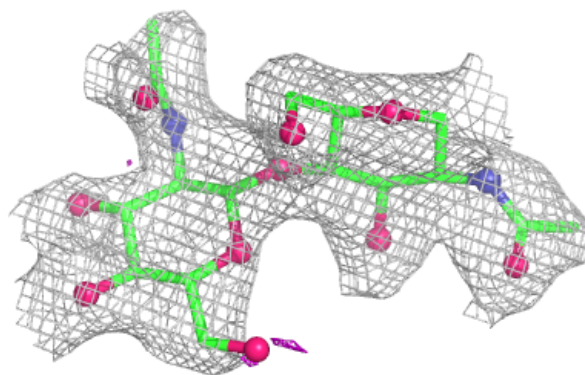


Electron density around Chain G:

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

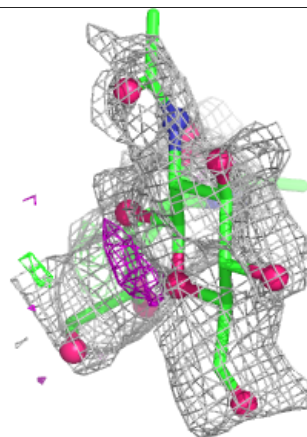
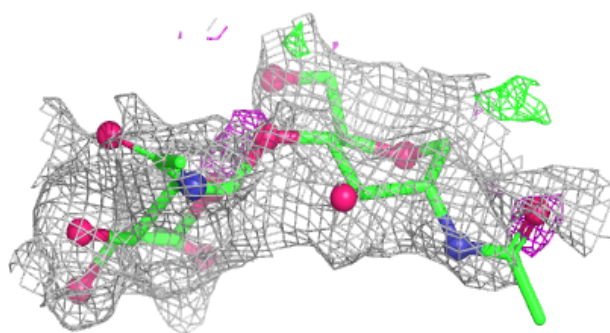
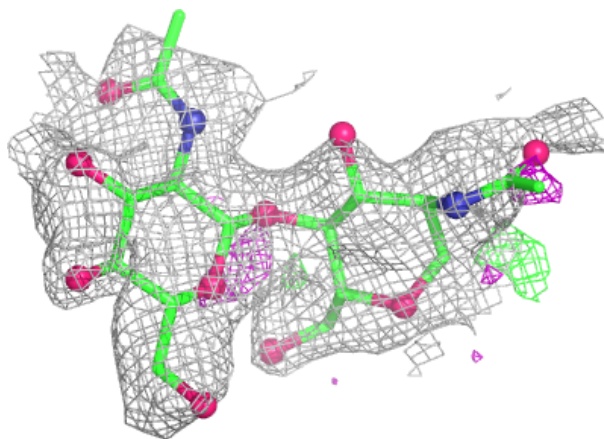
**Electron density around Chain H:**

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

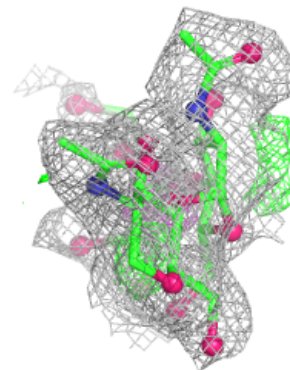
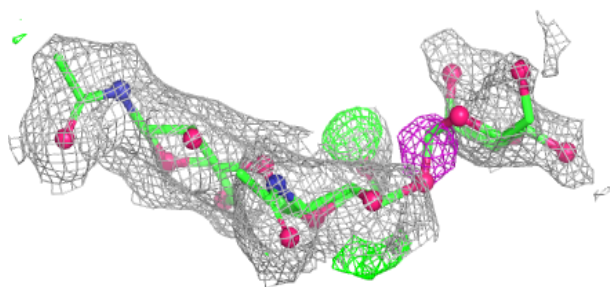
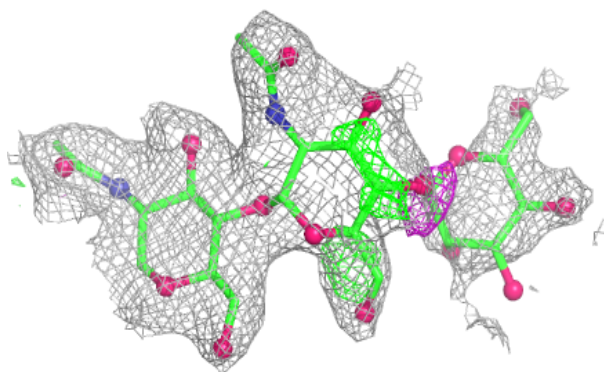


Electron density around Chain J:

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

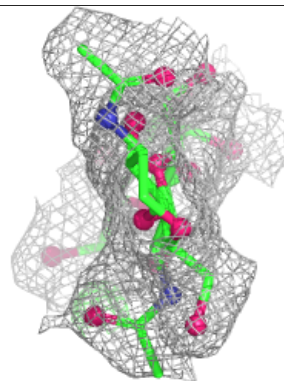
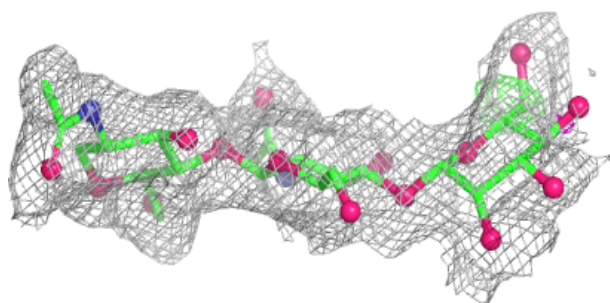
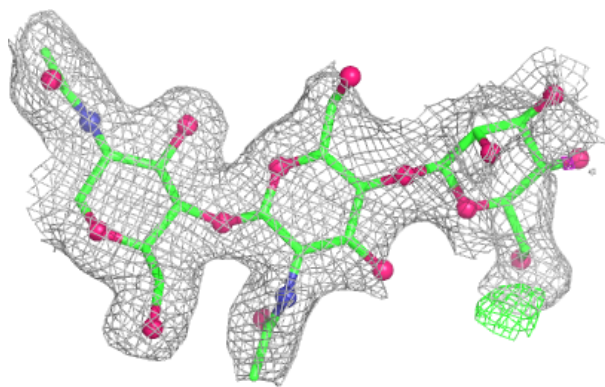
**Electron density around Chain F:**

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

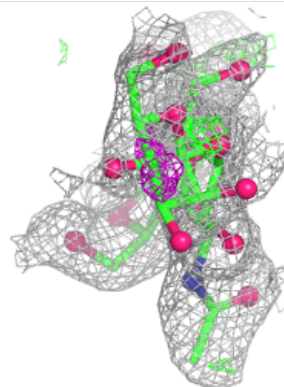
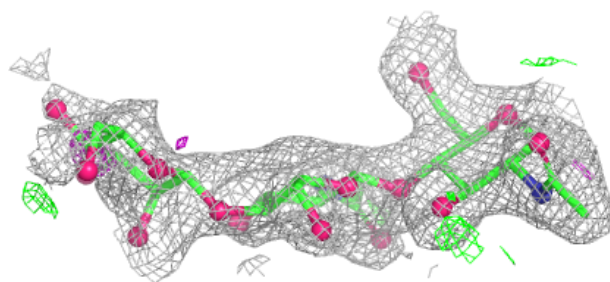
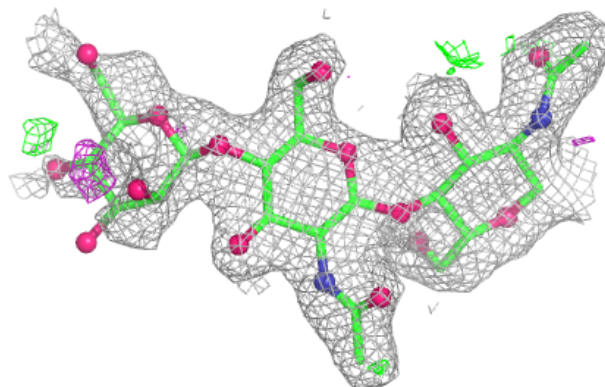


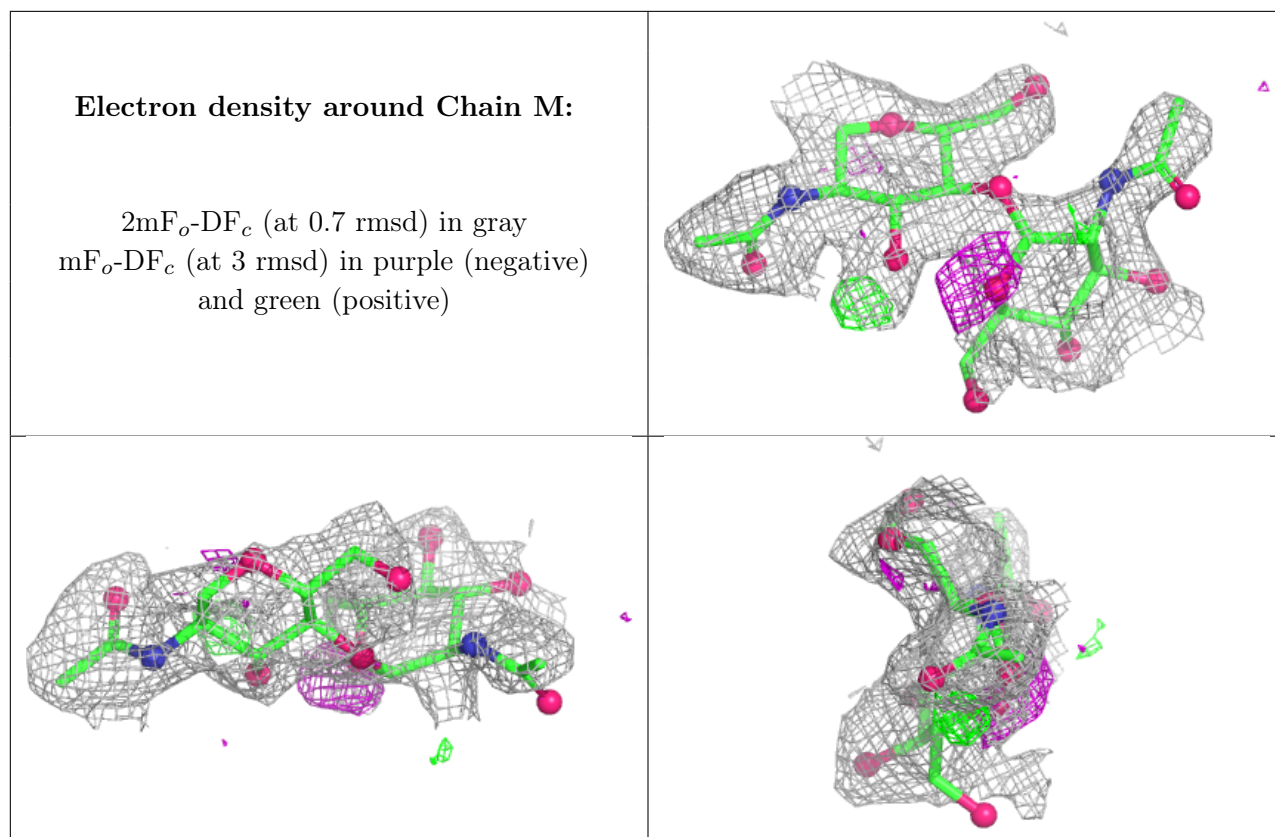
Electron density around Chain K:

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

**Electron density around Chain L:**

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





6.4 Ligands [i](#)

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

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
7	NAG	A	782	14/15	0.50	0.20	65,67,67,67	0
7	NAG	B	781	14/15	0.56	0.21	59,61,62,62	0
7	NAG	B	770	14/15	0.61	0.17	50,53,54,54	0

6.5 Other polymers [i](#)

There are no such residues in this entry.