wwPDB EM Validation Summary Report

Nov 29, 2022 – 12:20 PM JST

PDB ID	:	7WE7
EMDB ID	:	EMD-32441
Title	:	SARS-CoV-2 Omicron variant spike protein in complex with Fab XGv282
Authors	:	Wang, X.; Wang, L.
Deposited on	:	2021-12-23
Resolution	:	3.80 Å(reported)

This is a wwPDB EM Validation Summary 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/EMValidationReportHelp
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:

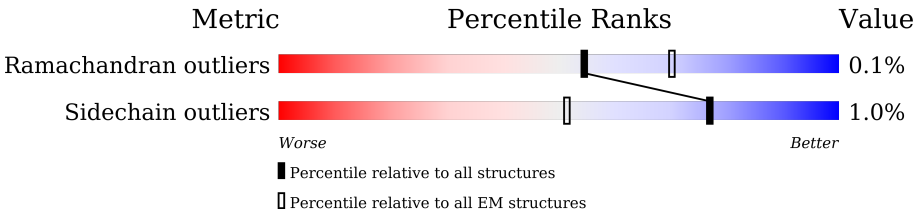
EMDB validation analysis	:	0.0.1.dev43
Mogul	:	1.8.5 (274361), CSD as541be (2020)
MolProbity	:	4.02b-467
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ	:	1.9.9
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.31.3

1 Overall quality at a glance

The following experimental techniques were used to determine the structure:
ELECTRON MICROSCOPY

The reported resolution of this entry is 3.80 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)	EM structures (#Entries)
Ramachandran outliers	154571	4023
Sidechain outliers	154315	3826

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the bar indicate the fraction of residues that contain outliers for >=3, 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions <=5% The upper red bar (where present) indicates the fraction of residues that have poor fit to the EM map (all-atom inclusion < 40%). The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	H	118	5% 94% 6%
1	J	118	26% 94% 6%
1	K	118	19% 96% .
2	L	111	10% 94% 6%
2	M	111	28% 96% .
2	N	111	23% 96% .
3	D	1270	86% 14%
3	E	1270	. 86% 14%
3	G	1270	. 86% 14%

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Mol	Chain	Length	Quality of chain
4	A	2	50% 100%
4	B	2	100%
4	C	2	100%
4	F	2	50% 50%
4	I	2	100%
4	P	2	100%
4	Q	2	100% 100%
4	R	2	100%
4	S	2	100%
4	T	2	100%
4	U	2	100%
4	X	2	100%
4	Y	2	100%
4	Z	2	100%
4	a	2	50% 50%
4	b	2	100%
5	O	3	100%
5	V	3	100%
5	W	3	100%
5	c	3	100%
5	d	3	100%

2 Entry composition (i)

There are 6 unique types of molecules in this entry. The entry contains 32095 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, 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 Heavy chain of Fab 282.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	H	118	Total	C	N	O	S	0	0
			917	581	154	178	4		
1	J	118	Total	C	N	O	S	0	0
			917	581	154	178	4		
1	K	118	Total	C	N	O	S	0	0
			917	581	154	178	4		

- Molecule 2 is a protein called The light chain of Fab 282.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	L	111	Total	C	N	O	S	0	0
			809	498	142	167	2		
2	M	111	Total	C	N	O	S	0	0
			809	498	142	167	2		
2	N	111	Total	C	N	O	S	0	0
			809	498	142	167	2		

- Molecule 3 is a protein called Spike glycoprotein.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	D	1098	Total	C	N	O	S	0	0
			8632	5525	1439	1629	39		
3	E	1098	Total	C	N	O	S	0	0
			8632	5525	1439	1629	39		
3	G	1098	Total	C	N	O	S	0	0
			8632	5525	1439	1629	39		

There are 114 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
D	67	VAL	ALA	variant	UNP P0DTC2
D	?	-	HIS	deletion	UNP P0DTC2
D	?	-	VAL	deletion	UNP P0DTC2

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Chain	Residue	Modelled	Actual	Comment	Reference
D	93	ILE	THR	variant	UNP P0DTC2
D	140	ASP	GLY	variant	UNP P0DTC2
D	?	-	VAL	deletion	UNP P0DTC2
D	?	-	TYR	deletion	UNP P0DTC2
D	?	-	TYR	deletion	UNP P0DTC2
D	?	-	ASN	deletion	UNP P0DTC2
D	209	GLU	-	insertion	UNP P0DTC2
D	210	PRO	-	insertion	UNP P0DTC2
D	211	GLU	-	insertion	UNP P0DTC2
D	336	ASP	GLY	variant	UNP P0DTC2
D	368	LEU	SER	variant	UNP P0DTC2
D	370	PRO	SER	variant	UNP P0DTC2
D	372	PHE	SER	variant	UNP P0DTC2
D	414	ASN	LYS	variant	UNP P0DTC2
D	437	LYS	ASN	variant	UNP P0DTC2
D	443	SER	GLY	variant	UNP P0DTC2
D	474	ASN	SER	variant	UNP P0DTC2
D	475	LYS	THR	variant	UNP P0DTC2
D	481	ALA	GLU	variant	UNP P0DTC2
D	490	ARG	GLN	variant	UNP P0DTC2
D	493	SER	GLY	variant	UNP P0DTC2
D	495	ARG	GLN	variant	UNP P0DTC2
D	498	TYR	ASN	variant	UNP P0DTC2
D	502	HIS	TYR	variant	UNP P0DTC2
D	544	LYS	THR	variant	UNP P0DTC2
D	611	GLY	ASP	variant	UNP P0DTC2
D	652	TYR	HIS	variant	UNP P0DTC2
D	676	LYS	ASN	variant	UNP P0DTC2
D	678	HIS	PRO	variant	UNP P0DTC2
D	761	LYS	ASN	variant	UNP P0DTC2
D	793	TYR	ASP	variant	UNP P0DTC2
D	853	LYS	ASN	variant	UNP P0DTC2
D	951	HIS	GLN	variant	UNP P0DTC2
D	966	LYS	ASN	variant	UNP P0DTC2
D	978	PHE	LEU	variant	UNP P0DTC2
E	67	VAL	ALA	variant	UNP P0DTC2
E	?	-	HIS	deletion	UNP P0DTC2
E	?	-	VAL	deletion	UNP P0DTC2
E	93	ILE	THR	variant	UNP P0DTC2
E	140	ASP	GLY	variant	UNP P0DTC2
E	?	-	VAL	deletion	UNP P0DTC2
E	?	-	TYR	deletion	UNP P0DTC2

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Chain	Residue	Modelled	Actual	Comment	Reference
E	?	-	TYR	deletion	UNP P0DTC2
E	?	-	ASN	deletion	UNP P0DTC2
E	209	GLU	-	insertion	UNP P0DTC2
E	210	PRO	-	insertion	UNP P0DTC2
E	211	GLU	-	insertion	UNP P0DTC2
E	336	ASP	GLY	variant	UNP P0DTC2
E	368	LEU	SER	variant	UNP P0DTC2
E	370	PRO	SER	variant	UNP P0DTC2
E	372	PHE	SER	variant	UNP P0DTC2
E	414	ASN	LYS	variant	UNP P0DTC2
E	437	LYS	ASN	variant	UNP P0DTC2
E	443	SER	GLY	variant	UNP P0DTC2
E	474	ASN	SER	variant	UNP P0DTC2
E	475	LYS	THR	variant	UNP P0DTC2
E	481	ALA	GLU	variant	UNP P0DTC2
E	490	ARG	GLN	variant	UNP P0DTC2
E	493	SER	GLY	variant	UNP P0DTC2
E	495	ARG	GLN	variant	UNP P0DTC2
E	498	TYR	ASN	variant	UNP P0DTC2
E	502	HIS	TYR	variant	UNP P0DTC2
E	544	LYS	THR	variant	UNP P0DTC2
E	611	GLY	ASP	variant	UNP P0DTC2
E	652	TYR	HIS	variant	UNP P0DTC2
E	676	LYS	ASN	variant	UNP P0DTC2
E	678	HIS	PRO	variant	UNP P0DTC2
E	761	LYS	ASN	variant	UNP P0DTC2
E	793	TYR	ASP	variant	UNP P0DTC2
E	853	LYS	ASN	variant	UNP P0DTC2
E	951	HIS	GLN	variant	UNP P0DTC2
E	966	LYS	ASN	variant	UNP P0DTC2
E	978	PHE	LEU	variant	UNP P0DTC2
G	67	VAL	ALA	variant	UNP P0DTC2
G	?	-	HIS	deletion	UNP P0DTC2
G	?	-	VAL	deletion	UNP P0DTC2
G	95	ILE	THR	variant	UNP P0DTC2
G	142	ASP	GLY	variant	UNP P0DTC2
G	?	-	VAL	deletion	UNP P0DTC2
G	?	-	TYR	deletion	UNP P0DTC2
G	?	-	TYR	deletion	UNP P0DTC2
G	?	-	ASN	deletion	UNP P0DTC2
G	211	GLU	-	insertion	UNP P0DTC2
G	212	PRO	-	insertion	UNP P0DTC2

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Chain	Residue	Modelled	Actual	Comment	Reference
G	213	GLU	-	insertion	UNP P0DTC2
G	338	ASP	GLY	variant	UNP P0DTC2
G	370	LEU	SER	variant	UNP P0DTC2
G	372	PRO	SER	variant	UNP P0DTC2
G	374	PHE	SER	variant	UNP P0DTC2
G	416	ASN	LYS	variant	UNP P0DTC2
G	439	LYS	ASN	variant	UNP P0DTC2
G	445	SER	GLY	variant	UNP P0DTC2
G	476	ASN	SER	variant	UNP P0DTC2
G	477	LYS	THR	variant	UNP P0DTC2
G	483	ALA	GLU	variant	UNP P0DTC2
G	492	ARG	GLN	variant	UNP P0DTC2
G	495	SER	GLY	variant	UNP P0DTC2
G	497	ARG	GLN	variant	UNP P0DTC2
G	500	TYR	ASN	variant	UNP P0DTC2
G	504	HIS	TYR	variant	UNP P0DTC2
G	546	LYS	THR	variant	UNP P0DTC2
G	613	GLY	ASP	variant	UNP P0DTC2
G	654	TYR	HIS	variant	UNP P0DTC2
G	678	LYS	ASN	variant	UNP P0DTC2
G	680	HIS	PRO	variant	UNP P0DTC2
G	763	LYS	ASN	variant	UNP P0DTC2
G	795	TYR	ASP	variant	UNP P0DTC2
G	855	LYS	ASN	variant	UNP P0DTC2
G	953	HIS	GLN	variant	UNP P0DTC2
G	968	LYS	ASN	variant	UNP P0DTC2
G	980	PHE	LEU	variant	UNP P0DTC2

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

Mol	Chain	Residues	Atoms				AltConf	Trace
4	A	2	Total	C	N	O	0	0
			28	16	2	10		
4	B	2	Total	C	N	O	0	0
			28	16	2	10		
4	C	2	Total	C	N	O	0	0
			28	16	2	10		

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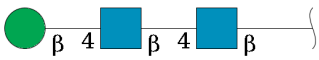
Mol	Chain	Residues	Atoms	AltConf	Trace
4	F	2	Total C N O 28 16 2 10	0	0
4	I	2	Total C N O 28 16 2 10	0	0
4	P	2	Total C N O 28 16 2 10	0	0
4	Q	2	Total C N O 28 16 2 10	0	0
4	R	2	Total C N O 28 16 2 10	0	0
4	S	2	Total C N O 28 16 2 10	0	0
4	T	2	Total C N O 28 16 2 10	0	0
4	U	2	Total C N O 28 16 2 10	0	0
4	X	2	Total C N O 28 16 2 10	0	0
4	Y	2	Total C N O 28 16 2 10	0	0
4	Z	2	Total C N O 28 16 2 10	0	0
4	a	2	Total C N O 28 16 2 10	0	0
4	b	2	Total C N O 28 16 2 10	0	0

- 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	AltConf	Trace
5	O	3	Total C N O 39 22 2 15	0	0
5	V	3	Total C N O 39 22 2 15	0	0
5	W	3	Total C N O 39 22 2 15	0	0
5	c	3	Total C N O 39 22 2 15	0	0

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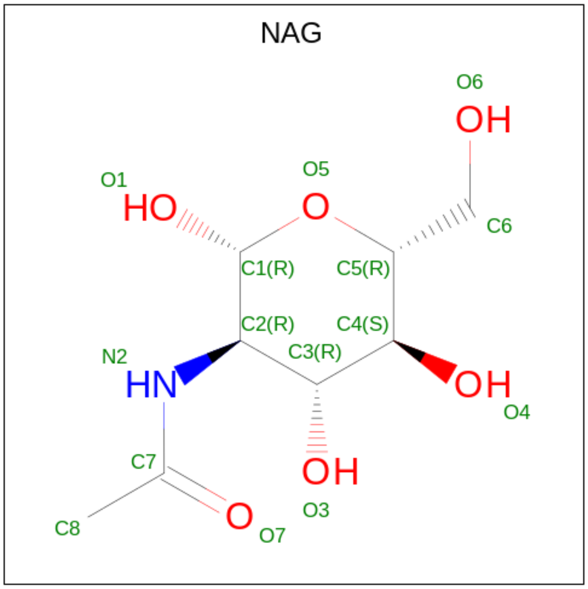
Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
5	d	3	39	22	2	15	0	0

- Molecule 6 is 2-acetamido-2-deoxy-beta-D-glucopyranose (three-letter code: NAG) (formula: $C_8H_{15}NO_6$).



Mol	Chain	Residues	Atoms				AltConf
			Total	C	N	O	
6	D	1	126	72	9	45	0
6	D	1	126	72	9	45	0
6	D	1	126	72	9	45	0
6	D	1	126	72	9	45	0
6	D	1	126	72	9	45	0
6	D	1	126	72	9	45	0
6	D	1	126	72	9	45	0
6	D	1	126	72	9	45	0
6	D	1	126	72	9	45	0
6	E	1	126	72	9	45	0

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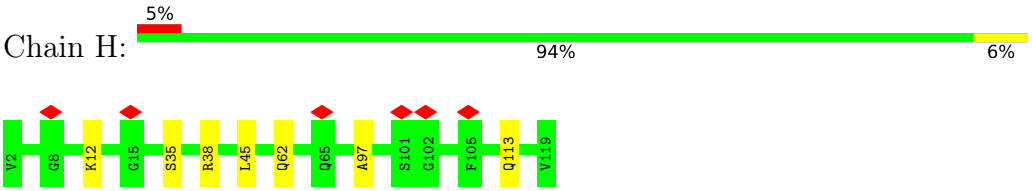
Mol	Chain	Residues	Atoms				AltConf
6	E	1	Total 126	C 72	N 9	O 45	0
6	E	1	Total 126	C 72	N 9	O 45	0
6	E	1	Total 126	C 72	N 9	O 45	0
6	E	1	Total 126	C 72	N 9	O 45	0
6	E	1	Total 126	C 72	N 9	O 45	0
6	E	1	Total 126	C 72	N 9	O 45	0
6	E	1	Total 126	C 72	N 9	O 45	0
6	E	1	Total 126	C 72	N 9	O 45	0
6	G	1	Total 126	C 72	N 9	O 45	0
6	G	1	Total 126	C 72	N 9	O 45	0
6	G	1	Total 126	C 72	N 9	O 45	0
6	G	1	Total 126	C 72	N 9	O 45	0
6	G	1	Total 126	C 72	N 9	O 45	0
6	G	1	Total 126	C 72	N 9	O 45	0
6	G	1	Total 126	C 72	N 9	O 45	0
6	G	1	Total 126	C 72	N 9	O 45	0
6	G	1	Total 126	C 72	N 9	O 45	0

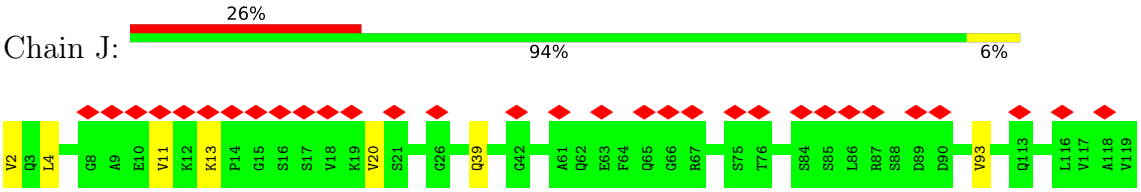
3 Residue-property plots (i)

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 atom inclusion in map 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 diamond above a residue indicates a poor fit to the EM map for this residue (all-atom inclusion < 40%). 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.

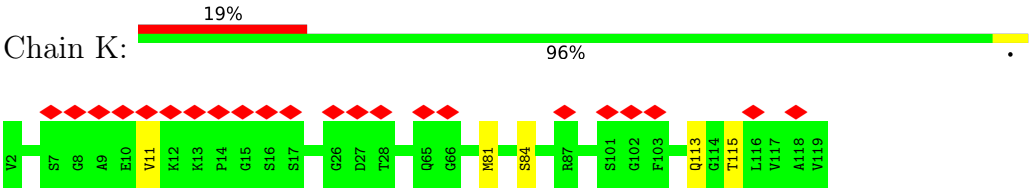
• Molecule 1: Heavy chain of Fab 282



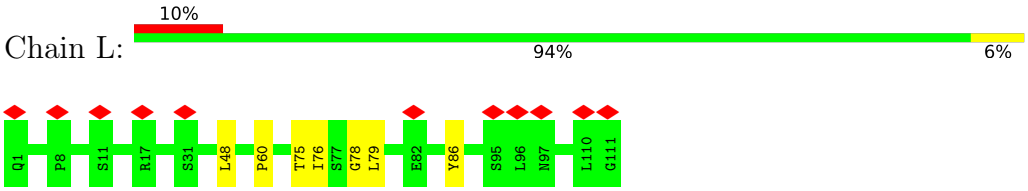
• Molecule 1: Heavy chain of Fab 282



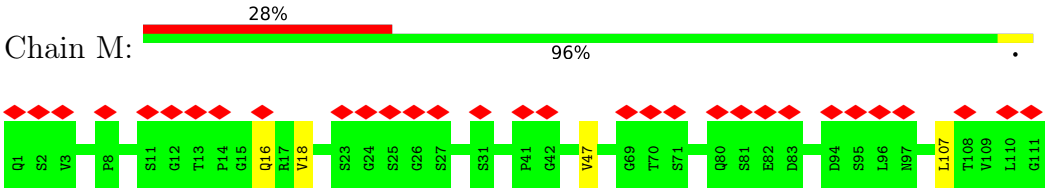
• Molecule 1: Heavy chain of Fab 282



• Molecule 2: The light chain of Fab 282

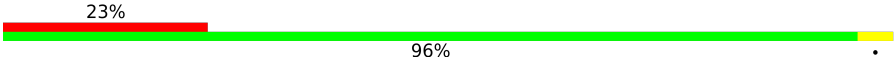


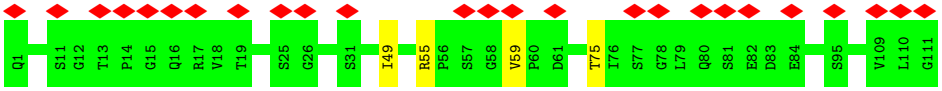
• Molecule 2: The light chain of Fab 282



• Molecule 2: The light chain of Fab 282

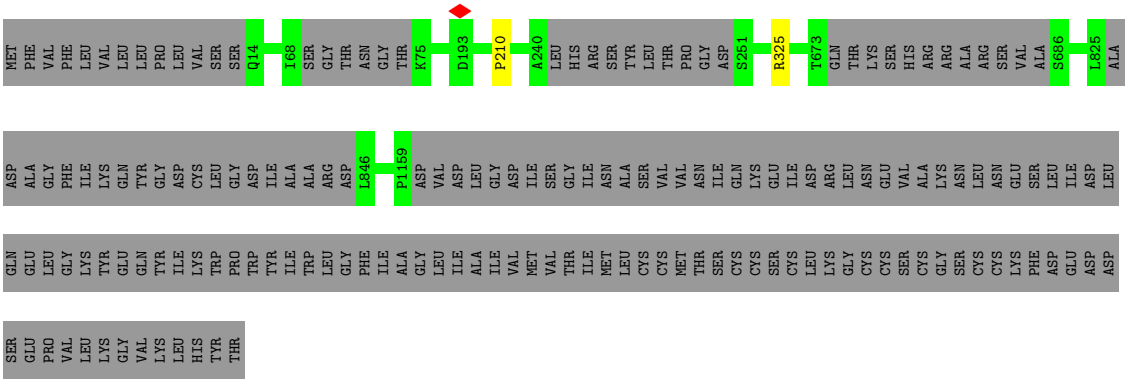
Chain N:





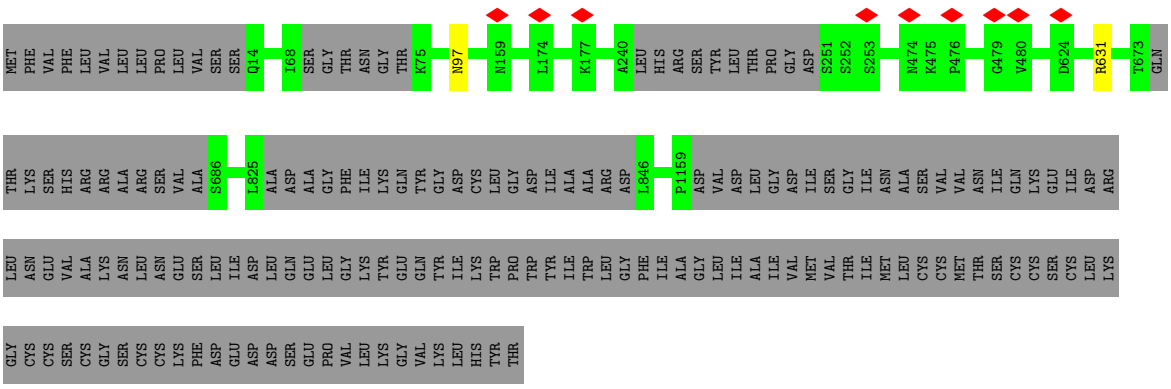
• Molecule 3: Spike glycoprotein

Chain D:



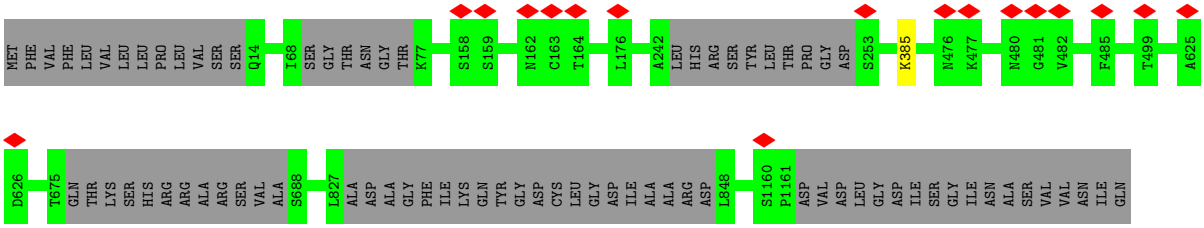
• Molecule 3: Spike glycoprotein

Chain E:



• Molecule 3: Spike glycoprotein

Chain G:

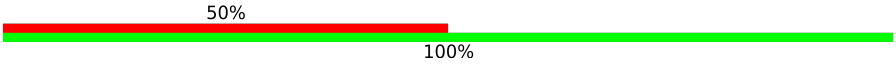


LYS GLU ILE ASP ARG LEU ASN GLU VAL ALA LYS ASN LEU ASN GLU SER LEU ILE ASP LEU GLN GLU LEU GLY LYS TYR GLU GLN TYR ILE LYS TRP PRO TRP TYR ILE TRP LEU GLY PHE ILE ALA GLY LEU ILE ALA ILE VAL MET VAL THR ILE MET LEU CYS CYS MET THR SER CYS

CYS SER CYS LEU LYS GLY CYS CYS SER CYS GLY SER CYS CYS LYS PHE ASP GLU ASP ASP SER GLU PRO VAL LEU LYS GLY VAL LYS LEU HIS TYR THR

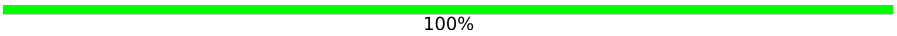
• Molecule 4: 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose

Chain A:



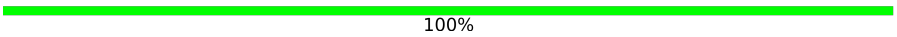
• Molecule 4: 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose

Chain B:



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

Chain C:

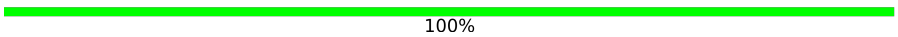


• Molecule 4: 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose

Chain F:

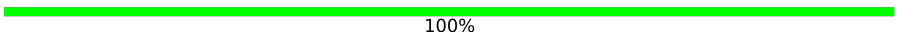
• Molecule 4: 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose

Chain I:



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

Chain P:

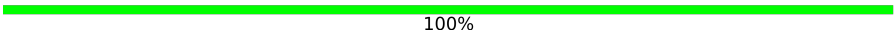


• Molecule 4: 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose

Chain Q:

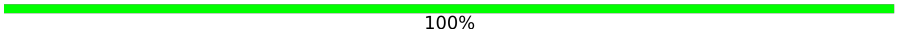
• Molecule 4: 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose

Chain R:



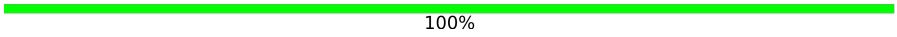
• Molecule 4: 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose

Chain S:



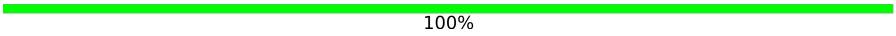
• Molecule 4: 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose

Chain T:



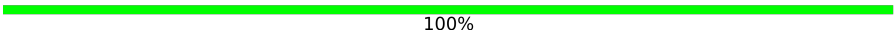
• Molecule 4: 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose

Chain U:



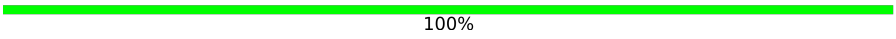
• Molecule 4: 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose

Chain X:



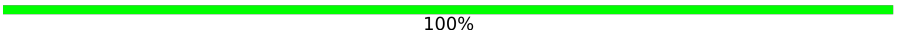
• Molecule 4: 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose

Chain Y:



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

Chain Z:

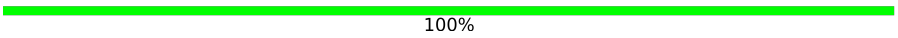


• Molecule 4: 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose

Chain a:

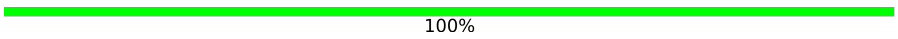
• Molecule 4: 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose

Chain b:



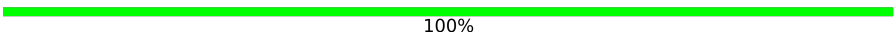
• Molecule 5: beta-D-mannopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose

Chain O:



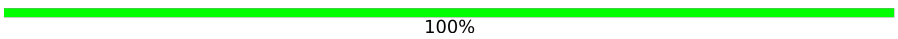
• Molecule 5: beta-D-mannopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose

Chain V:

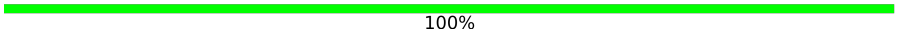


• Molecule 5: beta-D-mannopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose

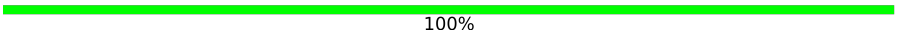
Chain W:



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

Chain c: 

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

Chain d: 

4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	119800	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	NONE	Depositor
Microscope	FEI TITAN	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/Å^2$)	60	Depositor
Minimum defocus (nm)	1500	Depositor
Maximum defocus (nm)	2500	Depositor
Magnification	Not provided	
Image detector	GATAN K3 (6k x 4k)	Depositor
Maximum map value	2.930	Depositor
Minimum map value	-1.233	Depositor
Average map value	0.001	Depositor
Map value standard deviation	0.058	Depositor
Recommended contour level	0.219	Depositor
Map size (Å)	385.2, 385.2, 385.2	wwPDB
Map dimensions	360, 360, 360	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.07, 1.07, 1.07	Depositor

5 Model quality

5.1 Standard geometry

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

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\#\|Z\| > 5$	RMSZ	$\#\|Z\| > 5$
1	H	0.52	0/939	0.65	0/1272
1	J	0.54	0/939	0.60	0/1272
1	K	0.51	0/939	0.60	0/1272
2	L	0.40	0/827	0.55	0/1127
2	M	0.43	0/827	0.55	0/1127
2	N	0.41	0/827	0.55	0/1127
3	D	0.26	0/8837	0.47	0/12019
3	E	0.27	0/8837	0.48	0/12019
3	G	0.28	0/8837	0.48	0/12019
All	All	0.31	0/31809	0.50	0/43254

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts

Due to software issues we are unable to calculate clashes - this section is therefore empty.

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 PDB entries followed by that with respect to all EM entries.

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
1	H	116/118 (98%)	105 (90%)	10 (9%)	1 (1%)	17 54
1	J	116/118 (98%)	104 (90%)	11 (10%)	1 (1%)	17 54
1	K	116/118 (98%)	106 (91%)	10 (9%)	0	100 100
2	L	109/111 (98%)	101 (93%)	6 (6%)	2 (2%)	8 42
2	M	109/111 (98%)	103 (94%)	6 (6%)	0	100 100
2	N	109/111 (98%)	104 (95%)	5 (5%)	0	100 100
3	D	1088/1270 (86%)	1042 (96%)	45 (4%)	1 (0%)	51 83
3	E	1088/1270 (86%)	1037 (95%)	51 (5%)	0	100 100
3	G	1088/1270 (86%)	1037 (95%)	51 (5%)	0	100 100
All	All	3939/4497 (88%)	3739 (95%)	195 (5%)	5 (0%)	54 83

All (5) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	H	97	ALA
2	L	78	GLY
2	L	60	PRO
3	D	210	PRO
1	J	13	LYS

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 PDB entries followed by that with respect to all EM entries.

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
1	H	98/98 (100%)	92 (94%)	6 (6%)	18 50
1	J	98/98 (100%)	92 (94%)	6 (6%)	18 50
1	K	98/98 (100%)	93 (95%)	5 (5%)	24 54
2	L	90/90 (100%)	85 (94%)	5 (6%)	21 52
2	M	90/90 (100%)	86 (96%)	4 (4%)	28 57

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
2	N	90/90 (100%)	86 (96%)	4 (4%)	28 57
3	D	964/1112 (87%)	963 (100%)	1 (0%)	93 97
3	E	964/1112 (87%)	962 (100%)	2 (0%)	93 97
3	G	964/1112 (87%)	963 (100%)	1 (0%)	93 97
All	All	3456/3900 (89%)	3422 (99%)	34 (1%)	77 86

5 of 34 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	K	113	GLN
1	K	115	THR
2	N	59	VAL
3	E	97	ASN
3	D	325	ARG

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. 5 of 16 such sidechains are listed below:

Mol	Chain	Res	Type
2	N	38	GLN
2	M	39	GLN
3	G	185	ASN
1	J	39	GLN
3	E	1156	HIS

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)

47 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	A	1	3,4	14,14,15	0.19	0	17,19,21	0.41	0
4	NAG	A	2	4	14,14,15	0.26	0	17,19,21	0.45	0
4	NAG	B	1	3,4	14,14,15	0.26	0	17,19,21	0.43	0
4	NAG	B	2	4	14,14,15	0.22	0	17,19,21	0.44	0
4	NAG	C	1	3,4	14,14,15	0.23	0	17,19,21	0.44	0
4	NAG	C	2	4	14,14,15	0.22	0	17,19,21	0.42	0
4	NAG	F	1	3,4	14,14,15	0.24	0	17,19,21	0.37	0
4	NAG	F	2	4	14,14,15	1.07	1 (7%)	17,19,21	1.18	1 (5%)
4	NAG	I	1	3,4	14,14,15	0.22	0	17,19,21	0.44	0
4	NAG	I	2	4	14,14,15	0.23	0	17,19,21	0.40	0
5	NAG	O	1	3,5	14,14,15	0.19	0	17,19,21	0.44	0
5	NAG	O	2	5	14,14,15	0.18	0	17,19,21	0.40	0
5	BMA	O	3	5	11,11,12	0.58	0	15,15,17	0.83	0
4	NAG	P	1	3,4	14,14,15	0.66	0	17,19,21	0.61	0
4	NAG	P	2	4	14,14,15	0.35	0	17,19,21	0.47	0
4	NAG	Q	1	4	14,14,15	0.56	0	17,19,21	0.42	0
4	NAG	Q	2	4	14,14,15	0.24	0	17,19,21	0.40	0
4	NAG	R	1	4	14,14,15	0.20	0	17,19,21	0.42	0
4	NAG	R	2	4	14,14,15	0.21	0	17,19,21	0.45	0
4	NAG	S	1	3,4	14,14,15	0.19	0	17,19,21	0.40	0
4	NAG	S	2	4	14,14,15	0.20	0	17,19,21	0.41	0
4	NAG	T	1	4	14,14,15	0.21	0	17,19,21	0.54	0
4	NAG	T	2	4	14,14,15	0.27	0	17,19,21	0.45	0
4	NAG	U	1	3,4	14,14,15	0.23	0	17,19,21	0.46	0
4	NAG	U	2	4	14,14,15	0.20	0	17,19,21	0.40	0
5	NAG	V	1	3,5	14,14,15	0.22	0	17,19,21	0.43	0
5	NAG	V	2	5	14,14,15	0.19	0	17,19,21	0.40	0
5	BMA	V	3	5	11,11,12	0.59	0	15,15,17	0.84	0
5	NAG	W	1	3,5	14,14,15	0.22	0	17,19,21	0.38	0
5	NAG	W	2	5	14,14,15	0.22	0	17,19,21	0.42	0
5	BMA	W	3	5	11,11,12	0.59	0	15,15,17	0.75	0
4	NAG	X	1	3,4	14,14,15	0.20	0	17,19,21	0.36	0
4	NAG	X	2	4	14,14,15	0.15	0	17,19,21	0.57	0
4	NAG	Y	1	4	14,14,15	0.20	0	17,19,21	0.43	0
4	NAG	Y	2	4	14,14,15	0.25	0	17,19,21	0.42	0
4	NAG	Z	1	3,4	14,14,15	0.20	0	17,19,21	0.48	0
4	NAG	Z	2	4	14,14,15	0.23	0	17,19,21	0.41	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
4	NAG	a	1	4	14,14,15	0.44	0	17,19,21	1.27	1 (5%)
4	NAG	a	2	4	14,14,15	0.29	0	17,19,21	0.40	0
4	NAG	b	1	3,4	14,14,15	0.22	0	17,19,21	0.46	0
4	NAG	b	2	4	14,14,15	0.23	0	17,19,21	0.40	0
5	NAG	c	1	3,5	14,14,15	0.20	0	17,19,21	0.39	0
5	NAG	c	2	5	14,14,15	0.22	0	17,19,21	0.40	0
5	BMA	c	3	5	11,11,12	0.58	0	15,15,17	0.75	0
5	NAG	d	1	3,5	14,14,15	0.23	0	17,19,21	0.49	0
5	NAG	d	2	5	14,14,15	0.22	0	17,19,21	0.40	0
5	BMA	d	3	5	11,11,12	0.59	0	15,15,17	0.72	0

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
4	NAG	A	1	3,4	-	0/6/23/26	0/1/1/1
4	NAG	A	2	4	-	2/6/23/26	0/1/1/1
4	NAG	B	1	3,4	-	2/6/23/26	0/1/1/1
4	NAG	B	2	4	-	2/6/23/26	0/1/1/1
4	NAG	C	1	3,4	-	2/6/23/26	0/1/1/1
4	NAG	C	2	4	-	1/6/23/26	0/1/1/1
4	NAG	F	1	3,4	-	0/6/23/26	0/1/1/1
4	NAG	F	2	4	-	2/6/23/26	0/1/1/1
4	NAG	I	1	3,4	-	0/6/23/26	0/1/1/1
4	NAG	I	2	4	-	1/6/23/26	0/1/1/1
5	NAG	O	1	3,5	-	2/6/23/26	0/1/1/1
5	NAG	O	2	5	-	2/6/23/26	0/1/1/1
5	BMA	O	3	5	-	1/2/19/22	0/1/1/1
4	NAG	P	1	3,4	-	2/6/23/26	0/1/1/1
4	NAG	P	2	4	-	2/6/23/26	0/1/1/1
4	NAG	Q	1	4	-	2/6/23/26	0/1/1/1
4	NAG	Q	2	4	-	1/6/23/26	0/1/1/1
4	NAG	R	1	4	-	2/6/23/26	0/1/1/1
4	NAG	R	2	4	-	2/6/23/26	0/1/1/1
4	NAG	S	1	3,4	-	2/6/23/26	0/1/1/1
4	NAG	S	2	4	-	2/6/23/26	0/1/1/1
4	NAG	T	1	4	-	3/6/23/26	0/1/1/1

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
4	NAG	T	2	4	-	2/6/23/26	0/1/1/1
4	NAG	U	1	3,4	-	2/6/23/26	0/1/1/1
4	NAG	U	2	4	-	2/6/23/26	0/1/1/1
5	NAG	V	1	3,5	-	0/6/23/26	0/1/1/1
5	NAG	V	2	5	-	0/6/23/26	0/1/1/1
5	BMA	V	3	5	-	2/2/19/22	0/1/1/1
5	NAG	W	1	3,5	-	2/6/23/26	0/1/1/1
5	NAG	W	2	5	-	2/6/23/26	0/1/1/1
5	BMA	W	3	5	-	0/2/19/22	0/1/1/1
4	NAG	X	1	3,4	-	2/6/23/26	0/1/1/1
4	NAG	X	2	4	-	0/6/23/26	0/1/1/1
4	NAG	Y	1	4	-	2/6/23/26	0/1/1/1
4	NAG	Y	2	4	-	0/6/23/26	0/1/1/1
4	NAG	Z	1	3,4	-	0/6/23/26	0/1/1/1
4	NAG	Z	2	4	-	2/6/23/26	0/1/1/1
4	NAG	a	1	4	-	5/6/23/26	0/1/1/1
4	NAG	a	2	4	-	2/6/23/26	0/1/1/1
4	NAG	b	1	3,4	-	0/6/23/26	0/1/1/1
4	NAG	b	2	4	-	2/6/23/26	0/1/1/1
5	NAG	c	1	3,5	-	0/6/23/26	0/1/1/1
5	NAG	c	2	5	-	2/6/23/26	0/1/1/1
5	BMA	c	3	5	-	1/2/19/22	0/1/1/1
5	NAG	d	1	3,5	-	2/6/23/26	0/1/1/1
5	NAG	d	2	5	-	2/6/23/26	0/1/1/1
5	BMA	d	3	5	-	0/2/19/22	0/1/1/1

All (1) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	F	2	NAG	O5-C1	3.64	1.49	1.43

All (2) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	F	2	NAG	C1-O5-C5	4.62	118.45	112.19
4	a	1	NAG	C2-N2-C7	4.34	129.09	122.90

There are no chirality outliers.

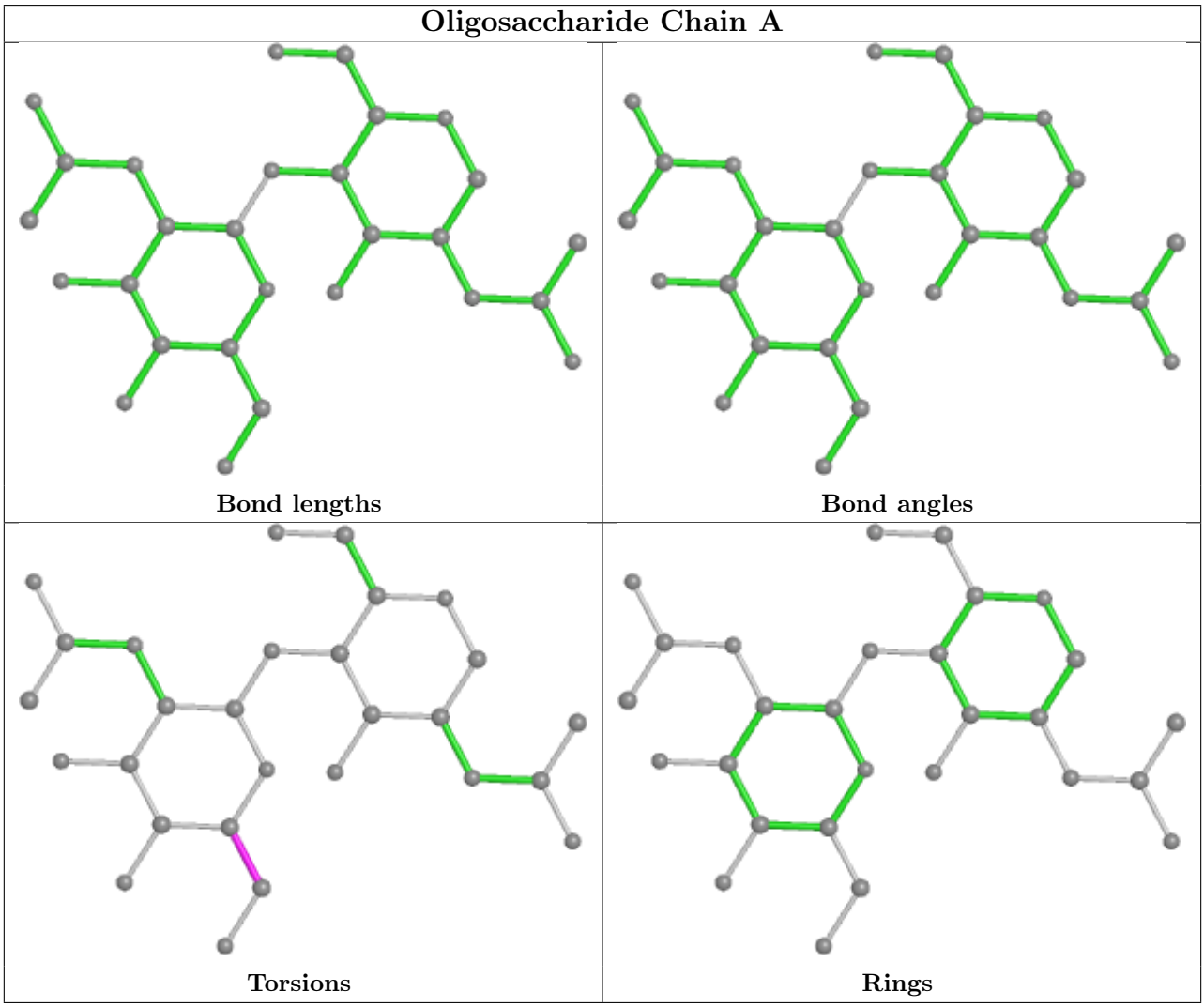
5 of 69 torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
4	P	1	NAG	O5-C5-C6-O6
4	Z	2	NAG	O5-C5-C6-O6
4	a	1	NAG	O5-C5-C6-O6
5	W	1	NAG	O5-C5-C6-O6
4	A	2	NAG	O5-C5-C6-O6

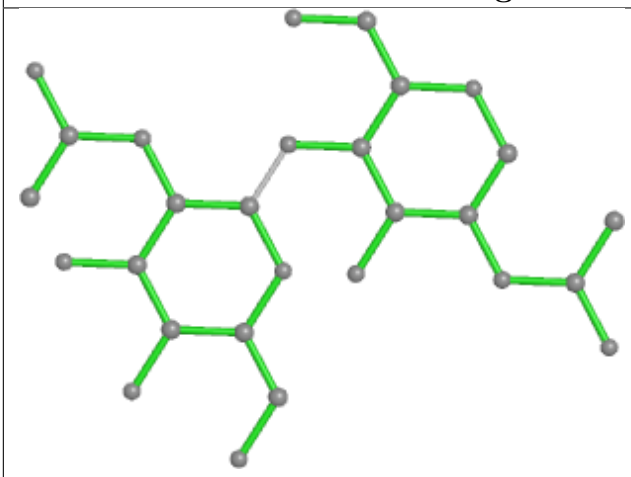
There are no ring outliers.

No monomer is involved in short contacts.

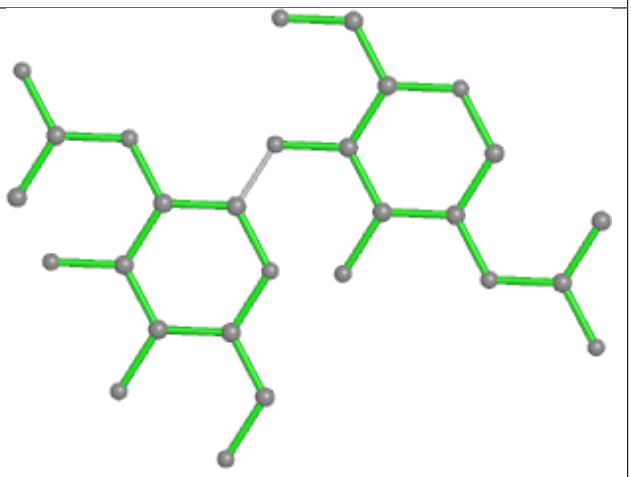
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for oligosaccharide.



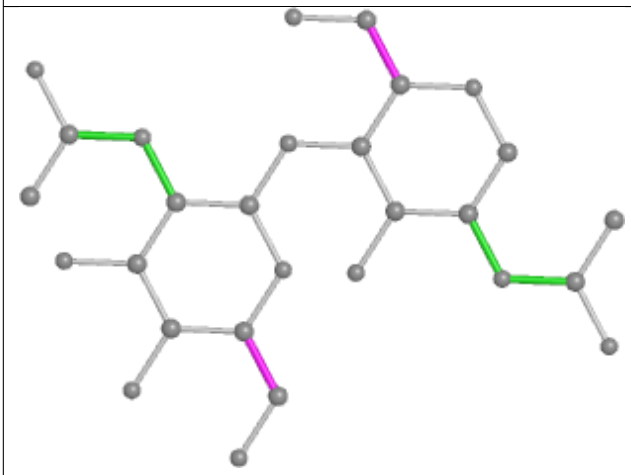
Oligosaccharide Chain B



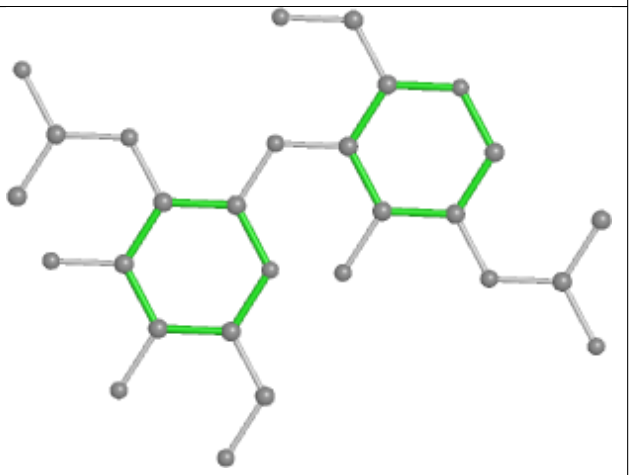
Bond lengths



Bond angles

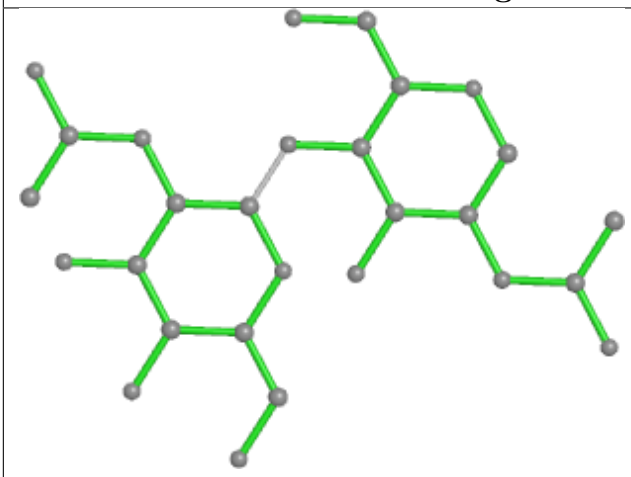


Torsions

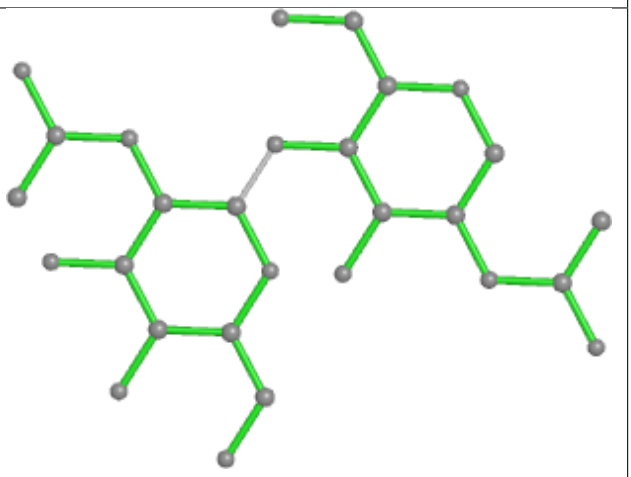


Rings

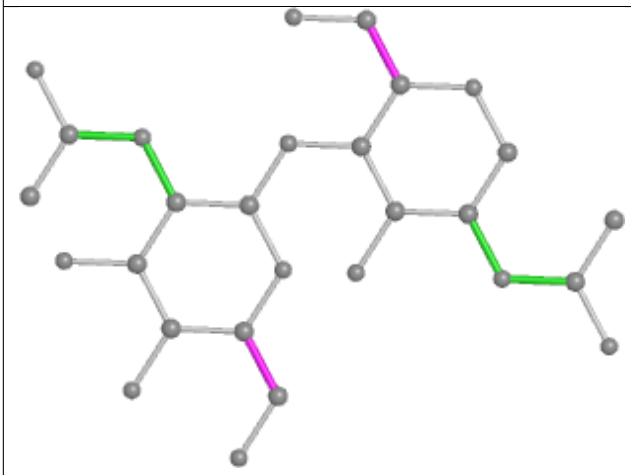
Oligosaccharide Chain C



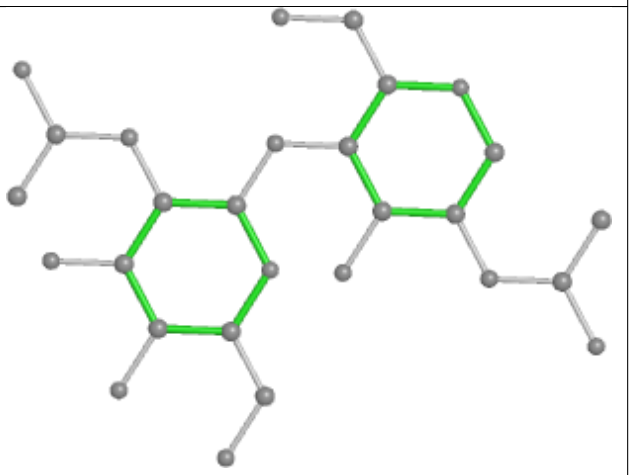
Bond lengths



Bond angles

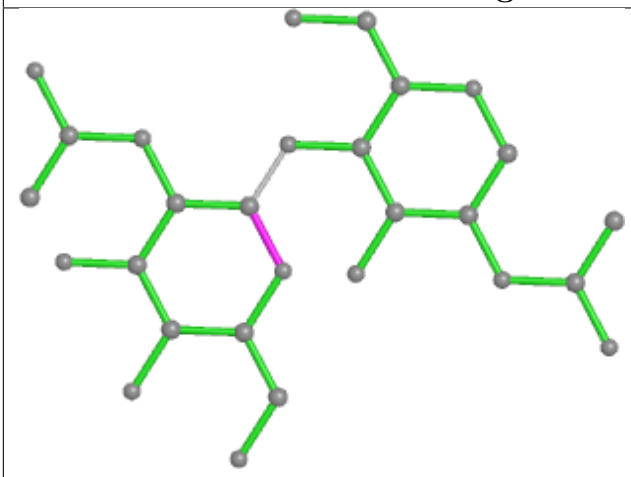


Torsions



Rings

Oligosaccharide Chain F



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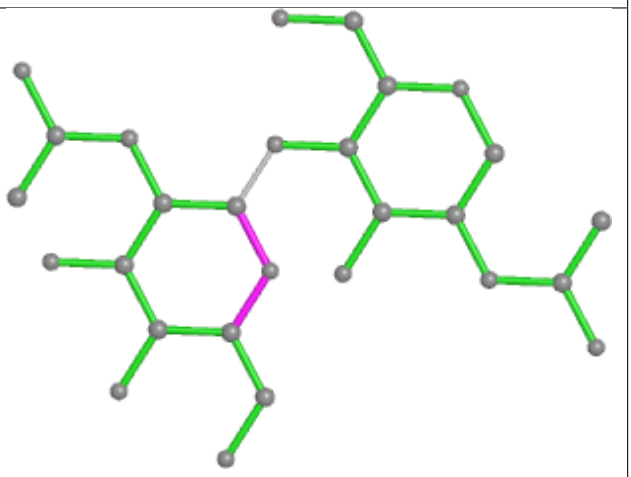
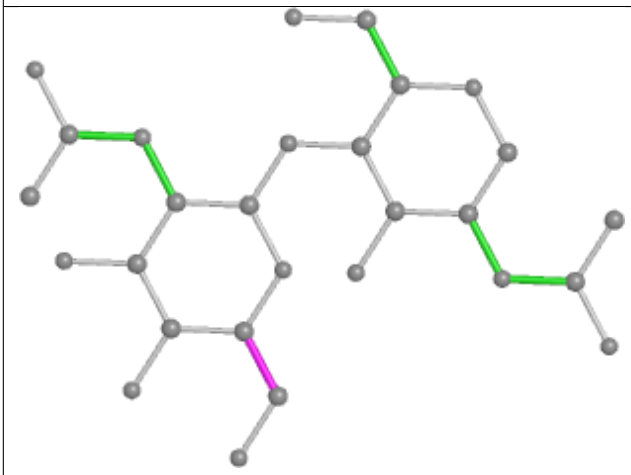
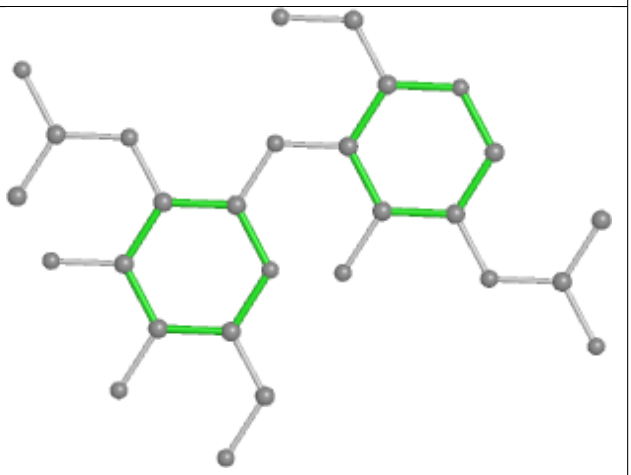


Bond angles

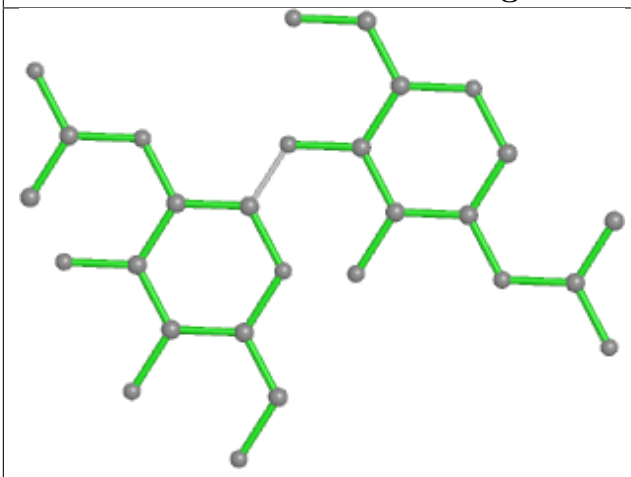


Torsions



Rings

Oligosaccharide Chain I



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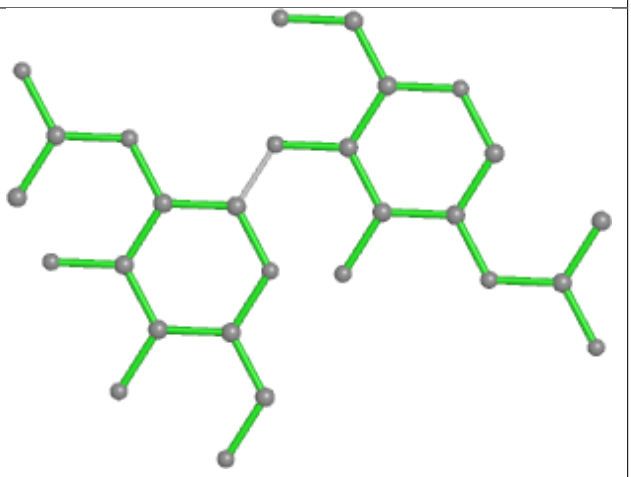
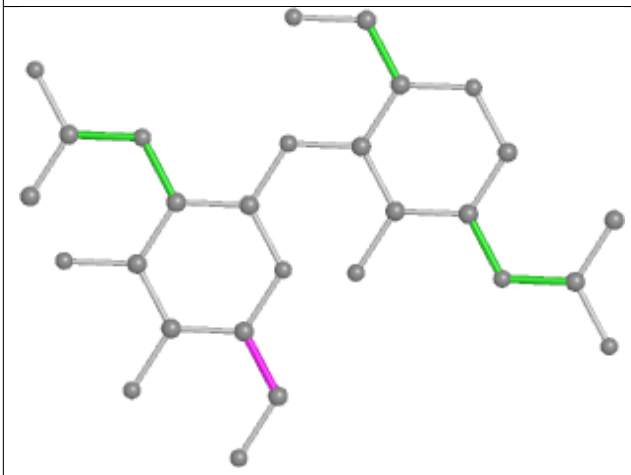


Bond angles



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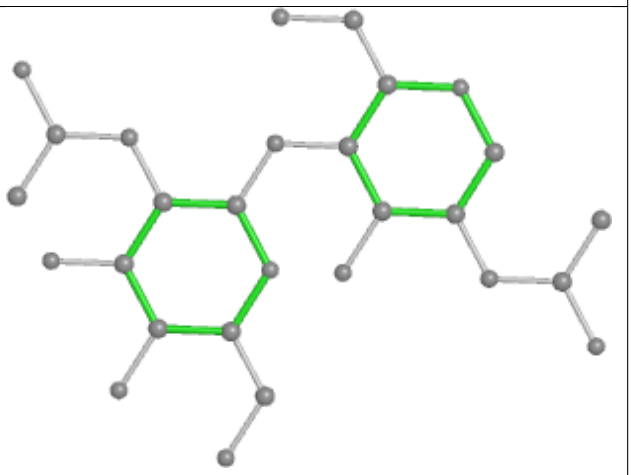
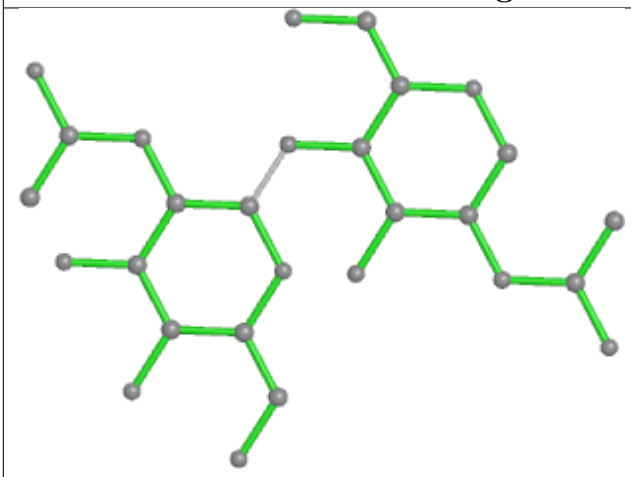


Rings

Oligosaccharide Chain P



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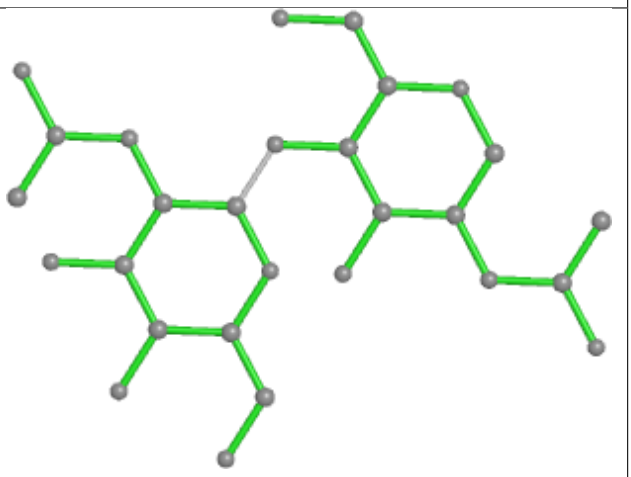
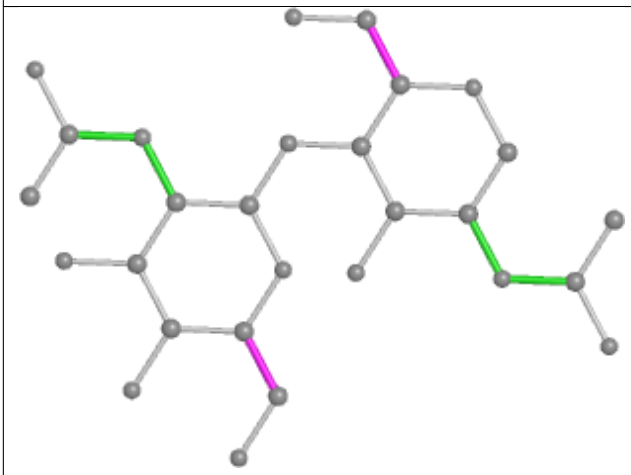


Bond angles



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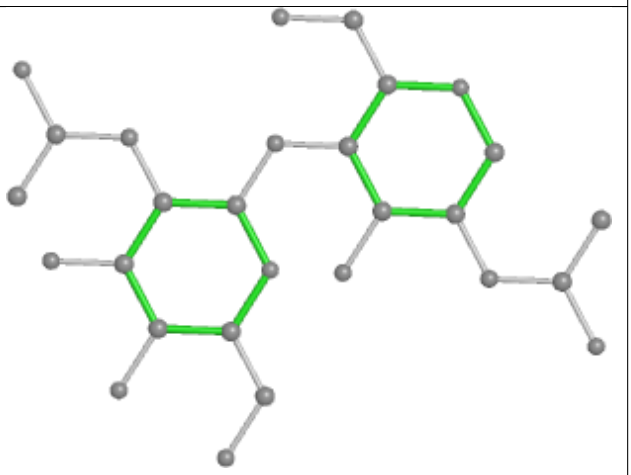
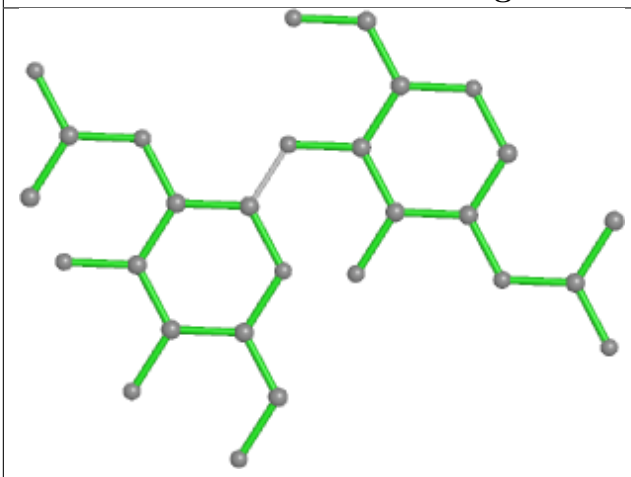


Rings

Oligosaccharide Chain Q



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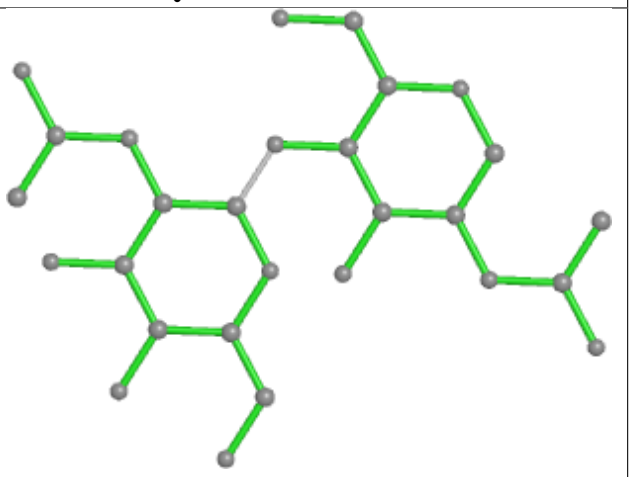

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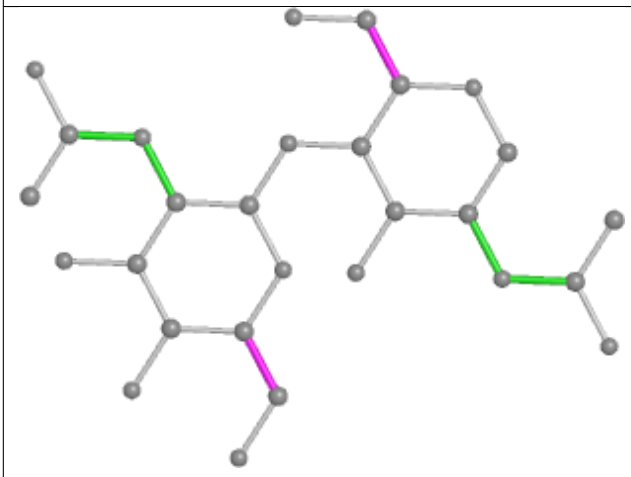

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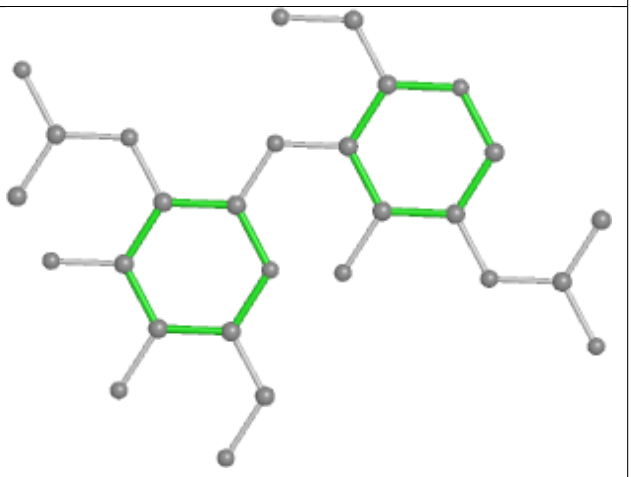
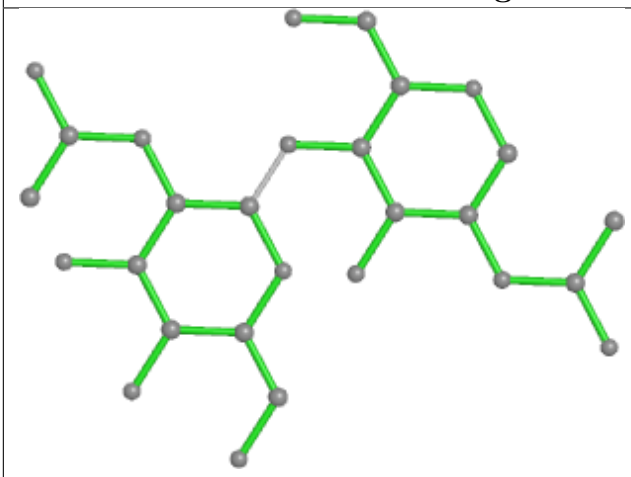
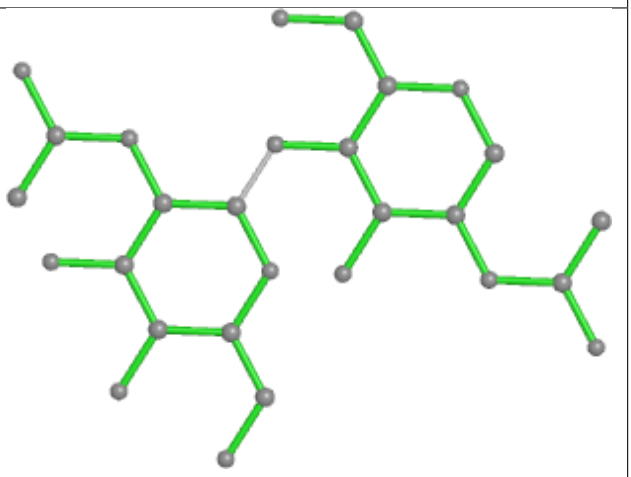


Rings

Oligosaccharide Chain R



Bond lengths



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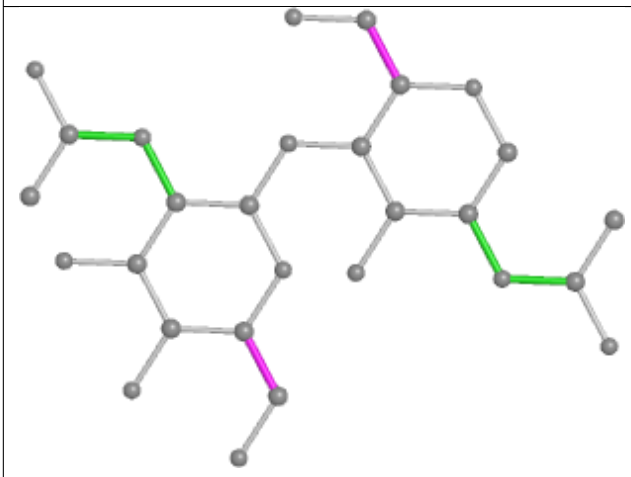

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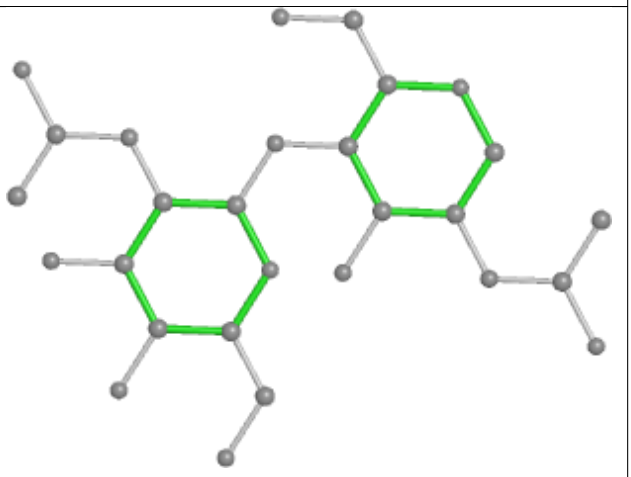
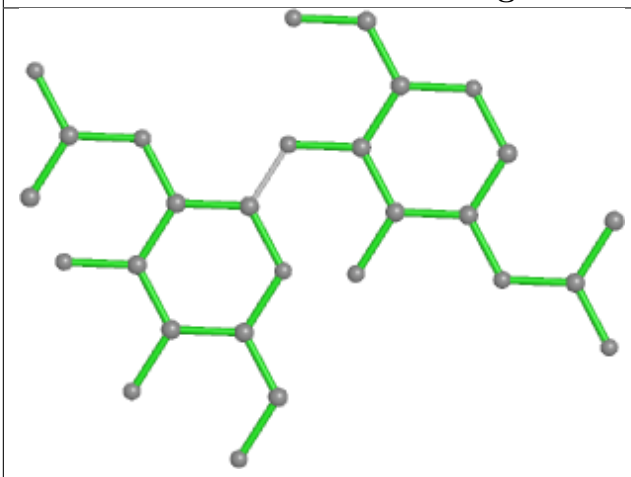


Rings

Oligosaccharide Chain S



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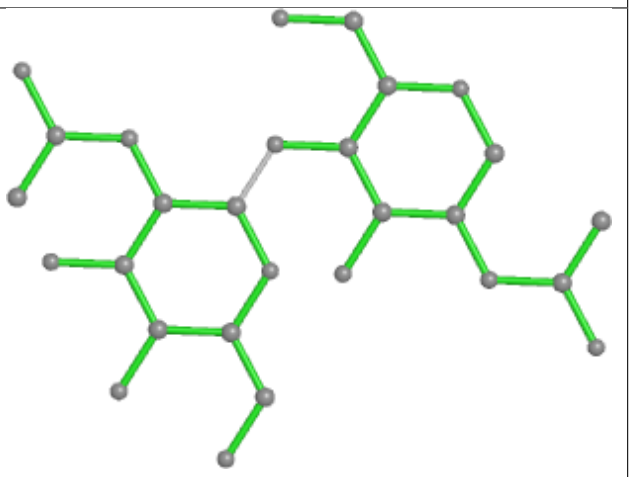
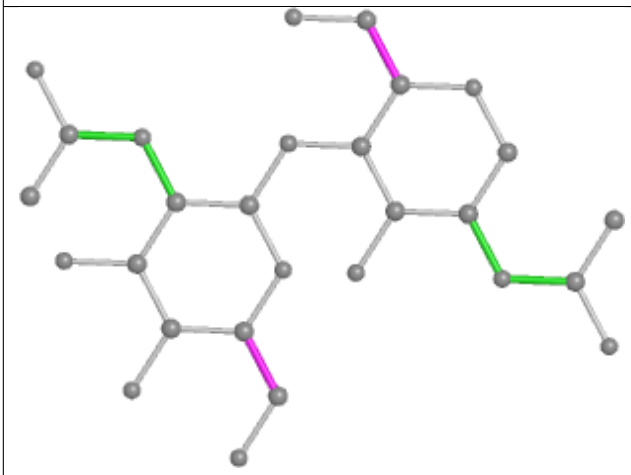
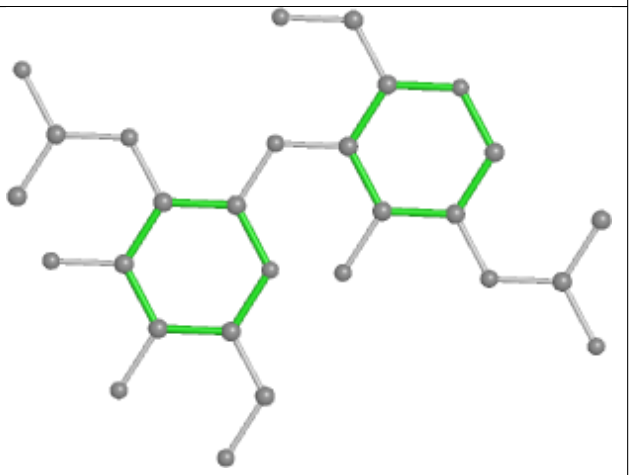


Bond angles

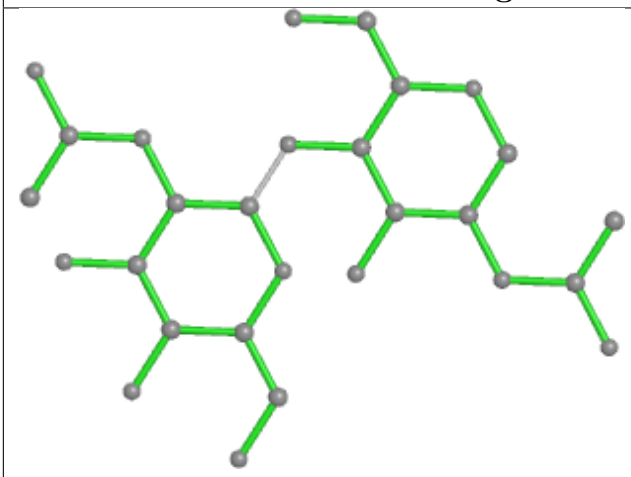


Torsions



Rings

Oligosaccharide Chain T



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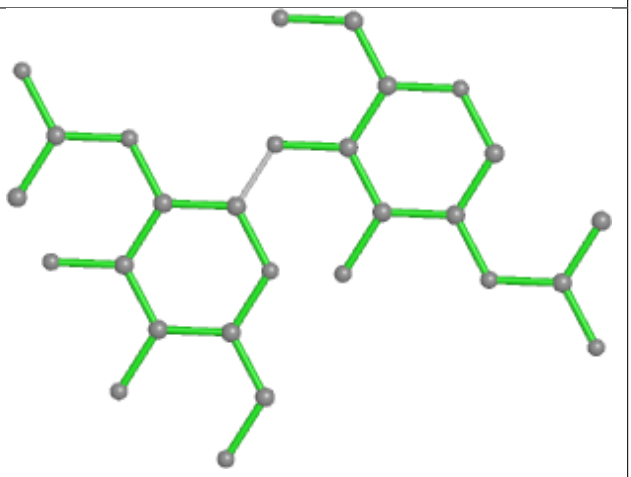
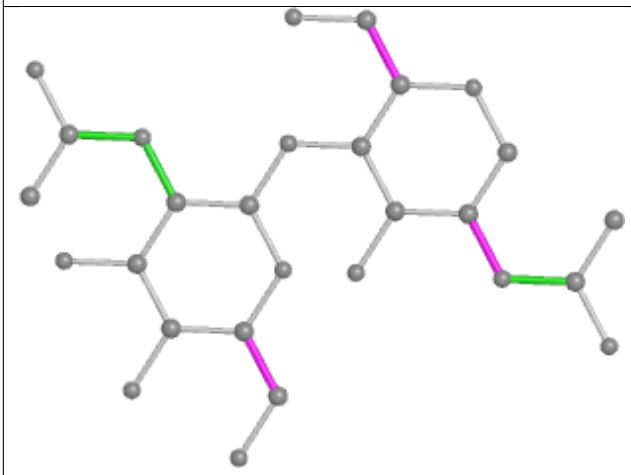
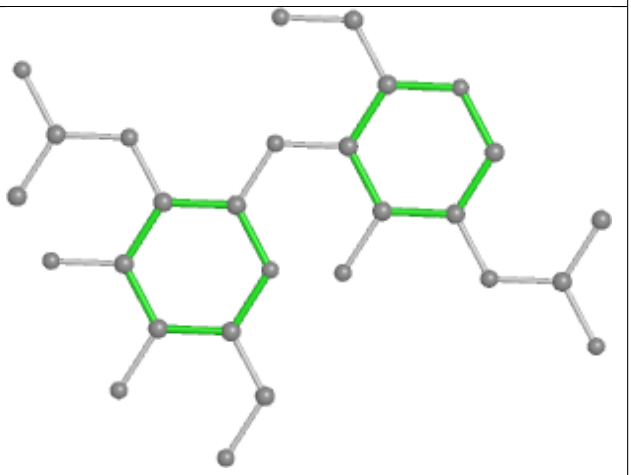


Bond angles

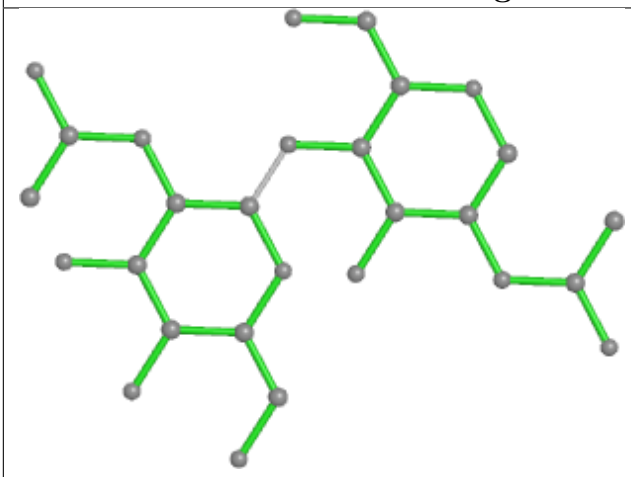


Torsions

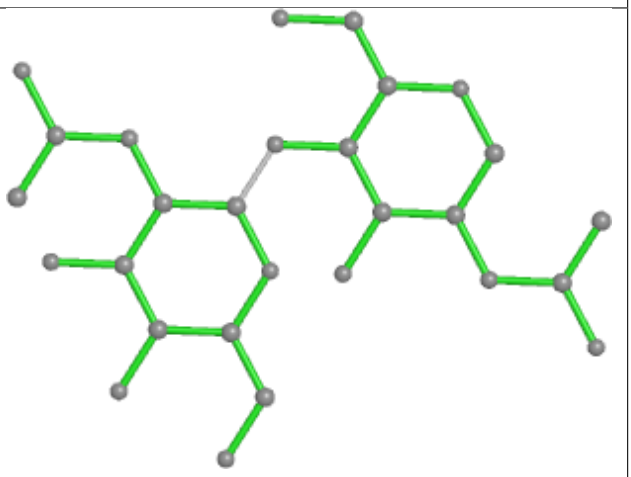


Rings

Oligosaccharide Chain U



Bond lengths



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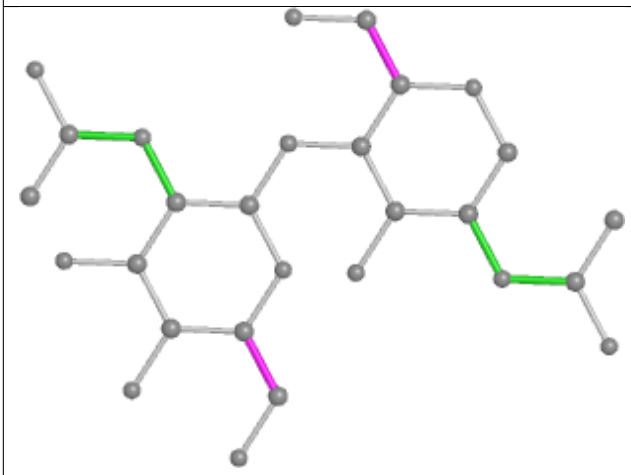

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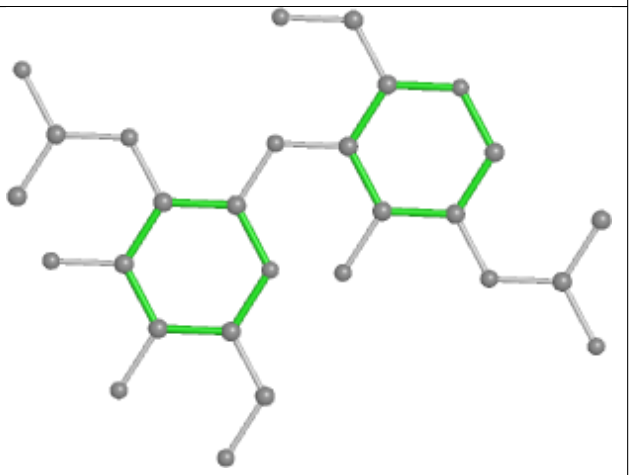
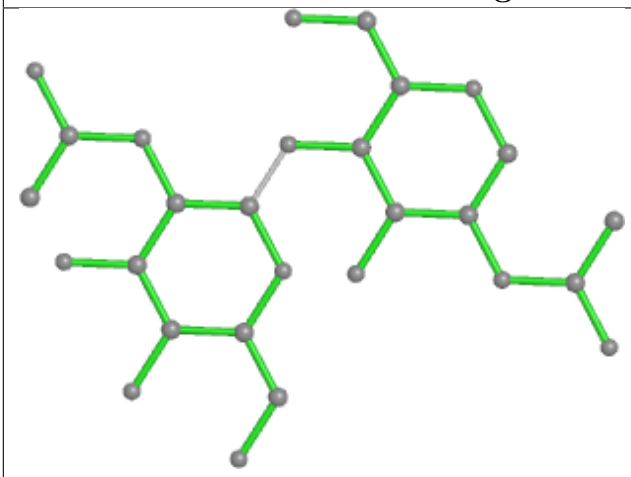
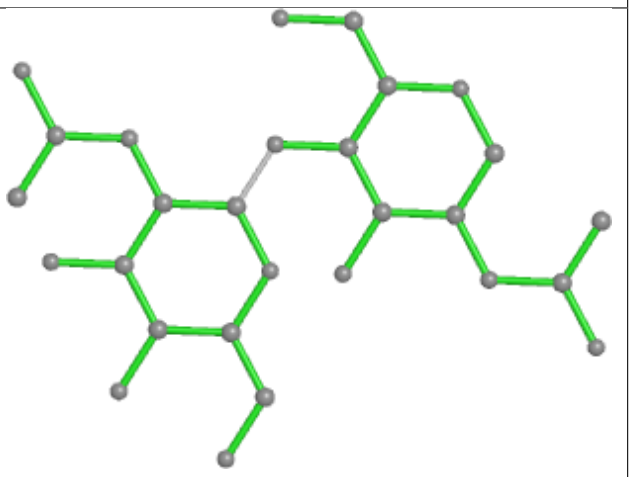


Rings

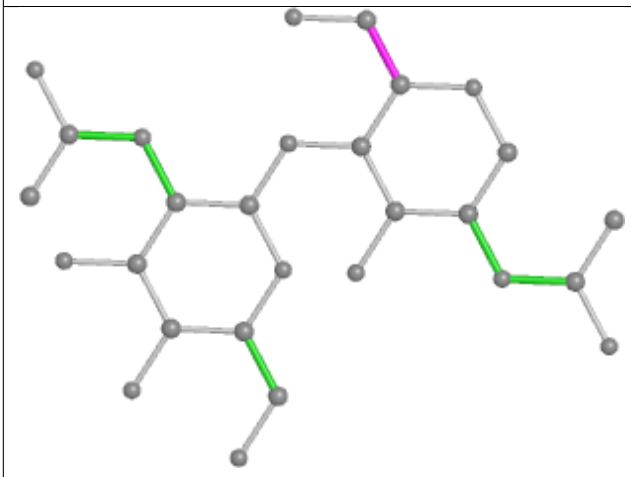
Oligosaccharide Chain X



Bond lengths



Bond angles



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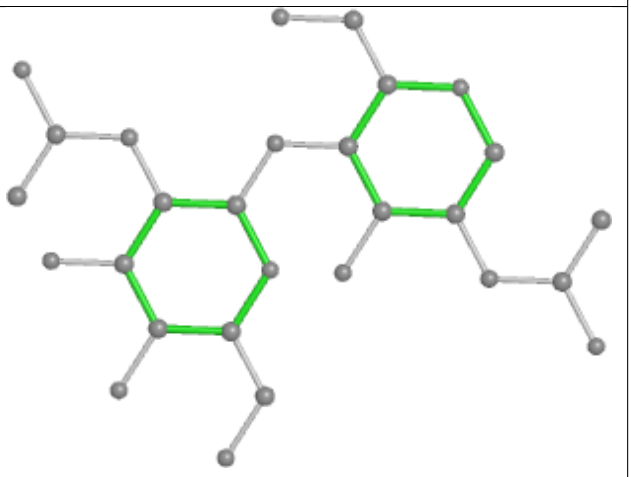
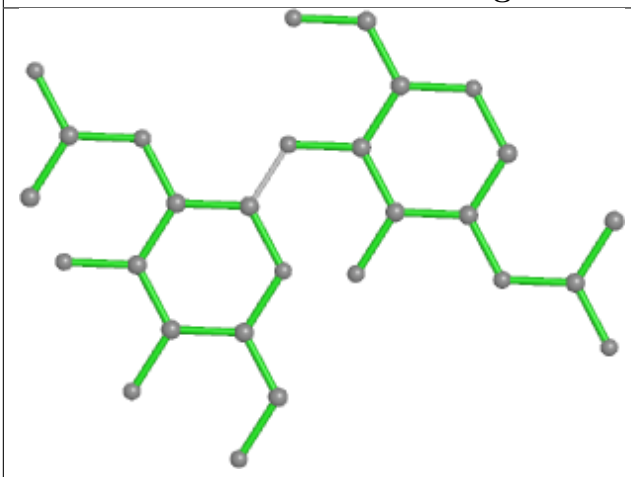


Rings

Oligosaccharide Chain Y



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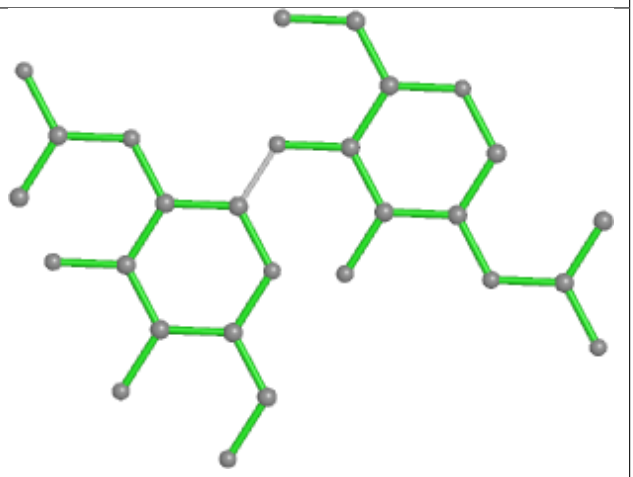
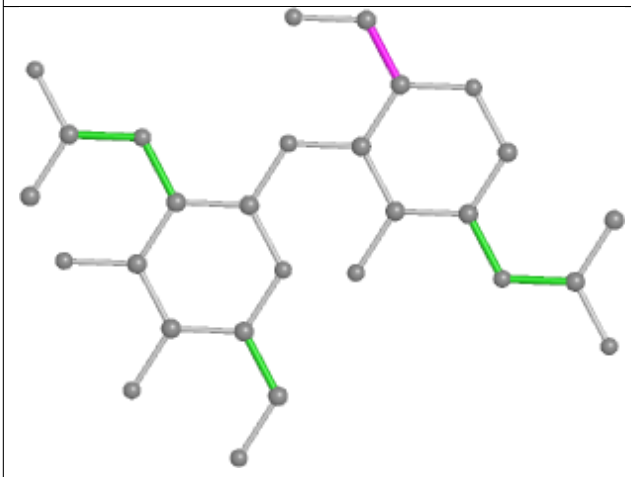


Bond angles



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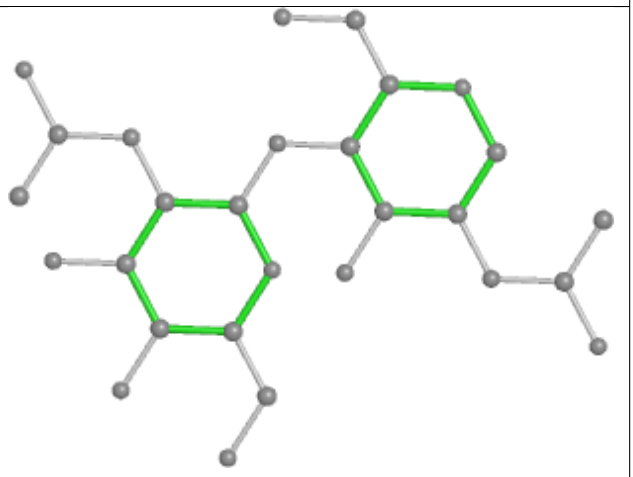
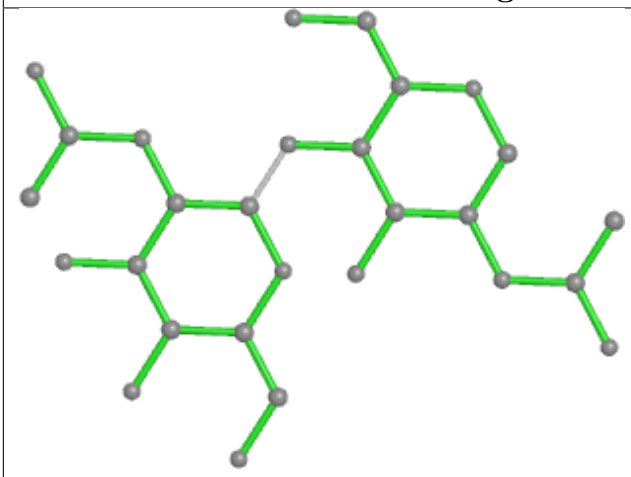
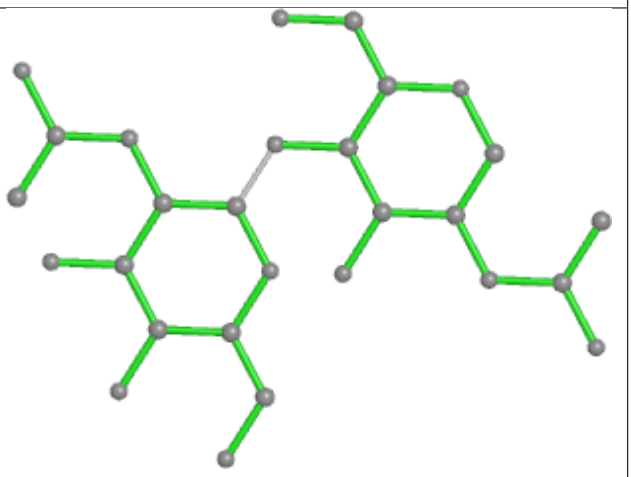


Rings

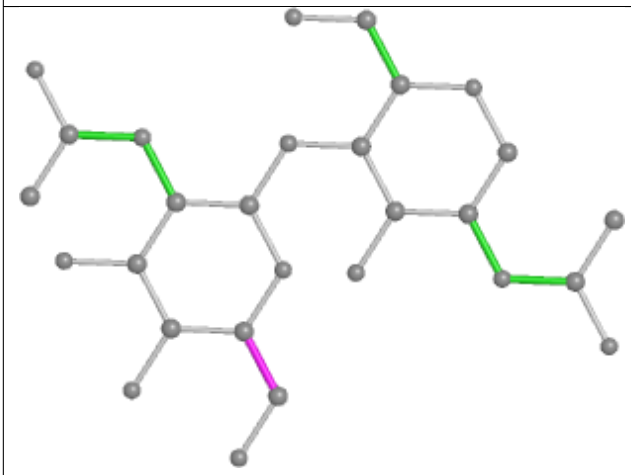
Oligosaccharide Chain Z



Bond lengths



Bond angles



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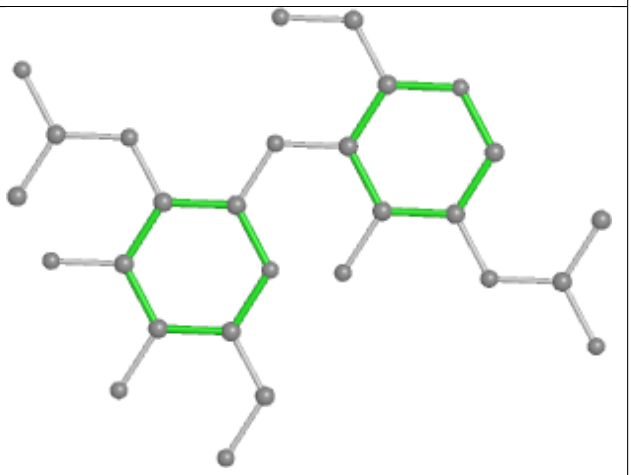
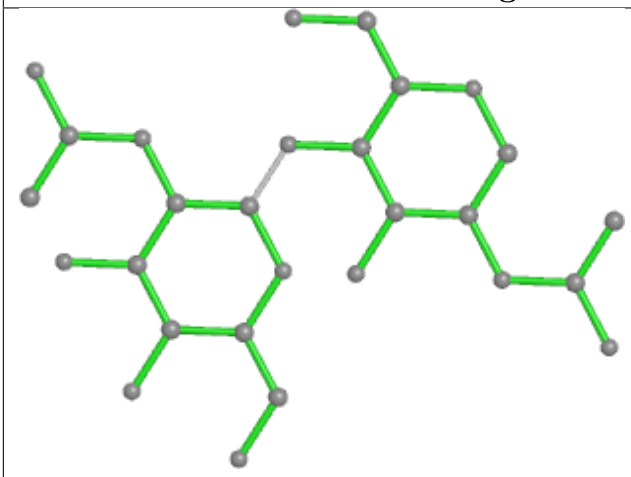
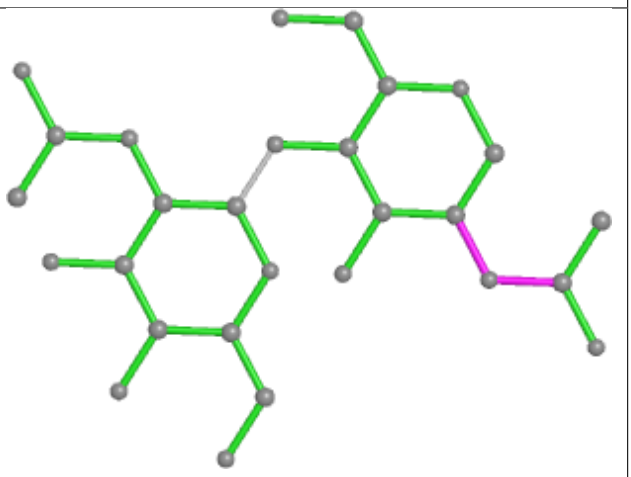


Rings

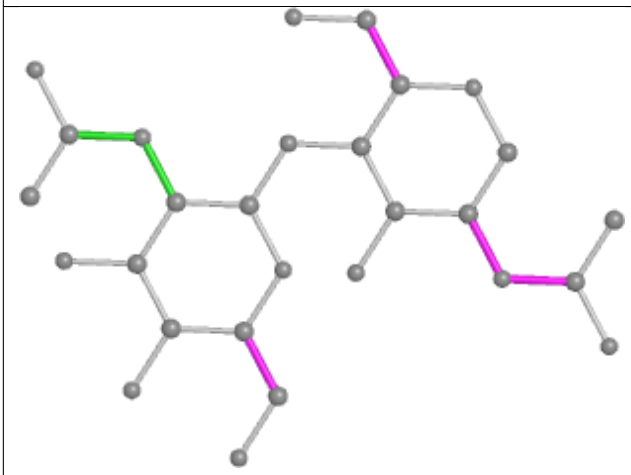
Oligosaccharide Chain a



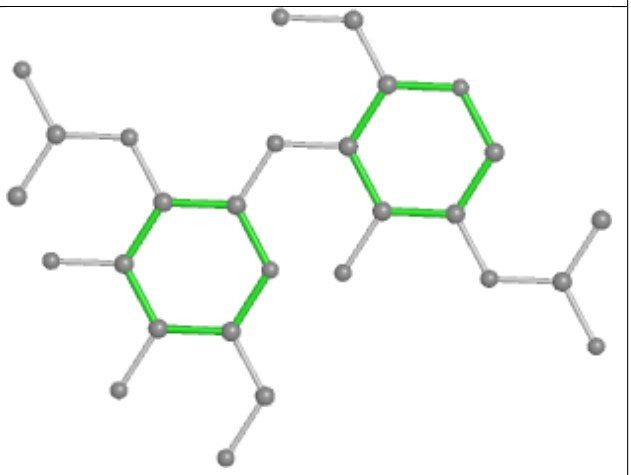
Bond lengths



Bond angles

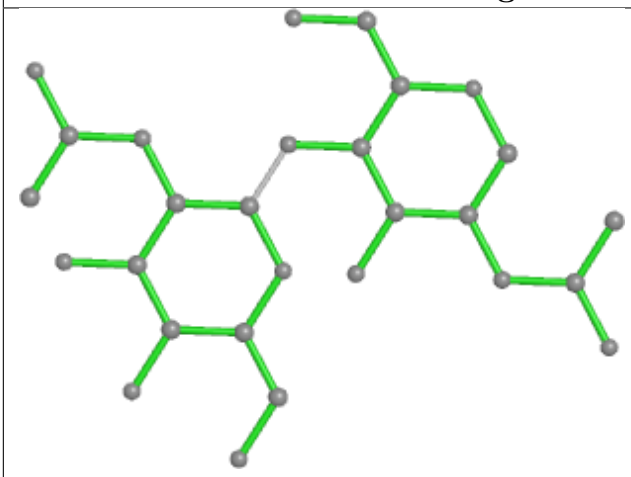


Torsions

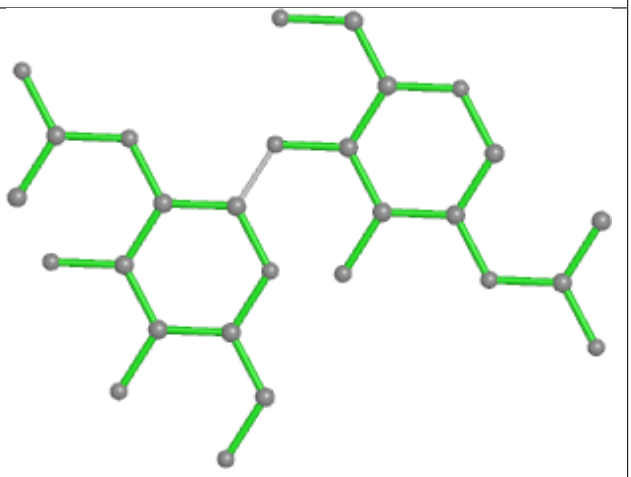


Rings

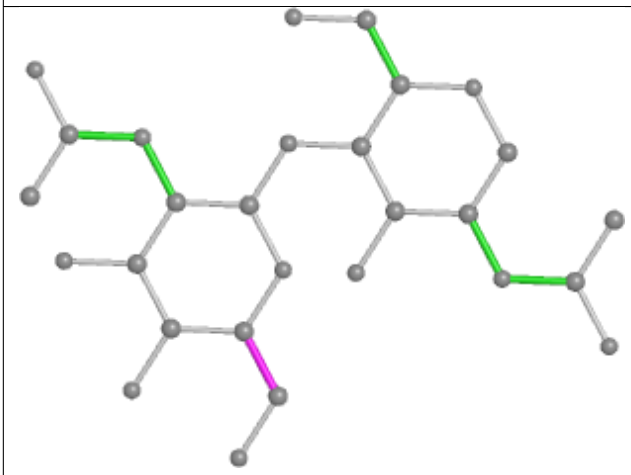
Oligosaccharide Chain b



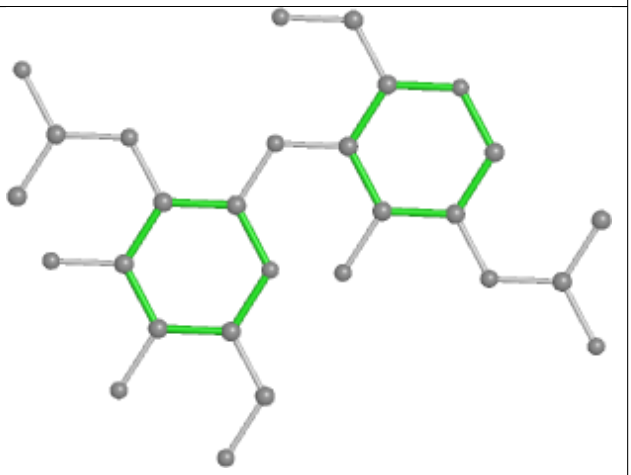
Bond lengths



Bond angles

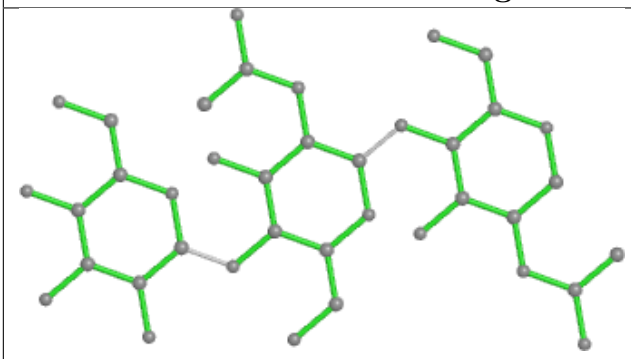


Torsions

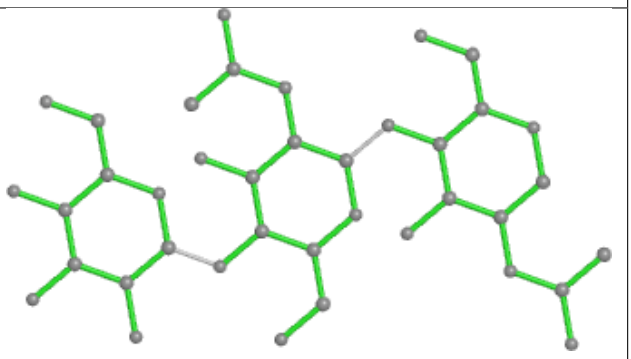


Rings

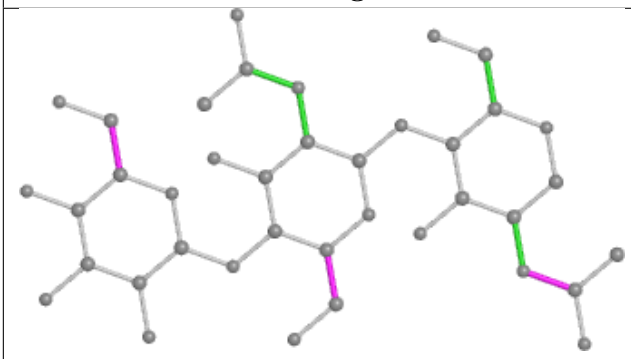
Oligosaccharide Chain O



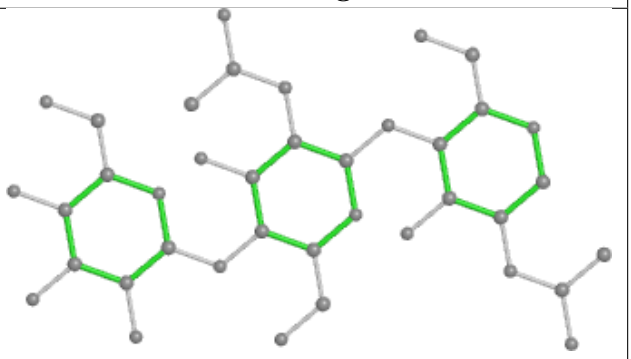
Bond lengths



Bond angles

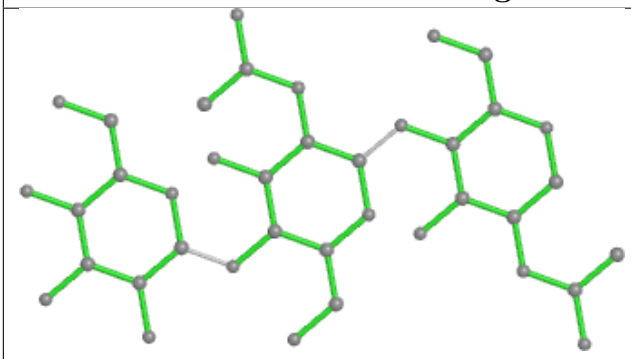


Torsions

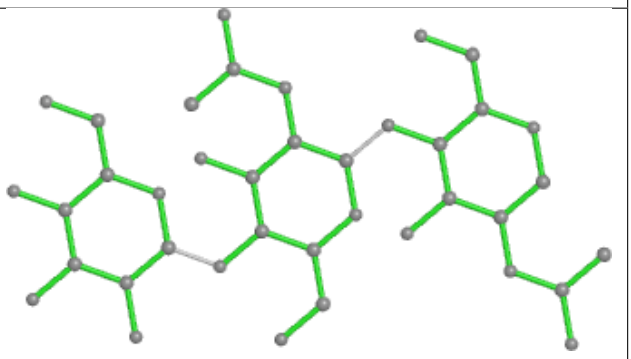


Rings

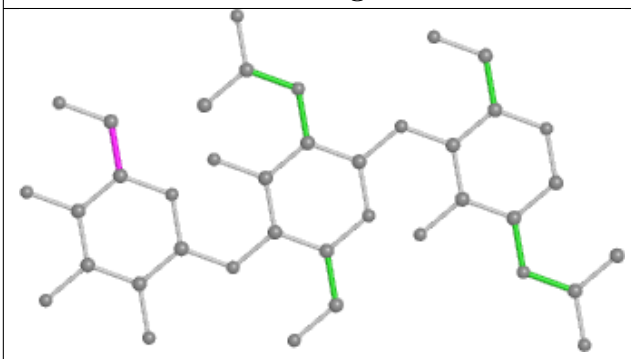
Oligosaccharide Chain V



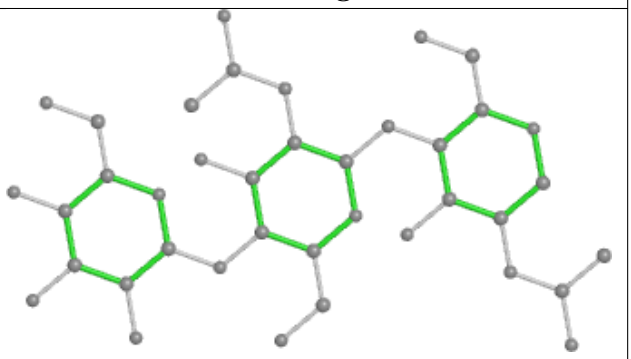
Bond lengths



Bond angles

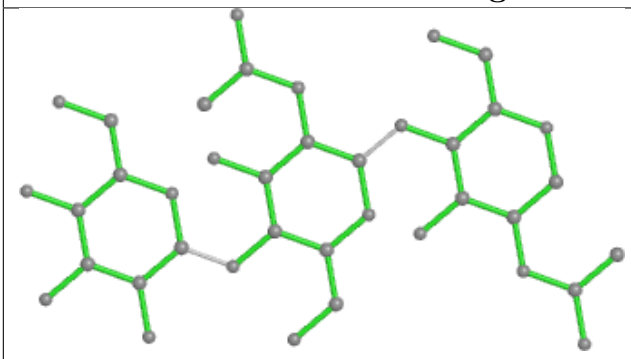


Torsions

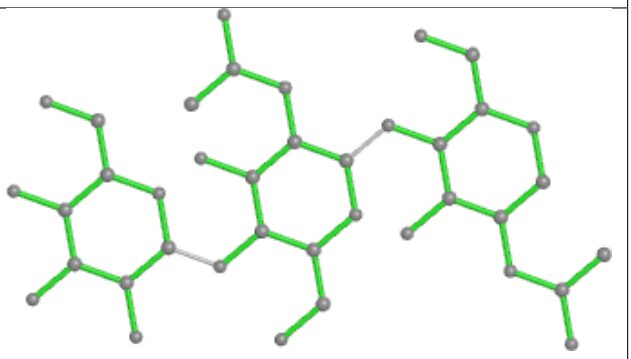


Rings

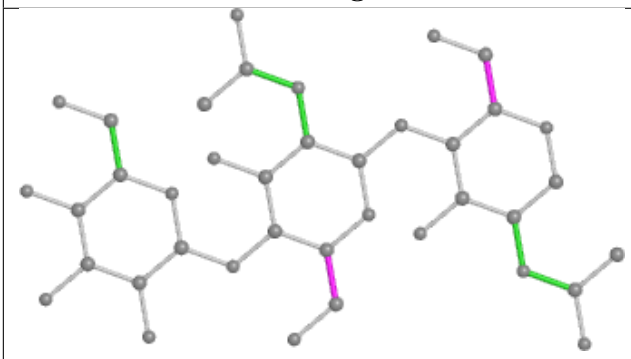
Oligosaccharide Chain W



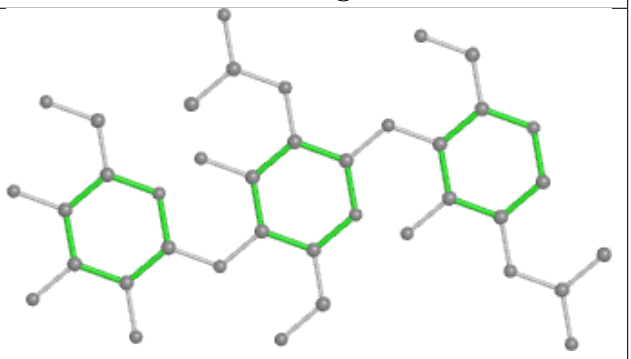
Bond lengths



Bond angles

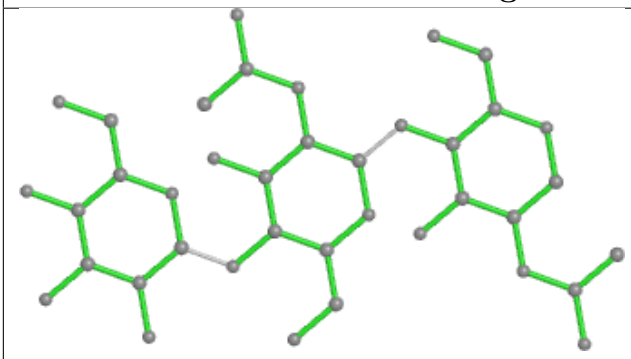


Torsions

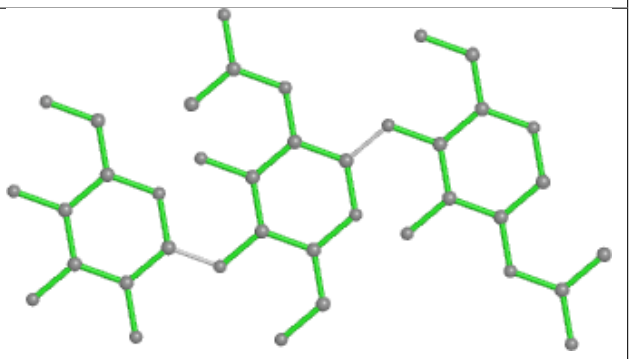


Rings

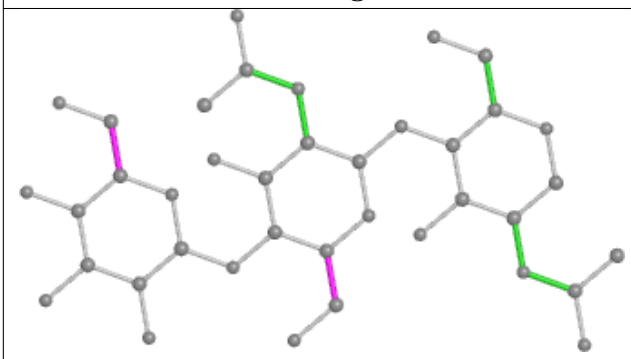
Oligosaccharide Chain c



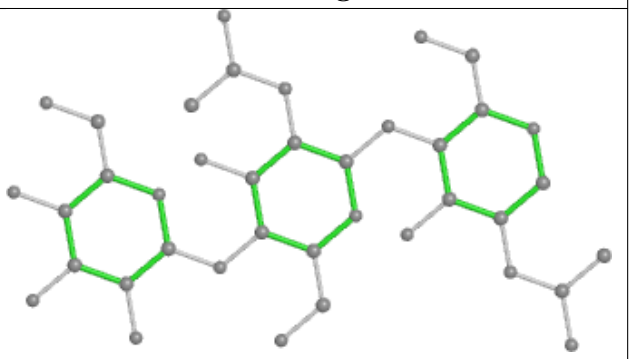
Bond lengths



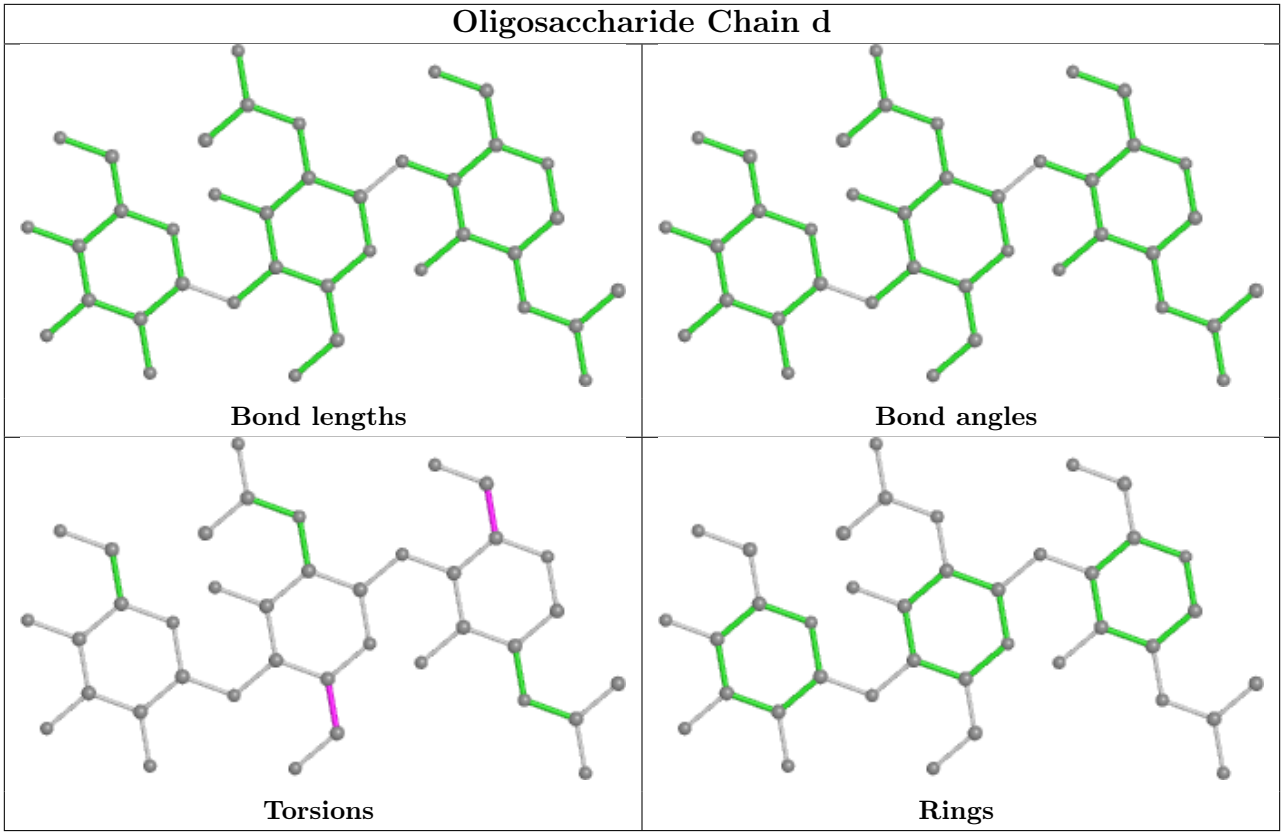
Bond angles



Torsions



Rings



5.6 Ligand geometry (i)

27 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	$\#\|Z\|>2$
6	NAG	E	1302	3	14,14,15	0.28	0	17,19,21	0.79	0
6	NAG	G	1302	3	14,14,15	0.20	0	17,19,21	0.42	0
6	NAG	E	1303	3	14,14,15	0.28	0	17,19,21	0.56	0
6	NAG	E	1301	3	14,14,15	0.22	0	17,19,21	0.43	0
6	NAG	E	1306	3	14,14,15	0.40	0	17,19,21	0.44	0
6	NAG	G	1309	3	14,14,15	0.23	0	17,19,21	0.48	0
6	NAG	G	1308	3	14,14,15	0.25	0	17,19,21	0.42	0
6	NAG	D	1307	3	14,14,15	0.20	0	17,19,21	0.45	0
6	NAG	D	1302	3	14,14,15	0.23	0	17,19,21	0.44	0
6	NAG	E	1304	3	14,14,15	0.34	0	17,19,21	0.61	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
6	NAG	G	1307	3	14,14,15	0.23	0	17,19,21	0.54	0
6	NAG	G	1301	3	14,14,15	0.22	0	17,19,21	0.42	0
6	NAG	D	1309	3	14,14,15	0.20	0	17,19,21	0.46	0
6	NAG	E	1307	3	14,14,15	0.22	0	17,19,21	0.42	0
6	NAG	D	1304	3	14,14,15	0.25	0	17,19,21	0.45	0
6	NAG	G	1304	3	14,14,15	0.25	0	17,19,21	0.45	0
6	NAG	G	1303	3	14,14,15	0.22	0	17,19,21	0.39	0
6	NAG	D	1305	3	14,14,15	0.20	0	17,19,21	0.44	0
6	NAG	D	1308	3	14,14,15	0.17	0	17,19,21	0.44	0
6	NAG	G	1305	3	14,14,15	0.27	0	17,19,21	0.43	0
6	NAG	E	1309	3	14,14,15	0.21	0	17,19,21	0.48	0
6	NAG	D	1306	3	14,14,15	0.21	0	17,19,21	0.41	0
6	NAG	G	1306	3	14,14,15	0.20	0	17,19,21	0.39	0
6	NAG	E	1305	3	14,14,15	0.23	0	17,19,21	0.39	0
6	NAG	E	1308	3	14,14,15	0.21	0	17,19,21	0.44	0
6	NAG	D	1301	-	14,14,15	0.19	0	17,19,21	0.41	0
6	NAG	D	1303	3	14,14,15	0.22	0	17,19,21	0.40	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
6	NAG	E	1302	3	-	2/6/23/26	0/1/1/1
6	NAG	G	1302	3	-	0/6/23/26	0/1/1/1
6	NAG	E	1303	3	-	2/6/23/26	0/1/1/1
6	NAG	E	1301	3	-	2/6/23/26	0/1/1/1
6	NAG	E	1306	3	-	2/6/23/26	0/1/1/1
6	NAG	G	1309	3	-	2/6/23/26	0/1/1/1
6	NAG	G	1308	3	-	2/6/23/26	0/1/1/1
6	NAG	D	1307	3	-	1/6/23/26	0/1/1/1
6	NAG	D	1302	3	-	2/6/23/26	0/1/1/1
6	NAG	E	1304	3	-	0/6/23/26	0/1/1/1
6	NAG	G	1307	3	-	2/6/23/26	0/1/1/1
6	NAG	G	1301	3	-	2/6/23/26	0/1/1/1
6	NAG	D	1309	3	-	0/6/23/26	0/1/1/1
6	NAG	E	1307	3	-	2/6/23/26	0/1/1/1
6	NAG	D	1304	3	-	2/6/23/26	0/1/1/1
6	NAG	G	1304	3	-	2/6/23/26	0/1/1/1

Continued on next page...

Continued from previous page...

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
6	NAG	G	1303	3	-	0/6/23/26	0/1/1/1
6	NAG	D	1305	3	-	2/6/23/26	0/1/1/1
6	NAG	D	1308	3	-	2/6/23/26	0/1/1/1
6	NAG	G	1305	3	-	1/6/23/26	0/1/1/1
6	NAG	E	1309	3	-	2/6/23/26	0/1/1/1
6	NAG	D	1306	3	-	0/6/23/26	0/1/1/1
6	NAG	G	1306	3	-	4/6/23/26	0/1/1/1
6	NAG	E	1305	3	-	2/6/23/26	0/1/1/1
6	NAG	E	1308	3	-	2/6/23/26	0/1/1/1
6	NAG	D	1301	-	-	0/6/23/26	0/1/1/1
6	NAG	D	1303	3	-	0/6/23/26	0/1/1/1

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

5 of 40 torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
6	E	1302	NAG	C8-C7-N2-C2
6	E	1302	NAG	O7-C7-N2-C2
6	E	1301	NAG	O5-C5-C6-O6
6	E	1305	NAG	C4-C5-C6-O6
6	G	1306	NAG	O5-C5-C6-O6

There are no ring outliers.

No monomer is involved in short contacts.

5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

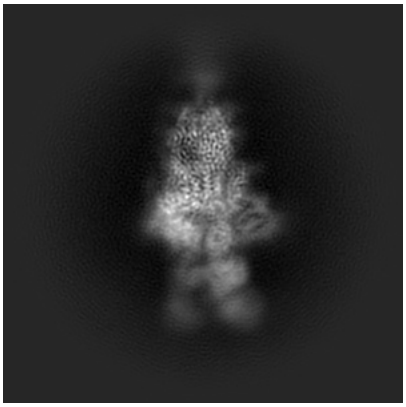
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-32441. These allow visual inspection of the internal detail of the map and identification of artifacts.

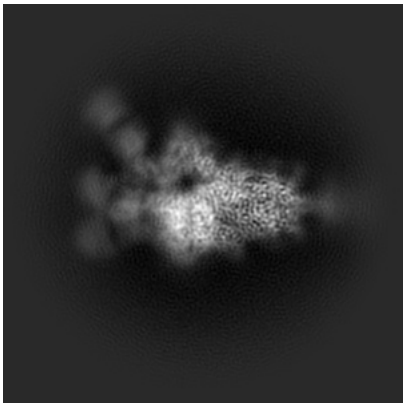
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections

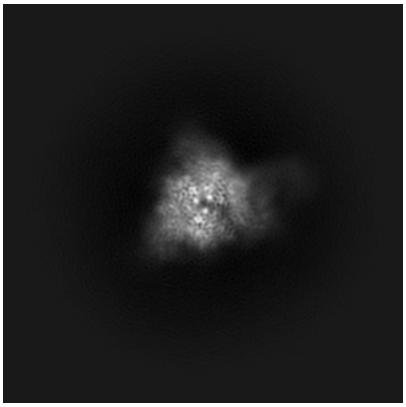
6.1.1 Primary map



X



Y



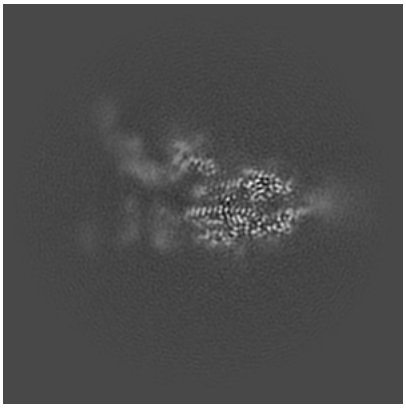
Z

The images above show the map projected in three orthogonal directions.

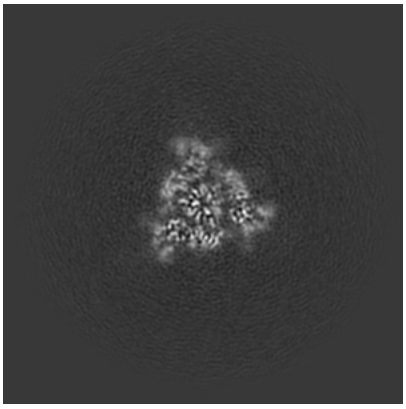
6.2 Central slices

6.2.1 Primary map

X Index: 180



Y Index: 180

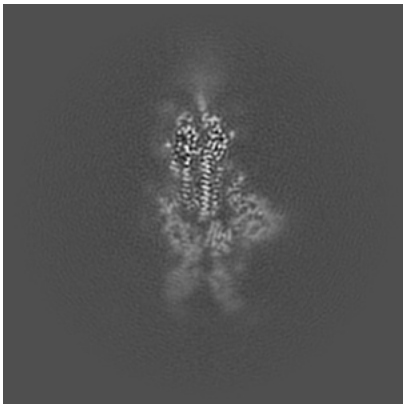


Z Index: 180

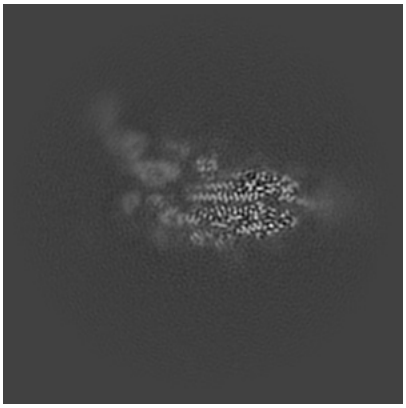
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

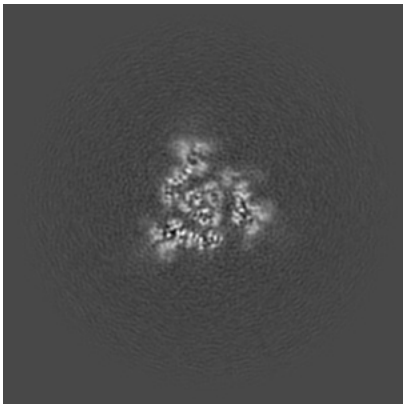
6.3.1 Primary map



X Index: 173



Y Index: 185

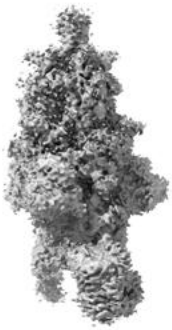


Z Index: 176

The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal surface views (i)

6.4.1 Primary map



X

Y

Z

The images above show the 3D surface view of the map at the recommended contour level 0.219. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

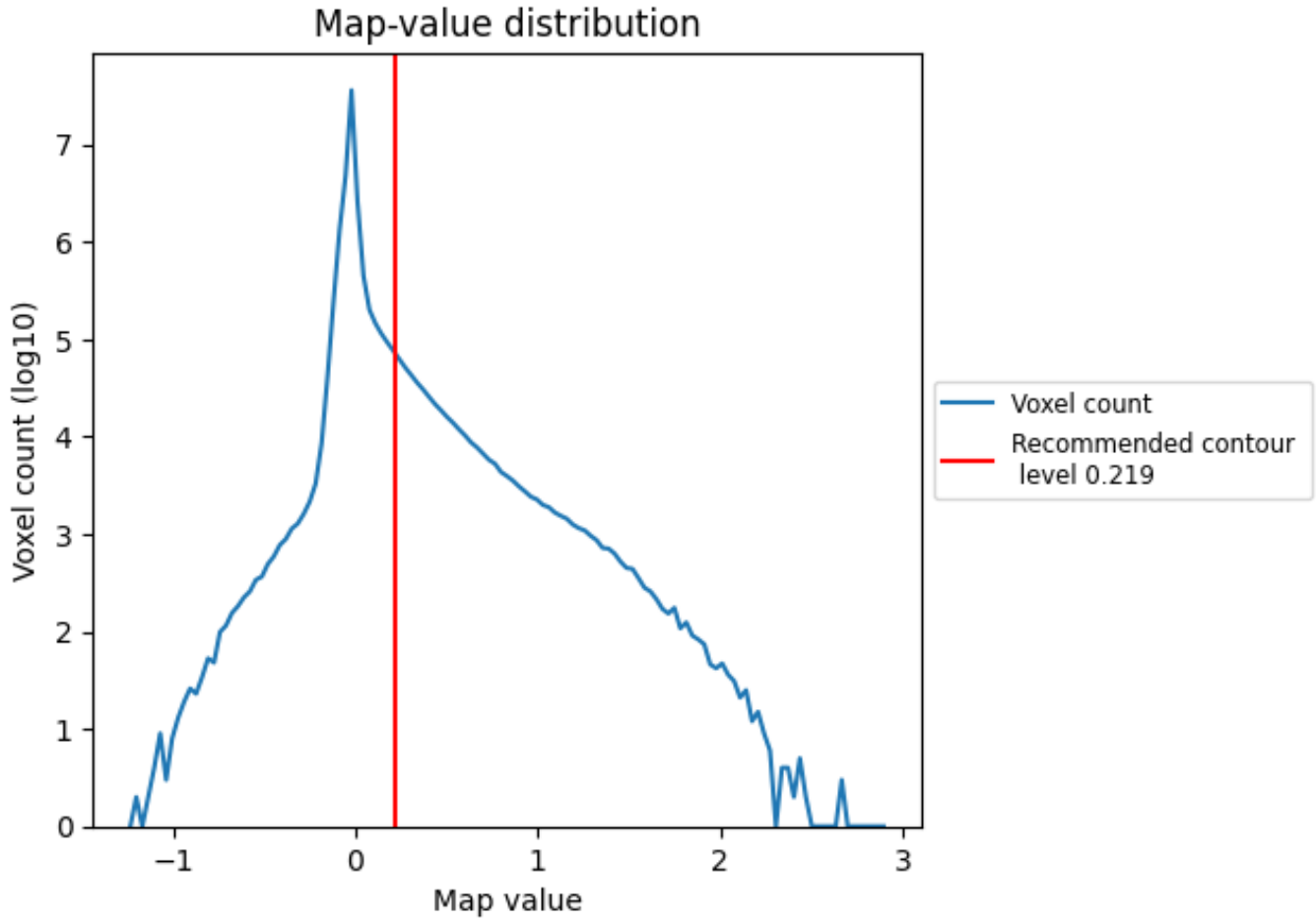
6.5 Mask visualisation (i)

This section was not generated. No masks/segmentation were deposited.

7 Map analysis

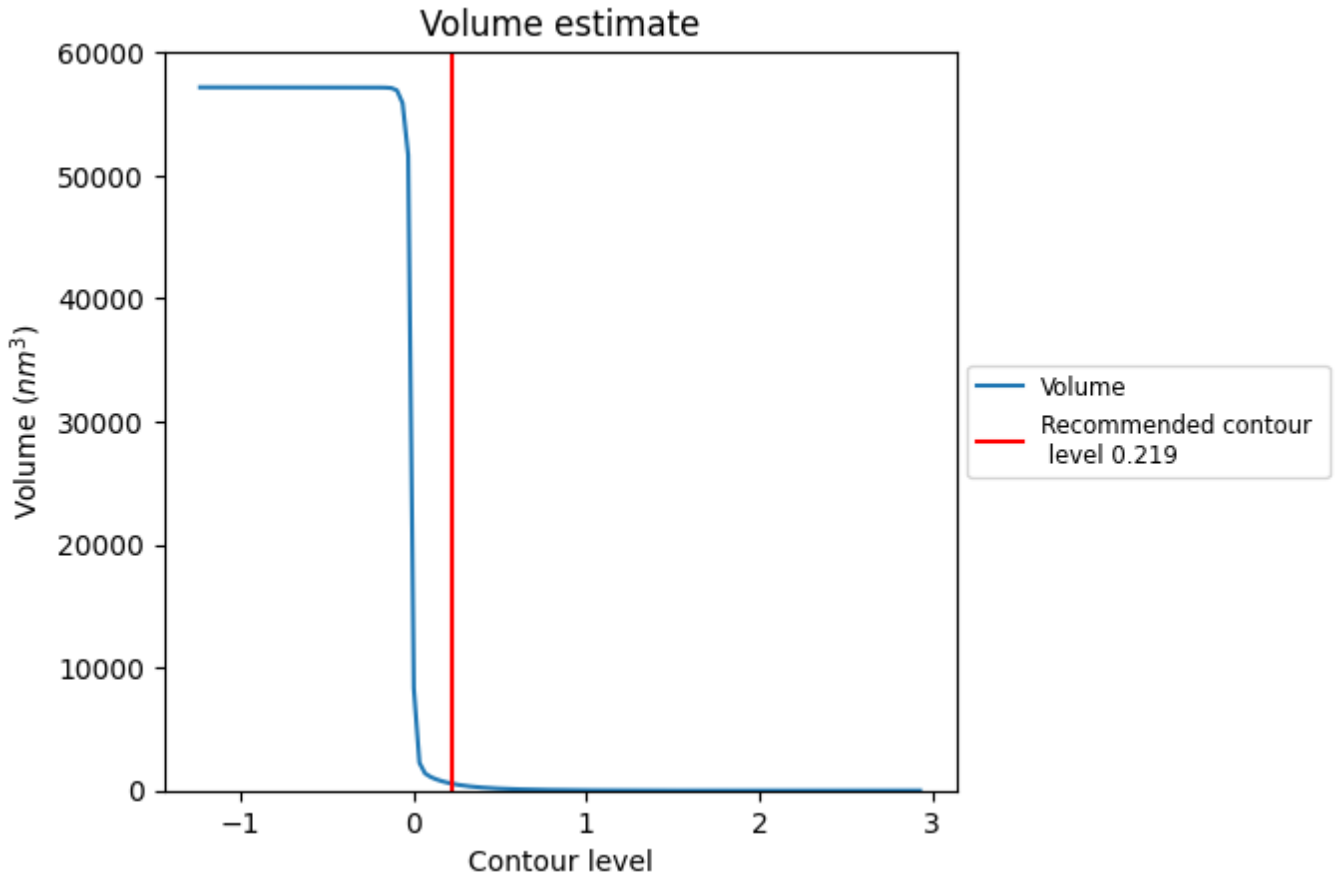
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution



The map-value distribution is plotted in 128 intervals along the x-axis. The y-axis is logarithmic. A spike in this graph at zero usually indicates that the volume has been masked.

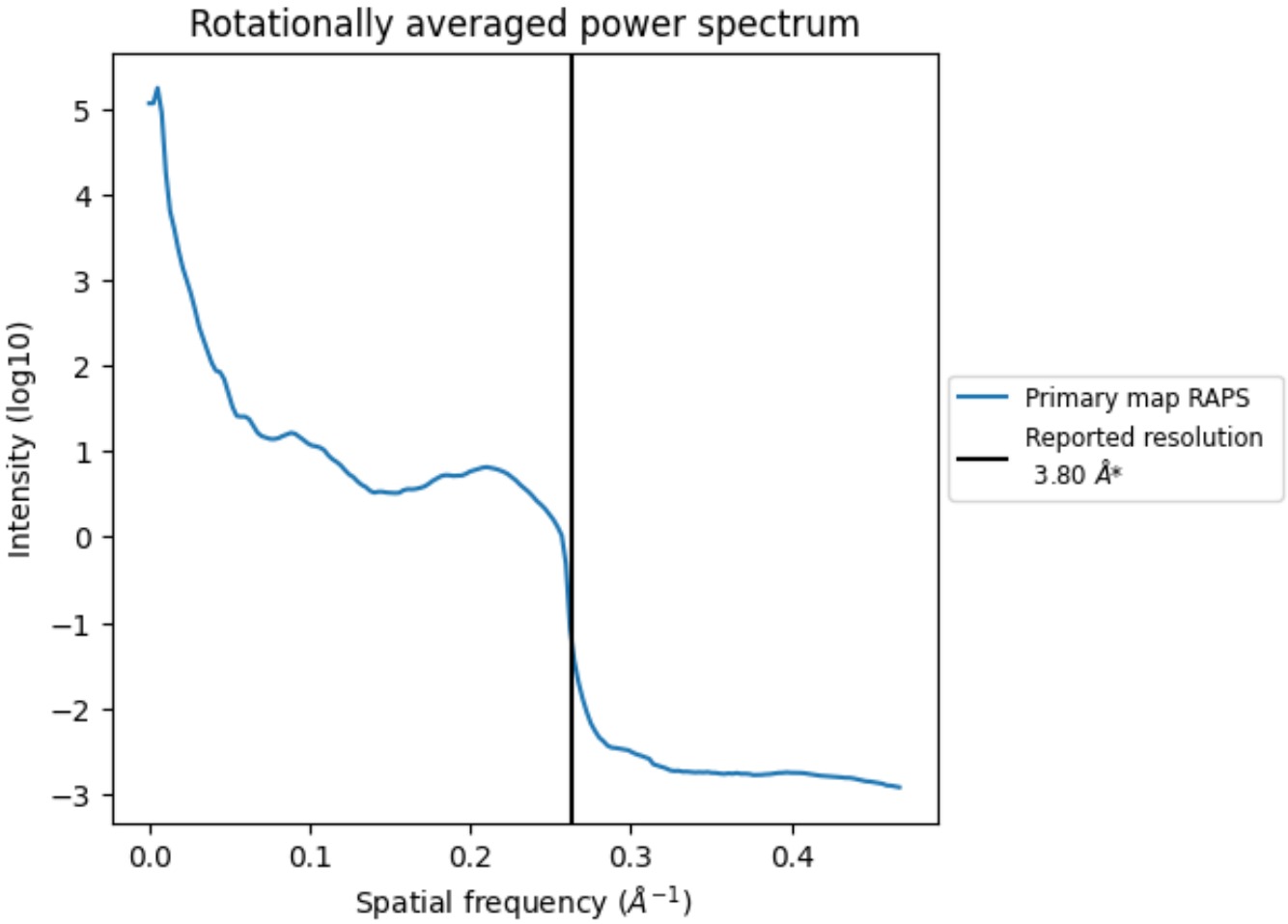
7.2 Volume estimate (i)



The volume at the recommended contour level is 577 nm^3; this corresponds to an approximate mass of 521 kDa.

The volume estimate graph shows how the enclosed volume varies with the contour level. The recommended contour level is shown as a vertical line and the intersection between the line and the curve gives the volume of the enclosed surface at the given level.

7.3 Rotationally averaged power spectrum (i)



*Reported resolution corresponds to spatial frequency of 0.263 Å^{-1}

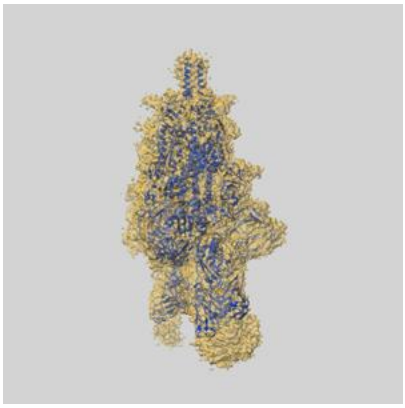
8 Fourier-Shell correlation (i)

This section was not generated. No FSC curve or half-maps provided.

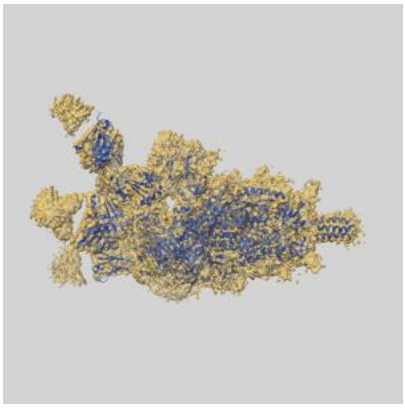
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-32441 and PDB model 7WE7. Per-residue inclusion information can be found in section 3 on page 11.

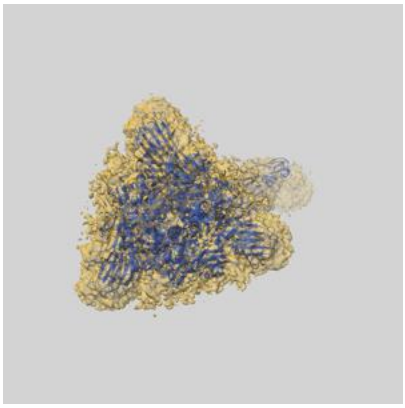
9.1 Map-model overlay



X



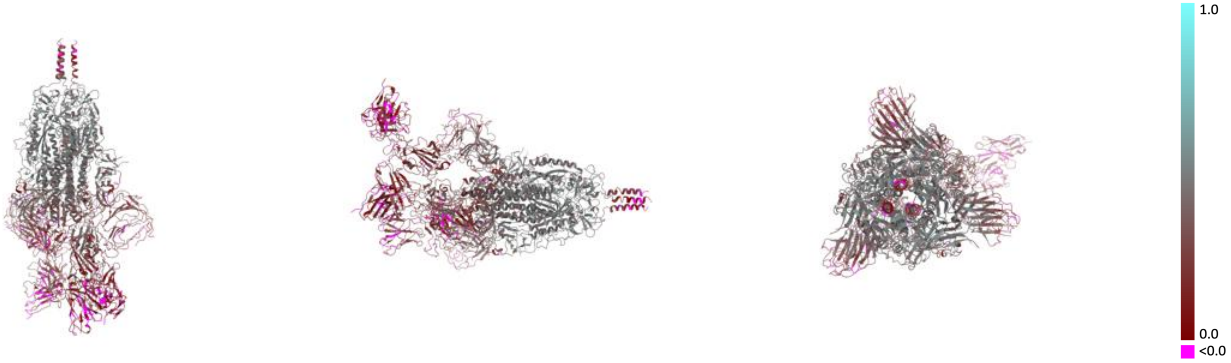
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.219 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

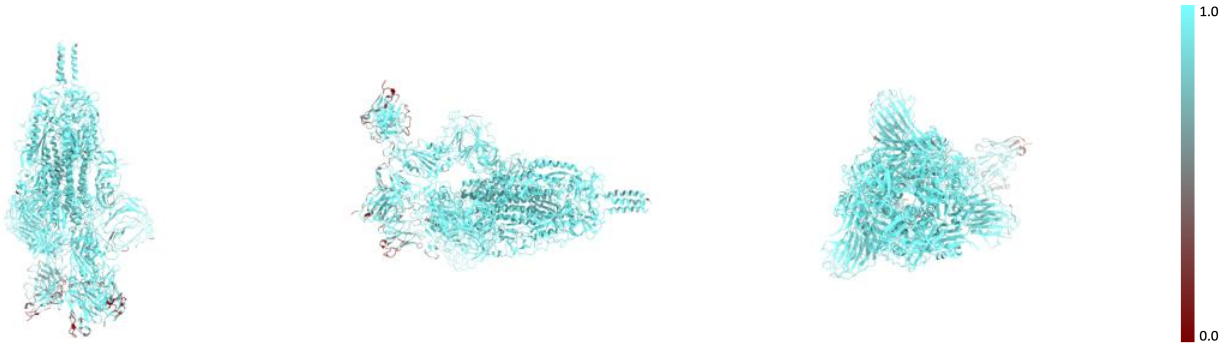
9.2 Q-score mapped to coordinate model



X Y Z

The images above show the model with each residue coloured according its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions at which atoms can be resolved. Low Q-score values may therefore be expected for many entries.

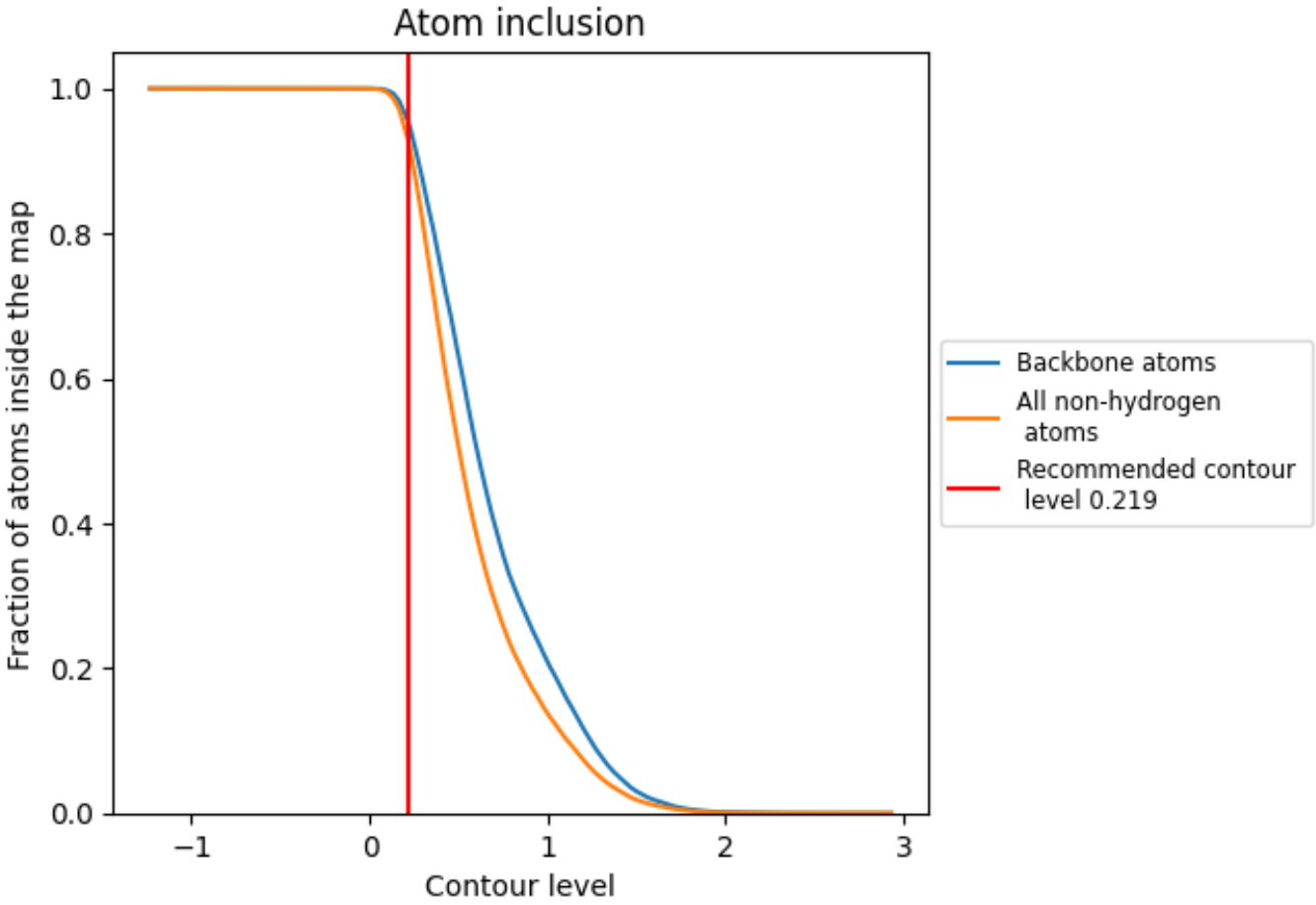
9.3 Atom inclusion mapped to coordinate model



X Y Z

The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.219).

9.4 Atom inclusion (i)



At the recommended contour level, 95% of all backbone atoms, 93% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary

The table lists the average atom inclusion at the recommended contour level (0.219) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.9271	0.3150
A	0.6071	0.3110
B	0.8214	0.2490
C	0.9643	0.4550
D	0.9709	0.3720
E	0.9645	0.3570
F	0.8571	0.3000
G	0.9549	0.3290
H	0.8603	0.1650
I	1.0000	0.4060
J	0.6682	0.0890
K	0.7687	0.0990
L	0.8302	0.1510
M	0.6553	0.1090
N	0.7094	0.1070
O	0.9744	0.3720
P	1.0000	0.4030
Q	0.1786	0.0790
R	0.8929	0.2320
S	1.0000	0.4820
T	0.8214	0.2900
U	1.0000	0.4430
V	0.8974	0.3640
W	0.9487	0.4180
X	0.5714	0.1270
Y	0.8571	0.1720
Z	1.0000	0.5370
a	0.8214	0.3160
b	0.9286	0.4030
c	0.9231	0.3220
d	0.9231	0.3280