



Full wwPDB EM Validation Report ⓘ

Aug 29, 2024 – 10:09 PM JST

PDB ID : 8WLZ
EMDB ID : EMD-37636
Title : Cryo-EM structure of the WIV1 S-hACE2 complex
Authors : Wang, X.; Qiao, S.
Deposited on : 2023-10-01
Resolution : 4.45 Å(reported)

This is a Full wwPDB EM 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/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:

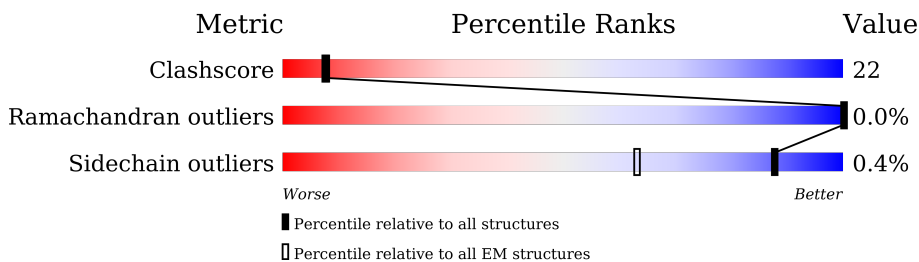
EMDB validation analysis : **FAILED**
Mogul : 1.8.5 (274361), CSD as541be (2020)
MolProbity : 4.02b-467
Percentile statistics : 20231227.v01 (using entries in the PDB archive December 27th 2023)
MapQ : **FAILED**
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.38.2

1 Overall quality at a glance i

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

The reported resolution of this entry is 4.45 Å.

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



Metric	Whole archive (#Entries)	EM structures (#Entries)
Clashscore	210492	15764
Ramachandran outliers	207382	16835
Sidechain outliers	206894	16415

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 $\leq 5\%$

Mol	Chain	Length	Quality of chain
1	A	1271	42% 41% 16%
1	B	1271	45% 38% 16%
1	C	1271	47% 37% 16%
2	D	603	66% 33% .
2	G	603	63% 36% .
3	E	2	100%
3	F	2	100%
3	H	2	50% 50%
3	I	2	100%

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Mol	Chain	Length	Quality of chain
3	J	2	 100%
3	K	2	 50% 50%
3	L	2	 50% 50%
3	O	2	 50% 50%
3	P	2	 50% 50%
3	Q	2	 50% 50%
3	R	2	 100%
3	T	2	 50% 50%
3	U	2	 100%
4	M	3	 100%
4	N	3	 100%
4	S	3	 67% 33%

2 Entry composition i

There are 5 unique types of molecules in this entry. The entry contains 35498 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 Spike glycoprotein,Fibritin.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	A	1068	8332	5317	1387	1587	41	0	0
1	B	1067	8319	5309	1383	1586	41	0	0
1	C	1068	8332	5317	1387	1587	41	0	0

There are 168 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	969	PRO	LYS	conflict	UNP U5WI05
A	970	PRO	VAL	conflict	UNP U5WI05
A	1192	GLY	-	linker	UNP U5WI05
A	1193	SER	-	linker	UNP U5WI05
A	1220	LEU	-	expression tag	UNP A0A346FJN8
A	1221	GLY	-	expression tag	UNP A0A346FJN8
A	1222	ARG	-	expression tag	UNP A0A346FJN8
A	1223	SER	-	expression tag	UNP A0A346FJN8
A	1224	LEU	-	expression tag	UNP A0A346FJN8
A	1225	GLU	-	expression tag	UNP A0A346FJN8
A	1226	VAL	-	expression tag	UNP A0A346FJN8
A	1227	LEU	-	expression tag	UNP A0A346FJN8
A	1228	PHE	-	expression tag	UNP A0A346FJN8
A	1229	GLN	-	expression tag	UNP A0A346FJN8
A	1230	GLY	-	expression tag	UNP A0A346FJN8
A	1231	PRO	-	expression tag	UNP A0A346FJN8
A	1232	GLY	-	expression tag	UNP A0A346FJN8
A	1233	HIS	-	expression tag	UNP A0A346FJN8
A	1234	HIS	-	expression tag	UNP A0A346FJN8
A	1235	HIS	-	expression tag	UNP A0A346FJN8
A	1236	HIS	-	expression tag	UNP A0A346FJN8
A	1237	HIS	-	expression tag	UNP A0A346FJN8
A	1238	HIS	-	expression tag	UNP A0A346FJN8
A	1239	HIS	-	expression tag	UNP A0A346FJN8

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Chain	Residue	Modelled	Actual	Comment	Reference
A	1240	HIS	-	expression tag	UNP A0A346FJN8
A	1241	SER	-	expression tag	UNP A0A346FJN8
A	1242	ALA	-	expression tag	UNP A0A346FJN8
A	1243	TRP	-	expression tag	UNP A0A346FJN8
A	1244	SER	-	expression tag	UNP A0A346FJN8
A	1245	HIS	-	expression tag	UNP A0A346FJN8
A	1246	PRO	-	expression tag	UNP A0A346FJN8
A	1247	GLN	-	expression tag	UNP A0A346FJN8
A	1248	PHE	-	expression tag	UNP A0A346FJN8
A	1249	GLU	-	expression tag	UNP A0A346FJN8
A	1250	LYS	-	expression tag	UNP A0A346FJN8
A	1251	GLY	-	expression tag	UNP A0A346FJN8
A	1252	GLY	-	expression tag	UNP A0A346FJN8
A	1253	GLY	-	expression tag	UNP A0A346FJN8
A	1254	SER	-	expression tag	UNP A0A346FJN8
A	1255	GLY	-	expression tag	UNP A0A346FJN8
A	1256	GLY	-	expression tag	UNP A0A346FJN8
A	1257	GLY	-	expression tag	UNP A0A346FJN8
A	1258	GLY	-	expression tag	UNP A0A346FJN8
A	1259	SER	-	expression tag	UNP A0A346FJN8
A	1260	GLY	-	expression tag	UNP A0A346FJN8
A	1261	GLY	-	expression tag	UNP A0A346FJN8
A	1262	SER	-	expression tag	UNP A0A346FJN8
A	1263	ALA	-	expression tag	UNP A0A346FJN8
A	1264	TRP	-	expression tag	UNP A0A346FJN8
A	1265	SER	-	expression tag	UNP A0A346FJN8
A	1266	HIS	-	expression tag	UNP A0A346FJN8
A	1267	PRO	-	expression tag	UNP A0A346FJN8
A	1268	GLN	-	expression tag	UNP A0A346FJN8
A	1269	PHE	-	expression tag	UNP A0A346FJN8
A	1270	GLU	-	expression tag	UNP A0A346FJN8
A	1271	LYS	-	expression tag	UNP A0A346FJN8
B	969	PRO	LYS	conflict	UNP U5WI05
B	970	PRO	VAL	conflict	UNP U5WI05
B	1192	GLY	-	linker	UNP U5WI05
B	1193	SER	-	linker	UNP U5WI05
B	1220	LEU	-	expression tag	UNP A0A346FJN8
B	1221	GLY	-	expression tag	UNP A0A346FJN8
B	1222	ARG	-	expression tag	UNP A0A346FJN8
B	1223	SER	-	expression tag	UNP A0A346FJN8
B	1224	LEU	-	expression tag	UNP A0A346FJN8
B	1225	GLU	-	expression tag	UNP A0A346FJN8

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Chain	Residue	Modelled	Actual	Comment	Reference
B	1226	VAL	-	expression tag	UNP A0A346FJN8
B	1227	LEU	-	expression tag	UNP A0A346FJN8
B	1228	PHE	-	expression tag	UNP A0A346FJN8
B	1229	GLN	-	expression tag	UNP A0A346FJN8
B	1230	GLY	-	expression tag	UNP A0A346FJN8
B	1231	PRO	-	expression tag	UNP A0A346FJN8
B	1232	GLY	-	expression tag	UNP A0A346FJN8
B	1233	HIS	-	expression tag	UNP A0A346FJN8
B	1234	HIS	-	expression tag	UNP A0A346FJN8
B	1235	HIS	-	expression tag	UNP A0A346FJN8
B	1236	HIS	-	expression tag	UNP A0A346FJN8
B	1237	HIS	-	expression tag	UNP A0A346FJN8
B	1238	HIS	-	expression tag	UNP A0A346FJN8
B	1239	HIS	-	expression tag	UNP A0A346FJN8
B	1240	HIS	-	expression tag	UNP A0A346FJN8
B	1241	SER	-	expression tag	UNP A0A346FJN8
B	1242	ALA	-	expression tag	UNP A0A346FJN8
B	1243	TRP	-	expression tag	UNP A0A346FJN8
B	1244	SER	-	expression tag	UNP A0A346FJN8
B	1245	HIS	-	expression tag	UNP A0A346FJN8
B	1246	PRO	-	expression tag	UNP A0A346FJN8
B	1247	GLN	-	expression tag	UNP A0A346FJN8
B	1248	PHE	-	expression tag	UNP A0A346FJN8
B	1249	GLU	-	expression tag	UNP A0A346FJN8
B	1250	LYS	-	expression tag	UNP A0A346FJN8
B	1251	GLY	-	expression tag	UNP A0A346FJN8
B	1252	GLY	-	expression tag	UNP A0A346FJN8
B	1253	GLY	-	expression tag	UNP A0A346FJN8
B	1254	SER	-	expression tag	UNP A0A346FJN8
B	1255	GLY	-	expression tag	UNP A0A346FJN8
B	1256	GLY	-	expression tag	UNP A0A346FJN8
B	1257	GLY	-	expression tag	UNP A0A346FJN8
B	1258	GLY	-	expression tag	UNP A0A346FJN8
B	1259	SER	-	expression tag	UNP A0A346FJN8
B	1260	GLY	-	expression tag	UNP A0A346FJN8
B	1261	GLY	-	expression tag	UNP A0A346FJN8
B	1262	SER	-	expression tag	UNP A0A346FJN8
B	1263	ALA	-	expression tag	UNP A0A346FJN8
B	1264	TRP	-	expression tag	UNP A0A346FJN8
B	1265	SER	-	expression tag	UNP A0A346FJN8
B	1266	HIS	-	expression tag	UNP A0A346FJN8
B	1267	PRO	-	expression tag	UNP A0A346FJN8

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Chain	Residue	Modelled	Actual	Comment	Reference
B	1268	GLN	-	expression tag	UNP A0A346FJN8
B	1269	PHE	-	expression tag	UNP A0A346FJN8
B	1270	GLU	-	expression tag	UNP A0A346FJN8
B	1271	LYS	-	expression tag	UNP A0A346FJN8
C	969	PRO	LYS	conflict	UNP U5WI05
C	970	PRO	VAL	conflict	UNP U5WI05
C	1192	GLY	-	linker	UNP U5WI05
C	1193	SER	-	linker	UNP U5WI05
C	1220	LEU	-	expression tag	UNP A0A346FJN8
C	1221	GLY	-	expression tag	UNP A0A346FJN8
C	1222	ARG	-	expression tag	UNP A0A346FJN8
C	1223	SER	-	expression tag	UNP A0A346FJN8
C	1224	LEU	-	expression tag	UNP A0A346FJN8
C	1225	GLU	-	expression tag	UNP A0A346FJN8
C	1226	VAL	-	expression tag	UNP A0A346FJN8
C	1227	LEU	-	expression tag	UNP A0A346FJN8
C	1228	PHE	-	expression tag	UNP A0A346FJN8
C	1229	GLN	-	expression tag	UNP A0A346FJN8
C	1230	GLY	-	expression tag	UNP A0A346FJN8
C	1231	PRO	-	expression tag	UNP A0A346FJN8
C	1232	GLY	-	expression tag	UNP A0A346FJN8
C	1233	HIS	-	expression tag	UNP A0A346FJN8
C	1234	HIS	-	expression tag	UNP A0A346FJN8
C	1235	HIS	-	expression tag	UNP A0A346FJN8
C	1236	HIS	-	expression tag	UNP A0A346FJN8
C	1237	HIS	-	expression tag	UNP A0A346FJN8
C	1238	HIS	-	expression tag	UNP A0A346FJN8
C	1239	HIS	-	expression tag	UNP A0A346FJN8
C	1240	HIS	-	expression tag	UNP A0A346FJN8
C	1241	SER	-	expression tag	UNP A0A346FJN8
C	1242	ALA	-	expression tag	UNP A0A346FJN8
C	1243	TRP	-	expression tag	UNP A0A346FJN8
C	1244	SER	-	expression tag	UNP A0A346FJN8
C	1245	HIS	-	expression tag	UNP A0A346FJN8
C	1246	PRO	-	expression tag	UNP A0A346FJN8
C	1247	GLN	-	expression tag	UNP A0A346FJN8
C	1248	PHE	-	expression tag	UNP A0A346FJN8
C	1249	GLU	-	expression tag	UNP A0A346FJN8
C	1250	LYS	-	expression tag	UNP A0A346FJN8
C	1251	GLY	-	expression tag	UNP A0A346FJN8
C	1252	GLY	-	expression tag	UNP A0A346FJN8
C	1253	GLY	-	expression tag	UNP A0A346FJN8

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Chain	Residue	Modelled	Actual	Comment	Reference
C	1254	SER	-	expression tag	UNP A0A346FJN8
C	1255	GLY	-	expression tag	UNP A0A346FJN8
C	1256	GLY	-	expression tag	UNP A0A346FJN8
C	1257	GLY	-	expression tag	UNP A0A346FJN8
C	1258	GLY	-	expression tag	UNP A0A346FJN8
C	1259	SER	-	expression tag	UNP A0A346FJN8
C	1260	GLY	-	expression tag	UNP A0A346FJN8
C	1261	GLY	-	expression tag	UNP A0A346FJN8
C	1262	SER	-	expression tag	UNP A0A346FJN8
C	1263	ALA	-	expression tag	UNP A0A346FJN8
C	1264	TRP	-	expression tag	UNP A0A346FJN8
C	1265	SER	-	expression tag	UNP A0A346FJN8
C	1266	HIS	-	expression tag	UNP A0A346FJN8
C	1267	PRO	-	expression tag	UNP A0A346FJN8
C	1268	GLN	-	expression tag	UNP A0A346FJN8
C	1269	PHE	-	expression tag	UNP A0A346FJN8
C	1270	GLU	-	expression tag	UNP A0A346FJN8
C	1271	LYS	-	expression tag	UNP A0A346FJN8

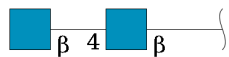
- Molecule 2 is a protein called Processed angiotensin-converting enzyme 2.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	D	597	Total	C	N	O	S	0	0
			4870	3115	806	920	29		
2	G	597	Total	C	N	O	S	0	0
			4870	3115	806	920	29		

There are 12 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
D	616	HIS	-	expression tag	UNP Q9BYF1
D	617	HIS	-	expression tag	UNP Q9BYF1
D	618	HIS	-	expression tag	UNP Q9BYF1
D	619	HIS	-	expression tag	UNP Q9BYF1
D	620	HIS	-	expression tag	UNP Q9BYF1
D	621	HIS	-	expression tag	UNP Q9BYF1
G	616	HIS	-	expression tag	UNP Q9BYF1
G	617	HIS	-	expression tag	UNP Q9BYF1
G	618	HIS	-	expression tag	UNP Q9BYF1
G	619	HIS	-	expression tag	UNP Q9BYF1
G	620	HIS	-	expression tag	UNP Q9BYF1
G	621	HIS	-	expression tag	UNP Q9BYF1

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



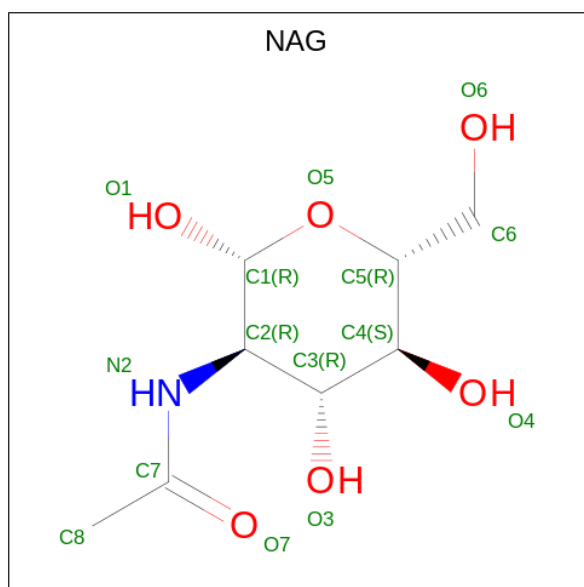
Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
3	E	2	28	16	2	10	0	0
3	F	2	28	16	2	10	0	0
3	H	2	28	16	2	10	0	0
3	I	2	28	16	2	10	0	0
3	J	2	28	16	2	10	0	0
3	K	2	28	16	2	10	0	0
3	L	2	28	16	2	10	0	0
3	O	2	28	16	2	10	0	0
3	P	2	28	16	2	10	0	0
3	Q	2	28	16	2	10	0	0
3	R	2	28	16	2	10	0	0
3	T	2	28	16	2	10	0	0
3	U	2	28	16	2	10	0	0

- Molecule 4 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
4	M	3	Total	C	N	O	0	0
			39	22	2	15		
4	N	3	Total	C	N	O	0	0
			39	22	2	15		
4	S	3	Total	C	N	O	0	0
			39	22	2	15		

- Molecule 5 is 2-acetamido-2-deoxy-beta-D-glucopyranose (three-letter code: NAG) (formula: $C_8H_{15}NO_6$).



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

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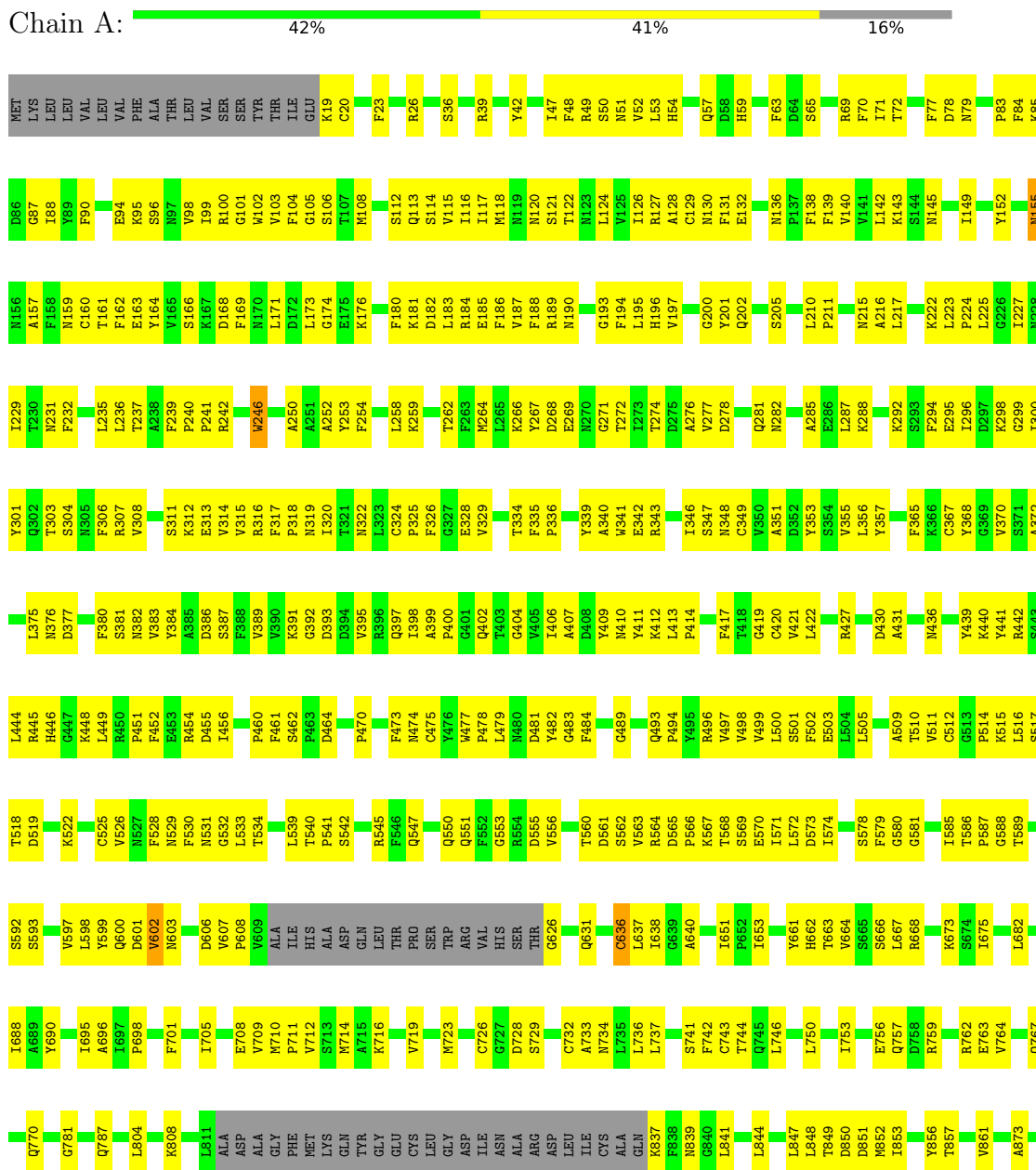
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Mol	Chain	Residues	Atoms				AltConf
			Total	C	N	O	
5	B	1	Total 14	8	1	5	0
5	B	1	Total 14	8	1	5	0
5	B	1	Total 14	8	1	5	0
5	C	1	Total 14	8	1	5	0
5	C	1	Total 14	8	1	5	0
5	C	1	Total 14	8	1	5	0
5	C	1	Total 14	8	1	5	0
5	C	1	Total 14	8	1	5	0
5	C	1	Total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

3 Residue-property plots

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

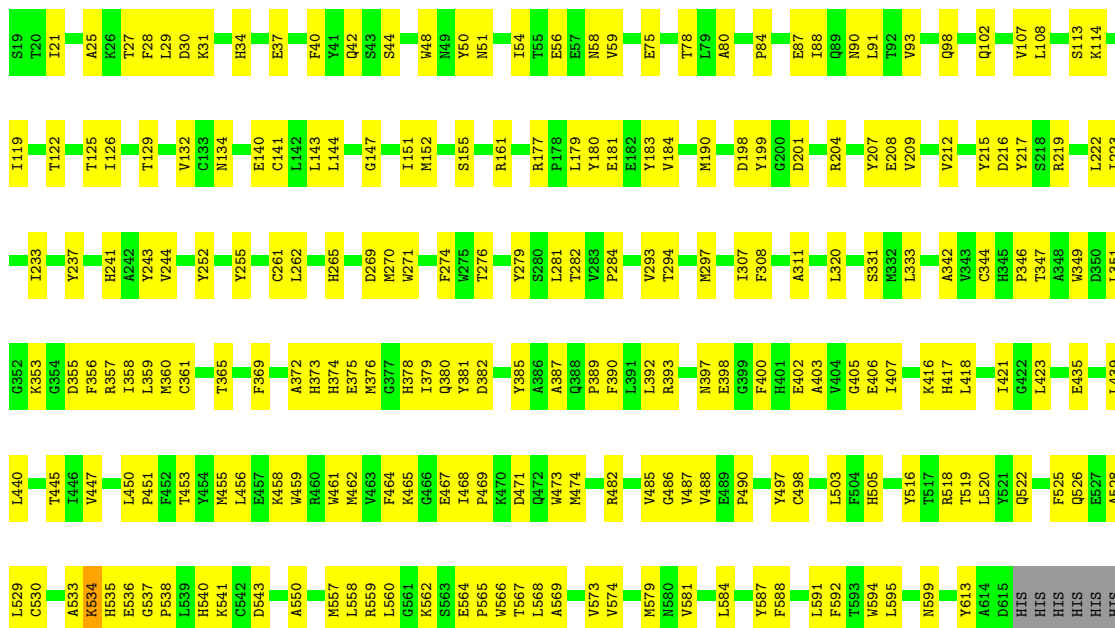


Q878	S957	V1053	LYS	PRO	GLY
M853	S958	P1052	ASN	ARG	GLY
M854	Y959	T1060	HIS	ASP	GLY
Y867	L960	T1061	THR	GLY	ALA
R888	N961	P1062	SER	GLN	TRP
F889	D962	ASP	PRO	ALA	SER
I892	L963	H1066	VAL	VAL	HIS
T895	S965	E1067	ASP	ARG	PRO
M897	L966	K1069	GLY	ALA	GLN
V898	L967	P1073	LEU	LEU	PHE
L899	P870	R1074	ILE	LEU	TRP
Y900	E971	V1077	GLY	VAL	VAL
Q903	E972	F1078	ILE	LEU	LEU
I906	E973	F1079	ASN	LEU	LEU
A907	N974	F1080	ALA	SER	ALA
N908	Q975	F1088	SER	THR	SER
K912	I976	W1085	VAL	PHE	VAL
A913	I980	Q1089	VAL	LEU	LEU
Q916	T981	R1090	ASN	GLY	ASN
I917	G982	F1092	ILE	VAL	ASN
P918	R983	F1093	ASP	LEU	ASP
Q918	L984	P1095	ARG	PHE	LEU
T922	Q988	I1098	GLN	GLY	GLY
I923	Y991	T1099	LEU	PRO	GLY
V934	G993	L1100	ASN	GLY	VAL
V935	R994	D1101	ALA	HIS	VAL
N936	R997	N1102	LYS	HIS	ALA
Q937	A1008	T1103	ASN	HIS	ALA
N938	G929	S1108	ASN	HIS	HIS
Q940	K930	C1109	GLU	HIS	HIS
A941	L931	D1110	LEU	HIS	HIS
T944	Q932	V1120	LEU	HIS	HIS
Q948	D933	Y1121	LEU	SER	ILE
S951	V934	C1015	LEU	ALA	ALA
F953	V935	D1122	LEU	TRP	SER
G954	Q937	P1123	LEU	SER	LEU
A955	N938	L1124	GLN	HIS	GLY
I956	A939	E1127	GLY	PRO	GLY
	Q940	LEU	LYS	PHE	GLY
	A941	ASP	TYR	GLY	GLY
	T944	SER	GLU	LYS	GLY
	Q948	PHE	GLN	GLY	GLY
	S951	LYS	GLY	GLY	GLY
	F953	GLU	GLY	SER	GLY
	G954	LEU	LEU	GLY	GLY
	A955	ASP	ILE	GLY	GLY
	I956	TYR	PRO	GLY	GLY
		PHE	ALA	SER	SER

• Molecule 1: Spike glycoprotein,Fibrin



MET	N76	L223	V308	F388	M468	V583	V643
LYS	F77	P224	R312	F389	V469	R564	Y647
LEU	F78	L225	E313	V390	P476	D565	E648
VAL	N79	T230	V314	K391	L479	F566	C649
LEU	P83	M231	V315	D392	N480	K567	T663
VAL	F84	F232	R316	D394	D481	T568	I663
PHE	R85	R233	F317	V395	V482	S569	I657
ALA	K85	L234	N322	R396	G483	E570	I657
LEU	Y89	L235	C324	Q397	F484	I571	C658
VAL	F90	T237	P325	P400	V485	L572	A659
SER	A91	F238	F326	Q402	T486	D573	A659
TYR	E94	P240	F330	T403	M488	V582	H662
THR	K95	R241	N331	D408	C491	S583	T663
ILE	S96	R242	A332	Y409	V492	I585	V664
GLU	N97	Y245	T333	M410	Q493	T586	L667
K19	Y98	W246	T334	N411	P494	F587	K673
F23	I99	G247	T335	K412	V495	G588	K673
R26	G101	E175	F336	P413	V496	T589	Y678
T27	W102	F186	S337	P414	V498	S592	T679
T32	V103	V187	V338	D415	V499	M680	M680
Q33	F104	D182	W341	D416	L500	S681	S681
F34	G105	L183	E342	F417	A506	L682	L682
M108	S106	R184	F345	T418	Q600	A696	A696
S37	T107	E185	R346	F419	C604	I697	I697
H38	M108	F186	I346	C420	V608	P698	P698
R39	G113	V187	V257	V421	S501	I705	I705
G40	S114	F188	L258	L422	A509	V712	V712
Y42	V115	R189	R259	A423	F510	M713	M713
D46	I116	M190	P260	M425	V511	S714	S714
I47	I117	K191	T261	T426	C512	M714	M714
F48	M118	F194	T262	R427	ALA	V719	V719
R49	M119	H195	F263	M428	ASP	N722	N722
S50	H200	H196	M264	A431	GLN	M723	M723
N51	S121	V197	L265	T432	LEU	Y724	Y724
V52	T122	Y198	K266	F436	LEU	I725	I725
L53	L124	Y201	Y267	M436	L520	C726	C726
H54	V125	Q202	E269	N438	N529	E731	E731
Q57	R127	L204	I273	Y437	G532	C732	C732
D58	A128	S208	L284	Y439	H539	A733	A733
H59	C129	G209	L287	K440	L539	N734	N734
F60	F131	L210	L287	R442	S542	L736	L736
L61	F132	P211	I296	M376	F546	L737	L737
D64	L133	F214	D297	C379	Q547	Q738	Q738
T68	M136	M215	K298	F380	P548	Y739	Y739
R69	P137	A216	F381	S381	F451	G740	G740
F70	F138	L217	Q302	N382	F452	S741	S741
I71	F139	K218	T303	V383	F453	F742	F742
T72	V140	P219	S304	Y384	R454	G743	G743
F73	V141	I220	F305	A395	D455	T744	T744
	Q148	K222	R307	S387	T456	Q745	Q745
					S562	L746	L746



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

Chain E: 100%



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

Chain F: 100%



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

Chain H: 50%

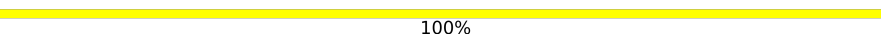


- Molecule 3: 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose

Chain I: 100%



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

Chain J:  100%

MAG1
MAG2

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

Chain K:  50% 50%

MAG1
MAG2

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

Chain L:  50% 50%

MAG1
MAG2

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

Chain O:  50% 50%

MAG1
MAG2

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

Chain P:  50% 50%

MAG1
MAG2

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

Chain Q:  50% 50%

MAG1
MAG2

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

Chain R:  100%



MAG1
MAG2

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

Chain T:  50% 50%



MAG1
MAG2

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

Chain U:  100%



MAG1
MAG2

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

Chain M:  100%



MAG1
MAG2
BMAS

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

Chain N:  100%



MAG1
MAG2
BMAS

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

Chain S:  67% 33%



MAG1
MAG2
BMAS

4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	31293	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	NONE	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	50	Depositor
Minimum defocus (nm)	1500	Depositor
Maximum defocus (nm)	1800	Depositor
Magnification	Not provided	
Image detector	GATAN K3 (6k x 4k)	Depositor

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: BMA, NAG

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	0.35	0/8534	0.56	1/11621 (0.0%)
1	B	0.35	0/8520	0.54	0/11601
1	C	0.35	0/8534	0.55	0/11621
2	D	0.27	0/5007	0.49	0/6803
2	G	0.25	0/5007	0.47	0/6803
All	All	0.33	0/35602	0.53	1/48449 (0.0%)

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

There are no bond length outliers.

All (1) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	636	CYS	CA-CB-SG	6.15	125.07	114.00

There are no chirality outliers.

All (1) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	602	VAL	Peptide

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	8332	0	8098	471	0
1	B	8319	0	8076	439	0
1	C	8332	0	8091	396	0
2	D	4870	0	4643	158	0
2	G	4870	0	4643	162	0
3	E	28	0	25	0	0
3	F	28	0	25	0	0
3	H	28	0	25	1	0
3	I	28	0	25	0	0
3	J	28	0	25	2	0
3	K	28	0	25	0	0
3	L	28	0	25	1	0
3	O	28	0	25	1	0
3	P	28	0	25	1	0
3	Q	28	0	25	1	0
3	R	28	0	25	0	0
3	T	28	0	25	1	0
3	U	28	0	25	0	0
4	M	39	0	34	0	0
4	N	39	0	34	0	0
4	S	39	0	34	1	0
5	A	56	0	52	0	0
5	B	98	0	91	2	0
5	C	140	0	130	4	0
All	All	35498	0	34251	1568	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 22.

All (1568) 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:183:LEU:HB3	1:B:202:GLN:O	1.65	0.96
1:A:128:ALA:HB3	1:A:162:PHE:HB3	1.51	0.93
1:B:103:VAL:HG22	1:B:116:ILE:HG12	1.53	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:956:ILE:H	1:A:975:GLN:HE22	1.21	0.88
1:B:189:ARG:NH1	1:B:190:ASN:O	2.07	0.87
1:C:427:ARG:HA	1:C:494:PRO:HG2	1.56	0.87
1:A:59:HIS:HB3	1:A:258:LEU:HB3	1.55	0.87
1:B:662:HIS:O	1:B:673:LYS:HA	1.74	0.86
1:B:799:SER:HB2	1:B:802:GLU:HG3	1.58	0.85
1:A:298:LYS:HG2	1:A:651:ILE:HD11	1.57	0.84
1:A:741:SER:O	1:A:744:THR:OG1	1.95	0.84
2:D:346:PRO:HA	2:D:359:LEU:O	1.76	0.84
1:B:73:PHE:H	1:B:76:ASN:HB3	1.40	0.83
1:A:343:ARG:HB2	1:A:384:TYR:HB3	1.61	0.82
1:A:39:ARG:HE	1:A:210:LEU:HD21	1.44	0.82
1:C:932:GLN:OE1	1:C:936:ASN:ND2	2.14	0.81
1:A:585:ILE:HD11	1:A:653:ILE:HD11	1.60	0.81
1:A:346:ILE:HB	1:A:383:VAL:HG13	1.63	0.80
1:A:960:LEU:HD11	1:A:976:ILE:HG12	1.63	0.80
1:B:562:SER:HA	1:B:572:LEU:O	1.81	0.80
1:B:996:ILE:O	1:B:998:ALA:N	2.15	0.80
1:C:380:PHE:HB2	1:C:511:VAL:HB	1.64	0.80
1:A:522:LYS:HD2	1:A:541:PRO:HD3	1.62	0.80
1:C:87:GLY:HA2	1:C:188:PHE:O	1.83	0.79
1:C:545:ARG:NH1	1:C:546:PHE:O	2.14	0.79
1:A:100:ARG:HH21	1:A:237:THR:HG21	1.48	0.79
1:B:121:SER:O	1:B:170:ASN:ND2	2.16	0.79
1:B:953:PHE:HD2	1:B:982:GLY:HA3	1.48	0.79
1:A:298:LYS:HG3	1:A:587:PRO:HA	1.65	0.79
1:B:77:PHE:HE2	1:B:136:ASN:HD21	1.25	0.79
1:A:278:ASP:HB2	1:A:281:GLN:HB2	1.65	0.79
1:A:662:HIS:O	1:A:673:LYS:HA	1.84	0.78
1:B:956:ILE:HD12	1:B:966:ARG:HH11	1.50	0.77
1:A:883:MET:SD	1:A:900:TYR:OH	2.43	0.77
1:A:712:VAL:HG21	1:A:764:VAL:HG11	1.67	0.76
1:C:347:SER:HA	1:C:510:THR:HB	1.67	0.76
1:C:938:ASN:HB3	1:C:997:ARG:HH22	1.50	0.75
1:C:330:PHE:HB2	1:C:360:THR:HG21	1.68	0.75
1:A:316:ARG:HH21	1:A:517:SER:HB2	1.51	0.74
1:A:753:ILE:O	1:A:757:GLN:NE2	2.20	0.74
1:A:756:GLU:OE1	1:A:759:ARG:NH2	2.20	0.74
1:C:59:HIS:HB2	1:C:189:ARG:HH22	1.52	0.74
1:A:53:LEU:HD13	1:A:292:LYS:HG2	1.70	0.74
1:B:106:SER:HA	1:B:231:ASN:H	1.53	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:23:PHE:H	1:A:136:ASN:HD22	1.34	0.74
1:B:1011:LYS:NZ	1:B:1025:PHE:O	2.21	0.74
1:B:194:PHE:HD1	1:B:224:PRO:HA	1.53	0.74
1:A:753:ILE:HG22	1:A:757:GLN:HE22	1.53	0.73
1:A:95:LYS:NZ	1:A:250:ALA:O	2.20	0.73
1:A:329:VAL:HG22	1:A:498:VAL:HG21	1.71	0.73
1:B:731:GLU:O	1:B:734:ASN:ND2	2.21	0.73
1:C:181:LYS:HA	1:C:205:SER:HB3	1.71	0.73
1:B:140:VAL:HG23	1:B:151:SER:HB3	1.70	0.73
1:A:631:GLN:HA	1:A:636:CYS:HB3	1.70	0.73
1:A:421:VAL:HG22	1:A:499:VAL:HG12	1.71	0.73
1:B:101:GLY:HA2	1:B:118:MET:HA	1.70	0.73
1:B:953:PHE:CD2	1:B:982:GLY:HA3	2.23	0.72
2:G:406:GLU:HG3	2:G:518:ARG:HD3	1.71	0.72
1:A:300:ILE:HG12	1:A:585:ILE:HG12	1.71	0.72
1:A:849:THR:H	1:A:852:MET:HE3	1.54	0.72
1:B:419:GLY:HA2	1:B:502:PHE:HD2	1.51	0.72
2:D:528:ALA:HB2	2:D:574:VAL:HG12	1.72	0.72
1:A:113:GLN:HB3	1:A:227:ILE:HG21	1.72	0.72
1:A:712:VAL:HG12	1:A:1042:GLY:HA2	1.72	0.72
1:C:892:ILE:HD12	1:C:1030:TYR:HB3	1.72	0.71
1:A:84:PHE:H	1:A:231:ASN:HA	1.53	0.71
1:A:550:GLN:O	1:A:564:ARG:NH2	2.18	0.71
1:B:1029:GLY:HA2	1:C:873:ALA:HB1	1.72	0.71
1:A:427:ARG:HA	1:A:494:PRO:HG2	1.70	0.71
2:G:261:CYS:HB2	2:G:488:VAL:HG13	1.70	0.71
1:A:531:ASN:ND2	1:A:566:PRO:HB3	2.05	0.71
1:A:306:PHE:HZ	1:A:608:PRO:HD2	1.56	0.71
1:A:115:VAL:HG21	1:A:225:LEU:HD13	1.73	0.71
1:A:688:ILE:HD11	1:B:878:GLN:HB3	1.70	0.71
2:D:406:GLU:HG3	2:D:518:ARG:HD3	1.71	0.71
1:B:130:ASN:OD1	1:B:159:ASN:ND2	2.15	0.70
2:G:389:PRO:HG2	2:G:392:LEU:HB2	1.73	0.70
2:D:177:ARG:HH12	2:D:473:TRP:HE3	1.40	0.70
2:G:462:MET:HB2	2:G:467:GLU:HB2	1.74	0.70
1:B:353:TYR:HB2	1:B:375:LEU:HB3	1.74	0.70
1:C:316:ARG:HH12	1:C:529:ASN:H	1.37	0.70
1:A:96:SER:HB2	1:A:98:VAL:HG23	1.72	0.70
1:B:952:ASN:ND2	1:B:955:ALA:O	2.24	0.70
1:B:885:MET:HG3	1:B:899:LEU:HD11	1.74	0.70
1:B:895:THR:HG23	1:B:1089:GLN:HE22	1.55	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:985:GLN:HE22	1:C:742:PHE:HE1	1.37	0.70
1:A:952:ASN:HB2	1:A:955:ALA:HB3	1.74	0.70
1:B:437:TYR:O	1:B:440:LYS:NZ	2.25	0.70
2:G:209:VAL:HG11	2:G:565:PRO:HB3	1.73	0.70
1:C:142:LEU:HD12	1:C:147:THR:HB	1.72	0.69
1:A:287:LEU:HD11	1:A:301:TYR:HD2	1.56	0.69
1:A:311:SER:N	1:A:525:CYS:O	2.21	0.69
1:A:398:ILE:HG21	1:A:497:VAL:HG11	1.74	0.69
1:B:127:ARG:NH2	1:B:160:CYS:SG	2.61	0.69
1:C:103:VAL:HG22	1:C:116:ILE:HG22	1.74	0.69
1:A:420:CYS:HB3	1:A:500:LEU:HD12	1.75	0.69
1:C:42:TYR:OH	1:C:189:ARG:NH2	2.26	0.69
1:C:269:GLU:OE1	3:Q:1:NAG:N2	2.26	0.69
1:C:732:CYS:SG	1:C:733:ALA:N	2.66	0.69
2:G:320:LEU:HD13	2:G:380:GLN:HG2	1.74	0.69
1:A:349:CYS:H	1:A:511:VAL:HA	1.58	0.69
1:B:565:ASP:HB3	1:B:568:THR:O	1.93	0.69
1:A:1098:ILE:HG22	1:A:1120:VAL:HG23	1.75	0.69
1:A:714:MET:HB3	1:A:757:GLN:HG2	1.75	0.69
1:B:69:ARG:NH1	1:B:208:SER:OG	2.26	0.69
1:B:269:GLU:OE2	3:P:1:NAG:N2	2.22	0.69
2:D:389:PRO:HG2	2:D:392:LEU:HB2	1.74	0.69
1:A:726:CYS:SG	1:A:729:SER:OG	2.51	0.68
1:C:185:GLU:OE2	1:C:215:ASN:ND2	2.26	0.68
1:B:637:LEU:HD21	1:B:640:ALA:HB3	1.73	0.68
1:A:729:SER:OG	1:A:732:CYS:SG	2.52	0.68
1:B:195:LEU:HD23	1:B:223:LEU:HD12	1.73	0.68
1:B:488:ASN:O	1:B:493:GLN:NE2	2.26	0.68
1:C:1073:PRO:HA	1:C:1103:THR:HG22	1.75	0.68
1:B:113:GLN:NE2	1:B:114:SER:O	2.26	0.68
1:B:352:ASP:OD1	1:B:376:ASN:ND2	2.26	0.68
1:C:546:PHE:CE2	1:C:571:ILE:HG21	2.28	0.68
1:B:897:ASN:OD1	1:B:898:VAL:N	2.27	0.68
1:C:90:PHE:HE1	1:C:92:ALA:HB2	1.58	0.68
1:C:348:ASN:N	1:C:510:THR:O	2.26	0.68
2:D:30:ASP:O	2:D:34:HIS:ND1	2.26	0.68
2:G:503:LEU:HD23	2:G:505:HIS:H	1.58	0.68
1:A:312:LYS:H	1:A:526:VAL:HG12	1.58	0.68
1:B:187:VAL:HG23	1:B:217:LEU:HD12	1.74	0.68
1:A:626:GLY:HA2	1:A:638:ILE:HG23	1.75	0.68
1:B:653:ILE:HD11	1:B:659:ALA:HB2	1.76	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:705:ILE:HG12	1:B:913:ALA:HB1	1.76	0.68
1:A:129:CYS:SG	1:A:160:CYS:N	2.67	0.67
1:C:426:THR:HG21	1:C:496:ARG:HD2	1.76	0.67
1:A:39:ARG:NH2	1:A:211:PRO:O	2.27	0.67
1:B:126:ILE:HB	1:B:164:TYR:HB3	1.76	0.67
1:B:449:LEU:HD11	1:B:455:ASP:HB3	1.77	0.67
1:A:484:PHE:CE1	1:A:494:PRO:HB3	2.29	0.67
1:C:58:ASP:OD1	1:C:59:HIS:N	2.26	0.67
2:D:263:PRO:HB2	2:D:266:LEU:HD23	1.75	0.67
1:B:1074:ARG:NH2	1:B:1103:THR:O	2.27	0.67
1:B:431:ALA:HA	1:B:484:PHE:HB3	1.77	0.67
1:B:604:CYS:SG	1:B:631:GLN:NE2	2.68	0.67
1:A:411:TYR:HA	1:A:449:LEU:HD12	1.77	0.67
1:A:282:ASN:H	1:A:285:ALA:HB3	1.60	0.67
1:C:314:VAL:O	1:C:316:ARG:NH1	2.28	0.67
1:A:441:TYR:HE2	2:D:34:HIS:HB3	1.61	0.66
1:C:977:ASP:OD2	1:C:978:ARG:N	2.28	0.66
1:C:551:GLN:HG3	1:C:564:ARG:HE	1.59	0.66
1:C:633:GLN:OE1	1:C:633:GLN:N	2.24	0.66
1:B:129:CYS:SG	1:B:160:CYS:N	2.68	0.66
1:C:531:ASN:HB2	1:C:566:PRO:HG3	1.78	0.66
1:C:562:SER:OG	1:C:573:ASP:OD1	2.13	0.66
1:C:665:SER:HA	1:C:669:SER:HA	1.77	0.66
1:A:743:CYS:HA	1:A:746:LEU:HB2	1.77	0.66
1:A:1067:GLU:O	1:A:1069:LYS:NZ	2.28	0.66
1:A:682:LEU:HD22	1:B:856:TYR:HE2	1.60	0.66
1:A:663:THR:HA	1:A:673:LYS:HA	1.78	0.66
2:D:320:LEU:HD13	2:D:380:GLN:HG2	1.77	0.66
1:A:414:PRO:HG3	1:A:452:PHE:H	1.61	0.65
1:B:436:ASN:HB2	1:B:484:PHE:HD2	1.60	0.65
1:C:325:PRO:HG2	1:C:344:LYS:HZ3	1.61	0.65
1:C:344:LYS:HB3	1:C:385:ALA:HB3	1.78	0.65
1:C:973:GLU:HA	1:C:976:ILE:HG12	1.78	0.65
1:B:364:THR:HB	1:B:423:ALA:HB3	1.79	0.65
1:C:305:ASN:HA	1:C:581:GLY:HA2	1.77	0.65
1:C:343:ARG:HE	1:C:454:ARG:HH12	1.44	0.65
1:A:464:ASP:OD2	1:A:474:ASN:ND2	2.29	0.65
1:A:414:PRO:HB3	1:A:451:PRO:HB3	1.79	0.65
1:A:142:LEU:HB3	1:A:145:ASN:HB3	1.78	0.65
1:B:1122:ASP:HB3	1:B:1125:GLN:HG2	1.77	0.65
1:C:332:ALA:HB3	1:C:335:PHE:HE1	1.61	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:292:LYS:O	1:C:292:LYS:HG2	1.96	0.65
1:C:79:ASN:HB3	1:C:233:ARG:HH11	1.62	0.65
1:A:759:ARG:HG3	1:A:762:ARG:HH22	1.62	0.64
1:A:115:VAL:HG23	1:A:227:ILE:HD11	1.80	0.64
1:A:343:ARG:HD3	1:A:384:TYR:CG	2.33	0.64
1:B:386:ASP:HB2	1:B:499:VAL:HB	1.79	0.64
1:B:725:ILE:HG21	1:B:736:LEU:HD21	1.80	0.64
1:A:381:SER:HB3	1:A:509:ALA:HA	1.79	0.64
1:C:196:HIS:HE1	1:C:222:LYS:HE2	1.63	0.64
1:C:550:GLN:O	1:C:564:ARG:NH2	2.31	0.64
1:A:336:PRO:HD2	1:A:387:SER:HB2	1.78	0.64
1:C:949:LEU:HB2	1:C:983:ARG:HH22	1.63	0.64
2:D:453:THR:HG21	2:D:516:TYR:HB2	1.80	0.64
1:B:550:GLN:O	1:B:564:ARG:NH2	2.23	0.64
1:C:316:ARG:NH1	1:C:529:ASN:H	1.96	0.64
1:C:367:CYS:HA	1:C:420:CYS:HA	1.80	0.64
1:C:468:CYS:N	1:C:475:CYS:SG	2.67	0.64
1:A:414:PRO:HD2	1:A:417:PHE:HD2	1.62	0.63
1:C:746:LEU:HD13	1:C:987:LEU:HD22	1.80	0.63
1:A:368:TYR:HB2	1:A:400:PRO:HB2	1.80	0.63
1:A:399:ALA:HB3	1:A:402:GLN:HB2	1.81	0.63
1:C:58:ASP:HB3	1:C:60:PHE:CZ	2.34	0.63
1:B:1074:ARG:HG2	1:B:1102:ASN:O	1.99	0.63
1:B:326:PHE:HZ	1:B:383:VAL:HG11	1.64	0.63
1:A:194:PHE:HA	1:A:223:LEU:O	1.99	0.62
1:A:419:GLY:HA3	1:A:500:LEU:O	1.99	0.62
1:A:578:SER:HB2	1:A:601:ASP:HB3	1.79	0.62
1:A:984:LEU:HG	1:A:988:GLN:HE22	1.64	0.62
2:G:482:ARG:HG2	2:G:488:VAL:HG12	1.81	0.62
1:A:850:ASP:OD1	1:A:851:ASP:N	2.32	0.62
1:A:1011:LYS:HD3	1:A:1025:PHE:CE2	2.34	0.62
1:A:95:LYS:HB3	1:A:180:PHE:HA	1.80	0.62
1:A:126:ILE:HB	1:A:164:TYR:HB3	1.81	0.62
1:A:318:PRO:HA	1:A:566:PRO:HB2	1.81	0.62
1:B:759:ARG:NH1	1:B:763:GLU:OE2	2.31	0.62
1:A:131:PHE:HB3	1:A:157:ALA:HA	1.80	0.62
1:A:933:ASP:OD1	1:A:934:VAL:N	2.33	0.62
2:G:557:MET:SD	2:G:569:ALA:HB1	2.39	0.62
1:A:460:PRO:HA	1:A:478:PRO:HD3	1.80	0.62
1:B:553:GLY:HA2	1:C:48:PHE:HB3	1.82	0.62
1:C:353:TYR:HA	1:C:356:LEU:HD12	1.80	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:929:GLY:O	1:C:932:GLN:NE2	2.33	0.62
1:C:956:ILE:N	1:C:975:GLN:OE1	2.25	0.62
1:A:427:ARG:HG3	1:A:493:GLN:HG2	1.80	0.62
1:B:27:THR:OG1	1:B:77:PHE:N	2.32	0.62
1:B:442:ARG:NH2	1:B:457:SER:O	2.33	0.62
1:C:291:VAL:HG13	1:C:293:SER:H	1.65	0.62
1:A:441:TYR:HB3	1:A:482:TYR:CE1	2.35	0.62
1:C:1105:VAL:HG13	1:C:1106:SER:H	1.64	0.62
2:D:459:TRP:HZ2	2:D:473:TRP:HB3	1.65	0.62
1:A:36:SER:HB3	1:A:65:SER:H	1.65	0.62
1:A:389:VAL:HG22	1:A:496:ARG:HG2	1.80	0.62
1:A:409:TYR:HB3	1:A:445:ARG:HB2	1.80	0.62
1:C:1066:HIS:CD2	1:C:1067:GLU:HG2	2.35	0.62
2:G:402:GLU:HG3	2:G:518:ARG:HG3	1.81	0.62
1:B:314:VAL:O	1:B:518:THR:OG1	2.15	0.61
1:A:705:ILE:HG22	1:A:1048:VAL:HA	1.81	0.61
1:C:953:PHE:CD1	1:C:982:GLY:HA3	2.34	0.61
1:A:662:HIS:O	1:A:673:LYS:CA	2.48	0.61
1:B:91:ALA:HB3	1:B:254:PHE:HB2	1.82	0.61
1:C:350:VAL:HG12	1:C:514:PRO:HD2	1.82	0.61
2:D:459:TRP:HB2	2:D:480:MET:HE3	1.82	0.61
1:B:968:ASP:HB3	1:B:971:GLU:HG2	1.82	0.61
2:G:528:ALA:HB2	2:G:574:VAL:HG12	1.81	0.61
1:A:322:ASN:ND2	1:A:348:ASN:O	2.34	0.61
1:C:460:PRO:HA	1:C:477:TRP:HA	1.82	0.61
1:A:288:LYS:HE3	1:A:294:PHE:HA	1.82	0.61
1:A:452:PHE:CD1	1:A:501:SER:HB2	2.36	0.61
1:A:966:ARG:HH22	1:A:975:GLN:HE21	1.49	0.61
1:B:191:LYS:HB3	1:B:196:HIS:CD2	2.36	0.61
1:B:963:ILE:HG23	1:B:975:GLN:HE21	1.65	0.61
2:D:119:ILE:HG23	2:D:179:LEU:HD22	1.82	0.61
2:G:281:LEU:HD12	2:G:282:THR:HG23	1.83	0.61
1:B:59:HIS:ND1	1:B:258:LEU:O	2.28	0.61
1:B:417:PHE:HE2	1:B:501:SER:HA	1.66	0.61
1:C:419:GLY:CA	1:C:500:LEU:O	2.49	0.61
1:A:316:ARG:NH1	1:A:519:ASP:HA	2.15	0.60
1:A:929:GLY:HA2	1:A:932:GLN:HB3	1.82	0.60
1:B:139:PHE:HB2	1:B:237:THR:HB	1.83	0.60
2:G:208:GLU:OE2	2:G:219:ARG:NH1	2.33	0.60
1:A:462:SER:HB2	1:A:475:CYS:HB3	1.83	0.60
2:G:215:TYR:CE2	2:G:568:LEU:HD12	2.37	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:139:PHE:HE1	1:A:235:LEU:HB3	1.65	0.60
1:A:473:PHE:HB3	2:D:79:LEU:HD11	1.82	0.60
1:A:952:ASN:HB3	1:A:958:SER:HA	1.82	0.60
2:G:265:HIS:CD2	2:G:490:PRO:HG2	2.36	0.60
2:G:588:PHE:O	2:G:592:PHE:N	2.34	0.60
1:A:319:ASN:HB2	1:A:567:LYS:HA	1.83	0.60
1:A:95:LYS:HG3	1:A:176:LYS:HB2	1.84	0.60
1:C:51:ASN:HA	1:C:267:TYR:O	2.02	0.60
1:C:722:ASN:O	1:C:727:GLY:N	2.35	0.60
2:G:212:VAL:HG11	2:G:215:TYR:HB2	1.82	0.60
1:A:114:SER:HB2	1:A:131:PHE:CZ	2.36	0.60
1:A:603:ASN:O	1:A:606:ASP:N	2.30	0.60
1:B:84:PHE:H	1:B:231:ASN:HA	1.66	0.60
1:C:311:SER:HB2	1:C:526:VAL:HG12	1.82	0.60
1:B:99:ILE:HG12	1:B:236:LEU:HB3	1.83	0.60
1:C:324:CYS:HB2	1:C:326:PHE:CE1	2.37	0.60
1:B:307:ARG:NH1	1:B:308:VAL:H	1.99	0.60
1:C:420:CYS:O	1:C:499:VAL:HA	2.01	0.60
1:B:441:TYR:HE2	1:B:443:SER:HB3	1.67	0.60
1:B:1097:ILE:O	1:B:1102:ASN:ND2	2.34	0.60
1:B:58:ASP:HB3	1:B:60:PHE:CE1	2.37	0.60
1:B:97:ASN:HD22	1:B:171:LEU:HD11	1.66	0.60
2:D:50:TYR:HA	2:D:58:ASN:HB3	1.82	0.60
1:C:175:GLU:OE2	1:C:249:SER:OG	2.19	0.59
1:B:745:GLN:OE1	1:B:748:ARG:NH2	2.35	0.59
3:H:2:NAG:H3	3:H:2:NAG:H83	1.84	0.59
1:A:325:PRO:HD2	1:A:346:ILE:HG23	1.84	0.59
1:A:530:PHE:HD1	1:A:566:PRO:HD2	1.67	0.59
1:B:946:VAL:O	1:B:949:LEU:HB3	2.01	0.59
2:G:207:TYR:CE1	2:G:397:ASN:HB2	2.37	0.59
1:B:1098:ILE:HA	1:B:1102:ASN:HD22	1.67	0.59
1:C:87:GLY:CA	1:C:188:PHE:O	2.49	0.59
1:C:129:CYS:HB3	1:C:131:PHE:CE1	2.37	0.59
1:C:343:ARG:NE	1:C:454:ARG:HH12	2.00	0.59
1:C:1011:LYS:NZ	1:C:1025:PHE:O	2.35	0.59
2:D:174:LYS:HG2	2:D:496:THR:HG22	1.84	0.59
1:B:427:ARG:HD3	1:B:486:ILE:HA	1.83	0.59
1:C:386:ASP:O	1:C:498:VAL:HA	2.02	0.59
1:C:1055:GLU:OE1	1:C:1055:GLU:N	2.34	0.59
1:A:547:GLN:HB2	1:A:550:GLN:HB2	1.84	0.59
1:B:83:PRO:HB2	1:B:85:LYS:HE3	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:392:GLY:N	1:B:491:GLY:O	2.36	0.59
1:C:962:ASP:O	1:C:966:ARG:N	2.36	0.59
1:B:972:ALA:HA	1:B:975:GLN:NE2	2.18	0.59
1:C:79:ASN:O	1:C:233:ARG:NH1	2.36	0.59
2:D:252:TYR:HB3	2:D:255:TYR:HD2	1.67	0.59
1:C:100:ARG:HH21	1:C:237:THR:HG21	1.67	0.58
1:C:123:ASN:HD21	5:C:1309:NAG:H5	1.67	0.58
1:C:988:GLN:O	1:C:992:THR:HG23	2.03	0.58
2:D:125:THR:O	2:D:129:THR:OG1	2.17	0.58
2:D:480:MET:HA	2:D:483:GLU:HB3	1.85	0.58
2:G:482:ARG:NH2	2:G:613:TYR:OH	2.34	0.58
1:A:439:TYR:HB2	1:A:484:PHE:HE2	1.68	0.58
2:D:37:GLU:OE1	2:D:393:ARG:NH1	2.35	0.58
1:A:215:ASN:OD1	1:A:216:ALA:N	2.36	0.58
1:B:34:PHE:HE2	1:B:69:ARG:HD2	1.67	0.58
1:B:442:ARG:NH1	1:B:455:ASP:HB2	2.18	0.58
2:D:459:TRP:CD1	2:D:480:MET:HE1	2.39	0.58
1:A:542:SER:HB3	1:A:571:ILE:HG13	1.85	0.58
1:C:32:THR:HG23	1:C:69:ARG:HB3	1.85	0.58
1:C:370:VAL:HG13	1:C:418:THR:HB	1.84	0.58
1:C:948:GLN:O	1:C:951:SER:OG	2.21	0.58
2:G:216:ASP:OD1	2:G:217:TYR:N	2.36	0.58
1:B:796:THR:HG23	1:B:798:ARG:H	1.69	0.58
1:C:264:MET:O	1:C:276:ALA:HA	2.04	0.58
1:C:962:ASP:HA	1:C:966:ARG:HH11	1.68	0.58
2:D:169:ARG:NH2	2:D:270:MET:O	2.35	0.58
1:A:49:ARG:HB2	1:A:267:TYR:CD1	2.38	0.58
1:C:1066:HIS:CE1	1:C:1119:THR:HG23	2.39	0.58
2:D:177:ARG:CD	2:D:498:CYS:HB2	2.34	0.58
2:D:233:ILE:HD11	2:D:581:VAL:HG21	1.86	0.58
1:A:122:THR:O	1:A:168:ASP:HA	2.03	0.58
1:B:849:THR:HG22	1:B:852:MET:CE	2.33	0.58
2:D:347:THR:HG1	2:D:349:TRP:HE1	1.51	0.58
2:G:233:ILE:HD11	2:G:581:VAL:HG21	1.85	0.58
1:A:42:TYR:HA	1:A:217:LEU:H	1.68	0.58
1:A:953:PHE:HD2	1:A:982:GLY:HA3	1.68	0.58
1:B:918:GLN:O	1:B:922:THR:OG1	2.12	0.58
1:A:1077:VAL:HG23	1:A:1090:ARG:NH1	2.19	0.58
1:B:391:LYS:HB3	1:B:482:TYR:CE2	2.39	0.58
1:C:387:SER:HA	1:C:498:VAL:HG22	1.86	0.58
1:C:742:PHE:O	1:C:745:GLN:HG2	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:954:GLY:O	1:C:978:ARG:NH2	2.29	0.58
2:D:588:PHE:O	2:D:592:PHE:N	2.34	0.58
1:A:528:PHE:O	1:A:534:THR:HA	2.03	0.58
1:A:568:THR:O	1:A:570:GLU:N	2.35	0.58
1:B:106:SER:OG	1:B:230:THR:N	2.35	0.58
1:A:316:ARG:NH2	1:A:517:SER:HB2	2.18	0.57
1:C:437:TYR:OH	2:G:42:GLN:OE1	2.19	0.57
2:D:184:VAL:HG12	2:D:464:PHE:HE1	1.69	0.57
1:A:42:TYR:OH	1:A:59:HIS:O	2.21	0.57
1:A:103:VAL:HG22	1:A:116:ILE:HG12	1.87	0.57
1:C:709:VAL:HG22	1:C:1044:VAL:HG22	1.85	0.57
2:G:403:ALA:O	2:G:407:ILE:HG12	2.04	0.57
1:B:338:VAL:HA	1:B:388:PHE:HB2	1.86	0.57
2:G:453:THR:HG21	2:G:516:TYR:HB2	1.85	0.57
1:A:440:LYS:HE3	1:A:479:LEU:HD12	1.87	0.57
2:G:237:TYR:OH	2:G:485:VAL:O	2.15	0.57
1:B:181:LYS:HA	1:B:204:ILE:H	1.70	0.57
1:A:115:VAL:HG22	1:A:128:ALA:HB2	1.85	0.57
1:A:367:CYS:SG	1:A:372:ALA:N	2.78	0.57
1:B:129:CYS:SG	1:B:157:ALA:HB1	2.45	0.57
2:D:307:ILE:HG23	2:D:369:PHE:HD1	1.70	0.57
2:D:352:GLY:H	2:D:356:PHE:HE1	1.53	0.57
1:A:988:GLN:HA	1:A:991:VAL:HG12	1.86	0.57
1:B:380:PHE:N	1:B:511:VAL:O	2.19	0.57
1:B:391:LYS:NZ	1:B:394:ASP:OD2	2.38	0.57
1:B:849:THR:HG23	1:B:851:ASP:H	1.70	0.57
1:C:442:ARG:HG3	1:C:478:PRO:HB2	1.86	0.57
1:C:521:ILE:HG21	1:C:526:VAL:HG21	1.86	0.57
1:A:391:LYS:O	1:A:395:VAL:N	2.36	0.57
1:C:325:PRO:HD2	1:C:346:ILE:HG23	1.86	0.57
1:C:581:GLY:H	1:C:600:GLN:HG2	1.69	0.57
1:A:716:LYS:HG2	1:A:844:LEU:HB2	1.87	0.56
1:B:649:CYS:HB2	1:B:680:MET:HG3	1.85	0.56
1:B:838:PHE:HB2	1:B:841:LEU:HD12	1.87	0.56
2:D:281:LEU:HD12	2:D:282:THR:HG23	1.87	0.56
1:C:122:THR:O	1:C:169:PHE:N	2.35	0.56
1:C:412:LYS:HG3	1:C:414:PRO:HD3	1.86	0.56
1:C:648:GLU:O	1:C:678:TYR:OH	2.16	0.56
1:C:733:ALA:HA	1:C:736:LEU:HB3	1.87	0.56
1:A:391:LYS:HB3	1:A:482:TYR:HE2	1.69	0.56
1:A:763:GLU:OE1	1:A:767:GLN:NE2	2.37	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:369:GLY:HA3	1:B:418:THR:HG23	1.87	0.56
1:B:889:PHE:CD2	1:B:899:LEU:HD12	2.40	0.56
1:C:69:ARG:NH2	1:C:208:SER:O	2.38	0.56
2:G:416:LYS:HB3	2:G:543:ASP:HB2	1.88	0.56
1:B:412:LYS:HZ3	1:B:413:LEU:H	1.52	0.56
1:C:419:GLY:HA2	1:C:500:LEU:O	2.06	0.56
1:C:1074:ARG:NH1	1:C:1101:ASP:O	2.39	0.56
2:D:238:GLU:HA	2:D:606:TRP:HZ3	1.69	0.56
2:G:307:ILE:HG23	2:G:369:PHE:HD1	1.71	0.56
1:A:182:ASP:OD1	1:A:201:TYR:OH	2.23	0.56
1:A:640:ALA:HB2	1:A:675:ILE:HG23	1.88	0.56
1:A:743:CYS:HA	1:A:746:LEU:HD12	1.88	0.56
1:B:390:VAL:HG22	1:B:497:VAL:HG21	1.87	0.56
1:B:895:THR:HG23	1:B:1089:GLN:NE2	2.19	0.56
1:A:132:GLU:HB3	1:A:155:ASN:HB3	1.88	0.56
1:A:441:TYR:CE2	2:D:34:HIS:HB3	2.41	0.56
1:B:392:GLY:HA3	1:B:491:GLY:HA2	1.86	0.56
2:D:261:CYS:HB2	2:D:488:VAL:HG13	1.87	0.56
1:A:83:PRO:HB2	1:A:85:LYS:HE3	1.88	0.56
1:B:662:HIS:O	1:B:673:LYS:CA	2.52	0.56
1:B:945:LEU:HD21	1:B:990:TYR:HB2	1.88	0.56
1:B:976:ILE:O	1:B:980:ILE:HD12	2.05	0.56
1:B:1062:PRO:HB3	1:C:900:TYR:CZ	2.41	0.56
1:C:54:HIS:HE2	1:C:56:VAL:HB	1.71	0.56
1:A:386:ASP:HB2	1:A:499:VAL:HG22	1.88	0.56
1:A:561:ASP:OD1	1:A:562:SER:N	2.39	0.56
1:C:187:VAL:O	1:C:197:VAL:HA	2.06	0.56
1:C:191:LYS:HB3	1:C:196:HIS:CD2	2.40	0.56
1:A:106:SER:HB3	1:A:112:SER:OG	2.05	0.56
1:A:349:CYS:O	1:A:512:CYS:N	2.39	0.56
1:A:698:PRO:HD3	1:B:877:LEU:HD22	1.88	0.56
1:C:71:ILE:HG22	1:C:73:PHE:H	1.71	0.56
1:A:94:GLU:HA	1:A:180:PHE:HB2	1.88	0.55
1:B:722:ASN:OD1	1:B:723:MET:N	2.37	0.55
2:D:278:LEU:O	2:D:282:THR:N	2.39	0.55
1:A:340:ALA:HB1	1:A:456:ILE:HD12	1.88	0.55
1:B:216:ALA:HB1	1:B:273:ILE:HD12	1.89	0.55
1:C:77:PHE:CG	1:C:246:TRP:HZ2	2.24	0.55
1:C:352:ASP:OD1	1:C:376:ASN:ND2	2.39	0.55
2:D:478:TRP:NE1	2:D:499:ASP:OD2	2.37	0.55
2:G:381:TYR:HD1	2:G:558:LEU:HD12	1.70	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:534:LYS:HD2	2:G:534:LYS:O	2.06	0.55
1:A:682:LEU:HD21	1:B:852:MET:HG2	1.87	0.55
1:C:124:LEU:HB3	1:C:166:SER:HB3	1.87	0.55
1:A:143:LYS:HG2	1:A:241:PRO:HG3	1.88	0.55
1:B:53:LEU:HB3	1:B:264:MET:CE	2.37	0.55
1:B:972:ALA:HA	1:B:975:GLN:HE22	1.71	0.55
1:C:51:ASN:CA	1:C:267:TYR:O	2.55	0.55
1:A:564:ARG:HD3	1:A:569:SER:HB3	1.88	0.55
1:B:37:SER:H	1:B:64:ASP:H	1.53	0.55
1:C:67:VAL:HG21	1:C:254:PHE:HB3	1.89	0.55
2:D:459:TRP:HB2	2:D:480:MET:CE	2.37	0.55
1:A:787:GLN:NE2	1:A:918:GLN:OE1	2.40	0.55
1:A:900:TYR:CZ	1:C:1062:PRO:HB3	2.41	0.55
2:D:54:ILE:HG13	2:D:342:ALA:HA	1.89	0.55
2:G:152:MET:O	2:G:161:ARG:NH2	2.40	0.55
1:A:20:CYS:HB2	1:A:152:TYR:HD2	1.72	0.55
1:A:101:GLY:HA3	1:A:235:LEU:HD12	1.88	0.55
2:G:378:HIS:HE1	2:G:402:GLU:HA	1.70	0.55
1:A:708:GLU:OE2	1:A:1011:LYS:NZ	2.38	0.55
1:C:139:PHE:O	1:C:238:ALA:N	2.33	0.55
2:D:241:HIS:HA	2:D:244:VAL:HG22	1.87	0.55
1:A:322:ASN:ND2	1:A:348:ASN:HD22	2.05	0.55
1:A:682:LEU:HD11	1:B:852:MET:HG3	1.88	0.55
1:A:1099:THR:OG1	1:A:1101:ASP:OD1	2.17	0.55
1:B:49:ARG:HH12	1:B:54:HIS:CE1	2.25	0.55
1:B:181:LYS:O	1:B:203:PRO:HA	2.07	0.55
1:C:899:LEU:HD12	1:C:906:ILE:HD12	1.89	0.55
2:G:387:ALA:HB3	2:G:559:ARG:HH21	1.70	0.55
1:A:202:GLN:OE1	1:A:215:ASN:ND2	2.39	0.54
1:A:372:ALA:HB2	1:A:420:CYS:SG	2.46	0.54
1:B:325:PRO:HG2	1:B:346:ILE:HD12	1.89	0.54
1:C:36:SER:N	1:C:65:SER:O	2.39	0.54
2:D:378:HIS:HE1	2:D:402:GLU:HA	1.71	0.54
2:G:51:ASN:HB3	2:G:359:LEU:CD1	2.37	0.54
1:B:568:THR:O	1:B:570:GLU:N	2.38	0.54
1:C:339:TYR:HD2	1:C:456:ILE:HA	1.72	0.54
1:C:431:ALA:HB2	1:C:494:PRO:HG3	1.88	0.54
2:G:30:ASP:O	2:G:34:HIS:ND1	2.41	0.54
2:G:360:MET:HE3	2:G:372:ALA:HA	1.89	0.54
1:C:106:SER:O	1:C:231:ASN:ND2	2.37	0.54
1:C:127:ARG:NH2	1:C:160:CYS:SG	2.79	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:729:SER:OG	1:C:732:CYS:HB3	2.07	0.54
1:C:732:CYS:C	1:C:734:ASN:H	2.11	0.54
2:D:123:MET:HA	2:D:126:ILE:HG12	1.88	0.54
2:D:169:ARG:NH1	2:D:270:MET:SD	2.70	0.54
2:D:180:TYR:HA	2:D:183:TYR:HB3	1.90	0.54
2:D:482:ARG:HG2	2:D:488:VAL:HG12	1.88	0.54
1:A:317:PHE:CD2	1:A:515:LYS:HB2	2.42	0.54
1:A:404:GLY:H	1:A:407:ALA:HB3	1.71	0.54
1:A:562:SER:HA	1:A:572:LEU:O	2.07	0.54
1:A:565:ASP:HB3	1:A:568:THR:O	2.07	0.54
1:B:34:PHE:CE2	1:B:69:ARG:HD2	2.42	0.54
1:B:352:ASP:HB3	1:B:355:VAL:HG22	1.89	0.54
1:C:362:PHE:HB2	1:C:365:PHE:HB2	1.90	0.54
2:G:75:GLU:O	2:G:78:THR:OG1	2.23	0.54
1:A:100:ARG:HD2	1:A:120:ASN:HB3	1.89	0.54
1:B:379:CYS:HB3	1:B:509:ALA:CB	2.38	0.54
1:B:485:TYR:H	1:B:488:ASN:ND2	2.06	0.54
1:A:287:LEU:HD11	1:A:301:TYR:CD2	2.41	0.54
1:A:662:HIS:O	1:A:673:LYS:C	2.46	0.54
1:A:993:GLN:HE22	1:A:997:ARG:NH1	2.05	0.54
1:B:333:THR:O	1:B:496:ARG:NH2	2.40	0.54
1:C:117:ILE:HG13	1:C:126:ILE:HG23	1.90	0.54
1:A:957:SER:HB3	1:A:963:ILE:HG13	1.88	0.54
1:B:757:GLN:HE22	1:B:1001:ILE:HG21	1.72	0.54
1:C:59:HIS:HB2	1:C:189:ARG:HH12	1.72	0.54
1:C:116:ILE:HB	1:C:118:MET:HE3	1.88	0.54
1:B:116:ILE:HG13	1:B:131:PHE:CE2	2.43	0.54
1:B:345:ARG:HG3	1:B:382:ASN:OD1	2.08	0.54
1:C:72:THR:HG21	1:C:236:LEU:HG	1.90	0.54
2:G:108:LEU:HB2	2:G:113:SER:HB3	1.90	0.54
1:A:317:PHE:HE1	1:A:532:GLY:HA2	1.73	0.54
1:A:441:TYR:CE1	1:A:482:TYR:HA	2.43	0.54
1:A:449:LEU:HD21	1:A:455:ASP:HB3	1.89	0.54
1:A:57:GLN:HB2	1:A:262:THR:HG22	1.88	0.54
1:A:183:LEU:HB3	1:A:202:GLN:HB2	1.90	0.54
1:B:198:TYR:HA	1:B:219:PRO:HA	1.89	0.54
2:D:40:PHE:HB2	2:D:69:TRP:CZ3	2.43	0.54
1:A:804:LEU:HD11	1:A:922:THR:HA	1.90	0.53
1:A:993:GLN:HE22	1:A:997:ARG:HH11	1.55	0.53
1:B:49:ARG:HH21	1:B:267:TYR:HE2	1.54	0.53
1:B:51:ASN:N	1:B:267:TYR:O	2.41	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:442:ARG:HG3	1:B:478:PRO:HB2	1.89	0.53
1:A:36:SER:HB3	1:A:65:SER:N	2.23	0.53
1:A:129:CYS:HB3	1:A:131:PHE:HD2	1.73	0.53
1:B:98:VAL:HG12	1:B:236:LEU:HB2	1.91	0.53
1:A:94:GLU:OE1	1:A:99:ILE:HG13	2.08	0.53
1:A:555:ASP:CG	1:A:556:VAL:H	2.11	0.53
1:A:696:ALA:HB2	1:B:878:GLN:HG2	1.90	0.53
1:B:72:THR:OG1	1:B:77:PHE:HA	2.09	0.53
1:B:130:ASN:O	1:B:157:ALA:HA	2.09	0.53
1:B:181:LYS:HG2	1:B:203:PRO:HB3	1.91	0.53
1:C:121:SER:HB3	5:C:1309:NAG:H82	1.90	0.53
1:A:556:VAL:HG22	1:B:52:VAL:HG11	1.91	0.53
1:A:852:MET:SD	1:C:682:LEU:HD21	2.48	0.53
2:G:573:VAL:HG12	2:G:574:VAL:HG13	1.90	0.53
1:B:941:ALA:O	1:B:944:THR:OG1	2.16	0.53
1:C:71:ILE:HB	1:C:76:ASN:HD21	1.74	0.53
1:A:72:THR:HG21	1:A:236:LEU:HD23	1.89	0.53
2:G:346:PRO:HA	2:G:359:LEU:O	2.09	0.53
1:A:597:VAL:O	1:A:598:LEU:HD22	2.09	0.53
1:B:59:HIS:CE1	1:B:260:PRO:HD3	2.44	0.53
1:B:547:GLN:HG2	1:B:549:PHE:CE1	2.44	0.53
1:B:307:ARG:NH2	1:B:308:VAL:O	2.42	0.53
1:B:408:ASP:HB3	1:B:448:LYS:HD3	1.89	0.53
1:C:587:PRO:HG3	1:C:661:TYR:CD1	2.43	0.53
1:A:956:ILE:H	1:A:975:GLN:NE2	2.00	0.53
1:C:128:ALA:HB3	1:C:162:PHE:HB3	1.90	0.53
1:C:367:CYS:SG	1:C:372:ALA:HA	2.49	0.53
1:C:546:PHE:HE2	1:C:571:ILE:HG21	1.73	0.53
2:D:351:LEU:HB2	2:D:355:ASP:O	2.09	0.53
2:D:403:ALA:O	2:D:407:ILE:HG12	2.09	0.53
1:B:72:THR:HB	1:B:78:ASP:OD1	2.09	0.52
1:C:94:GLU:O	1:C:182:ASP:HB2	2.09	0.52
2:D:402:GLU:HG3	2:D:518:ARG:HG3	1.91	0.52
1:A:397:GLN:HB3	1:A:404:GLY:HA3	1.91	0.52
1:B:296:ILE:H	1:B:589:THR:HG22	1.74	0.52
1:B:302:GLN:HE22	1:B:582:VAL:N	2.07	0.52
1:B:648:GLU:O	1:B:678:TYR:OH	2.23	0.52
1:B:972:ALA:O	1:B:976:ILE:HG13	2.10	0.52
1:C:129:CYS:HB3	1:C:131:PHE:CZ	2.45	0.52
1:B:184:ARG:HG2	1:B:201:TYR:CD1	2.44	0.52
1:B:390:VAL:HB	1:B:394:ASP:HB2	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:392:GLY:HA2	1:B:395:VAL:HG13	1.91	0.52
1:B:485:TYR:HD2	1:B:488:ASN:HD21	1.57	0.52
1:B:952:ASN:OD1	1:B:953:PHE:N	2.43	0.52
2:G:108:LEU:HD11	2:G:190:MET:HB2	1.91	0.52
1:A:174:GLY:HA2	1:A:239:PHE:HE2	1.75	0.52
1:B:210:LEU:HD12	1:B:211:PRO:HD2	1.90	0.52
1:B:322:ASN:O	1:B:350:VAL:N	2.40	0.52
1:B:600:GLN:HG2	1:C:844:LEU:HD11	1.92	0.52
2:G:374:HIS:CE1	2:G:406:GLU:HG2	2.44	0.52
1:A:586:THR:HG22	1:A:587:PRO:O	2.10	0.52
1:B:23:PHE:CD2	1:B:246:TRP:HB3	2.44	0.52
1:B:379:CYS:HA	1:B:512:CYS:HA	1.92	0.52
1:B:750:LEU:HA	1:B:753:ILE:HD12	1.91	0.52
1:C:322:ASN:HB2	1:C:348:ASN:O	2.09	0.52
1:A:105:GLY:H	1:A:108:MET:HE1	1.73	0.52
1:A:932:GLN:O	1:A:935:VAL:HG12	2.09	0.52
1:B:742:PHE:O	1:B:746:LEU:HG	2.10	0.52
1:B:947:LYS:HD3	1:B:947:LYS:N	2.24	0.52
1:A:139:PHE:CE1	1:A:235:LEU:HB3	2.44	0.52
1:B:314:VAL:HG22	1:B:521:ILE:HD12	1.92	0.52
1:C:778:LYS:HG2	1:C:789:LEU:HD23	1.90	0.52
1:C:912:LYS:NZ	1:C:916:GLN:OE1	2.43	0.52
1:C:930:LYS:HA	1:C:933:ASP:OD2	2.10	0.52
2:G:358:ILE:HD12	2:G:376:MET:HE1	1.92	0.52
1:A:295:GLU:OE2	1:A:589:THR:OG1	2.28	0.52
1:A:377:ASP:O	1:A:515:LYS:HD3	2.10	0.52
1:A:853:ILE:HA	1:A:856:TYR:HD1	1.74	0.52
1:B:27:THR:OG1	1:B:76:ASN:OD1	2.16	0.52
1:B:314:VAL:HG13	1:B:520:LEU:HA	1.92	0.52
1:B:315:VAL:HG12	1:B:517:SER:HA	1.91	0.52
2:D:19:SER:N	2:D:23:GLU:OE1	2.43	0.52
2:G:241:HIS:NE2	2:G:486:GLY:O	2.42	0.52
1:A:83:PRO:O	1:A:85:LYS:NZ	2.40	0.52
1:A:196:HIS:HB3	1:A:222:LYS:HZ1	1.75	0.52
1:A:392:GLY:HA2	1:A:395:VAL:HB	1.90	0.52
1:C:342:GLU:O	1:C:386:ASP:HA	2.10	0.52
1:C:484:PHE:CE2	1:C:494:PRO:HB3	2.45	0.52
2:D:177:ARG:HD3	2:D:497:TYR:O	2.09	0.52
2:D:482:ARG:NH2	2:D:613:TYR:OH	2.35	0.52
2:G:252:TYR:HB3	2:G:255:TYR:HD2	1.73	0.52
2:G:276:THR:O	2:G:279:TYR:HD1	1.93	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:440:LYS:HG2	1:A:481:ASP:HA	1.90	0.52
1:B:99:ILE:HD13	1:B:234:THR:HB	1.91	0.52
1:B:304:SER:HB2	1:B:582:VAL:HB	1.92	0.52
1:B:788:ILE:O	1:B:799:SER:OG	2.18	0.52
1:B:1090:ARG:NH2	1:C:887:TYR:HB2	2.25	0.52
1:C:341:TRP:CE2	1:C:454:ARG:HG2	2.45	0.52
1:C:787:GLN:OE1	4:S:1:NAG:H62	2.10	0.52
1:A:317:PHE:CE2	1:A:515:LYS:HB2	2.45	0.51
1:A:382:ASN:HB2	1:A:503:GLU:HB2	1.91	0.51
1:A:1080:PHE:HB2	1:A:1085:TRP:CD2	2.46	0.51
1:B:96:SER:HB2	1:B:98:VAL:HG22	1.92	0.51
1:C:285:ALA:HA	1:C:288:LYS:HD2	1.91	0.51
1:C:380:PHE:HE2	1:C:502:PHE:CE1	2.28	0.51
2:D:358:ILE:HG13	2:D:379:ILE:HG13	1.93	0.51
1:B:982:GLY:O	1:B:985:GLN:HG3	2.10	0.51
2:G:294:THR:HG23	2:G:365:THR:HA	1.92	0.51
1:A:240:PRO:HA	1:A:246:TRP:HA	1.92	0.51
1:B:305:ASN:ND2	1:C:720:ASP:OD1	2.43	0.51
2:G:351:LEU:HB2	2:G:355:ASP:O	2.10	0.51
1:A:122:THR:O	1:A:124:LEU:N	2.41	0.51
1:A:439:TYR:HB2	1:A:484:PHE:CE2	2.45	0.51
1:A:728:ASP:OD2	1:C:307:ARG:NH2	2.44	0.51
1:A:918:GLN:O	1:A:922:THR:OG1	2.10	0.51
1:A:1101:ASP:OD1	1:A:1102:ASN:N	2.44	0.51
1:B:394:ASP:HA	1:B:397:GLN:HG3	1.91	0.51
1:B:756:GLU:OE2	1:B:1002:ARG:HD2	2.10	0.51
1:C:138:PHE:O	1:C:151:SER:OG	2.20	0.51
1:C:314:VAL:HG23	1:C:316:ARG:NH1	2.25	0.51
2:D:75:GLU:O	2:D:78:THR:OG1	2.25	0.51
1:A:381:SER:OG	1:A:505:LEU:HA	2.11	0.51
1:A:562:SER:OG	1:A:573:ASP:OD1	2.29	0.51
1:B:261:THR:HG22	1:B:262:THR:H	1.75	0.51
1:B:422:LEU:HD13	1:B:500:LEU:HD13	1.92	0.51
1:C:555:ASP:OD1	1:C:561:ASP:HB2	2.10	0.51
1:C:942:LEU:O	1:C:946:VAL:HG12	2.10	0.51
2:G:360:MET:HE1	2:G:375:GLU:HB2	1.92	0.51
1:A:102:TRP:HE3	1:A:117:ILE:HD13	1.76	0.51
1:B:315:VAL:HG22	1:B:529:ASN:HD22	1.76	0.51
1:B:719:VAL:HG22	1:B:841:LEU:HD23	1.93	0.51
1:B:758:ASP:O	1:B:761:THR:OG1	2.25	0.51
1:C:1062:PRO:HD2	1:C:1114:GLY:O	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:32:THR:HB	1:B:69:ARG:HB3	1.92	0.51
1:B:181:LYS:O	1:B:183:LEU:N	2.44	0.51
1:B:885:MET:CG	1:B:899:LEU:HD11	2.40	0.51
1:C:324:CYS:HB3	1:C:346:ILE:HG21	1.93	0.51
1:C:352:ASP:HA	1:C:376:ASN:HB3	1.92	0.51
2:D:557:MET:HG2	2:D:569:ALA:HB1	1.93	0.51
1:A:367:CYS:HA	1:A:420:CYS:HA	1.93	0.51
1:A:503:GLU:O	1:A:505:LEU:N	2.40	0.51
1:C:54:HIS:NE2	1:C:56:VAL:HB	2.25	0.51
2:D:241:HIS:O	2:D:245:ARG:HG3	2.11	0.51
1:A:664:VAL:HG21	1:A:667:LEU:HG	1.93	0.51
1:B:370:VAL:HA	1:C:966:ARG:O	2.11	0.51
1:B:402:GLN:NE2	1:B:403:THR:O	2.43	0.51
1:B:539:LEU:HD12	1:B:572:LEU:HB3	1.93	0.51
1:C:703:ILE:HG13	1:C:906:ILE:HG23	1.92	0.51
2:D:245:ARG:HA	2:D:262:LEU:HD21	1.92	0.51
1:A:132:GLU:O	1:A:155:ASN:N	2.41	0.51
1:A:314:VAL:HB	1:A:528:PHE:HA	1.93	0.51
1:C:141:VAL:HG13	1:C:173:LEU:HD12	1.93	0.51
1:C:1026:CYS:HB2	1:C:1047:HIS:CE1	2.45	0.51
2:G:207:TYR:HE1	2:G:398:GLU:HG2	1.76	0.51
2:G:223:ILE:HG12	2:G:461:TRP:CZ3	2.46	0.51
1:A:50:SER:O	1:A:52:VAL:HG23	2.10	0.50
1:A:187:VAL:HG11	1:A:189:ARG:NH2	2.26	0.50
1:A:336:PRO:HG2	1:A:342:GLU:HB3	1.93	0.50
1:C:444:LEU:HD11	2:G:27:THR:HG23	1.93	0.50
1:C:565:ASP:HB3	1:C:568:THR:O	2.11	0.50
1:C:730:THR:O	1:C:734:ASN:ND2	2.44	0.50
1:A:129:CYS:HA	1:A:160:CYS:HA	1.93	0.50
1:B:314:VAL:HG12	1:B:316:ARG:HG2	1.92	0.50
1:B:662:HIS:CE1	1:B:664:VAL:HG22	2.46	0.50
1:B:744:THR:HB	1:B:748:ARG:HH12	1.76	0.50
1:C:991:VAL:O	1:C:995:LEU:HD23	2.11	0.50
1:A:599:TYR:HB2	1:A:602:VAL:CG2	2.41	0.50
1:B:76:ASN:O	1:B:248:THR:OG1	2.27	0.50
2:D:438:PHE:HA	2:D:441:LYS:HG2	1.93	0.50
1:A:121:SER:HB3	1:A:173:LEU:HD11	1.94	0.50
1:B:105:GLY:HA2	1:B:114:SER:OG	2.11	0.50
1:C:492:TYR:CD2	2:G:353:LYS:HG2	2.47	0.50
1:A:116:ILE:HD11	1:A:131:PHE:CZ	2.46	0.50
1:A:124:LEU:HG	1:A:166:SER:HB3	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:193:GLY:HA3	1:C:226:GLY:HA2	1.94	0.50
2:D:51:ASN:O	2:D:342:ALA:HB1	2.11	0.50
2:D:177:ARG:HD3	2:D:498:CYS:HB2	1.92	0.50
1:A:104:PHE:HB3	1:A:229:ILE:HG21	1.94	0.50
1:A:1019:GLN:HE21	1:A:1032:LEU:HA	1.76	0.50
1:B:648:GLU:OE1	1:B:648:GLU:N	2.41	0.50
1:B:952:ASN:C	1:B:953:PHE:HD1	2.15	0.50
2:D:209:VAL:HG23	2:D:216:ASP:HA	1.93	0.50
2:D:503:LEU:HD23	2:D:505:HIS:H	1.76	0.50
2:G:243:TYR:HA	2:G:599:ASN:HD21	1.75	0.50
1:A:70:PHE:HB2	1:A:253:TYR:CE2	2.47	0.50
1:A:326:PHE:HZ	1:A:500:LEU:HD21	1.77	0.50
1:A:522:LYS:HZ3	1:A:539:LEU:HB3	1.76	0.50
1:A:903:GLN:HA	1:A:906:ILE:HG22	1.94	0.50
1:B:220:ILE:HD12	1:B:221:PHE:HD2	1.77	0.50
1:C:1007:LEU:O	1:C:1011:LYS:HG2	2.12	0.50
1:C:1059:THR:HG23	1:C:1080:PHE:HB3	1.92	0.50
1:A:592:SER:OG	1:A:593:SER:N	2.44	0.50
1:B:51:ASN:CA	1:B:267:TYR:O	2.60	0.50
1:B:330:PHE:CE1	1:B:498:VAL:HG21	2.47	0.50
1:B:412:LYS:NZ	1:B:413:LEU:H	2.09	0.50
1:B:714:MET:H	1:B:757:GLN:NE2	2.10	0.50
1:C:215:ASN:OD1	1:C:216:ALA:N	2.45	0.50
1:C:713:SER:O	1:C:1041:HIS:HB3	2.11	0.50
1:C:949:LEU:HB2	1:C:983:ARG:NH2	2.26	0.50
1:B:39:ARG:HH21	1:B:211:PRO:HG2	1.76	0.50
1:B:870:THR:O	1:B:873:ALA:N	2.45	0.50
1:C:59:HIS:CE1	1:C:86:ASP:HB2	2.47	0.50
1:C:188:PHE:HB3	1:C:195:LEU:HD11	1.94	0.50
1:C:739:TYR:HB3	1:C:742:PHE:CE2	2.46	0.50
2:G:184:VAL:HG12	2:G:464:PHE:HE1	1.77	0.50
2:G:435:GLU:O	2:G:439:LEU:HD23	2.12	0.50
2:G:526:GLN:NE2	2:G:530:CYS:SG	2.81	0.50
1:A:296:ILE:HD11	1:A:586:THR:HG21	1.93	0.49
1:A:847:LEU:HD12	1:C:652:PRO:HB3	1.92	0.49
1:C:21:LEU:HB2	1:C:138:PHE:CZ	2.46	0.49
1:C:100:ARG:NH2	1:C:237:THR:HG21	2.27	0.49
2:G:108:LEU:HD21	2:G:190:MET:HA	1.94	0.49
2:G:455:MET:SD	2:G:456:LEU:N	2.84	0.49
1:A:196:HIS:HB3	1:A:222:LYS:NZ	2.27	0.49
1:A:853:ILE:O	1:A:857:THR:HG23	2.11	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1090:ARG:HH21	1:B:887:TYR:HD1	1.58	0.49
1:B:102:TRP:CD1	1:B:232:PHE:HZ	2.31	0.49
1:A:48:PHE:HD2	1:C:550:GLN:NE2	2.10	0.49
1:A:889:PHE:HE1	1:A:1032:LEU:HD11	1.76	0.49
1:A:895:THR:OG1	1:A:897:ASN:OD1	2.24	0.49
1:B:392:GLY:O	1:B:395:VAL:HG22	2.12	0.49
1:B:714:MET:HG3	1:B:757:GLN:HE21	1.77	0.49
1:C:43:TYR:CE1	1:C:216:ALA:HB1	2.47	0.49
1:C:714:MET:N	1:C:757:GLN:OE1	2.37	0.49
1:C:946:VAL:O	1:C:949:LEU:HG	2.12	0.49
2:D:174:LYS:HA	2:D:496:THR:O	2.12	0.49
2:D:223:ILE:HG12	2:D:461:TRP:CZ3	2.47	0.49
2:G:215:TYR:HE2	2:G:568:LEU:HD12	1.75	0.49
2:G:237:TYR:HD1	2:G:447:VAL:HG12	1.77	0.49
1:B:102:TRP:HD1	1:B:232:PHE:HZ	1.59	0.49
1:B:332:ALA:HB3	1:B:335:PHE:CE1	2.47	0.49
1:B:549:PHE:CE1	1:C:218:LYS:HB3	2.47	0.49
1:B:712:VAL:HG12	1:B:1042:GLY:HA2	1.93	0.49
1:C:163:GLU:OE1	1:C:164:TYR:N	2.46	0.49
1:C:528:PHE:O	1:C:534:THR:HA	2.11	0.49
1:A:71:ILE:HG23	1:A:252:ALA:HB2	1.93	0.49
1:A:391:LYS:HE3	1:A:393:ASP:HB3	1.95	0.49
1:B:100:ARG:HD3	1:B:171:LEU:HD23	1.95	0.49
1:B:108:MET:HB3	1:B:133:LEU:HB2	1.95	0.49
1:B:1011:LYS:HG3	1:B:1045:PHE:CE1	2.47	0.49
1:C:568:THR:O	1:C:570:GLU:N	2.45	0.49
2:D:439:LEU:HD21	2:D:540:HIS:HB2	1.94	0.49
1:B:100:ARG:O	1:B:119:ASN:N	2.32	0.49
1:B:381:SER:HB2	1:B:506:ASN:H	1.77	0.49
1:B:441:TYR:O	1:B:480:ASN:N	2.42	0.49
1:C:310:PRO:HA	1:C:525:CYS:O	2.11	0.49
1:C:915:SER:O	1:C:918:GLN:HG2	2.13	0.49
1:C:962:ASP:HA	1:C:966:ARG:NH1	2.28	0.49
2:D:244:VAL:HG23	2:D:262:LEU:HD11	1.95	0.49
2:G:403:ALA:HA	2:G:518:ARG:HG2	1.93	0.49
1:B:97:ASN:HB2	1:B:172:ASP:OD1	2.12	0.49
1:B:384:TYR:HB2	1:B:501:SER:HB2	1.95	0.49
1:B:886:ALA:HB1	1:B:896:GLN:HB3	1.93	0.49
1:B:1087:ILE:HG23	1:B:1096:GLN:HB2	1.95	0.49
1:A:804:LEU:O	1:A:808:LYS:HG2	2.12	0.49
1:A:1022:ARG:HH22	1:A:1025:PHE:HD1	1.61	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:96:SER:O	1:B:100:ARG:NH1	2.46	0.49
1:B:196:HIS:CE1	1:B:222:LYS:HG3	2.48	0.49
1:B:236:LEU:HD23	1:B:236:LEU:H	1.77	0.49
1:B:1062:PRO:HB3	1:C:900:TYR:CE1	2.48	0.49
1:C:660:SER:O	1:C:676:VAL:HG22	2.13	0.49
1:A:48:PHE:O	1:C:554:ARG:HG2	2.13	0.49
1:A:460:PRO:HG3	1:A:477:TRP:CD1	2.47	0.49
1:A:781:GLY:O	1:A:903:GLN:NE2	2.42	0.49
1:A:908:ASN:O	1:A:912:LYS:HD3	2.13	0.49
1:B:51:ASN:HA	1:B:267:TYR:O	2.13	0.49
1:B:115:VAL:HA	1:B:128:ALA:HA	1.95	0.49
1:B:892:ILE:HD12	1:B:1030:TYR:HB3	1.95	0.49
1:C:660:SER:O	1:C:675:ILE:HD12	2.13	0.49
1:A:1089:GLN:HE21	1:A:1092:PHE:HB3	1.77	0.49
1:A:1121:TYR:CZ	1:A:1123:PRO:HA	2.48	0.49
1:B:60:PHE:HD2	1:B:263:PHE:CG	2.31	0.49
1:B:647:TYR:HB2	1:B:678:TYR:CZ	2.47	0.49
1:B:888:ARG:NH1	1:B:1032:LEU:O	2.46	0.49
2:D:318:VAL:HG12	2:D:545:SER:HA	1.94	0.49
1:C:196:HIS:CE1	1:C:222:LYS:HG3	2.48	0.48
2:G:37:GLU:OE1	2:G:393:ARG:NH1	2.46	0.48
1:A:563:VAL:HG12	1:A:574:ILE:HD11	1.95	0.48
1:A:673:LYS:HB3	1:A:673:LYS:HE2	1.69	0.48
1:B:968:ASP:OD2	1:B:970:PRO:HD2	2.14	0.48
2:D:197:GLU:HB2	2:D:201:ASP:HB2	1.94	0.48
1:B:391:LYS:HE3	1:B:482:TYR:CD2	2.49	0.48
1:B:714:MET:HG3	1:B:757:GLN:NE2	2.29	0.48
1:C:686:SER:OG	1:C:687:SER:N	2.45	0.48
2:G:276:THR:HB	2:G:445:THR:OG1	2.13	0.48
2:G:358:ILE:HG13	2:G:379:ILE:HG13	1.94	0.48
1:A:184:ARG:HB3	1:A:186:PHE:CZ	2.48	0.48
1:A:547:GLN:O	1:A:564:ARG:NH2	2.46	0.48
1:B:546:PHE:HZ	1:B:553:GLY:HA3	1.78	0.48
1:B:589:THR:HA	1:B:592:SER:O	2.13	0.48
1:C:325:PRO:HG2	1:C:344:LYS:NZ	2.28	0.48
1:C:368:TYR:CZ	1:C:399:ALA:HB1	2.48	0.48
1:C:641:GLU:OE2	1:C:676:VAL:HG12	2.13	0.48
2:D:308:PHE:HZ	2:D:360:MET:HG2	1.77	0.48
1:A:269:GLU:HG2	3:J:1:NAG:H82	1.94	0.48
1:A:441:TYR:HD1	1:A:482:TYR:CD1	2.32	0.48
1:A:701:PHE:HB2	1:A:1050:TYR:CE1	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:242:ARG:HB2	1:B:245:TYR:CE2	2.48	0.48
1:B:1001:ILE:HD12	1:B:1001:ILE:H	1.79	0.48
1:C:388:PHE:CE2	1:C:497:VAL:HB	2.48	0.48
1:C:476:TYR:HB3	2:G:31:LYS:HD2	1.95	0.48
1:A:315:VAL:HA	1:A:529:ASN:HB3	1.95	0.48
1:A:412:LYS:HG2	1:A:448:LYS:HB3	1.96	0.48
1:B:53:LEU:HD13	1:B:266:LYS:HA	1.95	0.48
1:B:744:THR:HB	1:B:748:ARG:NH1	2.28	0.48
1:B:138:PHE:CZ	1:B:140:VAL:HG22	2.49	0.48
1:B:298:LYS:HG3	1:B:587:PRO:HA	1.95	0.48
1:B:337:SER:OG	1:B:439:TYR:HA	2.13	0.48
1:B:412:LYS:NZ	1:B:413:LEU:O	2.45	0.48
1:B:653:ILE:HD12	1:B:657:ILE:HG22	1.96	0.48
2:G:51:ASN:O	2:G:342:ALA:HB1	2.14	0.48
1:A:316:ARG:HH11	1:A:519:ASP:HA	1.78	0.48
1:A:878:GLN:HE22	1:C:694:THR:C	2.17	0.48
1:B:39:ARG:HD2	1:B:210:LEU:HD21	1.95	0.48
1:B:40:GLY:HA2	1:B:89:TYR:CD1	2.49	0.48
1:C:427:ARG:HG2	1:C:494:PRO:HD2	1.95	0.48
2:D:307:ILE:HG23	2:D:369:PHE:CD1	2.49	0.48
2:D:499:ASP:N	2:D:500:PRO:HD2	2.29	0.48
2:G:44:SER:HB3	2:G:351:LEU:HG	1.95	0.48
2:G:269:ASP:OD2	2:G:274:PHE:N	2.43	0.48
1:A:493:GLN:NE2	2:D:325:GLN:OE1	2.40	0.48
1:A:937:GLN:HB3	1:A:997:ARG:HH12	1.78	0.48
1:B:439:TYR:HD2	1:B:484:PHE:HE2	1.62	0.48
1:C:59:HIS:HE1	1:C:86:ASP:HB2	1.79	0.48
2:D:594:TRP:HE3	2:D:595:LEU:HD22	1.79	0.48
2:G:382:ASP:HA	2:G:385:TYR:CZ	2.49	0.48
2:G:450:LEU:HB2	2:G:451:PRO:HD3	1.95	0.48
1:A:303:THR:O	1:A:304:SER:OG	2.32	0.48
1:A:664:VAL:HG11	1:A:667:LEU:HB2	1.96	0.48
1:A:1124:LEU:HD23	1:A:1124:LEU:H	1.79	0.48
1:B:547:GLN:HG2	1:B:549:PHE:CZ	2.49	0.48
1:B:967:LEU:HD12	1:B:975:GLN:NE2	2.29	0.48
1:B:969:PRO:HB2	1:B:970:PRO:HD3	1.96	0.48
1:C:327:GLY:O	1:C:331:ASN:N	2.47	0.48
1:C:386:ASP:OD2	1:C:411:TYR:OH	2.23	0.48
1:C:460:PRO:HA	1:C:478:PRO:HD3	1.95	0.48
2:D:460:ARG:CZ	2:D:506:VAL:HG13	2.43	0.48
1:B:296:ILE:H	1:B:589:THR:CG2	2.26	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1074:ARG:NH2	1:B:1104:PHE:HB3	2.29	0.47
1:C:29:PRO:HG3	1:C:78:ASP:HB3	1.96	0.47
1:C:59:HIS:HB2	1:C:189:ARG:NH2	2.24	0.47
1:C:333:THR:O	1:C:496:ARG:NH1	2.44	0.47
1:C:345:ARG:HD2	1:C:382:ASN:HA	1.96	0.47
1:C:1111:VAL:HG23	1:C:1112:VAL:HG23	1.96	0.47
2:G:98:GLN:O	2:G:102:GLN:HG2	2.14	0.47
2:G:540:HIS:HA	2:G:587:TYR:CE1	2.49	0.47
1:A:383:VAL:HG23	1:A:502:PHE:CE1	2.49	0.47
1:A:1066:HIS:CE1	1:A:1120:VAL:H	2.32	0.47
1:A:1074:ARG:HG2	1:A:1102:ASN:O	2.15	0.47
1:C:364:THR:HB	1:C:423:ALA:HB3	1.94	0.47
1:C:462:SER:OG	1:C:466:LYS:N	2.47	0.47
2:D:56:GLU:HA	2:D:59:VAL:HG12	1.97	0.47
1:A:336:PRO:HB2	1:A:341:TRP:HA	1.96	0.47
1:B:26:ARG:HD2	1:B:79:ASN:H	1.79	0.47
1:B:391:LYS:HD2	1:B:393:ASP:HB2	1.94	0.47
1:B:696:ALA:HB2	1:C:878:GLN:OE1	2.14	0.47
1:B:1123:PRO:O	1:B:1126:PRO:HD2	2.15	0.47
1:C:291:VAL:HG13	1:C:293:SER:N	2.29	0.47
1:C:328:GLU:OE1	1:C:328:GLU:N	2.46	0.47
1:C:404:GLY:O	1:C:408:ASP:N	2.35	0.47
2:D:169:ARG:HH22	2:D:270:MET:HG3	1.79	0.47
1:A:129:CYS:HB3	1:A:131:PHE:CD2	2.48	0.47
1:A:343:ARG:HE	1:A:454:ARG:NH1	2.12	0.47
1:A:347:SER:HA	1:A:511:VAL:HG23	1.95	0.47
1:B:139:PHE:HB3	1:B:148:GLN:OE1	2.14	0.47
1:C:332:ALA:HB3	1:C:335:PHE:CE1	2.46	0.47
1:C:542:SER:HB2	1:C:573:ASP:N	2.29	0.47
1:C:705:ILE:HD12	1:C:1047:HIS:O	2.13	0.47
1:A:122:THR:HB	1:A:168:ASP:HB3	1.97	0.47
1:A:1062:PRO:HB3	1:B:900:TYR:CZ	2.50	0.47
1:B:371:SER:HB3	1:B:374:LYS:HE2	1.95	0.47
1:B:802:GLU:OE1	1:B:1038:ALA:HB3	2.14	0.47
1:C:26:ARG:HD2	1:C:77:PHE:HD2	1.80	0.47
1:C:746:LEU:HD22	1:C:991:VAL:HG21	1.96	0.47
2:D:36:ALA:HB1	2:D:69:TRP:HZ3	1.80	0.47
2:D:374:HIS:CE1	2:D:406:GLU:HG2	2.49	0.47
2:G:518:ARG:O	2:G:522:GLN:HB2	2.14	0.47
1:A:105:GLY:HA3	1:A:108:MET:SD	2.54	0.47
1:B:51:ASN:HA	1:B:266:LYS:NZ	2.29	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:662:HIS:ND1	1:B:664:VAL:HG22	2.30	0.47
1:B:1066:HIS:ND1	1:B:1119:THR:HA	2.29	0.47
2:D:41:TYR:CG	2:D:353:LYS:HD2	2.49	0.47
2:D:116:LEU:HD13	2:D:186:LEU:HB2	1.96	0.47
2:D:207:TYR:CE1	2:D:397:ASN:HB2	2.49	0.47
3:J:1:NAG:H61	3:J:2:NAG:C7	2.44	0.47
1:A:84:PHE:HB2	1:A:232:PHE:HB2	1.95	0.47
1:A:266:LYS:NZ	1:A:274:THR:OG1	2.43	0.47
1:A:551:GLN:N	1:B:46:ASP:OD1	2.40	0.47
1:B:162:PHE:CZ	1:B:164:TYR:HB2	2.49	0.47
1:B:459:VAL:H	1:B:478:PRO:HG3	1.78	0.47
1:B:780:PHE:HE2	1:B:785:PHE:HD2	1.61	0.47
1:B:791:ASP:O	1:B:794:LYS:HG2	2.15	0.47
1:C:27:THR:HB	1:C:76:ASN:HB3	1.96	0.47
1:C:116:ILE:HD12	1:C:118:MET:HE1	1.96	0.47
1:C:140:VAL:O	1:C:149:ILE:N	2.47	0.47
1:C:182:ASP:HB3	1:C:201:TYR:HE2	1.79	0.47
1:C:628:ASN:ND2	1:C:641:GLU:HB3	2.30	0.47
1:C:709:VAL:HB	1:C:930:LYS:NZ	2.30	0.47
2:D:237:TYR:CG	2:D:451:PRO:HG2	2.50	0.47
2:G:207:TYR:CE1	2:G:398:GLU:HG2	2.50	0.47
2:G:241:HIS:HA	2:G:244:VAL:HG22	1.96	0.47
2:G:560:LEU:HD23	2:G:564:GLU:HB2	1.95	0.47
1:A:84:PHE:CE1	1:A:88:ILE:HG12	2.50	0.47
1:A:531:ASN:HD21	1:A:566:PRO:HB3	1.76	0.47
1:A:937:GLN:HA	1:A:940:GLN:HB3	1.96	0.47
1:C:126:ILE:HG21	1:C:223:LEU:HD11	1.96	0.47
2:G:134:ASN:HB2	2:G:140:GLU:HB3	1.97	0.47
1:A:319:ASN:HA	1:A:567:LYS:NZ	2.29	0.47
1:A:753:ILE:HG22	1:A:757:GLN:NE2	2.25	0.47
1:B:267:TYR:CE1	1:B:273:ILE:HG12	2.50	0.47
1:B:342:GLU:HA	1:B:454:ARG:NH1	2.30	0.47
1:B:801:ILE:O	1:B:805:LEU:HD23	2.14	0.47
1:C:312:LYS:NZ	1:C:524:GLN:OE1	2.48	0.47
1:C:391:LYS:HB2	1:C:492:TYR:HA	1.96	0.47
1:C:430:ASP:OD1	1:C:439:TYR:OH	2.29	0.47
1:C:953:PHE:CE1	1:C:982:GLY:HA3	2.50	0.47
2:D:28:PHE:CE2	2:D:80:ALA:HB2	2.50	0.47
2:D:28:PHE:HE2	2:D:80:ALA:HB2	1.79	0.47
1:A:324:CYS:HB3	1:A:346:ILE:HG23	1.97	0.47
1:A:723:MET:SD	1:C:307:ARG:NH1	2.87	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:848:LEU:HD21	1:A:856:TYR:CE1	2.50	0.47
1:B:37:SER:H	1:B:64:ASP:N	2.13	0.47
1:B:140:VAL:O	1:B:149:ILE:N	2.35	0.47
1:B:261:THR:HG22	1:B:262:THR:N	2.29	0.47
1:B:1015:CYS:HB3	1:B:1034:SER:OG	2.14	0.47
1:C:220:ILE:HG22	1:C:221:PHE:CD1	2.50	0.47
1:C:389:VAL:HG22	1:C:496:ARG:HG2	1.95	0.47
2:D:152:MET:HE2	2:D:270:MET:SD	2.55	0.47
2:G:204:ARG:NH1	2:G:223:ILE:HD11	2.30	0.47
1:B:420:CYS:HB2	1:B:502:PHE:HE2	1.79	0.46
1:B:427:ARG:NH2	1:B:428:ASN:OD1	2.41	0.46
1:B:857:THR:HG21	1:B:1038:ALA:HB2	1.97	0.46
1:C:116:ILE:HG12	1:C:131:PHE:HE2	1.80	0.46
1:C:230:THR:HG21	5:C:1304:NAG:H83	1.97	0.46
2:D:315:PHE:HD1	2:D:320:LEU:HD12	1.80	0.46
2:D:381:TYR:HD1	2:D:558:LEU:HD12	1.80	0.46
2:G:269:ASP:OD1	2:G:269:ASP:N	2.47	0.46
1:A:900:TYR:CE1	1:C:1062:PRO:HB3	2.51	0.46
1:B:99:ILE:HA	1:B:236:LEU:HA	1.98	0.46
1:B:412:LYS:HB3	1:B:451:PRO:HA	1.97	0.46
1:B:759:ARG:HH22	1:B:763:GLU:CD	2.18	0.46
1:C:656:GLY:O	1:C:679:THR:HA	2.15	0.46
2:G:594:TRP:HE3	2:G:595:LEU:HD22	1.80	0.46
1:A:935:VAL:O	1:A:938:ASN:HB2	2.15	0.46
2:D:382:ASP:HA	2:D:385:TYR:CZ	2.50	0.46
2:G:177:ARG:HB2	2:G:498:CYS:HB2	1.97	0.46
1:A:142:LEU:HB2	1:A:149:ILE:HD11	1.96	0.46
1:A:663:THR:HA	1:A:673:LYS:HG2	1.96	0.46
1:C:971:GLU:OE1	1:C:971:GLU:N	2.48	0.46
2:D:127:TYR:HA	2:D:172:VAL:HG21	1.98	0.46
2:G:122:THR:O	2:G:126:ILE:HG12	2.15	0.46
2:G:435:GLU:OE2	2:G:540:HIS:NE2	2.48	0.46
1:A:39:ARG:HG2	1:A:210:LEU:HD11	1.97	0.46
1:A:49:ARG:HH12	1:A:54:HIS:CD2	2.34	0.46
1:A:127:ARG:NH1	1:A:160:CYS:SG	2.89	0.46
1:A:143:LYS:HB2	1:A:239:PHE:HB3	1.98	0.46
1:A:753:ILE:C	1:A:757:GLN:HE22	2.19	0.46
1:B:97:ASN:HB3	1:B:171:LEU:HD21	1.97	0.46
1:C:284:LEU:O	1:C:288:LYS:HG3	2.15	0.46
1:C:482:TYR:HD2	1:C:484:PHE:CE2	2.33	0.46
1:C:652:PRO:HA	1:C:658:CYS:SG	2.55	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:143:LEU:H	2:G:143:LEU:HD23	1.81	0.46
2:G:297:MET:HG3	2:G:423:LEU:HD11	1.96	0.46
1:A:277:VAL:HG21	1:A:288:LYS:HE2	1.96	0.46
1:A:326:PHE:CZ	1:A:500:LEU:HD21	2.50	0.46
1:A:889:PHE:CD2	1:A:899:LEU:HB2	2.50	0.46
1:B:312:LYS:HG3	1:B:521:ILE:HD13	1.96	0.46
1:C:24:ASP:OD1	1:C:24:ASP:N	2.47	0.46
1:C:326:PHE:HE1	1:C:351:ALA:HA	1.81	0.46
1:C:430:ASP:OD1	1:C:496:ARG:NH2	2.49	0.46
1:C:1113:ILE:HD12	1:C:1113:ILE:H	1.81	0.46
2:D:204:ARG:HG2	2:D:222:LEU:HD23	1.96	0.46
2:D:419:LYS:HE3	2:D:426:PRO:O	2.16	0.46
1:A:365:PHE:CD1	1:A:422:LEU:HA	2.51	0.46
1:B:317:PHE:HE1	1:B:532:GLY:H	1.62	0.46
1:B:791:ASP:H	1:B:794:LYS:HD2	1.81	0.46
1:B:971:GLU:O	1:B:974:VAL:HG22	2.15	0.46
1:B:985:GLN:NE2	1:C:742:PHE:HE1	2.07	0.46
2:G:459:TRP:HZ2	2:G:473:TRP:HB3	1.79	0.46
1:A:69:ARG:HB2	1:A:254:PHE:CD2	2.51	0.46
1:A:118:MET:O	1:A:124:LEU:HA	2.16	0.46
1:A:384:TYR:HB2	1:A:501:SER:OG	2.16	0.46
1:A:690:TYR:CE1	1:B:880:PRO:HA	2.50	0.46
1:B:42:TYR:HB3	1:B:187:VAL:HG21	1.98	0.46
1:B:431:ALA:HB2	1:B:494:PRO:CD	2.46	0.46
1:C:51:ASN:N	1:C:268:ASP:O	2.44	0.46
1:C:91:ALA:HB1	1:C:183:LEU:HD11	1.97	0.46
2:D:25:ALA:O	2:D:29:LEU:HD23	2.15	0.46
2:G:346:PRO:HB3	2:G:360:MET:HG2	1.98	0.46
1:B:50:SER:O	1:B:52:VAL:HG13	2.16	0.46
1:C:21:LEU:HB2	1:C:138:PHE:HZ	1.80	0.46
1:A:193:GLY:O	1:A:225:LEU:N	2.47	0.46
1:A:759:ARG:HG3	1:A:762:ARG:NH2	2.31	0.46
1:B:412:LYS:HA	1:B:412:LYS:HD2	1.81	0.46
1:B:911:ASN:O	1:B:914:ILE:HG22	2.15	0.46
1:C:223:LEU:HD22	1:C:225:LEU:HB3	1.98	0.46
1:C:287:LEU:HD21	1:C:296:ILE:HG21	1.98	0.46
1:C:338:VAL:HG13	1:C:410:ASN:HB3	1.97	0.46
1:C:951:SER:OG	1:C:953:PHE:HE2	1.99	0.46
1:A:223:LEU:HA	1:A:224:PRO:HD3	1.78	0.45
1:A:746:LEU:O	1:A:750:LEU:HD13	2.16	0.45
1:B:713:SER:O	1:B:1041:HIS:ND1	2.48	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:643:VAL:HG21	1:C:676:VAL:HB	1.98	0.45
1:C:801:ILE:O	1:C:805:LEU:HD23	2.16	0.45
2:D:38:ASP:OD1	2:D:353:LYS:NZ	2.45	0.45
2:D:408:MET:SD	2:D:408:MET:N	2.89	0.45
2:D:459:TRP:HD1	2:D:480:MET:HE1	1.78	0.45
1:A:664:VAL:C	1:A:666:SER:H	2.19	0.45
1:A:966:ARG:HG3	1:A:967:LEU:HG	1.97	0.45
1:B:72:THR:HG23	1:B:251:ALA:HB3	1.98	0.45
1:B:98:VAL:HA	1:B:100:ARG:NH2	2.32	0.45
1:B:126:ILE:HD13	1:B:223:LEU:HD11	1.98	0.45
1:B:190:ASN:HA	1:B:196:HIS:H	1.81	0.45
1:C:51:ASN:N	1:C:267:TYR:O	2.50	0.45
1:C:287:LEU:O	1:C:291:VAL:HG12	2.15	0.45
2:G:356:PHE:HB3	2:G:379:ILE:HD12	1.98	0.45
1:A:69:ARG:HD3	1:A:71:ILE:HD11	1.99	0.45
1:A:550:GLN:HA	1:B:46:ASP:OD2	2.16	0.45
1:A:857:THR:O	1:A:861:VAL:HG23	2.17	0.45
1:B:985:GLN:NE2	1:C:742:PHE:CE1	2.82	0.45
1:B:1012:MET:HE1	1:B:1016:VAL:HG21	1.99	0.45
1:B:1012:MET:O	1:B:1016:VAL:HB	2.17	0.45
1:C:50:SER:O	1:C:52:VAL:HG23	2.16	0.45
1:C:482:TYR:HD2	1:C:484:PHE:CZ	2.35	0.45
1:C:546:PHE:CZ	1:C:562:SER:HB2	2.51	0.45
2:G:147:GLY:O	2:G:151:ILE:HG12	2.16	0.45
2:G:392:LEU:HG	2:G:562:LYS:HB3	1.98	0.45
1:A:78:ASP:OD1	1:A:78:ASP:N	2.50	0.45
1:A:334:THR:HA	1:A:496:ARG:HH21	1.80	0.45
1:C:54:HIS:CD2	1:C:56:VAL:HB	2.52	0.45
1:C:932:GLN:O	1:C:936:ASN:ND2	2.49	0.45
2:G:90:ASN:OD1	2:G:91:LEU:N	2.50	0.45
1:A:663:THR:CA	1:A:673:LYS:HA	2.45	0.45
1:A:1066:HIS:CE1	1:A:1120:VAL:HG12	2.52	0.45
1:B:341:TRP:HA	1:B:387:SER:O	2.17	0.45
1:B:1028:LYS:HE2	1:B:1028:LYS:HA	1.98	0.45
1:C:67:VAL:CG2	1:C:254:PHE:HB3	2.47	0.45
1:C:406:ILE:HD12	1:C:441:TYR:HB2	1.98	0.45
1:C:659:ALA:HA	1:C:676:VAL:O	2.16	0.45
2:D:88:ILE:HG21	2:D:93:VAL:HG23	1.98	0.45
2:D:169:ARG:NH2	2:D:270:MET:HG3	2.31	0.45
2:G:132:VAL:O	2:G:141:CYS:HA	2.16	0.45
1:A:90:PHE:CE1	1:A:253:TYR:HB2	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:522:LYS:HZ2	1:A:572:LEU:HD22	1.80	0.45
1:A:695:ILE:HB	1:A:1060:THR:HG21	1.99	0.45
1:B:47:ILE:HG22	1:B:49:ARG:HD2	1.97	0.45
1:B:371:SER:HB3	1:B:374:LYS:NZ	2.32	0.45
1:B:409:TYR:CZ	1:B:448:LYS:HE2	2.51	0.45
1:B:780:PHE:O	1:B:783:PHE:N	2.36	0.45
1:B:856:TYR:O	1:B:860:LEU:HD23	2.16	0.45
1:C:664:VAL:HG13	1:C:666:SER:H	1.82	0.45
1:C:1087:ILE:CG2	1:C:1096:GLN:HB2	2.46	0.45
2:D:237:TYR:HD1	2:D:447:VAL:HG12	1.82	0.45
1:A:298:LYS:NZ	1:A:588:GLY:H	2.15	0.45
1:A:430:ASP:C	1:A:436:ASN:HD22	2.20	0.45
1:A:719:VAL:HG23	1:A:841:LEU:HD12	1.98	0.45
1:A:991:VAL:O	1:A:995:LEU:HD23	2.17	0.45
1:B:1022:ARG:HB2	1:C:1014:GLU:OE2	2.16	0.45
1:C:419:GLY:HA3	1:C:500:LEU:O	2.17	0.45
1:C:441:TYR:HB3	1:C:482:TYR:HE1	1.80	0.45
2:D:47:SER:O	2:D:51:ASN:ND2	2.50	0.45
2:D:177:ARG:HD2	2:D:498:CYS:HB2	1.97	0.45
2:G:91:LEU:HD21	2:G:212:VAL:HG22	1.98	0.45
1:A:127:ARG:HG3	1:A:163:GLU:OE1	2.17	0.45
1:A:839:ASN:HD21	1:C:559:PHE:HZ	1.65	0.45
1:B:315:VAL:HA	1:B:529:ASN:HB2	1.98	0.45
1:B:359:SER:HB3	5:B:1302:NAG:H4	1.99	0.45
1:B:663:THR:HA	1:B:673:LYS:HA	1.98	0.45
1:B:794:LYS:HD3	1:B:798:ARG:O	2.17	0.45
1:C:85:LYS:H	1:C:88:ILE:HD11	1.81	0.45
1:C:441:TYR:HD2	1:C:482:TYR:CD1	2.35	0.45
1:B:547:GLN:HG3	1:B:548:PRO:HD2	1.98	0.45
1:A:325:PRO:HD2	1:A:346:ILE:HA	1.99	0.45
1:B:57:GLN:HE22	1:B:260:PRO:HB2	1.81	0.45
1:B:722:ASN:C	1:B:724:TYR:H	2.20	0.45
1:B:915:SER:O	1:B:919:GLU:HG2	2.17	0.45
1:B:1083:THR:HG23	3:O:1:NAG:HN2	1.81	0.45
1:C:39:ARG:NH2	1:C:211:PRO:O	2.49	0.45
1:C:106:SER:O	1:C:230:THR:OG1	2.35	0.45
2:D:270:MET:HB3	2:D:271:TRP:CE3	2.52	0.45
2:G:51:ASN:HB3	2:G:359:LEU:HD12	1.98	0.45
2:G:307:ILE:HG23	2:G:369:PHE:CD1	2.50	0.45
1:A:19:LYS:HD3	1:A:152:TYR:CE1	2.52	0.44
1:A:365:PHE:CE1	1:A:422:LEU:HA	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:710:MET:CE	1:A:1008:ALA:HA	2.47	0.44
1:A:770:GLN:HB3	1:C:684:ALA:O	2.17	0.44
1:A:1124:LEU:HA	1:A:1127:GLU:OE2	2.17	0.44
1:B:1067:GLU:O	1:B:1069:LYS:NZ	2.47	0.44
1:C:103:VAL:HG23	1:C:235:LEU:HD21	1.99	0.44
1:C:487:THR:HB	2:G:357:ARG:NH2	2.32	0.44
2:D:119:ILE:HD12	2:D:179:LEU:HD22	1.99	0.44
2:D:430:GLU:OE2	2:D:541:LYS:HD3	2.17	0.44
1:A:84:PHE:CZ	1:A:87:GLY:HA2	2.52	0.44
1:A:1015:CYS:HB3	1:A:1034:SER:OG	2.17	0.44
1:B:346:ILE:HB	1:B:383:VAL:HG13	1.98	0.44
1:B:410:ASN:HD21	1:B:442:ARG:H	1.65	0.44
1:B:705:ILE:HA	1:B:1047:HIS:O	2.18	0.44
1:C:123:ASN:HB3	1:C:168:ASP:OD1	2.16	0.44
2:G:21:ILE:HD12	2:G:87:GLU:HB2	1.99	0.44
1:A:51:ASN:N	1:A:268:ASP:O	2.31	0.44
1:A:99:ILE:HG12	1:A:236:LEU:HG	2.00	0.44
1:A:122:THR:HA	1:A:169:PHE:N	2.32	0.44
1:A:1089:GLN:NE2	1:A:1092:PHE:O	2.50	0.44
1:B:37:SER:H	1:B:64:ASP:HA	1.82	0.44
1:C:48:PHE:CZ	1:C:50:SER:HB3	2.52	0.44
1:C:133:LEU:HD11	1:C:137:PRO:HG3	1.98	0.44
1:C:194:PHE:HA	1:C:223:LEU:O	2.18	0.44
1:C:659:ALA:HB1	1:C:675:ILE:HD11	2.00	0.44
2:D:381:TYR:CD1	2:D:558:LEU:HD12	2.53	0.44
2:D:403:ALA:HA	2:D:518:ARG:HG2	1.98	0.44
2:D:594:TRP:CE3	2:D:595:LEU:HD22	2.53	0.44
2:G:119:ILE:HD12	2:G:179:LEU:HD22	1.98	0.44
1:A:103:VAL:HA	1:A:115:VAL:O	2.17	0.44
1:A:307:ARG:NE	1:A:308:VAL:O	2.51	0.44
1:A:322:ASN:HD22	1:A:348:ASN:HD22	1.64	0.44
1:A:1080:PHE:HB2	1:A:1085:TRP:CE2	2.52	0.44
1:B:49:ARG:HB3	1:B:52:VAL:CG2	2.47	0.44
1:C:411:TYR:CZ	1:C:413:LEU:HD21	2.52	0.44
1:C:723:MET:HA	1:C:727:GLY:HA2	1.99	0.44
2:D:275:TRP:HB3	2:D:444:LEU:HD12	1.99	0.44
2:G:50:TYR:HA	2:G:58:ASN:HB3	2.00	0.44
2:G:380:GLN:HG3	2:G:558:LEU:HD21	1.99	0.44
1:A:264:MET:O	1:A:276:ALA:HA	2.17	0.44
1:A:328:GLU:HB3	1:A:335:PHE:HE1	1.82	0.44
1:A:406:ILE:HG23	1:A:441:TYR:HB2	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:837:LYS:HE2	1:C:576:PRO:HG2	1.99	0.44
1:A:884:GLN:HE21	1:A:888:ARG:HE	1.66	0.44
1:A:892:ILE:HD12	1:A:1030:TYR:HB3	2.00	0.44
1:B:400:PRO:HB3	1:B:415:ASP:HA	1.98	0.44
1:B:642:HIS:NE2	1:B:643:VAL:O	2.51	0.44
1:B:726:CYS:SG	1:B:733:ALA:N	2.91	0.44
1:C:210:LEU:HD22	1:C:254:PHE:CG	2.52	0.44
1:C:316:ARG:HH22	1:C:528:PHE:HB2	1.83	0.44
1:C:562:SER:HA	1:C:572:LEU:O	2.17	0.44
1:C:838:PHE:O	1:C:839:ASN:HB2	2.17	0.44
1:C:1105:VAL:HG13	1:C:1106:SER:N	2.31	0.44
1:C:1115:ILE:O	1:C:1116:ILE:HD13	2.18	0.44
2:D:560:LEU:HD23	2:D:564:GLU:HB2	2.00	0.44
1:A:142:LEU:HD23	1:A:145:ASN:HD22	1.82	0.44
1:A:414:PRO:HD2	1:A:417:PHE:CD2	2.47	0.44
1:A:439:TYR:O	1:A:482:TYR:HB2	2.18	0.44
1:A:873:ALA:HB1	1:C:1029:GLY:HA2	2.00	0.44
1:B:436:ASN:H	1:B:484:PHE:HB2	1.83	0.44
1:B:682:LEU:HB2	1:C:771:MET:HE1	1.99	0.44
1:B:698:PRO:HG2	1:B:1052:PRO:HB3	1.99	0.44
1:B:732:CYS:SG	1:B:733:ALA:N	2.90	0.44
1:B:805:LEU:HD13	1:B:928:LEU:HD21	2.00	0.44
1:C:489:GLY:O	1:C:493:GLN:HG3	2.17	0.44
1:C:592:SER:OG	1:C:593:SER:N	2.51	0.44
1:C:663:THR:HG23	1:C:673:LYS:NZ	2.32	0.44
1:C:998:ALA:HA	1:C:1001:ILE:HG22	1.99	0.44
2:D:237:TYR:CD1	2:D:451:PRO:HG2	2.52	0.44
2:G:88:ILE:HG21	2:G:93:VAL:HG23	2.00	0.44
2:G:485:VAL:HG12	2:G:487:VAL:HG23	1.99	0.44
1:A:389:VAL:HG11	1:A:430:ASP:HB3	2.00	0.44
1:A:941:ALA:O	1:A:944:THR:OG1	2.30	0.44
1:A:966:ARG:HH12	1:A:975:GLN:HE21	1.65	0.44
1:B:195:LEU:HB2	1:B:225:LEU:HD12	2.00	0.44
1:B:633:GLN:OE1	1:B:633:GLN:N	2.43	0.44
2:G:439:LEU:HB3	2:G:591:LEU:HD22	1.99	0.44
1:A:637:LEU:HD13	1:A:640:ALA:HB3	2.00	0.44
1:A:1108:SER:OG	1:A:1110:ASP:OD1	2.27	0.44
1:B:242:ARG:HB2	1:B:245:TYR:CD2	2.53	0.44
1:B:913:ALA:O	1:B:916:GLN:HG2	2.18	0.44
1:B:980:ILE:O	1:B:984:LEU:HD23	2.18	0.44
1:C:111:LYS:HE3	5:C:1302:NAG:H4	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:191:LYS:HE2	1:C:196:HIS:NE2	2.33	0.44
1:C:225:LEU:HD12	1:C:227:ILE:HG12	1.99	0.44
2:D:37:GLU:HA	2:D:390:PHE:CE1	2.53	0.44
2:G:538:PRO:HD2	2:G:541:LYS:NZ	2.33	0.44
1:A:26:ARG:NH1	1:A:79:ASN:HB3	2.33	0.44
1:B:58:ASP:O	1:B:260:PRO:HA	2.17	0.44
1:B:123:ASN:ND2	1:B:165:VAL:HG13	2.33	0.44
1:B:705:ILE:HG22	1:B:1048:VAL:HG22	2.00	0.44
1:C:470:PRO:N	1:C:471:PRO:HD2	2.33	0.44
1:C:961:ASN:OD1	1:C:962:ASP:N	2.51	0.44
2:D:178:PRO:O	2:D:182:GLU:OE1	2.36	0.44
2:G:406:GLU:HG3	2:G:518:ARG:HH11	1.83	0.44
2:G:450:LEU:HD21	2:G:519:THR:HG21	1.98	0.44
2:G:474:MET:HE1	2:G:497:TYR:HB2	1.99	0.44
1:A:113:GLN:OE1	1:A:161:THR:OG1	2.34	0.43
1:A:190:ASN:HB2	1:A:195:LEU:HD12	1.99	0.43
1:B:238:ALA:O	1:B:240:PRO:HD3	2.18	0.43
1:B:284:LEU:HB2	1:B:595:VAL:HG11	2.00	0.43
1:B:551:GLN:NE2	1:B:564:ARG:HB3	2.33	0.43
1:B:1080:PHE:HB2	1:B:1085:TRP:CE2	2.53	0.43
1:C:870:THR:HG21	1:C:877:LEU:HD12	1.99	0.43
2:G:535:HIS:NE2	2:G:537:GLY:O	2.51	0.43
1:A:298:LYS:CG	1:A:651:ILE:HD11	2.39	0.43
1:B:632:THR:HG23	1:B:634:ALA:N	2.33	0.43
1:B:973:GLU:HA	1:B:976:ILE:HD12	2.00	0.43
1:C:416:ASP:OD1	1:C:417:PHE:N	2.51	0.43
1:A:101:GLY:CA	1:A:235:LEU:HB2	2.48	0.43
1:A:409:TYR:CE2	1:A:444:LEU:HD23	2.53	0.43
1:A:441:TYR:CD1	1:A:482:TYR:HA	2.53	0.43
1:A:470:PRO:HA	1:A:475:CYS:O	2.18	0.43
1:A:1062:PRO:HG3	1:B:883:MET:HE1	2.00	0.43
1:B:102:TRP:CD1	1:B:234:THR:HG22	2.53	0.43
1:B:131:PHE:HD1	1:B:154:PHE:HB3	1.84	0.43
1:B:641:GLU:OE1	1:B:667:LEU:HD13	2.18	0.43
1:C:95:LYS:HB3	1:C:181:LYS:H	1.83	0.43
1:C:284:LEU:HD12	1:C:284:LEU:HA	1.84	0.43
1:C:941:ALA:HB1	1:C:990:TYR:HE1	1.84	0.43
1:C:1110:ASP:OD1	1:C:1111:VAL:N	2.51	0.43
2:G:284:PRO:HG3	2:G:440:LEU:HD13	1.99	0.43
2:G:536:GLU:HG2	2:G:537:GLY:N	2.33	0.43
2:G:581:VAL:HG22	2:G:584:LEU:HB3	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:316:ARG:HH21	1:B:520:LEU:N	2.16	0.43
1:C:43:TYR:CE2	1:C:273:ILE:HG13	2.54	0.43
1:C:73:PHE:HD2	1:C:75:LEU:HG	1.84	0.43
1:C:194:PHE:HB2	1:C:196:HIS:NE2	2.32	0.43
1:C:931:LEU:HD13	1:C:931:LEU:HA	1.88	0.43
2:D:190:MET:SD	2:D:194:ASN:ND2	2.92	0.43
2:D:245:ARG:HG2	2:D:262:LEU:HD21	2.00	0.43
2:G:284:PRO:HD3	2:G:440:LEU:HD22	2.01	0.43
2:G:311:ALA:HA	2:G:373:HIS:CE1	2.54	0.43
1:A:47:ILE:CG2	1:C:554:ARG:HD2	2.49	0.43
1:A:581:GLY:HA3	1:A:600:GLN:HE22	1.84	0.43
1:A:733:ALA:O	1:A:737:LEU:HB2	2.18	0.43
1:B:287:LEU:HD21	1:B:296:ILE:HG21	2.01	0.43
1:B:482:TYR:CE2	1:B:484:PHE:CE1	3.07	0.43
1:C:98:VAL:HA	1:C:100:ARG:NH2	2.34	0.43
1:C:599:TYR:O	1:C:635:GLY:HA3	2.18	0.43
1:C:808:LYS:NZ	1:C:923:THR:O	2.49	0.43
2:D:19:SER:OG	2:D:20:THR:N	2.51	0.43
1:A:306:PHE:N	1:A:580:GLY:O	2.27	0.43
1:A:391:LYS:O	1:A:395:VAL:HG23	2.19	0.43
1:A:960:LEU:O	1:A:964:LEU:HG	2.18	0.43
1:B:70:PHE:HD2	1:B:253:TYR:CE2	2.36	0.43
1:B:117:ILE:HG13	1:B:126:ILE:HG12	1.99	0.43
1:B:657:ILE:HD13	1:B:679:THR:HA	2.01	0.43
1:C:39:ARG:N	1:C:213:GLY:O	2.51	0.43
1:C:88:ILE:HG13	1:C:232:PHE:CE1	2.53	0.43
2:D:406:GLU:HG3	2:D:518:ARG:HH11	1.83	0.43
2:G:25:ALA:O	2:G:29:LEU:HD23	2.19	0.43
2:G:344:CYS:HB3	2:G:361:CYS:HB2	1.88	0.43
3:L:1:NAG:H61	3:L:2:NAG:C7	2.49	0.43
1:A:705:ILE:O	1:A:917:ILE:HD11	2.18	0.43
1:A:957:SER:OG	1:A:962:ASP:HB2	2.18	0.43
1:B:425:ASN:HB2	1:B:495:TYR:CZ	2.54	0.43
1:B:725:ILE:HD13	1:B:984:LEU:HD21	2.00	0.43
2:G:308:PHE:HE1	2:G:360:MET:HE3	1.83	0.43
2:G:520:LEU:HD22	2:G:579:MET:HE2	2.00	0.43
1:A:412:LYS:HB3	1:A:449:LEU:H	1.84	0.43
1:A:710:MET:HA	1:A:711:PRO:HD3	1.90	0.43
1:A:1032:LEU:HA	1:A:1032:LEU:HD23	1.80	0.43
1:B:95:LYS:NZ	1:B:250:ALA:HB3	2.33	0.43
1:C:74:GLY:HA2	1:C:248:THR:OG1	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:98:VAL:HG13	1:C:239:PHE:HE2	1.83	0.43
1:C:198:TYR:HA	1:C:219:PRO:HA	2.01	0.43
1:C:588:GLY:O	1:C:591:THR:N	2.51	0.43
2:G:107:VAL:HG13	2:G:107:VAL:O	2.19	0.43
2:G:181:GLU:HA	2:G:473:TRP:HH2	1.84	0.43
2:G:199:TYR:HB3	2:G:464:PHE:CD2	2.54	0.43
1:A:102:TRP:HB3	1:A:232:PHE:HE1	1.84	0.43
1:A:357:TYR:HD1	1:A:365:PHE:CE2	2.36	0.43
1:A:913:ALA:HA	1:A:916:GLN:OE1	2.19	0.43
1:B:85:LYS:HB2	1:B:257:TYR:CE2	2.54	0.43
1:B:141:VAL:HG11	1:B:173:LEU:HD12	2.01	0.43
1:B:195:LEU:HB3	1:B:223:LEU:HB2	2.00	0.43
1:B:913:ALA:HA	1:B:916:GLN:OE1	2.19	0.43
1:C:391:LYS:HD2	1:C:492:TYR:CD1	2.54	0.43
1:C:460:PRO:HB2	1:C:475:CYS:HB3	2.01	0.43
2:D:407:ILE:HD11	2:D:525:PHE:HB2	2.00	0.43
2:G:56:GLU:HA	2:G:59:VAL:HG12	2.01	0.43
1:A:98:VAL:HG22	1:A:239:PHE:HE1	1.84	0.43
1:A:259:LYS:HA	1:A:259:LYS:HD3	1.79	0.43
1:A:320:ILE:O	1:A:514:PRO:HD3	2.19	0.43
1:A:356:LEU:HD13	1:A:422:LEU:HD13	2.00	0.43
1:A:372:ALA:HA	1:A:375:LEU:HB2	2.00	0.43
1:A:753:ILE:HD11	1:A:995:LEU:HD22	2.01	0.43
1:B:19:LYS:HA	1:B:19:LYS:HD3	1.71	0.43
1:B:51:ASN:HA	1:B:266:LYS:HZ2	1.84	0.43
1:B:585:ILE:HB	1:B:596:ALA:HB3	2.01	0.43
1:C:628:ASN:HD22	1:C:641:GLU:HB3	1.82	0.43
1:C:902:ASN:O	1:C:906:ILE:HG13	2.19	0.43
2:D:36:ALA:HB1	2:D:69:TRP:CZ3	2.54	0.43
2:D:450:LEU:HD22	2:D:516:TYR:CD1	2.54	0.43
2:D:462:MET:HB3	2:D:467:GLU:HB3	2.01	0.43
2:D:488:VAL:HG11	2:D:610:TRP:O	2.19	0.43
2:G:144:LEU:HD11	2:G:270:MET:HG3	2.01	0.43
1:A:121:SER:HA	1:A:171:LEU:HB3	2.01	0.42
1:A:130:ASN:HB3	1:A:159:ASN:HB2	2.00	0.42
1:A:181:LYS:HA	1:A:205:SER:HA	2.01	0.42
1:A:382:ASN:HB3	1:A:384:TYR:CZ	2.54	0.42
1:A:528:PHE:CD1	1:A:539:LEU:HD11	2.53	0.42
1:B:37:SER:N	1:B:64:ASP:H	2.15	0.42
1:B:184:ARG:HB3	1:B:186:PHE:CZ	2.54	0.42
1:B:417:PHE:CE2	1:B:501:SER:HA	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:889:PHE:CE2	1:B:899:LEU:HD12	2.54	0.42
1:C:931:LEU:HD11	1:C:1042:GLY:HA3	2.01	0.42
2:D:450:LEU:HB2	2:D:451:PRO:HD3	2.00	0.42
2:D:482:ARG:HD3	2:D:608:THR:O	2.18	0.42
2:G:155:SER:O	2:G:252:TYR:OH	2.36	0.42
2:G:198:ASP:OD1	2:G:201:ASP:N	2.49	0.42
2:G:237:TYR:CD1	2:G:451:PRO:HG2	2.54	0.42
2:G:270:MET:HB2	2:G:271:TRP:CE3	2.54	0.42
1:A:348:ASN:O	1:A:348:ASN:ND2	2.52	0.42
1:A:446:HIS:HA	1:A:461:PHE:HD1	1.83	0.42
1:A:482:TYR:CD2	1:A:483:GLY:N	2.87	0.42
1:A:1073:PRO:HA	1:A:1103:THR:HG22	2.00	0.42
1:B:60:PHE:HD2	1:B:263:PHE:CD1	2.37	0.42
1:B:371:SER:HB3	1:B:374:LYS:CE	2.49	0.42
1:B:381:SER:O	1:B:503:GLU:HB2	2.19	0.42
1:B:809:VAL:HB	1:B:1040:PRO:HG2	2.01	0.42
1:C:91:ALA:O	1:C:253:TYR:HB2	2.19	0.42
1:C:116:ILE:HB	1:C:118:MET:CE	2.48	0.42
2:D:538:PRO:HD2	2:D:541:LYS:HZ3	1.84	0.42
2:G:458:LYS:O	2:G:462:MET:HG2	2.19	0.42
2:G:462:MET:HA	2:G:465:LYS:HB3	2.00	0.42
1:A:103:VAL:HG23	1:A:235:LEU:HD11	2.01	0.42
1:A:343:ARG:HB3	1:A:386:ASP:OD1	2.20	0.42
1:A:516:LEU:HD23	1:A:516:LEU:O	2.20	0.42
1:A:709:VAL:HG13	1:A:931:LEU:HG	2.01	0.42
1:A:732:CYS:C	1:A:734:ASN:H	2.23	0.42
1:B:302:GLN:OE1	1:B:583:SER:HB3	2.18	0.42
1:B:441:TYR:CE2	1:B:443:SER:HB3	2.51	0.42
1:C:128:ALA:N	1:C:162:PHE:O	2.33	0.42
1:C:933:ASP:O	1:C:937:GLN:HG2	2.19	0.42
2:D:365:THR:HG22	2:D:367:ASP:H	1.83	0.42
2:G:372:ALA:O	2:G:376:MET:HG2	2.19	0.42
1:A:714:MET:SD	1:A:938:ASN:ND2	2.92	0.42
1:B:184:ARG:HE	1:B:186:PHE:HZ	1.66	0.42
1:B:440:LYS:HG2	1:B:481:ASP:HB3	2.01	0.42
1:B:634:ALA:HA	1:C:845:PRO:HG3	2.02	0.42
1:C:441:TYR:HB3	1:C:482:TYR:CE1	2.55	0.42
1:C:712:VAL:HG12	1:C:1042:GLY:HA2	2.01	0.42
2:D:315:PHE:HA	2:D:318:VAL:HG22	2.01	0.42
2:D:381:TYR:OH	2:D:395:GLY:HA2	2.20	0.42
1:A:77:PHE:CE2	1:A:79:ASN:HB2	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:412:LYS:NZ	1:A:413:LEU:O	2.50	0.42
1:B:417:PHE:CD2	1:B:452:PHE:HZ	2.38	0.42
1:C:36:SER:OG	1:C:65:SER:N	2.51	0.42
2:G:204:ARG:HG2	2:G:222:LEU:HD23	2.01	0.42
2:G:347:THR:HG1	2:G:349:TRP:HE1	1.67	0.42
2:G:538:PRO:HD2	2:G:541:LYS:HZ3	1.85	0.42
1:A:84:PHE:HE1	1:A:188:PHE:HB2	1.85	0.42
1:A:187:VAL:O	1:A:197:VAL:HA	2.20	0.42
1:A:348:ASN:H	1:A:510:THR:HB	1.85	0.42
1:A:353:TYR:HB3	1:A:376:ASN:HB3	2.02	0.42
1:A:372:ALA:HA	1:A:375:LEU:HD13	2.01	0.42
1:A:522:LYS:NZ	1:A:539:LEU:HB3	2.35	0.42
1:A:682:LEU:HD21	1:B:852:MET:CG	2.49	0.42
1:A:1014:GLU:OE2	1:C:1022:ARG:NE	2.48	0.42
1:B:106:SER:O	1:B:231:ASN:ND2	2.29	0.42
1:B:1063:ALA:C	1:B:1115:ILE:HG13	2.39	0.42
1:C:390:VAL:HG11	1:C:398:ILE:CD1	2.49	0.42
1:C:977:ASP:HA	1:C:980:ILE:HG12	2.02	0.42
2:D:166:GLU:OE2	2:D:497:TYR:OH	2.26	0.42
2:G:308:PHE:CE2	2:G:333:LEU:HD12	2.54	0.42
1:A:328:GLU:HB3	1:A:335:PHE:CE1	2.55	0.42
1:A:410:ASN:CG	1:A:442:ARG:H	2.21	0.42
1:B:59:HIS:CD2	1:B:260:PRO:HB3	2.55	0.42
1:B:125:VAL:HG13	1:B:163:GLU:OE2	2.19	0.42
1:B:189:ARG:O	1:B:196:HIS:HB2	2.20	0.42
1:B:932:GLN:HG3	1:B:936:ASN:OD1	2.19	0.42
1:C:258:LEU:C	1:C:259:LYS:HD2	2.39	0.42
1:C:488:ASN:HD21	2:G:353:LYS:HD3	1.85	0.42
1:C:905:GLN:O	1:C:909:GLN:HG3	2.19	0.42
2:D:252:TYR:HB3	2:D:255:TYR:CD2	2.51	0.42
2:D:589:GLU:HB3	2:D:590:PRO:HD3	2.01	0.42
2:G:270:MET:HB2	2:G:271:TRP:CD2	2.55	0.42
2:G:400:PHE:CE2	2:G:566:TRP:HB2	2.54	0.42
2:G:417:HIS:NE2	2:G:421:ILE:HD11	2.35	0.42
1:A:313:GLU:OE2	1:A:315:VAL:HG23	2.19	0.42
1:A:339:TYR:HB2	1:A:442:ARG:HE	1.84	0.42
1:A:444:LEU:HD12	2:D:27:THR:HG23	2.02	0.42
1:A:551:GLN:HA	1:A:564:ARG:HE	1.84	0.42
1:A:948:GLN:O	1:A:951:SER:OG	2.20	0.42
1:B:196:HIS:HB3	1:B:198:TYR:CE1	2.54	0.42
1:B:313:GLU:N	1:B:313:GLU:OE1	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:400:PRO:HB3	1:B:414:PRO:O	2.20	0.42
1:C:914:ILE:O	1:C:917:ILE:HG22	2.20	0.42
2:G:48:TRP:HZ2	2:G:331:SER:HA	1.83	0.42
1:A:329:VAL:HG11	1:A:422:LEU:HD13	2.00	0.42
1:A:489:GLY:O	1:A:493:GLN:HG3	2.20	0.42
1:B:185:GLU:HB3	1:B:217:LEU:HD11	2.01	0.42
1:B:735:LEU:O	1:B:739:TYR:HD1	2.03	0.42
1:C:140:VAL:HA	1:C:238:ALA:HB3	2.01	0.42
1:C:246:TRP:O	1:C:246:TRP:CG	2.73	0.42
1:C:721:CYS:O	1:C:725:ILE:HG12	2.20	0.42
2:D:356:PHE:HB3	2:D:379:ILE:HD12	2.02	0.42
1:A:540:THR:CG2	1:A:573:ASP:HB2	2.49	0.42
1:A:705:ILE:HG12	1:A:913:ALA:HB1	2.01	0.42
1:A:888:ARG:HB3	1:A:1019:GLN:HE22	1.85	0.42
1:B:23:PHE:CE2	1:B:246:TRP:HB3	2.55	0.42
1:B:129:CYS:HB3	1:B:131:PHE:CE1	2.55	0.42
1:B:139:PHE:HB2	1:B:237:THR:CB	2.50	0.42
1:B:360:THR:HG23	5:B:1302:NAG:O3	2.20	0.42
1:B:443:SER:OG	1:B:480:ASN:ND2	2.53	0.42
1:B:546:PHE:CE1	1:B:571:ILE:HG21	2.55	0.42
2:D:44:SER:HB3	2:D:351:LEU:HG	2.02	0.42
2:D:199:TYR:HB3	2:D:464:PHE:CD2	2.55	0.42
1:A:1011:LYS:HE2	1:A:1025:PHE:O	2.19	0.41
1:B:49:ARG:HH22	1:B:54:HIS:CE1	2.38	0.41
1:B:733:ALA:HA	1:B:736:LEU:HB2	2.01	0.41
1:C:441:TYR:CD1	1:C:443:SER:HB3	2.54	0.41
1:C:544:LYS:HA	1:C:544:LYS:HD3	1.92	0.41
2:D:177:ARG:HD2	2:D:177:ARG:HA	1.86	0.41
2:D:188:ASN:HD21	2:D:464:PHE:HA	1.84	0.41
2:D:229:THR:HG23	2:D:516:TYR:OH	2.20	0.41
2:G:37:GLU:HA	2:G:390:PHE:CE1	2.55	0.41
2:G:54:ILE:HG13	2:G:342:ALA:HA	2.02	0.41
2:G:244:VAL:HG23	2:G:262:LEU:HD11	2.02	0.41
2:G:439:LEU:HD21	2:G:540:HIS:CD2	2.55	0.41
2:G:474:MET:HE1	2:G:497:TYR:CB	2.50	0.41
2:G:533:ALA:O	2:G:534:LYS:HG3	2.20	0.41
1:A:553:GLY:O	1:A:560:THR:HA	2.20	0.41
1:B:94:GLU:HG3	1:B:97:ASN:HA	2.02	0.41
1:B:562:SER:HB3	1:B:571:ILE:HG22	2.01	0.41
1:B:749:ALA:O	1:B:753:ILE:HG13	2.20	0.41
1:C:42:TYR:HA	1:C:217:LEU:H	1.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:455:ASP:OD1	1:C:455:ASP:N	2.53	0.41
1:C:917:ILE:HD12	1:C:917:ILE:HA	1.90	0.41
1:C:973:GLU:HA	1:C:976:ILE:CG1	2.47	0.41
2:D:107:VAL:O	2:D:107:VAL:HG13	2.20	0.41
2:D:127:TYR:CE2	2:D:504:PHE:HA	2.56	0.41
2:D:314:PHE:HE2	2:D:408:MET:HB3	1.86	0.41
2:D:591:LEU:O	2:D:595:LEU:HD23	2.20	0.41
2:G:48:TRP:CZ2	2:G:331:SER:HA	2.55	0.41
2:G:180:TYR:HA	2:G:183:TYR:HB3	2.03	0.41
2:G:407:ILE:HD11	2:G:525:PHE:HB2	2.02	0.41
1:A:90:PHE:O	1:A:185:GLU:HA	2.21	0.41
1:A:349:CYS:SG	1:A:511:VAL:HG22	2.60	0.41
1:C:94:GLU:HA	1:C:180:PHE:CD1	2.55	0.41
1:C:409:TYR:CD1	1:C:445:ARG:HB3	2.55	0.41
2:D:32:PHE:CG	2:D:100:LEU:HD21	2.55	0.41
2:G:529:LEU:HG	2:G:550:ALA:HB1	2.02	0.41
1:A:63:PHE:N	1:A:278:ASP:OD2	2.34	0.41
1:A:121:SER:OG	1:A:122:THR:N	2.53	0.41
1:A:138:PHE:CE2	1:A:140:VAL:HG22	2.56	0.41
1:A:272:THR:O	1:A:274:THR:HG23	2.20	0.41
1:A:299:GLY:HA2	1:A:651:ILE:HD13	2.01	0.41
1:B:411:TYR:HE2	1:B:499:VAL:HG21	1.85	0.41
1:B:549:PHE:CE2	1:B:550:GLN:HG3	2.56	0.41
1:B:1013:SER:O	1:B:1017:LEU:HB2	2.20	0.41
1:C:78:ASP:C	1:C:80:PRO:HD3	2.40	0.41
1:C:95:LYS:HD3	1:C:179:ASN:O	2.20	0.41
1:C:312:LYS:O	1:C:526:VAL:HB	2.20	0.41
1:C:325:PRO:HD2	1:C:346:ILE:CG2	2.49	0.41
2:D:90:ASN:OD1	2:D:91:LEU:N	2.54	0.41
2:G:378:HIS:CE1	2:G:405:GLY:HA3	2.56	0.41
2:G:381:TYR:CD1	2:G:558:LEU:HD12	2.53	0.41
1:A:852:MET:HG2	1:C:682:LEU:HD11	2.01	0.41
1:A:976:ILE:O	1:A:980:ILE:HG13	2.20	0.41
1:B:426:THR:HG21	1:B:496:ARG:HD2	2.02	0.41
1:C:116:ILE:O	1:C:126:ILE:HA	2.21	0.41
1:C:539:LEU:HD12	1:C:572:LEU:HD23	2.03	0.41
2:G:84:PRO:HG2	2:G:87:GLU:OE2	2.21	0.41
1:B:741:SER:O	1:B:745:GLN:NE2	2.53	0.41
1:C:916:GLN:O	1:C:919:GLU:HG3	2.21	0.41
1:C:1087:ILE:HG22	1:C:1096:GLN:HB2	2.03	0.41
2:D:269:ASP:OD1	2:D:269:ASP:N	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:458:LYS:O	2:D:462:MET:HG2	2.20	0.41
1:A:923:THR:HG23	1:A:925:SER:H	1.85	0.41
1:B:324:CYS:HB3	1:B:326:PHE:CD2	2.56	0.41
1:B:414:PRO:O	1:B:417:PHE:HB3	2.20	0.41
1:B:432:THR:O	1:B:485:TYR:HA	2.21	0.41
1:B:917:ILE:HD12	1:B:917:ILE:HA	1.81	0.41
1:C:85:LYS:HD3	1:C:257:TYR:CE2	2.56	0.41
1:C:375:LEU:HD23	1:C:375:LEU:HA	1.93	0.41
1:C:519:ASP:OD1	1:C:519:ASP:N	2.54	0.41
1:C:643:VAL:HG12	1:C:645:THR:H	1.86	0.41
1:C:710:MET:HE1	1:C:1011:LYS:HG3	2.01	0.41
1:C:774:THR:HA	1:C:775:PRO:HD3	1.94	0.41
1:C:952:ASN:C	1:C:953:PHE:HD2	2.24	0.41
1:C:1074:ARG:NH1	1:C:1102:ASN:HA	2.36	0.41
1:C:1083:THR:HG21	3:T:1:NAG:H3	2.03	0.41
1:A:267:TYR:HB3	1:A:271:GLY:HA2	2.03	0.41
1:A:314:VAL:HA	1:A:518:THR:OG1	2.20	0.41
1:A:351:ALA:HB1	1:A:375:LEU:HD23	2.02	0.41
1:A:579:PHE:CE2	1:B:840:GLY:HA2	2.55	0.41
1:B:40:GLY:HA3	1:B:61:LEU:HB3	2.03	0.41
1:B:117:ILE:HG23	1:B:117:ILE:O	2.20	0.41
1:B:410:ASN:ND2	1:B:442:ARG:H	2.19	0.41
1:B:440:LYS:HD3	1:B:479:LEU:HG	2.02	0.41
1:B:493:GLN:HB3	1:B:494:PRO:HD2	2.02	0.41
1:B:954:GLY:H	1:C:738:GLN:NE2	2.19	0.41
1:C:48:PHE:CE2	1:C:271:GLY:HA3	2.56	0.41
1:C:298:LYS:O	1:C:301:TYR:OH	2.30	0.41
1:C:554:ARG:NH1	1:C:558:ASP:HA	2.36	0.41
2:D:111:ASP:O	2:D:114:LYS:HG3	2.21	0.41
1:A:200:GLY:N	1:A:217:LEU:HD22	2.36	0.41
1:A:306:PHE:CZ	1:A:607:VAL:HG23	2.56	0.41
1:A:529:ASN:HA	1:A:533:LEU:O	2.21	0.41
1:A:710:MET:HE1	1:A:1008:ALA:HA	2.03	0.41
1:B:95:LYS:HD2	1:B:175:GLU:OE2	2.21	0.41
1:B:198:TYR:CD1	1:B:219:PRO:HA	2.56	0.41
1:B:214:PHE:HZ	1:B:273:ILE:HG22	1.86	0.41
1:B:353:TYR:HB2	1:B:375:LEU:HD22	2.03	0.41
1:B:542:SER:HB2	1:B:573:ASP:N	2.35	0.41
1:B:780:PHE:CE2	1:B:785:PHE:HD2	2.39	0.41
1:B:879:ILE:HG22	1:B:880:PRO:O	2.21	0.41
2:D:20:THR:O	2:D:23:GLU:HG3	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:151:ILE:HG23	2:D:155:SER:HB2	2.02	0.41
2:D:204:ARG:HD2	2:D:219:ARG:O	2.21	0.41
2:D:267:LEU:HD22	2:D:275:TRP:CZ2	2.56	0.41
2:D:479:GLU:O	2:D:482:ARG:HB2	2.21	0.41
2:D:481:LYS:O	2:D:486:GLY:N	2.54	0.41
2:G:125:THR:O	2:G:129:THR:HG22	2.20	0.41
2:G:468:ILE:HG22	2:G:469:PRO:O	2.21	0.41
2:G:591:LEU:O	2:G:595:LEU:HD23	2.20	0.41
1:A:20:CYS:HB2	1:A:152:TYR:CD2	2.55	0.41
1:A:115:VAL:HA	1:A:128:ALA:HA	2.02	0.41
1:A:306:PHE:CZ	1:A:608:PRO:HD2	2.46	0.41
1:A:1073:PRO:HB3	1:A:1078:PHE:CE1	2.57	0.41
1:C:424:TRP:HH2	1:C:498:VAL:HG23	1.86	0.41
1:C:441:TYR:O	1:C:479:LEU:HA	2.21	0.41
2:D:44:SER:CB	2:D:351:LEU:HG	2.51	0.41
2:D:242:ALA:HA	2:D:245:ARG:CZ	2.51	0.41
2:G:215:TYR:HB3	2:G:567:THR:OG1	2.20	0.41
2:G:471:ASP:OD1	2:G:471:ASP:N	2.50	0.41
1:A:95:LYS:HD2	1:A:176:LYS:O	2.20	0.40
1:A:375:LEU:HG	1:A:380:PHE:HE2	1.87	0.40
1:A:427:ARG:O	1:A:431:ALA:N	2.54	0.40
1:A:653:ILE:HD13	1:A:653:ILE:HA	1.81	0.40
1:A:709:VAL:CG1	1:A:931:LEU:HG	2.51	0.40
1:A:733:ALA:HA	1:A:736:LEU:HB3	2.03	0.40
1:A:887:TYR:HB2	1:C:1090:ARG:NH2	2.37	0.40
1:B:785:PHE:CD1	1:B:788:ILE:HD11	2.56	0.40
1:B:791:ASP:HB2	1:B:794:LYS:HD2	2.03	0.40
1:C:663:THR:HG22	1:C:673:LYS:HG2	2.03	0.40
1:C:710:MET:HA	1:C:711:PRO:HD3	1.97	0.40
2:D:198:ASP:OD1	2:D:201:ASP:N	2.53	0.40
2:D:538:PRO:HB2	2:D:540:HIS:ND1	2.35	0.40
2:D:581:VAL:HG22	2:D:584:LEU:HB3	2.03	0.40
1:A:343:ARG:HD3	1:A:384:TYR:CD2	2.56	0.40
1:A:742:PHE:CD2	1:A:984:LEU:HD21	2.57	0.40
1:A:1050:TYR:HE2	1:A:1052:PRO:HG3	1.86	0.40
1:B:39:ARG:HB3	1:B:89:TYR:OH	2.21	0.40
1:B:68:THR:OG1	1:B:255:VAL:HB	2.21	0.40
1:B:102:TRP:HB3	1:B:232:PHE:CE1	2.57	0.40
1:B:682:LEU:HD22	1:C:856:TYR:CE2	2.56	0.40
1:B:737:LEU:HD12	1:B:737:LEU:HA	1.93	0.40
1:B:760:ASN:HD21	1:B:1002:ARG:HG3	1.86	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:370:VAL:HG21	1:C:502:PHE:HZ	1.85	0.40
1:C:693:ASN:C	1:C:1060:THR:HG22	2.41	0.40
1:C:1012:MET:HG2	1:C:1045:PHE:HZ	1.87	0.40
2:D:132:VAL:O	2:D:141:CYS:HA	2.21	0.40
2:D:435:GLU:O	2:D:439:LEU:HD23	2.21	0.40
2:G:535:HIS:NE2	2:G:538:PRO:O	2.48	0.40
1:A:348:ASN:HA	1:A:510:THR:O	2.21	0.40
1:A:353:TYR:CE2	1:A:355:VAL:HG23	2.56	0.40
1:A:370:VAL:HG11	1:A:502:PHE:CZ	2.56	0.40
1:A:529:ASN:HD22	1:A:534:THR:HB	1.86	0.40
1:A:587:PRO:HG3	1:A:661:TYR:HB2	2.02	0.40
1:A:897:ASN:OD1	1:A:898:VAL:N	2.55	0.40
1:A:952:ASN:ND2	1:A:955:ALA:O	2.54	0.40
1:A:972:ALA:O	1:A:976:ILE:HG13	2.22	0.40
1:A:992:THR:O	1:A:996:ILE:HG12	2.22	0.40
1:A:1093:PHE:CE1	1:A:1095:PRO:HG3	2.56	0.40
1:B:439:TYR:HD2	1:B:484:PHE:CE2	2.38	0.40
1:B:632:THR:HG23	1:B:634:ALA:H	1.85	0.40
1:C:123:ASN:N	1:C:123:ASN:OD1	2.53	0.40
1:C:461:PHE:N	1:C:476:TYR:O	2.54	0.40
1:C:542:SER:HA	1:C:573:ASP:OD2	2.21	0.40
2:G:28:PHE:HE2	2:G:80:ALA:HB2	1.86	0.40
2:G:402:GLU:CG	2:G:518:ARG:HG3	2.50	0.40
1:A:48:PHE:CE1	1:A:50:SER:HB2	2.57	0.40
1:A:71:ILE:HA	1:A:252:ALA:HA	2.04	0.40
1:A:452:PHE:CE1	1:A:501:SER:HB2	2.57	0.40
1:A:522:LYS:NZ	1:A:572:LEU:HD22	2.37	0.40
1:A:540:THR:HG23	1:A:573:ASP:HB2	2.04	0.40
1:A:579:PHE:O	1:A:579:PHE:CD2	2.75	0.40
1:B:113:GLN:HE22	1:B:129:CYS:N	2.19	0.40
1:B:316:ARG:HD2	1:B:567:LYS:NZ	2.35	0.40
1:B:417:PHE:CZ	1:B:419:GLY:HA3	2.56	0.40
1:B:914:ILE:O	1:B:917:ILE:HG22	2.21	0.40
1:C:59:HIS:CD2	1:C:260:PRO:HB3	2.56	0.40
1:C:326:PHE:CE1	1:C:351:ALA:HA	2.57	0.40
1:C:412:LYS:O	1:C:413:LEU:HD23	2.21	0.40
2:D:557:MET:CG	2:D:569:ALA:HB1	2.51	0.40
2:G:293:VAL:HG21	2:G:418:LEU:HD11	2.02	0.40
1:A:77:PHE:HE1	1:A:236:LEU:HB2	1.86	0.40
1:A:140:VAL:O	1:A:149:ILE:N	2.35	0.40
1:A:970:PRO:O	1:A:973:GLU:HB2	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:42:TYR:CD1	1:B:187:VAL:HG21	2.57	0.40
1:C:538:VAL:CG2	1:C:575:SER:HB2	2.52	0.40
1:C:650:ASP:O	1:C:651:ILE:HD13	2.21	0.40
1:C:880:PRO:HD2	1:C:883:MET:SD	2.62	0.40
2:D:218:SER:HB3	2:D:221:GLN:HG3	2.04	0.40
2:G:40:PHE:HB3	2:G:390:PHE:CZ	2.57	0.40
2:G:381:TYR:HA	2:G:558:LEU:HG	2.04	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 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	A	1062/1271 (84%)	974 (92%)	87 (8%)	1 (0%)	48 83
1	B	1059/1271 (83%)	998 (94%)	60 (6%)	1 (0%)	48 83
1	C	1062/1271 (84%)	995 (94%)	67 (6%)	0	100 100
2	D	595/603 (99%)	569 (96%)	26 (4%)	0	100 100
2	G	595/603 (99%)	572 (96%)	23 (4%)	0	100 100
All	All	4373/5019 (87%)	4108 (94%)	263 (6%)	2 (0%)	100 100

All (2) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	246	TRP
1	B	315	VAL

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	A	932/1100 (85%)	928 (100%)	4 (0%)	89	90
1	B	930/1100 (84%)	928 (100%)	2 (0%)	92	93
1	C	932/1100 (85%)	927 (100%)	5 (0%)	86	89
2	D	527/533 (99%)	526 (100%)	1 (0%)	92	93
2	G	527/533 (99%)	525 (100%)	2 (0%)	89	90
All	All	3848/4366 (88%)	3834 (100%)	14 (0%)	88	90

All (14) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	155	ASN
1	A	242	ARG
1	A	545	ARG
1	A	668	ARG
1	B	189	ARG
1	B	242	ARG
1	C	136	ASN
1	C	167	LYS
1	C	316	ARG
1	C	545	ARG
1	C	1002	ARG
2	D	114	LYS
2	G	114	LYS
2	G	534	LYS

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (22) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	57	GLN
1	A	322	ASN
1	A	474	ASN
1	A	531	ASN

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Mol	Chain	Res	Type
1	A	757	GLN
1	A	787	GLN
1	A	878	GLN
1	A	975	GLN
1	A	993	GLN
1	A	1019	GLN
1	B	54	HIS
1	B	57	GLN
1	B	113	GLN
1	B	488	ASN
1	B	662	HIS
1	B	734	ASN
1	B	757	GLN
1	B	1102	ASN
1	C	59	HIS
1	C	1066	HIS
2	G	265	HIS
2	G	401	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](#)

35 monosaccharides are modelled in this entry.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\# Z > 2$	Counts	RMSZ	$\# Z > 2$
3	NAG	E	1	3,1	14,14,15	0.33	0	17,19,21	0.38	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
3	NAG	E	2	3	14,14,15	0.26	0	17,19,21	0.42	0
3	NAG	F	1	3,1	14,14,15	0.24	0	17,19,21	0.35	0
3	NAG	F	2	3	14,14,15	0.22	0	17,19,21	0.42	0
3	NAG	H	1	3,1	14,14,15	0.24	0	17,19,21	0.43	0
3	NAG	H	2	3	14,14,15	0.39	0	17,19,21	1.24	1 (5%)
3	NAG	I	1	3,1	14,14,15	0.37	0	17,19,21	0.49	0
3	NAG	I	2	3	14,14,15	0.19	0	17,19,21	0.43	0
3	NAG	J	1	3,1	14,14,15	0.25	0	17,19,21	0.52	0
3	NAG	J	2	3	14,14,15	0.28	0	17,19,21	0.47	0
3	NAG	K	1	3,1	14,14,15	0.18	0	17,19,21	0.65	1 (5%)
3	NAG	K	2	3	14,14,15	0.19	0	17,19,21	0.39	0
3	NAG	L	1	3,1	14,14,15	0.40	0	17,19,21	1.03	1 (5%)
3	NAG	L	2	3	14,14,15	0.36	0	17,19,21	0.36	0
4	NAG	M	1	4,1	14,14,15	0.43	0	17,19,21	0.36	0
4	NAG	M	2	4	14,14,15	0.20	0	17,19,21	0.45	0
4	BMA	M	3	4	11,11,12	0.52	0	15,15,17	0.78	0
4	NAG	N	1	4,1	14,14,15	0.25	0	17,19,21	0.47	0
4	NAG	N	2	4	14,14,15	0.21	0	17,19,21	0.54	0
4	BMA	N	3	4	11,11,12	0.75	0	15,15,17	0.75	0
3	NAG	O	1	3,1	14,14,15	0.25	0	17,19,21	0.51	0
3	NAG	O	2	3	14,14,15	0.18	0	17,19,21	0.43	0
3	NAG	P	1	3,1	14,14,15	0.64	1 (7%)	17,19,21	0.63	0
3	NAG	P	2	3	14,14,15	0.30	0	17,19,21	0.47	0
3	NAG	Q	1	3,1	14,14,15	0.29	0	17,19,21	0.40	0
3	NAG	Q	2	3	14,14,15	0.17	0	17,19,21	0.43	0
3	NAG	R	1	3,1	14,14,15	0.33	0	17,19,21	0.37	0
3	NAG	R	2	3	14,14,15	0.22	0	17,19,21	0.44	0
4	NAG	S	1	4,1	14,14,15	0.40	0	17,19,21	0.53	0
4	NAG	S	2	4	14,14,15	0.26	0	17,19,21	0.39	0
4	BMA	S	3	4	11,11,12	0.53	0	15,15,17	0.82	0
3	NAG	T	1	3,1	14,14,15	0.28	0	17,19,21	0.36	0
3	NAG	T	2	3	14,14,15	0.21	0	17,19,21	0.41	0
3	NAG	U	1	3,1	14,14,15	0.18	0	17,19,21	0.49	0
3	NAG	U	2	3	14,14,15	0.22	0	17,19,21	0.43	0

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
3	NAG	E	1	3,1	-	2/6/23/26	0/1/1/1

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
3	NAG	E	2	3	-	2/6/23/26	0/1/1/1
3	NAG	F	1	3,1	-	1/6/23/26	0/1/1/1
3	NAG	F	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	-	5/6/23/26	0/1/1/1
3	NAG	I	1	3,1	-	0/6/23/26	0/1/1/1
3	NAG	I	2	3	-	0/6/23/26	0/1/1/1
3	NAG	J	1	3,1	-	0/6/23/26	0/1/1/1
3	NAG	J	2	3	-	2/6/23/26	0/1/1/1
3	NAG	K	1	3,1	-	0/6/23/26	0/1/1/1
3	NAG	K	2	3	-	2/6/23/26	0/1/1/1
3	NAG	L	1	3,1	-	2/6/23/26	0/1/1/1
3	NAG	L	2	3	-	0/6/23/26	0/1/1/1
4	NAG	M	1	4,1	-	2/6/23/26	0/1/1/1
4	NAG	M	2	4	-	2/6/23/26	0/1/1/1
4	BMA	M	3	4	-	0/2/19/22	0/1/1/1
4	NAG	N	1	4,1	-	2/6/23/26	0/1/1/1
4	NAG	N	2	4	-	2/6/23/26	0/1/1/1
4	BMA	N	3	4	-	1/2/19/22	0/1/1/1
3	NAG	O	1	3,1	-	0/6/23/26	0/1/1/1
3	NAG	O	2	3	-	1/6/23/26	0/1/1/1
3	NAG	P	1	3,1	-	0/6/23/26	0/1/1/1
3	NAG	P	2	3	-	2/6/23/26	0/1/1/1
3	NAG	Q	1	3,1	-	2/6/23/26	0/1/1/1
3	NAG	Q	2	3	-	1/6/23/26	0/1/1/1
3	NAG	R	1	3,1	-	0/6/23/26	0/1/1/1
3	NAG	R	2	3	-	2/6/23/26	0/1/1/1
4	NAG	S	1	4,1	-	2/6/23/26	0/1/1/1
4	NAG	S	2	4	-	2/6/23/26	0/1/1/1
4	BMA	S	3	4	-	0/2/19/22	0/1/1/1
3	NAG	T	1	3,1	-	2/6/23/26	0/1/1/1
3	NAG	T	2	3	-	0/6/23/26	0/1/1/1
3	NAG	U	1	3,1	-	0/6/23/26	0/1/1/1
3	NAG	U	2	3	-	0/6/23/26	0/1/1/1

All (1) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	P	1	NAG	O5-C1	-2.24	1.40	1.43

All (3) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	H	2	NAG	C2-N2-C7	4.18	128.85	122.90
3	L	1	NAG	C1-O5-C5	3.05	116.33	112.19
3	K	1	NAG	C1-O5-C5	2.24	115.22	112.19

There are no chirality outliers.

All (41) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
3	F	2	NAG	C4-C5-C6-O6
3	F	2	NAG	O5-C5-C6-O6
3	E	2	NAG	O5-C5-C6-O6
4	S	2	NAG	O5-C5-C6-O6
3	P	2	NAG	O5-C5-C6-O6
4	M	2	NAG	O5-C5-C6-O6
3	H	2	NAG	O5-C5-C6-O6
3	K	2	NAG	O5-C5-C6-O6
4	M	2	NAG	C4-C5-C6-O6
4	S	2	NAG	C4-C5-C6-O6
3	P	2	NAG	C4-C5-C6-O6
4	M	1	NAG	C4-C5-C6-O6
3	K	2	NAG	C4-C5-C6-O6
3	E	2	NAG	C4-C5-C6-O6
4	N	2	NAG	O5-C5-C6-O6
3	H	2	NAG	C8-C7-N2-C2
3	H	2	NAG	O7-C7-N2-C2
3	Q	1	NAG	C8-C7-N2-C2
3	Q	1	NAG	O7-C7-N2-C2
3	J	2	NAG	O5-C5-C6-O6
3	E	1	NAG	C4-C5-C6-O6
3	H	2	NAG	C4-C5-C6-O6
3	R	2	NAG	O5-C5-C6-O6
3	L	1	NAG	O5-C5-C6-O6
4	N	2	NAG	C4-C5-C6-O6
3	J	2	NAG	C4-C5-C6-O6
3	T	1	NAG	C4-C5-C6-O6
3	L	1	NAG	C4-C5-C6-O6
3	R	2	NAG	C4-C5-C6-O6
4	S	1	NAG	O5-C5-C6-O6
4	M	1	NAG	O5-C5-C6-O6
4	N	1	NAG	C4-C5-C6-O6
4	S	1	NAG	C4-C5-C6-O6

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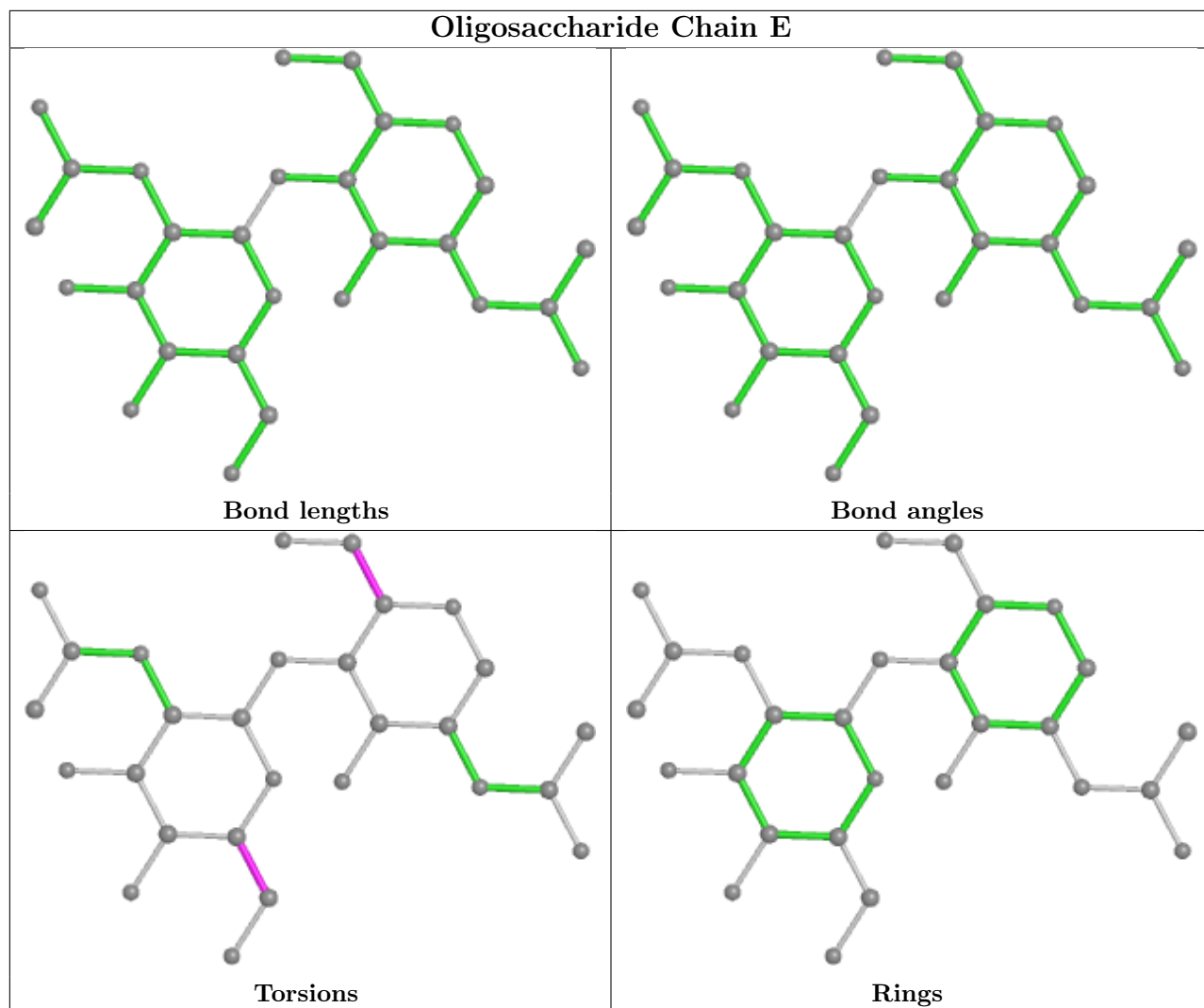
Mol	Chain	Res	Type	Atoms
3	E	1	NAG	O5-C5-C6-O6
3	T	1	NAG	O5-C5-C6-O6
4	N	3	BMA	O5-C5-C6-O6
4	N	1	NAG	O5-C5-C6-O6
3	O	2	NAG	O5-C5-C6-O6
3	Q	2	NAG	C4-C5-C6-O6
3	H	2	NAG	C3-C2-N2-C7
3	F	1	NAG	C4-C5-C6-O6

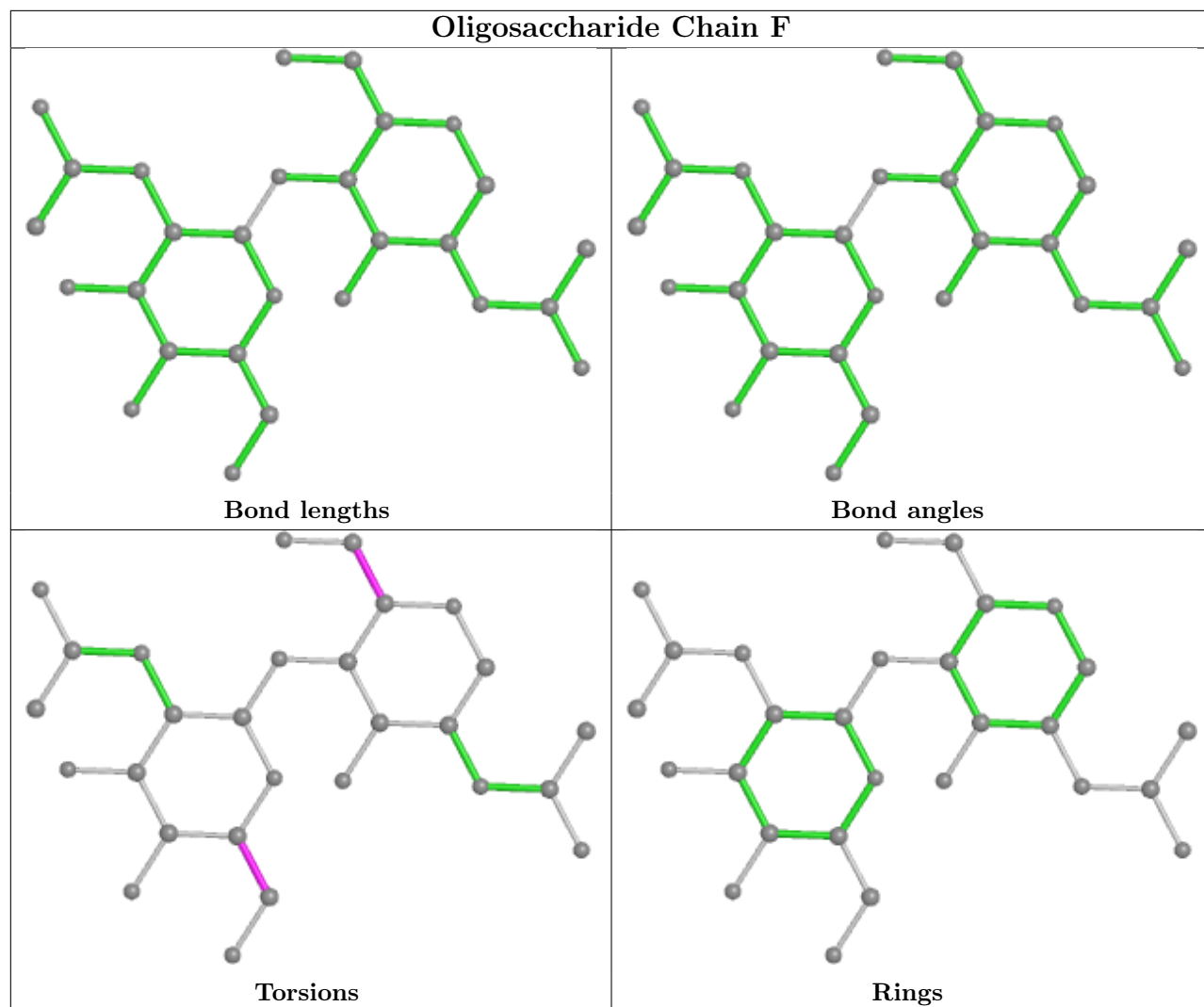
There are no ring outliers.

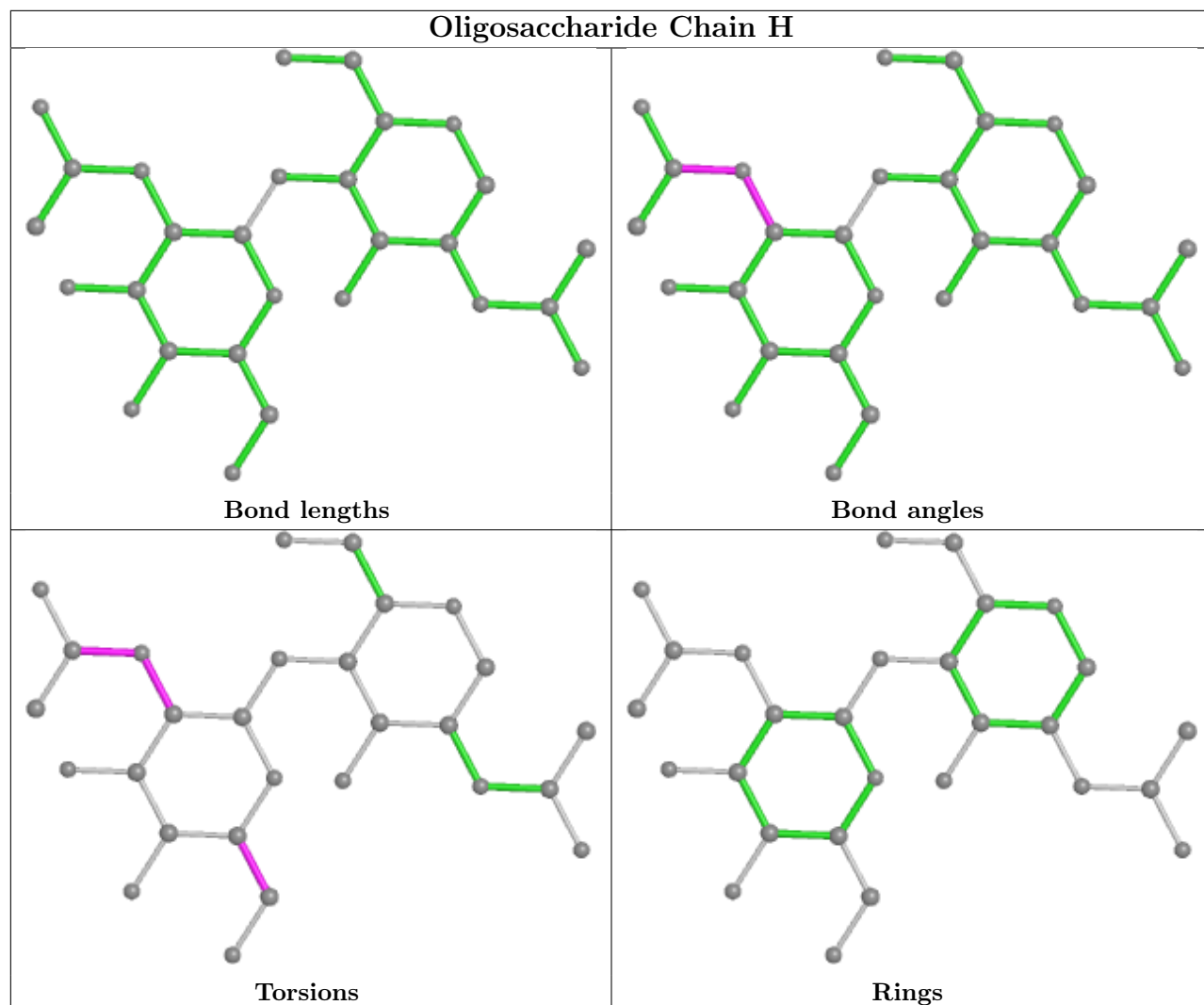
10 monomers are involved in 9 short contacts:

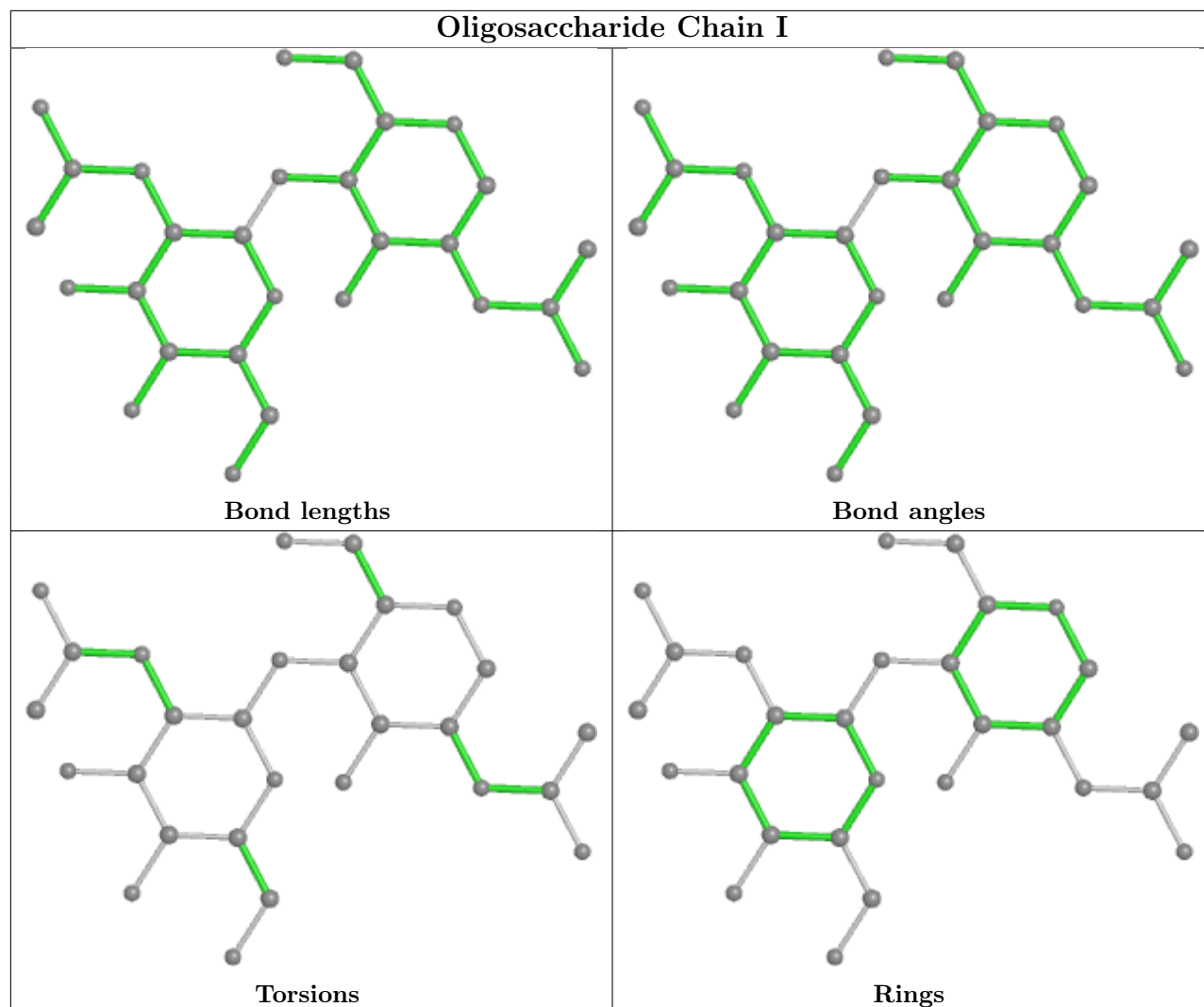
Mol	Chain	Res	Type	Clashes	Symm-Clashes
3	O	1	NAG	1	0
4	S	1	NAG	1	0
3	Q	1	NAG	1	0
3	J	2	NAG	1	0
3	J	1	NAG	2	0
3	L	1	NAG	1	0
3	L	2	NAG	1	0
3	H	2	NAG	1	0
3	P	1	NAG	1	0
3	T	1	NAG	1	0

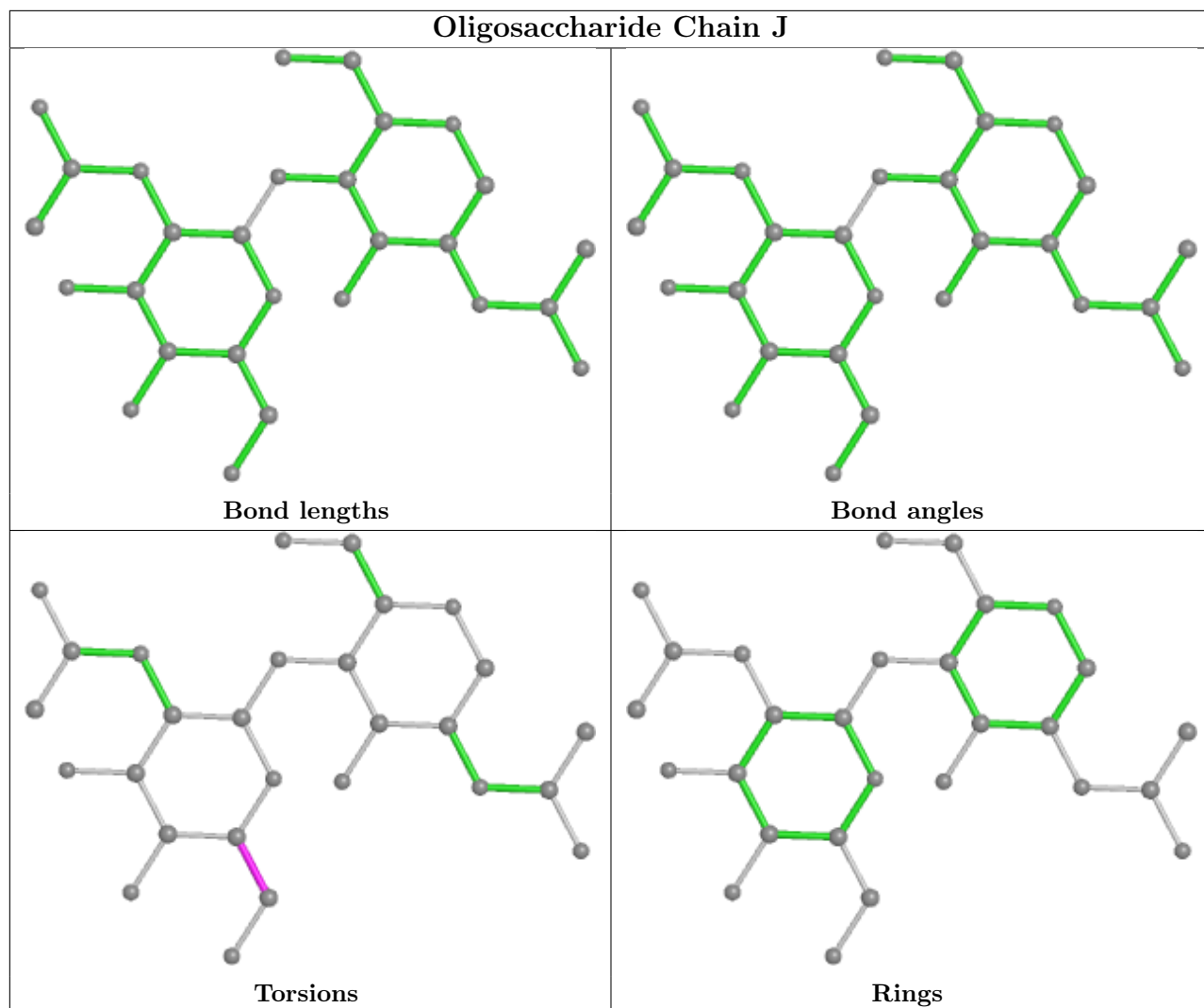
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for oligosaccharide.

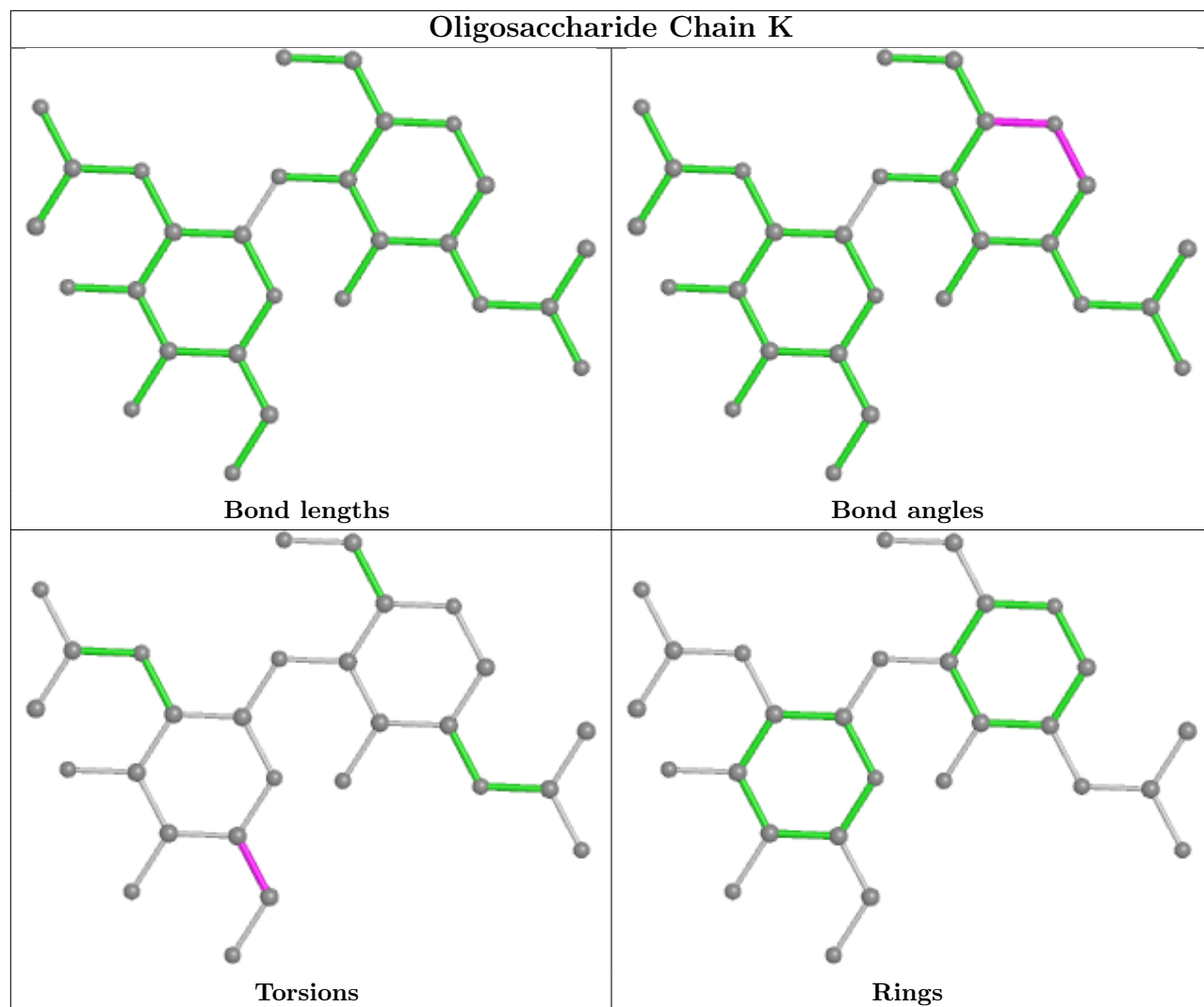


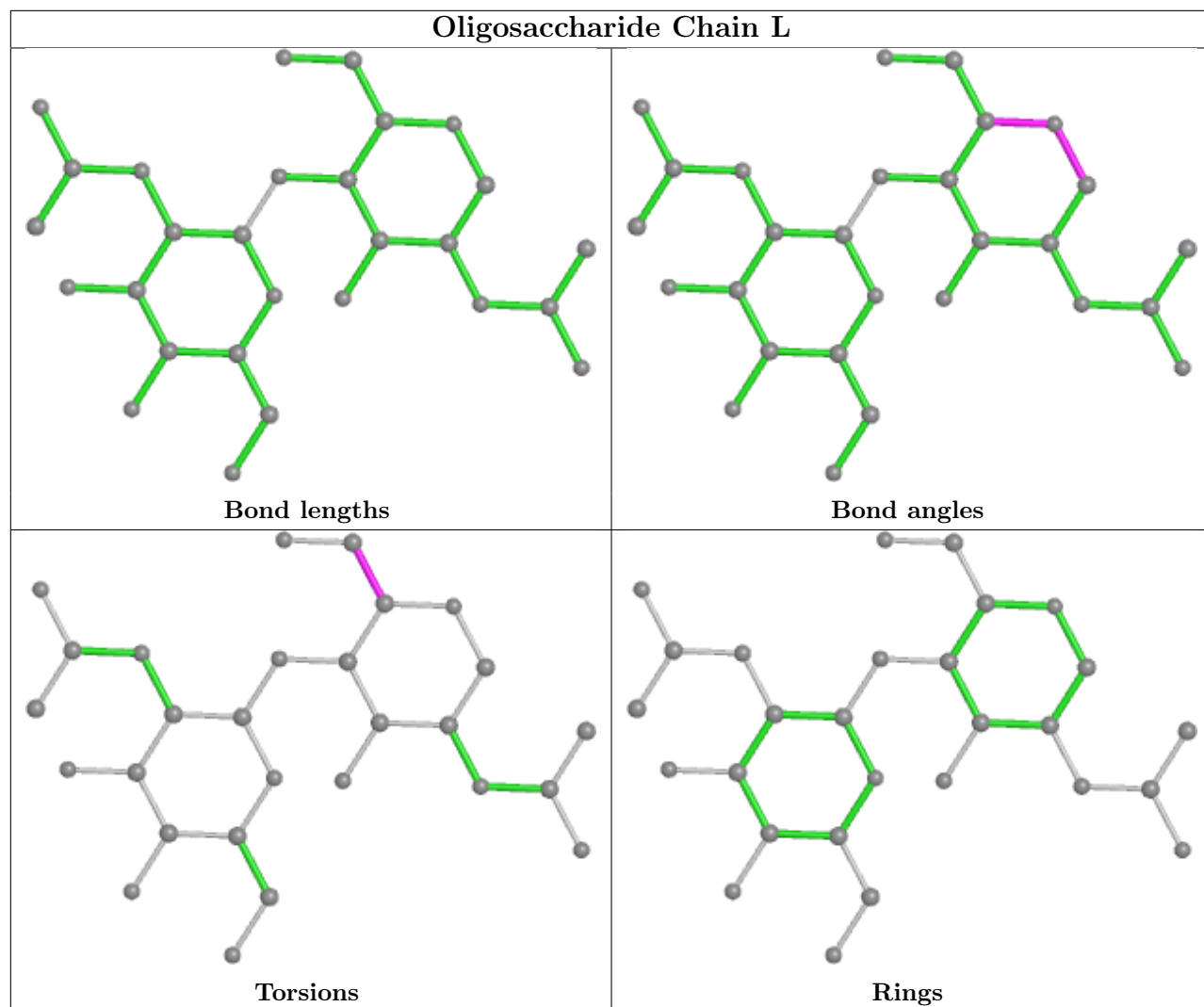


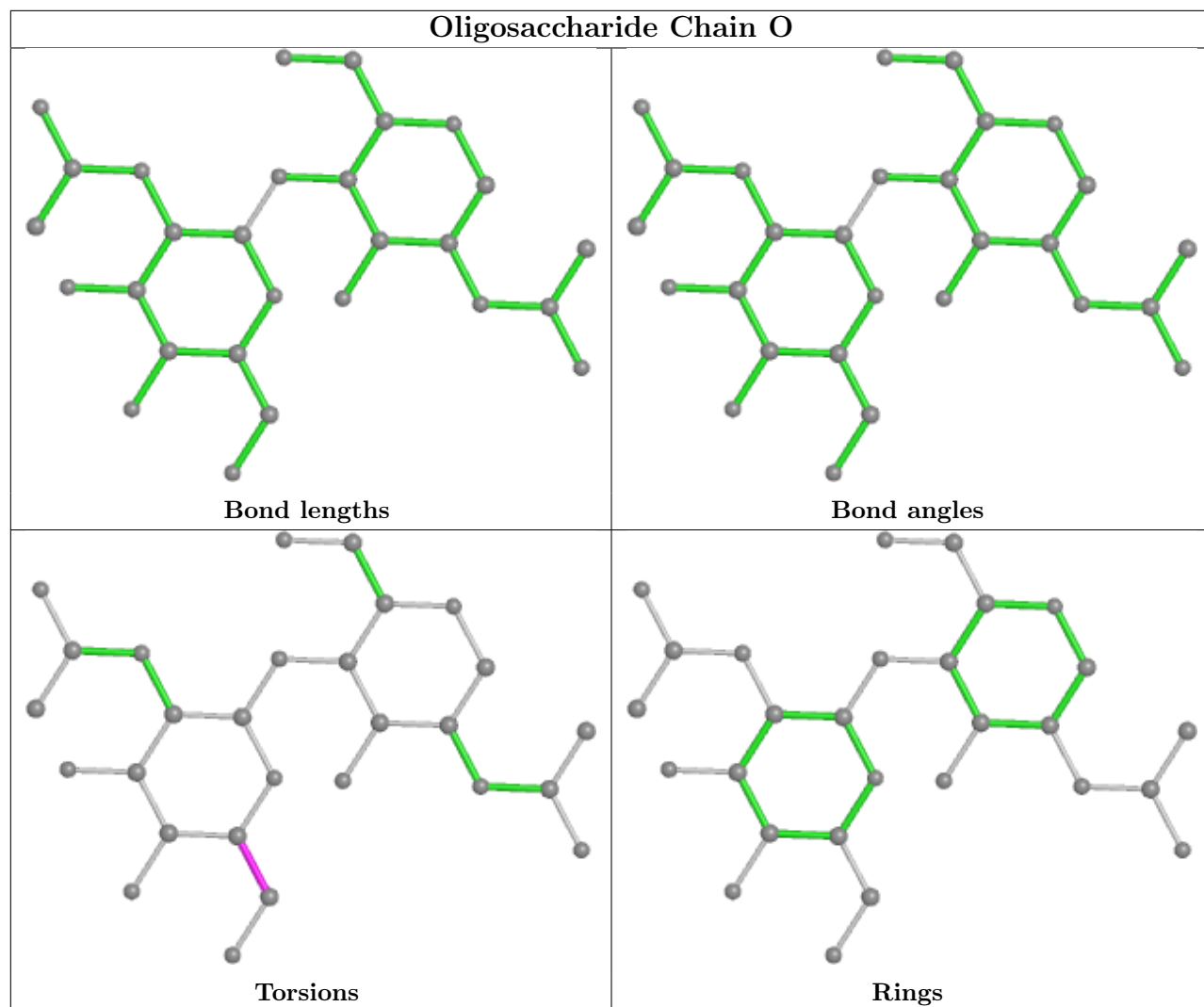


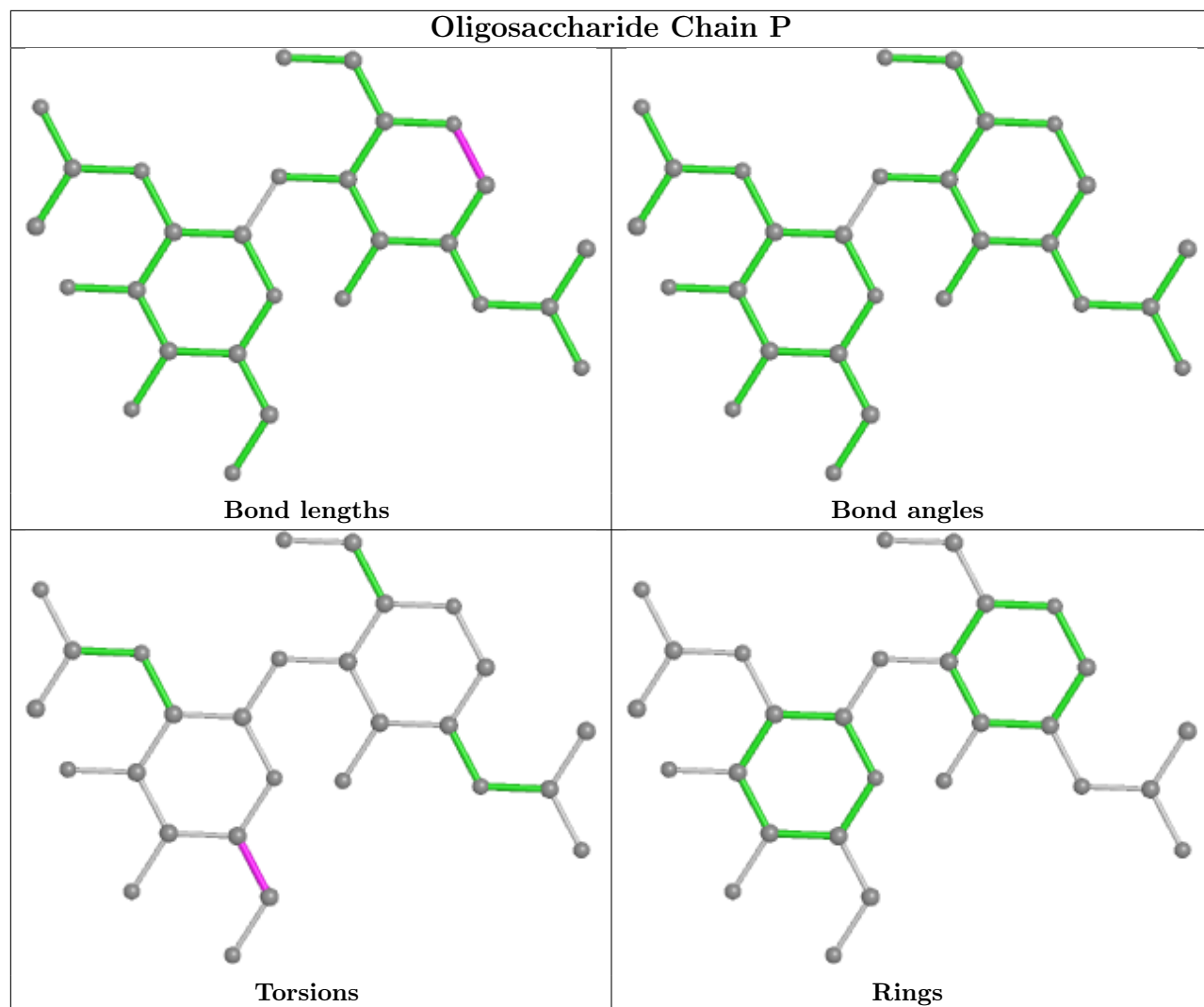


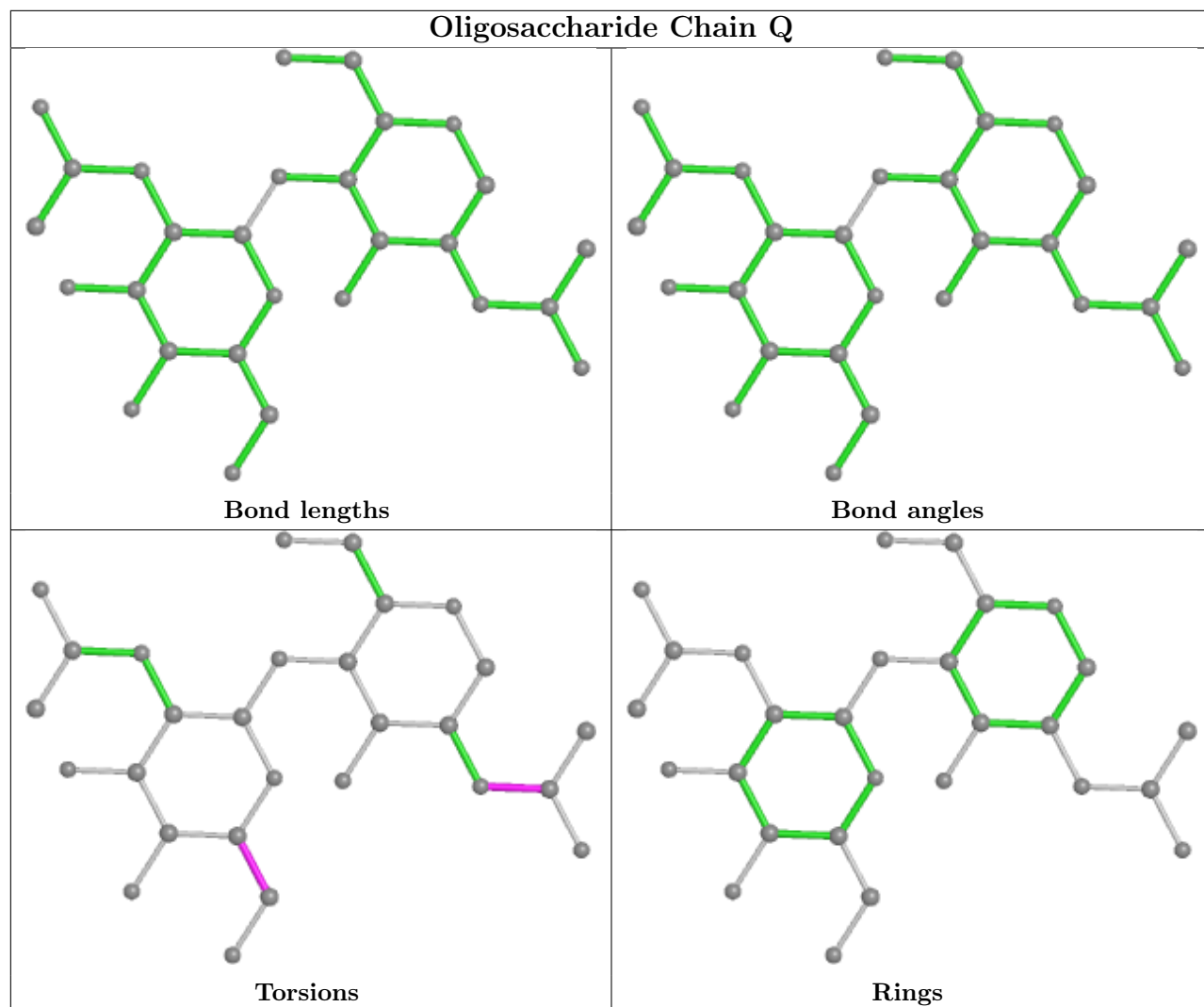


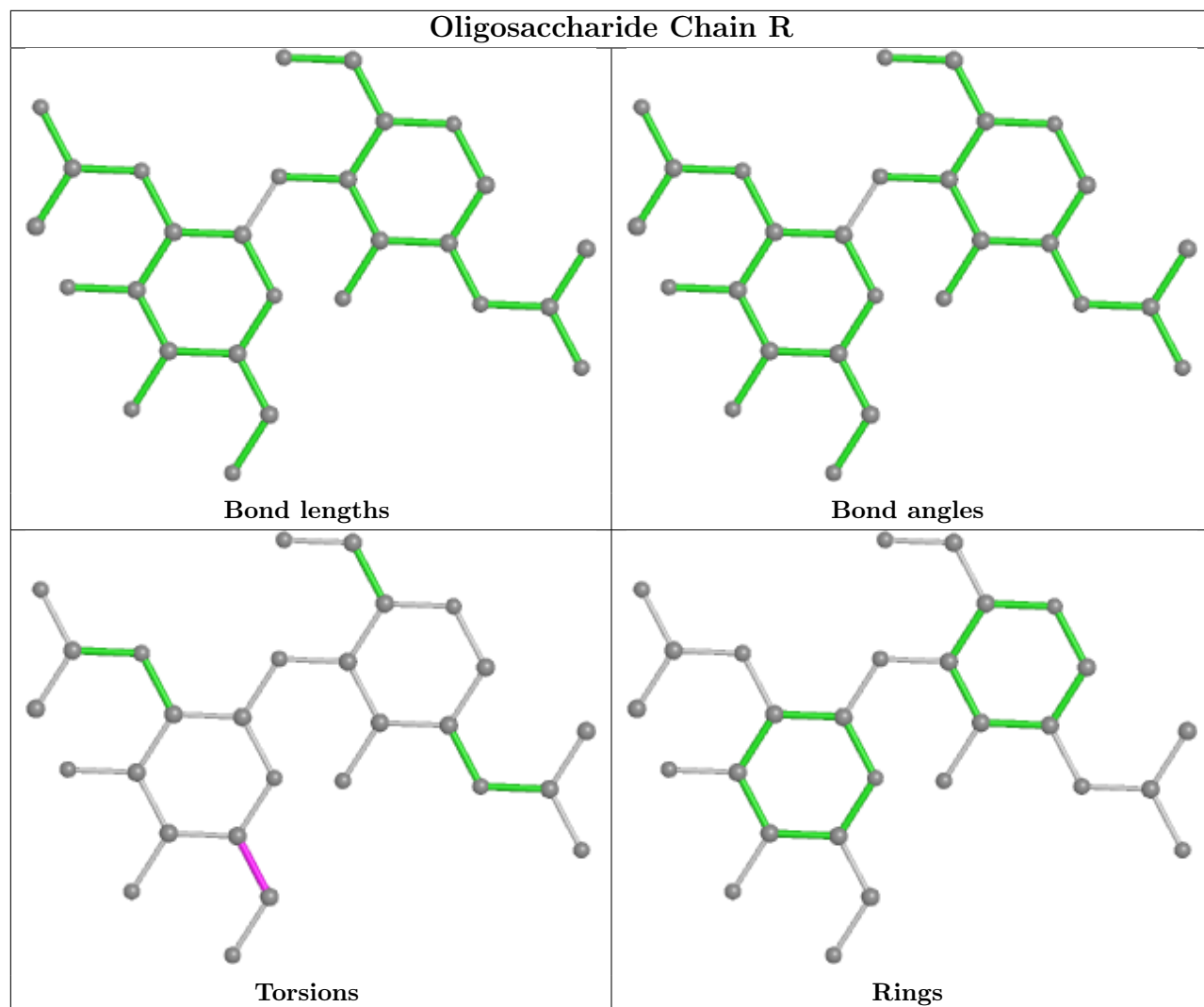


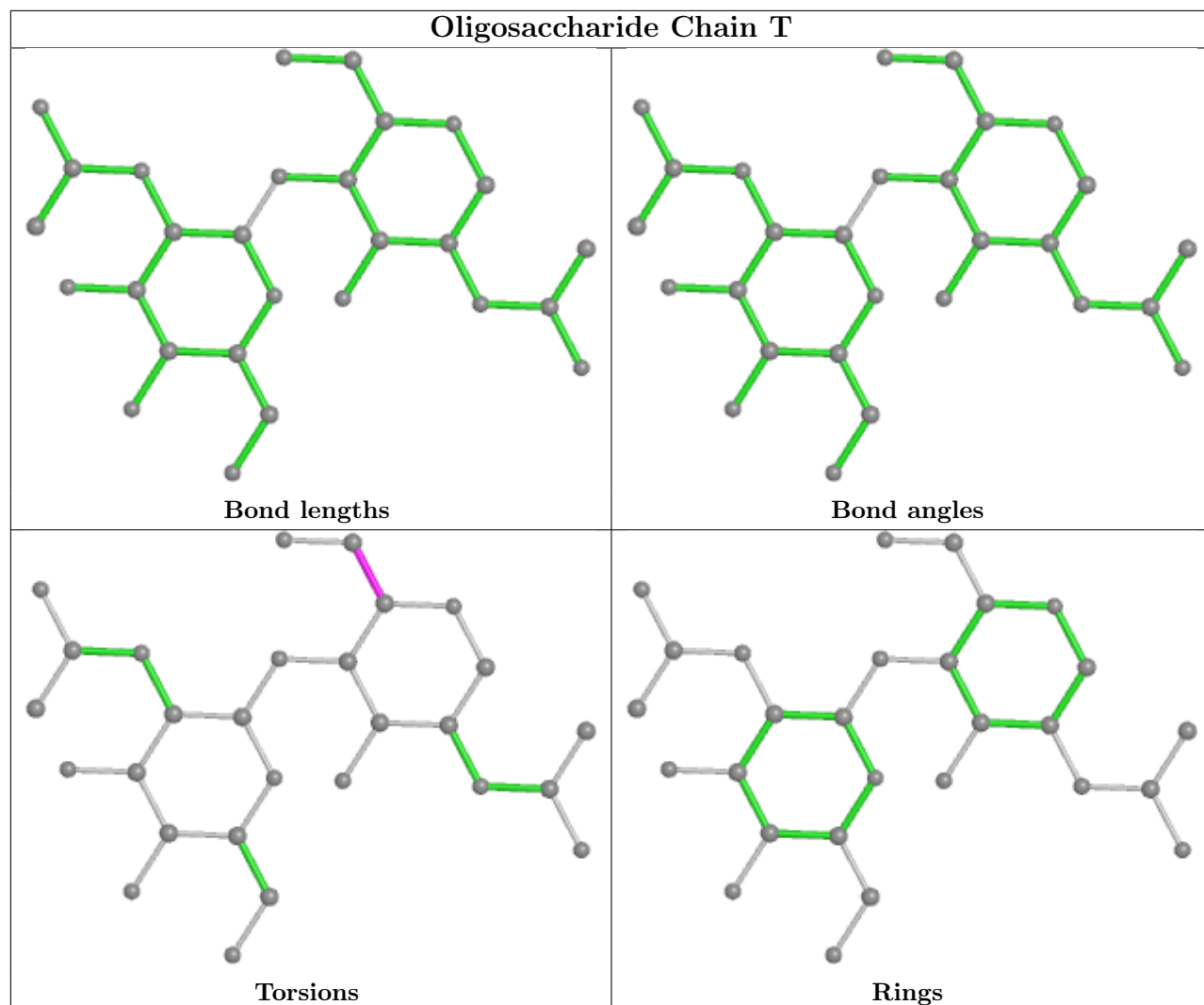


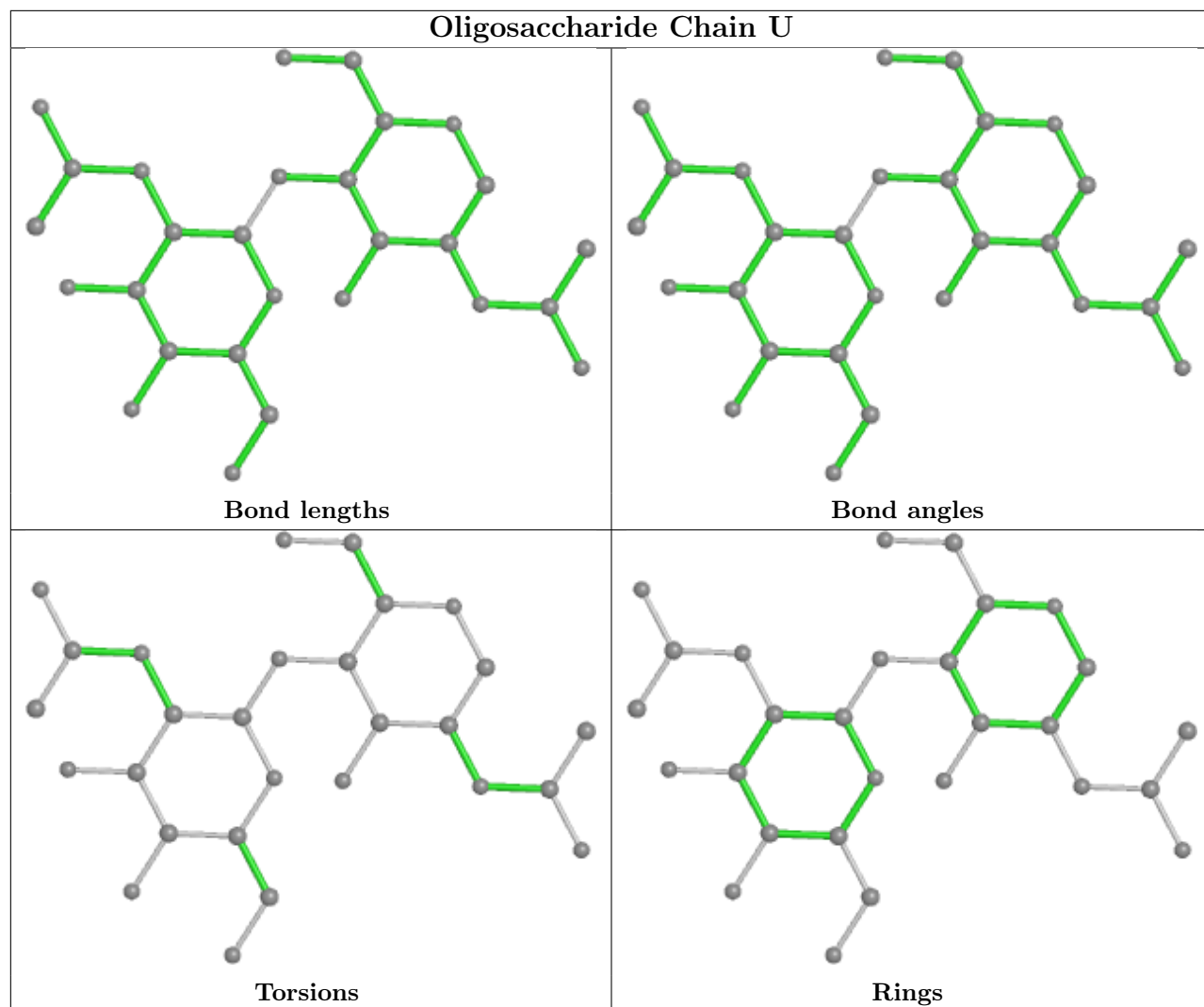


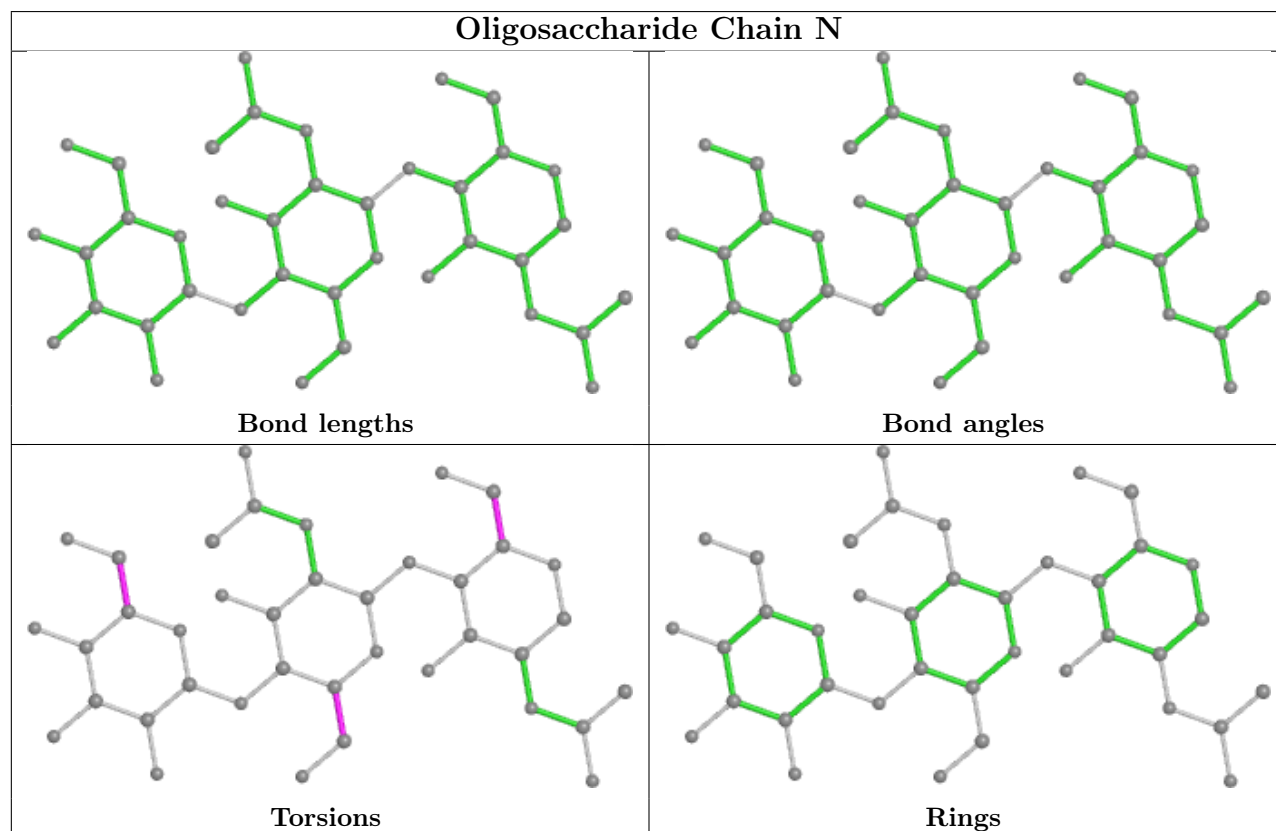
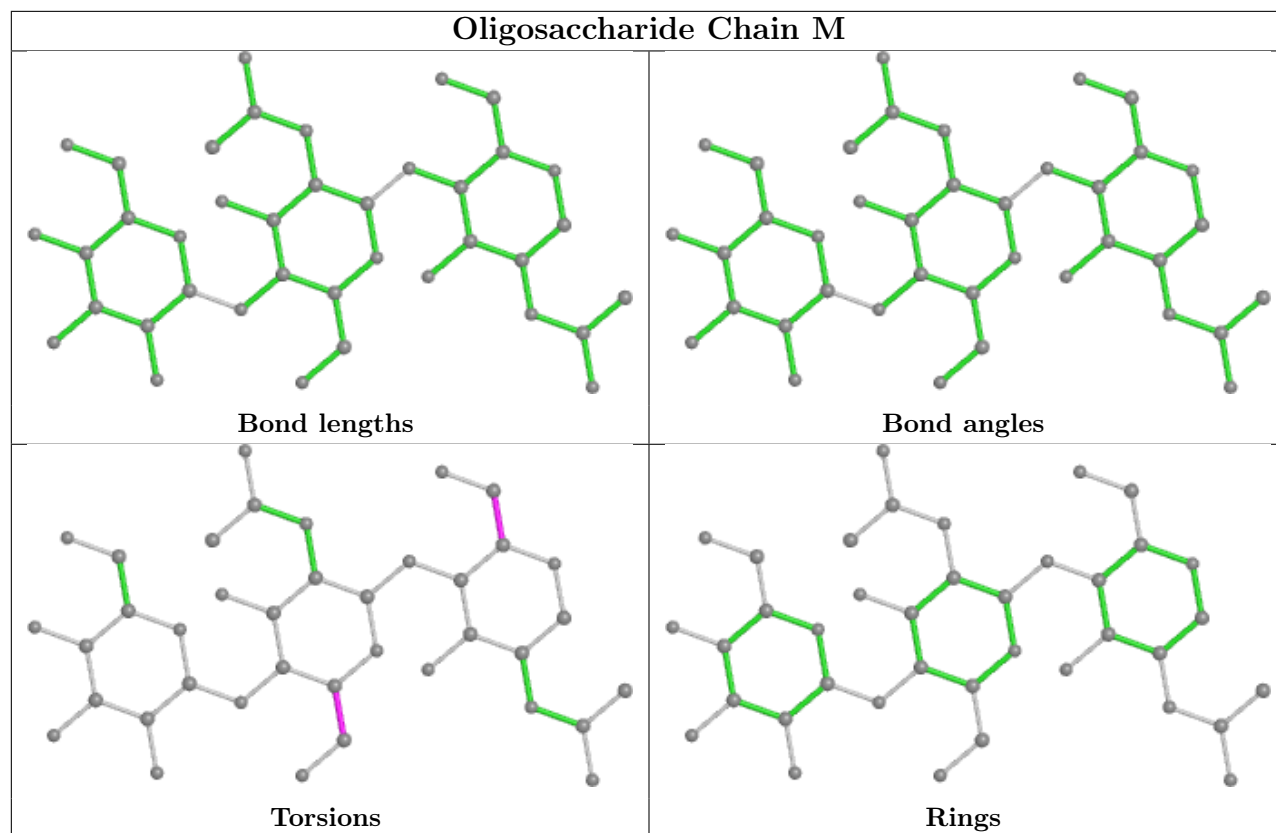


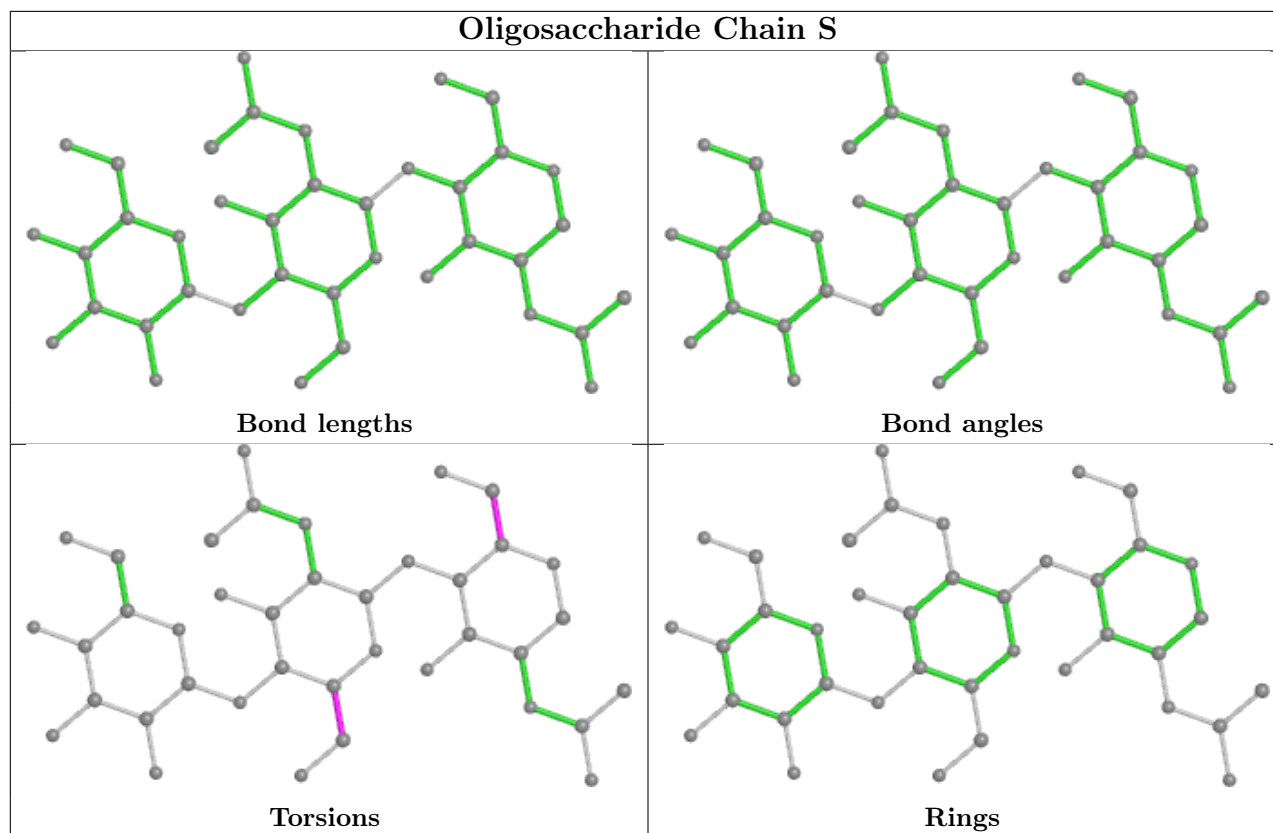












5.6 Ligand geometry [i](#)

21 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	$\# Z > 2$
5	NAG	A	1302	1	14,14,15	0.31	0	17,19,21	0.44	0
5	NAG	B	1306	1	14,14,15	0.22	0	17,19,21	0.47	0
5	NAG	B	1307	1	14,14,15	0.19	0	17,19,21	0.45	0
5	NAG	B	1301	1	14,14,15	0.19	0	17,19,21	0.41	0
5	NAG	C	1302	1	14,14,15	0.30	0	17,19,21	0.32	0
5	NAG	C	1303	1	14,14,15	0.21	0	17,19,21	0.38	0
5	NAG	C	1304	1	14,14,15	0.25	0	17,19,21	0.49	0
5	NAG	C	1301	1	14,14,15	0.24	0	17,19,21	0.43	0
5	NAG	C	1308	1	14,14,15	0.31	0	17,19,21	0.34	0
5	NAG	A	1303	1	14,14,15	0.29	0	17,19,21	0.36	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
5	NAG	B	1304	1	14,14,15	0.20	0	17,19,21	0.42	0
5	NAG	C	1307	1	14,14,15	0.60	0	17,19,21	0.43	0
5	NAG	C	1305	1	14,14,15	0.25	0	17,19,21	0.42	0
5	NAG	C	1309	1	14,14,15	0.25	0	17,19,21	0.39	0
5	NAG	B	1305	1	14,14,15	0.24	0	17,19,21	0.44	0
5	NAG	A	1304	1	14,14,15	0.23	0	17,19,21	0.44	0
5	NAG	C	1306	1	14,14,15	0.22	0	17,19,21	0.37	0
5	NAG	C	1310	1	14,14,15	0.22	0	17,19,21	0.52	0
5	NAG	A	1301	1	14,14,15	0.22	0	17,19,21	0.35	0
5	NAG	B	1303	1	14,14,15	0.22	0	17,19,21	0.59	0
5	NAG	B	1302	1	14,14,15	0.18	0	17,19,21	0.41	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
5	NAG	A	1302	1	-	2/6/23/26	0/1/1/1
5	NAG	B	1306	1	-	0/6/23/26	0/1/1/1
5	NAG	B	1307	1	-	0/6/23/26	0/1/1/1
5	NAG	B	1301	1	-	2/6/23/26	0/1/1/1
5	NAG	C	1302	1	-	2/6/23/26	0/1/1/1
5	NAG	C	1303	1	-	0/6/23/26	0/1/1/1
5	NAG	C	1304	1	-	1/6/23/26	0/1/1/1
5	NAG	C	1301	1	-	4/6/23/26	0/1/1/1
5	NAG	C	1308	1	-	4/6/23/26	0/1/1/1
5	NAG	A	1303	1	-	2/6/23/26	0/1/1/1
5	NAG	B	1304	1	-	2/6/23/26	0/1/1/1
5	NAG	C	1307	1	-	4/6/23/26	0/1/1/1
5	NAG	C	1305	1	-	2/6/23/26	0/1/1/1
5	NAG	C	1309	1	-	0/6/23/26	0/1/1/1
5	NAG	B	1305	1	-	2/6/23/26	0/1/1/1
5	NAG	A	1304	1	-	3/6/23/26	0/1/1/1
5	NAG	C	1306	1	-	3/6/23/26	0/1/1/1
5	NAG	C	1310	1	-	2/6/23/26	0/1/1/1
5	NAG	A	1301	1	-	2/6/23/26	0/1/1/1
5	NAG	B	1303	1	-	2/6/23/26	0/1/1/1
5	NAG	B	1302	1	-	4/6/23/26	0/1/1/1

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

All (43) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
5	C	1301	NAG	O5-C5-C6-O6
5	B	1304	NAG	C4-C5-C6-O6
5	B	1305	NAG	O5-C5-C6-O6
5	B	1302	NAG	C4-C5-C6-O6
5	A	1302	NAG	O5-C5-C6-O6
5	B	1301	NAG	C4-C5-C6-O6
5	C	1308	NAG	C4-C5-C6-O6
5	C	1301	NAG	C4-C5-C6-O6
5	B	1304	NAG	O5-C5-C6-O6
5	A	1303	NAG	C4-C5-C6-O6
5	A	1302	NAG	C4-C5-C6-O6
5	B	1305	NAG	C4-C5-C6-O6
5	A	1301	NAG	C8-C7-N2-C2
5	A	1301	NAG	O7-C7-N2-C2
5	A	1304	NAG	C8-C7-N2-C2
5	A	1304	NAG	O7-C7-N2-C2
5	B	1302	NAG	C8-C7-N2-C2
5	B	1302	NAG	O7-C7-N2-C2
5	C	1301	NAG	C8-C7-N2-C2
5	C	1301	NAG	O7-C7-N2-C2
5	C	1308	NAG	C8-C7-N2-C2
5	C	1308	NAG	O7-C7-N2-C2
5	A	1303	NAG	O5-C5-C6-O6
5	B	1302	NAG	O5-C5-C6-O6
5	C	1307	NAG	O5-C5-C6-O6
5	C	1305	NAG	O5-C5-C6-O6
5	C	1308	NAG	O5-C5-C6-O6
5	B	1301	NAG	O5-C5-C6-O6
5	C	1305	NAG	C4-C5-C6-O6
5	C	1310	NAG	C4-C5-C6-O6
5	C	1307	NAG	C1-C2-N2-C7
5	C	1302	NAG	O5-C5-C6-O6
5	C	1307	NAG	C4-C5-C6-O6
5	C	1310	NAG	O5-C5-C6-O6
5	B	1303	NAG	C4-C5-C6-O6
5	C	1306	NAG	C4-C5-C6-O6
5	B	1303	NAG	O5-C5-C6-O6

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Mol	Chain	Res	Type	Atoms
5	C	1306	NAG	O5-C5-C6-O6
5	C	1304	NAG	C3-C2-N2-C7
5	C	1307	NAG	C3-C2-N2-C7
5	C	1306	NAG	C1-C2-N2-C7
5	C	1302	NAG	C4-C5-C6-O6
5	A	1304	NAG	C4-C5-C6-O6

There are no ring outliers.

4 monomers are involved in 6 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
5	C	1302	NAG	1	0
5	C	1304	NAG	1	0
5	C	1309	NAG	2	0
5	B	1302	NAG	2	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.