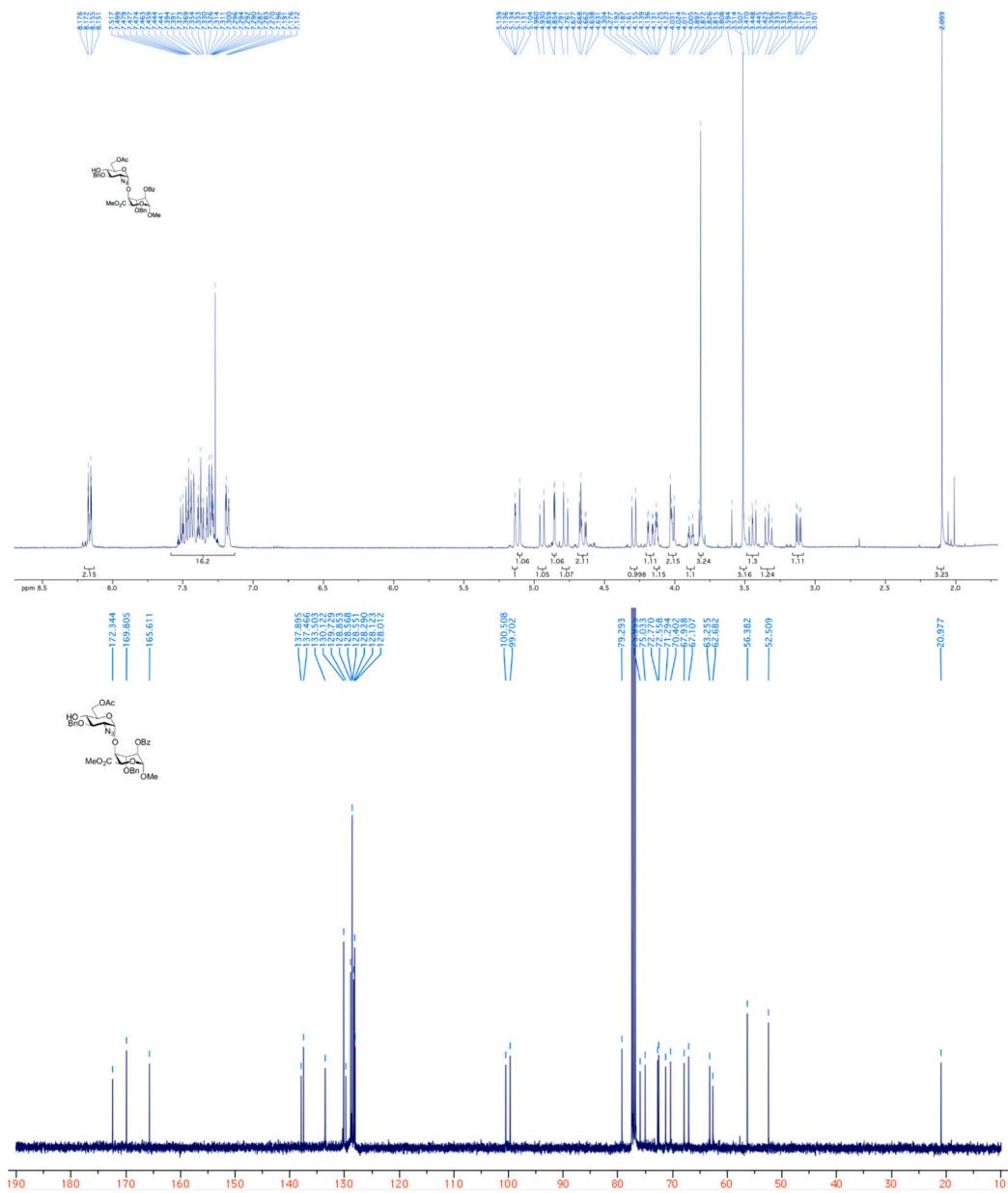
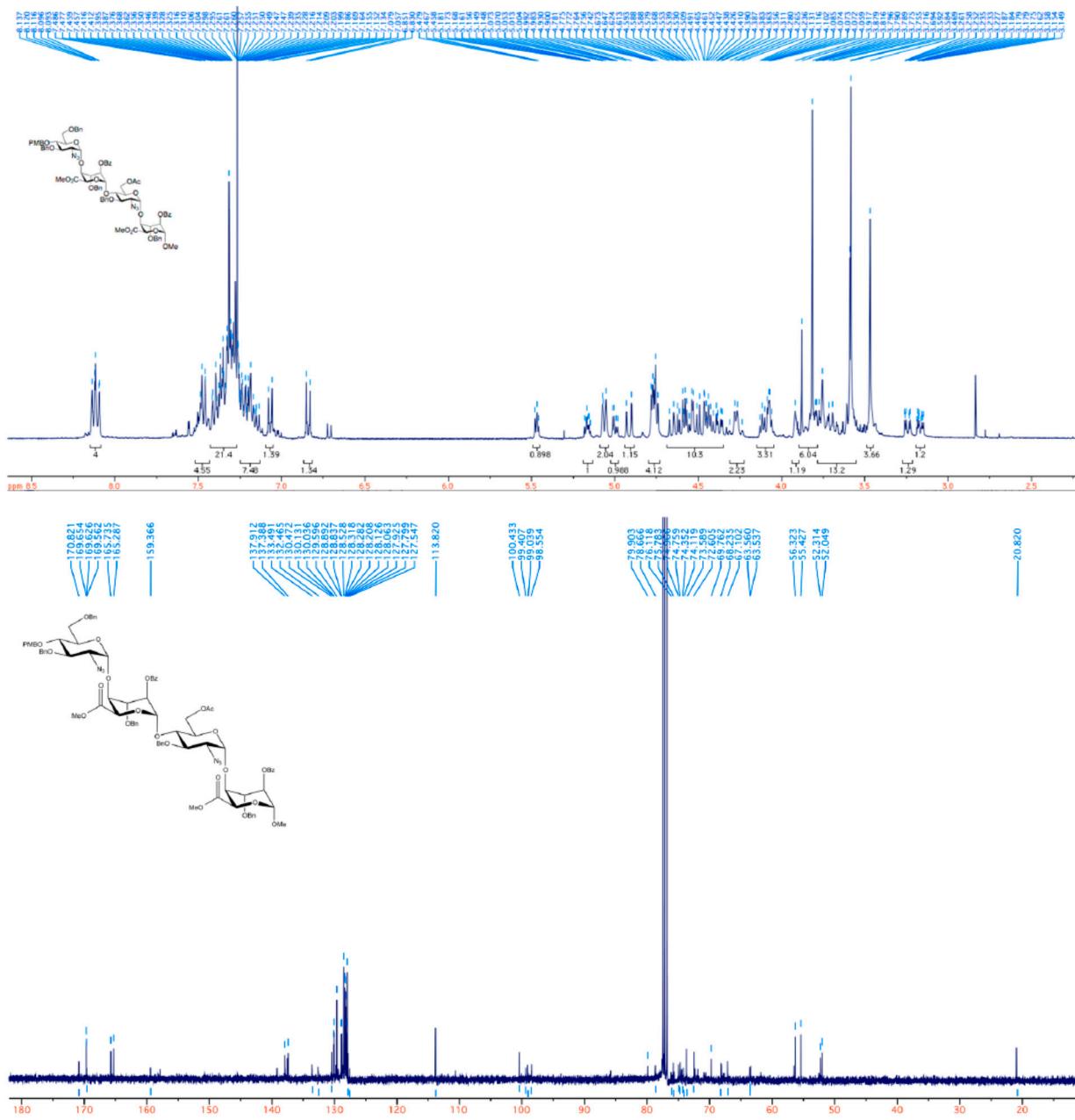


# Supplementary File

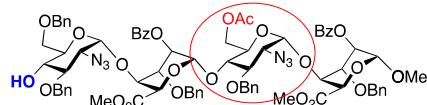
## Methyl 6-O-acetyl-2-azido-3-O-benzyl-2-deoxy- $\alpha$ -D-glucopyranosyl-(1 $\rightarrow$ 4)-(methyl 2-O-benzoyl-3-O-benzyl- $\alpha$ -L-idopyranoside) uronate (4)



**Methyl (2-azido-3,6-di-*O*-benzyl-2-deoxy-4-*O*-p-methoxybenzyl- $\alpha$ -D-glucopyranosyl-(1-4)-(methyl 2-*O*-benzoyl-3-*O*-benzyl- $\alpha$ -L-idopyranosyl) uronate)-(1-4)-6-*O*-acetyl-2-azido-3-*O*-benzyl-2-deoxy- $\alpha$ -D-glucopyranosyl-(1-4)-(methyl 2-*O*-benzoyl-3-*O*-benzyl- $\alpha$ -L-idopyranoside) uronate (5)**



**Methyl (2-azido-3,6-di-O-benzyl-2-deoxy-4-hydroxy- $\alpha$ -D-glucopyranosyl-(1-4)-(methyl 2-O-benzoyl-3-O-benzyl- $\alpha$ -L-idopyranosyl) uronate)-(1-4)-6-O-acetyl-2-azido-3-O-benzyl-2-deoxy- $\alpha$ -D-glucopyranosyl-(1-4)-(methyl 2-O-benzoyl-3-O-benzyl- $\alpha$ -Lidopyranoside)uronate (O4 deprotection of 5). LCMS Data 1.**



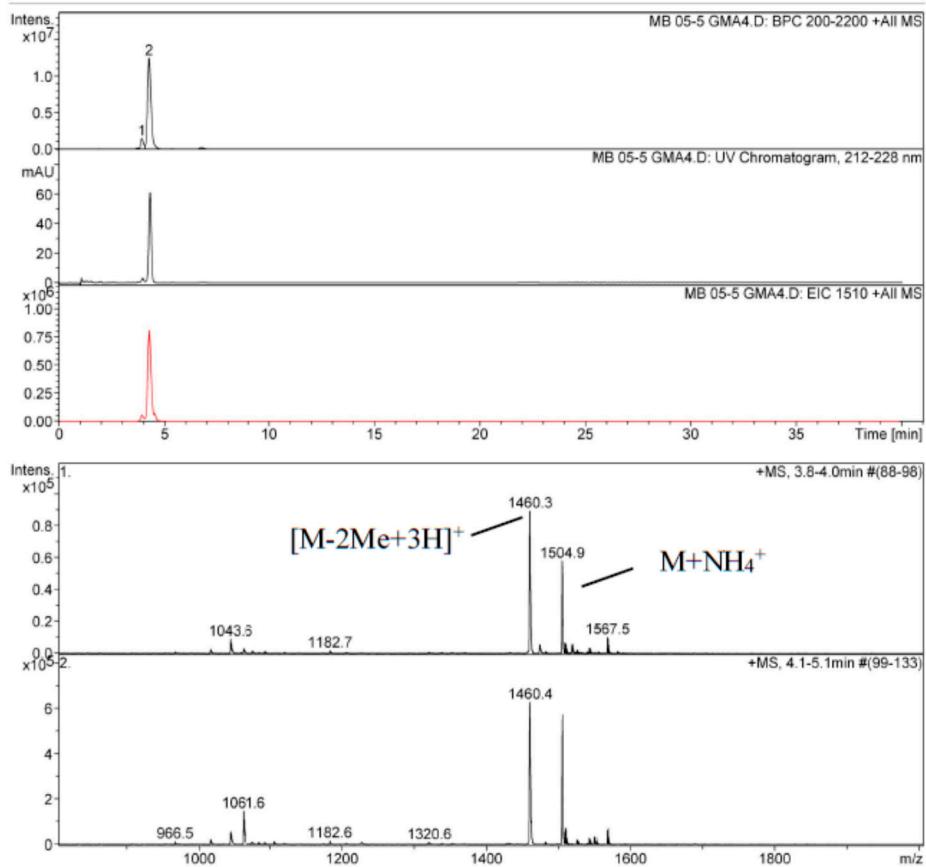
Display Report

**Analysis Info**

Analysis Name	MB 05-5 GMA4.D	Acquisition Date	13/02/2015 16:22:49
Method	90ACN.M	Operator	mib
Sample Name	MB 05-5/GMA4	Instrument	LC-MSD-Trap-SL
Comment	MB 05-5/GMA4 Kinetex XB C18 4.6x100mm 5u 90ACN 1ml/min +ve APCI		

**Acquisition Parameter**

Ion Source Type	APCI	Ion Polarity	Positive	Alternating Ion Polarity	off
Mass Range Mode	Std/Normal	Scan Begin	500 m/z	Scan End	2200 m/z
Capillary Exit	181.0 Volt	Skim 1	40.0 Volt	Trap Drive	131.0
Accumulation Time	200000 $\mu$ s	Averages	7 Spectra	Auto MS/MS	off



Data File C:\HPCHEM\1\DATA\CD 90ACN 13FEB15\MB 05-5 GMA4.D  
 Sample Name: MB 05-5/GMA4

```
=====
Acq. Operator : Rehana          Seq. Line : 2
Acq. Instrument : Instrument 1   Location : Vial 4
Injection Date : 13/02/2015 16:22:31   Inj : 1
                                                Inj Volume : 50 µl
Different Inj Volume from Sequence !   Actual Inj Volume : 10 µl
Acq. Method : C:\HPCHEM\1\METHODS\Rehana APCI LCMS\90ACN.M
Last changed : 13/02/2015 16:21:29 by Rehana
Analysis Method : C:\HPCHEM\1\METHODS\Rehana APCI LCMS\REHANA 90ACN APCI LCMS.M
Last changed : 16/02/2015 10:14:50 by Rehana
Sample Info : MB 05-5/GMA4
                           Kinetex XB C18 4.6x100mm 5µ
                           90ACN 1ml/min +ve APCI
=====
```

DAD1 A, Sig=220,16 Ref=off (CD 90ACN 13FEB15\MB 05-5 GMA4.D)

=====
 Area Percent Report
 =====

Sorted By : Signal  
 Multiplier : 1.0000  
 Dilution : 1.0000  
 Use Multiplier & Dilution Factor with ISTDs

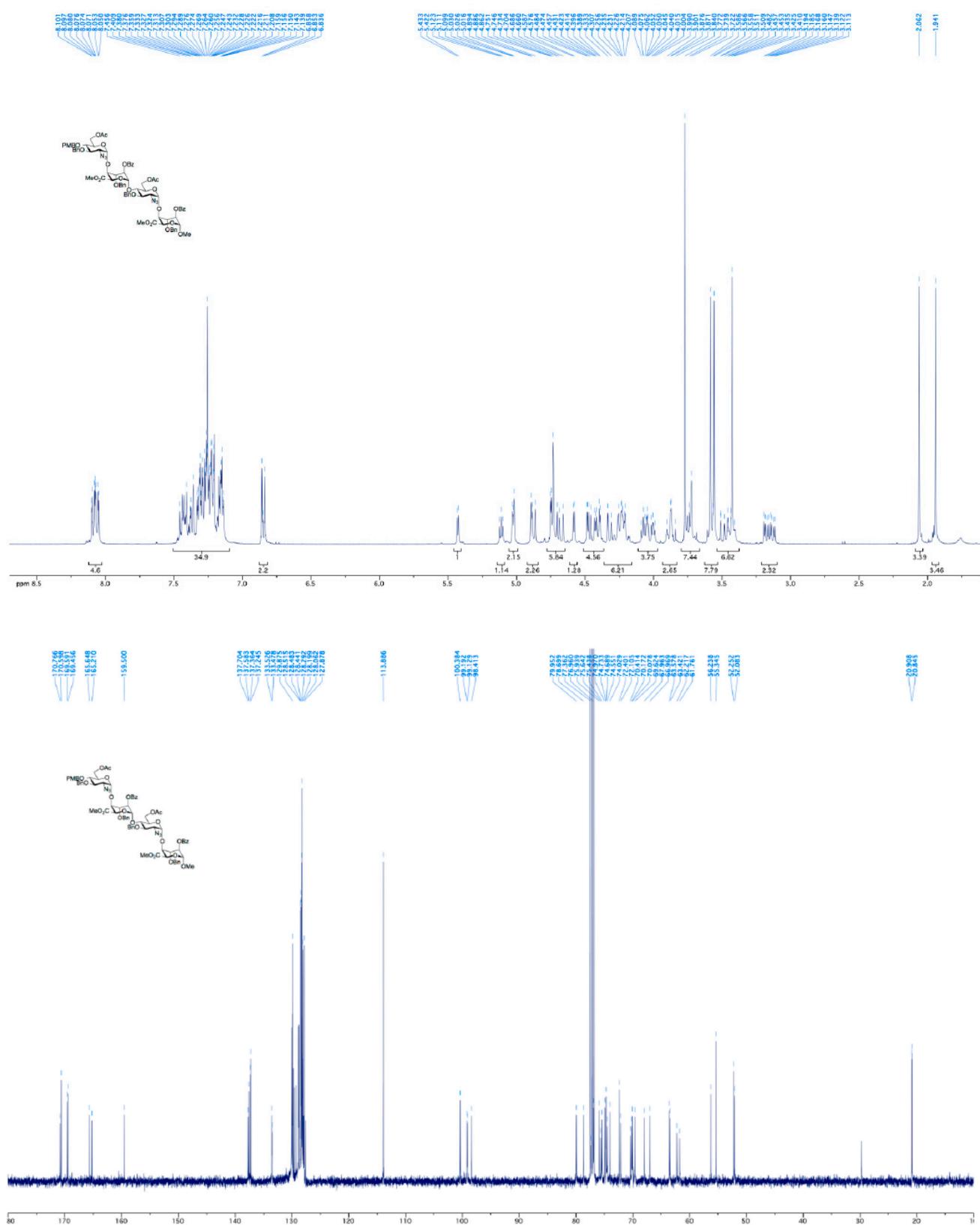
Signal 1: DAD1 A, Sig=220,16 Ref=off

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	1.273	VV	0.1066	16.18228	2.13032	2.6040
2	1.456	VB	0.1648	24.76468	1.91614	3.9851
3	1.915	BB	0.1833	21.19610	1.47791	3.4109
4	2.540	BB	0.4499	29.61157	8.03640e-1	4.7651
5	3.230	BB	0.2443	10.34769	5.58001e-1	1.6651
6	3.913	BV	0.1470	33.44304	3.27741	5.3816
7	4.257	VB	0.1232	485.688519	60.85077	78.1882

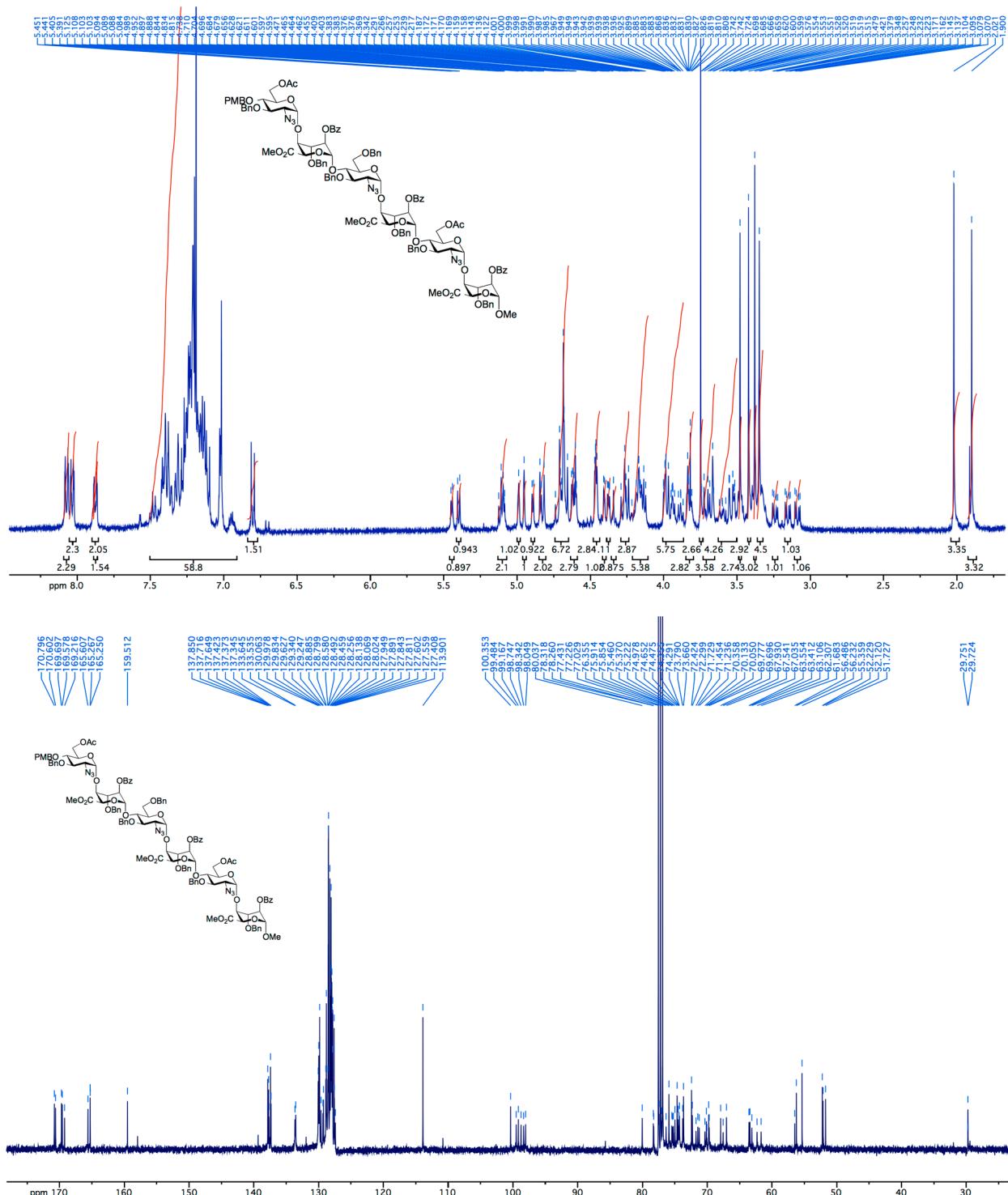
Totals : 621.43057 71.01421

=====
 \*\*\* End of Report \*\*\*
 =====

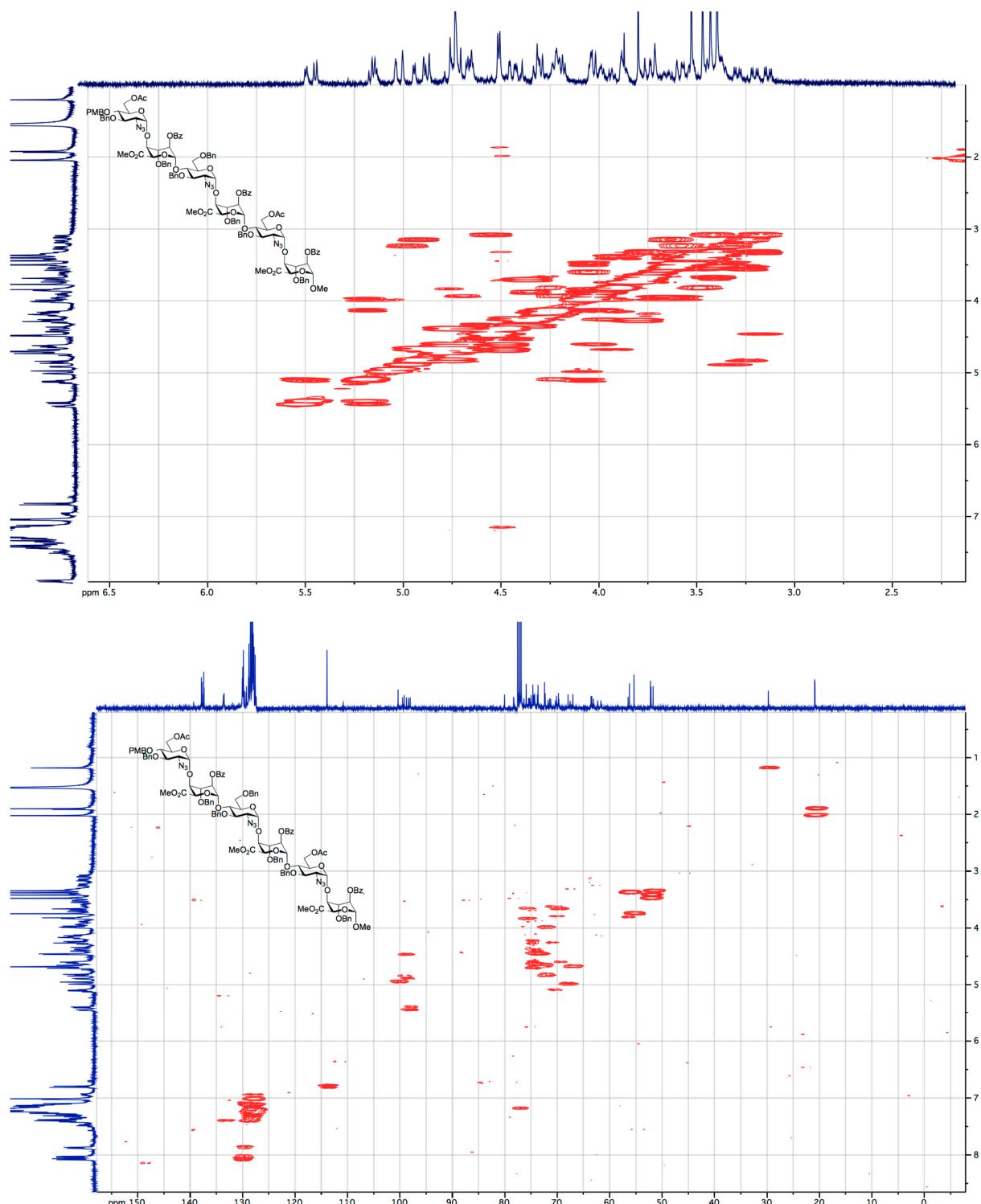
**Methyl (6-*O*-acetyl-2-azido-3-*O*-benzyl-2-deoxy-4-*O*-p-methoxybenzyl- $\alpha$ -Dglucopyranosyl-(1-4)-(methyl 2-*O*-benzoyl-3-*O*-benzyl- $\alpha$ -L-idopyranosyl) uronate)-(1-4)-6-*O*-acetyl-2-azido-3-*O*-benzyl-2-deoxy- $\alpha$ -D-glucopyranosyl-(1-4)-(methyl 2-Obenzoyl-3-*O*-benzyl- $\alpha$ -L-idopyranoside) uronate (6)**



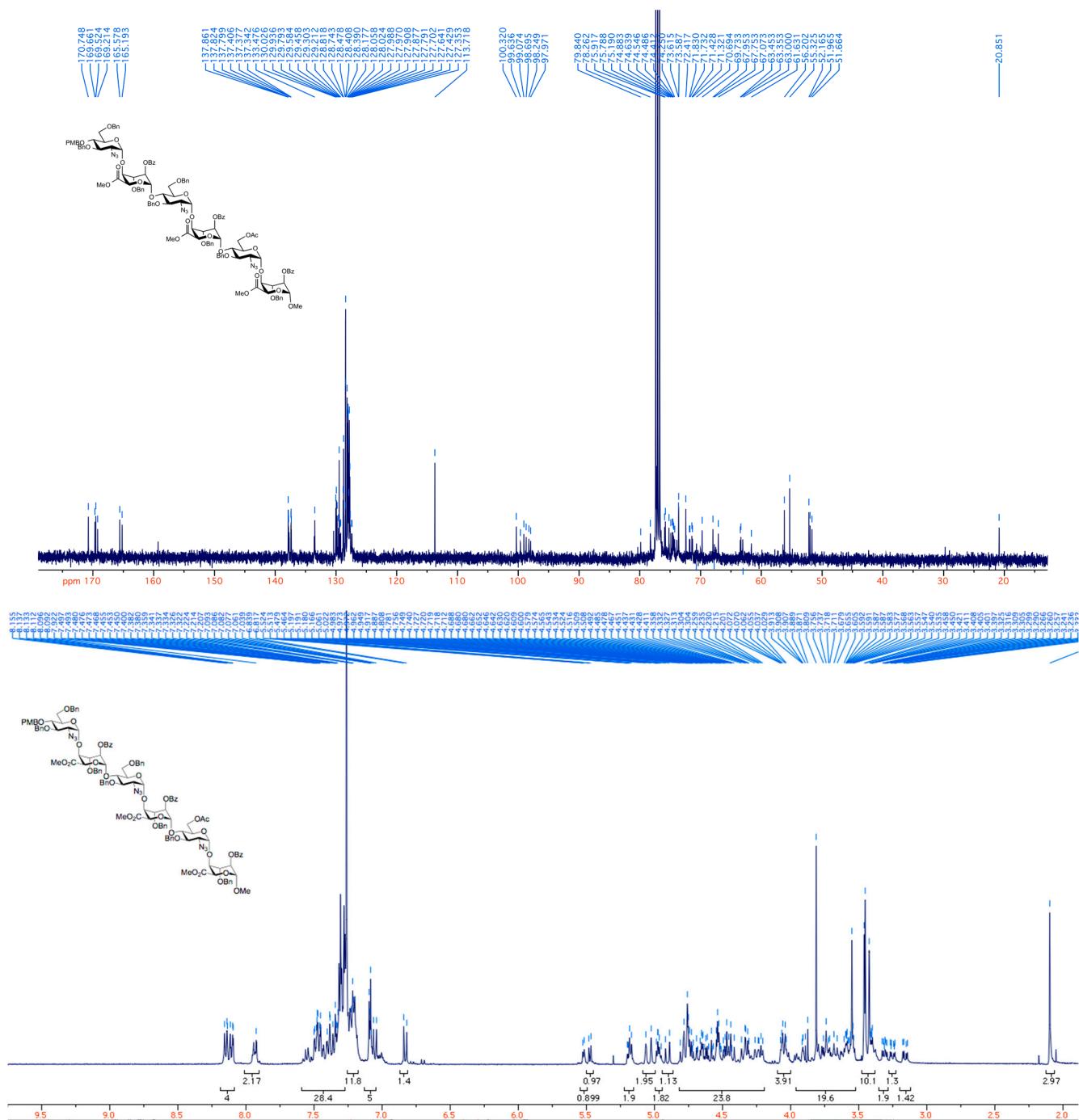
**Methyl (6-*O*-acetyl-2-azido-3-*O*-benzyl-2-deoxy-4-*O*-p-methoxybenzyl- $\alpha$ -Dglucopyranosyl-(1-4)-(methyl 2-*O*-benzoyl-3-*O*-benzyl- $\alpha$ -L-idopyranosyl) uronate)-(1-4)-2-azido-3,6-di-*O*-benzyl-2-deoxy- $\alpha$ -D-glucopyranosyl-(1-4)-(methyl 2-*O*-benzoyl-3-*O*-benzyl- $\alpha$ -L-idopyranosyl) uronate)-(1-4)-6-*O*-acetyl-2-azido-3-*O*-benzyl-2-deoxy- $\alpha$ -D-glucopyranosyl-(1-4)-(methyl 2-*O*-benzoyl-3-*O*-benzyl- $\alpha$ -L-idopyranoside) uronate (7)**



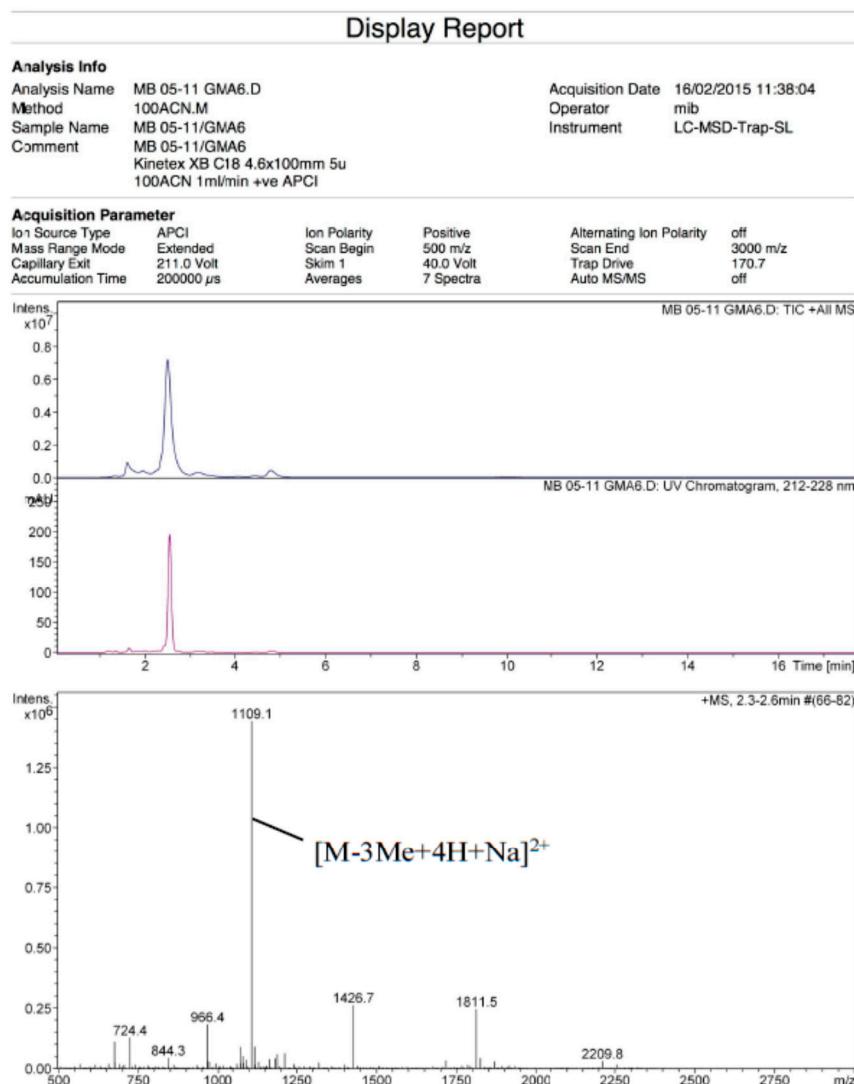
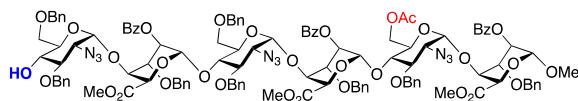
Methyl (6-*O*-acetyl-2-azido-3-*O*-benzyl-2-deoxy-4-*O*-p-methoxybenzyl- $\alpha$ -Dglucopyranosyl-(1-4)-(methyl 2-*O*-benzoyl-3-*O*-benzyl- $\alpha$ -L-idopyranosyl) uronate)-(1-4)-2-azido-3,6-di-*O*-benzyl-2-deoxy- $\alpha$ -D-glucopyranosyl-(1-4)-(methyl 2-*O*-benzoyl-3-*O*-benzyl- $\alpha$ -L-idopyranosyl) uronate)-(1-4)-6-*O*-acetyl-2-azido-3-*O*-benzyl-2-deoxy- $\alpha$ -D-glucopyranosyl-(1-4)-(methyl 2-*O*-benzoyl-3-*O*-benzyl- $\alpha$ -L-idopyranoside) uronate (7)



**Methyl (2-azido-3,6-di-*O*-benzyl-2-deoxy-4-*O*-*p*-methoxybenzyl- $\alpha$ -D-glucopyranosyl-(1 $\rightarrow$ 4)-(methyl 2-*O*-benzoyl-3-*O*-benzyl- $\alpha$ -L-idopyranosyl) uronate)-(1 $\rightarrow$ 4)-2-azido-3,6-di-*O*-benzyl-2-deoxy- $\alpha$ -D-glucopyranosyl-(1 $\rightarrow$ 4)-(methyl 2-*O*-benzoyl-3-*O*-benzyl- $\alpha$ -L-idopyranosyl) uronate)-(1 $\rightarrow$ 4)-6-*O*-acetyl-2-azido-3-*O*-benzyl-2-deoxy- $\alpha$ -D-glucopyranosyl-(1 $\rightarrow$ 4)-(methyl 2-*O*-benzoyl-3-*O*-benzyl- $\alpha$ -L-idopyranoside) uronate (8)**

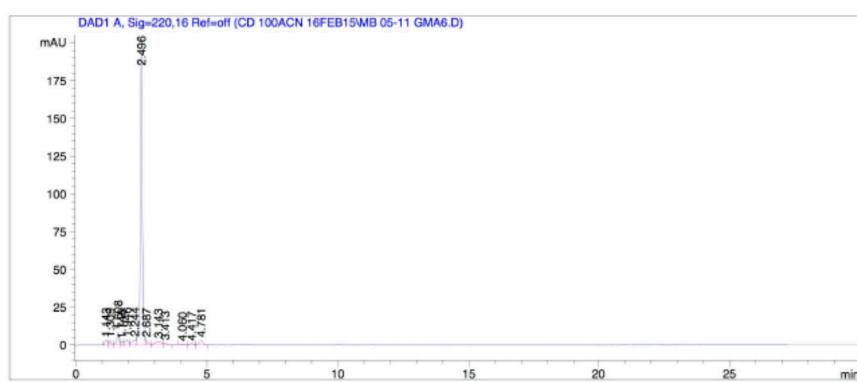


**Methyl (2-azido-3,6-di-O-benzyl-2-deoxy-4-hydroxy- $\alpha$ -D-glucopyranosyl-(1 $\rightarrow$ 4)-(methyl 2-O-benzoyl-3-O-benzyl- $\alpha$ -L-idopyranosyl) uronate)-(1 $\rightarrow$ 4)-2-azido-3,6-di-O-benzyl-2-deoxy- $\alpha$ -D-glucopyranosyl-(1 $\rightarrow$ 4)-(methyl 2-O-benzoyl-3-O-benzyl- $\alpha$ -L-idopyranosyl)uronate)-(1 $\rightarrow$ 4)-6-O-acetyl-2-azido-3-O-benzyl-2-deoxy- $\alpha$ -D-glucopyranosyl-(1 $\rightarrow$ 4)-(methyl 2-O-benzoyl-3-O-benzyl- $\alpha$ -L-idopyranoside) uronate (O4 deprotection of 8). LCMS 1.**



Data File C:\HPCHEM\1\DATA\CD 100ACN 16FEB15\MB 05-11 GMA6.D  
 Sample Name: MB 05-11/GMA6

=====
 Acq. Operator : Rehana Seg. Line : 2  
 Acq. Instrument : Instrument 1 Location : Vial 6  
 Injection Date : 16/02/2015 11:37:39 Inj : 1  
 Inj Volume : 50 µl  
 Different Inj Volume from Sequence 1 Actual Inj Volume : 10 µl  
 Acq. Method : C:\HPCHEM\1\METHODS\Rehana APCI LCMS\100ACN.M  
 Last changed : 16/02/2015 11:36:43 by Rehana  
 Analysis Method : C:\HPCHEM\1\METHODS\Rehana APCI LCMS\REHANA 90ACN APCI LCMS.M  
 Last changed : 16/02/2015 10:14:50 by Rehana  
 Sample Info : MB 05-11/GMA6  
 Kinetex XB C18 4.6x100mm 5µ  
 100ACN 1ml/min +ve APCI



=====
 Area Percent Report

Sorted By : Signal  
 Multiplier : 1.0000  
 Dilution : 1.0000  
 Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 A, Sig=220,16 Ref=off

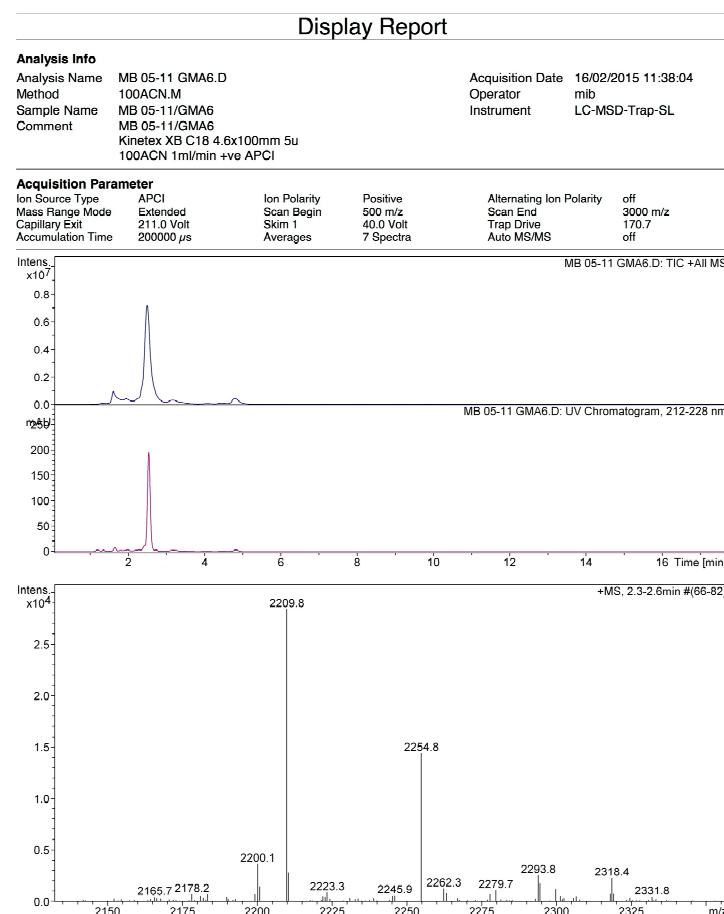
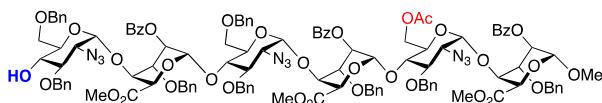
Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	1.143	BV	0.0941	21.93324	3.19534	1.6290
2	1.309	VV	0.0721	14.80308	2.97028	1.0994
3	1.608	VV	0.0773	43.95671	8.10042	3.2647
4	1.748	VV	0.0926	14.72439	2.18640	1.0936
5	1.946	VV	0.1196	29.09728	3.34190	2.1610
6	2.244	VV	0.1337	33.88317	3.35726	2.5165
7	2.496	VV	0.0850	1087.22021	195.11391	80.7476
8	2.687	VB	0.0930	19.19083	2.98476	1.4253
9	3.143	BV	0.2230	35.86568	2.28714	2.6637
10	3.413	VB	0.1252	7.98008	9.57534e-1	0.5927
11	4.060	BB	0.1267	2.79334	3.30273e-1	0.2075
12	4.417	BV	0.1375	6.50855	7.06515e-1	0.4834
13	4.781	VB	0.1438	28.48560	3.02598	2.1156

Totals : 1346.44216 228.55770

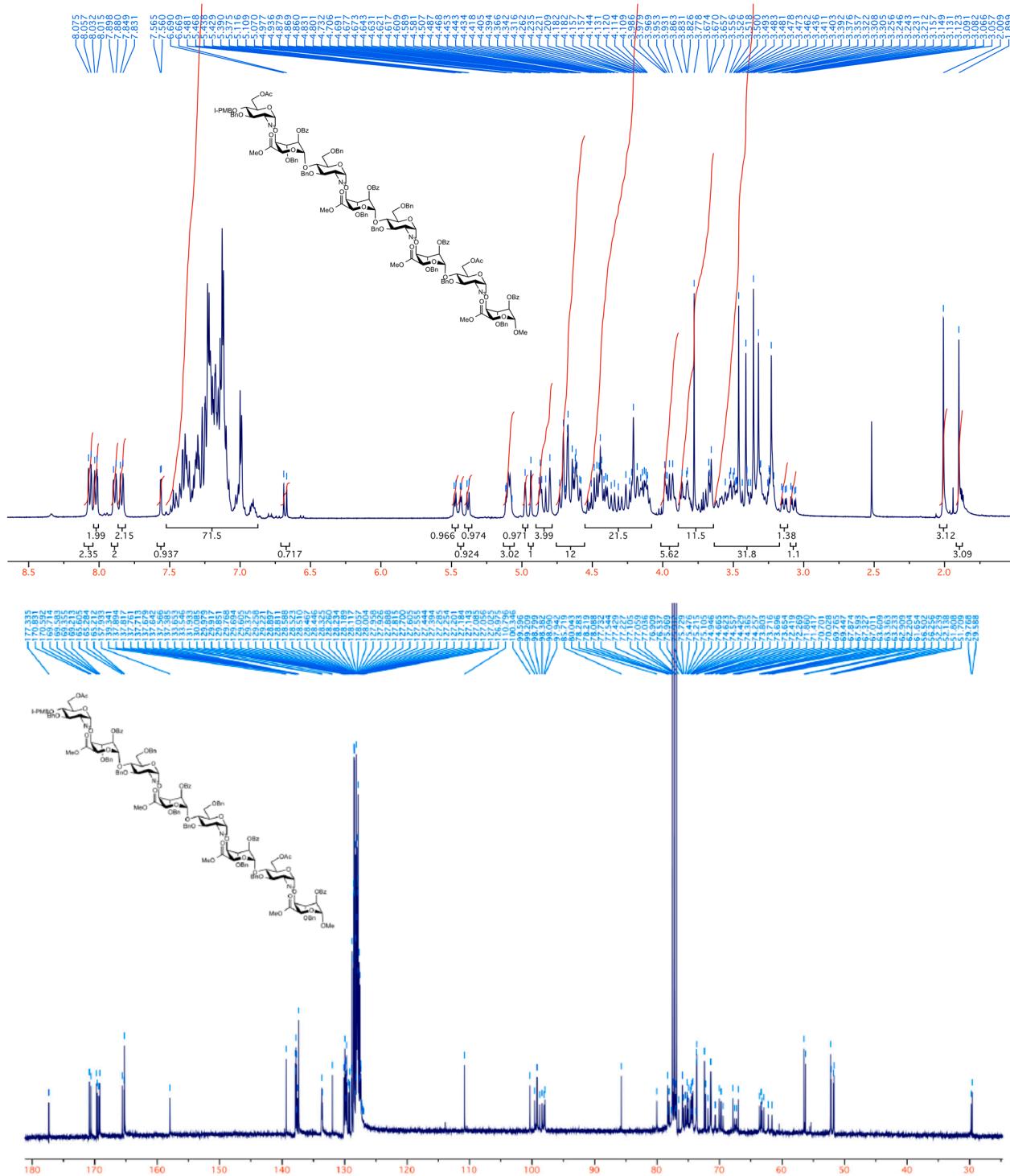
=====
 Instrument 1 16/02/2015 14:38:10 Rehana

Page 1 of 1

**Methyl (2-azido-3,6-di-O-benzyl-2-deoxy-4-hydroxy- $\alpha$ -D-glucopyranosyl-(1 $\rightarrow$ 4)-(methyl 2-O-benzoyl-3-O-benzyl- $\alpha$ -L-idopyranosyl) uronate)-(1 $\rightarrow$ 4)-2-azido-3,6-di-O-benzyl-2-deoxy- $\alpha$ -D-glucopyranosyl-(1 $\rightarrow$ 4)-(methyl 2-O-benzoyl-3-O-benzyl- $\alpha$ -L-idopyranosyl)uronate)-(1 $\rightarrow$ 4)-6-O-acetyl-2-azido-3-O-benzyl-2-deoxy- $\alpha$ -D-glucopyranosyl-(1 $\rightarrow$ 4)-(methyl 2-O-benzoyl-3-O-benzyl- $\alpha$ -L-idopyranoside) uronate (O4 deprotection of 8). LCMS 2.**



**Methyl (6-*O*-acetyl-2-azido-3-*O*-benzyl-2-deoxy-4-*O*-*p*-methoxy-*m*-iodo-benzyl- $\alpha$ -glucopyranosyl-(1 $\rightarrow$ 4)-(methyl 2-*O*-benzoyl-3-*O*-benzyl- $\alpha$ -L-idopyranosyl) uronate)-(1 $\rightarrow$ 4)-2-azido-3,6-di-*O*-benzyl-2-deoxy- $\alpha$ -D-glucopyranosyl-(1 $\rightarrow$ 4)-(methyl 2-*O*-benzoyl-3-*O*-benzyl- $\alpha$ -L-idopyranosyl) uronate)-(1 $\rightarrow$ 4)-2-azido-3,6-di-*O*-benzyl-2-deoxy- $\alpha$ -D-glucopyranosyl-(1 $\rightarrow$ 4)-(methyl 2-*O*-benzoyl-3-*O*-benzyl- $\alpha$ -L-idopyranosyl)uronate)-(1 $\rightarrow$ 4)-6-*O*-acetyl-2-azido-3-*O*-benzyl-2-deoxy- $\alpha$ -D-glucopyranosyl-(1 $\rightarrow$ 4)-(methyl 2-*O*-benzoyl-3-*O*-benzyl- $\alpha$ -L-idopyranoside) uronate (9)**



Methyl (6-*O*-acetyl-2-azido-3-*O*-benzyl-2-deoxy-4-*O*-*p*-methoxy-*m*-iodo-benzyl- $\alpha$ -glucopyranosyl-(1 $\rightarrow$ 4)-(methyl 2-*O*-benzoyl-3-*O*-benzyl- $\alpha$ -L-idopyranosyl) uronate)-(1 $\rightarrow$ 4)-2-azido-3,6-di-*O*-benzyl-2-deoxy- $\alpha$ -D-glucopyranosyl-(1 $\rightarrow$ 4)-(methyl 2-*O*-benzoyl-3-*O*-benzyl- $\alpha$ -L-idopyranosyl) uronate)-(1 $\rightarrow$ 4)-2-azido-3,6-di-*O*-benzyl-2-deoxy- $\alpha$ -D-glucopyranosyl-(1 $\rightarrow$ 4)-(methyl 2-*O*-benzoyl-3-*O*-benzyl- $\alpha$ -L-idopyranosyl)uronate)-(1 $\rightarrow$ 4)-6-*O*-acetyl-2-azido-3-*O*-benzyl-2-deoxy- $\alpha$ -D-glucopyranosyl-(1 $\rightarrow$ 4)-(methyl 2-*O*-benzoyl-3-*O*-benzyl- $\alpha$ -L-idopyranoside) uronate (9)

