

Electronic Supplementary Information

Amylase Catalyzed Synthesis of Glycosyl- Acrylates and their polymerization

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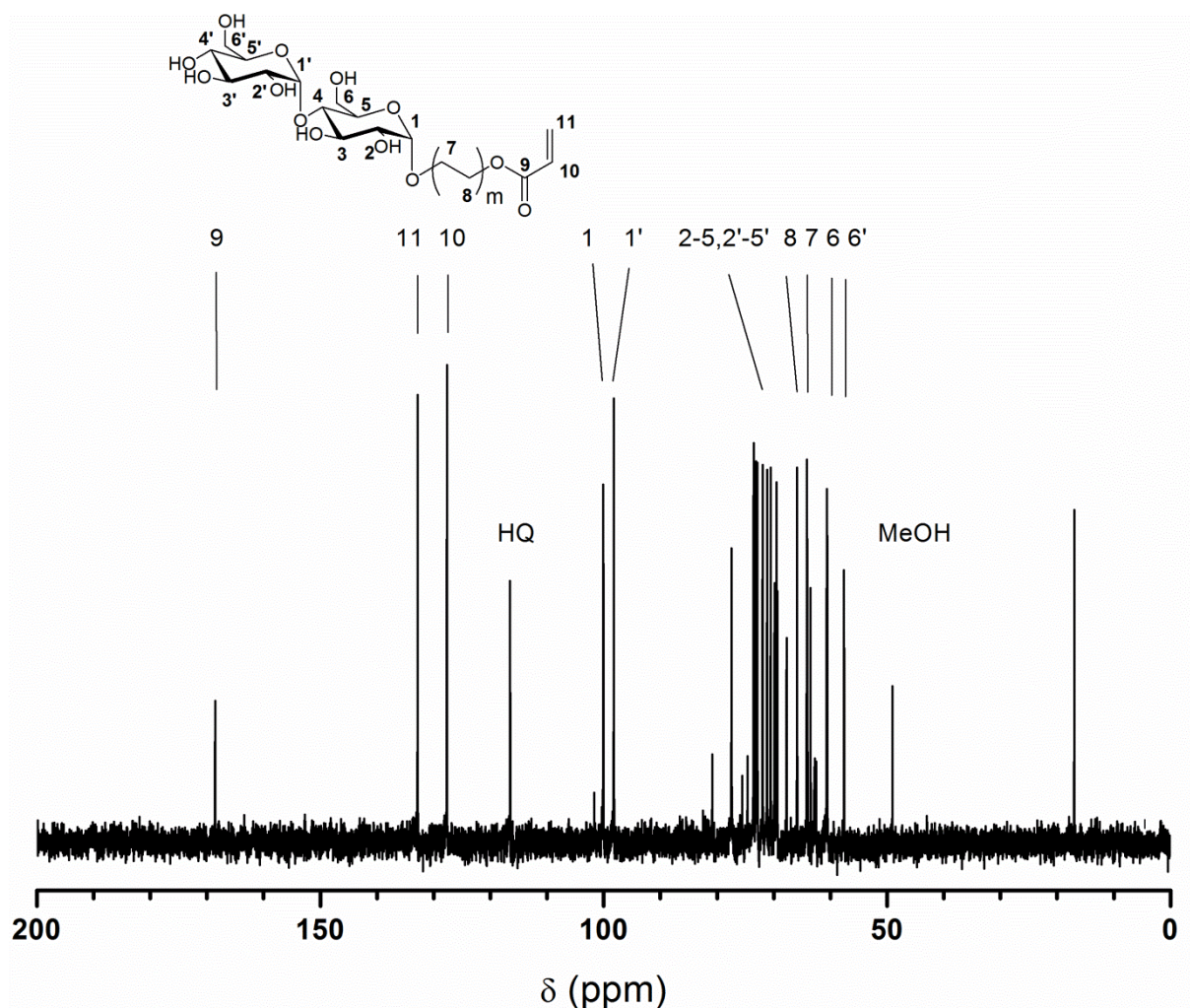


Figure S1. ^{13}C -NMR of Glc-Glc-EA

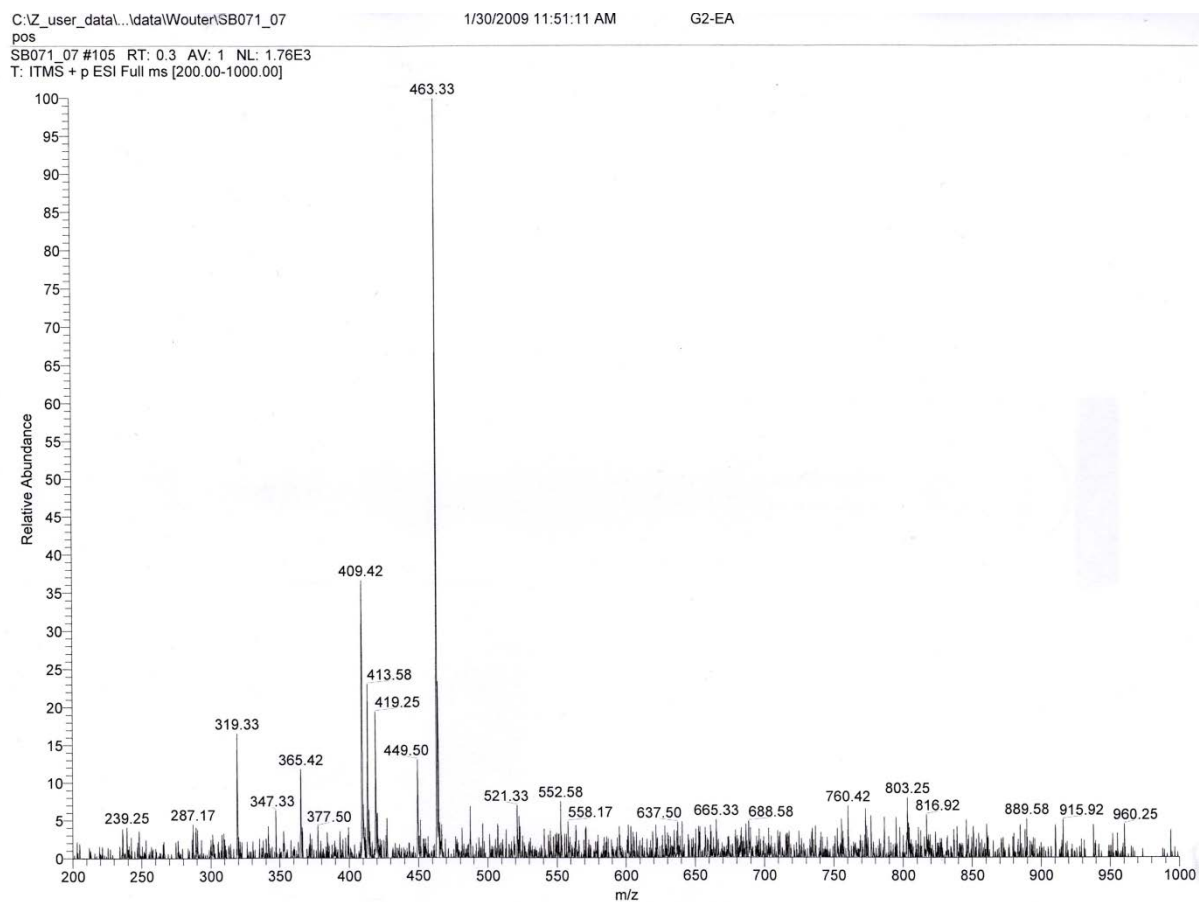


Figure S2. Positive ion ESI-MS spectrum of Glc-Glc-EA

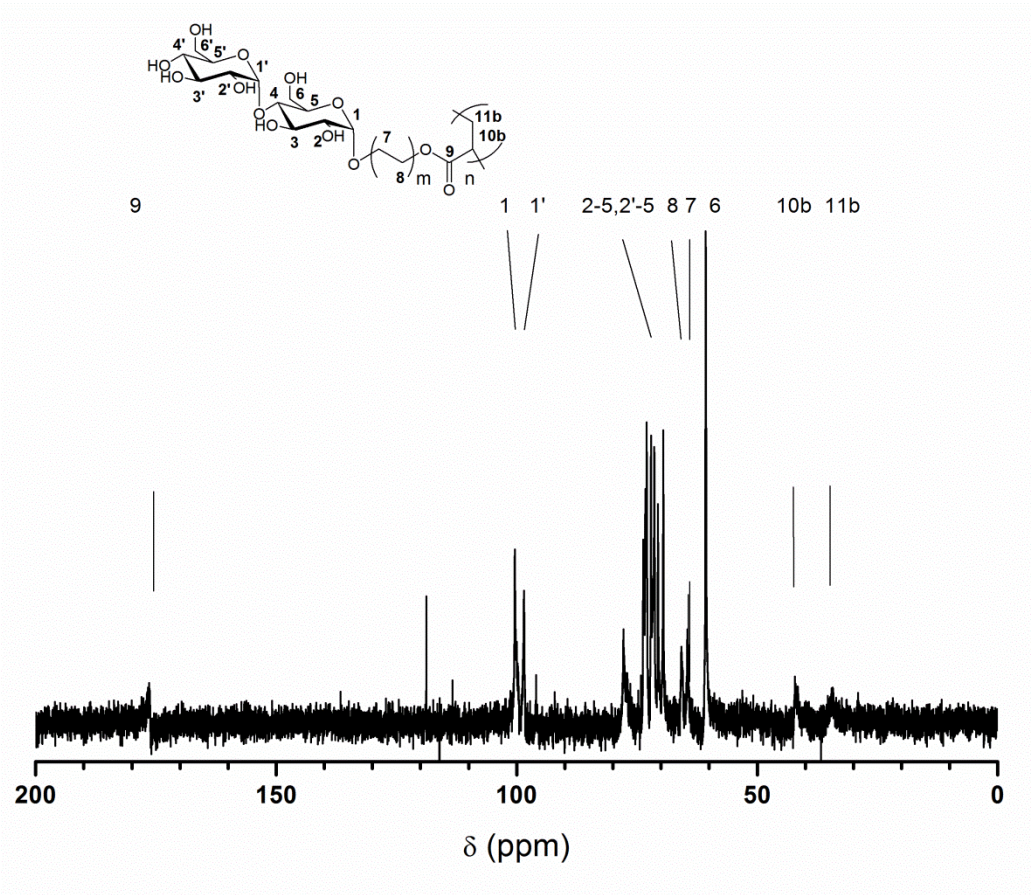


Figure S3. ^{13}C -NMR of Poly(Glc-Glc-EA)

Figure S4 Hydrolytic activity of tested amylases as determined by the DNSS method.

Saccharification amylases

1 U = amount of enzyme that liberates 1 μmol maltose per minute at pH 6.0, 25 $^{\circ}\text{C}$ using starch as the substrate

Entry	Tradel name	Enzyme type	Enzyme origin	Hydrolytic activity (U/ μL)
1	A8220	α -amylase	<i>Aspergillus oryzae</i>	16
2	A7595	α -amylase	<i>B. amyloliquefaciens</i>	9
3	Biokleitase L500	α -amylase	<i>B. amyloliquefaciens</i>	22
4	Optimalt BBA	β -amylase	from barley	7
5	A7130	β -amylase	from barley	26
6	Spezyme DBA	β -amylase	from barley	12
7	NS22035	Amyloglucosidase		7
8	Spirizyme	Amyloglucosidase		9
9	Gammadex	Amyloglucosidase	<i>A. niger</i>	4
10	Dextrozyme	Amyloglucosidase	<i>A. niger</i>	7
11	A7095	Amyloglucosidase	<i>A. niger</i>	12
12	Novamyl L	Maltogenic amylase	<i>B. stearotheophilus</i>	2
13	Veron Xtender	Maltogenic amylase	<i>B. stearotheophilus</i>	31 ^a

^a Activity in U/mg

Liquefaction amylases

1 U = amount of enzyme that liberates 1 μmol maltose per minute at pH 6.0, 25 $^{\circ}\text{C}$ using starch as the substrate

Entry	Commercial name	Enzyme origin	Hydrolytic activity (U/ μL)
1	Clarase L	<i>Aspergillus oryzae</i>	120
2	Neomalz H ₂ O	<i>Bacillus subtilis</i>	21
3	Kleitase T10S	<i>Bacillus subtilis</i>	14
4	Liquozyme Supra	Thermostable α -amylase	9
5	Gamalpha P120L	Thermostable α -amylase	10
6	Gamalpha Spezial	Thermostable α -amylase	12
7	Spezyme FRED	<i>Bacillus licheniformis</i>	10
8	Spezyme AA	<i>Bacillus licheniformis</i>	16
9	Spezyme Alpha	<i>Bacillus licheniformis</i>	11
10	Clearflow AA	<i>Bacillus licheniformis</i>	12

Figure S5 Remaining activity of the tested amylases after incubation in 30 v% 2-HEA solution at 60 °C for 15 minutes.

