

Materials List for:

Structural Characterization of Mannan Cell Wall Polysaccharides in Plants Using PACE

Venkataramana R. Pidatala^{*1,2}, Amir Mahboubi^{*1,2}, Jenny C. Mortimer^{1,2}

¹Joint BioEnergy Institute

²Environmental and Systems Biology, BioSciences Division, Lawrence Berkeley National Laboratory

*These authors contributed equally

Correspondence to: Jenny C. Mortimer at jcmortimer@lbl.gov

URL: <https://www.jove.com/video/56424>

DOI: [doi:10.3791/56424](https://doi.org/10.3791/56424)

Materials

Name	Company	Catalog Number	Comments
Oligosaccharide Standards			
Mannose	Sigma-Aldrich	CAS 3458-28-4	
Mannobiose	Megazyme	CAS: 14417-51-7	
Mannotriose	Megazyme	CAS: 28173-52-6	
Mannotetraose	Megazyme	CAS: 51327-76-5	
Mannopentaose	Megazyme	CAS: 70281-35-5	
Mannhexaose	Megazyme	CAS: 70281-36-6	
Glucomannan (Konjac; Low Viscosity)	Megazyme	P-GLCML	
Name	Company	Catalog Number	Comments
Other specialty chemicals			
8-Aminonaphthalene-1,3,6-trisulfonic acid	(Molecular probes) Thermo	A350	
2-picoline borane	TCI	B3018	
40 % acrylamide/Bis-acrylamide (29:1 acrylamide:Bis)	Bio-rad	1610146	
Name	Company	Catalog Number	Comments
Specialty Equipment			
Gel casting kit	Hofer	SE660 kit	18x24 cm glass plates, 0.75 mm spacers
Cooling recirculating water bath	Hofer	RCB20-plus 115v	Needs to be able to maintain temperature at ~10 C
G:Box Chemi XRQ Imaging System	Syngene	05-GBOX-CHEMI-XRQ	Order with filters appropriate to fluorophore, and transilluminator should be fitted with long-wave UV light bulbs
High Voltage Power Pack	Thermo	EC1000XL	1000V
Vacuum centrifuge(Speedvac)	Savant	SPD131	
Vertical Gel electrophoresis system	Hofer	SE660	
Glycosyl hydrolases			
These can be obtained from companies e.g. Megazyme (https://www.megazyme.com/) or Prozomix (http://www.prozomix.com/), or can be expressed in house by requesting the plasmid from the relevant research group.			

Name	Company	Catalog Number	Comments
Lab supplies			
15 ml Centrifuge tube (Falcon Centrifuge Tubes, Polypropylene, Sterile, Corning)	VWR	21008-918	
50 ml Centrifuge tube (Falcon Centrifuge Tubes, Polypropylene, Sterile, Corning)	VWR	21008-951	
Name	Company	Catalog Number	Comments
Software			
Gel imaging software (Genesys)	Syngene		