

Materials List for:

# Analysis of Protein Import into Chloroplasts Isolated from Stressed Plants

Qihua Ling<sup>1</sup>, Paul Jarvis<sup>1</sup>

<sup>1</sup>Department of Plant Sciences, University of Oxford

Correspondence to: Paul Jarvis at [paul.jarvis@plants.ox.ac.uk](mailto:paul.jarvis@plants.ox.ac.uk)

URL: <https://www.jove.com/video/54717>

DOI: [doi:10.3791/54717](https://doi.org/10.3791/54717)

## Materials

Name	Company	Catalog Number	Comments
Murashige and Skoog basal salt	Melford	M0221	
phytoagar	Melford	P1003	
2-(N-morpholino) ethane sulfonic acid (MES)	Melford	B2002	
triton X-100	Fisher	BPE151-500	
surgical tape (e.g., Micropore, 3M)	3M	1530-1	
filter paper	Fisher	FB59023	
Percoll	Fisher	10607095	
Ethylene Glycol Tetraacetic Acid (EGTA)	Sigma	E4378	
ethylenediaminetetraacetic acid (EDTA)	Fisher	D/0700/53	
4-(2-hydroxyethyl)piperazine-1-ethanesulfonic acid (HEPES)	Melford	B2001	
filtration cloth (Miracloth)	Calbiochem	475855	
50 mL centrifuge tube	Fisher	CFT-595-040M	
250 mL centrifuge bottle	Fisher	CFT-891-V	
Polytron (e.g., Kinematica PT10-35)	Fisher	11010070	
Polytron probe (e.g., Kinematica PTA20S)	Fisher	11030083	
centrifuge (e.g., Beckman Coulter Avanti JXN-26, for 50 and 250 mL tubes)	Beckman Coulter	B34182	
fixed-angle rotor for 250 mL bottles (e.g., JLA-16.250)	Beckman Coulter	363930	
fixed-angle rotor for 50 mL tubes (e.g., JA-25.50)	Beckman Coulter	363058	
swinging-bucket rotor for 50 mL tubes (e.g., JS-13.1)	Beckman Coulter	346963	
radiolabeled [ <sup>35</sup> S] methionine	Perkin Elmer	NEG072002MC	
rabbit reticulocyte lysate based cell-free translation system (TNT T7 Quick kit for PCR DNA)	Promega	L5540	
phase-contrast microscope (e.g., Nikon Eclipse 80i)	Nikon	unavailable	
haemocytometer (Improved Neubauer BS748 chamber)	Hawksley Technology	AC1000	0.1 mm depth, 1/400 mm <sup>2</sup>
cover glasses	VWR	16004-094	22 mm × 22 mm, thickness 0.13-0.17 mm

1.5 mL microfuge tubes	Sarstedt	72.690.001	
2 mL microfuge tubes	Starlab	S1620-2700	
microfuge (e.g., Eppendorf 5415D)	Eppendorf	unavailable	
Nanodrop 2000 spectrophotometer or similar	Thermo Fisher	SPR-700-310L	
gluconic acid (potassium salt)	Fisher	22932-2500	
Bovine Serum Albumin (BSA)	Sigma	A7906	
MgATP	Sigma	A9187	
methionine	Sigma	M6039	
bromophenol blue	Fisher	B/P620/44	
glycerol	Fisher	G/0650/17	
SDS	Fisher	S/5200/53	
Tris Base	Melford	B2005	
dithiothreitol (DTT)	Melford	MB1015	
image analysis software (e.g., Aida Image Analyzer)	Raytest	unavailable	