

A Versatile Glass Jar System for Semihydroponic Root Exudate Profiling

 Sarah McLaughlin¹, Charlotte Joller^{1,2}, Alexandra Siffert¹, Eva Marina Stirnemann¹, Joelle Sasse¹
¹Institute of Plant and Microbial Biology, University of Zürich ²Department of Environmental Sciences, University of Basel

Corresponding Author

Joelle Sasse

jschlaepfer@botinst.uzh.ch

Citation

 McLaughlin, S., Joller, C., Siffert, A., Stirnemann, E.M., Sasse, J. A Versatile Glass Jar System for Semihydroponic Root Exudate Profiling. *J. Vis. Exp.* (201), e66070, doi:10.3791/66070 (2023).

Date Published

November 17, 2023

DOI

10.3791/66070

URL

jove.com/video/66070

Materials

Name	Company	Catalog Number	Comments
Agar powder for bacteriology	VWR	20767.298	
Aluminum foil	FORA GmbH		
Ammonium acetate	Sigma-Aldrich	32301-1KG	ACS reagent, Eur>- 98%
Autoclave VX-150	Systemec	1150	
Balance	Sartorius	QUINTIX64-1S	
Centrifuge	Hermle Labortechnik GmbH	305.00 V05	
Cuvettes	Greiner Bio-One	613101	
Difco LB Broth, Lennox	BD	240210	
Ethanol	Reuss-Chemie AG	RC-A15-A-005L	
Filtered deionized water	Merck Millipore	Milli-Q IQ7000	
Glass beads	Carl Roth	HH56.1	5 mm
Hydrochloric acid	Merk	1.00317.1000	
Inoculation loop	Karl Hammacher GmbH	HWO_070-21	
Jars	Weck	105741	850 mL
Lyophilizer	Christ	Alpha 2-4 LSCplus	
Magnesium chloride hexahydrate	Carl Roth	2189.1	
Matrix Orbital thermoshaker	IKA	10006248	
Microcentrifuge tube	Sarstedt AG & Co. KG	72.695.500	SafeSeal reaction tube, 2 mL, PP
Micropore tape	3M	1530-0	1.25 cm x 9.1 m
Micropore tape	3M	1530-1	2.5 cm x 9.1 m
Murashige & Skoog Medium (MS)	Duchefa Biochemie	M0221.0050	
Growth chamber	Percival	SE41-TLCU4	16 hour light/8 dark. 22 °C day/18 night
Phyto agar	Duchefa Biochemie	P1003.1000	
Potassium hydroxide	Sigma-Aldrich	8.14353.0100	
SmartSpec Plus Spectrophotometer	Bio-Rad	170-2525	
Sodium hypochlorite solution, 12% Cl	Carl Roth	9062.4	
Square petri dish	Greiner Bio-One	688102	120x120x17 mm, with vents

Stericup Quick release	Millipore	S2GPU05RE	0.22 µm PES, 500 mL
Sterile bench	FASTER S.r.l.	FlowFast H 18	