

Materials List for:

Multi-step Preparation Technique to Recover Multiple Metabolite Compound Classes for In-depth and Informative Metabolomic Analysis

Charmion Cruickshank-Quinn¹, Kevin D. Quinn¹, Roger Powell¹, Yanhui Yang¹, Michael Armstrong¹, Spencer Mahaffey², Richard Reisdorph¹, Nichole Reisdorph¹

¹Department of Immunology, National Jewish Health

²Department of Pharmacology, School of Medicine, University of Colorado Denver

Correspondence to: Nichole Reisdorph at reisdorphn@njhealth.org

URL: <https://www.jove.com/video/51670>

DOI: [doi:10.3791/51670](https://doi.org/10.3791/51670)

Materials

Name	Company	Catalog Number	Comments
Acetonitrile	Fisher Scientific	A955-4	
Methanol	Fisher Scientific	L-6815	
Chloroform	Fisher Scientific	C606-1	
Hexane	Sigma Aldrich	34859	
Acetic acid	Sigma Aldrich	49199-50ML-F	
Methyl <i>tert</i> -butyl ether	J.T. Baker	9042-03	
Isopropyl alcohol	Sigma Aldrich	34965-2.5L	
Water	Honeywell Burdick Jackson	365-4	
OA-SYS heating system	Organomation Associates, Inc		Used to keep samples under a constant flow of nitrogen while at 35 °C
12-position vacuum manifold	Phenomenex		
Strata NH ₂ (55 µM, 70Å) 100 mg/ml SPE cartridges	Phenomenex	8B-S009-EAK	
Glass pipette tips	Fisher Scientific	13-678-20C	Used to transfer sample to SPE column
Plastic pipette tips	USA Scientific	1182-1830	Used when glass tips are not necessary
Microcentrifuge tubes	Fisher Scientific	02-681-320	
Graduated glass pipets	Fisher Scientific	13-678-27B	Used to transfer organic solvents during sample prep
Pyrex glass culture tubes	Corning Incorporated	99499-16X	Used to store aqueous and lipid fractions until the next step
Autosampler vials	Agilent Technologies	5182-0545	
Snap cap vials for autosampler vials	Agilent Technologies	5182-0541	
Glass inserts	Agilent Technologies	5183-2085	Used for small sample volumes
Mass Hunter Qualitative Analysis software	Agilent Technologies	Version B.06.00	Used to monitor retention times and pressure curves
Mass Hunter Quantitative Analysis software	Agilent Technologies	Version B.05.02	Used to analyze quality control and sample data
Mass Profiler Professional software	Agilent Technologies	Version B.12.50	Used to determine statistics, fold changes, and perform metabolite identification