

Materials List for:

On-Site Sampling and Extraction of Brain Tumors for Metabolomics and Lipidomics Analysis

Joanna Bogusiewicz^{*1}, Paulina Zofia Goryńska^{*1}, Magdalena Gaca¹, Kamila Chmara¹, Krzysztof Goryński¹, Karol Jaroch¹, Dariusz Paczkowski², Jacek Furtak², Marek Harat^{2,3}, Barbara Bojko¹

¹Department of Pharmacodynamics and Molecular Pharmacology, Faculty of Pharmacy, Collegium Medicum in Bydgoszcz, Nicolaus Copernicus University in Torun

²Department of Neurosurgery, 10th Military Research Hospital and Polyclinic

³Division of Preventive Medicine and Healthy Policy, Collegium Medicum in Bydgoszcz, Nicolaus Copernicus University in Torun

*These authors contributed equally

Correspondence to: Barbara Bojko at bbojko@cm.umk.pl

URL: <https://www.jove.com/video/61260>

DOI: [doi:10.3791/61260](https://doi.org/10.3791/61260)

Materials

Name	Company	Catalog Number	Comments
acetic acid	Honeywell	49199	Mobile phase additive, LCMS grade
acetonitrile	Honeywell	34967	HPLC solvent, LCMS grade
ammonium acetate	Honeywell	14267	Mobile phase additive, LCMS grade
BenchMixer MultiTube Vortexer	Benchmark Scientific	BV1010*	Vortex mixer
caps	Agilent	5183-2076	Blue scrw tp,pre-slit PTFE/Si septa
Compound Discoverer 2.1	Thermo Scientific		software for data processing
Discovery HS F5 Supelgar Cartridge 2 cm x 2.1 mm, 3 µm	Supelco	567571-U	Guard Column
Discovery HS F5, 2.1 mm x 100 mm, 3 µm	Merck	567502-U	HPLC Column
formic acid	Honeywell	56302	Mobile phase additive, LCMS grade
glass vial inserts 250ul , deactivated	Agilent	5181-8872	
glass vial inserts 350ul	Agilent	5188-5321	
glass vials 1.5ml	Agilent	5183-2030	
glass vials, 2 mL (amber, deactivated)	Agilent	5183-2072	
glass vials, 2mL	Agilent	5182-0715	
HILIC Luna 3 µm, 200A, 100 x 2.0 mm	Shim-Pol	PHX-00D-4449-B0	HPLC Column
isopropanol	Honeywell	34965	HPLC solvent, LCMS grade
LipidSearch 4.1	Thermo Scientific		software for data processing
Metaboanalyst	Xia Lab @ McGill		online software for statistical analysis (Chong, J., Wishart, D.S. and Xia, J. (2019) Using MetaboAnalyst 4.0 for Comprehensive and Integrative Metabolomics Data Analysis. Current Protocols in Bioinformatics 68, e86)
methanol	Honeywell	34966	HPLC solvent, LCMS grade
Pierce LTQ Velos ESI Positive Ion Calibration Solution	Thermo Scientific	88323	

Pierce Negative Ion Calibration Solution	Thermo Scientific	88324	
Q Exactive Focus hybrid quadrupole-Orbitrap MS	Thermo Scientific	726049	Mass Spectrometer
SecurityGuard cartridge for HILIC, 4 mm × 2.0 mm	Phenomenex	KJ0-4282	Guard Column
SeQuant ZIC-cHILIC 3µm,100Å 100 x 2.1 mm	Merck	1506570001	HPLC Column
SeQuant ZIC-HILIC Guard Kit 20 x 2.1 mm	Supelco	1504360001	Guard column
SPME LC fiber probes, C18	Supelco	custom order	comercial probes: 57281-U; probes used in the experiment were not needle assembled and were precut to the length described in the protocol
SPME LC fiber probes, mixed Mode	Supelco	custom order	
UltiMate 3000 HPLC systems	Thermo Scientific	5200.0345	HPLC system
water	Merck	1153331000	HPLC solvent, LCMS grade
XSelect CSH C18 3.5µm 2.1x75mm	Waters	186005644	HPLC Column
XSelect CSH C18 VanGuard Cartridge, 3.5 µm, 3.9x5 mm	Waters	186007813	Column cartidge