

Materials List for:

Metabolomic Analysis of Rat Brain by High Resolution Nuclear Magnetic Resonance Spectroscopy of Tissue Extracts

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Materials

Name	Company	Catalog Number	Comments
Isoflurane	Virbac	Vetflurane	Anesthetic for animals
Isoflurane vaporizer	Ohmeda	Isotec 3	Newer model available: Isotec 4
Scalpel, scissors, forceps, clamps	Harvard Apparatus Fisher Scientific	various various	Surgical equipment for animals
Freeze-clamp tool	homebuilt	n/a	Tong with aluminium plates, to be inserted in liquid nitrogen for cooling
Dewar	Nalgene	4150-4000	
Liquid nitrogen	Air Liquide	n/a	
Nitrogen gas	Air Liquide	n/a	
Nitrogen evaporator	Organomation Associates	N-EVAP 111	Can be replaced by homebuilt device
Mortar	Sigma-Aldrich	Z247472	
Pestle	Sigma-Aldrich	Z247510	
Tissue homogenizer	Kinematica	Polytron	With test tubes fitting homogenizer shaft
Electronic scale	Sartorius	n/a	
Methanol	Sigma-Aldrich	M3641	
Chloroform	Sigma-Aldrich	366910	
Glass centrifuge tubes	Kimble	45500-15, 45500-30	Kimax 15 ml, 30 ml tube
Microcentrifuge tubes	Kimble	45150-2	Kimax 2 ml tube; should replace "Eppendorf" tube if compatible with centrifuge rotor
Polystyrene pipettes	Costar Corning	Stripettes	5 and 10 ml volumes
Deuteriochloroform	Sigma-Aldrich	431915	99.96% deuterated
Deuterium oxide	Sigma-Aldrich	423459	99.96% deuterated
Deuterium chloride	Alpha Aesar	42406	20% in deuterium oxide
Sodium deuterioxide	Sigma-Aldrich	164488	30% in deuterium oxide
Lyophilizer	Christ	Alpha 1-2	
Cold centrifuge	Heraeus	Megafuge 16R	
pH meter	Eutech Cybernetics	Cyberscan	
CDTA	Sigma-Aldrich	D0922	
Cesium hydroxide	Sigma-Aldrich	516988	
NMR tubes	Wilmad	528-PP	
NMR stem coaxial insert	Sigma-Aldrich	Z278513	By Wilmad

NMR pipettes	Sigma-Aldrich	Z255688	
Pipettes	Eppendorf	Research	With tips for volumes from 0.5 to 1,000 μ l
Pipet-Aid	Drummond	XP	
NMR spectrometer	Bruker	AVANCE 400	including probe and other accessories
NMR software	Bruker	TopSpin 1.3	newer version available: Topspin 3.2
Water-soluble standard compounds	Sigma-Aldrich	various	
Phospholipid standard compounds	Avanti Polar Lipids Doosan Serdary Sigma-Aldrich	various various various	Source for plasmalogens, but may be <70 - 80% purity
Methylenediphosphonate	Sigma-Aldrich	M9508	
TSP-d4	Sigma-Aldrich	269913	