

Materials List for:

A Convenient Method for Extraction and Analysis with High-Pressure Liquid Chromatography of Catecholamine Neurotransmitters and Their Metabolites

Li Xie¹, Liqin Chen³, Pan Gu⁴, Lanlan Wei¹, Xuejun Kang²

¹School of Public Health of Southeast University, Laboratory of Environment and Biosafety Research Institute of Southeast University in Suzhou

²Key Laboratory of Child Development and Learning Science (Ministry of Education), School of Biological Science & Medical Engineering, Southeast University

³School of Public Health, Tianjin Medical University

⁴British Columbia Academy, Nanjing Foreign Language School

Correspondence to: Li Xie at 11206104@163.com

URL: <https://www.jove.com/video/56445>

DOI: [doi:10.3791/56445](https://doi.org/10.3791/56445)

Materials

Name	Company	Catalog Number	Comments
200 µL pipette tip			column to contain nanofibers
PCE-PS nanofibers			material for PFSPE extraction
steel rod (about 0.5 mm diameter)			fill the nanofibres into the column
gastight plastic syringe (5 ml)			compress solution into the end of the tip
methanol	Sinopharm Chemical ReagentCo., Ltd	67-56-1	
diphenylborinic acid 2-aminoethyl ester(DPBA)	Sigma-Aldrich.Inc	A-106408	complex reagent
norepinephrine(NE)	Sigma-Aldrich.Inc	A-9512	analyte
3-Methoxy-4-hydroxyphenylglycol(MHPG)	Sigma-Aldrich.Inc	H1377	analyte
epinephrine(E)	Sigma-Aldrich.Inc	100154-200503	analyte
3, 4-Dihydroxyphenylacetic acid(DOPAC)	Sigma-Aldrich.Inc	D-9128	analyte
dopamine(DA)	Sigma-Aldrich.Inc	H-8502	analyte
3, 4-dihydroxybenzylamine hydrobromide(DHBA)	Sigma-Aldrich.Inc	858781	interior label
acetonitrile	Sigma-Aldrich.Inc	75-05-8	eluriant and mobile phase
phosphoric acid	Sinopharm Chemical ReagentCo., Ltd	7664-38-2	eluriant
uric acid	Sinopharm Chemical ReagentCo., Ltd	69-93-2	artificial urine
creatinine	Sinopharm Chemical ReagentCo., Ltd	60-27-5	artificial urine
trisodium citrate	Sinopharm Chemical ReagentCo., Ltd	6132-04-3	artificial urine
KCl	Sinopharm Chemical ReagentCo., Ltd	7447-40-7	artificial urine
NH4Cl	Sinopharm Chemical ReagentCo., Ltd	12125-02-9	artificial urine
NaHCO3	Sinopharm Chemical ReagentCo., Ltd	SWC0140326	artificial urine
C2Na2O4	Sinopharm Chemical ReagentCo., Ltd	62-76-0	artificial urine
NaSO4	Sinopharm Chemical ReagentCo., Ltd	7757-82-6	artificial urine

disodium hydrogen phosphate	Sinopharm Chemical ReagentCo., Ltd	10039-32-4	artificial urine
urea	Sinopharm Chemical ReagentCo., Ltd	57-13-6	artificial urine
NaCl	Sinopharm Chemical ReagentCo., Ltd	7647-14-5	artificial urine
MgSO4.7H2O	Sinopharm Chemical ReagentCo., Ltd	10034-99-8	artificial urine
CaCl2	Sinopharm Chemical ReagentCo., Ltd	10035-04-8	artificial urine
HCl	Sinopharm Chemical ReagentCo., Ltd	7647-01-0	artificial urine
citric acid	Sinopharm Chemical ReagentCo., Ltd	77-92-9	artificial urine and mobile phase
EDTA disodium salt	Sinopharm Chemical ReagentCo., Ltd	34124-14-6	mobile phase
monometallic sodium orthophosphate	Sinopharm Chemical ReagentCo., Ltd	7558-80-7	artificial urine and mobile phase
1-heptanesulfonic acid sodium salt	Sinopharm Chemical ReagentCo., Ltd	22767-50-6	mobile phase
sodium hydroxide	Sinopharm Chemical ReagentCo., Ltd	1310-73-2	mobile phase
phenylboronic acid column(PBA column)	Agilent	12102018	PBA extraction
Inertsil® ODS-3 5 µm 4.6×150 mm column	Dikma	5020-06731	HPLC column for seperation
SHIMADZU SIL-20AC prominence AUTO SAMPLER	Shimadzu Corporation, Japan	SIL-20AC	auto injection for eluriant
SHIMADZU LC-20AD High Performance Liquid Chromatography	Shimadzu Corporation, Japan	LC-20AD	HPLC pump
SHIMADZU L-ECD-60A electrochemical detector	Shimadzu Corporation, Japan	L-ECD-60A	detector for the analytes
ASAP 2020 Accelerated Surface Area and Porosimetry System	Micromeritics, USA		surface and porosity analyzer