

Multi-Faceted Mass Spectrometric Investigation of Neuropeptides in *Callinectes sapidus*

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Materials

Name	Company	Catalog Number	Comments
Chemicals, Reagents, and Consumables			
2,5-Dihydroxybenzoic acid (DHB) matrix	Supelco	39319	
Acetic acid	Fisher Chemical	A38S-500	
Acetonitrile Optima LC/MS grade	Fisher Chemical	A955-500	
Ammonium bicarbonate	Sigma-Aldrich	9830	
Borane pyridine	Sigma-Aldrich	179752	
Bruker peptide calibration mix	Bruker Daltonics	NC9846988	
Capillary	Polymicro	1068150019	to make nanoflow column (75 μ m inner diameter x 360 μ m outer diameter)
Cryostat cup	Sigma-Aldrich	E6032	any cup or mold should work
Microcentrifuge Tubes	Eppendorf	30108434	
Formaldehyde	Sigma-Aldrich	252549	
Formaldehyde - D2	Sigma-Aldrich	492620	
Formic acid Optima LC/MS grade	Fisher Chemical	A117-50	
Gelatin	Difco	214340	place in 37 °C water bath to melt
Hydrophobic barrier pen	Vector Labs	15553953	
Indium tin oxide (ITO)-coated glass slides	Delta Technologies	CB-90IN-S107	25 mm x 75 mm x 0.8 mm (width x length x thickness)
LC-MS vials	Thermo	TFMSCERT5000-30LVW	
Methanol Optima LC/MS Grade	Fisher Chemical	A456-500	
Parafilm	Sigma-Aldrich	P7793	Hydrophobic film
pH-Indicator strips	Supelco	109450	
Red phosphorus clusters	Sigma-Aldrich	343242	
Reversed phase C18 material	Waters	186002350	manually packed into nanoflow column
Wite-out pen	BIC	150810	

ZipTip	Millipore	Z720070	
Instruments and Tools			
Automatic matrix sprayer system- M5	HTX Technologies, LLC		
Centrifuge - 5424 R	Eppendorf	05-401-205	
Cryostat- HM 550	Thermo Fisher Scientific	956564A	
Desiccant	Drierite	2088701	
Forceps	WPI	501764	
MALDI stainless steel target plate	Bruker Daltonics	8280781	
Pipet-Lite XLS	Rainin	17014391	200 µL
Q Exactive Plus Hybrid Quadrupole-Orbitrap	Thermo Fisher Scientific	IQLAAEGAAPFALGMBDK	
RapifleX MALDI-TOF/TOF	Bruker Daltonics		
SpeedVac - SVC100	Savant	SVC-100D	
Ultrasonic Cleaner	Branson	2510R-MTH	for sonication
Ultrasonic homogenizer	Fisher Scientific	FB120110	FB120 Sonic Dismembrator with CL-18 Probe
Vacuum pump- Alcatel 2008 A	Ideal Vacuum Products	P10976	ultimate pressure = 1×10^{-4} Torr
Vortex Mixer	Corning	6775	
Water bath (37C) - Isotemp 110	Fisher Scientific	15-460-10	
Data Analysis Software			
Expasy	https://web.expasy.org/translate/		
FlexAnalysis	Bruker Daltonics		
FlexControl	Bruker Daltonics		
FlexImaging	Bruker Daltonics		
PEAKS Studio	Bioinformatics Solutions, Inc.		
SCiLS Lab	https://scils.de/		
SignalP 5.0	https://services.healthtech.dtu.dk/service.php?SignalP-5.0		
tBLASTn	http://blast.ncbi.nlm.nih.gov/Blast.cgi?PROGRAM=tblastn&BLAST_PROGRAMS=tblastn&PAGE_TYPE=BlastSearch&SHOW_DEFAULTS=on&LINK_LOC=blasthome		