

Materials List for:

Isolation of Mandibular Gland Reservoir Contents from Bornean 'Exploding Ants' (*Formicidae*) for Volatilome Analysis by GC-MS and Metabolite Detector

Michaela Hoenigsberger¹, Alexey G. Kopchinskiy², Alexandra Parich¹, Karsten Hiller^{3,4}, Alice Laciny⁵, Herbert Zettel⁵, Linda B.L. Lim⁶, Kamariah A. Salim⁷, Irina S. Druzhinina², Rainer Schuhmacher¹

¹Center for Analytical Chemistry, Department of Agrobiotechnology (IFA-Tulln), University of Natural Resources and Life Sciences Vienna (BOKU), Austria

²Institute of Chemical, Environmental and Biological Engineering, TU Vienna, Austria

³Department of Computational Biology of Infection Research, Helmholtz Centre for Infection Research, Germany

⁴Institute for Biochemistry, Biotechnology and Bioinformatics, University of Technology (TU) Braunschweig, Germany

⁵2nd Zoological Department, Natural History Museum Vienna, Austria

⁶Chemical Sciences, Universiti Brunei Darussalam, Brunei

⁷Environmental and Life Sciences, Universiti Brunei Darussalam, Brunei

Correspondence to: Rainer Schuhmacher at rainer.schuhmacher@boku.ac.at

URL: <https://www.jove.com/video/57652>

DOI: [doi:10.3791/57652](https://doi.org/10.3791/57652)

Materials

Name	Company	Catalog Number	Comments
Tube 50 ml, 115 x 28 mm, flat/conical base PP	Sarstedt	62,559,001	see Figure 1 in manuscript
PVC Tubings	Rehau	290 4489	see Figure 1 in manuscript
Mesh, stainless steel, 0.63 mm mesh size	Antstore	1000378	see Figure 1 in manuscript
Freezer	Severin	KS 9890	-20 °C or lower
polystyrene foam box, inner dimensions 155 mm x 100 mm x 45 mm	Thorsten Koch	4260308590481	
Petri dish, glass, 100 mm x 15 mm	Aldrich	BR455742	
Cold pack 150 mm x 100 mm	Elite Bags	1998	freeze to -20 °C
Bucket with crushed ice			
1.5 mL Short Thread Vials, 32 x 11.6 mm, clear glass, 1st hydrolytic class, wide opening	La-Pha-Pack	11090500	
Screw caps for 1.5 mL Short Thread Vials, closed, Silicon white/PTFE red septum, 55° shore A, 1.0 mm	La-Pha-Pack	9151799	
Stereomicroscope	Bresser	5806100	
Forceps, Superfine Tip curved	Medizinische Instrumente May, Norman May	PI-0005B	
Forceps, Superfine Tip straight	blueINOX	BL-3408	
Dissection needle 140 mm, pointed, straight	Heinz Herenz Medizinalbedarf GmbH	1110301	
Methanol, LC-MS CHROMASOLV, Honeywell Riedel-de Haën	fisher scientific	15654740	
Distilled water			
Rotizell-Tissue-Tücher	Carl Roth GmbH + Co.KG	0087.2	
Acetic acid ethyl ester ROTISOLV ≥99,8 %	Carl Roth GmbH + Co.KG	4442.1	freeze to -20 °C
Vortex Genie 2	neoLab	7-0092	

0.1 mL micro-inserts for 1.5 mL Short Thread Vials, 31 x 6 mm, clear glass, 1st hydrolytic class, 15 mm tip	La-Pha-Pack	06090357	
Screw caps for 1.5 mL Short Thread Vials, with hole, RedRubber/PTFE septum, 45° shore A, 1.0 mm	La-Pha-Pack	9151819	
Alkane standard solution C ₈ -C ₂₀	Sigma-Aldrich	04070	
Alkane standard solution C ₂₁ -C ₄₀	Sigma-Aldrich	04071	
n-Hexane SupraSolv	Merck	104371	
GC-autosampler, e.g. MPS2XL-Twister	Gerstel		
Agilent Gas chromatograph 6890 N	Agilent		
Gooseneck splitless Liner	Restek	22406	
Helium (5.0 - F50)	Messer	102532501	
GC capillary column HP-5MS UI 30 m x 0.25 mm x 0.25 µm	Agilent	19091S-433UI	
Agilent Mass Selective Detector 5975B	Agilent		
MSD ChemStation Data Analysis Application software	Agilent		
MetaboliteDetector software (3.1.Lisa20170127Ra-Linux)	Hiller K		download from: http://metabolitedetector.tu-bs.de/node/10
Calibration Library for MetaboliteDetector	Hiller K		download from: http://metabolitedetector.tu-bs.de/node/10
MD Conversion Tool for NIST-library	Hiller K		download from: http://metabolitedetector.tu-bs.de/node/10