

Materials List for:

Using Deuterium Oxide as a Non-Invasive, Non-Lethal Tool for Assessing Body Composition and Water Consumption in Mammals

Sarah E. Hooper¹, Amanda N. Eshelman², Ashley N. Cowan³, Alicia Roistacher⁴, Tyler S. Paneitz², Sybill K. Amelon⁵

¹Department of Veterinary Pathobiology, University of Missouri

²College of Veterinary Medicine, University of Missouri

³Department of Animal Science, University of Missouri

⁴School of Natural Resources, University of Missouri

⁵USDA USFS Northern Research Station

Correspondence to: Sarah E. Hooper at sarahdvm.ugamizzou@gmail.com

URL: <https://www.jove.com/video/59442>

DOI: [doi:10.3791/59442](https://doi.org/10.3791/59442)

Materials

Name	Company	Catalog Number	Comments
0.2 micron non-pyrogenic disk filter	Argos Technologies	FN32S	nylon, 30mm diameter, 0.22um, sterile
1.5 mL conical microcentrifuge tubes	USA Scientific	1415-9701	1.5 ml self-standing microcentrifuge tube, natural with blue cap
10 mL sterile glass vial for injection	Mountainside Medical Equipment	MS-SEV10	clear, sterile glass injection unit
10 mL syringe	Becton Dickinson	305219	sterile 10 mL syringe individually wrapped
100 mL sterile glass vial for injection	Mountainside Medical Equipment	AL-SV10020	clear, sterile glass injection unit
20 gauge needle	Exel	26417	needles hypodermic 20g x 1" plastic hub (yellow) / regular bevel
22 gauge needle	Exel	26411	needles hypodermic 22g x 1" plastic hub (black) / regular bevel
deuterium oxide	Sigma-Aldrich	151882-25G	99.9 atom % D
isoflurane	Vetone	3060	fluriso isoflurane, USP
OMNIC Spectra Software	ThermoFisher Scientific	833-036200	FT-IR standard software
petroleum jelly	Vaseline	305212311006	Vaseline, 100% pure petroleum jelly, original, skin protectant
plastic capillary tubes	Innovative Med Tech	100050	sodium heparin anticoagulant, 50 µL capacity, 30 mm length
Sealed liquid spectrophotometer SL-3 FTIR CAF2 Cell	International Crystal Laboratory	0005D-875	0.05 mm Pathlength
sodium chloride	EMD Millipore	1.37017	suitable for biopharmaceutical production
Thermo Electron Nicolet 380 FT-IR Spectrometer	ThermoFisher Scientific	269-169400	discontinued model, newer models available