

Materials List for:

Standardized Measurement of Nasal Membrane Transepithelial Potential Difference (NPD)

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Materials

Name	Company	Catalog Number	Comments
KD Scientific infusion pump (or equivalent – such as programmable infusion pumps provided by the institution/hospital)	Fisher Scientific		
Powerlab 4/30	AD Instruments		
BMA-200 AC/DC portable bioamplifier	AD Instruments		
ISO-Z isolation headstage for BMA-200	AD Instruments		
Windows compatible PC - Minimum requirements of Windows XP or higher	Various		
AD Instruments software: GLP Client V6 (Windows) or higher	AD Instruments		
ECG electrode (ground for study subject)	Hospital standard		
2 mini calomel reference electrodes	Fisher Scientific	13-620-79	
Potassium Chloride KCl, Granular – USP, formula weight 76, qty: 500 gm	Spectrum		
Sterile container (such as specimen collection container , or similar) to be used for KCl calomel bath, with holes cut in lid to hold electrodes in place. (If not provided by electrode manufacturer.)	Hospital standard		
2 electrodes: Ag/AgCl 8 mm TP electrode	BIOPAC Systems	UNSHLD-EL258	
2 Ag/AgCl electrodes, B0194, plug 4 mm	SLE Instruments		
Signacreme® Conductive Electrode Cream	Fisher Scientific	Parker Labs ref # 17-05	
Skin abrasion device	PROMED Feeling	Ref 374901	
Hi Di 541 M, Diamond tipped dental burs	Ash Instruments		

Becton Dickinson PE 50 tubing	Fisher Scientific	427411	
Becton Dickinson PE 90 tubing	Fisher Scientific	427421	
Silastic tubing, 0.062" ID, 0.095" OD	Fisher Scientific	508-007	
Micropore Surgical Tape Paper (25 mm x 9.1 m)	3M	1530-1	
Marquat double lumen catheter Length: 80 cm; Outer diameter: 2.5 mm; Internal diameter of the channels: 0.8 mm; Distance of the side-holes to the tip: 2 mm. EU label Agreement for NPD: I0202US	Marquat	I0202US	
1" X 10 yards silk tape	3M Durapore	1538-1	
IV extension tubing (30", 50/box)	International Limited	IMN30	
Three-way stopcock (50/box)	Medex	MX5311L	
Sterile syringe filters (ANOTOP 25 sterile 50 pk; 0.22-µm or smaller filters; or equivalent)	Fisher Scientific	09-926-7	
Becton Dickinson Intramedic Luer stub adapter (20 G, for connection to PE90 if using nasal catheter produced at study site)	Fisher Scientific	427564	
Becton Dickinson 23 G, 0.75" Vacutainer ("butterfly") needles (0.6 mm x 19 mm; 50 U/box) (for connection to PE50) if using nasal catheter produced at study site)	Fisher Scientific	367283	
Becton Dickinson Syringe 60 mL without needle Luer-Lok tip (40/Box)	Fisher Scientific	309653	
Becton Dickinson Syringe 10 mL without needle Luer-Lok tip (100/Box)	Fisher Scientific	309604	
Single use sterile wipes (per institutional availability)	Hospital standard		
70% EtOH (1 pint), Aaper Alcohol and Chemical Co. catalog number NC9274019 (or equivalent)	Fisher Scientific		
Corning single use sterile bottle-top filters, 0.22 µm pore size (0.15 – 1.0 L volumes acceptable)	Fisher Scientific	430624	
Buffer Cert Ph 10.00 (1 L Sn04332) – for pH meter calibration	Fisher Scientific		
Buffer Cert Ph 4.00 (1 L Sn04327) – for pH meter calibration	Fisher Scientific		
Buffer Cert Ph 7.00 (500 mL Sn04328) – for pH meter calibration	Fisher Scientific		
Disposable underpads (Blue Pads; 23" x 36" 150/Box; or equivalent per hospital standard)	SureCare		
23 G, 0.75" Vacutainer "butterfly" needles (0.6 mm x 19 mm; 50 U/box)	Becton Dickinson	367283	
Difco Laboratories Agar (Noble 100 g 0142-15-2; or equivalent)	Fisher Scientific		
Welch Allyn Rhinoscope 71000-C (or equivalent)	Fisher Scientific		

Welch Allyn Convertible Handle Battery 72300 (or equivalent) OR Otoscope with battery	Fisher Scientific		
Head and chin rest (or equivalent; optional)	Richmond Products, Inc	629R	
Static Dissipative Anti-Fatigue Matting (or equivalent)	Fisher Scientific	No. 791	
REAGENTS FOR SOLUTIONS MIXED ON SITE			
Sodium Chloride, Granular – USP NaCl	Spectrum		Formula Weight: 58; Size: 500 gm
Calcium Chloride CaCl ₂ •2H ₂ O – USP	Spectrum		Formula Weight: 147; Size: 500 gm
Magnesium Chloride Hexahydrate Crystal, MgCl ₂ •6H ₂ O – USP	Spectrum		Formula Weight: 203; Size: 500 gm
Potassium Phosphate Dibasic, Anhydrous, Granular, KH ₂ PO ₄ – USP	Spectrum		Formula Weight: 174; Size: 500 gm
Potassium Phosphate Monobasic Crystals – NF (KH ₂ PO ₄)	Spectrum		Formula Weight: 136; Size: 500 gm
Sodium Gluconate- USP (monosodium salt)	Spectrum		Formula Weight: 218; Size: 500 gm
Calcium Gluconate – USP (Anhydrous Powder)	Spectrum		Formula Weight: 430; Size: 500 gm
Potassium Gluconate- USP (Anhydrous)	Spectrum		Formula Weight: 234; Size: 500 gm
Magnesium Sulfate Heptahydrate – USP MgSO ₄ •7H ₂ O	Spectrum		Formula Weight: 246; Size: 500 gm
Amiloride HCl – USP	Spectrum		Formula Weight: 302; Size: 5gm
Adenosine 5'-Triphosphate (ATP) (Disodium salt)	Spectrum		Formula Weight: 551; Size: 5 gm
Magnesium Chloride, Hexahydrate, Crystal – USP MgCl ₂ •6H ₂ O	Spectrum		Formula Weight: 203; Size: 500 gm
Double-distilled water (ddH ₂ O)	Hospital Pharmacy		Formula Weight: NA; Size: 1 L
Isoproterenol HCL Injection - USP 1 mg/5 mL ampule	Hospital Pharmacy		Formula Weight: 248; Size: single use
Ringers Injection, USP or Ringers Irrigation	Hospital Pharmacy		Formula Weight: NA; Size: 5 L