

Acquiring Hyperpolarized ^{129}Xe Magnetic Resonance Images of Lung Ventilation

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Materials

Name	Company	Catalog Number	Comments
1.5T or 3T human MRI scanner	Siemens		MAGNETOM Symphony (1.5T) or Vida (3T); older models fine, as long as multinuclear option is/can be installed; scanners also available from GE and Philips
^{129}Xe hyperpolarizer	Polarean	9820	
^{129}Xe MRI phantom			
^{129}Xe MRI vest coil	Clinical MR Solutions		Also available from other vendors
^{129}Xe polarization measurement station	Polarean	2881	
^1H MRI phantom			
Coil file for ^{129}Xe MRI vest coil			Also available from other vendors for their respective coils
ECG machine			
Helium buffer gas			
Interface box from coil to scanner			May be built into coil, but needs to be included separately if not
Liquid nitrogen			
MRI-safe pulse oximeter	Philips	Expression MR200	
Nitrogen buffer gas			
PFT machine			
Programming/image analysis software	MATLAB	R2023a	Various other options available
Pulse sequence design software	Siemens		IDEA software package; also available from GE and Philips for their respective scanners
Scanner multinuclear option	Siemens		Scanner integrated hardware/software package; also available from GE and Philips for their respective scanners

Tedlar gas sampling bags (500, 750, 1000, 1250, 1500 mL)			
Xenon gas (^{129}Xe isotopically enriched)			