

Materials List for:

High-pressure Sapphire Cell for Phase Equilibria Measurements of CO₂/Organic/Water Systems

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Materials

Name	Company	Catalog Number	Comments
Hollow sapphire cylinder			50.8 mm O.D. x 25.4±0.0001 mm I.D. x 203.2 mm L
Pressurizing fluid	Water		
Syringe pumps	Teledyne Isco Model 500D		
Digital temperature controller	Omega CN76000		
Digital readouts	HH-22 Omega		
Thermocouples	Omega Type K		
Pressure transducer & readout	Druck, DPI 260, PDCR 910		
CO ₂			SCF grade
Cathetometer	Gaertner Scientific Corporation or any scientific lab suppliers		
Relief valve	Spring loaded relieve valve (Swagelok)		
Mounting bracket	Unistrut bracket		
Hollow spacers			3/4 in
4 stainless steel bolts, 4 nuts, 2 washers			3/4 in
3 O-rings	Kalrez, 210 size		
3 backing rings			116 size for piston; 2 8210 size for end caps
1 multiport fitting	HiP		
High pressure tubing			Stainless steel, 1/16 in