

Materials List for:

# Protocol for Measuring the Thermal Properties of a Supercooled Synthetic Sand-water-gas-methane Hydrate Sample

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## Materials

Name	Company	Catalog Number	Comments
TPS thermal probe, Hot disk sensor	Hot Disk AB Co., Sweden	#7577	Kapton sensor type, sensor radius 2.001 mm
Hot disk thermal properties analyzer	Hot Disk AB Co., Sweden	TPS 2500	
Toyoura standard silica sand	Toyoura Keiseki Kogyo Co., Ltd., Japan	N/A	
Methane gas, 99.9999%	Tokyo Gas Chemicals Co., Ltd., Japan	N/A	Grade 6 N, Volume 47 L, Charging pressure 14.7 MPa
Water Purification System, Elix Advantage 3	Merck Millipore., U.S.	N/A	5 MΩ cm (at 25 °C) resistivity
Vibrating table, Vibratory packer	Sinfonia Technology Co. Ltd., Japan	VGP-60	
Chiller, Thermostatic Bath Circulator	THOMAS KAGAKU Co., Ltd., Japan	TRL-40SP	
Coorant, Aurora brine	Tokyo Fine Chemical Co.,Ltd., Japan	N/A	ethylene glycol 71 wt%
Temperature gage	Nitto Kouatsu., Japan	N/A	Pt 100, sheath-type platinum resistance temperature detector
Pressure gage	Kyowa Electronic Instruments., Japan	PG-200 KU	
Data logger	KEYENCE., Japan	NR-500	
Mass flow controller	OVAL Co., Japan	F-221S-A-11-11A	Maximum flow 2,000 N ml/M, maximum design pressure 19.6 MPa