

Materials List for:

Experimental Study of the Relationship Between Particle Size and Methane Sorption Capacity in Shale

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URL: <https://www.jove.com/video/57705>

DOI: [doi:10.3791/57705](https://doi.org/10.3791/57705)

Materials

Name	Company	Catalog Number	Comments
XRF D8 DISCOVER X-Ray diffractometer	Brook, Germany	204458	For mineralogy X-ray diffraction
EBSD three element integration system with spectrum	EDAX, USA	Trident XM4	For nanoscale imaging (SEM)
Mercury injection capillary pressure (MICP)	USA micromeritics Instrument company	AutoPore IV 9520	For the immersion method to measure macropores (Porosity)
Nitrogen gas adsorption at low temperature	USA micromeritics Instrument company	ASAP2460/2020	For the low pressure nitrogen gas adsorption to measure mesopores and micropores (BET)
Finnigan MAT-252 mass spectrometer	ThermoFinnigan, USA	TRQ/Y2008-004	For C isotope
LECO CS-230 analyzer	Research Institute of Petroleum Exploration and Development	617-100-800	TOC apparatus
3Y-Leica MPV-SP photometer microphotometric system	Leica, Germany	M090063016	Ro apparatus
Magnetic Suspension Balance Isothermal adsorption analyzer	Rubotherm, Germany	2015-1974CHN	For methane adsorption tests
Sieve (20/40/60/80/100/120 mesh)	Sinopharm Chemical Reagent Beijing Co. Ltd	200*50GB6003.102012	Used to screen samples
Absorbent cotton, hammer, tweezers and acetaldehyde	Sinopharm Chemical Reagent Beijing Co. Ltd	standard	Used to clean materials
Residual gas tight grinder	Nantong Huaxing Petroleum Instrument Co., Ltd	TY2013000237	Sample smasher