

Measurement of GRI porosity for shale sample

Fangwen Chen, Xue Ding, Shuangfang Lu, Xipeng He

Abstract

Citation: Fangwen Chen, Xue Ding, Shuangfang Lu, Xipeng He Measurement of GRI porosity for shale sample. **protocols.io**

dx.doi.org/10.17504/protocols.io.icycaxw

Published: 08 Jun 2017

Protocol

Step 1.

Preheat 250g shale sample a vacuum oven at 100 °C for 12-16 hours to remove pore fluids, such as water and oil.

Step 2.

Measure the weight and bulk volume of the shale sample.

Step 3.

Calculate the bulk density ρ_b of the shale sample.

Step 4.

Crush the shale sample into 80-200 mesh.

Step 5.

Measure the weight and grain volume of the shale sample.

Step 6.

Calculate the grain density ρ_g of the shale sample.

Step 7.

Calculate The GRI porosity Φ_{GRI} of the sample using the following formula: $\Phi_{GRI} = (\rho_g - \rho_b) / \rho_g \times 100\%$.