POROSITY CALCULATION OF COMPACTED SALT SAMPLE
USING VACUUM SEALING METHOD

Scope: To determine the bulk specific gravity & porosity of specimen of compacted salt sample

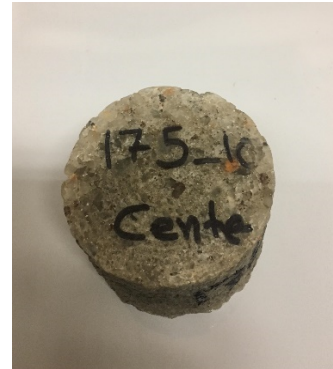**Apparatus used:** Corelok InstroTek, Inc

Test Specimen:
Sample ID: 175_10 (Oven dried)
Sample Type: Salt, Core
Shape: Cylindrical

Figure 1: Salt Sample 175_10

Calculation:

Sample (Oven dried) weight in air, $W_1 =$ 933.020 g

Membrane (InstroTek provided) weight, $W_p =$ 20.230 g

Sample weight in water (Submerged), $W_2 =$ 488.720 g

Density of Water (g/cm^3) for 20.9˚C (recorded 0.99768

Bulk Specific Gravity of the sample, $G_b =$ 2.113
Using CoreGravity (Software)

So, bulk density, $D_b =$ 2.108 g/cm^3

Sample volume, $V =$ 442.589 cm^3

Maximum Specific gravity, $Gm = [W_1/ (W_1-W_3)]$ x $\rho_s = 2.157$

(Based on calculation for Sample 90_05, where W3 = sample weight in Silica oil- pores filled with same fluid)

Hence we will assume, Gm = 2.157

% Porosity = (1- G_b/ G_m) x 100 = 2.04%

Results:	
Therefore the sample volume =	442.589 cm^3
Bulk Specific Gravity, G_b =	2.113
And calculated Porosity =	2.04%