



Series of Practical Work N°03 : Soil Compaction

Exercise: Analysis of a Standard Proctor Test

A **Standard Proctor Test** was conducted on a **silty soil**, and the following data were obtained:

Wet mass (g)	Mold volume (cm ³)	Wet density (g/cm ³)	Water content (%)
3400	945	3.60	6
3550	945	3.76	8
3675	945	3.89	10
3700	945	3.92	12
3680	945	3.89	14
3620	945	3.83	16

Given:

- Empty mold weight = 2500 g
- Unit weight of water = 1 g/cm³

Questions:

1. Calculate the dry mass and dry density for each point.
2. Plot the compaction curve (dry density vs. water content).
3. Determine the optimum water content (OWC) and the maximum dry density (MDD).
4. Draw the 100% saturation curve and compare it to the experimental curve.