

## Journal

J. Biol. Chem. Environ. Sci., 2018, Vol. 13(1): 437-452 http://biochemv.sci.eg

## IMPACT OF TEXTURE AND COMPOST ON SOIL VISCOSITY

Awadalla, S.Y., S., El-Demerdashe, Amal, A. Ahmed and Sherine, M. Shehata

Soil Physics and Chemistry Department, Desert Research Center, Cairo, Egypt.

## **ABSTRACT**

Eleven soil samples representing 6 soil texture classes and three kinds of composts have been prepared to this study, incubated 90 days and studied for several analyses beside soil suspension (1: 2.5) viscosity. The resulted data indicate the following:

- 1- Highly expected correlation between (silt + clay %) values with soil viscosity under all treated both compost kinds & amounts.
- 2- The multiple correlation of (silt + clay) and (organic matter) O.M. % on viscosity is highly significant being positive with the former and negative with the latter indicating buffering action of O.M for fine particles effect.
- 3- No significant relations between viscosity and both EC and pH.
- 4- Significant relation between viscosity and (cation exchange capacity) CEC indicating the importance of compost incubation in soil on enlarging CEC than expected.
- 5- Significant relation between viscosity and Exch. Na<sup>+</sup>.

**Key words:** Compost, organic matter content, soil viscosity, soil texture and Tafla.