

**PHYSICO-CHEMICAL CHARACTERIZATION OF HUMBAS MATI (TERMITE  
MOUND CLAY) AND ITS POTENTIAL INCLUSION IN MAINSTREAM  
MUD THERAPY**

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The Sri Lankan indigenous medical system incorporates various types of mud including *Humbas mati* (Termite mound clay), *Kumbal mati* (Potter wasp clay), *Kambiseenipas* and *Geri pas* for therapeutic purposes such as edema (*Shotha*), fracture dislocation (*Kadum bidum*) and hydrocele (*Mutraja vrudhi*). This study was designed to analyze the physico-chemical properties of *Humbas mati* (Termite mound clay) and to rationalize its potential use in mainstream mud therapy. Termite mound clay was obtained from Colombo, Sri Lanka. Particle size analysis was conducted to identify clay, silt and sand percentages using the Hydrometer method at the Department of Agricultural and Plantation Engineering, Open University of Sri Lanka. Electrical conductivity, pH, total Nitrogen, available Phosphorus, Calcium, Magnesium, Potassium, Sodium, Iron, Zinc, Copper and Sulphur were analyzed using standard methods at the Soil and Plant Nutrition Division of the Tea Research Institute, Talawakelle. Research articles on the therapeutic application of mud were obtained from PubMed and Google Scholar. Accordingly, Termite mound clay exhibited 86% clay, 8% silt and 6% sand. Electrical conductivity of 10.74 $\mu$ s/cm and 3.6-3.8pH. Chemical analysis revealed 15% total Nitrogen and 42ppm available Phosphorus. Potassium, Calcium, Magnesium and Sodium levels were 45.8ppm, 151.7ppm, 9.7ppm and 241.7ppm respectively, while Iron, Zinc, Copper and Sulphur levels were 9.6ppm, 1.1ppm, 0.11ppm and 48.3ppm respectively. This study revealed Termite Mound clay exhibit similar physico-chemical properties to types of mud used in mainstream mud therapy. Additionally, the results agreed with research findings on the healing ability of Termite mound clay in joint disorders, skin diseases and edema. Therefore, Termite mound clay could be a potential inclusion in mainstream mud therapy.

**Keywords:** Mud therapy, physico chemical properties, termite mound clay, traditional medicine