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Physico-chemical nurture of soil texture procedure for identification of Indian tropical soils

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A simple, accurate and convenient analytical method has been developed for the determination of different soil samples. Soils were collected from different locations like Rudraram, Koulampet, Cheriya, Lakdaram and Pashamylaram belonging to Medak district, Telangana, India. Soil samples were taken from a depth below the surface 20 cm. The selected sampling sites were not treated with crop protection products formative last two years and no organic fertilizers applied from last two years. Soils dried for about half an hour at room temperature before determination of all physico-chemical parameters. Air dried soil samples were sieved through a 2 mm sieve and used for determination of pH, bulk density and soil texture. To a 1 liter beaker, 20 g of air dried soil sample was transferred and 50 ml of 30% w/v H_2O_2 was added and mixed well. The reaction was allowed to proceed for 5 minutes and then it was placed in a hot water bath at 70 °C for about 20 minutes. The beaker was covered with a watch glass. Stirring was continued to avoid frothing over. Further 20 ml of H_2O_2 was added and was placed in the water bath at 70 °C for about 20 minutes. The contents were diluted to about 150 ml of distilled water and were brought to boil on a water bath at 70 °C. H_2O_2 treatment is to oxidize the organic matter in the soil, estimation of clay, silt and sand. Based on the characterization, the soils were distinguished into loamy sand, sandy loam, clay and sandy clay. The details of collection location and type of soils as follows: (1) Rudraram-contains loamy sand soil, (2) Koulampet-contains loamy sand soil, (3) Cheriya-contains sandy loam soil, (4) Lakdaram-contains sandy clay soil and (5) Pashamylaram-contains clay soil.

Biography

T Benarji Patrudu has completed his PhD from Andhra University, Visakhapatnam. He is currently working as an Associate Professor in the Department Of Chemistry, Gandhi Institute of Technology and Management University, Hyderabad, India. His area of research includes analytical methods for bio, environmental and pharmaceutical samples. He has published 40 research articles in reputed international and national journals and has published 18 papers in national conferences.

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