# SRI LANKA BALL CLAYS AS A POSSIBLE SUBSTITUTE FOR IMPORTED VARIETIES

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The best known deposit of ball clay in Sri Lanka occurs at Dediyawela in Kalutara district. Ball clay is used extensively in the ceramic industry as it imparts plasticity to ceramic body mixtures. Local ball clay could be used for the production of earthenware and other ceramic items, but for sanitaryware, imported ball clays have to be used.

The mineralogy and chemical composition, thermal behaviour, particle size distribution, plasticity, fired properties and the rheology (deflocculation behaviour) of local ball clays have been studied. These results are compared with results obtained from imported varieties of clay. A new test method to determine the deflocculation behaviour of a clay is discussed.

The rheological properties of local ball clay reveal that the casting concentration and casting rate is lower and the deflocculation demand higher, than imported ball clays, when sodium silicate is used as a deflocculant. This property is of very great importance for the fabrication of items where casting is involved and depend mainly on the type of the electrolyte used. It is therefore desirable to use a suitable electrolyte for local ball clay which can improve casting properties. An account is given of the use of polyelectrolytes to achieve good casting properties and tests reveal that very promising results can be obtained by the use of this dispersing agent for deflocculation of Sri Lanka ball clays.