



DOI: **10.5958/2249-7137.2021.01959.5**

OPTIMIZATION OF THE ACID ACTIVATION PROCESS OF BENTONITE

Jobir X. Xamroyev*; Normurot I. Fayzullayev**; Jasur H. Shukurov***;
Rustam D. Berdiyev***

* Samarkand Medical Institute,
UZBEKISTAN

** Samarkand State University,
UZBEKISTAN

*** Academic Lyceum of Samarkand State University,
UZBEKISTAN

Email id: fayzullayev72@inbox.ru

ABSTRACT

The fields of application of Bentonite clays are expanding due to imparting new properties to them as a result of various types of activation. One of the most effective treatments is acid treatment. Acid-activated montmorillonites are used as acid catalysts for various reactions. Acid activation with HCl solution of calcium and sodium montmorillonites of the Navbakhor deposit was carried out. It was shown that, as a result of acid treatment, the development of a porous structure occurs due to the removal of both interlayer cations (Na^+ , Ca^{2+}) and cations of the octahedral layer (Al^{3+} , Fe^{2+} , Mg^{3+}). The textural characteristics and strength properties of moulded composites based on acid-activated montmorillonites have been investigated. The purpose of this study is to identify the optimal conditions for acid activation and to study the textural characteristics of bentonite from the Navbakhor deposit.

KEYWORDS: Bentonite, Activation, Processing, Modification, Optimization, Texture Characteristics.

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