



---

## SLUDGE RECYCLING IN CERAMIC MATRIX

Ana-Maria Szoke<sup>1</sup>, Marcela Muntean<sup>2\*</sup>

<sup>1</sup>*Faculty of Environmental Science Extension Sf. Gheorghe- Babes-Bolyai, Romania*

<sup>2</sup>*University "Politehnica" Bucharest, PO.Box 12-46, 78100 Bucharest, Romania*

---

### Abstract

In the new millennium to sustain a healthy life in harmony with nature, it will be extremely important to develop various materials and processes that minimize any harmful influence on the environment. The feasibility of sludge recycling in the brick manufacture was evaluated through laboratory testing. Several ceramic masses with clay, sand and various proportion of sludge have been synthesized and than characterized by their physical-mechanical properties. Sludge fineness also has been taking into consideration for every raw mixture. Sludge waste addition, in small proportion does not modify the mechanical properties of the ceramic product. The ceramic properties, particularly, the open porosity –water adsorption in presence of small sludge proportion (up to 7%) shows small modification, respectively small decreasing.

*Key words:* ecological ceramic, sludge in ceramic matrix, solid waste recycling

---

---

\* Author to whom all correspondence should be addressed: [m\\_muntean@chim.upb.ro](mailto:m_muntean@chim.upb.ro)