



Development of the additional agriculture byproducts for increasing clay-body porosity in the making of ceramic water filters

Thitima Khunyotying^{1*}

¹*Department of Ceramics Technology, Faculty of Industrial Technology,
Lampang Rajabhat University, Thailand*

*e-mail: tiwpop4@hotmail.com

The purpose of this research was to develop the open pores in ceramic filters by using agricultural waste. The experiment started with blending of local red clay (Ban Mon Khao Kaeo) and four types of agricultural waste (scrap of soil, sawdust, coconut husk, and black rice husk) together in the defined ratio and then forming by jiggering. After that, the specimens were followed by firing at 750 °C and 800 °C. Finally, the specimens were tested by the BET technique, bending strength, physical properties and photometric method. It was found from the results that adding scrap of soil in 25 percent and black rice husk in 5percent represented of the best condition.

Keywords: Ceramic Water Filters; Water; Agricultural Byproducts; Porosity