CHARACTERISTICS OF POROUS CERAMICS BASED ON COFFEE SHELL WASTE AS A POTENTIAL COFFEE BREWING TOOL

Supervisor: Hatmiyarni Tri Handayani, S.TP., M.Sc.
Khoirul Azka Azkiya
Azkakhazkiya03Desember@gmail.com
Coffee Plantation Management Study Program
Department of Agricultural Production

So far, coffee shells are simply thrown away because they are considered less useful and worthless, but there are also a small number of farmers who use them as organic fertilizer on their plantations. This research aims to find out whether coffee shell waste can be used as an innovation in ceramic shaft-based coffee brewing equipment, whether the innovation in ceramic shaft-based coffee brewing equipment can be used for brewing and can be used as an alternative to filter paper, the effect of using ceramic shaft-based coffee brewing equipment on coffee shell waste on the physical properties of porous ceramics. This research uses a descriptive method. The research had 4 treatments with variants of adding 0%, 25%, 30%, 35% coffee shell. The results of the research show that coffee shell waste can be used as an innovative product for coffee brewing tools based on ceramic shafts and of course this can add added value from the use of coffee shell waste. The innovation of manual coffee brewing tools based on ceramic shafts can allow water to flow because there are pores in it. The structure of the manual coffee brewer, and the zeolite material contains silicon (Si) compounds which are not included as metal compounds and aluminum (Al) has hardening properties. Therefore, the innovation of ceramic shaft based coffee brewing equipment can be used for brewing and can be an alternative to filter paper. The use of coffee shell waste as a substitute material for making innovative ceramic shaft based coffee brewing equipment affects the physical properties of porous ceramics, causing an increase in mass loss and porosity. , and density are in line with variations in the addition of coffee shell waste. The research results showed mass loss values (38.33-46.40) %, porosity (12.83-39.84) %, density (1.029-2.259) gr/l.

Keywords : Coffee shell waste, porous ceramics, innovative products, coffee brewing equipment, filter paper.