

## **Treated oil palm ash as precursor in the zeolite synthesis**

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**Abstract.** In this study, the ability of treated oil palm ash aided with kaolin powder to produce zeolites is studied. The palm ash has been treated with citric acid via a leaching process to get rid of the metallic impurities in it. The usage of treated oil palm ash in the zeolites conversion seems to be an option for waste materials management. Characterization of treated oil palm ash from Malaysia's palm oil plantation has been cleared. The treated oil palm ash and kaolin powder are used as the starting material for the synthesis of zeolites materials. The method chose for the zeolites conversion is alkaline hydrothermal treatment. The chemical composition, crystalline phases and elemental composition of treated oil palm ash and as-synthesized samples were characterized and studied. From the analysis, the treated oil palm ash was a fertile source of silica and exists as quartz phase. The outcomes have significant motivation for the production of zeolites by using low cost material such as treated oil palm ash.

**Keywords:** Agricultural Wastes, Palm Ash, Zeolite