Zero-Waste Management for Spent Bleaching Earth: A Study of Its Reuse and Regeneration

Rongdejpratheep, Papitchaya

Techasontichai, Marisa

Spent bleaching earth (SBE) is waste product from the palm oil refining industries and mostly is disposed in landfill. This project studies the zero waste management to reuse the remaining palm oil in the SBE as fuel for power plants and recycle the regenerated SBE in the palm oil refining again. The SBE fuel properties are improved using cassava rhizome to increase the heating power and molasses as a binder in different ratios. The analysis of physical fuel properties including calorific value, moisture content, ash content, compressive strength, and volatile organic component are measured. The absorbing function of the regenerated SBE is preliminarily tested with the methylene blue. This information suggests the designing of zero waste management for SBE.

Awards Won: