

NOVEL DESIGN OF A LOCALLY FABRICATED ROTARY SHAKER

Executive summary about the design

Different leaching procedures including Toxicity Characteristic Leaching Procedure (TCLP) and Synthetic Precipitation Leaching Procedure (SPLP) to determine if a suspected waste is hazardous or not require a rotary shaker to mix the solid wastes with the liquid extracting solutions at recommended speeds.

The cost of buying this equipment from renowned manufacturers is very high and unaffordable by my team at a moment. The desire to continue with the current research by my team at the Basel Convention Coordinating Centre for the African Region (BCCC-Africa) in Nigeria where I am a Research Associate and the Department of Chemistry, University of Ibadan, where I am lecturing to characterize many suspected hazardous substances including e-waste components made it necessary to conceive the idea to design this equipment locally, where it is cheaper and affordable.

The design of this equipment was made by Dr Gilbert U. Adie and fabricated in one of the laboratories at the University of Ibadan, Nigeria. This equipment rotates at 40-50 rpm, depending on the load. The pictures below show the equipment alone and with the designer.



