

## Short Description

### **MICROBIAL DEGRADATION OF FLEXIBLE POLYURETHANE FOAMS BY *ASPERGILLUS NIGER* AND *ASPERGILLUS TERREUS***

Polyurethane (PU), which is widely used in a range of industries, is often discarded after use. It would therefore, present an environmental problem because of its resistance to disintegration and biodegradation. For years researchers have tried to solve the degradability problems by investigating modification or productions that could lead to biodegradable products. One solution to these problems would be to include a material in the formulation of PU that provides biodegradability. Starches, various polysaccharides and vegetable oil have all been used in the production of PU foam to promote foam disintegration. A number of microorganisms, particularly fungi, have been isolated and characterized for their ability to degrade PU. Some of these fungi produce enzymes capable of degrading PU.

The ability of the fungi (*Aspergillus niger* and *Aspergillus terreus*) to degrade palm-based PU foam was determined via the petri dish and shake flask tests. It was observed that palm-based PU foams degraded faster than the commercial foams in shake flask test by both fungi as shown by higher weight losses, deterioration and/or complete decomposition of the samples. Hence, palm-based foam can be degraded in the environment in the presence of *A. niger* or *A. terreus*, with sufficient nutrients and maximum contact between fungi and the foams.

This short description describes the article by Razmah Ghazali; Lai Choon Mei; Norin Zamiah Kassim Shaari; Mohtar Yusof and Salmiah Ahmad. (2005). **Microbial degradation of flexible polyurethane foams by aspergillus niger and aspergillus terreus.** *Oil Palm Bulletin* 51(2): 26-35.

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