

## DOST-ITDI develops nanoclay from bentonite ore

Bicutan-Taguig City - As experts at the Industrial Technology Development Institute (DOST-ITDI) continue to explore areas of interest in materials science, it developed nanoclay using locally sourced bentonite ore.

But, what is nanoclay?

Nanoclay is a clay mineral with a particle size of 1–100 nm. It is used as an additive or filler in polymer nanocomposites to improve their mechanical strength, toughness, electrical or thermal conductivity. In turn, the nanocomposites produced with nanoclay find application in making various commodity and engineering products for the automotive, construction, electronics, and packaging industry.



Some of the products derived from nanoclay are biodegradable nanocomposite films for green packaging (food and cutleries); halloysite nanoclay-filled epoxy molding compound for integrated circuit packaging; recycled polycarbonate-layered silicate nanocomposites (PLSN); local bioactive polymer nanofibrous scaffold for tissue engineering; and nanostructures fibrous membrane for wastewater treatment.

Other possible applications of these clay-based polymer nanocomposites are in the biomedical and biotechnological fields such as tissue engineering, drug delivery, biosensors, and biomedical devices.

The ITDI nanoclay technology is now ready for transfer to interested parties. For more information on how to adopt the technology, you may contact: Ms. Nelia A. Florendo, Chief of the Technological Services Division (TSD) at Tel.: (632) 837.2071 to 82 ext. 2265/2270 or Email: [tsd@itdi.dost.gov.ph](mailto:tsd@itdi.dost.gov.ph) (*DDGotis\ITDI S&T Media Service*)

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