

2017 ITDI 5th Cluster Techno Offering

ITDI develops food grade NPCC



Plastic is all around us. It is widely used because it is versatile, lightweight, flexible, moisture resistant, durable, strong, and relatively inexpensive. It can be chemical resistant, clear or opaque, and basically unbreakable. Nevertheless, the widespread use of plastic is now causing unparalleled environmental problems and conceals serious health risks to all living things. Thus, it is best to use it wisely, cautiously, sparingly, and only when suitable alternatives do not exist or are not available.

The high demand for plastic materials and the growing problem in its reduction, now calls for unified efforts from the government and the industries to come up with effective solutions.

Our Business is Industry

To this end, the Industrial Technology Development Institute (DOST-ITDI) worked on an innovative process to produce nano precipitated calcium carbonate (NPCC) from local limestone minerals sourced in Negros Oriental.

NPCC is a nanomaterial that has wide range of industrial applications in the areas of papermaking, rubber, plastics, pharmaceuticals, agriculture, and foods, among others. It is commonly used as filler or additive that can improve processing and enhance its properties.

During NPCC production, limestone is processed into food grade nano precipitated calcium carbonate through carbonation. ITDI researchers pursued development of the technology to make use of the country's 29-billion tons of non-metallic minerals and limestone deposits.



Pellets with NPCC



Processing of film with NPCC



Rainwater collection system with NPCC

When ready, NPCC will help local processors of calcium carbonate to meet the quality of product requirements of the paper and plastic industries. Conventional processing usually produces calcium carbonate laden with impurities like calcite.

Our Business is Industry



ITDI
S&TMEDIASERVICE

www.itdi.dost.gov.ph

Because local processing is confined to calcining and simple grinding, processors cannot produce calcium carbonate in its original state of purity.

Use of this processing technology will enable local processors to meet the increasing demand for food grade precipitated calcium carbonate rather than import it.

In addition, the technology will increase the value of local limestone as an import substitute, while opening up a new industry with a different livelihood opportunity.

(DDGotis\ ITDI S&T Media Service)

Our Business is Industry

Department of Science and Technology INDUSTRIAL TECHNOLOGY DEVELOPMENT INSTITUTE
DOST Compound, General Santos Avenue, Bicutan, Taguig City Tel.: 837-2071 local 2184 / 2268