SUMMARY

The attempt to recycle plastic in an easy and unexpensive way had been tried by Waluyo (2004) and Zulaikha (2008) through their research project. They fry the plastic bag using cooking oil. Plastic which is heated by fried process, has unique shape and texture. The shape, motif and texture of fried plastic can be a Unique Selling Point (USP) if the material are applied for craft product. However the smell problem because of the cleaning process has not been solved yet.

In this research, the researchers try some experiments of plastic bag frying process which can produce exotic motif and texture to be used as craft products. Besides, the team also survey some places which provide plastic bag resources, test some kinds of chemical materials as cleaner to extract oil and investigate the most prospective market and product development.

There are some activity of the experiments, which are observing the transformation character of HDPE (High density Poly Ethylene) and LDPE (Low Density Poly Ethylene) plastic bag when heated, investigating the most appropriate temperature to heat begin from 100°C – 275°C, and making observation when the plastic bags are mixed with other material such as sand, acrylic powder, candy packaging, plastic straw, and when mixed with any colors of plastic bag. The results of those experiments are recommended process of frying plastic bag to produce exotic motif and texture to be used as craft product. The new material which is made by frying plastic bag using the recommended process is called “PlazOre”.

There are two recommended process to fry plastic bag. First is “high-temp process” and the second is “low-temp process”. The high temp process means the plastic bag frying process done when the heat of cooking oil reach 250 - 270°C, while low temp process means the plastic bag frying process done when the heat of cooking oil reach 160 - 195°C. The high temp process can produce PlazOre Block and Plazore Sheet, while the low temp process can produce Mosaic PlazOre. Hi-Temp Process Technique is better to be applied on plastic sheet 0.01 – 0.03 mm thick, especially LDPE which has lower melting temperature. For a plastic 0.03 mm thick or more, it would be better to use Low Temp Process, in which the result of this process is Mosaic Plazore.

The Plazore Material can be applied for craft product as accesories, necklace, bracelet, brooch, bag, footwear, lamp cover and other interior elements. As part of the research, the team has held a Plazore craft product exhibition to observe the prospective market. During the exhibition people are enthusiastic to know the process and to buy the product, although it is sold at 50% higher price than its production cost.

The patents is for this plastic bag frying process in progress.