MUSSEL SHELLS AND CLAM SHELLS AS COMPONENTS IN THE PRODUCTION OF DECORATIVE POTS

Research Study

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ABSTRACT

GUEVARRA, NICKBROE U.; and **QUINONES, DANE MICA R. Mussel Shells and Clam Shells as Component in the Production of Decorative Pots** Applied Research III, Science High School, College of Education, Cavite State University, Indang, Cavite. May 2017. Adviser: Engr. Willie C. Buclatin

The study entitled "Mussel Shells and Clam Shells as Components in the Production of the Decorative Pots" was conducted to make use of mussel shells and clam shells in the production of decorative pots. It aimed to: (a) determine the physical properties of decorative pots in terms of actual dimension (thickness, outside dimension, height), maximum load, and texture (b) determine the level of acceptability of using clam and mussel shells in the production of decorative pots (c) determine the significant difference between the different treatments (d) determine the cost of production of the produced decorative pots. The study was conducted at Palahanan II, San Juan, Batangas from October 2016- December 2016.

The shells were washed by water and detergent soap and oven dried at 127 degrees Celsius. After that, the shells were powdered and strained to obtain the finest powder. The raw materials were mixed all together to form a homogenous mixture. The mixture was Kneaded, Cured, Threw, Retouched, Air Dried, Oven Dried, and Fired.

The treatments that were used are as follows: Treatment 0 (40% Red Clay + 10% Chinese ball clay + 30% Feldspar + 20% silica), Treatment 1 (40% Red Clay + 10% Chinese ball clay + 10% Feldspar + 20% Silica + 20% Mussel Shells), Treatment 2 (40% Red Clay + 10% Chinese ball clay + 10% Feldspar + 20% Silica + 10% Mussel Shell +

10% Clam Shells), and Treatment 3 (40% Red Clay + 10% Chinese ball clay + 10% Feldspar + 20% Silica + 20% Clam Shells).

The physical properties of the produced decorative pots under T0, T1, T2, and T3 were tested. Based on the result T3 (40% Red Clay + 10% Chinese ball clay + 10% Feldspar + 20% Silica + 20% Clam Shells) had the highest mean score in terms of texture and level of acceptability. It was proven that T3 (40% Red Clay + 10% Chinese ball clay + 10% Feldspar + 20% Silica + 20% Clam Shells) was as acceptable as commercial pots. The produce decorative pots with mussel shells and clam shells were smooth and highly acceptable.

The significant difference among treatments was obtained. Analysis of Variance (ANOVA) was used to determine the significant differences among the treatments. The result in ANOVA shows that there is no significant difference among the treatments in terms of thickness, outside dimension, height, max load, texture, and level of acceptability.

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INTRODUCTION

Pottery is the craft of making ceramic material into pots or pottery wares such as earthenware, stoneware and porcelain. The place where such wares are made is also called a pottery. Pottery also refers to the art or craft of a potter. Merriam-Webster dictionary defined pottery as objects that are made out of clay usually by hand and then baked at high temperatures. The American Society for Testing and Materials (ASTM) defined pottery as "all fired ceramic wares that contain clay when formed, except technical, structural, and refractory products."(*Retrieved from: https://en.wikipedia.org/wiki/Pottery* Williams, J.)

Mussels and clams are common names used for members of several families of bivalve mollusks found in saltwater and freshwater habitats. These mollusks are abundantly found locally. These are edible bivalves with shells that are usually discarded after being eaten. Mussel and clam shells are basically composed of calcium carbonate