Development of Biodegradable Packaging Foam Type From Different Starches, Phase II

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Polystyrene is a synthetic aromatic polymer made with the styrene monomer, it is a liquid derived from the petrochemical industry, popularly known as Styrofoam. Polystyrene is one of the most used plastics in the world, being produced millions of tons annually. Styrofoam can be naturally transparent, but it is usually colored with the use of dyes. It is generally used as a protective packaging. The process for reusing the packaging produced with Styrofoam is still a problem for the environment, so it becomes necessary to produce alternative packaging with low cost and that are biodegradable. Of the possible forms of production at term expansion, it is shown to be the most suitable for the production of trays. The study was carried out in the city of Toledo - PR, aiming to produce a styrofoam that is biodegradable using the thermo expansion technique with several types of starches such as: face starch, rice flour, oat starch, starch English potato and yam starch, for the production of a tray to replace the Styrofoam tray. 15 treatments will be evaluated each with repetitions, for each sample produced, moisture tolerance, density, resistance, flexibility, degradation period and consumer acceptability will be evaluated. The use of starches proved to be ideal for the production of a substitute for styrofoam, the use of rice flour proved to be more resistant and similar to conventional material. The degradation test shows that the material based on rice flour in a dry environment did not show degradation yet and on the soil it had a durability of 120 days. The study was in progress and with satisfactory results.

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