Manufacture and Design of a Grating-Based Low Density Polyethylene and Urea Formaldehyde Obtained from Human Urine

Escarcega Ramirez, Monserrat

Cortes García, Tania

Lopez Carrasco, Andres

“In the modern world it is necessary to establish a self-sustainable and ecological approach to allow the technological and productive development of developing countries, to achieve it, it´s necessary innovations and ideas in the productive process, reuse waste and less impact on the environment”. Propose to achieve the reuse of different materials for the manufacture of new plastic industries where innovation is the use of human urine as raw material. The realization of this research project is due to address the various ecological proposals for the use or manufacture of the plastic-based products obtained from human urine. The method of separation of the constituents of urine is performed by physical separation such as filtration, precipitation by solvent exchange, the nitration reaction and subsequently neutralization with barium carbonate to finally obtain the urea in the urine, which is reacted with formaldehyde in acid medium and in this way obtain the condensation polymerization of urea-formaldehyde resin. Urea-formaldehyde resin obtained is mixed in a ratio 30-70% polypropylene post -consumer and thereafter perform the injection molding of the flange, which exhibits better creep resistance superseded at 50 kilograms per square centimeter to plastic and line containing 100% polypropylene, so it is concluded that the urea-formaldehyde resin obtained from human urine is an excellent external agent for the manufacture and improvement of the physical characteristics of the plastic materials.

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