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## BIODEGRADABLE POLYESTERS IN MEDICAL APPLICATIONS

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Thermoplastic polyesters produced from renewable resources directly from a fermentation based process, are biodegradable and biocompatible polymers and can be processed by traditional polymer techniques for use in an enormous variety of applications, including medical products. A wide range of different bioactive compounds can be incorporated into a controlled release device made from polyesters. In order to produce controlled release medical devices, such as transdermal systems, we have prepared films from polyhydroxyalkanoates containing polyhydroxybutyrate and the blends thereof. This films were subjected to testings of mecanical properties and biocompatibility on cell culture. The results showed that the films made from blending polyhydroxybutyrate showed the elongation to break increased with 20% in comparison with the polymer alone. Tensile strength of polyhydroxybutyrate blends was 14% grather than polyhydroxybutyrate. The tests of biocompatibility were performed on cellular cultures *in vitro*, and proved that the films resulted from polyhydroxybutyrate blends are biocompatible with tissues, and allow the developing of normal cells. The polymeric films studied can be used in medical devices with drug controlled release, type reservoir.