



Progetto PRIN 2022 a scorIMENTO n. 2022AKJNBA - "finanziato dall'Unione Europe Next Generation EU"

Abstract

ECO-FRIENDLY FOAMING PROCESS OF POLYBUTYLENE ADIPATE TEREPHTALATE(PBAT), POLYBUTYLENE SUCCINATE TEREPHTALATE (PBST) AND THEIR BLENDS WITH THERMOPLASTIC STARCH (TPS) - CUP Master: F53C24000940006

Polybutylene adipate-co-terephthalate (PBAT) and polybutylene succinate-co-terephthalate (PBST) are biodegradable polyesters, obtainable with raw material from renewable sources. They can be used in the production of foams for the manufacture of trays for the food packaging industry. PBAT and PBST also have a rheology that is not functional to the foaming process. As polyesters, they have many features in common with PET that make managing the foaming process very complex. Therefore, the research project aims to demonstrate the manufacturing process of foams in PBAT, PBST and their blends with TPS by acting on the design of materials, on the modification of the rheology of resins by reactive extrusion, on the prototyping of foamed items on a laboratory scale, on the validation of the functional properties of such items. A comparative study of the life cycle of the foams obtained will also be developed.

Team di ricerca

Università degli Studi di ROMA "La Sapienza" - Responsabile Scientifico per il DIMA: prof.ssa Annamaria GISARIO; Assegnista di ricerca: dott.ssa Maria Pia Desole

Partner

Università degli Studi ROMA TRE - Responsabile Scientifico e PI del progetto: prof. Massimiliano BARLETTA

Durata del progetto 24 mesi

Importo finanziato (DIMA)

Contributo MUR per ricerca DIMA: 86.716

Cofinanziamento Ateneo/Ente: 24.254

Costo totale: 110.970