The development of a process enabling polyesters with a low level of residual monomer to be obtained using methods which are "soft" from an economic and environmental point of view constitutes a major need.

The problem solved by the present invention is to develop an industrialisable process enabling the residual monomer level in polymers to be reduced to values below 0.1 % and even below 0.06 %.

The applicant therefore proposes a new polyester purification process which enables a low level of residual monomer(s) to be obtained while at the same time respecting the original properties of the polymer and proposing economically and environmentally advantageous reaction conditions.

The object of the present invention is therefore a process for purification of polyester containing impurities, these impurities containing at least 0.1 % residual monomer(s) by weight of polyester. The present invention comprises at least the step of:

(ii) adding to the polyester in a solvent a functionalised material chosen from a PAMAM dendrimer and a resin functionalised by a primary and/or secondary amine function or functions

The term "polyester" refers to a polymer of which at least one pattern contains an ester function. For example, it refers to polycaprolactones (PCL), lactic acid polymers (PLA), lactic and glycolic acid polymers (PLGA) and glycolic acid polymers (PGA).

The term "solvent" refers to any appropriate solvent or mixture of solvents. Preferably, the solvent or mixture of solvents is such that the polyester is soluble in it. Preferably, the solvent is chosen from halogenated solvents, ketones (such as acetone, methyl ethyl ketone (MEK), methyl isobutyl ketone (MIBUK)), cyclic ethers (THF, methyl THF) and aromatic solvents. For example, the solvent is chosen from dichloromethane, dichloroethane, chloroform and toluene. Preferably, the solvent is dichloromethane.

The term "impurities" refers in particular to any impurity resulting from the polyester synthesis process, for example a catalyst or a monomer which has not been consumed by the reaction.

For example, it refers to a polyester containing at least 0.1 to 1.0 % impurities by total weight of polyester and preferably 0.2 to 0.5 % impurities by total weight of polyester.

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