CLAIMS

1. Process for purification of polyester containing impurities, these impurities containing at least 0.1 % residual monomer(s) by weight of polyester, comprising 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

2. Process according to claim 1 additionally comprising the steps of:

(iii) eliminating the functionalised material;

(iv) eliminating the solvent.

3. Process according to one of claims 1 or 2, in which the polyester is chosen from a polycaprolactone (PCL), a lactic acid polymer (PLA), a lactic and glycolic acid polymer (PLGA) and a glycolic acid polymer (PGA).

4. Process according to one of claims 1 to 3, in which the polyester is a lactic acid polymer (PLA) or a lactic acid and glycolic acid polymer (PLGA).

5. Process according to one of claims 1 to 4, in which the functionalised material is a resin, preferably a resin functionalised by a primary amine function or functions.

6. Process according to claim 5, in which the functionalised resin used in step (ii) has the formula (I)

S-L (I)

in which L is a linear or branched C_1 to C_{15} alkyl chain or an aralkyl chain, in which one or more carbon atoms are replaced by a nitrogen atom,

given that two successive carbon atoms cannot both be replaced by a nitrogen atom, and

given that at least one terminal carbon atom is replaced by a nitrogen atom,

and S is an appropriate support.

7. Process according to claim 6, in which S is a polystyrene or polystyrene-divinyl benzene support.

8. Process according to one of claims 1 to 7, in which step (iii) is carried out by filtration.

9. Process according to one of claims 1 to 8, in which step (iv) is carried out by drying, preferably by vacuum evaporation.

10. Process according to one of claims 1 to 9 for purification of polyester containing impurities, these impurities additionally containing at least 0.1 % residual catalyst by weight of polyester, additionally comprising the step of:

(i) adding a weak base anion exchange resin to the polyester in a solvent.

11. Process according to claim 10, in which step (i) is repeated a second time.

12. Process according to one of claims 10 or 11, in which the anion exchange resin is chosen from Amberlyst® A21, Dowex™ 66, Amberlite FPA53, Amberlite FPA55, Amberlite CR5550 or IMAC HP661 resin.

13. Process according to one of claims 10 to 12, in which the anion exchange resin is then eliminated by filtration.

14. Polyester (co)polymerisation process comprising the steps of:

(a) placing the monomer(s) in contact with an acidic catalyst in a solvent;

(b) treating the obtained polyester according to step (i) as defined in claims 10 to 13;

(c) treating the obtained polyester according to steps (ii) to (iv) as defined in claims 1 to 9.

CLAIMS

1. Process for purification of polyester containing impurities, these impurities containing at least 0.1 % residual monomer(s) by weight of polyester, comprising at least the step of:

(ii) adding to the polyester in a solvent a functionalised material which is a resin functionalised by a primary and/or secondary amine function or functions

2. Process according to claim 1 additionally comprising the steps of:

(iii) eliminating the functionalised material;

(iv) eliminating the solvent.

3. Process according to one of claims 1 or 2, in which the polyester is chosen from a polycaprolactone (PCL), a lactic acid polymer (PLA), a lactic and glycolic acid polymer (PLGA) and a glycolic acid polymer (PGA).

4. Process according to one of claims 1 to 3, in which the polyester is a lactic acid polymer (PLA) or a lactic acid and glycolic acid polymer (PLGA).

5. Process according to one of claims 1 to 4, in which the functionalised material is a resin functionalised by a primary amine function or functions.

6. Process according to claim 5, in which the functionalised resin used in step (ii) has the formula (I)

S-L (I)

in which L is a linear or branched C_1 to C_{15} alkyl chain or an aralkyl chain, in which one or more carbon atoms are replaced by a nitrogen atom,

given that two successive carbon atoms cannot both be replaced by a nitrogen atom, and

given that at least one terminal carbon atom is replaced by a nitrogen atom,

and S is an appropriate support.

7. Process according to claim 6, in which S is a polystyrene or polystyrene-divinyl benzene support.

8. Process according to one of claims 1 to 7, in which step (iii) is carried out by filtration.

9. Process according to one of claims 1 to 8, in which step (iv) is carried out by drying, preferably by vacuum evaporation.

10. Process according to one of claims 1 to 9 for purification of polyester containing impurities, these impurities additionally containing at least 0.1 % residual catalyst by weight of polyester, additionally comprising the step of:

(i) adding a weak base anion exchange resin to the polyester in a solvent.

11. Process according to claim 10, in which step (i) is repeated a second time.

12. Process according to one of claims 10 to 11, in which the anion exchange resin is then eliminated by filtration.

13. Polyester (co)polymerisation process comprising the steps of:

(a) placing the monomer(s) in contact with an acidic catalyst in a solvent;

(b) treating the obtained polyester according to step (i) as defined in claims 10 to 12;

(c) treating the obtained polyester according to steps (ii) to (iv) as defined in claims 1 to 9.