Claims

1. 4, 1', 6'-trichloro-4, 1', 6'-trideoxygalactosucrose.

CLAIMS:

1. A process comprising:

a) recovering a crude recycle solvent stream comprising a tertiary formamide and a tertiary acetamide from a mixture comprising at least one substance less volatile than the tertiary formamide and the tertiary acetamide, said tertiary formamide and said tertiary acetamide;

b) contacting said crude recycle solvent stream with a chlorinating agent to provide a reaction product mixture;

c) obtaining a purified recycle solvent stream by distillation of said reaction product mixture; and

d) recycling said purified recycle solvent stream for use as a reaction vehicle.

2. A process comprising:

a) recovering a crude recycle solvent stream comprising a tertiary formamide and a tertiary acetamide from a mixture comprising at least one substance less volatile than the tertiary formamide and the tertiary acetamide, said tertiary formamide and said tertiary acetamide;

b) reacting at least a portion of the tertiary acetamide in the crude recycle solvent stream with a chlorinating agent to provide a reaction product mixture;

c) utilizing said reaction product mixture as a purified recycle solvent stream; and

d) recycling said purified recycle solvent stream for use as a reaction vehicle.

3. The process of Claim 1 or 2, wherein the at least one substance less volatile than the tertiary formamide and the tertiary acetamide includes at least one sucrose moiety-containing compound.

4. The process of Claim 1 or 2, wherein said purified solvent stream is recycled for use as a reaction vehicle in a sucrose-6-acylate chlorination.

5. The process of Claim 1 or 2, wherein said mixture comprising at least one substance less volatile than the tertiary formamide and the tertiary acetamide, said tertiary formamide and said tertiary acetamide has been obtained by chlorination of a sucrose-6-acylate in a reaction vehicle comprising tertiary formamide.

6. The method of Claim 4 wherein said sucrose-6-acylate is sucrose-6-acetate or sucrose-6-benzoate.

7. The method of any preceding claim, wherein said tertiary formamide is dimethylformamide.

8. The method of any preceding claim, wherein said chlorinating agent is a chloroiminium species.

9. The method of Claim 8 wherein said chlorinating agent is *N,N*-dimethylchloroformiminium chloride.

10. The method of Claim 8 wherein said chlorinating agent is a chloroformiminium chloride.

11. The method of Claim 8 wherein said chloroiminium species is formed *in situ* in said crude recycle solvent stream by reacting said tertiary formamide with a chlorinating agent selected from the group consisting of phosgene, phosgene dimer, phosgene trimer, phosphorus pentachloride, thionyl chloride, and oxalyl chloride.

12. The method of Claim 1 or 2 wherein an amount of said chlorinating agent is used so as to provide an equivalents ratio of chlorinating agent:tertiary acetamide of at least 1.5:1.

13. The method of Claim 1 or 2 wherein an amount of said chlorinating agent is used so as to provide an equivalents ratio of chlorinating agent:tertiary acetamide of 2:1 to 3.5:1.

14. The method of Claim 1 or 2 wherein said contacting is carried out within a temperature range of from -10 °C to 40 °C.

15. The method of Claim 1 or 2 wherein said tertiary acetamide is present in said crude recycle solvent stream at a concentration of from 0.5 to 7 weight percent.