What is Claimed:

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) reducing the concentration of tertiary acetamide in the crude recycle solvent stream to provide a purified recycle solvent stream; and

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

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

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

4. The process of Claim 1, wherein the concentration of tertiary acetamide in the crude recycle solvent stream is reduced by removing at least a portion of the tertiary acetamide from the crude recycle solvent stream.

5. The process of Claim 1, wherein the concentration of tertiary acetamide in the crude recycle solvent stream is reduced by reacting at least a portion of the tertiary acetamide.

6. The process of Claim 1, wherein at least a portion of the tertiary acetamide is separated from the crude recycle solvent stream by fractional distillation in step b).

7. The process of Claim 1, wherein the crude recycle solvent stream is contacted with a chlorinating agent in step b).

8. The process of Claim 1, wherein the crude recycle solvent stream is contacted with a chlorinating agent to provide a reaction product mixture and said purified recycle solvent stream is obtained by distillation of said reaction product mixture.

9. The process of Claim 1, wherein at least a portion of the tertiary acetamide in the crude recycle solvent stream is reacted with a chlorinating agent to provide a reaction product mixture and said reaction product mixture is utilized as said purified recycle solvent stream.

10. The process of Claim 1, wherein said mixture has been obtained by chlorination of a sucrose-6-acylate in a reaction vehicle comprising tertiary formamide.

11. A method comprising contacting a contaminated tertiary formamide containing a tertiary acetamide as a contaminant with a chlorinating agent to react the tertiary acetamide with the chlorinating agent to form a reaction product mixture.

12. The method of Claim 11 additionally comprising removing said tertiary formamide from said reaction product mixture by distillation.

13. The method of Claim 11 additionally comprising carrying out chlorination of a sucrose-6-acylate using said reaction product mixture as a reaction vehicle for said chlorination.

14. The method of Claim 13 additionally comprising recovering said tertiary formamide by distillation following said chlorination.

15. The method of Claim 13 wherein said chlorinating agent is used for said chlorination of said sucrose-6-acylate.

16. The method of Claim 13 wherein said sucrose-6-acylate is sucrose-6-acetate or sucrose-6-benzoate.

17. The method of Claim 11 wherein said tertiary formamide is dimethylformamide.

18. The method of Claim 11 wherein said chlorinating agent is a chloroiminium species.

19. The method of Claim 11 wherein said chlorinating agent is *N,N*-dimethylchloroformiminium chloride.

20. The method of Claim 11 wherein said chlorinating agent is a chloroformiminium chloride.

21. The method of Claim 18 wherein said chloroiminium species is formed *in situ* in said contaminated tertiary formamide 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.

22. The method of Claim 11 wherein an amount of said chlorinating agent is used so as to provide an equivalents ratio of chlorinating agent:tertiary acetamide of at least about 1.5:1.

23. The method of Claim 11 wherein an amount of said chlorinating agent is used so as to provide an equivalents ratio of chlorinating agent:tertiary acetamide of about 2:1 to about 3.5:1.

24. The method of Claim 11 wherein said contacting is carried out within a temperature range of from about -10 °C to about 40 °C.

25. The method of Claim 11 wherein said tertiary acetamide is present in said contaminated tertiary formamide at a concentration of from about 0.5 to about 7 weight percent.

26. A method for producing a sucralose-6-acylate, said method comprising:

a). forming a mixture of a sucrose-6-acylate in a reaction vehicle comprised of a tertiary formamide and a tertiary acetamide;

b). analyzing said reaction vehicle or said mixture to determine the amount of tertiary acetamide contained therein; and

c). contacting said mixture with a quantity of a chlorinating agent to react said tertiary acetamide and said sucrose-6-acylate with said chlorinating agent, wherein said quantity of said chlorinating agent is selected in accordance with the amount of tertiary acetamide contained in said reaction vehicle or said mixture.

27. The method of Claim 26, wherein said mixture is contacted with said chlorinating agent under a first set of conditions effective to react said chlorinating agent with said tertiary acetamide and then under a second set of conditions effective to chlorinate said sucrose-6-acylate.

28. The method of Claim 26, wherein a molar amount of said chlorinating agent is used that is greater than or equal to:

7·1/n·(molar amount sucrose-6-acylate) + 2·1/n·(molar amount tertiary acetamide)

wherein n is the number of chlorine atoms per molecule of chlorinating agent that are capable of participating in a chlorination reaction with the sucrose-6-acylate and the tertiary acetamide.

29. The method of Claim 26, wherein a molar amount of said chlorinating agent is used that is within the range:

[7·1/n·(molar amount sucrose-6-acylate) + 2·1/n·(molar amount tertiary acetamide)] to [8·1/n·(molar amount sucrose-6-acylate) + 3.5·1/n·(molar amount tertiary acetamide)]

wherein n is the number of chlorine atoms per molecule of chlorinating agent that are capable of participating in a chlorination reaction with the sucrose-6-acylate and the tertiary acetamide.

30. The method of Claim 26, wherein following said contacting said tertiary formamide is recovered by distillation.

31. The method of Claim 26, wherein said contacting provides an initial reaction mixture which is treated with an aqueous base.

32. The method of Claim 31, wherein said tertiary formamide is recovered by distillation prior to treatment of said initial reaction mixture with said aqueous base.

33. The method of Claim 31, wherein said tertiary formamide is recovered after treatment of said initial reaction mixture with said aqueous base.

34. The method of Claim 26 wherein said sucrose-6-acylate is sucrose-6-acetate or sucrose-6-benzoate.

35. The method of Claim 26 wherein said tertiary formamide is dimethylformamide.

36. The method of Claim 26 wherein said chlorinating agent is a chloroformiminium chloride.

37. The method of Claim 26 wherein said chlorinating agent is *N,N*-dimethylchloroformiminium chloride.

38. The method of Claim 26 wherein said chlorinating agent is a chloroiminium species.

39. The method of Claim 38 wherein said chloroiminium species is formed *in situ* in said mixture 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.

Claims:

1. A method for producing a sucralose-6-acylate, said method comprising:
   a). forming a mixture of a sucrose-6-acylate in a reaction vehicle comprised of a tertiary formamide and a tertiary acetamide;
   b). analyzing said reaction vehicle or said mixture to determine the amount of tertiary acetamide contained therein; and
   c). contacting said mixture with a quantity of a chlorinating agent to react said tertiary acetamide and said sucrose-6-acylate with said chlorinating agent, wherein said quantity of said chlorinating agent is selected in accordance with the amount of tertiary acetamide contained in said reaction vehicle or said mixture.

2. The method of Claim 1, wherein said mixture is contacted with said chlorinating agent under a first set of conditions effective to react said chlorinating agent with said tertiary acetamide and then under a second set of conditions effective to chlorinate said sucrose-6-acylate.

3. The method of Claim 1, wherein a molar amount of said chlorinating agent is used that is greater than or equal to:

$7 \cdot 1/n \cdot$(molar amount sucrose-6-acylate) + $2 \cdot 1/n \cdot$(molar amount tertiary acetamide)

wherein n is the number of chlorine atoms per molecule of chlorinating agent that are capable of participating in a chlorination reaction with the sucrose-6-acylate and the tertiary acetamide.

4. The method of Claim 1, wherein a molar amount of said chlorinating agent is used that is within the range:

[$7 \cdot 1/n \cdot$(molar amount sucrose-6-acylate) + $2 \cdot 1/n \cdot$(molar amount tertiary acetamide)] to [$8 \cdot 1/n \cdot$(molar amount sucrose-6-acylate) + $3.5 \cdot 1/n \cdot$(molar amount tertiary acetamide)]

wherein n is the number of chlorine atoms per molecule of chlorinating agent that are capable of participating in a chlorination reaction with the sucrose-6-acylate and the tertiary acetamide.

5. The method of Claim 1, wherein following said contacting said tertiary formamide is recovered by distillation.

6. The method of Claim 1, wherein said contacting provides an initial reaction mixture which is treated with an aqueous base.

7. The method of Claim 6, wherein said tertiary formamide is recovered by distillation prior to treatment of said initial reaction mixture with said aqueous base.

8. The method of Claim 6, wherein said tertiary formamide is recovered after treatment of said initial reaction mixture with said aqueous base.

9. The method of Claim 1 wherein said sucrose-6-acylate is sucrose-6-acetate or sucrose-6-benzoate.

10. The method of Claim 1 wherein said tertiary formamide is dimethylformamide.

11. The method of Claim 1 wherein said chlorinating agent is a chloroformiminium chloride.

12. The method of Claim 1 wherein said chlorinating agent is *N,N*-dimethylchloroformiminium chloride.

13. The method of Claim 1 wherein said chlorinating agent is a chloroiminium species.

14. The method of Claim 13 wherein said chloroiminium species is formed *in situ* in said mixture 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.