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(54) Title: USE OF ACID SCAVENGERS IN REMOVAL OF PROTONS (ACIDITY) OF THE REACTION MASS DURING CHLORINATION OF SUCROSE-6- ACETATE

(57) Abstract: A process is described wherein efficiency of chlorination is improved in a process for production of a chlorinated sucrose by scavenging, using an acid scavenger, of excess of acidic protons formed during a chlorination reaction between 6-0- acyl sucrose in dimethylformamide and a chlorinating reagent.

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AMENDED CLAIMS
received by the International Bureau on 28June 2007 (28.06.07)

1. A process of production of a chlorinated sucrose compound comprising steps of:
    a. reacting f 6-O-protected sucrose dissolved in a solvent with a chlorinating agent,
    b. contacting the reaction mixture with an acid scavenger, the said acid scavenger comprising one or more of a relatively inert chemical capable of binding acidic protons without reacting with a chemical in contact,
    c. optionally removing the acid scavenger form the reaction mixture,
    d. heating the mixture further to achieve completion of the chlorination reaction, and
    e. subjecting the reaction mixture of step (d.) to one or more of a further process step to obtain, isolate and purify desired chlorinated sucrose compound.
2. A process of claim 1 wherein:
    a. the said chlorinated sucrose compound comprises one or more of a chlorinated sucrose and their derivatives including one or more of a trichlorogalactosucrose with chemical formula 1-6-Dichloro-1-6-DIDEOXY-β-Fructofuranosyl-4-chloro-4-deoxy-galactopyranoside abbreviated as TGS, a di chloro sucrose, a tetrachloro sucrose and the like,
    b. the said acyl derivatives of sucrose comprises one or more of an acylate of sucrose including a sucrose-6-acetate, sucrose-6-benzoate, sucrose-6-propionate, sucrose-6-laurate,

AMENDED SHEET (ARTICLE 19)

STATEMENT UNDER ARTICLE 19 (1)

The applicant humbly presents his informal response to the reasoned statement given under title **Re Item V** in the Written Opinion of the Honorable ISR Authority mailed to the Applicant on 07 May, 2007.

This applicant has appreciated that claim no. 2 has been judged to have novelty, inventive step as well as industrial applicability. It has also been appreciated that claim 1 was judged to have industrial applicability. The applicant concurs with this part of the written opinion.

In view of the comment of the Hon Authorized Officer that Claims 1 did not have novelty and inventive step, referring to the two documents cited D1 (US 5136031) and D2 (GB 2065618) and reasoned statement accompanying the same, without implying any acceptance of the interpretation, the applicant endeavours to amend the claim no. 1 under Article 19 suitably to make the meaning clear by rewording the claim.

To clarify the definition of "acid scavenger" applicant has amended claim no. 1 to delete "the said acid scavenger being a matter capable of selectively binding from a process stream a free acidic proton, without reacting with other chemical molecules in the process stream" and to replace it with the definition given in the description i.e. "comprising one or more of a relatively inert chemical capable of binding acidic protons without reacting with a chemical in contact".

The amended claim no. 1 shall make it clear that pyridine, which is an organic base, is not covered in the "acid scavenger" of claim 1, and hence, claim 1 shall also be novel as well as inventive.

Claim no. 2 remains unchanged, and is already judged to have novelty and to be inventive. Thus, now both the claims are novel and inventive.

There may be a need to amend description in view of comments in ISR.