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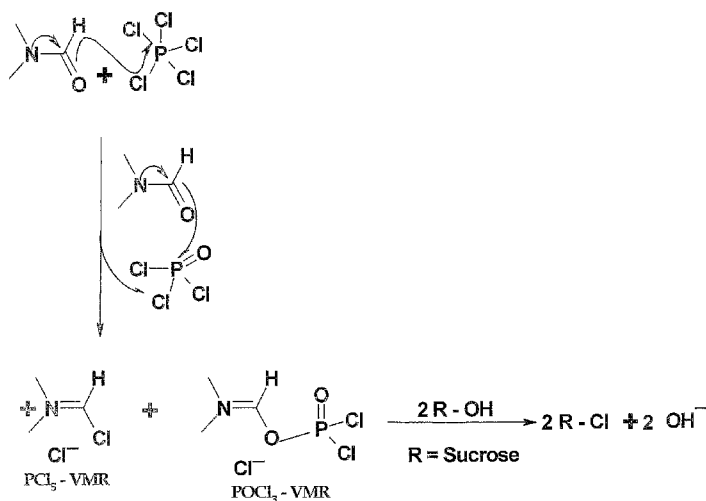
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- Declarations under Rule 4.17:**
— as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))

[Continued on next page]

(54) Title: GENERATION OF PHOSPHORUS OXYCHLORIDE AS BY-PRODUCT FROM PHOSPHORUS PENTACHLORIDE AND DMF AND ITS USE FOR CHLORINATION REACTION BY CONVERTING INTO VILSMEIER-HAACK REAGENT.

Mechanism of Combined Vilsmeier Reagent for the Chlorination of sugars



(57) Abstract: A process is described wherein after formation of first crop of Vilsmeier-Haack reagent by reacting Phosphorus Pentachloride with N,N-dimethylformamide to form a first crop of Vilsmeier reagent as insoluble crystals, a by-product of this reaction, the Phosphorus Oxy-Chloride, reacts with N,N-dimethylformamide to give a second crop of Vilsmeier reagent. This second crop of Vilsmeier reagent is soluble in DMF. This process makes it possible to double the yield of chlorinated substrate, such as sucrose-6-acetate or sucrose-6-benzoate, from the same quantity of Phosphorus Pentachloride.

WO 2007/017891 A2



— of inventorship (Rule 4.17(iv))

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