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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: EFFICIENT, HIGH-YIELD CONVERSION OF MONOSACCHARIDES TO 5-(CHLOROMETHYL)-2-FURALDEHYDE

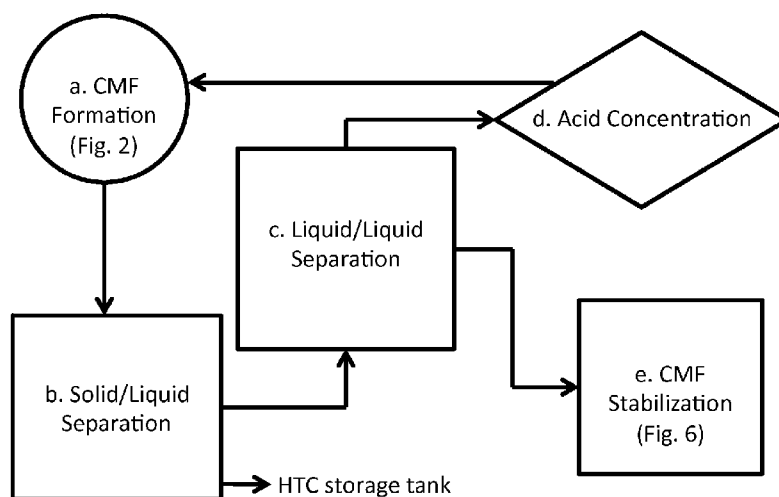


FIG. 1

(57) Abstract: The present invention describes methods and apparatuses for the synthesis of 5-(chloromethyl)-2-furaldehyde (CMF) from monosaccharides, the method comprising: (a) contacting monosaccharides, hydrochloric acid, and an organic solvent, by way of a continuous, biphasic-flow reactor assembly at a temperature from about 60 degree C to about 200 degree C and pressures from about 1 atm to 10 atm, such that CMF is produced; (b) separating 5-(chloromethyl)-2-furaldehyde by liquid/liquid and solid/liquid phase separation; (c) producing at least five kilograms per day with at least 50% yield.



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