

NEW METHOD FOR ALKYLATION OF AMINES

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Partner institution :

UQAR

BACKGROUND

Green chemistry, otherwise, the utilization of a set of principles that reduces or eliminates the use or generation of hazardous substances in the design, manufacture and application of chemical products is becoming more and more sought after.

Alkylation of amines is currently achieved with alkyl halide, alkyl sulfate and sulfonates. Alkylated amines are widely used in formation of various chemicals such as surfactants, chelating agents, ionic liquids and drug precursors.

TECHNOLOGY

The invention relates to a new green chemical process of alkylation of amines. The one-pot reaction should be easy to apply in a beneficial and reproducible manner, providing a green technology that is currently being widely embraced.

COMPETITIVE ADVANTAGES

- Less hazardous chemical synthesis
- Low cost
- One step and one pot reaction, therefore quicker reaction
- Reaction can be done in water, therefore needing less purification and less waste

APPLICATIONS

Formation of various alkylated amines which can be used as the following:

- Surfactants, such as amine oxide, betaines.
- Biocides, swimming pool and water treatment.
- Flotation agents
- Gasoline detergents
- Corrosion inhibitors
- Rubber processing additives
- Emulsifier for herbicides
- Textile softeners
- Oilfield drilling materials

TECHNOLOGY DEVELOPMENTAL STAGE

Proof of principle in the laboratory has been realized. Scaling up has to be done for commercial production.

BUSINESS OPPORTUNITY

Licensing opportunity for any field – maybe licensed on an exclusive basis related to a specific field of use.

For Information please contact:

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