

Trifluoroacetaldehyde ethyl hemiacetal

CAS No. 433-27-2

Trifluoroacetaldehyde ethyl hemiacetal is used as an intermediate in the production of various fluorinated chemicals.

Proposed Specifications

Assay by Gas Chromatography 90% minimum
Contains up to 10% ethanol

Physical Properties

Chemical Formula: $\text{CF}_3\text{CH}(\text{OH})\text{OCH}_2\text{CH}_3$
Mol. Wt.: 144.1
Boiling Pt.: 105-107 °C
Melting Pt.: Not determined
Flash Pt.: 39 °C
Appearance and Odor: Clear, colorless liquid with sweet odor

Packaging

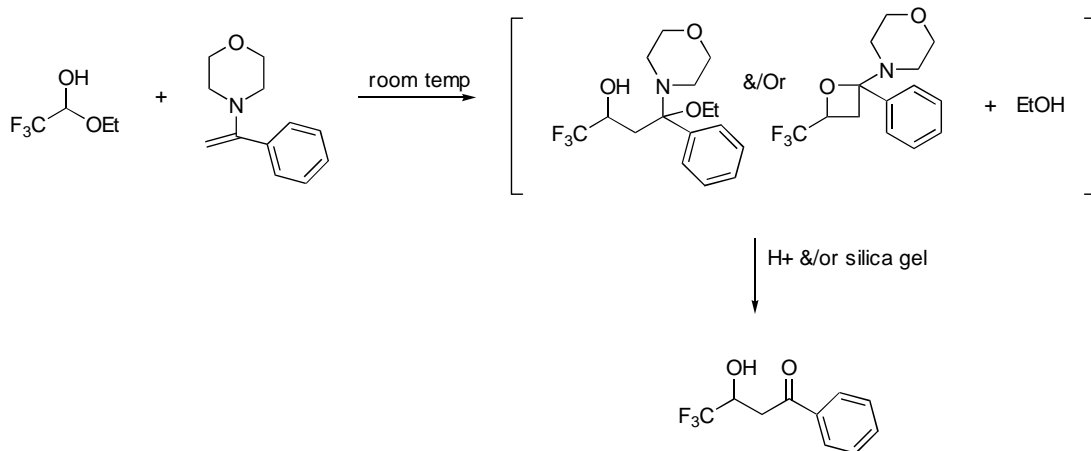
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Typical chemistry and uses

Trifluoroacetaldehyde ethyl hemiacetal is an alternative to gaseous unstable trifluoroacetaldehyde. It is used to prepare α -trifluoromethylated alcohols for antifungals, antitumor, and chemotherapeutic agents and as a building block in the synthesis of fluorinated molecules. Some examples of its use are shown below.

Enamine assisted facile generation of trifluoroacetaldehyde from trifluoroacetaldehyde ethyl hemiacetal and its carbon-carbon bond forming reaction leading to β -hydroxy- β -trifluoromethyl ketones.

Funabiki et al., *Chem. Commun.*, 1998, 2051.



Synthesis of fluorine containing taxoids

I. Ojima; J. McCarthy; J. Welch, *Biomedical Frontiers of Fluorine Chemistry*, 1996, Pg 232

