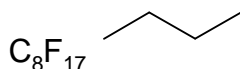


**F017023**

1H,1H,2H,2H-Perfluorodecane-1-thiol



Chemical Formula:	C <sub>10</sub> H <sub>5</sub> F <sub>17</sub> S
Formula Weight:	480.18
Description:	Nucleophilic Scavenger
CAS Number:	34143-74-3
Appearance:	Clear liquid
Properties:	Density: 1.64 Boiling Point: 82°C/12mm
Soluble in:	Dichloromethane, chloroform, THF, ether, toluene and most other typical organic solvents
Stability:	Solidifies near room temperature

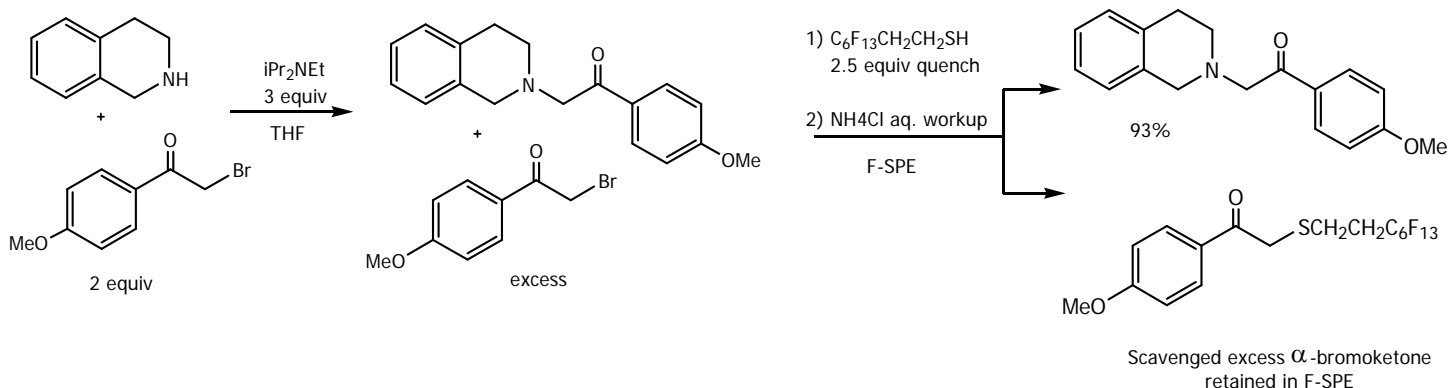
**DESCRIPTION AND USES:**<sup>1</sup>

- Thiols are good nucleophiles that have been used as covalent scavengers to rid product mixtures of excess halides and other electrophiles.
- F-Thiol is the solution phase equivalent of polymer-bound thiol scavengers. It has the advantage of reacting faster than its polymer counterpart.<sup>1</sup>
- F-Thiol-quenched derivatives can be easily separated from the organic product by performing a quick fluorous solid phase extraction over FluoroFlash® silica gel.<sup>2,3</sup>

**TYPICAL SCAVENGING PROCEDURE:**<sup>1</sup>

To a 5 mL vial charged with a solution of 1,2,3,4-tetrahydroisoquinoline (14 mg, 0.1 mmol) in 0.3mL of THF was added 2-bromo-4'-methoxyacetophenone (46 mg, 0.2 mmol) followed by diisopropylethylamine (55 μL, 0.3 mmol). After stirring at 25°C for 30 min, F-Thiol (95 mg, 0.2 mmol) was added and the mixture was stirred for an additional 30 min. Aqueous NH<sub>4</sub>Cl (0.8 mL) was added. The aqueous layer was pipetted out and the organic phase was loaded onto a 5g FluoroFlash® cartridge that had been pre-conditioned with MeOH:H<sub>2</sub>O (80:20). The cartridge was washed with 5 mL of MeOH:H<sub>2</sub>O (80:20). The desired product was isolated by concentration of the first extract to provide 26 mg (93%) of the alkylated amine.<sup>3,4</sup>

Note: The acidic workup to rid the reaction mixture of excess base can be avoided by using acidic ion-exchange resin on top of the F-SPE cartridge.<sup>4</sup>


**REFERENCES:**

- Zhang, W.; Curran, D. P.; Chen, H.-T. *Tetrahedron*, **2002**, 3871.
- Curran, D. P. *Synlett* **2001**, 1488.
- Please refer to FTI Application Note "Fluorous Solid Phase Extraction"
- Lindsley, C. W.; Zhao, Z.; Leister, W. H.; Strauss, K. A. *Tetrahedron Letters* **2002**, 43, 6319.

FluoroFlash® is a registered trademark of Fluorous Technologies Inc.  
20060104