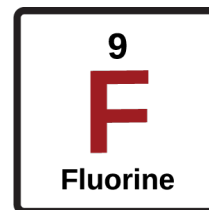


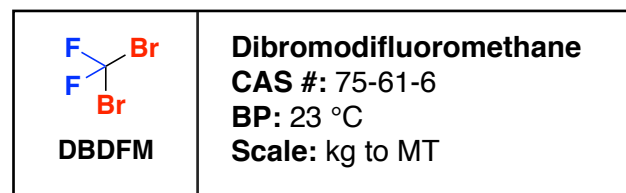
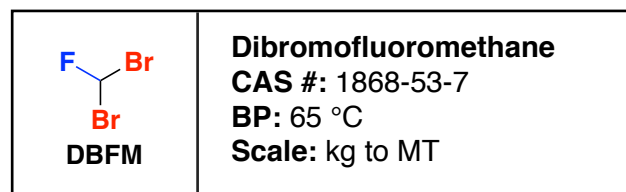
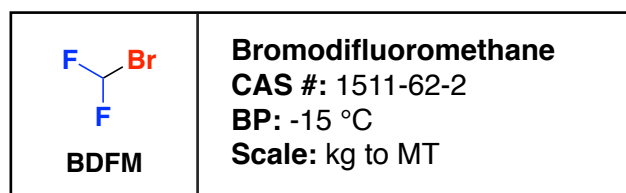
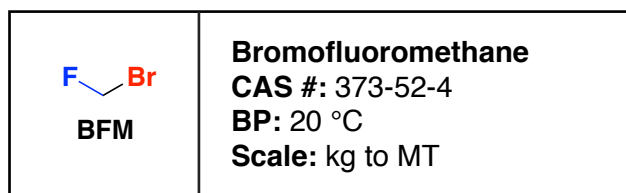
Global Manufacturing Headquarters:
 1110 NE Circle Blvd, Bldg 11
 Corvallis, OR 97330 USA
 Tel: +1 541-286-5082
 Email: info@valliscor.com
 Website: www.valliscor.com

Valliscor
Experts in Fluoroalkylation

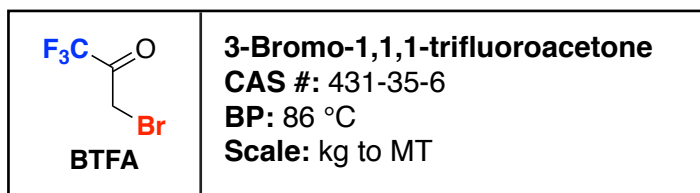
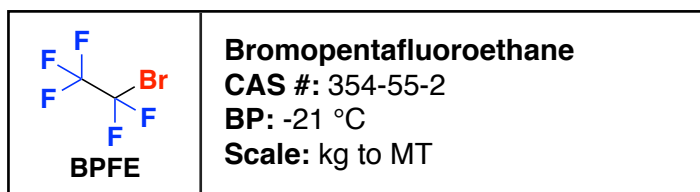
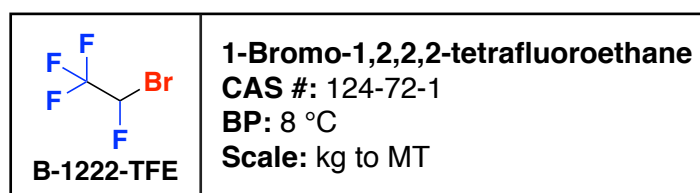
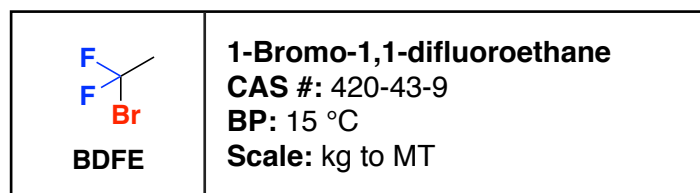


Fluoroalkylation Reagents

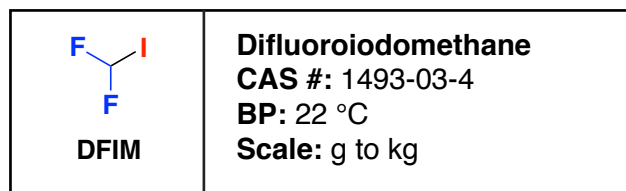
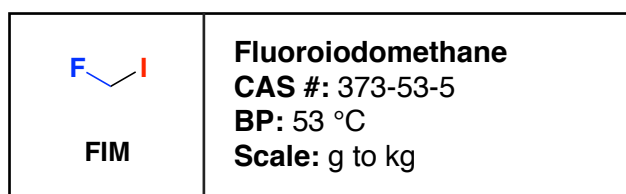
C₁ Br-Reagents



C₂ & C₃ Br-Reagents



C₁ I-Reagents



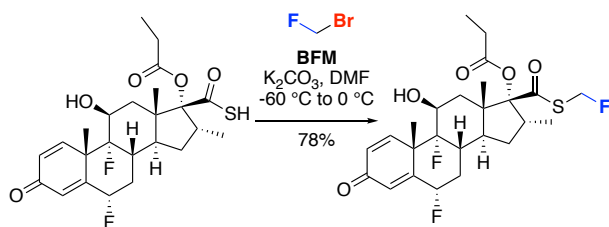
Valliscor Advantage

- US-based manufacturing facility
- Extensive experience with shipping, handling, regulation and use of ozone depleting substances (ODSs)
- Global dominant manufacturer of fluoroalkylation reagents
- Strong ICH Q7-based quality system
- Extensive before and after sales support - including detailed technical assistance with use of materials

Select Applications of Vallisacor Fluoroalkylation Reagents

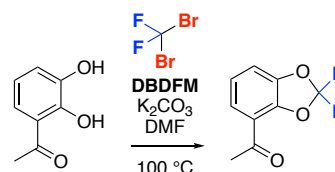
Bromofluoromethane (BFM)

Fluticasone Production. BFM's primary commercial application is for construction of the fluoromethyl thioester in API fluticasone via an S_N2 reaction (*J. Med. Chem.* **1994**, *37*, 3717-3729).

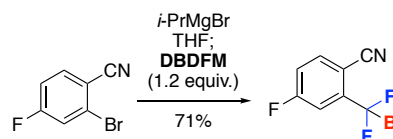


Dibromodifluoromethane (DBDFM)

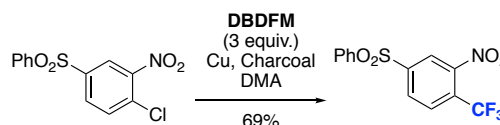
Difluoromethylation. Most transformations with DBDFM proceed through a carbene mechanism. For example, DBDFM can difluoromethylenate catechol derivatives (PTC Int. Appl. 2004018468, 4 Mar 2004).



Bromodifluoromethylation. DBDFM can also be used to incorporate a $CBrF_2$ moiety within a scaffold as shown in this Grignard example (*Tetrahedron Lett.* **2014**, *55*, 6839-6843).

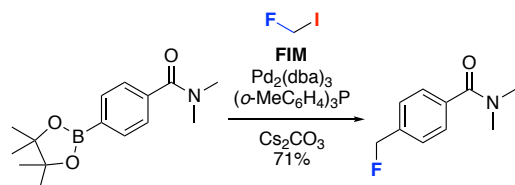


Trifluoromethylation. DBDFM can serve as a direct difluoromethylenation reagent in the presence of copper (*J. Med. Chem.* **2009**, *52*, 105-116).



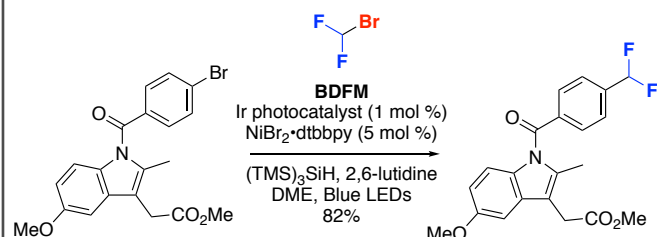
Fluoroiodomethane (FIM)

Versatile Med Chem Fluoromethylation Reagent. FIM is an excellent non-ODS equivalent of BFM for early route scouting by medicinal chemists. In addition to traditional S_N2 -type chemistry, FIM has been reported to undergo cross couplings under a range of conditions. (*Org. Lett.* **2015**, *17*, 3086-3089).



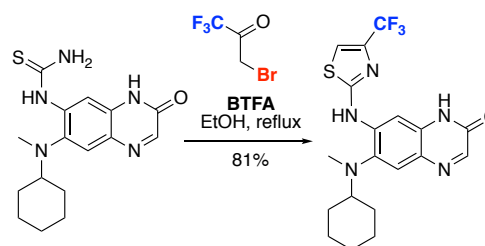
Bromodifluoromethane (BDFM)

Difluoromethylation Reagent. BDFM is an excellent source for difluoromethylation and can serve as a replacement reagent for **R-22** ($CHClF_2$). In addition, BDFM has been shown effective in cross-couplings (*Angew. Chem. Int. Ed.* **2018**, *57*, 12543-12548).



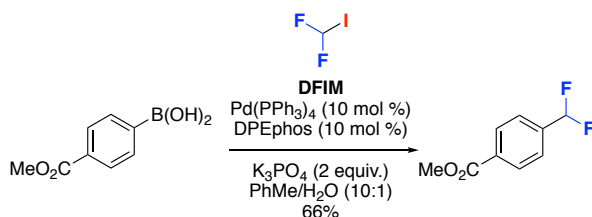
3-Bromo-1,1,1-trifluoroacetone (BTFA)

Trifluoromethyl annulation. BTFA reacts under mild conditions with a variety of heterocyclic annulation partners to provide CF_3 -functionalized heterocycles directly (*J. Med. Chem.* **2011**, *54*, 5747-5768).



Difluoroiodomethane (DFIM)

Difluoromethylation Reagent. DFIM is an excellent non-ODS equivalent of BDFM for early route scouting by medicinal chemists. It has been shown effective in cross-couplings (*ACS Catal.* **2019**, *9*, 417-421).



Bromopentafluoroethane (BPFE)

Fulvestrant Production. BPFE smoothly reacts with allylic alcohol to produce the sidearm present in the API fulvestrant (Eur. Pat. Appl. 2196449, 16 Jun 2010).

