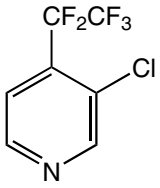
Pentafluoroethyl

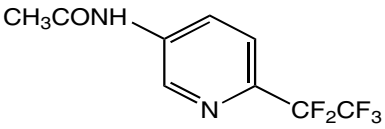
A new more versatile substituent for the synthesis of pharmaceuticals and crop protection agents

Trifluoromethyl (-CF_3) is by far the most common fluoroalkyl group due to its synthetic accessibility. In addition, fluoroalkyl groups bring a novel combination of localized electronegativity, lipophilicity, and metabolic stability. However, a more effective substituent is needed. Pentafluorothio (-SF_5) has been tried but is very difficult to synthesize.

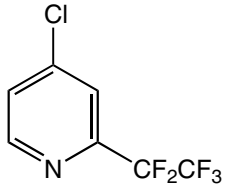
Alfa Aesar is announcing that a new substituent is now available - pentafluoroethyl (-CF_2CF_3). It is chemically stable and also highly resistant to the action of P450 enzymes, leading to increased metabolic stability at sites where it is incorporated. The advantages of -CF_2CF_3 are a comparable lipophilicity to -SF_5 (ClogP), that it is slightly less electronegative than -SF_5, it is high chemically and metabolically stable, and the size of the substituent is intermediate between -CF_3 and tert-butyl.



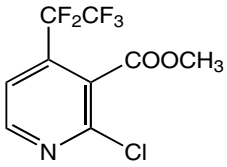
H66017
3-Chloro-4-(pentafluoroethyl)pyridine, 96%



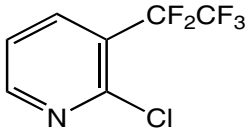
H66076
5-Acetamido-2-(pentafluoroethyl) pyridine, 96%



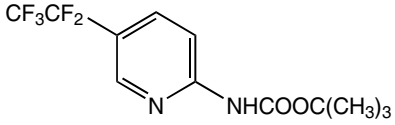
H66113
4-Chloro-2-(pentafluoroethyl)pyridine, 96%



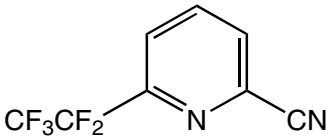
H66173
Methyl 2-chloro-4-(pentafluoroethyl) nicotinate, 96%



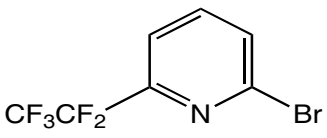
H66265
2-Chloro-3-(pentafluoroethyl)pyridine, 96%



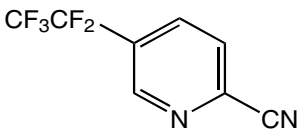
H66291
2-(Boc-amino)-5-(pentafluoroethyl) pyridine, 96%



H66308
2-Cyano-6-(pentafluoroethyl)pyridine, 96%

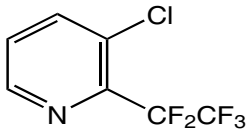


H66316
2-Bromo-6-(pentafluoroethyl)pyridine, 96%

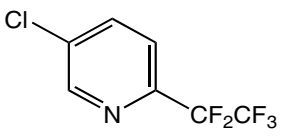


H66413
2-Cyano-5-(pentafluoroethyl)pyridine, 96%

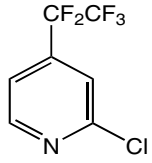
Pentafluoroethyl



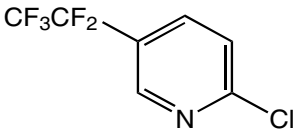
H66435
3-Chloro-2-(pentafluoroethyl)pyridine, 96%



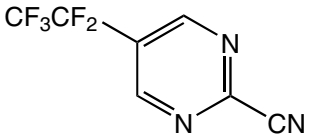
H66444
5-Chloro-2-(pentafluoroethyl)pyridine, 96%



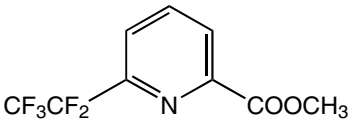
H66545
2-Chloro-4-(pentafluoroethyl)pyridine, 96%



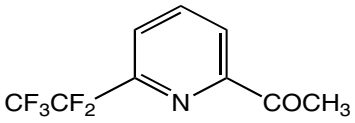
H66678
2-Chloro-5-(pentafluoroethyl)pyridine, 96%



H66838
2-Cyano-5-(pentafluoroethyl)pyrimidine, 96%



H66841
Methyl 6-(pentafluoroethyl)pyridine-2-carboxylate, 96%



H66942
2-Acetyl-6-(pentafluoroethyl)pyridine, 96%