**2-Chloro-6-(phenethylsulfinyl)pyrazine, OSM-S-XXX**

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Representative Example:http://bit.ly/2khu0ZC

Sodium hydride (403 mg, 16.8 mmol) was added to phenylethyl mercaptan (2.25 mL, 16.8 mmol) in toluene (16 mL). The mixture was heated to reflux for 1 h, then cooled to rt and a solution of 2,6-dichloropyrazine (2.50 g, 16.8 mmol) in toluene (16 mL) was added. The mixture was heated to reflux for 24 h, cooled to rt, then washed with water (30 mL). The organic layer was separated, dried (Na2SO4), filtered and concentrated under reduced pressure to give the crude sulfide as a yellow liquid (3.56 g, 85%). Hydrogen peroxide (30%, 2.18 mL, 71.0 mmol, 5 equiv.) was slowly added to the crude product (3.56 g, 14.2 mmol, 1 equiv.) in glacial acetic acid (15 mL). The reaction mixture was stirred at rt until completion as indicated by TLC (25% ethyl acetate in hexanes). The solution was neutralised with aqueous 4M NaOH and extracted with DCM. The organic layer was dried (Na2SO4), filtered and concentrated under reduced pressure to give a cloudy yellow liquid (3.50 g, 92%); purified by automated flash chromatography on silica (Biotage Isolera, 6**–**50% ethyl acetate in hexanes) to give the title compound as a viscous orange liquid (888 mg, 23%); **m.p.** XX–XX ˚C; **IR** νmax (film) /cm-1 XX;**1H NMR** (X MHz, CDCl3) δ: XX; **13C NMR** (X MHz, CDCl3) δ: XX; **HRMS** (XX) found XX [M+X]+, XXrequiresXX.

*ClC1=NC(S(CCC2=CC=CC=C2)=O)=CN=C1*

*InChI=1S/C12H11ClN2OS/c13-11-8-14-9-12(15-11)17(16)7-6-10-4-2-1-3-5-10/h1-5,8-9H,6-7H2*