One-Pot Preparation of Hydroxyaryl- and (Hydroxyalkyl)aryltrifluoroborates

**Significance:** A simple one-pot synthesis of both potassium hydroxyaryl- and (hydroxyalkyl)aryltrifluoroborates was developed. The respective hydroxyl groups are protected in situ via deprotonation with t-BuLi. The hydroxylated trifluoroborates could be successfully subjected to Suzuki–Miyaura cross-coupling reactions where they are less subject to protodeboronation. Moreover, organotrifluoroborates are stable, crystalline solids that are easy to purify.

**Comment:** This method offers an easy one-pot access to various hydroxylated trifluoroborates. Organotrifluoroborates are often superior to their boronic acid or ester counterparts in Suzuki–Miyaura cross-coupling reactions where they are less subject to protodeboronation. Moreover, organotrifluoroborates are stable, crystalline solids that are easy to purify.

**Examples:**

1. ![Reaction Scheme](image)
   - **Yield:** 21–76% with X = Br
   - **Yield:** 77–98% with X = I

   **Reagents:**
   - 1) t-BuLi (3.0 equiv)
   - THF, –78 °C
   - 2) B(Oi-Pr)₃ (1.0 equiv)
   - 3) KHF₂ (1 N)

2. ![Reaction Scheme](image)
   - **Yield:** 21–76% with X = Br
   - **Yield:** 77–98% with X = I

   **Reagents:**
   - 1) t-BuLi (3.0 equiv)
   - THF, –78 °C
   - 2) B(Oi-Pr)₃ (1.0 equiv)
   - 3) KHF₂ (1 N)

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