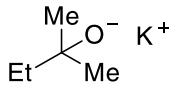
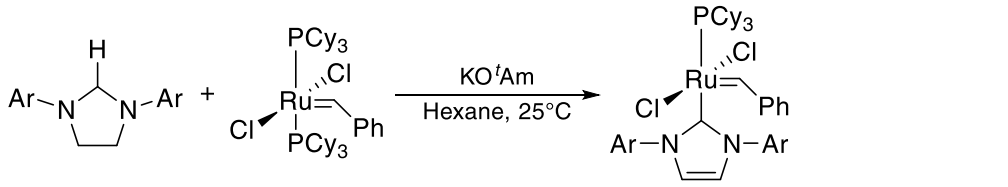
Catalog # 19-1070 CALLERY™ Potassium *tert*-amylate, 5% solution in cyclohexane



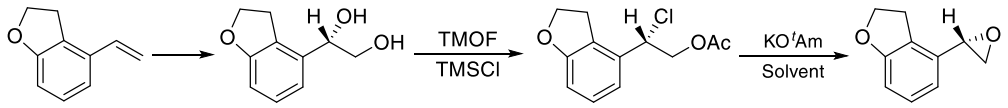
Potassium tertiary amylate (KTA) is also known as potassium *t*-pentoxide or potassium *t*-amyloxide. The high hydrocarbon solubility of potassium *tert*-amylate gives it an advantage over sodium and potassium alkoxides derived from tert-butanol or primary alcohols.

Technical Notes:

1. **Catalyst Preparation:** Used to convert imidazolium salts to free carbenes in the synthetic process of ruthenium olefin metathesis catalysts under mild reaction conditions.
2. **Asymmetric Epoxidation**: Base additive used in Jacobsen asymmetric epoxidation and the Sharpless asymmetric dihydroxylation/cyclization for the preparation of chiral epoxides.
3. **Allylic Substitutions**: Base additive used in iron-catalyzed allylic substitutions.
4. **Direct Oxidation**: Used in transition metal free, direct oxidation of 2-, 3-, and 4-picoline to the corresponding carboxylic acid using oxygen or air under continuous flow conditions.
5. **Aldol Reaction**: Used for the production process of HIV NNRTI doravirine via continuous flow aldol reaction.
6. **Synthesis of Tertiary Difluoroketones**: Catalyst for the direct and chemoselective synthesis of tertiary difluoroketones via Weinreb amide homologation with a CHF_2-carbene equivalent.
7. **Redox Cyclization**: Used in the redox cyclization of amides and sulfonamides with nitrous oxide (N2O) for the direct synthesis of heterocycles.



Tech Note (1)
Ref. (1)



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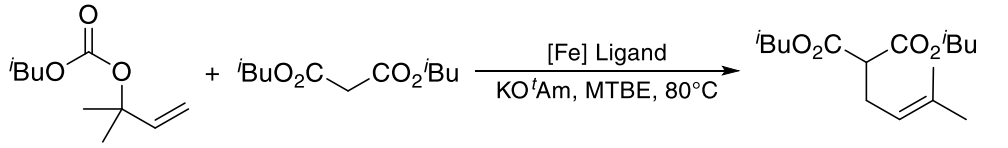

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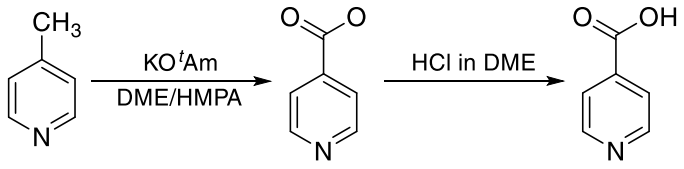

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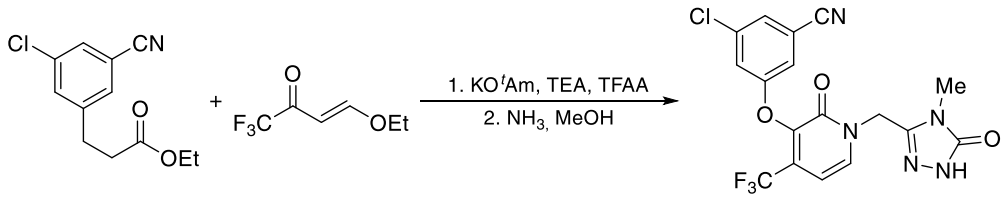

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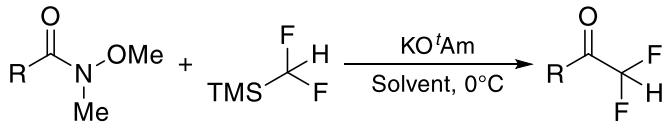

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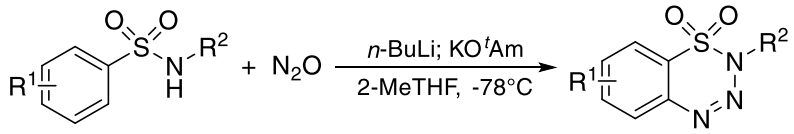

Tech Note (7)
Ref. (7)

References:

1. *Organometallics* **2002**, *21*, 442.
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