

BASE BATHS: BEST PRACTICES

A Guide to Preparation, Hazards, Usage, Storage, and Disposal



Hazards

Base baths are extremely flammable and corrosive. Exposure can occur through inhalation, skin or eye contact, and ingestion. Flash fires can occur if ignition sources are present. For large spills, call Research Safety and 911. For minor spills, apply a base spill neutralizer and use a suitable absorbent material to collect the spill.

Preparation

- Wear full PPE and work in a fume hood
- Dissolve 200-300 g of KOH (or NaOH) pellets in 1 L of distilled water
- **This solution is exothermic:** add base slowly while stirring, allowing the solution to cool
- Once fully dissolved and cooled, add 4-8 L of IPA (or EtOH) based on desired molarity and stir to ensure bath is homogenous
- Label the container with the appropriate Research Safety sticker, the contents, final concentration, and date created

Required PPE



Flame Resistant Lab Coat

Long Butyl or Neoprene Rubber Gloves



Chemical Splash Goggles

Usage



Do not leave glassware inside for more than **18 hours**. Extended exposure etches and degrades the glass, causing risk of fracturing or breaking.

Only place **glassware** in the base bath. Do not clean ground-glass joints, fritted glass, NMR tubes or volumetric instruments.



Do not add **incompatible materials** such as oxidizers, acids, alkali or reactive metals.

Storage & Disposal



- Store in chemically compatible containers
- Keep upright with the lid closed and in a secondary container **at all times**
- Pre-rinse glassware with water
- Change every **4-6 months**
- Transfer to Nalgene or carboy and submit a Chemical Waste Pick Up Request form

SOP

