

# Spotlight On Safety

[www.ehs.ucr.edu](http://www.ehs.ucr.edu)

## Hydrofluoric Acid Emergencies

Hydrofluoric acid (HF) is an aqueous inorganic acid solution commonly used in research and industry for its ability to etch silicon compounds. It is an essential tool for semiconductor and electronic fabrication, mineral processing and glass etching. In addition to its useful properties, hydrofluoric acid also poses severe health risks upon exposure. **An additional quirk of hydrofluoric acid is that dermal burns may not be readily noticed or painful, unlike the warning properties of other acids.**

### *Training*

Laboratory personnel working with HF must complete Hydrofluoric Acid Training prior to working with HF.

### *First Aid Supplies*

Labs that keep or use HF gas or solutions should have a first aid kit containing 2.5% calcium gluconate gel for use in emergencies. Check the expiration date. If the calcium gluconate is more than a year old, it must be replaced. Contact EHS at 951-827-5528 regarding where to obtain calcium gluconate.

### *Spills*

Contact EHS at 951-827-5528 during normal business hours or 951-827-5222 after hours, holidays and weekends regarding any size spill of HF. All HF exposures must be evaluated by a physician.

### *Exposure to HF*

#### **Skin Contact**

1. Flush affected area thoroughly with large amounts of water for 5 minutes.
2. Immediately after rinsing, apply and massage 2.5% calcium gluconate topical gel onto the area of affected skin.  
Note: It is advisable for the individual applying the calcium gluconate gel to wear gloves to prevent a secondary HF exposure

**Eye Contact**-Immediately flush the eyes for at least 5 minutes with large amounts of gently flowing water. Ice water compresses may be applied to the eyes while transporting the individual.

**Inhalation**-Immediately move victim to fresh air and call 911

**Ingestion**-Drink large amounts of water as quickly as possible to dilute the acid. Do not induce vomiting. Do not give emetics or baking soda. Never give anything by mouth to an unconscious person.

For more information, please visit [www.ehs.ucr.edu](http://www.ehs.ucr.edu) or call 951-827-5528.