

Sharps

Process:

Using and discarding sharps for standard cleanroom procedures. Cleaning broken glass and wafers.

Materials:

Razor blades, syringes, scalpels, chipped wafers, broken glassware and others.

Incompatible Materials:

When possible, try to avoid contaminating sharps with hazardous chemicals as it makes them more difficult to discard.

Hazards:

Many cleanroom sharps such as razor blades have extremely fine edges, which can create deep, clean, bloody cuts (incisions) on the hands. If sharps are contaminated with hazardous compounds (like photoresist), they can expose you to the material.

Exposure Actions: Do what's below, and then notify NCNC staff within a few hours. For advice, call NCNC Staff.

Eyes: Very rare due to mandatory shop glasses. Call 911. If sensible, apply gentle pressure with a trauma pad or gauze.

Skin: When possible grab another user to help you dress the wound in the gowning area, however when necessary you may dress your wounds in the cleanroom. Gauze and trauma pads are available in first aid kits located in the main office, gowning area, 1246 and the cleanroom safety stations. For deep cuts from a razor blade you can use the following advice:

If the cut lets a lot of blood, use gauze/trauma pad and gentle pressure to soak away blood, replacing the pads as needed. - If bleeding does not remit, call 911. - If bleeding continues very slightly, use a butterfly bandage to hold the cut closed, wrap the area with plenty of gauze and tape the gauze in place with slight pressure. Replace the gauze regularly. - If bleeding stops, apply antiseptic to a bandaid or the surrounding skin (do not apply antiseptic into a cut), and apply bandaid. Your cut will likely need stitches if the cut is deeper than a couple millimeters or bleeds for more than 5min. Your cut may be infected and will require medical attention if it becomes red, swollen, itchy, hot, rashed, smelly, oddly uncomfortable, red-lined, or discharges puss. Though tetanus is unlikely in a cleanroom, always defer to your doctor's advice.

Acceptable Locations For Use:

Sharps are common and allowed throughout the cleanroom².

Additional Process Notes:

When cutting with unmounted blades, always double check which side is the sharp side, and make sure your other hand is far away from the cut path in case of slips. When using syringes, beware their impressive ability to slash and cut. The edges of chipped wafers are sharp enough to cut, though rarely do when properly handled. Discard any waste sharps in the sharps bucket⁶. Except for shop glasses, none of the NCNC PPE is designed to protect you from sharps. That said, heavy chemical gloves can somewhat reduce the risk of cuts from broken wafers and glass wear. When in doubt, ask the lab staff to help with handling broken glassware.

*Additional SOPs available, see: 1. PPE Choice and Cleaning
5. Hydrofluoric Acid

2. Work Station Cleaning
6. Haz Waste Management

3. Pouring and Mixing

4. Hotplates