

## Standard Operating Procedures for Complete Freund's Adjuvant (CFA)

**For an Emergency refer to the Safety Data Sheet**

### Hazards:

#### Primary routes of exposure: accidental needle stick, skin contact

Acute Toxicity- Flu like symptoms, swelling, inflammation, lesions, necrosis (symptoms may persist for several years after exposure)

Chronic Toxicity- persistent fever, neurological abnormalities, tuberculoid granulomas, arthritis, permanent organ damage, autoimmune disease

Corrosive- Skin exposure may lead to severe irritation and scarring. Eye exposure may lead to blindness.

### Chemical handling instructions:

#### Personal Protective Equipment (PPE):

Those handling CFA must wear chemically resistant gloves (not latex), lab coat, eye protection, and appropriate lab attire (pants, closed-toe shoes).

#### Preparing CFA solutions:

1. Those preparing CFA solutions must always handle it inside a certified chemical fume hood or biosafety cabinet.
2. The work area should be prepared by laying down an absorbent work surface with the absorbent material facing up. Tape the edges of the absorbent material to prevent its movement in the fume hood.
3. Care should be taken to not generate any aerosol during the preparation or injection procedure. Always wash hands after removing gloves following handling CFA.
4. To clean areas where CFA has been handled, use a 5% to 10% bleach solution after removing the absorbent material. Any contaminated paper towels will then be placed into a container for hazardous waste, appropriately labeled for waste removal and placed in a designated area for disposal.

#### Waste Disposal:

1. Any leftover/unused CFA should be collected for disposal as chemical waste. All material contaminated with the chemical and residual chemical must be disposed of as hazardous waste.
2. Used needles/syringes should be disposed in a sharps container destined for incineration. Do not recap or bend needles.
3. Contact the Safety Office at x2697 or [SafetyOffice@unthsc.edu](mailto:SafetyOffice@unthsc.edu) for hazardous waste pickup.

### Animal Experiments

Research staff must inform DLAM in advance that CFA will be used, and arrangements will be made for appropriate animal housing.

#### Injecting animals with CFA:

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1. Animals should be appropriately restrained or sedated prior to administering injections.
2. Animals must be injected with CFA within a Class II Type B Biosafety cabinet or designated fume hood.
3. Animal handler must wear PPE as described above.
4. All needles must be disposed of in sharps container – do not recap or bend needles.
5. All bedding is considered contaminated and requires special handling.
6. Dispose of waste as described above.

Cage handling:

1. The bedding and carcasses are considered contaminated and require special handling.
2. All bedding changes should be handled using procedures that minimize aerosolization.
3. Dispose of all contaminated bedding and animal carcasses in a hazardous waste container to be incinerated.