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| **Duke OESO Guidelines for Safe Use of**  **STENCH!**  **STENCH!**  **β-mercaptoethanol (2-ME)**  ***Complete Lab-Specific Safety Information on page 2.*** | | | | | |
| **Hazards** | **Potential Hazards** | * **Fatal in contact with skin**, category 2 and therefore Particularly Hazardous. **Rapidly absorbed through skin.** Toxic if inhaled or ingested. * Low odor threshold (0.12-0.64 ppm). **Very unpleasant stench similar to odorant in natural gas.** **Misuse or spill may cause suspicion of natural gas leak.** * May cause allergic skin reaction. Causes eye damage and skin irritation. * May cause liver or heart damage with repeated oral exposure. | | | |
| **Hazard Controls** | **Selection & Purchase** | * **Purchase the** **smallest**, shatter resistant **containers**, at the lowest concentration **feasible**. * Consider alternate methods and **use a less hazardous substance if possible**. * **Purchase butyl or laminate gloves for clean-up of small spills.** | | | |
| **Storage & Transport** | * **Store away from metals, oxidizers**, and any other incompatibles. * Storage container must be tightly closed, resealed and stored upright.  * Store in sealed **secondary container** in a **well ventilated area (not in a cold room).** Do not store on the floor. | | | |
| **Engineering Controls** | * Chemical Fume Hood Flow Diagram**Always work with 2-ME in a chemical fume hood** or 100% exhausted biological safety cabinet (Class II, Type B2). | | * Eye Shower, Eye Wash, Rinse Eyes, First Aid, Sign**Eyewash** required in immediate work area. **Eyewash-drench hose** preferred. | |
| **Work Practice Controls** | * ***Work with the smallest practicable amount for the experiment being performed.*** * Designate a specific work area for 2-ME (within a hood or exhausted BSC) and label it. * **Keep containers closed** as much as possible when not in use. * Plan work to **avoid glove contact**. * Clean work area & reusable equipment with soap, water and paper towels; dispose of paper towels as chemical waste. If stench remains, neutralize with an aqueous solution of sodium hypochlorite (bleach). | | | |
| **Personal Protective Equipment**  **(PPE)** | * lab coat2Wear **closed-toed shoes** and **clothing covering the legs**. * nitrile gloves**Minimum PPE:**   **x2**   * + Buttoned lab coat   + Safety **goggles**   + TWO pairs **nitrile** gloves.   + *Change gloves immediately if splashed.* | | | North Silver Shield® Gloves, Silver, 29" Long, Size 8  If glove contact is expected  or |
| * **Risk of splash**: ADD: chemical resistant sleeves & apron, face shield, and laminate or butyl gloves. | 3XE79_AS01?$zmmain$8400131-24Image result for butyl gloves | | |
| **Other** | **Emergencies** | * See Emergency Response [webpage](https://www.safety.duke.edu/emergency) or flip chart and/or lab specific chemical hygiene plan. * For clean-up of *small* (<10 ml) spills confined to the chemical fume hood, wear butyl or laminate gloves & other PPE noted above. Clean up with inert absorbent materials (i.e., vermiculite, dry sand). Clean spill area as indicated in Work Practice Controls section. Contaminated PPE and clean-up materials must be double-bagged and tightly sealed. Dispose as chemical waste. * Other spills: Contact OESO Spill Response Team via Duke Police. | | | |
| **Waste** | Store accumulating waste in hood until picked up by OESO. See also lab-specific chemical hygiene plan, [Lab Chemical Waste Management Practice](https://www.safety.duke.edu/environmental-programs/hazardous-waste/chemical-waste), and [Drain Disposal Practice](https://www.safety.duke.edu/environmental-programs/hazardous-waste/chemical-waste). | | | |
| **Training** | Sign signature page in lab-specific chemical hygiene plan to indicate review. | | | |
| **Questions** | Contact OESO Lab Safety at 919-684-8822 or labsafety@dm.duke.edu. | | | |

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| **STENCH!** | | **Lab-Specific Safety Information for**  **β-mercaptoethanol (2-ME)**  ***Supplements the Guidelines for Safe Use of 2-ME*** | | | **STENCH!** |
| **Lab** | **PI Name** | Click or tap here to enter PI Name | | | |
| **Location** | Enter building(s) and room(s) where lab is located | | | |
| **Lab-Specific Hazard Controls** | **Purchase**  **Details** | Maximum container size | Enter maximum container sized purchased | | |
| Maximum concentration | Enter maximum concentration purchased | | |
| Container type | Enter the container material | | |
| Specific product information | Enter supplier name/product number or purity/grade to purchase | | |
| **Storage** | Specific location | Enter specific storage location | **Not in a cold room!** | |
| **Use Information** | Designated work area  (specific room(s) and area(s)) | Enter rooms and areas designated for use | | |
| Maximum quantity | Enter maximum quantity to be used at a time | | |
| Location of supplies for decontamination | Bleach: Enter location of bleach  Paper Towels: Enter location of paper towels | | |
| Location of supplies for small spill clean-up  (Use decon supplies if needed) | Laminate gloves: Location of Laminate Gloves (i.e. SilverShield)  Butyl gloves: Location of butyl gloves  Location & Type of inert absorbent: Location of vermiculite or dry sand | | |
| **Details of Process** | 1. Enter steps used in lab process(es) or experiment(s) | | | |