

Job Hazard Analysis

Task/Equipment:	Hot Plate Use
Department:	Biology and Chemistry
Analyzed By:	Justine Becker
Date:	10/1/2020

Personal Protective Equipment Required:



Splash
Goggles



Lab Coat



Chemical
Resistant Gloves

Trainings Required*/Recommended:

General Lab Safety Training

Equipment/Tools/Chemicals Required for the Job:

Bunsen Burner, fuel hose, striker, tongs, fuel (gas)

Optional: stand with wire screen and clamp, test tube clamps, glass beakers, test tubes, or microscope slides, various laboratory chemicals (see SDS for specific information)

Tasks/Steps	Hazards Present	Safety Measures and Controls
Plug in the hot plate	Possible fire	Make sure outlets are clear from flammables. Do not use if the hot plate cord is damaged
Turn on the hot plate on and turn up to desired level	<ul style="list-style-type: none"> A. Possible fire B. Skin burn 	<ul style="list-style-type: none"> A. Keep all flammable materials and chemicals away from the hot plate. Do not use plastic B. Do not touch the hot plate
Place the glassware containing the chemical onto the hot plate	<ul style="list-style-type: none"> A. Possible splashing B. Boiling over C. Dangerous chemical vapors D. Overheating chemical/glassware 	<ul style="list-style-type: none"> A. Add boiling chips and/or use a glass cover to decrease splashing. Wear splash goggles and a lab coat to protect yourself B. Stir constantly with a glass rod or use a stir bar to decrease boiling over and burning the beaker C. Complete task inside of a fume hood D. Frequently monitor your reactions. Use a timer if needed
If applicable, stir frequently	<ul style="list-style-type: none"> A. Possible skin burn B. Chemical vapors 	<ul style="list-style-type: none"> A. Wear laboratory gloves to protect your skin B. Stir inside fume hood. Keep the hood sash at or below the arrow/ line. Do not put your head inside the fume hood
Once you are done heating up the chemical, turn off the hot plate and remove the glassware	<ul style="list-style-type: none"> A. Possible skin burn B. Spilling hot chemicals 	<ul style="list-style-type: none"> A. Do not pick up the hot beaker with your hands. Use tongs or wait until the glassware reaches a lower temperature to carry it safely to the designated area B. While removing the glassware, hold away from your body. Wear a lab coat and splash goggles for protection

Unplug the hotplate and let cool before storing

Melting, burn, fire

Do not store hot plate until it has reached room temperature

Updated: 4/25/22