

STANDARD OPERATING PROCEDURE

UV Light

Zhou Lab, Institute for Environmental Genomics

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Minimum Personal Protective Equipment Required: Lab coat, gloves, UV-filtering face shields, make sure wrists, chin and neck are covered with clothing or face shield

Risks: Exposure of eyes and skin to UV radiation. Generation of toxic compounds from UV irradiation of the air (and of airborne substances)

Special Handling:

- ✓ Eye protection should be ANSI-Z87 rated and provide protection from side exposure via a side lens or “wrap around” lens. Normal eye protection and/or prescription glasses provide little to no protection!
- ✓ UV exposure is not immediately felt; the user may not realize the danger until after the damage is done. Symptoms can occur 4-24 hours after exposure.
- ✓ Limit time (short a time as possible) and distance (as far away as possible) when working with UV-producing equipment

Protocol/Procedure:

Several sources of UV radiation are present in the lab.

Transilluminator

- Used to visualize nucleic acids following gel electrophoresis.
 - A transilluminator is used in the gel imager
 - A stand-alone transilluminator is on the bench near the imager and is used to locate bands so they can be cut out of the gel.
- Eyes and skin must be protected when using the transilluminators. Make sure there is no gap between the cuff of your lab coat and the glove. Wear a UV resistant face shield.

Biosafety cabinets/PCR hoods

- UV lights are located in biosafety cabinets and PCR hoods to disinfect the interior surfaces prior to and after use.
- Make sure hood sash is down before turning UV lights on

UV lamps in ceiling

- Germicidal lamps are installed at ceiling level in the clean room for air and surface disinfection.
- Access to the clean room is restricted and requires special permission and an access card to enter.

- A sign indicating UV lights are in use is illuminated when the UV lights are turned on.
- Entry is strictly prohibited while the lamps are on to prevent employee exposure.

UV crosslinker

- Used to attach nucleic acids to the surface of a chemically coated microscope slide.
- Crosslinkers are equipped with door safety interlocks, which prevent operation of the machine when the door is open.
- If the interlock system is not functioning correctly, do not use the crosslinker and let Joy know.