Safety Summary			
Title: Ultraviolet (UV) Lights			
Approved by:		Effective Date:	
David A. Brown,	DAShorm	Revised Date:	
Director, EH&S		Section:	BIO

Ultraviolet (UV) lights are used in biological safety cabinets to sterilize/decontaminate and for developing agarose and ethidium gels

"Primary Containment for Biohazards: Selection, Installation and use of Biological Safety Cabinets, $2^{\underline{nd}}$ Ed." published by CDC and NIH, states:

"Ultraviolet (UV) lamps are not required in BSCs. If installed, UV lamps must be cleaned weekly to remove any dust and dirt that may block the germicidal effectiveness of the ultraviolet light. The lamps should be checked periodically with a meter to ensure that the appropriate intensity of UV light is being emitted. UV lamps must be turned off when the room is occupied to protect eyes and skin from UV exposure, which can burn the cornea and cause skin cancer."

- The bulb should be cleaned weekly with ethanol to remove dust and dirt.
- UV lamps should be checked annually to ensure the appropriate intensity
 of UV light is being emitted for germicidal activity (UVC). This is
 performed by Precision Air during the annual certification process.
- Overuse of UV lights, leaving on for extended periods of time, overnight or longer, can result in the germicidal wavelength not being produced.
- Keep sash closed when UV light is on.
- Minimize storage in BSC when working in the BSC and when the UV light is on.
- UV light should not be on when working in the BSC or when the area is occupied.

Health Hazards

Biological effects from UV radiation vary with wavelength, photon energy and duration of exposure. In general, adverse effects are limited to the skin and eyes.

Chronic exposure

- May accelerate the skin aging process and increase the risk of developing skin cancer.
- May cause cataracts in humans.
- Wavelengths in the UVA, UVB and UVC are probable human carcinogens.

In developing gels:

UV protective glasses should be worn when developing gels are in a "UV box".