UV radiation from laboratory equipment is more concentrated then natural occurring UV!!!

What is Ultraviolet Radiation??

Ultraviolet light (UV) has two levels of radiation:

- Non-ionizing: ranges from 40-400 nanometers and is the most common form of UV radiation being used in biomedical and microbiological research laboratories.
- Ionizing: ranges from 100-280nm and more concentrated then natural occurring UV, which poses a greater threat to personnel. Can be emitted from some types of lab equipment.

What is the Exposure Hazard of UV?

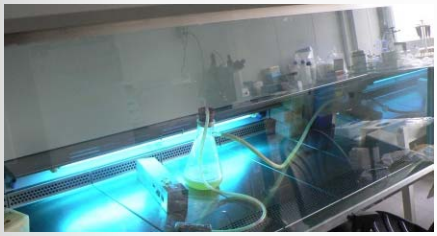
Exposure to UV light can injure both the eye and skin.

- Photokeratitis - inflammation of the cornea (outer protective coating of the eye). Can with very brief exposure or just a flash of UV light.
- Erythema - sunburn of the skin. Can occur within a few seconds of exposure to UV. Prolonged exposure can cause premature aging and cancer of the skin.

LIMITS of UV for sterilization:

- Germicidal lamp has **limited penetrating power.**
- The dynamic air stream in a BSC decreases the efficacy of the UV.
- **UV light does not penetrate soil, dust, or solid objects**.
- **Intensity of lamp diminishes over time**, decreasing germicidal activity.
- **Humidity levels** above 70% decrese the germicidal effect of UV.
- **Temperatures** below 77°F reduce the output of the germicidal wavelength.

EHRS does not recommend use of UV for decontamination.



Instruments that contain UV lights – use with caution!

Transilluminator

Crosslinker

Safety Practices and Precautions

Minimize eye and skin exposure:

- Always wear personal protective equipment (PPE) such as gloves, face shields, and lab coats
- Never occupy BSC while UV lamp is activated.
- Do not work in a room where a UV light is active.
- Use Transilluminators ONLY with protective shield in place.
- Do not use Crosslinkers if the door safety interlocking mechanism is not working.

Additional information and references can be found in the biosafety manual and on the EHRS website.