Risk Assessment: Use of Ultraviolet (UV) Transilluminators

Hazards

UV Transilluminators are backlit by 8 watt, 302 nm midrange ultraviolet tubes. Eyes and skin can be damaged by prolonged exposure to UV radiation.

- Repeated overexposure of skin to UV has been linked with premature aging, wrinkles and most seriously, skin cancer.
- Corneal scarring and cataract formation are examples of eye damages that can result from repeated exposure to UV radiation.

Risks

Exposure is likely if the cover is not used properly or if no PPE is used. As there is no immediate discomfort or effect on exposure to mid-range UV, there could be the likelihood that one may not be aware of the harmful effects of repeated exposure, or worse, not aware of being exposed to the light at all.

Who is likely to be injured?

- Users – students (attachment students, undergraduates and postgraduates) and laboratory staff.
- Other personnel not using the transilluminator but whom are also in the area.

Control Measures

Operating Precautions

- When working near UV radiation, PPE like lab-coats, gloves and safety glasses or other appropriate eye/skin protection such as UV protective glasses or a UV protective face shield must be worn. Make sure all persons in the area are also properly protected.
- Lower the UV-blocking safety cover before switching the UV lamps on.
- Always ensure that the UV is never left on unattended and is switched off after use.
- Always wear personal protective equipment even with the cover closed to prevent accidental exposure to UV radiation.
- Always disconnect the mains power cord before cleaning the unit or replacing fuses or lamps.
- If possible, locate the transilluminator in a controlled environment such as a darkroom.

Training

All users must be made aware of the hazards involved and trained in the correct procedures and precautions to follow when using the UV transilluminator.
Level of Risk Remaining

Low if the above control measures are followed.

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