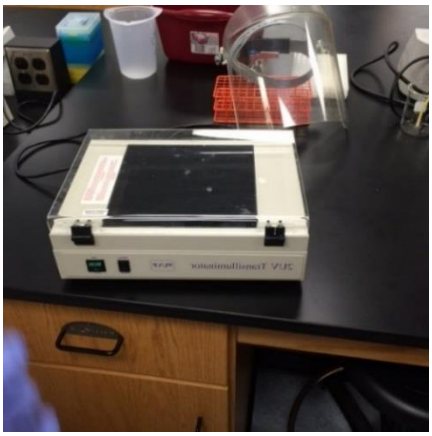
CLEMSON
RESEARCH SAFETY

Laboratory Safety Fact Sheet:
Ultraviolet Radiation Hazards transilluminator box



ULTRAVIOLET LIGHT (UV): The adverse health effects that may occur are erythema (sunburn), photokeratitis (a feeling of sand in the eyes), skin cancer, melanoma, cataracts, and retinal burns. These devices should always be used with caution, with special protection given to the eyes and skin. Symptoms of excessive exposure to UV radiation include skin burns, eye irritation and possibly a temporary loss of vision or blurred vision typically appear hours after exposure has occurred.

ULTRAVIOLET RADIATION EXPOSURE FROM TRANSILLUMINATORS A transilluminator is a box containing a UV light source and is used for viewing gels. Transilluminators can emit various wavelengths of UV radiation. Some of the lower wavelengths, such as those in the 254 nm range, can cause more serious damage to the skin and eyes. The transilluminator is equipped with a plastic shield that folds down over the viewing area. When properly used, the shield absorbs the UV radiation and prevents exposure to anyone in the vicinity of the device. If the shield is not in its proper position, direct exposure to UV radiation is possible. The manufacturer recommends those working directly with the device wear UV face shields.

As an extra precaution, please make sure that all students, faculty and staff take the following steps:

1). Wear nitrile or other chemical resistant gloves and a long sleeved shirt or laboratory coat to protect your hands and lower portions of your arms from UV light.

2). **Full face shields must be worn** while working with these devices. Make sure that the shield you are using is adequate to block the particular wavelengths of UV light emanating from the equipment. You can find the UV wavelength emitted from your devices in your owner's manual and if you are ordering a face shield or already have one, check in the catalogue from which it was ordered to determine the UV wavelengths that the shield will block.

3). Anyone working in the vicinity of the transilluminator should wear safety glasses or goggles that are rated for UV protection.

3). Make sure the transilluminator is properly labeled with a caution statement to remind the operator to use protective gear or discuss the use of face shields. Contact the Office of Research at (864) 656-0341 if you need further assistance.