Important Safety Information on Ultraviolet Hazards

• The QUV weathering tester's ultraviolet lamps may cause severe sunburn or eye inflammation.

• Shut off UV lamps before opening machine and removing test panels.

• Never look at lighted UV lamps without UV absorbing goggles.

• Do not be fooled by the lamps' cool blue appearance or by the lack of heat and visible light. The QUV machine's lamps are efficient generators of ultraviolet light similar to that in sunlight. These lamps require safety precautions similar to the precautions for suntanning and medical therapy lamps. Exposure of a few minutes to unshielded lamps may cause painful sunburn or eye inflammation. This eye inflammation is much like a severe sunburn on the surface of your eyeball, and is familiar to skiers as “snow blindness.” As with sunlight, extensive or repeated exposures may lead to premature aging of the skin or permanent skin damage.

• Sunburn and eye inflammation are delayed reactions. Symptoms (pain, redness, hot sensation) do not appear until 4 to 12 hours after UV exposure.

• After severe sunburn and eye inflammation, skin and eyes may be more sensitive to future UV exposures, including sunlight.

• There is no UV hazard from the QUV tester in normal operation with doors closed. With doors closed, UV leakage from the QUV unit is less than 1/20 the intensity of the UV from sunlight transmitted through a closed window. With doors open but with test panels in place, UV leakage is still less than sunlight through a window. Note: The QUV weathering tester does not produce any appreciable infrared radiation.

• Burning effects of UV lamps depend on duration of exposure, distance from lamps and percentage of lamp surface that is visible. Figures 1 through 3 show time of permissible daily exposure to light from the QUV tester under various conditions. These times are based on Threshold Limit Value (TLV) for UV exposure published by the American Conference of Governmental Industrial Hygienists. The TLV represents conditions under which it is believed that nearly all workers may be repeatedly exposed without adverse effect. TLV’s should be used as general guidelines in estimating the allowable time in which an individual can be exposed to UV light emitted from the QUV machine. Because every individual has a different sensitivity to UV light, a person may actually be more sensitive to UV light than allowed for in reference to TLV’s. Thus, photosensitive individuals may need to take extra precautions when using the QUV tester. Note that 12 successive exposures of 5 seconds during a day is the equivalent of a single exposure of 1 minute.

• If exposure to UV lamps is necessary, wear the UV absorbing goggles provided with your QUV weathering tester. Protect skin with opaque clothing or a quality sunscreen lotion percent PABA or sun protection factor of 20, not a “suntan” lotion.

• Individuals with light complexion are more susceptible to UV, and some individuals are allergic to UV. Also, many common medications increase your sensitivity to UV (including sunlight).

• Do not use QUV lamps for any purpose other than QUV testing. When discarding the lamps, disable them to prevent unauthorized use. To disable lamps, remove two of the end-pins with a wire cutter or pliers (do not break lamps). These lamps are not helpful for plant growth or similar purposes.
Figure 1.
One sample holder removed. Hand 50 mm from lights (same as sample): Allowable daily exposure 1 minute for UV-B lamps.

Figure 2.
One sample holder removed. Hand 30 cm from lights: Allowable daily UV-B lamp exposure 6 minutes. Face 1 m from lights: Allowable daily exposure 18 minutes.

Figure 3.
All sample holders removed. Hand 30 cm from lights: Allowable daily UV-B lamp exposure 2 minutes.