

## Microbiology Lab Experiment Changes

**Experiment #:** 8-2

**Title:** Ultraviolet Radiation Damage and Repair

**Live Organisms:** *Serratia marcescens*

**Changes:**

1. Work in groups.
2. Each group obtain 3 TSA plates.
3. Using a sterile swab, inoculate the entire surface of the plate with *S. marcescens*. Only one swab is necessary to inoculate all 3 plates.
4. When ready, obtain a UV lamp with paper “mask”. The lamps must be shared. If UV lamp has a choice between “long wave” and “short wave” use “short wave”. **Do not look into the lamp!**
5. Plate # 1: remove lid, cover with paper “mask”, expose to UV for 30 seconds then replace lid.
6. Plate # 2: remove lid, cover with paper “mask”, expose to UV for 3 minutes then replace lid.
7. Plate # 3: **do not** remove lid, put paper “mask” on top of lid, expose to UV for 3 minutes.

**Take Home Lesson:** Explain how thymine dimers are formed and repaired by cells. See questions at end of experiment.