Institut für HIV Forschung
SOP #05-00 **(Februar 2016)**

DNA/RNA measurement with Biospectrophotometer

Wear Gloves.

1. Turn on the Biospectrophotometer using the switch on the back
2. Choose your settings, the Biospectrophotometer can measure several different pathlengths (such as 1cm cuvettes) but typically measurements are performed with the µCuvette (1mm path length)
3. Blank the machine
    a. Clean the µCuvette with distilled water and a tissue
    b. Load 2µl of buffer that sample is diluted with onto the small circle
    c. Close the µCuvette and verify that liquid is making contact with both sides of the µCuvette
    d. Load the µCuvette into the reader slot, close the lid, and press "Blank"
    e. Re-blank after every 10 samples measured
4. Optional – Verify quality of Blank
    a. Clean the µCuvette with distilled water and a tissue
    b. Load 2µl of buffer that sample is diluted with onto the small circle
    c. Close the µCuvette and verify that liquid is making contact with both sides of the µCuvette
    d. Load the µCuvette into the reader slot, close the lid, and press "Measure"
    e. If you do not receive a value very close to 0 (within 0.5), then vortex your buffer and blank again
5. Vortex or pipette mix your DNA/RNA samples
6. Measure your sample concentration and purity
    a. Clean the µCuvette with distilled water and a tissue
    b. Load 2µl of sample is onto the small circle
    c. Close the µCuvette and verify that liquid is making contact with both sides of the µCuvette
    d. Load the µCuvette into the reader slot, close the lid, and press "Sample"
        - 260/280 window: a value of ~1.8 indicates pure DNA and a value of ~2.0 indicates pure RNA. Lower values indicate contaminants such as protein.
        - 260/230 window: a value of 1.8-2.2 indicates pure DNA/RNA. Lower values indicate contaminants
    e. Values are recorded on the machine and can be transferred to a USB, but due to the difficulty of typing in your sample names, writing down your samples/concentrations is highly recommended
7. After measuring all of your samples, clean the µCuvette with distilled water and a tissue. Return it to its box and place the box on the shelf above the Biospectrophotometer
8. Turn off the Biospectrophotometer and clean the area

*If decontamination is necessary, use a 5.25% solution of sodium hypochloride (bleach freshly prepared).