STANDARD OPERATING PROCEDURE				
Ragon Institute of MGH, MIT and Harvard	**DNA Measurement using NanoDrop ND-1000 instrument**		**SOP #**	PL-SOP-006
	Originated by:	Ildiko Toth	Date:	27 April 17
	Laboratory:	Processing Laboratory	Pages:	1 of 2
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I. PURPOSE:

The purpose of this procedure is DNA quantification using NanoDrop ND-1000 instrument.

II. SAFETY:

This protocol needs to be carried out in a BSL1 Lab. Personnel are required to wear gloves and a lab coat before initiating any work.

III. PROCEDURE:

Wear Gloves.

1. Open program on computer.
2. Initialize spectrophotometer:
    a. Load 2ul distilled water on measurement pedestal.
    b. Lower sampling arm gently.
    c. Click "OK".

3. Measure Blank:
    a. Load 2ul blank buffer (the buffer, solvent, or carrier used in your sample).
    b. Lower sampling arm gently.
    c. Type BLANK into the Sample ID window.
    d. Click "BLANK" (F3).

4. Ensure Quality of Blank:
    a. Load 2ul of same blank buffer.
    b. Lower sampling arm.
    c. Click "MEASURE" (F1).
    d. Check that the value in the concentration window is within -0.9 and +0.9.
    e. If the value exceeds these limits, repeat the blanking process. If not, proceed to measure your DNA.
    f. Repeat blanking process after every 10 samples.
5. Briefly vortex or mix DNA samples before loading on the NanoDrop.
6. Measure DNA concentration and purity:
    a. Type in the Sample ID.
    b. Load 2ul of DNA sample.
    c. Lower sampling arm.
    d. Click "MEASURE" (F1).
        - 260/280 window: a value of ~1.8 indicates pure DNA. Lower values indicate contaminants such as protein.
        - 260/230 window: a value of 1.8-2.2 indicates pure DNA. Lower values indicate contaminants

- ng/ul window: displays DNA concentration.

7. Between each measurement, clean upper and lower measurement pedestals with de-ionized (miliQ) water on a kim-wipe.
8. When you are finished measuring your samples clean the pedestals again and leave a dry, folded kim-wipe between the sampling arm and the lower measurement pedestal.
9. Your measurements are automatically saved and can be found in: My Computer → Local Disk C → NanoDrop Data → Default → Nucleic Acids
    a. Look for the date on which the measurements were taken.

10. Remember to clean the area after your work is done

IV. REFERENCES/ ADDITIONS/ NOTES:

N/A