



UHN Microarray Centre

NanoDrop Spectrophotometer Checklist

Revised May 2008

Introduction

This document presents the guidelines for using the Nanodrop ND-1000 spectrophotometer at the UHN Microarray Centre (UHNMAC).

The Nanodrop ND-1000 spectrophotometer is able to perform full spectrum UV-Vis absorbance analyses (220-750nm) and enables researchers to quantify DNA, RNA, dyes, proteins, and other samples. Only 1µL is required by the Nanodrop to quantify nucleic acid samples, however, we ask that 2µL be sent. 2µL of sample is required by the instrument for proteins (please send 4µL). Since the Nanodrop ND-1000 has a large dynamic range (2-3700 ng/µL for dsDNA), dilutions are not necessary for most samples. The accuracy of each measurement is typically within 2%. Using the microarray application, the concentration of nucleic acid and up to 2 dyes can be calculated and displayed at the same time.

Unlike traditional spectrophotometers, the Nanodrop does not require cuvettes or capillaries. Instead, the sample is pipetted directly onto the measurement pedestal. When the apparatus is closed, the sample arm compresses the droplet and a sample column is drawn (to a controlled path length of 1mm) and surface tension holds the sample in place. After the 10 second measurement, the sample is simply wiped off and the instrument is ready for the next sample. The sample cannot be collected following its measurement.

Another advantage of the Nanodrop ND-1000 is that there are few solvent restrictions. Although, one solvent that is restricted is hydrofluoric acid. Even samples dissolved in high vapour pressure solvents such as acetone can be measured, but only using the short path length to reduce evaporation.

The Nanodrop ND-1000 spectrophotometer service is available to all customers for a fee. Samples can be received Monday-Friday, 9am-4pm, excluding holidays. Please contact geneservice@microarrays.ca or call 416-581-7463. The cost of Nanodrop is \$5 per sample.

The UHNMAC is located at:
MaRS Centre, Toronto Medical
Discovery Tower
101 College St, Room 9-601
Toronto, ON, Canada
M5G 1L7

Please complete the following:

Your name: _____

P.I.: _____

Billing Address: _____

Phone Number: _____

e-mail address: _____

Preferred method of contact: Phone e-mail

Number of samples (\$5 per sample): _____

