

**Nano Drop**  
**(Low volume spectrophotometer)**  
**REF: No: NIN/ST/12/Nano Spectrophotometer/2017-18)**

**Application :** To measure micro liter volumes of Nucleic Acids (DNA, RNA) and proteins.

**Features :**

- Minimum volume with which measurement of absorbance can be done should be 0.5 microliter ( $\mu\text{l}$ ) or lower.
- System should not require any adaptors / another attachment for sample application /analysis other than cuvettes.
- Should have capability of recording sample absorption independently in regular volume cuvettes as well as on system integrated platform for microliter volume measurement.
- The microliter volume measurement of absorption should not require any external attachment / plate / block etc.
- No. of sample to be analysed : One sample at a time.
- Detector should be latest CCD array system.
- 100% sample recovery with no contamination.
- Simple & easy sample loading and cleaning facility should present.
- Windows based software (Upgradable free of cost) shall be offered to display data in graphical form and numerical form. User-friendly software to be provided.
- Software should have feature to identify the contaminants in the sample and report a corrected concentration. It should also detect the bubbles and anomallers in the sample column. Options should also be available for use with cuvette measurements.
- Should have option of Heater also for enzymatic activity measurement incubation at 37 °C. Heating facility of cuvette holder shall be offered with the accuracy of  $\pm 0.5$  °C. When selected, the current temperature of the cuvette shall be displayed at software screen and should have heating time within 10 minutes for the cuvette holder to reach 37 °C.
- Absorbance measurement time should take less than 10 seconds.
- Should have Stirrer option with various speed settings in the cuvette mode.
- Should have function to measure fluorescently-labeled nucleic acid and protein samples using absorbance.
- System should have facility to measures protein and peptides at A205nm also.
- Should be PC controlled

**Specifications :**

Path length	:	1 nm or better. ( Microlitre absorption mode).
Path length	:	1, 5, 10 mm ( in cuvette mode) or better options.
Light source	:	Xenon lamp

Wavelength range	:	190 – 800 nm or better (with accuracy +/- 1 nm or better).
Absorption range	:	0.03 – 200 (10 mm equivalent) or better in microliter absorption mode
Absorption range	:	0.002 – 1.5 or better (in cuvette mode) .
Absorption accuracy	:	2% or better .
Detection limit	:	Should be capable of measuring protein samples in the range 0.1 mg/ml – 100 mg/ ml (equivalent to BSA) or better, dsDNA of 0.2 ng/μl – 20000ng/ μl or better .
Display	:	Inbuilt 6” or larger colour display with touch screen

**Essential :**

- Branded computer with minimum i7, TFT monitor, HP/DELL/LENOVO make to be supplied with the system, and HP/DELL/LENOVO laser colour printer to be included.
- Should have Internal Storage atleast 32 GB flash Memory and expandable to more.
- Suitable UPS system to be included to run the instrument and computer-printer attached with the instrument.
- In case the quoted item is a proprietary one, then the supporting documents should be provided
- Warranty for the equipment and computer/printer/UPS systems must be 3 years after installation.

