

क्षेत्रीय जैवप्रौद्योगिकी केन्द्र
Regional Centre for Biotechnology

राष्ट्रीय महत्ता की संस्था

An institution of National Importance

(यूनेस्को के तत्वावधान में जैव प्रौद्योगिकी विभाग, भारत सरकार द्वारा स्थापित)
(Established by the Dept of Biotechnology, Govt of India under the auspices of UNESCO)

No. RCB/PAC/NOC/01/20-21

Dated: 06.07.2020

Invitation of Comments/Objections for Purchase of Qubit 4 Quantitation Starter Kit with Wifi.

Regional Centre for Biotechnology is in the process of purchasing of Qubit 4 Quantitation Starter Kit with Wifi from M/s Thermo Fisher Scientific, USA based on Proprietary basis.

The documents are being uploaded for open information to submit comments/objections, if any, from any manufacture regarding proprietary nature of the item. The offer should be submitted in accordance with the specifications as attached herewith. The comments may be emailed to purchase@rcb.res.in or submitted by speed post courier to the under mentioned address on or before **13.07.2020** failing which it will be presumed that any other vendor has nothing to comment upon this notice and the product will be purchased on Proprietary basis.

Comments/Objection may be submitted to:

The Executive Director
Regional Center for Biotechnology
NCR Biotech Science Cluster
3rd Mile Stone, Gurugram-Faridabad Expressway
Faridabad, Haryana-121001

Registrar

Quantification method comparison.

	Qubit Fluorometer	UV-absorbance microvolume spectrophotometer
Quantification method	Fluorescence-based dyes that bind specifically to DNA, RNA, or protein	UV absorbance measurements (measures absorbance at 260 nm and 260 nm/280 nm ratio)
Selectivity for DNA or RNA	Accurately measure both DNA and RNA in the same sample	Results for samples containing both DNA and RNA are non-discriminatory—you cannot distinguish one from the other
Accuracy and precision at low concentrations	Accurately quantifies DNA in samples with concentrations as low as 10 pg/μL	Not recommended for concentrations under 2 ng/μL ; variation for sample concentrations <10 ng/μL is often very high
Sensitivity and range	The effective range covers a sample concentration range of 10 pg/μL to 1 μg/μL DNA	Covers a sample concentration range of 2 ng/μL to 15 μg/μL; uses 0.5–2 μL of sample
Can indicate contamination	No	Gives peaks revealing the presence of contaminants

The extraction of the viral genome from a small volume of clinical samples often leads to the recovery of a low amount of viral nucleic acid. For sequencing reaction, it is important to accurately quantify the nucleic acid (both DNA and RNA) from starting materials as well as in each step of cDNA, library preparation as well as at the final step, i.e loading to the flow cell into sequencing machine.

The Qubit fluorometer offers dye-based accurate detection of low amount (as low as 10ng) of DNA and RNA simultaneously in the same samples which are not possible in nanodrop or UV based spectrophotometer (lower range >2 ng)

System specifications Qubit 4

INSTRUMENT DIMENSIONS

5.4 IN (W) X 10 IN (L) X 2.2 IN (H)
(13.6 CM X 25 CM X 5.5 CM)

WEIGHT	743 g
DYNAMIC RANGE	5 orders of magnitude
PROCESSING TIME	≤5 seconds/sample
LIGHT SOURCES	Blue LED (max ~470 nm) Red LED (max ~635 nm)
EXCITATION FILTERS	Blue 430–495 nm Red 600–645 nm
EMISSION FILTERS	Green 510–580 nm Red 665–720 nm
DETECTORS	Photodiodes: measurement capability from 300–1,000 nm
WARM-UP TIME	<35 seconds
USB DRIVE	4 GB

Key features of the Qubit 4 Fluorometer include:

- Fast and highly accurate quantitation of DNA, RNA, and protein in less than three seconds per sample
- Measures intact RNA in less than 5 seconds per sample
- High levels of accuracy using only 1–20 µL of sample, even with very dilute samples (<10 pg/µL)
- On-board Reagent Calculator quickly generates Qubit working solution preparation instructions
- Stores results from up to 1000 samples
- Large 5.7-inch, state-of-the-art color touch screen for easy workflow navigation
- Graphical display indicates when samples are in the extended range or out of range
- Flexibility to export data to using the included WiFi dongle, a USB drive, or directly to your computer via a USB cable
- Ability to personalize your Qubit fluorometer with the assays you run most, add new assays, or even create your own assays with the MyQubit software and web tool
- Language of your choice including English,
- Pre-loaded program to test performance of fluorometer using the Qubit Fluorometer Verification Assay Kit