

Nano Spectrophotometer



Year of Purchase – 2017

Cost – Rs. 5.13 Lac

Make: QIAGEN

Model: QIAxpert - Pure Revelation

Detailed Specifications: The salient features/Specifications of the system are as follows:

QIAxpert is an innovative high-speed micro-fluidic UV/VIS spectrophotometer for accelerated DNA, RNA, and Protein quantification and quality control. System with all required accessories with Instrument and Slide.

Instrument Specification

| Specification | Details |
|--------------------------------------|---|
| Type | UV/VIS polychromatic system +reference channel |
| Optical principle | Ultrasensitive photodiode array spectrometer for UV-VIS range |
| Light Source | Xenon flash lamp |
| Wavelength range | 230-750nm |
| Wavelength resolution | <3nm |
| Wavelength accuracy | 0.5nm |
| Wavelength reproducibility | 0.1nm |
| Photometric range | 0.0005-2.0 OD |
| Absorbance precision | 0.003 OD |
| Data output | USB, TCP/IP, or QR code |
| No. of samples/run | 1-16 |
| Sample consumption | 2 μ l |
| Measurement range (10 mm equivalent) | 0.03-40 OD |
| Power supply | 110-240V, 50/60Hz (operating voltage 24 V DC) |
| Size | (W) 23 x (L) 30 x (H) 28 cm |
| Weight | 9 kg |

Slide Specification

| Specification | Details |
|--------------------------------|--------------------------------------|
| Number of measurement cuvettes | 1 x 16 microcuvettes |
| Path length | 0.5 mm |
| Recommended sample quantity | 2 μ l |
| Sample residence time | 2 h |
| Measurement range (OD 10mm) | 0.03 - 40 OD |
| DNA concentration range | 1.5 - 2000 ng / μ l dsDNA (A260) |

Working Principles

The QIAxpert contains all hardware and software to measure DNA, RNA, or protein samples and to save and export experiment data. A single-channel spectrometer reads the UV/VIS absorption spectra. A pump and manifold unit transfer the sample in the micro-fluidic QIAxpert Slide from storage to the microcuvettes, and a mechanical X-Y-Z stage moves the slide inside the instrument. Up to 16 samples can be loaded into a QIAxpert slide at a time to be processed in one run. The minimal read time for a full Slide-40 is approximately 2 minutes. Unused wells can be used at a later time.

The integrated 7 inch (17.8 cm) color touch-screen gives the user access to the QIAxpert software. The software is designed to define and start an experiment in an easy way by protocol selection. After the read, the sample analysis results are displayed on the screen.

QIAxpert Slides are micro-fluidic plastic disposables, allowing fast and reliable quantification of 2 μ l liquid samples. On-board capillary channels preserve the samples after pipetting for up to 2 hours and allow sample preparation away from the QIAxpert.