

# Smart<sup>Q</sup><sup>TM</sup>

Quantitative Fluorometer

## FLUORESCENCE-BASED QUANTIFICATION

DNA, RNA, & PROTEINS

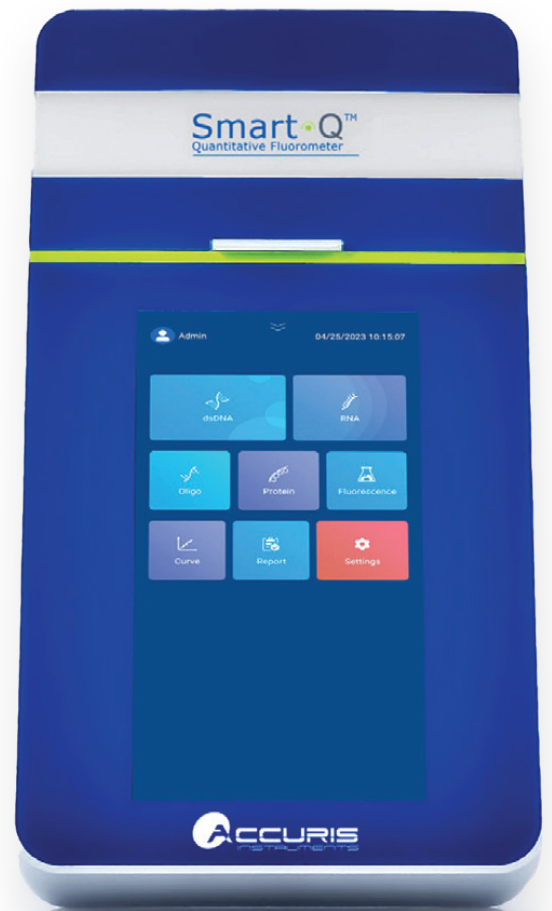


CALCULATE RESULTS  
IN SECONDS



SINGLE OR  
MULTICHANNEL

- Sensitive quantification down to 0.1pg/uL dsDNA
- Large color touch screen for programming & operation
- Two models for single or 8-sample processing
- Built-in reagent calculators for sample preparation
- Compact & portable (11 x 6 in. footprint)





*Icon-Driven Menu*

The Accuris™ Smart-Q™ 100 & Smart-Q™ 800 Fluorometers are designed for the precise quantification of DNA, RNA, and protein samples. By utilizing well-established methodologies for fluorescence detection, the Smart-Q Fluorometers provide higher specificity and enhanced accuracy compared to the traditional method of UV-absorbance detection. Accurate results are particularly crucial in workflows involving:

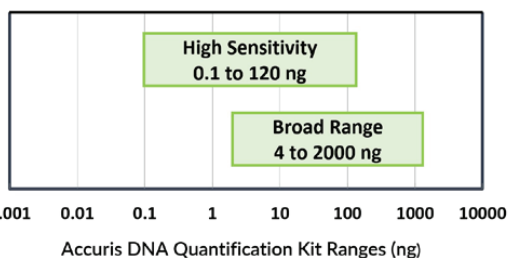
- Next Generation Sequencing
- PCR
- Transfection
- Western blotting
- Immunoassays

The Smart-Q Fluorometers are engineered to achieve optimal performance with Accuris' Fluorescent DNA Quantification Kits and assay tubes; however, they also maintain compatibility with a range of kits offered by various other suppliers.



### Intuitive Usability

Each instrument is equipped with a 7-inch color touchscreen, featuring an intuitive, icon-driven user interface. Preprogrammed protocols allow for quick & effortless assay set-up. Results are quickly calculated and displayed in less than 6 seconds, and saved to the instrument's internal memory. All data can be also be exported easily to a PC using a USB flash drive.

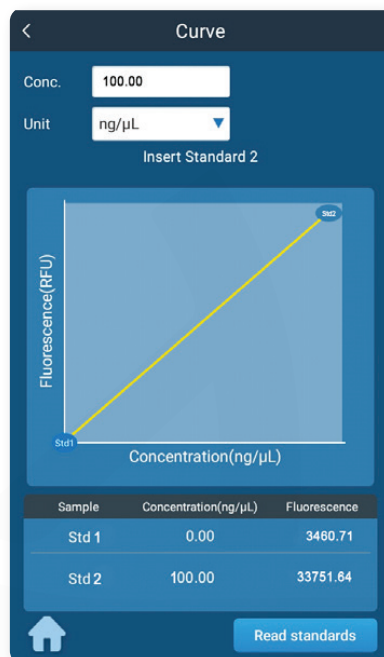


### Accurate Quantification

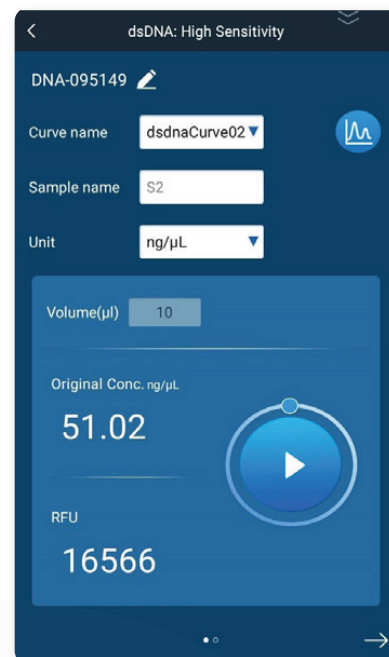
The Smart-Q Fluorometers, along with their accompanying assay kits, are engineered for the precise measurement of fluorescent dye signals that are bound to targeted biological molecules. These specially formulated dyes exhibit selective affinity towards DNA, RNA, or proteins, and generate fluorescent signals exclusively upon binding to their respective targets. Both Smart-Q models include Blue and Red channels that allow for various fluorescent dyes to be used in nucleic acid and protein measurements.

The Smart-Q Fluorometers incorporate advanced curve-fitting algorithms to establish calibration curves from standard samples of known concentrations.

The concentration of an unknown sample, whether it be DNA, RNA, or protein, is determined by correlating its Relative Fluorescence Units (RFUs) with those of the standards employed during calibration. The measurement sensitivity for each type of assay is distinct and defined by its detection limits.



**Smart-Q Calibration Curve**



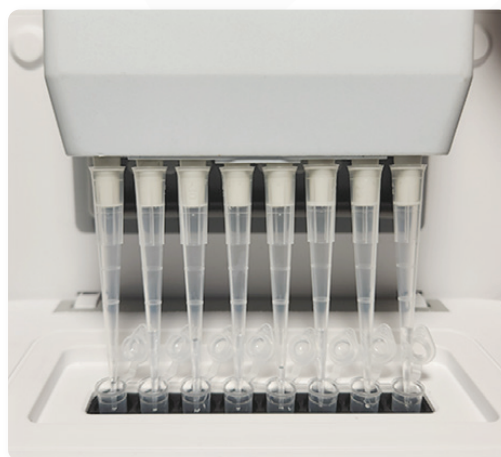
**Smart-Q Calculated Results**

### Options for Throughput

The Smart-Q portfolio includes two distinct models, each designed to meet specific laboratory requirements:

The Smart-Q 100 allows for single-sample processing in 0.5mL assay tubes. This renders the Smart-Q 100 ideal for laboratories processing fewer samples.

The Smart-Q 800 caters to high-throughput workflows and allows for up to eight samples to be evaluated at once using individual 0.2mL tubes or 8 x 0.2mL strips tubes (Order no. F1001-T and F1001-T-8,). The use of a standard 8-channel pipettor can streamline both the reagent preparation and sample transfer, making the Smart-Q 800 an efficient solution for workflows requiring parallel processing of multiple samples.



**Options for Throughput on Smart-Q Series.** The Smart-Q 100 readily accepts 0.5mL optically clear tubes. The Smart-Q 800 can accept either single 0.2mL or 8-tube (0.2mL) strips.

## Specifications

Model	Smart-Q™ 100 Fluorometer (F1001)	Smart-Q™ 800 Fluorometer (F1008)
Display	7.0-inch, color touch screen	7.0-inch, color touch screen
Dynamic Range	5 orders of magnitude	4 orders of magnitude
Light Source	Blue LED	Blue LED
	Red LED	Red LED
Excitation Wavelength	<b>Blue: 460 ± 20nm</b>	<b>Blue: 460 ± 20nm</b>
	<b>Red: 625 ± 20nm</b>	<b>Red: 625 ± 20nm</b>
Emission Wavelength	<b>Green: 525 – 570nm</b>	<b>Green: 525 – 570nm</b>
	<b>Red: 670 – 725nm</b>	<b>Red: 670 – 725nm</b>
Stability	≤ 1.5%	≤ 1.5%
Detector	Photodiodes	Photodiodes
Measurement Speed	≤ 5 seconds	≤ 6 seconds
Calibration type	2–3-point standard	2–3-point standard
Consumable type	0.5mL assay tubes	0.2mL assay tubes (single and 8-tube strip)
Input Voltage	24 VDC 2A	24 VDC 2A
Dimensions (WxDxH)	16.1 x 28.7 x 6.1cm / 6.34 x 11.30 x 2.40in.	16.1 x 28.7 x 7.6 cm / 6.3 x 11.3 x 3.0 in.
Weight	1.6kg / 3.5lbs	2.0kg / 4.4lbs

## Ordering Information

Item No.	Description
<b>F1001*</b>	Accuris™ Smart-Q™ 100 Fluorometer, 115V
<b>F1008*</b>	Accuris™ Smart-Q™ 800 Fluorometer, 115V
<b>F1000-HS-100**</b>	High Sensitivity dsDNA Quantification Kit, 100 assays
<b>F1000-BR-100**</b>	Broad Range dsDNA Quantification Kit, 100 assays
<b>F1001-T</b>	0.5mL Fluorescence Detection Tubes, pack of 250
<b>F1008-T</b>	Smart-Q™ 800 Assay Tubes, pack of 1000
<b>F1008-T-8</b>	Smart-Q™ 800 Assay Tube Strips, pack of 120

\* Use part number "-E" to indicate 240V input and specify required plug type

\*\* Bulk volumes available upon request