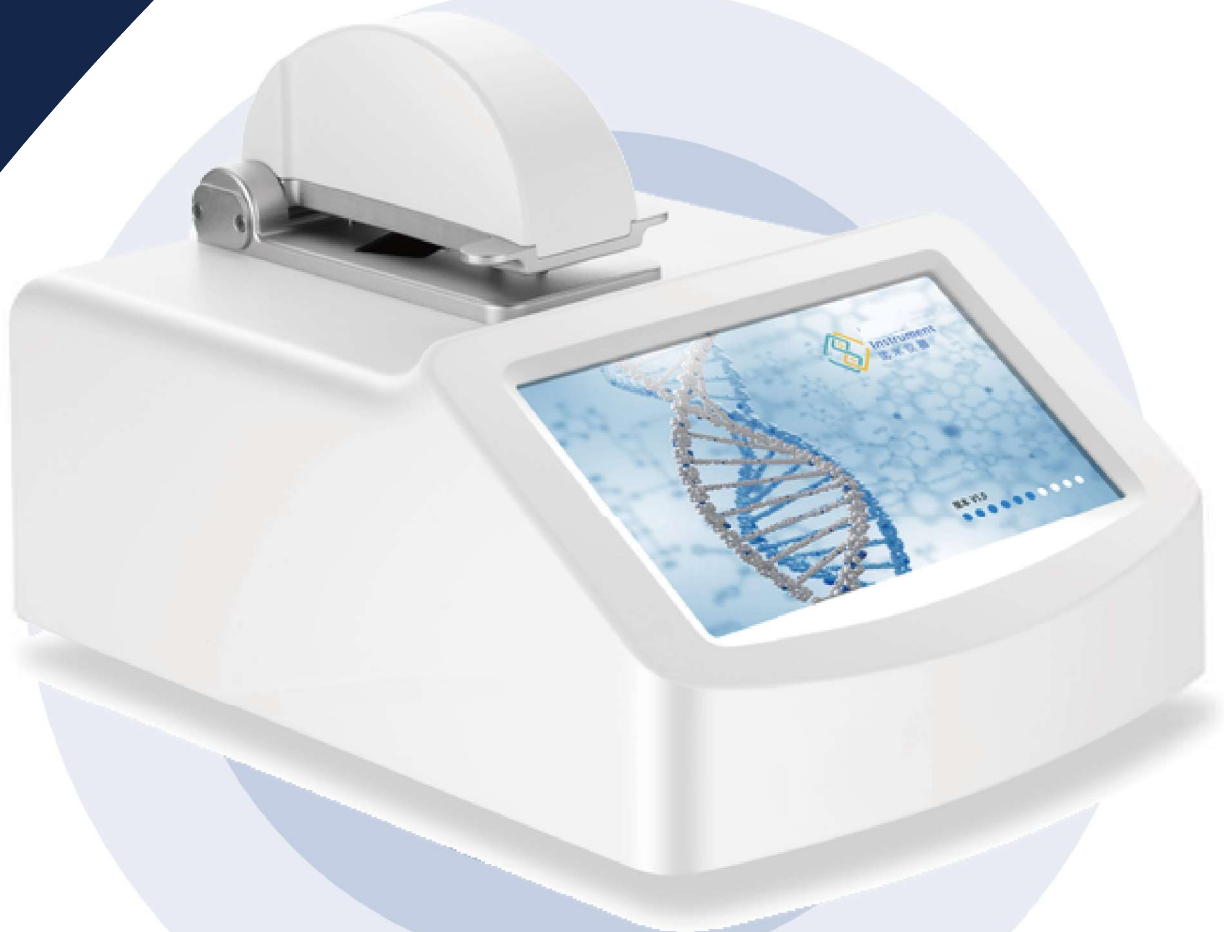


# Microvolume Spectrophotometer



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## Introduction

Micro-volume spectrophotometer is a high-reproducibility full-wavelength spectrophotometer, which adopts two detection modes of base and cuvette. It can quickly and accurately detect nucleic acids, proteins and cell solutions. And the sample detection concentration range is large, and the operation is simple. It can not only be used to measure the purity and concentration of DNA, RNA, and protein concentration, but also can be used for absorbance detection in general substance analysis.

## Features

### User-friendly operation

7-inch high-definition capacitive touch screen, no need for computer connection, stand-alone detection; the results can be directly exported and printed, which is convenient for user data management.

### Trace detection

Only 0.5uL-2uL sample is needed for each detection. Samples can also be recovered after measurement, allowing you to study precious samples with confidence.

### Fast detection

There is no need to dilute during the detection process, the trace sample is added directly, no other consumables are needed, and the detection can be completed in about 6 seconds.

### Long-life light source, no need to warm up when starting up

Xenon flash lamp with a lifespan of up to 1 billion times (up to 10 years). There is no need to warm up when starting up, and it can be detected directly.



## High concentration detection range

The highest detectable sample concentration is 15000ng/μL, and the sample does not need to be diluted.

## Easy to use

Drop the sample directly on the sample stage without dilution or other consumables, and the measurable sample concentration is 300 times than conventional spectrophotometer

Detection arm closure can be automatically detected, simplifying operation

## Fluorometer mode

For samples with a concentration lower than 2ng/uL, the fluorometer mode can be selected, and the lowest detection limit can reach 0.5pg/uL.

Compatible with common commercial fluorescent quantitative reagents, providing users with the greatest convenience and the lowest detection cost

## Various models

Nano-1000/Nano-1000F is a full-wavelength micro-spectrophotometer, and

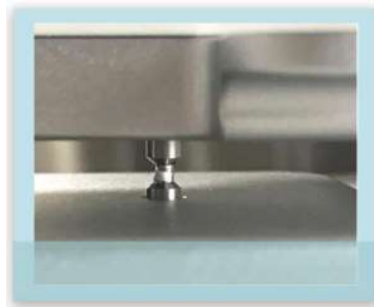
## Application Scope

Nucleic acid detection	dsDNA, ssDNA, RNA, OligoDNA, OligoRNA
A280nm protein detection	A280, BSA, IgG, Lysozyme, Other extinction coefficients
Colorimetry 562nm	BCA 595nm, Bradford 650nm, Lowry
Bacteria detection	OD600

## Simple Operation



Loading



Detecting



Cleaning



Nano-1000/Nano-1000F is a full wavelength (190~850nm) micro spectrophotometer. It can quickly and accurately detect the concentration of samples such as nucleic acid and protein. It has the characteristics of convenient use, less sample consumption (only 0.5-2 $\mu$ L), no preheating, no other consumables, easy cleaning of residual samples, and no need to dilute samples, etc. It has become the preferred routine instrument for many laboratories. 1000F has the function of fluorescence detection, and can accurately quantify the concentration of DNA, RNA and protein through the specific combination of fluorescent dyes and target substances, and the detection limit can reach 0.5pg/ $\mu$ L (dsDNA).

## Fluorescence Detection Mode

Light source	Monochrome LED
Dynamic Range	Five orders of magnitude
Linearity	R <sup>2</sup> ≥0.995
Detector	Photodiode
Repeatability	≤1.5%
Stability	≤1.5%
Sensitivity	dsDNA:0.5pg/ul
Speed	3 seconds



## Channel, Kit & Application

Channel	Excitation	Kit	Application
Blue (standard)	460±20nm	PicoGreen, oligreen RiboGreen R, GFP Protein, Fluorescein	dsDNA, ssDNA, green fluorescent protein GFP, gene detection, fluorescein detection, protein quanti
Uv (optional)	365±20nm	Hoechst 33258, 4-MU EnZCheK Caspase	Nucleic acid quantification, Plant GUS reporter gene detection
Green (optional)	525±20nm	Rhodamine, Cy3 RFP Vybrant Cytotoxicity	Rhodamine detection, Cy-3 label Red fluorescent protein RFP gene
Red (optional)	625±20nm	Cy5, Quant-iT RNA	Cy-5 fluorescent labeling detection, RNA quantification

## Product Finder

Model	Nano-1000	Nano-1000F	Nano-2000	Nano-2000F
Wavelength range	190~850nm	190~850nm	260nm,280nm	260nm,280nm
Nucleic acid dsDNA(ng/ul)	2~15000	2~15000	10~15000	10~15000
A280 Protein BSA(mg/ml)	0.1~400	0.1~400	0.3~400	0.3~400
Colorimetric assays	✓	✓		
Full-wavelength scan	✓	✓		
OD600	✓	✓	✓	✓
Fluorometer		✓		✓
Touch screen	✓	✓	✓	✓
Auto-blank/measure	✓	✓	✓	✓
Built-in printer	✓	✓	✓	✓

## Specifications

Model	Nano-1000	Nano-1000F
Wavelength range	190~850nm	190~850nm
Sample volume	0.5~2ul	0.5~2ul
Path length	0.05mm, 0.2mm, 1.0mm, auto-ranging	
Light source/Life span	Xenon Flash/10 <sup>9</sup> times	Xenon Flash/10 <sup>9</sup> times
Detector type	2048-element Linear CCD Array	
Spectral bandwidth	2nm	2nm
Display	7 inch touch screen	7 inch touch screen
Absorbance precision	0.003Abs	0.003Abs
Absorbance accuracy	±1%(7.332Abs at 260nm)	±1%(7.332Abs at 260nm)
Absorbance range	0.04-300A (10mm equivalent)	0.04-300A (10mm equivalent)
Nucleic acid range	2ng/ul~15000ng/ul dsDNA	2ng/ul~15000ng/ul dsDNA
Measurement time	6 sec	6 sec
Auto-calibration	Yes	Yes
OD600 Absor. range	0~4.000 Abs	0~4.000 Abs
OD600 Absor. stability	[0,3) ≤0.5%, [3,4) ≤1%	[0,3) ≤0.5%, [3,4) ≤1%
OD600 Absor. Repeatability	[0,3) ≤0.5%, [3,4) ≤1%	[0,3) ≤0.5%, [3,4) ≤1%
OD600 Absor. accuracy	[0,3) ≤0.005A+1%, [3,4) ≤2%	[0,3) ≤0.005A+1%, [3,4) ≤2%
Fluorescence measurement	/	Excitation wavelength:470nm Emission wavelength:525nm
Fluorescence linearity	/	R2>0.995

## Specifications

Model	Nano-2000	Nano-2000F
Wavelength range	260nm,280nm,365nm	260nm,280nm,365nm
Sample volume	0.5~2ul	0.5~2ul
Path length	0.2mm, 1.0mm	0.2mm, 1.0mm
Light source/Life span	UV LED/8000h	UV LED/8000h
Detector type	Ultraviolet silicon photocell	Ultraviolet silicon photocell
Spectral bandwidth	8nm	8nm
Display	7 inch touch screen	7 inch touch screen
Absorbance precision	0.005Abs	0.005Abs
Absorbance accuracy	±5ng or 2%	±5ng or 2%
Absorbance range	0.2-100 (10mm equivalent)	0.2-100 (10mm equivalent)
Nucleic acid range	5ng/ul~5000ng/ul dsDNA	5ng/ul~5000ng/ul dsDNA
Measurement time	6 sec	6 sec
Auto-calibration	Yes	Yes
OD600 Absor. range	0~4.000 Abs	0~4.000 Abs
OD600 Absor. stability	[0,3) ≤0.5%, [3,4) ≤1%	[0,3) ≤0.5%, [3,4) ≤1%
OD600 Absor. Repeatability	[0,3) ≤0.5%, [3,4) ≤1%	[0,3) ≤0.5%, [3,4) ≤1%
OD600 Absor. accuracy	[0,3) ≤0.005A+1%, [3,4) ≤2%	[0,3) ≤0.005A+1%, [3,4) ≤2%
Fluorescence measurement	/	Excitation wavelength:470nm Emission wavelength:525nm
Fluorescence linearity	/	R2>0.995

**Shanghai Unicorn Medical Technology Co., Ltd.**

Room J, Building 4, B Zone, No. 925 Yecheng Road, Jiading Industrial Area, Shanghai

Tel: +86 (021) 6082 8473 Cel: +86 17317108636 Email: [info@unicornlifescience.com](mailto:info@unicornlifescience.com)

**[www.unicornlifescience.com](http://www.unicornlifescience.com)**

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