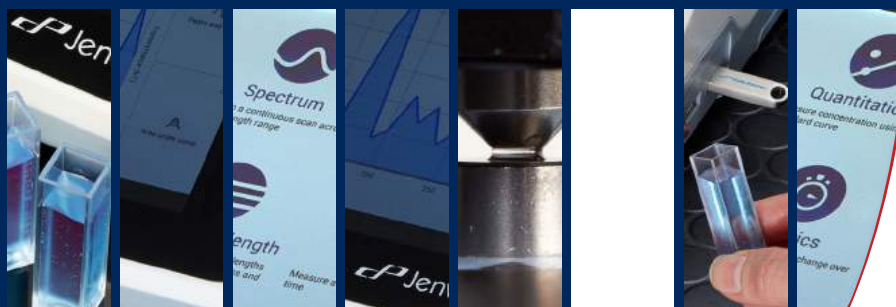




7415 Nano

Micro-volume Spectrophotometer

This spectrophotometer is dedicated to life science analysis. It is fitted with a micro-volume accessory enabling micro-volume samples to be pipetted directly onto the read head, removing the need for cuvettes and conserving precious samples. The perfect analysis tool to measure the purity and concentration of biological samples.



Introducing the 7415 Nano

The 7415 Nano measures small sample volumes as low as 0.5µl with a high degree of accuracy, reproducibility and speed. Its ability to measure small sample volumes, reduces the need for dilutions and eliminates the requirement for cuvettes. Cleaning is quick and simple; wiping the read heads with a microfibre cloth removes all trace of the sample, allowing faster change over between samples, therefore increasing sample throughput.

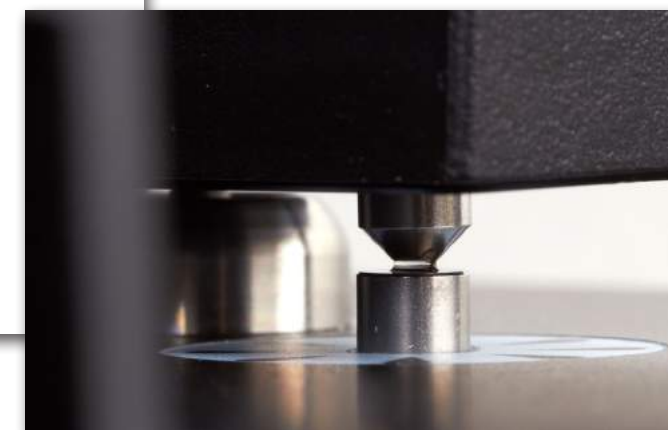
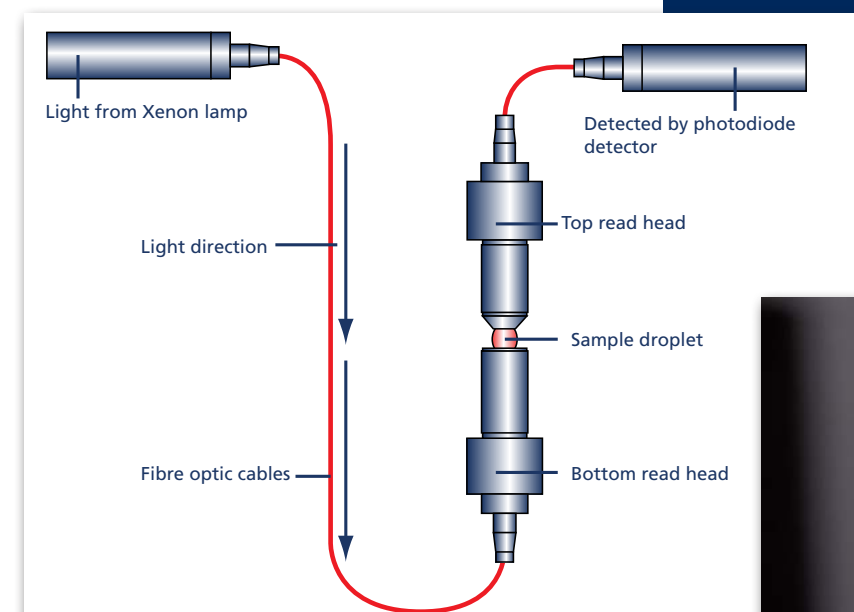
Key Features

- Android operating system
- Only 0.5µl sample volume required
- 7" High Definition colour touchscreen display
- Ideal for DNA, RNA and Protein measurements
- Purity scan over entire wavelength range, 198 to 1000nm
- Quick and easy to clean
- Detects DNA concentrations as low as 2ng/µl
- Multiple USB ports for data storage & printer connectivity
- Multi-language options including English, French, German, Spanish and Italian
- Internal memory for methods & results (10GB onboard storage)
- 3 year warranty including Xenon lamp



Micro-volume Spectroscopy

The 7415 Nano is fitted with a micro-volume accessory which allows samples as small as 0.5µl to be pipetted directly onto the read head, removing the need for cuvettes and conserving precious samples. This makes it ideal for nucleic acid researchers where sample availability may be limited; the perfect analysis tool to measure the purity and concentration of biological samples.



Measurement Modes

To make sample measurement even easier the 7415 Nano spectrophotometer is pre-programmed with methods for the measurement of nucleic acid concentrations and purity and protein assays.

Nucleic Acid Determination Mode

The 7415 Nano is pre-programmed with methods for the measurement of ssDNA, dsDNA, RNA and oligonucleotide concentrations using wavelengths recorded at 260, 280 and 230nm, with an optional correction at 320nm. This measurement mode has the 260/280 and 260/230 ratios pre-programmed as well as a variable ratio option which enables up to 3 wavelengths to be entered as well as the correction wavelength.

Protein Assay Determination Mode

For measuring protein concentrations, the 7415 Nano is pre-programmed with methods for Bradford, Lowry, Biuret, Bicinchoninic Acid (BCA) and Direct UV assays. This measurement mode allows up to 20 standards,

with 5 replicates of each standard, to be measured to create the standard curve. The replicate measurements can be set to automatically perform 3 readings one after the other on the same sample; or the replicates can be set to enable one measurement to be performed on three separate samples of the same concentration.

Purity Scan Measurement Mode

This measurement mode is used to check the purity of nucleic acids. This is especially useful for RNA samples where impurities may be present at 230nm but cannot be detected using the 260/280 ratio measurement. The 7415 Nano enables scanning across the full wavelength range from 198 to 1000nm to identify any distorted peaks.

Interface Design

The 74 series spectrophotometers have a custom designed user interface which is based on an Android platform, making it easy to navigate and control the instrument. The home screen gives quick access to the different measurement modes as well as shortcuts to favourites and previously saved methods and results.

Read Head

Simply pipetting directly onto the read head makes sample measurement, quicker and requires much less effort, eliminating the need for both sample dilutions and cuvettes. The stainless steel read head which consists of a chemically inert embedded quartz lens, utilises the natural surface tension of the droplet to form the bond between the read head surfaces. After measurement the sample can be easily removed by pipetting or wiping away with a micro-fibre cloth.

Enhanced Connectivity

The 7415 Nano has been designed with excellent connectivity in mind. The easy access USB ports on the front of the instrument can be used for software updates, data storage and printer connectivity. Results and methods can be stored as CSV files for easy transfer to Microsoft Excel®. With the optional CPLive connectivity results can be automatically uploaded and stored effortlessly and securely in the cloud.



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Ordering Information

Product Code	Description
747 501	7415 Nano spectrophotometer fitted with micro-volume accessory, supplied with universal power supply, calibration standards and certificate and instruction manual
035 092	DNACON Solution, calibration standard for the Nano micro-volume spectrophotometer, the matrix and blank are in 1.5ml vials
SMP50/PRINTER	External Printer fitted with a battery and supplied with UK, EU and US power leads
037 702	Extra paper for internal printer
019 146	4GB USB memory stick

Technical Specification

Wavelength	
Wavelength Range	198 to 1000nm
Wavelength Accuracy	±2nm
Spectral Bandwidth	5nm
Path Length	0.2 or 0.5mm (auto-ranging)
Photometrics	
Absorbance Range	15 to 125A (10mm equivalent)
Absorbance Accuracy	±2% at 260nm
Absorbance Precision	<0.005A between 0 and 1A (at 260nm and 0.5mm)
Concentration/Quantitation	
Maximum Concentration	6,000 ng/μl (dsDNA) (at 0.2mm)
Detection Limit	2ng/μl (dsDNA) (at 0.5mm)
Measurement Time	<6.5 seconds
Minimum Sample Size	0.5μl (at 0.2mm) 1.0μl (at 0.5mm)
Maximum Sample Size	5μl
DNA measurement modes	dsDNA, ssDNA, RNA, Oligonucleotides, 260/280, 260/230, Variable ratio
Protein measurement modes	BCA, Bradford, Lowry, Biuret, Direct UV
Other	
Sample Pedestal Material	Quartz stainless steel
Light Source	Press to read Xenon lamp
Size (w x d x h), mm	280 x 500 x 156mm
Weight, kg	9.0
Outputs	USB Type A x 2, USB Type B x 1, Ethernet connection (RJ45)
Supply Voltage/Frequency	100 - 240VAC at 50 to 60Hz
Power Supply	24V DC, 2.5A
Warranty	3 years (including xenon lamp)



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