Supelco®
Analytical Products

Technical Data Sheet

Spectroquant® Prove Spectrophotometer 600 plus

1.73028

Version 1.0 – 01/2024

MERCK

1.73028.0001 - Spectroquant® Prove 600 plus	
Measuring technology	Spectrophotometer with reference beam technology
Wavelength range	190 – 1,100 nm
Lamp type	Xenon flash lamp
Measuring modes	Concentration, absorbance, transmission, multi wavelengths, spectra and kinetics in absorbance and transmission mode
Spectral bandwidth	1.8 nm
Toluene/hexane ratio	> 1.4 – the correlation of spectral bandwidth to resolution for a toluene in hexane solution standard measured at ambient temperature 25 °C
Wavelength resolution	1 nm (scan 0.1 nm)
Wavelength reproducibility	± 0.1 nm
Wavelength accuracy	± 1 nm
Stray light	≤ 0.1% transmission at 340 nm; ≤ 1% transmission at 198 nm
Photometric range	± 3.3 Abs
Absorbance resolution	0.001 Abs
Absorbance reproducibility	± 0.003 absorbance at 1 absorbance between 200 nm and 900 nm
Absorbance accuracy	at 230 – 900 nm 1 absorbance: ± 0.004 absorbance 2 absorbance: ± 0.004 absorbance 2.5 absorbance: ± 0.006 absorbance
Scan	Limits freely selectable within the wavelength range Increment: 0.1/1/5 nm Scan speed: up to 750 nm/min (depending on the increment)
Smart Screen Display	Display p-cap glass touch screen
Live ID barcode	Automatic 2-D barcode reading system for all Spectroquant® cell and reagent tests Barcode contains lot, expiry, and calibration data. Data stored with each measurement
Cell size	16 mm round cells, 10, 20, 50 and 100 mm rectangular cells with automatic recognition
Minimum filling volumes	16-mm round cells: 4 ml 10-mm rectangular cells (Standard): 2 ml (Semimicro): 1 ml 20-mm rectangular cells (Standard): 4 ml (Semimicro): 2 ml 50-mm rectangular cells (Standard): 8 ml 100-mm (Semimicro): 4 ml rectangular cells (Standard): 16 ml
Cell holder	Removable for easy cleaning
Methods	Programmed methods of all Spectroquant® cell and reagent tests, additional user-defined methods: 99 concentration mode, 20 kinetic mode, 20 wavelength scans
Applications	Free pre-programmed applications: bromate, brewery packages (MEBAK/EBC methods), sugar (ICUMSA), oil (DOBI, olive oil)
Ambient light protection	Measurement with open shaft possible due to proprietary solution (patent pending)
AQA prime	Individual settings for all methods in AQA1 mode: instrument check using PhotoCheck and/or Certipur® standards AQA2 mode: system check using CombiCheck or standard solutions
Monitoring functions	Instrument-supported pipette check and sample matrix check
Ad hoc measurement	Direct access to absorbance/transmission, kinetic and spectrum measurement
Software and method update	Free updates on our website (www.sigmaaldrich.com/photometer-service) via internet and USB stick
Communication interfaces	USB: 2 × USB-A (for printer, USB memory devices, keyboard or bar code reader), 1 × USB-mini-B Ethernet: LAN connection
Data storage	7,000 single measured values from the measuring modes concentration, absorbance/% transmission and multi wavelengths. 500 measurement result records of spectra, kinetics, AQA1, and AQA2 methods each
Languages	English, German, Spanish, French, Italian, Brazilian-Portuguese, Chinese (simplified and traditional), Japanese, Russian, Bulgarian, Czech, Danish, Dutch, Greek, Hungarian, Indonesian, Malay, Macedonian, Norwegian, Polish, Romanian, Serbian, Slovene, Swedish, Thai, Turkish, Vietnamese, Korean
Protection class	IP 31 for optics and electronics
Power supply	Power supply with 4 cables (1.2 m long) fitting US, EU, UK, and China plugs Total cable length 3 m (1.8 and 1.2 m)
Power requirements	100 V – 230 V, 50 – 60 Hz
Power consumption	Standard working condition: 12 W; power save mode: 8.6 W In regular measurement state: 46.5 W
Temperature	Operation: 10 – 35 °C; storage: -20 °C to +60 °C for 24 hours
Allowable relative humidity	Operation: 20 – 80% rH, storage in ambient relative humidity conditions of 20% to 95% Non-condensing
Dimensions	418 × 278 × 169 mm (width × depth × height)
Weight	approx. 6.8 kg
Warranty	24 months
EMC	Directive 2014/30/EU, EN IEC 61326-1:2021, IEC 61326-1:2020
Instrument safety	Directive 2014/35/EU, IEC 61010-1:2010/AMD1:2016, EN 61010-1:2010/A1:2019, UL 61010-1:2012/R:2019-07, CSA C22.2 No. 61010-1:2012/A1:2018-11

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