PCS® Specifications

SYSTEM PERFORMANCE

Time Requirements	10 data points < 3 minutes
Volume Range	0.1 µL to 5000 µL
Uncertainty (Inaccuracy)	0.6%
Random Error (Imprecision)	0.3%

PERFORMANCE SPECIFICATION DEFINITIONS

When collecting calibration, verification, or operator assessment data with the Artel PCS, each data point will be within the stated PCS inaccuracy specification at a statistical confidence of 95% or better.

1. When verifying the imprecision performance specification of the PCS, the liquid delivery apparatus used to dispense into the PCS Blank vial must be capable of repeatable volume delivery with a random error variability at least 3 times smaller than the PCS imprecision specification.
2. When verifying the inaccuracy performance specification of the PCS, the liquid delivery apparatus used to dispense into the PCS Blank vial must have a demonstrated uncertainty (expanded uncertainty at k=2) at least 3 times smaller than the PCS inaccuracy specification.
3. The number of dispenses in a single Blank vial, or in a collection of multiple Blank vials, showing results outside of the PCS inaccuracy specification will be less than 5% of the total dispenses measured.
4. The probability that a vial dispensed in this way will show a random error greater than the imprecision specification is less than 5% or one vial in 20.

ARTEL PCS INSTRUMENT

Size	(W x L x H): 22.4 cm x 33.0 cm x 14.7 cm (8.8" x 13.0" x 5.8")
Weight	5.7 kg (12.5 lbs.)
COM port	USB
Built in scanner	Reads 2D reagent barcodes
Operational Ambient Specifications	Temperature: 15 °C to 30 °C
	Relative Humidity: 10% to 90%, non-condensing
Wavelength selection	520 nm and 730 nm
Electrical Power Requirements	Voltage: 90 – 260 VAC Frequency: 50 – 60 Hz Current: 2 A maximum
Warranty	1 year

PCS COMPUTER (minimum requirements)

Processor	x64 Processor: 1.4 GHz
Memory	4 GB
I/O Ports	2 USB Connectors
Storage	40 GB of hard drive space
Operating Systems	Windows® 10
SQL Server	2017, 2016, 2014 and 2019 in Express, Standard, and Enterprise Editions

ARTEL®
trust your results

PCS SOFTWARE

- Provides comprehensive reporting, including audit trail and printing of calibration labels.
- Allows scheduling of operator competency assessments.
- Intuitive dashboard provides immediate overview of due calibrations and operator assessments.
- Offers digital review and approval workflow.
- Compact and portable design enables use in any laboratory.
- Performs to the same tight specifications under various laboratory conditions; no special environmental controls required.
- 21 CFR Part 11 compliance ready.
- Complies with regulatory requirements (CAP, CLIA, ISO, CLSI).
- Generates results traceable to national (NIST) and international standards (SI units).

PCS QualAssure KITS	STANDARD	BULK
Blank Vials	12	50
QualAssure Solutions	One each, QualAssure 1, 2, 3, 4	Customizable*
Transfer pipettes	12 included	sold separately
Aliquot containers	12 included	sold separately

Data Points	up to 40 data points per blank vial
Calibration Standard	1 solution – not consumed during use
Shelf Life	Minimum of 9 months at 15 °C to 25 °C
Storage	Store at room temperature 15 °C to 25 °C and with minimal exposure to ambient light.

Based on lab's total number of pipettes, sample volume, data points, and calibration frequency, a customized kit will be configured to contain the appropriate number of sample solutions.

PCS QualAssure SOLUTIONS	PART #	VOLUME RANGE (µL)
QualAssure 1	PCS-221	$\geq 200\ \mu L - \leq 5000\ \mu L$
QualAssure 2	PCS-222	$\geq 50\ \mu L\ - < 200\ \mu L$
QualAssure 3	PCS-223	$\geq 10\ \mu L\ - < 50\ \mu L$
QualAssure 4	PCS-224	$\geq 2\ \mu L\ - < 10\ \mu L$
QualAssure 5	PCS-225	$\geq 0.5\ \mu L\ - < 2\ \mu L$
QualAssure 6	PCS-226	$\geq 0.1\ \mu L\ - < 0.5\ \mu L$

PCS INSTRUMENT CALIBRATOR KIT

Vials	4 solutions – not consumed during use
Shelf Life	Minimum of 9 months at 15 °C to 25 °C
Use	Use monthly to check instrument performance
Storage	Store at room temperature 15 °C to 25 °C and with minimal exposure to ambient light.

PATENTS

The PCS and its components are covered by patents listed at **artel.co/patents**.

artel.co/PCS

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