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PCS® Standard/Bulk Kit Certificate PCS-606

Serial Number:	005323	Customer:	Artel	Issue Date:	22 May 2020
Lot Code:	54535	Address:	25 Bradley Drive	Condition:	New
Certificate #:	20-01067		Westbrook, ME 04092 USA	Expiration:	Feb 2021

Description of Item Tested:
The PCS Pipette Calibration System uses dual-dye, dual-wavelength, ratiometric photometry to determine the delivered volume of a pipette. The PCS Bulk Kit consists of a CAL A vial used to zero the PCS Instrument, 50 Blank Reagent Vials prefilled with Blank Reagent, and Sample Solutions customized to meet the requirements for measuring the liquid deliveries requested by the customer. The PCS Standard Kit consists of a CAL A vial, 12 Blank Reagent Vials, and Range 1-4 Sample Solutions.

Traceability: These test methods have been accredited to ISO/IEC 17025, A2LA Certificate #2093-01.

Test Method Document Numbers: 310A3279 and 310A4512
Reagent Accuracy testing of Sample Solutions and Blank Vial Volume testing of the Blank Solution are performed using a Mettler microanalytical balance, Serial Number 1123303108, ASN 01975, a Sartorius microanalytical balance, Serial Number 38301995, ASN 02704 and/or a Sartorius analytical balance, Serial Number 27603179, ASN 02307 or Serial Number 36301158, ASN 02600. The balances are calibrated yearly using weights traceable to the International System of Units (SI). The performance of each balance is verified daily using weights traceable to the International Systems of Units (SI) through Certified Reference Materials OIML R111 Class E2 Troemner Weight Set, Serial Number 68502, ASN 01279 calibration due on 31 Jan 2021, or Serial Number 68[illegible]8, ASN [illegible]1974 calibration due on 30 Sep 2021.

Solution Test	Lot #	Tolerance	Test Date	Result		Uncertainty (k=2)	Status
Range 1 Accuracy	R10309201	± 0.10%	12Mar2020	+0.01	%	±0.036 %	Pass
Range 2 Accuracy	R20310201	± 0.10%	11Mar2020	+0.06	%	±0.035 %	Pass
Range 3 Accuracy	R30227201	± 0.10%	[illegible]Mar2020	+0.04	%	±0.033 %	Pass
Range 4 Accuracy	R40205201	± 0.10%	13Feb2020	-0.04	%	±0.034 %	Pass
Range 5 Accuracy	R50316201	[illegible]20%	18Mar2020	+0.02	%	±0.047 %	Pass
Range 6 Accuracy	N/A	[illegible]25%	N/A	N/A	%	±0.14 %	N/A
Blank Vial Mixed	B11227197	4766.00 ± 2.50 µL	09Apr2020	4765.10	µL	±0.60 µL	Pass

These results relate only to the Kit identified in this report. Sample solution results are reported as percent deviation (Method 310A3279 – PCS volume vs. Gravimetric volume). Blank solution results are reported as average temperature corrected mixed volume (Method 310A4512 – Blank Vial Volume). Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of $k = 2$. The A2LA symbol does not imply certification/approval of the products, but rather accreditation of the competency of the Artel Laboratory to perform this testing. This certificate shall not be reproduced except in full, without written approval of the Artel Laboratory.

Authorized by: Kristi Cande Date: 22 May 2020
Technical Manager or designee: Kristi Cande

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