

MVS® Calibrator Plate Calibration Certificate

Calibration Number: strTestNum Customer: strCustomerName Issue Date: 25 Jul 2018
 Test Type: strTestType Address: strAddress1 Test Date: strTestDate
 Serial Number: strSerialNum strAddress2 Expiration Date: strExpDate
 strAddress3
 strAddress4

strStatement

Description of Item Calibrated:

The MVS Calibrator Plate is used to ensure the performance of each MVS system. The Calibrator Plate is an absorbance standard that contains sealed cuvettes and a neutral density glass filter. The absorbance of each of these components is measured at 520.2 nm and 730.5 nm. The cuvette absorbance readings are corrected to a reference temperature of 25°C. The Neutral Density filter corrected values are temperature corrected absorbance values normalized to the Neutral Density Glass absorbance.

Traceability:

Calibration is performed on a Cary UV/VIS Spectrophotometer, Serial Number EL05073629 or MY16020009. These instruments are calibrated monthly using standards traceable to the International System of Units (SI) through the National Physical Laboratory, UKAS No. 0478, Certified Reference Material: RM-IN2N5N Serial Number 7308 calibration due on 07 Sep 2021, RM-IN2N3N Serial Number 7232 calibration due on 07 Sep 2021, and RM-DID39N Serial Number 8984 calibration due on 07 Sep 2021.

Calibration Method Document Number: 310A4004

This calibration method has been accredited to ISO/IEC 17025, A2LA Certificate #2093-03.

The measured values reported below are embedded in the barcode on the Calibrator Plate.

Sample	Absorbance (A) @ 520.2 nm median reading, n=3 Temp corrected 25°C	Uncertainty K=2	Absorbance (A) @ 730.5 nm median reading, n=3 Temp corrected 25°C	Uncertainty K=2
	Neutral Density Filter	strND520	0.0026	strND730
Cuvette 1	str1520A	0.0013	str1730A	0.0013
Cuvette 2	str2520A	str2520KA	str2730A	str2730KA
Cuvette 3	str3520A	str3520KA	str3730A	str3730KA
Cuvette 4	str4520A	str4520KA	str4730A	str4730KA
Cuvette 5	str5520A	str5520KA	str5730A	str5730KA



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The values reported below are Neutral Density Filter corrected and are reported on the Data Manager MVS System Calibration Report.

Sample	Absorbance (A)	Uncertainty	Absorbance (A)	Uncertainty
	@ 520.2 nm median reading, n=3 ND corrected Temp corrected 25°C	K=2	@ 730.5 nm median reading, n=3 ND corrected Temp corrected 25°C	K=2
Cuvette 1	str1520	0.0012	str1730	0.0015
Cuvette 2	str2520	str2520K	str2730	str2730K
Cuvette 3	str3520	str3520K	str3730	str3730K
Cuvette 4	str4520	str4520K	str4730	str4730K
Cuvette 5	str5520	str5520K	str5730	str5730K

These results relate only to the MVS Calibrator Plate identified in this report.

Uncertainty:

Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of $k=2$.

Additional Information:

The MVS Calibrator Plate is used to normalize the absorbance measurements made by the MVS Plate Reader to correlate with those made by a reference spectrophotometer. The Data Manager software obtains critical information from the barcode concerning the absorbance standards used in the Calibrator Plate, then compares and adjusts the readings of the Plate Reader accordingly. StrPassState1

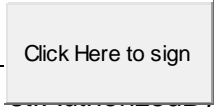
The contents of the MVS Calibrator Plate are subject to degradation with time, extreme temperature changes, and prolonged exposure to light. The plate should be stored in darkness in its case at room temperature (15°C to 30°C) between uses to ensure the shelf life. Prior to use, the MVS Calibrator Plate should be thermally equilibrated to room temperature. Handle the MVS Calibrator Plate with extreme care, and adhere to the cleaning procedures described in the MVS Procedure Guide.

The A2LA symbol does not imply certification/approval of the products, but rather accreditation of the competency of the Artel Laboratory to perform this calibration. This calibration certificate shall not be reproduced except in full, without written approval of the Artel Laboratory.

The MVS Calibrator Plate is covered by patents listed at <http://www.artel-usa.com/patents.aspx>.

Performed by: _____ PerformedBySig
 Technician: _____ strPerformedBy

Date: strPBDate

Authorized by: _____
 Technical Manager: _____ 

Date: strAuthDate