

# Calibration Certificate

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## SECTION 1: NAME AND ADDRESS OF CUSTOMER

VWR International  
100 Matsonford Road  
Radnor, PA 19087

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**Pipette Gravimetric**

Certificate Number: 559060867

Date of Calibration: 28-OCT-2015

## SECTION 2: APPROVED SIGNATORY

Steven Armstrong

## SECTION 3: PERSON PERFORMING WORK

Leila Smith

## SECTION 4: CERTIFICATE INFORMATION

Description of Pipette: VWR UHP VE100- 1000UL  
Manufacturer of Pipette: VWR

Order Number : 198273645  
Serial Number : 559060867  
Balance Used : AX205  
Work Order Number : 00860525

Date Received : 27-OCT-2015  
Date of Calibration : 28-OCT-2015  
Date of Issue : 28-OCT-2015

## SECTION 5: ENVIRONMENTAL CONDITIONS DURING TEST

Temperature: 21.30 °C  
Air Density: 0.001192 g/cm<sup>3</sup>

Pressure: 758.49 mm Hg

Humidity: 45.00 %  
Z-Factor: 1.003014

## SECTION 6: PERTINENT INFORMATION

The Pipettes listed on this calibration report have been tested on balances calibrated with reference mass standards that are directly traceable to the National Institute of Standards and Technology under Test No. 822/822-275872-11.

This calibration meets specifications as outlined in DIN 12650, ISO 8655, ASTM E1154, ISO 9001, ISO/IEC 17025.

The uncertainty is the error in volume due to the measurement process. Uncertainty is calculated per NIST Technical Note 1297 using coverage factor of  $k = 2$  ( $k=2$  defines an interval having a level of confidence of approximately 95 percent) The uncertainty associated with the measurement is not included in determining inaccuracy Pass/Fail Results.

Equipment used to monitor the environmental conditions in the certification laboratory have been compared with standards that are directly traceable to the National Institute of Standards and Technology (NIST).

The density of water is traceable to the SI units through the Jones/Harris Equation (1992, ITS-90)