

# CERTIFICATE OF CALIBRATION



**1001069146**

Certification Number

Gage ID	7514	Manufacturer	BUBBLE-O-METER, LLC
Type	BUBBLE-O-METER/GAS FLOW METER 1-10-500	Model	1-10-500 mL
Company	BUBBLE-O-METER, LLC.	Serial Number	7514
		Size	1-10-500 mL
		Department	N/A
		Procedure	PMC0429
Lab Temp	70°F	Cal Date	12/11/2009
	Lab Humid 24%RH		
Approved By: DJB			

**TOLERANCE**

+/-3% FOR 1ml RANGE  
 0.5% FOR 10mL RANGE AND ABOVE  
 BAROMETRIC PRESSURE: 30.27"Hg  
 ROOM TEMPERATURE: 70 DEG F  
 HUMIDITY: 24%

NOMINAL VOL	WT OF WATER (g)	WATER TEMP (DEG F)	ACTUAL VOL (ml)	ERROR (%)
1 mL	0.985	60	0.985	-1.5
10 mL	9.983	60	9.983	-0.17
500 ml	498.980	60	498.980	-0.204
FULL SCALE	509.948	60	509.948	-0.2058

THIS CALIBRATION HAS BEEN PERFORMED IN ACCORDANCE WITH ASTM E694

**CONDITION**

RECEIVED WITHIN MANUFACTURER'S SPECIFICATIONS  
 RETURNED WITHIN MANUFACTURER'S SPECIFICATIONS

**CALIBRATION STD(s)**

**Cal Due Date**

DISTILLED WATER	NO CALIBRATION REQUIRED	/ /
FG0089	Balance Precision Sartorius LP1200S	10/31/2010
FG0101	Balance Micro Sartorius MC 410 S	07/31/2010
ED0369	Thermometer	06/30/2010

This is to certify that the above instrument was calibrated with standards that are traceable to the National Institute of Standards & Technology (NIST). The results indicated on this certificate relate only to the item(s) calibrated.

is registered to ISO 9001:2008 and accredited to ISO/IEC 17025:2005 & ANSI/NC SL Z540-1-1994. This certificate and attachments may not be reproduced, except in full, without written approval of . The last page of this certificate is noted as "Last Page".

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**NIST Reference**

(FG0089)1001053970  
 (FG0101)1001033919  
 (ED0369)1001019801

**Measurement Uncertainty**

ACTUAL EXPANDED MEASUREMENT UNCERTAINTIES (K=2,95% confidence level)  
 ARE AS FOLLOWS-

PARAMETER	UNCERTAINTY
1mL	2%
10mL	0.2%
500mL	0.02%