



Calibration Certificate

Calibration certificate number: 2092 A ULR (Unique Lab Report) number: CC269020000002092F Page 01 of 02

Customer: The Medical Officer
 Government Primary Health Centre
 Tamilnadu
Through: Thermo Fisher Scientific India Pvt. Ltd., Pipette Division, Nashik.

Calibration details:
 Calibration and Certificate issue date: 16/9/20 Lab work order number: 20/09-01 Calibrated by: Sandip Bhamare
 Calibration location: Thermo Fisher Scientific India Pvt. Ltd. – Calibration Laboratory, D-96, MIDC Satpur, Nashik – 422 007.
 Next calibration date (as per Customer's request): 16/9/21

Device information:

Description: Finnipipette F3 10-100µl	Number of channels: 1
Catalogue number: 4640040	Serial number: RW09557
Manufacturer: Thermo Fisher Scientific	Tip used: Finntip 250 Universal
	Customer's asset ID: --

Environmental condition:

Air Temperature: 25.57 °C	Air Pressure: 936.9 hPa
Water Temperature: 25.65 °C	Relative Humidity (%RH): 70.6 %
Z correction factor (µl/mg): 1.0041	Y correction factor ((1/K)xK): 1.00064

Master equipment details (Traceable to National and International standards):

Equipment	Lab ID	Serial number	Model number	Calibration date	Calibration due date	Calibrated by with NABL certificate number
Micro Balance (Mettler Toledo)	QP-01	B115129039	XP26PC	13/11/19	12/11/20	Mettler Toledo, Mumbai (CC-2523)
Universal measuring instrument with sensors for environmental parameters (Almemo)	QP-10	H19070544	2590-4AS	09/10/19	08/10/20	Autocal, Nashik (CC-2052) & Lawkim, Mumbai (CC-2634)

Measurement procedure:
 The pipette calibration work instruction (LD-03/WI-01) of Thermo Fisher calibration laboratory follows the guidelines of the ISO 8655-6 standard. The device is calibrated for delivery (Ex) of the test liquid. The used test liquid is distilled water fulfilling ISO 3696 requirements. Calculations are done using the following formula: $V(\mu l) = m(mg) \times Z(\mu l/mg) \times Y((1/K) \times K)$. The mass / volume conversion is done using the Z factor (Annex A in EN ISO 8655-6). The obtained results are converted to correspond the reference temperature of 27°C using the Y factor. With variable volume devices nominal volume, 50 % of the nominal volume and 10% of the nominal volume or the minimum volume of the range (the higher value is used) are calibrated. With fixed volume devices, the nominal volume is calibrated. Ten measurements are performed at each calibrate volume. The test device is held at the calibration laboratory for minimum of two hours to reach the temperature equilibrium. The environmental conditions of the laboratory are monitored and recorded during the calibration procedure. The stated uncertainty is the expanded uncertainty obtained by multiplying the standard uncertainty by the coverage factor $k = 2$.

This corresponds the confidence level of 95%. The uncertainty budget is defined by lab internal procedure following the guidelines of ISO/TR 20461.

Device conformity status (considering applied Decision rule): PASSED

Calibration Laboratory Manager:
 (Signature and Date) Pramod Jadhav 16/9/20
Date

