



**ISO/IEC 17025 and ANSI/NCSL Z540-1 accredited**  
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## CALIBRATION REPORT FOR THERMOMETER

Report No. U173259 Page 1 of 2 SO: 123456

THE INSTRUMENT DESCRIBED BELOW WAS EXAMINED AND TESTED IN ICL'S ISO/IEC 17025 ACCREDITED CALIBRATION LABORATORY, USING NIST TRACEABLE REFERENCE STANDARDS, IN ACCORDANCE WITH ICL'S ISO/IEC 17025 CALIBRATION PROCEDURE REFERENCED BELOW. THIS CALIBRATION MEETS THE REQUIREMENTS OF ISO/IEC 17025, ANSI/NCSL Z540-1-1994, (WHICH SUPERCEDED AND REPLACED MIL-STD 45662A), AND THE ISO-9000 AND QS-9000 SERIES OF QUALITY STANDARDS.

### CUSTOMER INFORMATION

SAMPLE CUSTOMER  
 STREET ADDRESS  
 CITY, STATE ZIP

PURCHASE ORDER NUMBER: NOT AVAILABLE

SUBMITTED BY: SAMPLE COMPANY

### DATES

DATE REPORT ISSUED: 05-16-2011

### INSTRUMENT INFORMATION

THERMOMETER ASTM 12F INSCRIPTION: LSW

MODEL: 10012F-C RANGE: -5/215F DIVISIONS: .5 °F IMMERSION: TOTAL

ENGINEERING UNITS: degrees Fahrenheit

SERIAL NUMBER: XXXX

ACCURACY TOLERANCE (maximum scale error permitted by ASTM E 1): +/- 0.25F

### RESULTS OF PHYSICAL EXAMINATION

THIS INSTRUMENT WAS EXAMINED UNDER A POLARIZED LENS AND STRAINS IN THE GLASS, IF ANY, WERE JUDGED TO BE MINIMAL AND OF NO DETRIMENT TO THE FUNCTION OF THE INSTRUMENT.

THE CAPILLARY OF THIS THERMOMETER WAS EXAMINED UNDER MAGNIFICATION WITH RESULTS AS FOLLOWS: NO FOREIGN MATERIAL, MOISTURE, OR OTHER EVIDENCE OF CONTAMINATION WERE DISCOVERED. NO DISCERNABLE CAPILLARY IRREGULARITIES WERE NOTED.

IT WAS DETERMINED THAT THIS INSTRUMENT IS IN GOOD WORKING ORDER AND IS THEREFORE SUITABLE FOR CALIBRATION.

**CALIBRATION PROCEDURE USED:** ICL Procedure 01, which is based upon ASTM E 77, NBS Monograph 150 & NIST SP 250-23

### RESULTS OF CALIBRATION

NOTE: The indications of this instrument cannot be adjusted or modified by ordinary means; accordingly, the readings given in the table below should be considered, in effect, to be both "As Found" and "As Left" readings.

TEST TEMP	READING	CORRECTION	ACCEPT LIMIT* (+ or -)	P/M/F	UNCERTAINTY
-4.00°F	-4.00°F	0.00°F	0.246°F	PASS	0.12°F
15.00°F	14.95°F	+0.05°F	0.246°F	PASS	0.12°F
32.00°F	31.95°F	+0.05°F	0.246°F	PASS	0.12°F
60.00°F	59.90°F	+0.10°F	0.246°F	PASS	0.12°F
85.00°F	84.85°F	+0.15°F	0.246°F	PASS	0.12°F
110.00°F	109.95°F	+0.05°F	0.246°F	PASS	0.12°F
135.00°F	134.95°F	+0.05°F	0.246°F	PASS	0.12°F
160.00°F	160.00°F	0.00°F	0.246°F	PASS	0.12°F
185.00°F	184.95°F	+0.05°F	0.246°F	PASS	0.12°F
210.00°F	209.90°F	+0.10°F	0.246°F	PASS	0.12°F

\*ACCEPT LIMIT(s) The acceptance limit(s) shown above represent a statistical evaluation of the instrument's tolerance relative to the uncertainty of the measurement. If required, the acceptance limit is set to a value smaller than the tolerance. The difference between the tolerance and the acceptance limit is the "guard band". The guard band is imposed to reduce the probability of a false acceptance (PFA), or a false failure, to 2% or less.

P/M/F Accordingly, there are three possible calibration outcomes:

1. PASS The calibration result falls within the interval described by the test point + or - (the tolerance MINUS the guard band).
2. MARG\*\* (marginal) The calibration result is 'borderline', or indeterminate; it is therefore statistically and metrologically imprudent to declare that the instrument is definitively either 'in-tolerance' or 'out-of-tolerance'.
3. FAIL The calibration result falls outside the interval described by the test point + or - (the tolerance PLUS the guard band).

The methodology and equations used for determination of guard bands and acceptance limits comply with the requirements of ANSI/NCSL Z540.3

The above readings were made under magnification and resolved to one tenth of one scale division.

