

SOUTHWEST RESEARCH INSTITUTE
Department of Quality Assurance
Calibration Laboratory • 522-5215

WORK ORDER

CERTIFICATE # 25034 ASSET # 002513 DATE 07 Aug 97

ITEM DATA:

Manufacturer Vossler Model ASTM 82C
Description Sho. micrometer Serial # 024 515
Accessories _____

ACTION REQUESTED MM

CUSTODIAN Div. 20, David Durr

Turned in by: _____ Phone 6070

CHARGE # 405709 501 Date Required _____

INSTRUMENT USED ON: NUCLEAR DOD NASA GLP SPPE
 OTHER _____

COPY OF CALIBRATION CERTIFICATE Yes No

CONDITION RECEIVED: _____ Out of tolerance, repaired to specifications
_____ In tolerance, minor adjustments/repairs made
 In tolerance, no adjustments/repairs
_____ Out of tolerance, adjusted to specifications
_____ Received into system, introduced or reactivated
_____ Calibration interval
_____ Reliability code

ACTION TAKEN: (Calibration/Repair/Parts) Calibrated per procedure
MM 447
-0.02°C 0.0°C

25034

CAL ENVIRONMENT:
Temperature 70 °F Humidity 40 %RH

CALIBRATED/REPAIRED:
By [Signature] Cal Procedure WI-9-30-7403
Date 15 Aug 97 Accuracy ±1°C
Cal Interval 12 Mo Time to complete:
Next Cal due 15 Aug 98 Cal 2.0 Repair _____
Standards used (Asset#) 106, 5174

DATE COMPLETED 15 Aug 97
DATE PICKED UP 4/17/97 PICKED UP BY [Signature]

SOUTHWEST RESEARCH INSTITUTE
Department of Quality Assurance
Calibration Laboratory • 522-5215

WORK ORDER

CERTIFICATE # 29654 ASSET # 002313 DATE 08 May 98

ITEM DATA:
Manufacturer Kessler Model AS1182C
Description Thermometer Serial # 7443125
Accessories _____

ACTION REQUESTED cert

CUSTODIAN DWZ Danell Dunn

Turned in by: _____ Phone 6090

CHARGE # 701400-511 Date Required _____

INSTRUMENT USED ON: (DOD/NASA) (NUCLEAR) (GLP) (SPPE) (ISO)
 OTHER _____

COPY OF CALIBRATION CERTIFICATE (Yes) (No)

NEW WORK Yes No If yes, an evaluation shall be made to verify capabilities.

By MAE Date 05-08-98

Work involves proprietary/confidential information or equipment (Yes) (No)

CONDITION RECEIVED: _____ (F) Out of tolerance, repaired to specifications
_____ (G) In tolerance, minor adjustments/repairs made
 (J) In tolerance, no adjustments/repairs
_____ (K) Out of tolerance, adjusted to specifications
_____ (S) Received into system, introduced or reactivated

ACTION TAKEN: (Calibration/Repair/Parts) calibrated by procedure
445
0.04°C 0.0°C

29654

CAL ENVIRONMENT:
Temperature 78°F Humidity 37%RH

CALIBRATED/REPAIRED:
By Russell Cal Procedure AS11 E77-89
Date 11 May 98 Accuracy 1/29 spec
Cal Interval 12 mo Reliability Code: 5
Next Cal due 11 May 99 Cal Time 15 Repair Time _____
Standards used (Asset#) 219, 328

DATE COMPLETED 11 May 98
DATE PICKED UP 5/13/98 PICKED UP BY Daniel D

SOUTHWEST RESEARCH INSTITUTE
Department of Quality Assurance
Calibration Laboratory • 522-5215

WORK ORDER

CERTIFICATE # 34805 ASSET # 002313 DATE 07 June 99

ITEM DATA:

Manufacturer Kessler Model ASTM 82 C
Description Thermometer Serial # 9243195
Accessories _____

ACTION REQUESTED cal

CUSTODIAN Div. 20, Darrell Dunn

Turned in by: _____ Phone 6090

CHARGE # 20-0H Date Required _____

INSTRUMENT USED ON: (DOD/NASA) (NUCLEAR) (GLP) (SPPE) (ISO)
 OTHER _____

COPY OF CALIBRATION CERTIFICATE (Yes) (No)

NEW WORK Yes No If yes, an evaluation shall be made to verify capabilities.

By [Signature] Date 07 June 99

Work involves proprietary/confidential information or equipment (Yes) (No)

CONDITION RECEIVED: _____ (F) Out of tolerance, repaired to specifications
_____ (G) In tolerance, minor adjustments/repairs made
 (J) In tolerance, no adjustments/repairs
_____ (K) Out of tolerance, adjusted to specifications
_____ (S) Received into system, introduced or reactivated

ACTION TAKEN: (Calibration/Repair/Parts) on

CAL ENVIRONMENT:
Temperature 72 °F Humidity 45 %RH

CALIBRATED/REPAIRED
By [Signature] Cal Procedure CL-S MAY 99
Date 14 Jun 99 Accuracy +/- 1°C
Cal Interval 12 Reliability Code: _____
Next Cal due 14 Jun 00 Cal Time 2 Repair Time _____
Standards used (Asset#) 219 328

DATE COMPLETED 14 Jun 99
DATE PICKED UP 6/22/99 PICKED UP BY [Signature]

34805

WORK ORDER 39331

Date Received 6/5/00

Asset No. 002313 Manufacturer KESSLER Model ASTM 82C
 Description THERMOMETER Serial Number 9243195
 Accessory Received/Required NONE
 Div/CC ID NONE Accessory to Asset No. N/A
 Div/CC DIV20 Location B57 Custodian DARRELL DUNN Tel. 6090
 Charge/Project No. 20.00751.006 Proprietary/Confidential N Date Required ROUTINE
 Work Requested CALIBRATION
 Receiving Inspection O.K.
 Delivered By DARRELL DUNN Tel. 6090

WORK HISTORY

Date	Start Time	Stop Time	Notes

PARTS

Part Name	Part Number	Cost	Failure Description

39331

WORK SUMMARY

Failure Description _____

Repair Action _____

Cal Procedure CL-9, 5/99 Temp 73 F Hum 54 %

Tech MD Cal Hrs. ~ Repair Hrs. _____ Part Cost _____

Action Taken CHL _____

Standards Used 5243 5174 _____

Date Cal 2 JUN 2000 Int. 12 Mo. Date Due 2 JUL 2000 Reliability Code 2

Date Picked Up 6/14/00 Picked Up By Melissa Magant

workreq.rpt Rev 30 Jan 00
6/28/2000



Southwest Research Institute
6220 Culebra Road
San Antonio, TX 78238
(210) 522-5215
Department of Quality Assurance
Calibration Laboratory



Certificate #
0972-01

Certificate of Calibration

9 June 2000

Issued to: DARRELL DUNN DIV20 B57
Manufacturer/Model: KESSLER ASTM 82C
Description: THERMOMETER
Serial Number: 9243195
Asset Number: 002313

This certifies the above item was calibrated in compliance with MIL-STD-45662A and ANSI/NCSL Z540-1-1994. The results of this calibration relate only to the individual item as described above. Standards used in this calibration, described in the referenced calibration procedure with associated uncertainties or tolerances, are traceable to the National Institute of Standards and Technology (NIST). Supporting documentation relative to traceability is on file and available for examination upon request. This certificate is not to be reproduced, except in full, without the written approval of the Southwest Research Institute Department of Quality Assurance Calibration Laboratory.

This laboratory is accredited by the American Association for Laboratory Accreditation (A2LA) and the results of this calibration certificate were determined in accordance with the terms of accreditation unless stated otherwise below.

The uncertainty of the calibration was sufficient to determine that the item met the manufacturer's published specifications unless stated otherwise below.

Ambient Conditions: Temperature: 73.0 Degrees Fahrenheit Humidity: 54 % RH

Calibration Date: 9 Jun 00 **Calibration Procedure:** CL-9, 5/99

Condition as Received: In Tolerance

Remarks:

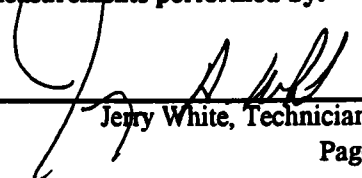
Approved by:



Jim Patterson, Supervisor, of Walt Hill, Metrologist

Certificate # 39331
m:\a2la.rpt Rev date 22 May 00

Measurements performed by:



Jerry White, Technician

Page 1 of 1

SOUTHWEST RESEARCH INSTITUTE

Calibration Laboratory

WORK ORDER

Processed by RCRUZ at 2:39:01PM on 7/9/01

1 1000 1000 1000 1000 1000 1000 1000

Work Order **444044288**

Arrived 7/9/01

Asset No. 002313 Manufacturer KESSLER

Model ASTM 82C

Instrument Type/Class THERMOMETER

Serial No. 9243195

Accessory No. Calibration Procedure CL-9, 5/99

Location B57

Div/Client DIV20

Custodian DARRELL DUNN

Mail Stop B57

Tel. 6090

Charge/Project No. 00751.006 1.20

Delivered By / Telephone

IN4CAL

Special Instructions _____

WORK NOTES

Date	Hours	Remarks/Notes
<u>2/16</u>	<u>2.0</u>	<u>Calibration</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

REPAIR PARTS

Date	Hours	Part Name	Part Number	Failure Description	Cost
<u>n/a</u>	<u>→</u>	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

WORK SUMMARY

Failure Description n/a

Repair Action n/a

Calibration Procedure CL-9, 5/99 Temp 78 F Hum. 46 %

Tech R Dykstra Totals Cal Hours 2.0 Repair Hours _____ Parts Cost _____

Standards Used 0219

Date Picked Up 2/20/07

Picked Up By [Signature]

44288

Acid Std

n

0 -0.2°C 0.050°C

50 50.4°C 50.655°C

+/- 1°C

100 101.8°C 99.941°C

39931

2/2/88



Southwest Research Institute
6220 Culebra Road
San Antonio, TX 78238
(210) 522-5215
Department of Quality Assurance
Calibration Laboratory



Certificate #
0972-01

Certificate of Calibration

16 July 2001

Issued to: DARRELL DUNN DIV20 B57
Manufacturer/Model: KESSLER ASTM 82C
Description: THERMOMETER
Serial Number: 9243195
Asset Number: 002313
Work Order Number: 444044288

This certifies the above item was calibrated in compliance with MIL-STD-45662A and ANSI/NCSL Z540-1-1994. The results of this calibration relate only to the individual item as described above. Standards used in this calibration, described in the referenced calibration procedure with associated uncertainties or tolerances, are traceable to the National Institute of Standards and Technology (NIST). Supporting documentation relative to traceability is on file and available for examination upon request. This certificate is not to be reproduced, except in full, without the written approval of the Southwest Research Institute Department of Quality Assurance Calibration Laboratory.

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Ambient Conditions: Temperature: 78.0 Degrees Fahrenheit Humidity: 46 % RH

Calibration Date: 16 Jul 01 **Calibration Procedure:** CL-9, 5/99

Condition as Received: IN TOLERANCE

Condition as Released: IN TOLERANCE

Remarks:

Approved by:

Walt Hill, Supervisor
Institute Calibration Laboratory

Measurements performed by:

Roger Dykstra, Technician

