

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

WORK ORDER

CERTIFICATE # 22431 ASSET # 004989 DATE 8/21/96

ITEM DATA:

Manufacturer FETCO Model 15-166A
Description Thermometer Serial # C96-649
Accessories _____

ACTION REQUESTED Cal

CUSTODIAN Darryl Dunn, Div. 20

Turned in by: Darryl Phone 6090

CHARGE # 20-5108-573 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
6405 Calibration interval
_____ Reliability code

ACTION TAKEN: (Calibration/Repair/Parts) Calibrated by Darryl Dunn

CAL ENVIRONMENT:
Temperature 78 °F Humidity 38 %RH

CALIBRATED/REPAIRED:
By Darryl Dunn Cal Procedure WI-9-30-5A03
Date 26 Aug 96 Accuracy ±0.1
Cal Interval 6405 Time to complete: _____
Next Cal due 26 Feb 97 Cal 2.5 Repair _____
Standards used (Asset#) 219,328

DATE COMPLETED 26 Aug 96
DATE PICKED UP 8/27/96 PICKED UP BY Darryl Dunn

22431

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

WORK ORDER

CERTIFICATE # 24338 ASSET # 004989 DATE 17 Feb 97

ITEM DATA:

Manufacturer Exco Model 15 166A
Description thermometer Serial # C 98-649
Accessories _____

ACTION REQUESTED cal

CUSTODIAN DIV. 20, Donnell Dunn

Turned in by: _____ Phone _____

CHARGE # 70-5208-561 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 internal
 - _____ Reliability code

ACTION TAKEN: (Calibration/Repair/Parts) Calibrated Per Procedure.
STG DAS
0.02°C 0.0°C

CAL ENVIRONMENT:
Temperature 74 °F Humidity 35 %RH

CALIBRATED/REPAIRED:
By [Signature] Cal Procedure WI-9-30-8463
Date 25 Feb 97 Accuracy +/- 1°C
Cal Interval 6 mos Time to complete: _____
Next Cal due 25 Feb 97 Cal 2.0 Repair _____
Standards used (Asset#) 219, 328

DATE COMPLETED 26 Feb 97
DATE PICKED UP 2/26/97 PICKED UP BY [Signature]

24338

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

WORK ORDER

CERTIFICATE # 21587 ASSET # 1001111 DATE 25 Aug 97

ITEM DATA:

Manufacturer Fisher, Bio & Home Model 5 MM
Description Thermometer Serial # 091 111
Accessories _____

ACTION REQUESTED Cal

CUSTODIAN Dr. J. J. Smith

Turned in by: _____ Phone 6070

CHARGE # 20-5708-561 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 _____ Date _____

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 per Procedure
ST 445
0.012°C 0.5°C

21587

CAL ENVIRONMENT:
Temperature 81°F Humidity 34%RH

CALIBRATED/REPAIRED:
By [Signature] Cal Procedure 61-9-30-0A03
Date 3 Aug 97 Accuracy ±1°C
Cal Interval 6 Mo Reliability Code: 24
Next Cal due 3 Aug 98 Cal Time 1.5 Repair Time _____
Standards used (Asset#) 219, 328

DATE COMPLETED 4 Aug 97
DATE PICKED UP 9/10/97 PICKED UP BY [Signature]

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

WORK ORDER

CERTIFICATE # 28933 ASSET # 004989 DATE 09 MAR 98

ITEM DATA:

Manufacturer Fisher Model 15-166A
Description Thermometer Serial # 076-647
Accessories _____

ACTION REQUESTED 101

CUSTODIAN DIV 70, Daniel Dunn

Turned in by: _____ Phone 6040

CHARGE # 70-1162-5-11 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 _____ Date _____

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) _____
cal std UMT
0.005°C 0.2°C

CAL ENVIRONMENT: Temperature 72 °F Humidity 26 %RH

CALIBRATED/REPAIRED:
By K. Kuehn Cal Procedure W19-30-TH03
Date 10 Mar 98 Accuracy ±1°C
Cal Interval 6 mo Reliability Code: 4
Next Cal due 10 Sep 98 Cal Time 1.0 Repair Time _____
Standards used (Asset#) 719, 328

DATE COMPLETED 10 Mar 98
DATE PICKED UP 3/18/98 PICKED UP BY [Signature]

28933

ASTM-E1

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

WORK ORDER

CERTIFICATE # 31710 ASSET # 004989 DATE 21 Oct 98

ITEM DATA:

Manufacturer Fisher Model 15-166A
Description Thermometer (Partial Immersion) Serial # C96-019
Accessories _____

ACTION REQUESTED Cal

CUSTODIAN DV-20, Daniel Dunn

Turned in by: _____ Phone 6090

CHARGE # 20-1401-571 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 MA-01 Date 10-21-98

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) _____

CAL ENVIRONMENT:
Temperature 72°F Humidity 64%RH

CALIBRATED/REPAIRED:
By W. Hall Cal Procedure 33K5-4-42-1
Date 30 Oct 98 Accuracy _____
Cal Interval 6m Reliability Code: 5
Next Cal due 30 APR 99 Cal Time _____ Repair Time _____
Standards used (Asset#) 219 32B

DATE COMPLETED _____
DATE PICKED UP 11/4/98 PICKED UP BY Daniel Dunn

31710

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

WORK ORDER

CERTIFICATE # 34397 ASSET # 004989 DATE 05 May 99

ITEM DATA:

Manufacturer Fisher brand Model 15-100A
Description thermometer Serial # 091-113
Accessories tupe

ACTION REQUESTED cal

CUSTODIAN Div. 20, Darrell Dunn

Turned in by: _____ Phone 0096

CHARGE # 20-04 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 MAD Date 05-05-99

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) calibrated per procedure

CAL ENVIRONMENT:
Temperature 71 °F Humidity 50 %RH

CALIBRATED/REPAIRED:
By [Signature] Cal Procedure F.O. 33K5-1-124, APR 97
Date 12 May 99 Accuracy [Signature]
Cal Interval 6 mths Reliability Code: F
Next Cal due 12 Nov 99 Cal Time 1.5 Repair Time _____
Standards used (Asset#) 5174, 7001

DATE COMPLETED 12 May 99
DATE PICKED UP 5/13/99 PICKED UP BY [Signature]

34397

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

WORK ORDER

WORK ORDER # 37057 ASSET # 004989 DATE 08 Dec. 99

ITEM DATA:

Manufacturer Fisher Model 15-166A
Description Thermometer Serial # 096-649
Accessories _____

ACTION REQUESTED cal

CUSTODIAN D.W. Dunn, Carroll Dunn

Turned in by: _____ Phone 6096

CHARGE # 20.04 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 MAS Date 12-08-99

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

CONDITION RECEIVED: _____ Out of tolerance
 In tolerance
_____ Damaged (Contact customer)
_____ Contact _____ Date _____
_____ Received into system, introduced or reactivated

ACTION TAKEN: (Calibration/Repair/Parts) cal

CAL ENVIRONMENT:

Temperature 20 °F Humidity 30 %RH

CALIBRATED/REPAIRED:

By [Signature] Cal Procedure CL-9 may 99
Date 10 DEC 99 Accuracy ± 1 Deg
Cal Interval 4 Reliability Code _____
Next Cal Due 10 NOV 00 Cal Time 43 Repair Time _____
Standards used (Asset #) 5174 5243

DATE COMPLETED 10 Dec 99

DATE PICKED UP 12/14/99 PICKED UP BY [Signature]

37057



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

10 December 1999

Issued to: DARRELL DUNN DIV20 B57
Manufacturer/Model: FISHER SCIENTIFIC 15-166A
Description: THERMOMETER
Serial Number: C96-649
Asset Number: 004989

This certifies the above item was calibrated in compliance with MIL-STD-45662A and ANSI/NCSL Z540-1-1994. 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 is 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: 70.0 Degrees Fahrenheit Humidity: 30 % RH

Calibration Date: 10 Dec 99 **Calibration Procedure:** CL-9 MAY 99

Condition as Received: IN TOLERANCE

Condition as Released: IN TOLERANCE

Remarks:

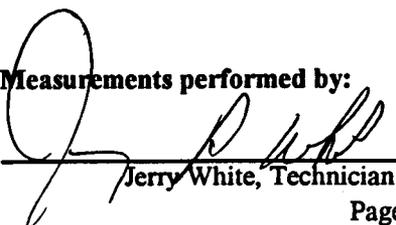
Approved by:


Jim Patterson, Supervisor or Walt Hill, Metrologist

Certificate # 37057

m:\a2la.rpt Rev date 10 Mar 99

Measurements performed by:


Jerry White, Technician

Page 1 of 1

WORK ORDER 39218

Date Received 5/25/00

Asset No. 004989 Manufacturer FISHER SCIENTIFIC Model 15-166A
Description THERMOMETER Serial Number C96-649
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

39218

WORK SUMMARY

Failure Description _____
Repair Action _____
Cal Procedure CL-9 MAY 99 Temp 76 F Hum 47 %
Tech JDW Cal Hrs. .7 Repair Hrs. _____ Part Cost _____
Action Taken ewL
Standards Used 219 5174
Date Cal 1 JUN 2000 Int. 6 Mo. Date Due 11 DEC 2000 Reliability Code 8
Date Picked Up 6/2/00 Picked Up By Darrell Dunn



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

1 June 2000

Issued to: DARRELL DUNN DIV20 B57
Manufacturer/Model: FISHER SCIENTIFIC 15-166A
Description: THERMOMETER
Serial Number: C96-649
Asset Number: 004989

This certifies the above item was calibrated in compliance with MIL-STD-45662A and ANSI/NC SL 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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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: 76.0 Degrees Fahrenheit Humidity: 47 % RH

Calibration Date: 1 Jun 00 **Calibration Procedure:** CL-9 MAY 99

Condition as Received: In Tolerance

Remarks:

Approved by:

Jim Patterson, Supervisor, or Walt Hill, Metrologist

Certificate # 39218

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 3:56:28PM on 12/14/00

1 100000 10000 10000 10000 10000 10000

Work Order **444041753**

Arrived 12/14/00

Asset No. 004989 Manufacturer FISHER SCIENTIFIC

Model 15-166A

Instrument Type/Class THERMOMETER

Serial No. C96-649

Accessory No. Calibration Procedure CL-9 MAY 99

Location B57

Div/Client DIV20

Custodian DARRELL DUNN

Mail Stop B57

Tel. 6090

Charge/Project No. 20.00751.006

Delivered By / Telephone

IN4CAL

Special Instructions _____

WORK NOTES

Date	Hours	Remarks/Notes
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

REPAIR PARTS

Date	Hours	Part Name	Part Number	Failure Description
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

WORK SUMMARY

Failure Description _____

Repair Action _____

Calibration Procedure _____ Temp 69 F Hum. 40 %

Tech QW Totals Cal Hours 1 Repair Hours _____ Parts Cost _____

Standards Used 219

Date Picked Up 1/9/2001

Picked Up By Darrell Dunn

41753



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

22 December 2000

Issued to: DARRELL DUNN DIV20 B57
Manufacturer/Model: FISHER SCIENTIFIC 15-166A
Description: THERMOMETER
Serial Number: C96-649
Asset Number: 004989

This certifies the above item was calibrated in compliance with MIL-STD-45662A and ANSI/NC SL 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: 69.0 Degrees Fahrenheit Humidity: 40 % RH

Calibration Date: 21 Dec 00 **Calibration Procedure:** CL-9 MAY 99

Condition as Received: IN TOLERANCE

Condition as Released: IN TOLERANCE

Remarks:

Approved by:

Jim Patterson, Supervisor, or Walt Hill, Metrologist

Certificate # 444041753

m\aa21a.rpt Rev date 22 May 00

Measurements performed by:

Jerry White, Technician

SOUTHWEST RESEARCH INSTITUTE

Calibration Laboratory

WORK ORDER

Processed by RCRUZ at 2:43:41PM on 6/22/01

1 10001 0001 0001 0001 0001 0001 0001

Work Order **444044168**

Arrived 6/22/01

Asset No. 004989

Manufacturer FISHER SCIENTIFIC

Model 15-166A

Instrument Type/Class THERMOMETER

Serial No. C96-649

Accessory No.

Calibration Procedure CL-9 MAY 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>6/25</u>	<u>.5</u>	<u>Calibration</u>
<u>6/26</u>	<u>.5</u>	<u>Calibration</u>

REPAIR PARTS

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

WORK SUMMARY

Failure Description n/a

Repair Action n/a

Calibration Procedure CL-9, 5/99 Temp 75F Hum. 50 %

Tech R. Dykstra Totals Cal Hours 1.0 Repair Hours Parts Cost

Standards Used 0219

Date Picked Up 7/9/01

Picked Up By B. R. [Signature]

444168



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

26 June 2001

Issued to: DARRELL DUNN DIV20 B57
Manufacturer/Model: FISHER SCIENTIFIC 15-166A
Description: THERMOMETER
Serial Number: C96-649
Asset Number: 004989
Work Order Number: 444044168

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: 75.0 Degrees Fahrenheit Humidity: 50 % RH

Calibration Date: 26 Jun 01 **Calibration Procedure:** CL-9 MAY 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

SOUTHWEST RESEARCH INSTITUTE

Calibration Laboratory

WORK ORDER

Received by JIBARRA, 1/8/02 11:36:03AM

Arrived 1/8/02

Work Order **444046677**

Asset No. 004989 Manufacturer FISHER SCIENTIFIC

Model 15-166A

Equipment Type THERMOMETER

Serial No. C96-649

Accessory No.

Interval 6 M

Calibration Procedure CL-9 MAY 99

Location B57

Div/Client DIV20

Custodian DARRELL DUNN

Mail Stop B57

Tel 6090

IN4CAL

Special Instructions _____

Notify before adjustments or repairs. () Provide data with certificate () Certificate Type _____

Charge/Project No. 00751.006 1.20

Requester / Telephone DARRELL DUNN/ X6090

This information is correct for the work requested. *Darrell Dunn*

WORK NOTES

Date	Hours	Remarks/Notes
<u>10/4/02</u>	<u>1.0</u>	<u>Cal</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

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

WORK SUMMARY

Failure Description n/a

Repair Action n/a

Tech R Dykstra

Cal Hrs. _____

Repair Hrs. 1.0

Parts Cost _____

Temp 76 F

Hum. 42 %

Standards Used 0942219

RD

Date Picked Up 1/11/02

Picked Up By *Darrell Dunn*

444046677



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

Certificate of Calibration

10 January 2002

Issued to: DARRELL DUNN DIV20 B57
Manufacturer/Model: FISHER SCIENTIFIC 15-166A
Description: THERMOMETER
Serial Number: C96-649
Asset Number: 004989
Work Order Number: 444046677

This certifies the above item was calibrated in compliance with MIL-STD-45662A and ANSI/NCSL Z540-1-1994. 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 is 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.

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: 76.0 Degrees Fahrenheit Humidity: 42 % RH

Calibration Date: 10 Jan 02 **Calibration Procedure:** CL-9 MAY 99

Condition as Received: IN TOLERANCE

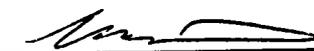
Condition as Returned: IN TOLERANCE

Remarks:

Approved by:


Walt Hill, Supervisor
Institute Calibration Laboratory

Measurements performed by:


Roger Dykstra, Technician