

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

WORK ORDER

CERTIFICATE # 34368 ASSET # 001199 DATE 04 May 99

ITEM DATA:

Manufacturer Fisherbrand Model 25-1669
Description thermometer Serial # H98-168
Accessories Lot

ACTION REQUESTED Cal

CUSTODIAN Dr. D. Donnell Davis

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 MAA Date 05-04-99

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) Cal

CAL ENVIRONMENT:
Temperature 75 °F Humidity 57 %RH

CALIBRATED/REPAIRED: M Wood
By _____ Cal Procedure T033KS-4-42-1 Apr 97
Date 5-5-99 Accuracy ±1°C
Cal Interval 6 mo Reliability Code: _____
Next Cal due 11-5-99 Cal Time 1h Repair Time _____
Standards used (Asset#) 5174, 7001

DATE COMPLETED 5-6-99
DATE PICKED UP 5/13/99 PICKED UP BY [Signature]

34368

CALIBRATION CHECK FORM

Date Calibrated 5-5-99 Work Order 34368
 Technician OM Wood Calibration Procedure 7033KS-4-42-1 Ap. 97
 Unit Under Test Thermometer
 Manufacturer Fisher Model 15-166A SN 1498-168 ASN 2229

STEP	FUNCTION OR RANGE	APPLIED °C	TOLERANCE	MEASURED VALUES		P/F
			MIN - MAX	AS FOUND	RELEASED	
			± 1.0			
1)		-16.37	-15.37 - 17.37	-17.0		P
2)		13.57	12.57 - 14.57	13.2		P
3)		46.26	45.26 - 47.26	47.0		P
4)		81.86	80.86 - 82.86	82.0		P
5)		115.89	114.89 - 116.89	116.1		P
6)		144.84	143.84 - 145.84	145.7		P
			<u>End</u>			

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WORK ORDER

WORK ORDER # 36837 ASSET # 001599 DATE 19 Nov 99

ITEM DATA:
Manufacturer Fisherbrand Model 1516A
Description 1 No. Monitor Serial # H18-168
Accessories _____

ACTION REQUESTED RM

CUSTODIAN D.D. [unclear]

Turned in by: _____ Phone 0016

CHARGE # 4004 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 11-17-99

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) Calibrated As Found

CAL ENVIRONMENT:
Temperature 75 °F Humidity 52 %RH

CALIBRATED/REPAIRED:
By [Signature] Cal Procedure CL-9, 11/17/99
Date 22 Nov 99 Accuracy [unclear]
Cal Interval 6 mos Reliability Code 2
Next Cal Due 22 May 00 Cal Time 2 Repair Time _____
Standards used (Asset #) 5243, 5174

DATE COMPLETED 22 Nov 99
DATE PICKED UP 11/23/99 PICKED UP BY [Signature]

36837



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

Accredited

Certificate #
0972-01

Certificate of Calibration

22 November 1999

Issued to: DARRELL DUNN DIV20 B57
Manufacturer/Model: FISHER SCIENTIFIC 15-166A
Description: THERMOMETER
Serial Number: H98-168
Asset Number: 007299

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: 75.0 Degrees Fahrenheit Humidity: 52 % RH

Calibration Date: 22 Nov 99 Calibration Procedure: CL-9, MAY99

Condition as Received: IN TOLERANCE

Condition as Released: IN TOLERANCE

Remarks:

Approved by:



Jim Patterson, Supervisor or Walt Hill, Metrologist

Certificate # 36837

m:\a2la.rpt Rev date 10 Mar 99

Measurements performed by:



Ken Harp, Technician

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WORK ORDER 39329

Date Received 6/5/00

Asset No. 007299 Manufacturer FISHER SCIENTIFIC Model 15-166A
Description THERMOMETER Serial Number H98-168

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
06/14			Thermometer inadvertently picked up by JWS regner who dropped it before realizing unit did not belong to division. Cal-lab paying for replacement.

PARTS

Part Name	Part Number	Cost	Failure Description

39329
67862

WORK SUMMARY

Failure Description _____

Repair Action _____

Cal Procedure CL-9, MAY99 Temp 23 F Hum 54 %

Tech JWS Cal Hrs. 2 Repair Hrs. _____ Part Cost _____

Action Taken cal

Standards Used 5243 5174

Date Cal 9 JUN 2000 Int. 6 Mo. Date Due 9 DEC 2000 Reliability Code 3

Date Picked Up 6-14-00 Picked Up By Mike Fisher



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: FISHER SCIENTIFIC 15-166A
Description: THERMOMETER
Serial Number: H98-168
Asset Number: 007299

This certifies the above item was calibrated in compliance with MIL-STD-45662A and ANSI/NCCL 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: 73.0 Degrees Fahrenheit Humidity: 54 % RH

Calibration Date: 9 Jun 00 **Calibration Procedure:** CL-9, MAY99

Condition as Received: In Tolerance

Remarks:

Approved by:

Jim Patterson, Supervisor, or Walt Hill, Metrologist

Certificate # 39329

m:\a2la.rpt Rev date 22 May 00

Measurements performed by:

Jerry White, Technician

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