

S O U T H W E S T   R E S E A R C H   I N S T I T U T E

Department of Quality Assurance  
Calibration Laboratory

CERTIFICATE OF CALIBRATION

Issued to: DIV20 B57 HERSH MAMAKTALA

Device No: 1893

Manufacturer: FISHER SCIENTIFI

Model: ACCUMET 950

Nomenclature: PH METER

Serial Number: 3340

SwRI No:

Remarks

Accuracy: MFGR

Procedure: MFGR

ENVIRONMENT

Temperature: 73

Humidity: 42

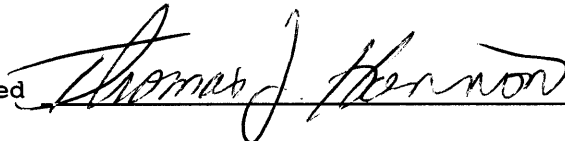
Location: ROOM A11 B68 SWRI

CONCLUSION

Tolerance/Remarks: Received in tolerance, no adjustments made

Calibration was in accord with requirements of MIL-STD-45662A. Measurements are traceable to the National Institute of Standards and Technology. Inspection and test data are on file and available for inspection.

Signed



Calibration Date: 10/06/92

Record Number: 00009938

Next Calibration Due: 10/06/93

S O U T H W E S T   R E S E A R C H   I N S T I T U T E

Department of Quality Assurance  
Calibration Laboratory

Device Serial No: 3340

Calibration Date: 10/06/92

STANDARDS

-----

Standard No:    115    Manufacturer: HEWLETT PACKARD    Model: 3456A  
Nomenclature: DIGITAL VOLTMETER  
Serial No: 2201A08306                      Cal.Due: 11/06/92                      Cal.Rec.No: 00009125

Standard No:    182    Manufacturer: JOHN FLUKE                      Model: 5700A  
Nomenclature: CALIBRATOR  
Serial No: 5200003                      Cal.Due: 01/24/93                      Cal.Rec.No: 00009507

S O U T H W E S T   R E S E A R C H   I N S T I T U T E

Department of Quality Assurance  
Calibration Laboratory

CERTIFICATE OF CALIBRATION

Issued to: DIV20 B57 HERSH MANAKTALA

Device No: 1893

Manufacturer: FISHER SCIENTIFI

Model: ACCUMET 950

Nomenclature: PH METER

Serial Number: 3340

SwRI No:

Cal interval 12 Mo.

Remarks

Accuracy: SEE ATTACH

Procedure: MFGR

ENVIRONMENT

Temperature: 70

Humidity: 50

Location: ROOM A11 B68 SWRI

CONCLUSION

Tolerance/Remarks: Received in tolerance, no adjustments made

Calibration was in accord with requirements of MIL-STD-45662A. Measurements are traceable to the National Institute of Standards and Technology. Inspection and test data are on file and available for inspection.

Signed

*Anthony P. Lewis*

Calibration Date: 10/13/93

Cal interval: 12 Months

Record Number: 00012499

Next Calibration Due: 10/13/94

S O U T H W E S T   R E S E A R C H   I N S T I T U T E

Department of Quality Assurance  
Calibration Laboratory

Device Serial No: 3340

Calibration Date: 10/13/93

STANDARDS

Standard No: 132    Manufacturer: JOHN FLUKE

Model: 5100B

Nomenclature: CALIBRATOR

Serial No: 2730017

Cal.Due: 10/23/93

Cal.Rec.No: 00010981

FISHER 950

## PERFORMANCE CHARACTERISTICS

|                                  |   |
|----------------------------------|---|
| <b>Ranges</b>                    | -2 to 16 pH/pX<br>0 to $\pm 1999.9$ mV<br>-5 to +105°C<br>$0.1 \times 10^{-9}$ to $9.99 \times 10^9$<br>(Concentration)                           |
| <b>Resolution</b>                | 0.01 pH (Normal Mode)<br>0.001 pH (EXPAND Mode)<br>1 mV (Normal Mode)<br>0.1 mV (EXPAND Mode)<br>0.1°C<br>0.01, floating point<br>(Concentration) |
| <b>Relative Accuracy</b>         | $\pm 0.001$ pH/px<br>$\pm 0.1$ mV<br>$\pm 0.2$ °C<br>$\pm 0.17$ n% (Concentration)<br>(n = oxidation number)                                      |
| <b>Input Impedance</b>           | $>10^{13}$ ohms   |
| <b>Slope Correction</b>          | $\pm$ infinity  |
| <b>Stability (drift/24 hrs)</b>  | $\pm 0.001$ pH  |
| <b>Temperature Compensation:</b> |   |
| Manual (thermometer)             | no limit  |
| Automatic (ATC Probe)            | -5 to +105°C  |
| <b>K-F Polarizing Current</b>    | -10 $\mu$ A   |
| <b>Recorder Output:</b>          |   |
| pH/pX Mode                       | 0 to $\pm 200$ mV   |
| Millivolt Mode                   | 0 to $\pm 1000$ mV (Adjustable)   |

## SPECIFICATIONS

|                                |  |
|--------------------------------|--|
| <b>Displays:</b>               |  |
| Data                           | 6-digit, 0.5" H, blue, vacuum-fluorescent.   |
| Message                        | 16-character, 0.2" H, blue vacuum-fluorescent.   |
| <b>Data I/O Connectors:</b>    |  |
| Control (P7)                   | Separate TTL logic levels for high- and low-limit set points.  |
| Printer (P7)                   | RS-232 serial output.  |
| Electrode Switch (P8)          | Interface with Model 953 Electrode Switch.   |
| <b>Power Requirements:</b>     |  |
| 950 115V $\pm 10\%$ , 50/60 Hz | 0.08A 9.2W   |
| 951 230V $\pm 10\%$ , 50/60 Hz | 0.05A 11.5W  |
| <b>Environmental:</b>          |  |
| Humidity                       | 0 to 90%, non-condensing   |
| Temperature, Operating         | +15 to +40°C   |
| Temperature, Storage           | -25 to +50°C   |
| <b>Dimensions</b>              | 12"L x 8-1/4"W x 4-5/8"H   |
| <b>Weight</b>                  | 4.7 lb.  |
| <b>Case Construction</b>       | ABS flame retardant molded plastic with conductive, RFI shield inner coating and color-coordinated panel overlays. |

**SOUTHWEST RESEARCH INSTITUTE**

**Department of Quality Assurance  
Calibration Laboratory**

**CERTIFICATE OF CALIBRATION  
02/09/95**

Issued to: DARRELL DUNN  
Manufacturer: FISHE  
Nomenclature: PH METER  
Serial Number: 3340

DIV20 ,B57

Asset Number: 001893  
Model Number: ACCUMET 950  
SwRI Capital Number: UNKWN

**ENVIRONMENTAL CONDITIONS**

Temperature: 74.0F

Relative Humidity: 40 %

**CALIBRATION INFORMATION**

Location: CAL1  
Procedure Number: MFGR SERVICE MAN  
Remarks: METER CALIBRATION PER MFGR SERVICE MANUAL.  
USER RESPONSIBLE FOR PROBES.

Technician: 10004  
Accuracy: MFGR  
Received IN Tolerance

**Calibration was in accordance with requirements of MIL-STD-45662A.  
Measurements are traceable to the National Institute of Standards and Tech-  
nology. Inspection and test data are on file and available for inspection.**

**STANDARDS USED FOR CERTIFICATION**

| Asset # | Serial # | Mfg   | Model # | Nomenclature | Cal Date | Int. | Cal Due  |
|---------|----------|-------|---------|--------------|----------|------|----------|
| 000182  | 5200003  | FLUKE | 5700A   | CALIBRATOR   | 12/14/94 | 3    | 03/14/95 |

Certified by :



Certificate#: 16295

Calibration Date: 02/08/95  
Interval: 12 months  
Next Calibration Due: 02/08/96

**SOUTHWEST RESEARCH INSTITUTE**  
**Department of Quality Assurance**  
**Calibration Laboratory**

**CERTIFICATE OF CALIBRATION**  
**02/15/96**

Issued to: DARRELL DUNN DIV20 ,B57  
Manufacturer/Model: FISHE/ACCUMET 950  
Nomenclature: PH METER  
Serial Number: 3340  
Asset Number: 001893  
Notes:

**ENVIRONMENTAL CONDITIONS**

Temperature: 78.0F

Relative Humidity: 34%

**CALIBRATION INFORMATION**

Procedure Number: MFGR SERVICE MAN

Accuracy: MFGR

Remarks: METER CALIBRATION PER MFGR SERVICE MANUAL  
USERRESPONSIBLE FOR PROBES.

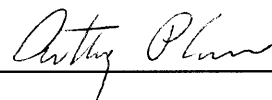
Received IN Tolerance

**Calibration was in accordance with requirements of MIL-STD-45662A.  
Measurements are traceable to the National Institute of Standards and Tech-  
nology. Inspection and test data are on file and available for inspection.**

**STANDARDS USED FOR CERTIFICATION**

| Asset # | Serial # | Mfg   | Model # | Nomenclature | Cal Date | Int. | Cal Due  |
|---------|----------|-------|---------|--------------|----------|------|----------|
| 000132  | 2730017  | FLUKE | 5100B   | CALIBRATOR   | 12/05/95 | 6    | 06/05/96 |

Certified by :



Certificate#: 20159

Calibration Date: 02/14/96

Interval: 12 months

Next Calibration Due: 02/14/97



Southwest Research Institute  
6220 Culebra Road  
San Antonio, TX 78238  
Department of Quality Assurance  
Calibration Laboratory

# Certificate of Calibration

21 April 1997

Issued to: DARRELL DUNN                      DIV20                      B57  
Manufacturer/Model: FISHER SCIENTIFIC ACCUMET 950  
Description: PH/ION METER  
Serial Number: 3340  
Asset Number: 001893

## Environmental Conditions

Temperature: 76.0 Deg. F                      Humidity: 42%

## Calibration Information

Calibration was in accordance with requirements of MIL-STD-45662A and ANSI/NC SL Z540-1-1994. Measurements are traceable to the National Institute of Standards and Technology (NIST). This report may not be reproduced except in full without written approval of the originator. Inspection and test data are on file and available for inspection.

Calibration Date: 21 Apr 97                      Calibration Procedure: MFGR MAN #1893  
Interval: 12 months                      Accuracy: MFGR  
Next Calibration Due: 21 Apr 98                      Received: In Tolerance  
Remarks: LIMITED CALIBRATION - MV ONLY

## Standards Used

| Asset  | MFR   | Model | Description | Serial No. | Due Cal   |
|--------|-------|-------|-------------|------------|-----------|
| 000182 | FLUKE | 5700A | CALIBRATOR  | 5200003    | 25 May 97 |

Certificate # 24332

Signed: 

LAST PAGE OF REPORT  
Total Pages Printed: 1





Southwest Research Institute  
 6220 Culebra Road  
 San Antonio, TX 78238  
 Department of Quality Assurance  
 Calibration Laboratory



# Certificate of Calibration

19 May 1998

Issued to: DARRELL DUNN                      DIV20                      B57  
 Manufacturer/Model: FISHER SCIENTIFIC ACCUMET 950  
 Description: PH/ION METER  
 Serial Number: 3340  
 Asset Number: 001893

## Environmental Conditions

Temperature: 74.00 Deg. F                      Humidity: 46 % RH

## Calibration Information

Calibration was in accordance with requirements of MIL-STD-45662A and ANSI/NC SL Z540-1-1994. Measurements are traceable to the National Institute of Standards and Technology (NIST). This report may not be reproduced except in full without written approval of the originator. Inspection and test data are on file and available for inspection.

The uncertainty of the calibration was sufficient to determine that the instrument met the manufacturer's specifications.

Calibration Date: 18 May 98                      Calibration Procedure: CLCP-PH-002

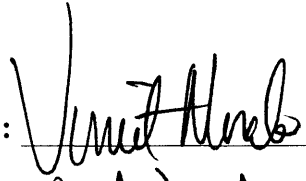
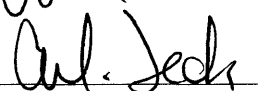
Interval: 12 months

Next Calibration Due: 18 May 99                      Received: In Tolerance

Remarks: LIMITED CALIBRATION- CALIBRATED FOR MILLIVOLT USE ONLY!

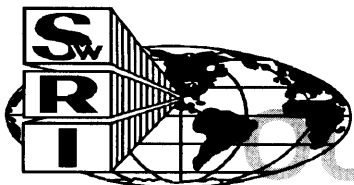
## Standards Used

| Asset  | MFR   | Model | Description | Serial No. | Due Cal  |
|--------|-------|-------|-------------|------------|----------|
| 000182 | FLUKE | 5700A | CALIBRATOR  | 5200003    | 2 Jul 99 |

Signed:   
 Title: 

LAST PAGE OF REPORT  
 Total Pages Printed: 1

Certificate # 29656



Southwest Research Institute  
6220 Culebra Road  
San Antonio, TX 78238  
Department of Quality Assurance  
Calibration Laboratory

## Out of Tolerance Notice

2 June 1999

The following asset was found to be out of tolerance when submitted for calibration. Please be aware measurements made with this instrument may be inaccurate.

### Instrument Information

Issued to: DARRELL DUNN DIV20 B57  
Manufacturer/Model: FISHER SCIENTIFIC ACCUMET 950  
Description: PH/ION METER  
Serial Number: 3340  
Asset Number: 001893  
SwRI Cap No.: NONE  
Calibration Interval: 12 months  
Remarks:

Accuracy: MFG SPECS  
Calibration Procedure: MFG P/N 1893

### Calibration Results

Out of Tolerance Date: 2 Jun 99

Last Valid Calibration Date: 18 May 98

#### Channel A

| APPLIED: | MEASURED: | ERROR: | TOLERANCE: |
|----------|-----------|--------|------------|
| 1000.0mV | 999.8mV   | .2mV   | +/- .1mV   |
| 1990.0mV | 1989.8mV  | .2mV   | +/- .1mV   |

#### Channel B

|           |           |      |          |
|-----------|-----------|------|----------|
| 1000.0mV  | 999.5mV   | .5mV | +/- .1mV |
| 1990.0mV  | 1989.6mV  | .4mV | +/- .1mV |
| -1000.0mV | -1000.2mV | .2mV | +/- .1mV |

Signed:

Checked by:

Certificate # 34487

Page 1 of 1

## Out of Tolerance Notice



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

## Certificate of Calibration

2 June 1999

**Issued to:** DARRELL DUNN DIV20 B57  
**Manufacturer/Model:** FISHER SCIENTIFIC ACCUMET 950  
**Description:** PH/ION METER  
**Serial Number:** 3340  
**Asset Number:** 001893

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: 72.0 Degrees Fahrenheit Humidity: 42 % RH

**Calibration Date:** 2 Jun 99 **Calibration Procedure:** MFG P/N 1893

**Condition as Received:** OUT OF TOLERANCE

**Condition as Released:** IN TOLERANCE, ADJUSTED

**Remarks:** LIMITED: CAL MV USE ONLY

**Approved by:**

Jim Patterson, Supervisor or Walt Hill, Metrologist

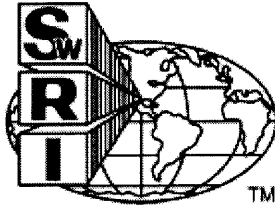
**Certificate # 34487**

m:\nona21a.rpt Rev date 13 Apr 99

**Measurements performed by:**

Vince Morales, Technician

Page 1 of 1



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

## Certificate of Calibration

7 August 2002

**Issued to:** DARRELL DUNN DIV20 B57  
**Manufacturer/Model:** FISHER SCIENTIFIC ACCUMET 950  
**Description:** PH/ION METER  
**Serial Number:** 3340  
**Asset Number:** 001893  
**Work Order Number:** 444049528

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: 72.0 Degrees Fahrenheit Humidity: 40 % RH

**Calibration Date:** 7 Aug 02 **Calibration Procedure:** ORION 950 5520A 1YR JULY 2000

**Condition as Received:** LIMITED CALIBRATION

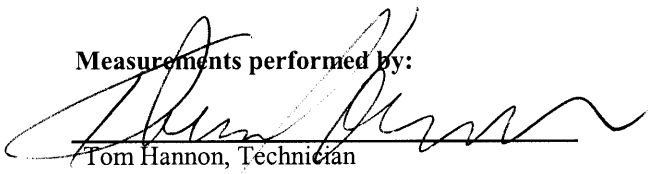
**Condition as Returned:** LIMITED CALIBRATION

**Remarks:** LIMITED CALIBRATION: MILLIVOLT USE ONLY

**Approved by:**

  
Walt Hill, Metrology Group Leader  
Institute Calibration Laboratory

**Measurements performed by:**

  
Tom Hannon, Technician

Southwest Research Institute  
Calibration Laboratory  
Calibration Sheet

Found/Left

|             |           |       |                   |            |               |
|-------------|-----------|-------|-------------------|------------|---------------|
| Work Order: | 444049528 | Mfr.  | Fisher Scientific | Technician | Thomas Hannon |
| Asset No.   | 001893    | Model | 950               | Procedure  | CL-38 05/99   |
| Serial No.  | 3340      | Type. | Ph Meter          | Cal Date.  | Aug. 7, 2002  |

Remarks:

LIMITED CAL: mVolts Only

| Function/Range | Test Point | TI Reading | Difference (1) | Test Limits+/- | Uncertainty (2) | Results |
|----------------|------------|------------|----------------|----------------|-----------------|---------|
| Ch A           | mVolts     | mVolts     | mVolts         | mVolts         | mVolts          |         |
|                | 1000.0     | 999.9      | -0.1           | 0.1            | 0.13            |         |
|                | -1000.0    | -1000.1    | -0.1           | 0.1            | 0.13            |         |
|                | 1990.0     | 1989.9     | -0.1           | 0.1            | 0.17            |         |
|                | -1990.0    | -1990.1    | -0.1           | 0.1            | 0.17            |         |

| Function/Range | Test Point | TI Reading | Difference (1) | Test Limits+/- | Uncertainty (2) | Results |
|----------------|------------|------------|----------------|----------------|-----------------|---------|
| Ch B           | mVolts     | mVolts     | mVolts         | mVolts         | mVolts          |         |
|                | 1000.0     | 1000.1     | 0.1            | 0.1            | 0.13            |         |
|                | -1000.0    | -999.9     | 0.1            | 0.1            | 0.13            |         |
|                | 1990.0     | 1990.1     | 0.1            | 0.1            | 0.17            |         |
|                | -1990.0    | -1989.9    | 0.1            | 0.1            | 0.17            |         |



# SOUTHWEST RESEARCH INSTITUTE™

6220 Culebra Road, P.O. Drawer 28510  
Institute Quality Systems  
Institute Calibration Laboratory  
Phone: 210-522-5215 Fax 210-522-3692

## Certificate of Calibration

**Submitted By:** DIV20  
**Address:** B57  
**Contact:** DARRELL DUNN  
**Manufacturer Model:** FISHER SCIENTIFIC ACCUMET 950  
**Description:** PH/ION METER  
**Serial No:** 3340  
**Asset No:** 001893  
**Procedure:** ORION 950 5520A 1YR JULY 2000

**Work Order:** 444054922  
**Date Issued:** Aug 11, 2003  
**Calibration Date:** Aug 11, 2003  
**\*\*Calibration Due:** Aug 11, 2004  
**Calibration Location:** Bldg. 64  
**Environment:** Temp. 72.0°F Hum. 41 %RH  
**\*As Found:** LIMITED CALIBRATION  
**\*As Left:** LIMITED CALIBRATION

This certificate documents traceability to the National Institute of Standards and Technology (NIST) and the International System of Units (SI). The Laboratory quality system conforms to ISO/IEC 17025, 1999 and ANSI/NC SL Z540-1-1994 which are equivalent to relevant requirements of the ISO 9000-1994 series of standards. This certificate may not be reproduced, except in full, without the written approval of the Southwest Research Institute Calibration Laboratory. The results of this calibration relate only to the individual instrument described above. This certificate shall not be used to claim product endorsement by the American Association for Laboratory Accreditation (A2LA) or any agency of the U. S. Government

Uncertainty evaluation includes the item under test and is calculated in accordance with the ISO "Guide to the Expression of Uncertainty in Measurement" (GUM). The uncertainty represents an expanded uncertainty using a coverage factor of  $k=2$  to approximate a 95% confidence level. The calibration process provides a Test Uncertainty Ratio (TUR) of less than or equal to 25% (4:1) of the test limit unless otherwise stated in remarks or an attachment

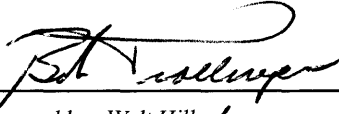
\*The client has sole responsibility for determination of in/out of tolerance or compliance/noncompliance. An in/out of tolerance opinion is provided for your convenience based only on the Test Instrument (TI) reading(s) and limits as reported. The reported uncertainty relates only to the results at the time of calibration and does not imply any short or long term stability of the TI.

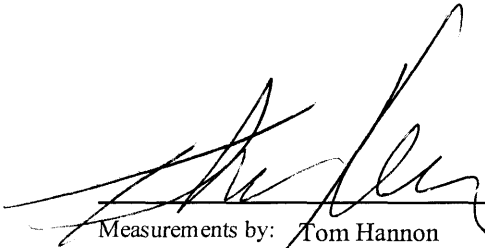
\*\*Calibration interval is determined by the client and does not assure the instrument will remain within tolerance until this date. Any number of factors may cause the instrument to be out of tolerance before the next calibration date.

**Remarks:** Millivolt Use Only

### Standards Used

| Asset  | Manufacturer | Model        | Description              | Cal Due    |
|--------|--------------|--------------|--------------------------|------------|
| 006413 | FLUKE        | 5520A/SC1100 | MULTI-PRODUCT CALIBRATOR | Jan 17, 04 |

  
Approved by: Walt Hill *for*  
Metrology Group Leader  
m:\Nona2\la1.rpt Rev date 15, August 02

  
Measurements by: Tom Hannon  
Metrology Technician

Southwest Research Institute  
 Calibration Laboratory  
 Calibration Report

|             |           |       |                   |            |           |
|-------------|-----------|-------|-------------------|------------|-----------|
| Work Order: | 444054922 | Mfr.  | Fisher Scientific | Technician | TJH       |
| Asset No.   | 001893    | Model | 950               | Cal Date.  | 11-Aug-03 |
| Serial No.  | 3340      | Type. | Ph Meter          |            |           |

Remarks:

LIMITED CAL: mVolts Only

| Function/Range | Test Point | TI Reading | Difference | +/-Limit | +/-Uncertainty | As Found |
|----------------|------------|------------|------------|----------|----------------|----------|
| Ch A           | mVolts     | mVolts     | mVolts     | mVolts   | mVolts         | Result   |
|                | 1000.0     | 999.9      | -0.1       | 0.1      | 0.13           | Pass     |
|                | -1000.0    | -1000.1    | -0.1       | 0.1      | 0.13           | Pass     |
|                | 1990.0     | 1989.9     | -0.1       | 0.1      | 0.17           | Pass     |
|                | -1990.0    | -1990.0    | 0.0        | 0.1      | 0.17           | Pass     |
| Ch B           | mVolts     | mVolts     | mVolts     | mVolts   | mVolts         |          |
|                | 1000.0     | 999.9      | -0.1       | 0.1      | 0.13           | Pass     |
|                | -1000.0    | -1000.0    | 0.0        | 0.1      | 0.13           | Pass     |
|                | 1990.0     | 1990.0     | 0.0        | 0.1      | 0.17           | Pass     |
|                | -1990.0    | -1990.0    | 0.0        | 0.1      | 0.17           | Pass     |

END OF REPORT

INSTITUTE CALIBRATION LABORATORY WORK REQUEST

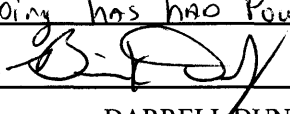
||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||

Arrived 10/31/2003

Received by RCRUZ, 10/31/2003 1:34:35PM

Asset No. **001893**

Work Request **444056116**

|  |  |
|--|--|
| <b>Manufacturer</b> FISHER SCIENTIFIC  | <b>Charge/Project No.</b> 00751.006 1.20   |
| <b>Description</b> PH/ION METER  | <b>Div/Client</b> DIV20  |
| <b>Model</b> ACCUMET 950   | <b>Custodian</b> DARRELL DUNN  |
| <b>Serial No.</b> 3340   | <b>Mail Stop</b> B57   |
| <b>Div ID/Loc.</b>   | <b>Phone</b> 6090  |
| <b>Interval</b> 12M  | <b>Type Certificate</b>  |
| <b>Special</b> Need by tue am  |  |
| <b>Instructions</b> <u>Meter says check Cal - self test. Building has had Power Spikes</u>           |  |
| <b>Notify for approval before adjusting</b> <input checked="" type="checkbox"/>                      |  |
| <b>Notify if repair exceeds \$500 or 50% of replacement cost</b> <input checked="" type="checkbox"/> | DARRELL DUNN   |

*207-766-7000*

|                      |                    |
|----------------------|--------------------|
| _____ Date Picked Up | _____ Picked Up By |
|----------------------|--------------------|

WORK SUMMARY

|  |  |
|--|--|
| <b>Asset No.</b> 001893                                    | <b>Work Request</b> 444056116            |
| <b>Manufacturer</b> FISHER SCIENTIFIC                      | <b>Charge/Project No.</b> 00751.006 1.20 |
| <b>Model</b> ACCUMET 950                                   | <b>Div/Client</b> DIV20                  |
| <b>Calibration Procedure</b> ORION 950 5520A 1YR JULY 2000 |  |

| Date        | Emp. | Hours | Remarks  |
|-------------|------|-------|--|
| Nov. 3 2003 | JH   | 1.0   | Unit will not switch measurement parameters -<br>Self-Test and diagnostics inaccessible. Unit<br>won't read mv values when applied |
| 11-5-03     |      |       | Fisher Scientific P.O.C.   |
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