

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 B168 NARASI SRIDHAR

Device No: 2029

Manufacturer: SARTORIUS

Model: RC210P

Nomenclature: ELECTRONIC BALANCE

Serial Number: 10704379

SwRI No: NONE

Remarks

Accuracy: MFGRS SPEC

Procedure: SWRI

ENVIRONMENT

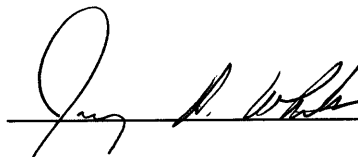
Temperature: 0 Humidity: 0 Location: DIV 20 B57 SWRI

CONCLUSION

Tolerance/Remarks: Received into the system, introduced or reactivated

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: 01/19/93

Record Number: 00010554

Next Calibration Due: 07/19/93

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: 10704379

Calibration Date: 01/19/93

STANDARDS

Standard No: 1704	Manufacturer: RICE LAKE	Model: 1 GRAM
Nomenclature: WEIGHT STANDARD		
Serial No: C859	Cal.Due: 07/08/93	Cal.Rec.No: 00000000
Standard No: 1708	Manufacturer: RICE LAKE	Model: 10 GRAM
Nomenclature: WEIGHT STANDARD		
Serial No: C863	Cal.Due: 07/08/93	Cal.Rec.No: 00000000
Standard No: 1711	Manufacturer: RICE LAKE	Model: 50 GRAM
Nomenclature: WEIGHT STANDARD		
Serial No: C866	Cal.Due: 07/08/93	Cal.Rec.No: 00000000
Standard No: 1712	Manufacturer: RICE LAKE	Model: 100 GRAM
Nomenclature: WEIGHT STANDARD		
Serial No: C867	Cal.Due: 07/08/93	Cal.Rec.No: 00000000
Standard No: 1713	Manufacturer: RICE LAKE	Model: 200 GRAM
Nomenclature: WEIGHT STANDARD		
Serial No: C868	Cal.Due: 07/08/93	Cal.Rec.No: 00000000
Standard No: 1720	Manufacturer: RICE LAKE	Model: 1 - 500 MG
Nomenclature: WEIGHT STANDARDS		
Serial No: C858	Cal.Due: 07/08/93	Cal.Rec.No: 00000000

BALANCE CALIBRATION VERIFICATION FORM

DATE: 19 JAN 93

MFGR.: SARTORIUS

MODEL: RC 210P

SER. NO. 10704379

RANGE: 210g

CALIBRATION DATES

TEMPERATURE: N/A

HUMIDITY: N/A

LAST: MAY 92

NEXT: 19 JUL 93

CALIBRATED BY: JERRY A. WHITE
PRINT NAME

UNCERTAINTY in MILLIGRAMS of 200g STANDARD
BALANCE TOLERANCES 0.410

BALANCE CAL #: 10554

LIN. TOL.: 0.15

REP. TOL.: 0.02/0.04/0.05

RANGE VERIFICATION										POSITION GUIDE	
	RANGE #1			RANGE #2			RANGE #3				
	CALIBRATION POINTS			CALIBRATION POINTS			CALIBRATION POINTS				
	1	2	3	1	2	3	3	4	5		
DATA PTS.	200g	150g		100g	50g	10g	5g	100mg	10mg		
RUN #1	200.00005	149.99990		99.99980	49.99980	9.99994	1.00001	100.00	10.01		
RUN #2	200.00005	149.99990		99.99978	49.99979	9.99995	1.00001	100.00	10.01		
RUN #3	200.00005	149.99985		99.99976	49.99976	9.99995	1.00001	100.01	10.02		
MEAN	200.00005	149.99988		99.99978	49.99978	9.99994	1.00001	100.003	10.013		
STD. DEV.	0.02 .00	0.05 .001		0.04 .00	0.02 .0003	.000	00	.005	.005		

SHIFT VERIFICATION				
SELF CALIBRATION Y/N INTERNAL: _____ EXTERNAL: <input checked="" type="checkbox"/>				
WEIGHT VALUE	PAN POSITION			
	1	2	3	4

COMMENTS: Add to system. Total uncertainty of sensor is .410 mg (200g used to cal scale)

SIGNATURE: Jerry A. White

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 NARASI SRIDHAR

Device No: 2029

Manufacturer: SARTORIUS

Model: RC210P

Nomenclature: ELECTRONIC BALANCE

Serial Number: 10704379

SwRI No: NONE

Cal interval 3 Mo.

Remarks

Accuracy: MFGRS SPEC

Procedure: SWRI

ENVIRONMENT

Temperature: 0 Humidity: 0 Location: SWRI DIV20 BLDG. 57

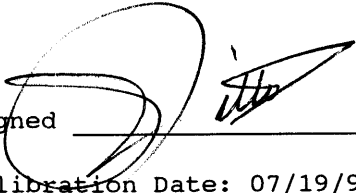
CONCLUSION

Tolerance/Remarks: Received out of tolerance, adjusted to specifications

Calibration cycle shortened to three months with new cal due date of October 19, 1993. Per memorandum from division 20 Narasi Sridhar, dated August 16, 1993.

Certificate revised 8/30/93

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: 07/19/93

Cal interval: 3 Months

Record Number: 00011808 *R*

Next Calibration Due: 10/19/93

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: 10704379

Calibration Date: 07/19/93

STANDARDS

Standard No: 1704	Manufacturer: RICE LAKE	Model: 1 GRAM
Nomenclature: WEIGHT STANDARD		
Serial No: C859	Cal.Due: 06/30/94	Cal.Rec.No: 00011756
Standard No: 1708	Manufacturer: RICE LAKE	Model: 10 GRAM
Nomenclature: WEIGHT STANDARD		
Serial No: C863	Cal.Due: 06/30/94	Cal.Rec.No: 00011760
Standard No: 1711	Manufacturer: RICE LAKE	Model: 50 GRAM
Nomenclature: WEIGHT STANDARD		
Serial No: C866	Cal.Due: 06/30/94	Cal.Rec.No: 00011763
Standard No: 1712	Manufacturer: RICE LAKE	Model: 100 GRAM
Nomenclature: WEIGHT STANDARD		
Serial No: C867	Cal.Due: 06/30/94	Cal.Rec.No: 00011764
Standard No: 1713	Manufacturer: RICE LAKE	Model: 200 GRAM
Nomenclature: WEIGHT STANDARD		
Serial No: C868	Cal.Due: 06/30/94	Cal.Rec.No: 00011765
Standard No: 1714	Manufacturer: RICE LAKE	Model: 200 GRAM
Nomenclature: WEIGHT STANDARD		
Serial No: C869	Cal.Due: 06/30/94	Cal.Rec.No: 00011766
Standard No: 1720	Manufacturer: RICE LAKE	Model: 1 - 500 MG
Nomenclature: WEIGHT STANDARDS		
Serial No: C858	Cal.Due: 06/30/94	Cal.Rec.No: 00011772

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 NARASI SRIDHAR

Device No: 2029

Manufacturer: SARTORIUS

Model: RC210P

Nomenclature: ELECTRONIC BALANCE

Serial Number: 10704379

SwRI No: NONE

Cal interval 3 Mo.

Remarks

Accuracy: MFGRS SPEC

Procedure: SWRI

ENVIRONMENT

Temperature: 70

Humidity: 40

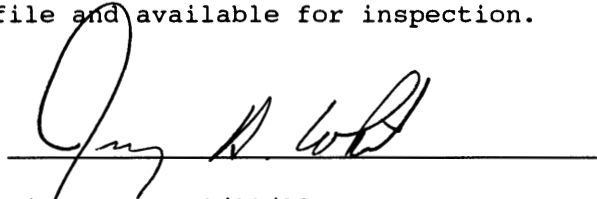
Location: SWRI DIV20 BLDG. 57

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: 10/22/93

Cal interval: 3 Months

Record Number: 00012629

Next Calibration Due: 01/22/94

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: 10704379

Calibration Date: 10/22/93

STANDARDS

Standard No: 1704	Manufacturer: RICE LAKE	Model: 1 GRAM
Nomenclature: WEIGHT STANDARD		
Serial No: C859	Cal.Due: 06/30/94	Cal.Rec.No: 00011756
Standard No: 1708	Manufacturer: RICE LAKE	Model: 10 GRAM
Nomenclature: WEIGHT STANDARD		
Serial No: C863	Cal.Due: 06/30/94	Cal.Rec.No: 00011760
Standard No: 1712	Manufacturer: RICE LAKE	Model: 100 GRAM
Nomenclature: WEIGHT STANDARD		
Serial No: C867	Cal.Due: 06/30/94	Cal.Rec.No: 00011764
Standard No: 1714	Manufacturer: RICE LAKE	Model: 200 GRAM
Nomenclature: WEIGHT STANDARD		
Serial No: C869	Cal.Due: 06/30/94	Cal.Rec.No: 00011766
Standard No: 1720	Manufacturer: RICE LAKE	Model: 1 - 500 MG
Nomenclature: WEIGHT STANDARDS		
Serial No: C858	Cal.Due: 06/30/94	Cal.Rec.No: 00011772

BALANCE CALIBRATION VERIFICATION FORM

DATE: 22 Oct 93 MFGR: JANTORIUS MODEL: RC 210P

SER. NO. 10704379 RANGE: 200g CALIBRATION DATES

TEMPERATURE: 70° HUMIDITY: 40% LAST: 19 JUL 93 NEXT: 22 JAN 94

CALIBRATED BY: Jerry N. White

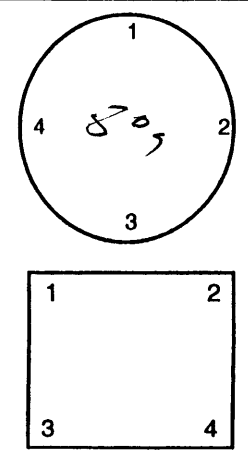
BALANCE TOLERANCES

BALANCE CAL #: 12629 LINE. TOL.: _____ REP. TOL.: _____

RANGE VERIFICATION

	RANGE #1			RANGE #2			RANGE #3		
	CALIBRATION POINTS			CALIBRATION POINTS			CALIBRATION POINTS		
	1	2	3	1	2	3	1	2	3
DATA PTS.	200g	100g	10g	1g	100mg				
RUN #1	200.00000	100.00002	9.99995	99999	09999				
RUN #2	200.00000	100.00000	9.99995	99999	09999				
RUN #3	200.00000	100.00000	9.99995	99999	09999				
MEAN									
STD. DEV.									

POSITION GUIDE



SHIFT VERIFICATION

SELF CALIBRATION Y/N INTERNAL: _____ EXTERNAL 200g

COMMENTS: _____

WEIGHT VALUE	PAN POSITION			
	1	2	3	4
50g	50.0000	50.00		

SIGNATURE: Jerry N. White

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 NARASI SRIDHAR

Device No: 2029

Manufacturer: SARTORIUS

Model: RC210P

Nomenclature: ELECTRONIC BALANCE

Serial Number: 10704379

SwRI No: NONE

Cal interval 3 Mo.

Remarks

Accuracy: MFGRS SPEC

Procedure: SWRI

ENVIRONMENT

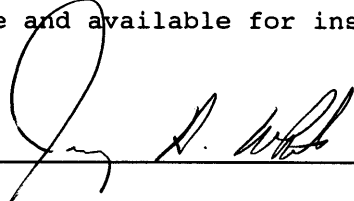
Temperature: 76 Humidity: 60 Location: SWRI DIV20 BLDG. 57

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: 01/24/94

Cal interval: 3 Months

Record Number: 00013185

Next Calibration Due: 04/24/94

BALANCE CALIBRATION VERIFICATION FORM

DATE: 24 JAN 94 MFGR: SARTORIUS MODEL: RC210P

SER. NO. 10704379 RANGE: 200g CALIBRATION DATES

TEMPERATURE: 76. HUMIDITY: 60% LAST: 22 Oct 93 NEXT: 24 APR 94

CALIBRATED BY: Jerry A. White

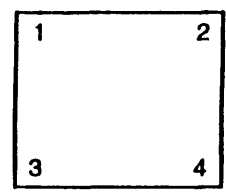
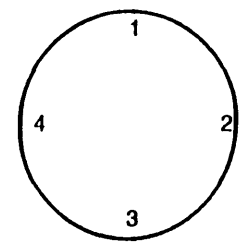
BALANCE TOLERANCES

BALANCE CAL #: _____ LINE. TOL.: 0.15 REP. TOL.: 0.02/04/.05

RANGE VERIFICATION

POSITION GUIDE

	RANGE #1			RANGE #2			RANGE #3		
	CALIBRATION POINTS			CALIBRATION POINTS			CALIBRATION POINTS		
	1	2	3	1	2	3	1	2	3
DATA PTS.	200g	150g	100g	100g	20g		50g	10g	1g
RUN #1	200.00000	199.99995		99.99998	70.00000		49.99998	10.00001	99998
RUN #2	199.99995	149.99995		99.99998	70.00000		49.99999	10.00000	.99999
RUN #3	199.99998	149.99998		99.99997	70.00000		49.99999	10.00000	.99999
MEAN	199.99995	149.99995		99.99998	70.00000		49.99998	10.00000	99998
STD. DEV.									



SHIFT VERIFICATION

COMMENTS: Total uncertainty is .410 mg (200g wt) to cal standards

SELF CALIBRATION Y/N INTERNAL: EXTERNAL _____

WEIGHT VALUE	PAN POSITION			
	1	2	3	4
50g	50.00000	50.00000	50.00000	50.00000

SIGNATURE: Jerry A. White

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 NARASI SRIDHAR

Device No: 2029

Manufacturer: SARTORIUS

Model: RC210P

Nomenclature: ELECTRONIC BALANCE

Serial Number: 10704379

SwRI No: NONE

Cal interval 3 Mo.

Remarks

Accuracy: MFGRS SPEC

Procedure: SWRI

ENVIRONMENT

Temperature:

Humidity:

Location: SWRI DIV20 BLDG. 57

CONCLUSION

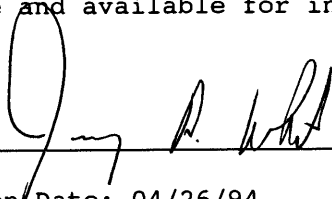
Tolerance/Remarks: Received in tolerance, no adjustments made

Room Temperature.

Limited Calibration- +/- .410mg (uncertainty of 200g calibration weight)

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: 04/26/94

Cal interval: 3 Months

Record Number: 00013951

Next Calibration Due: 07/26/94

BALANCE CALIBRATION VERIFICATION FORM

DATE: 26 APR 94 MFGR: SARTORIUS MODEL: RC210P

SER. NO. 10704379 RANGE: 200g CALIBRATION DATES

TEMPERATURE: _____ HUMIDITY: _____ LAST: 24 JAN 94 NEXT: 26 JUL 94

CALIBRATED BY: Jerry A. White

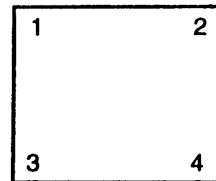
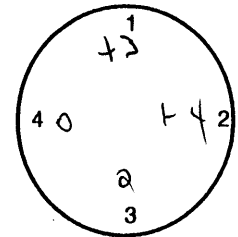
BALANCE TOLERANCES

BALANCE CAL #: 13932 LINE. TOL.: 0.15 REP. TOL.: .02/.04/.05

RANGE VERIFICATION

POSITION GUIDE

	RANGE #1			RANGE #2			RANGE #3		
	CALIBRATION POINTS			CALIBRATION POINTS			CALIBRATION POINTS		
	1	2	3	1	2	3	1	2	3
DATA PTS.	200g	150g	/	100g	70g	/	50g	10g	1g
RUN #1	179.99995	149.99995	/	99.99998	69.99996	/	49.99996	10.00001	.99998
RUN #2	159.99995	149.99995	/	89.99998	69.99998	/	49.99991	10.00001	.99998
RUN #3	139.99995	149.99995	/	79.99998	69.99998	/	49.99999	10.00002	.99999
MEAN			/			/			
STD. DEV.			/			/			



SHIFT VERIFICATION

SELF CALIBRATION Y/N INTERNAL: EXTERNAL:

COMMENTS: Total uncertainty of 200g cal weight

13 +/- .410mg

WEIGHT VALUE

PAN POSITION

	1	2	3	4
50g	50.00003	50.00004	50.00006	50.00008

SIGNATURE: Jerry A. White

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 NARASI SRIDHAR

Device No: 2029

Manufacturer: SARTORIUS

Model: RC210P

Nomenclature: ELECTRONIC BALANCE

Serial Number: 10704379

SwRI No: NONE

Cal interval 3 Mo.

Remarks

Accuracy: MFGRS SPEC

Procedure: SWRI

ENVIRONMENT

Temperature:

Humidity:

Location: SWRI DIV20 BLDG. 20

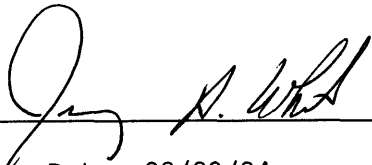
CONCLUSION

Tolerance/Remarks: Received in tolerance, no adjustments made

Room Temperature.

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: 08/02/94

Cal interval: 3 Months

Record Number: 00014789

Next Calibration Due: 11/02/95

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: 10704379

Calibration Date: 08/02/94

STANDARDS

Standard No: 1704	Manufacturer: RICE LAKE	Model: 1 GRAM
Nomenclature: WEIGHT STANDARD		
Serial No: C859	Cal.Due: 07/20/95	Cal.Rec.No: 00014516
Standard No: 1708	Manufacturer: RICE LAKE	Model: 10 GRAM
Nomenclature: WEIGHT STANDARD		
Serial No: C863	Cal.Due: 07/20/95	Cal.Rec.No: 00014520
Standard No: 1710	Manufacturer: RICE LAKE	Model: 20 GRAM
Nomenclature: WEIGHT STANDARD		
Serial No: C865	Cal.Due: 07/20/95	Cal.Rec.No: 00014522
Standard No: 1711	Manufacturer: RICE LAKE	Model: 50 GRAM
Nomenclature: WEIGHT STANDARD		
Serial No: C866	Cal.Due: 07/20/95	Cal.Rec.No: 00014523
Standard No: 1712	Manufacturer: RICE LAKE	Model: 100 GRAM
Nomenclature: WEIGHT STANDARD		
Serial No: C867	Cal.Due: 07/20/95	Cal.Rec.No: 00014524
Standard No: 1714	Manufacturer: RICE LAKE	Model: 200 GRAM
Nomenclature: WEIGHT STANDARD		
Serial No: C869	Cal.Due: 07/20/95	Cal.Rec.No: 00014526

BALANCE CALIBRATION VERIFICATION FORM

DATE: 2 AUG 94 MFGR: SARTORIUS MODEL: RC210P

SER. NO. 10704379 RANGE: 200g CALIBRATION DATES

TEMPERATURE: _____ HUMIDITY: _____ LAST: 26 APR 94 NEXT: 26 NOV 94

CALIBRATED BY: Jerry M. White

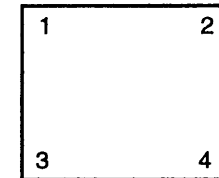
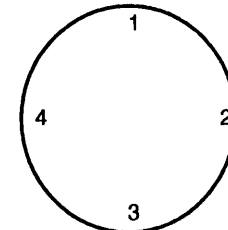
BALANCE TOLERANCES

BALANCE CAL #: _____ LINE. TOL.: .015 REP. TOL.: .02 / .04 / .05

RANGE VERIFICATION

	RANGE #1			RANGE #2			RANGE #3		
	CALIBRATION POINTS			CALIBRATION POINTS			CALIBRATION POINTS		
	1	2	3	1	2	3	1	2	3
DATA PTS.	200g	150g		100g	70g		50g	10g	1g
RUN #1	199.99995	150.00000		100.00005	70.00005		50.00004	10.00004	0.99998
RUN #2	199.99995	150.00000		100.00004	70.00005		50.00004	10.00004	0.99998
RUN #3	199.99995	150.00000		100.00005	70.00004		50.00005	10.00004	0.99998
MEAN	199.99995	150.00000		100.00005	70.00004		50.00005	10.00004	0.99998
STD. DEV.									

POSITION GUIDE



SHIFT VERIFICATION

SELF CALIBRATION Y/N INTERNAL: EXTERNAL:

COMMENTS: Total uncertainty of 200g cal weight
is +/- .410mg

WEIGHT VALUE

PAN POSITION

	1	2	3	4
50g	50.00003	50.00005	50.00000	50.00000

SIGNATURE: Jerry M. White

SOUTHWEST RESEARCH INSTITUTE
Department of Quality Assurance
Calibration Laboratory

CERTIFICATE OF CALIBRATION
01/25/95

Issued to: NARASI SRIDHAR DIV20 ,B57
Manufacturer: SARTO
Nomenclature: ELECTRONIC BALANCE
Serial Number: 10704379

Asset Number: 002029
Model Number: RC210P
SwRI Capital Number: NONE

ENVIRONMENTAL CONDITIONS

Temperature: 70.9F

Relative Humidity: 50 %

CALIBRATION INFORMATION

Location: B57
Procedure Number: SWRI
Remarks: UNCERTANITY OF 200G CAL WEIGHT IS +/-0.410MG

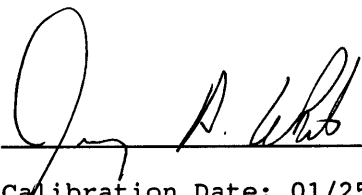
Technician: 7213
Accuracy: MFGR SPECS
Received IN Tolerance

Calibration was in accordance 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.

STANDARDS USED FOR CERTIFICATION

Asset #	Serial #	Mfg	Model #	Nomenclature	Cal Date	Int.	Cal Due
001704	C859	RICE	1 GRAM	WEIGHT STANDARD	07/20/94	12	07/20/95
001708	C863	RICE	10 GRAM	WEIGHT STANDARD	07/20/94	12	07/20/95
001710	C865	RICE	20 GRAM	WEIGHT STANDARD	07/20/94	12	07/20/95
001711	C866	RICE	50 GRAM	WEIGHT STANDARD	07/20/94	12	07/20/95
001712	C867	RICE	100 GRAM	WEIGHT STANDARD	07/20/94	12	07/20/95
001714	C869	RICE	200 GRAM	WEIGHT STANDARD	07/20/94	12	07/20/95

Certified by :



Calibration Date: 01/25/95
Interval: 3 months
Next Calibration Due: 04/25/95

Certificate#: 16303

BALANCE CALIBRATION VERIFICATION FORM

DATE: 25 JAN 95 MFGR: SARTORIUS MODEL: RC210P

SER. NO. 10704379 RANGE: _____ CALIBRATION DATES

TEMPERATURE: 70.9 HUMIDITY: 50% LAST: 2 AUG 94 NEXT: 25 APR 95

CALIBRATED BY: Jenny A. White

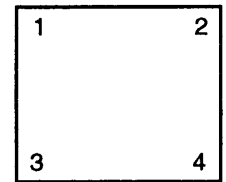
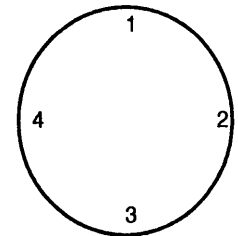
BALANCE TOLERANCES

BALANCE CAL #: 16303 LINE. TOL.: 0.15 REP. TOL.: .02/.04/.05

RANGE VERIFICATION

POSITION GUIDE

	RANGE #1			RANGE #2			RANGE #3		
	CALIBRATION POINTS			CALIBRATION POINTS			CALIBRATION POINTS		
	1	2	3	1	2	3	1	2	3
DATA PTS.	200g	150g							
RUN #1	200.00000	149.99990		80.99995	69.99995		49.99995	39.99997	29.99998
RUN #2	200.00000	149.99990		80.99995	69.99995		49.99995	39.99997	29.99998
RUN #3	200.00000	149.99990		100.00000	70.00000		49.99995	39.99997	29.99998
MEAN									
STD. DEV.									



SHIFT VERIFICATION

COMMENTS: Total uncertainty of 200g cal weight

SELF CALIBRATION Y/N INTERNAL: EXTERNAL _____

WEIGHT VALUE	PAN POSITION			
	1	2	3	4
	50.0000	50.0000	50.99995	50.99995

SIGNATURE: Jenny A. White

SOUTHWEST RESEARCH INSTITUTE

**Department of Quality Assurance
Calibration Laboratory**

**CERTIFICATE OF CALIBRATION
05/05/95**

Issued to: DARRELL DUNN DIV20 ,B57
Manufacturer: SARTO
Nomenclature: ELECTRONIC BALANCE
Serial Number: 10704379

Asset Number: 002029
Model Number: RC210P

SwRI/Div. I.D. #: NONE

ENVIRONMENTAL CONDITIONS

Temperature: 74.0F

Relative Humidity: 58%

CALIBRATION INFORMATION

Procedure Number: SWRI
Remarks: UNCERTANITY OF CAL WEIGHT IS +/-0.410MG

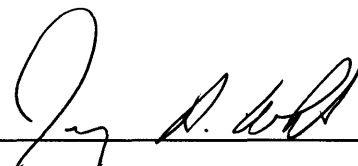
Accuracy: MFR SPECS
Received IN Tolerance

**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
001704	C859	RICE	1 GRAM	WEIGHT STANDARD	07/20/94	12	07/20/95
001708	C863	RICE	10 GRAM	WEIGHT STANDARD	07/20/94	12	07/20/95
001710	C865	RICE	20 GRAM	WEIGHT STANDARD	07/20/94	12	07/20/95
001711	C866	RICE	50 GRAM	WEIGHT STANDARD	07/20/94	12	07/20/95
001712	C867	RICE	100 GRAM	WEIGHT STANDARD	07/20/94	12	07/20/95
001714	C869	RICE	200 GRAM	WEIGHT STANDARD	07/20/94	12	07/20/95

Certified by :



Certificate#: 17214

Calibration Date: 05/05/95
Interval: 3 months
Next Calibration Due: 08/05/95

BALANCE CALIBRATION VERIFICATION FORM

DATE: 28 APR 95 MFGR: JANTORIUS MODEL: PC2107

SER. NO. 10704379 RANGE: 200/g CALIBRATION DATES

TEMPERATURE: 74 HUMIDITY: 58% LAST: 25 OCT 94 NEXT: 28 OCT 98

CALIBRATED BY: Jerry M. White

BALANCE TOLERANCES

BALANCE CAL #: 7214 LINE. TOL.: 0.15 REP. TOL.: 0.02/0.05

RANGE VERIFICATION										POSITION GUIDE	
	RANGE #1			RANGE #2			RANGE #3				
	CALIBRATION POINTS			CALIBRATION POINTS			CALIBRATION POINTS				
	1	2	3	1	2	3	1	2	3		
DATA PTS.	200g	150g		100g			50	10			
RUN #1	200.00000	149.99985		99.99954	69.99924		49.99957	10.00006	1.00010		
RUN #2	200.00006	149.99985		99.99954	69.99954		49.99958	10.00007	1.00012		
RUN #3	200.00000	149.99985		99.99954	69.99954		49.99957	10.00006	1.00010		
MEAN											
STD. DEV.											
SHIFT VERIFICATION										COMMENTS: <u>Total uncertainty of 200 cal weight</u> <u>is ± 0.410mg</u>	
SELF CALIBRATION Y/N INTERNAL: _____ EXTERNAL _____											
WEIGHT VALUE	PAN POSITION										
	1	2	3	4							
	50.00000	50.00000	49.99995	49.99995							
SIGNATURE:											

SOUTHWEST RESEARCH INSTITUTE
Department of Quality Assurance
Calibration Laboratory

CERTIFICATE OF CALIBRATION
08/03/95

Issued to: DARRELL DUNN DIV20 ,B57
Manufacturer: SARTO
Nomenclature: ELECTRONIC BALANCE
Serial Number: 10704379
Notes:

Asset Number: 002029
Model Number: RC210P
SwRI/Div. I.D. #: NONE

ENVIRONMENTAL CONDITIONS

Temperature: 74.0F

Relative Humidity: 41%

CALIBRATION INFORMATION

Procedure Number: SWRI
Remarks: UNCERTAINTY OF CAL WEIGHT IS 0.28MG.

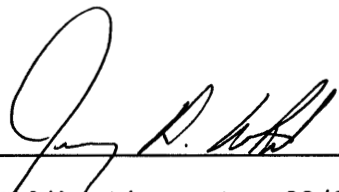
Accuracy: MFGR SPECS
Received IN Tolerance

Calibration was in accordance 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.

STANDARDS USED FOR CERTIFICATION

Asset #	Serial #	Mfg	Model #	Nomenclature	Cal Date	Int.	Cal Due
001714	C869	RICE	200 GRAM	WEIGHT STANDARD	06/23/95	12	06/23/96
001712	C867	RICE	100 GRAM	WEIGHT STANDARD	06/23/95	12	06/23/96
001711	C866	RICE	50 GRAM	WEIGHT STANDARD	06/23/95	12	06/23/96
001710	C865	RICE	20 GRAM	WEIGHT STANDARD	06/23/95	12	06/23/96
001708	C863	RICE	10 GRAM	WEIGHT STANDARD	06/23/95	12	06/23/96
001704	C859	RICE	1 GRAM	WEIGHT STANDARD	06/23/95	12	06/23/96

Certified by :



Calibration Date: 08/02/95
Interval: 3 months
Next Calibration Due: 11/02/95

Certificate#: 18186

AS FOUND BEYOND CNL

BALANCE CALIBRATION VERIFICATION FORM

DATE: 3 AUG 95 MFGR: SARTORIUS MODEL: RC210P

SER. NO. 10704379 RANGE: 200g CALIBRATION DATES

TEMPERATURE: 74 HUMIDITY: 41 LAST: 5 MAY NEXT: 2 NOV 95

CALIBRATED BY: Jerry P. White

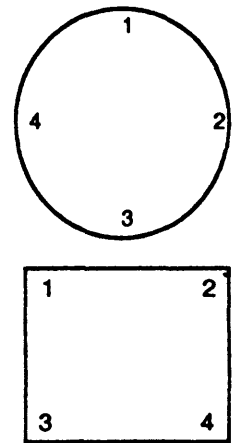
BALANCE TOLERANCES

BALANCE CAL #: 1818L LINE. TOL.: 0.15 REP. TOL.: .02/.04/.05

RANGE VERIFICATION

	RANGE #1			RANGE #2			RANGE #3		
	CALIBRATION POINTS			CALIBRATION POINTS			CALIBRATION POINTS		
	1	2	3	1	2	3	1	2	3
DATA PTS.	200g	150g		100g	70g		50	10	1g
RUN #1	199.99815	149.99830		99.9988L	69.9991L		49.99931	9.99977	0.9998L
RUN #2	159.99818	145.99830		99.9988L	69.9991L		49.99931	9.99977	0.9998L
RUN #3	159.99818	145.99830		99.9988L	69.9991L		49.99931	9.99977	0.9998L
MEAN									
STD. DEV.									

POSITION GUIDE



SHIFT VERIFICATION

SELF CALIBRATION Y/N INTERNAL: _____ EXTERNAL: _____

COMMENTS: OUT OF TOLERANCE
UNCERTAINTY of 200GRAM WEIGHT (CNL
WEIGHT) is 0.28mg
 SIGNATURE: Jerry P. White

WEIGHT VALUE	PAN POSITION			
	1	2	3	4

AFTE CNL

BALANCE CALIBRATION VERIFICATION FORM

DATE: 2 AUG 95 MFGR: SPR TORIUS MODEL: PC 210P

SER. NO. 10704379 RANGE: 200g CALIBRATION DATES

TEMPERATURE: 74 HUMIDITY: 41 LAST: 5 MAY 95 NEXT: 2 NOV 95

CALIBRATED BY: Jerry A. White

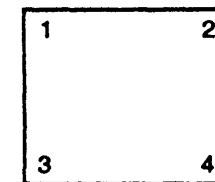
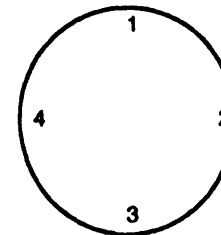
BALANCE TOLERANCES

BALANCE CAL #: 18185 LINE. TOL.: 0.15 REP. TOL.: 02/04/05

RANGE VERIFICATION

POSITION GUIDE

	RANGE #1			RANGE #2			RANGE #3		
	CALIBRATION POINTS			CALIBRATION POINTS			CALIBRATION POINTS		
	1	2	3	1	2	3	1	2	3
DATA PTS.	200g								
RUN #1	195.99995	149.99990		99.99992	69.99998		49.99999	9.99996	.99999
RUN #2	195.99995	149.99990		99.99992	69.99998		49.99999	9.99996	.99999
RUN #3	195.99995	149.99990		99.99992	69.99998		49.99999	9.99996	.99999
MEAN									
STD. DEV.									



SHIFT VERIFICATION

COMMENTS: _____

SELF CALIBRATION Y/N INTERNAL: _____ EXTERNAL 200g

WEIGHT VALUE	PAN POSITION			
	1	2	3	4
50g	45.99997	45.99997	45.99990	49.99990

SIGNATURE: [Signature]

SOUTHWEST RESEARCH INSTITUTE
Department of Quality Assurance
Calibration Laboratory

OUT OF TOLERANCE NOTICE

08/03/95

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

INSTRUMENT INFORMATION

Issued to: DARRELL DUNN DIV20 B57 Asset Number: 002029
Manufacturer: SARTO Model Number: RC210P
Nomenclature: ELECTRONIC BALANCE
Serial Number: 10704379 SwRI Capital Number: NONE
Accuracy: MFR SPECS Calibration Interval: 3 months

DEVIATION

Out of Tolerance Date: 08/02/95 Last Valid Calibration Date: 05/05/95

REMARKS

Standard	Balance reading	ERROR
200.00010g	199.99815	1.95 mg
149.99989g	149.99830	1.59 mg
99.99991g	99.99886	1.05 mg
69.99994g	69.99916	0.78 mg
49.99998g	49.99931	0.67 mg
9.99998g	9.99977	0.21 mg

The linearity of the balance is 0.15 milligrams

Signed

Checked by

OUT OF TOLERANCE

SOUTHWEST RESEARCH INSTITUTE
Department of Quality Assurance
Calibration Laboratory

OUT OF TOLERANCE NOTICE

08/03/95

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

INSTRUMENT INFORMATION

Issued to: DARRELL DUNN DIV20 B57 Asset Number: 002029
Manufacturer: SARTO Model Number: RC210P
Nomenclature: ELECTRONIC BALANCE
Serial Number: 10704379 SwRI Capital Number: NONE
Accuracy: MFGR SPECS Calibration Interval: 3 months

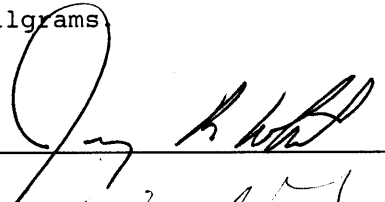
DEVIATION


Out of Tolerance Date: 08/02/95 Last Valid Calibration Date: 05/05/95

REMARKS

Standard	Balance reading	ERROR
200.00010g	199.99815	1.95 mg
149.99989g	149.99830	1.59 mg
99.99991g	99.99886	1.05 mg
69.99994g	69.99916	0.78 mg
49.99998g	49.99931	0.67 mg
9.99998g	9.99977	0.21 mg

The linearity of the balance is 0.15 milligrams.

Signed 

Checked by 

OUT OF TOLERANCE

SOUTHWEST RESEARCH INSTITUTE
Department of Quality Assurance
Calibration Laboratory

CERTIFICATE OF CALIBRATION
11/03/95

Issued to: DARRELL DUNN DIV20 ,B57
Manufacturer/Model: SARTO/RC210P
Nomenclature: ELECTRONIC BALANCE
Serial Number: 10704379
Asset Number: 002029
Notes:

ENVIRONMENTAL CONDITIONS

Temperature: 75.0F

Relative Humidity: 66%

CALIBRATION INFORMATION

Procedure Number: WI-9-30-WT01
Remarks:

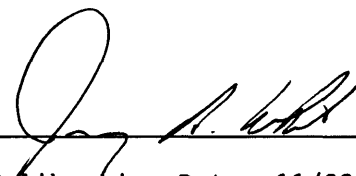
Accuracy: MFGR SPECS
Received IN Tolerance

Calibration was in accordance 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.

STANDARDS USED FOR CERTIFICATION

Asset #	Serial #	Mfg	Model #	Nomenclature	Cal Date	Int.	Cal Due
001714	C869	RICE	200 GRAM	WEIGHT STANDARD	06/23/95	12	06/23/96
001712	C867	RICE	100 GRAM	WEIGHT STANDARD	06/23/95	12	06/23/96
001711	C866	RICE	50 GRAM	WEIGHT STANDARD	06/23/95	12	06/23/96
001710	C865	RICE	20 GRAM	WEIGHT STANDARD	06/23/95	12	06/23/96
001708	C863	RICE	10 GRAM	WEIGHT STANDARD	06/23/95	12	06/23/96
001704	C859	RICE	1 GRAM	WEIGHT STANDARD	06/23/95	12	06/23/96

Certified by :



Calibration Date: 11/02/95
Interval: 3 months
Next Calibration Due: 02/02/96

Certificate#: 19167

BALANCE CALIBRATION VERIFICATION FORM

DATE: 2 NOV 95 MFGR: SANTORIOS MODEL: RC210P

SER. NO. 10704377 RANGE: 200 CALIBRATION DATES

TEMPERATURE: 75 HUMIDITY: 66 LAST: 3 AUG 95 NEXT: 2 FEB 96

CALIBRATED BY: Jerry M. White

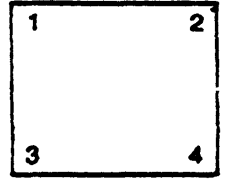
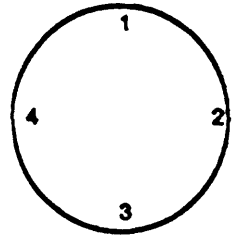
BALANCE TOLERANCES

BALANCE CAL #: 09167 LINE. TOL.: 0.15 REP. TOL.: .12/.04/.05

RANGE VERIFICATION

POSITION GUIDE

	RANGE #1			RANGE #2			RANGE #3		
	CALIBRATION POINTS			CALIBRATION POINTS			CALIBRATION POINTS		
	1	2	3	1	2	3	1	2	3
DATA PTS.	200g	150g		100g	70g		50	10	1g
RUN #1	199.99980	149.99980		99.99994	70.00008		50.00000	10.00008	1.00009
RUN #2	199.99980	149.99980		99.99996	70.00006		50.00002	10.00008	1.00009
RUN #3	199.99985	149.99985		99.99994	70.00006		50.00000	10.00009	1.00009
MEAN									
STD. DEV.									



SHIFT VERIFICATION

SELF CALIBRATION Y/N INTERNAL: EXTERNAL:

COMMENTS: _____

UNCERTAINTY of 200 mg pan weight (cal weight) is 0.28%

SIGNATURE: Jerry M. White

WEIGHT VALUE	PAN POSITION			
	1	2	3	4

SOUTHWEST RESEARCH INSTITUTE

**Department of Quality Assurance
Calibration Laboratory**

**CERTIFICATE OF CALIBRATION
02/07/96**

Issued to: DARRELL DUNN DIV20 ,B57
Manufacturer/Model: SARTO/RC210P
Nomenclature: ELECTRONIC BALANCE
Serial Number: 10704379
Asset Number: 002029
Notes:

ENVIRONMENTAL CONDITIONS

Temperature: 71.0F

Relative Humidity: 50%

CALIBRATION INFORMATION

Procedure Number: WI-9-30-WT01
Remarks:

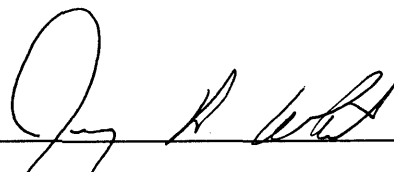
Accuracy: MFGR SPECS
Received IN Tolerance

**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
001714	C869	RICE	200 GRAM	WEIGHT STANDARD	06/23/95	12	06/23/96
001712	C867	RICE	100 GRAM	WEIGHT STANDARD	06/23/95	12	06/23/96
001711	C866	RICE	50 GRAM	WEIGHT STANDARD	06/23/95	12	06/23/96
001710	C865	RICE	20 GRAM	WEIGHT STANDARD	06/23/95	12	06/23/96
001708	C863	RICE	10 GRAM	WEIGHT STANDARD	06/23/95	12	06/23/96
001704	C859	RICE	1 GRAM	WEIGHT STANDARD	06/23/95	12	06/23/96

Certified by :



Calibration Date: 02/06/96
Interval: 3 months
Next Calibration Due: 05/06/96

Certificate#: 20000

ID 2025

BALANCE CALIBRATION VERIFICATION FORM

DATE: 6 FEB 96 MFGR: SHARTORIUS MODEL: RC210 T

SER. NO. 10704379 RANGE: _____ CALIBRATION DATES

TEMPERATURE: 71 HUMIDITY: 50% LAST: 2 NOV 96 NEXT: 6 MAY 96

CALIBRATED BY: Jerry R. White

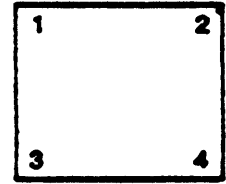
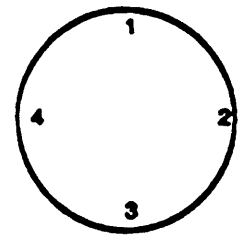
BALANCE TOLERANCES

BALANCE CAL #: 20000 LINE. TOL.: .015 REP. TOL.: .12/.04/.05

RANGE VERIFICATION

POSITION GUIDE

	RANGE #1			RANGE #2			RANGE #3		
	CALIBRATION POINTS			CALIBRATION POINTS			CALIBRATION POINTS		
	1	2	3	1	2	3	1	2	3
DATA PTS.	200	150		1005	705		505	105	65
RUN #1	129.99999	149.99990		100.00006	70.00004		49.99995	9.99995	.99998
RUN #2	159.99999	145.99995		100.00005	70.00005		49.99995	9.99995	.99998
RUN #3	189.99999	145.99995		100.00005	70.00004		49.99995	9.99995	.99998
MEAN									
STD. DEV.									



SHIFT VERIFICATION

SELF CALIBRATION Y/N INTERNAL: EXTERNAL: _____

COMMENTS: Uncertainty of 200 gram weight (cal weight is 0.28mg)

WEIGHT VALUE PAN POSITION

WEIGHT VALUE	PAN POSITION			
	1	2	3	4

SIGNATURE: Jerry R. White



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

Certificate of Calibration

17 May 1996

Issued to: DARRELL DUNN DIV20 B57
Manufacturer/Model: SARTO RC210P
Description: ELECTRONIC BALANCE
Serial Number: 10704379
Asset Number: 002029

Environmental Conditions

Temperature: 76.0

Humidity: 67%

Calibration Information

Calibration was in accordance with requirements of MIL-STD-45662A and ANSI/NCSL 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: 14 May 96

Calibration Procedure: WI-9-30-WT01

Interval: 3 months

Accuracy: MFGR SPECS

Next Calibration Due: 14 Aug 96

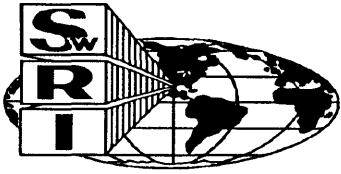
Received: In Tolerance

Remarks:

Certificate # 21115

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

14 August 1996

Issued to: DARRELL DUNN DIV20 B57
Manufacturer/Model: SARTO RC210P
Description: ELECTRONIC BALANCE
Serial Number: 10704379
Asset Number: 002029

Environmental Conditions

Temperature: 76.0

Humidity: 67%

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: 14 May 96

Calibration Procedure: WI-9-30-WT01

Interval: 6 months

Accuracy: MFGR SPECS

Next Calibration Due: 14 Nov 96

Received: In Tolerance

Remarks: CHANGED TO SIX MONTHS BECAUSE OF HISTORY

Comments:

Certificate # 21115

Signed: 

AMENDED CERTIFICATE OF CALIBRATION

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

11 November 19

Issued to: DARRELL DUNN DIV20 B57
Manufacturer/Model: SARTO RC210P
Description: ELECTRONIC BALANCE
Serial Number: 10704379
Asset Number: 002029

Environmental Conditions

Temperature: 71.0 Humidity: 56%

Calibration Information

Calibration was in accordance with requirements of MIL-STD-45662A and ANSI/NCSL 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: 1 Nov 96 Calibration Procedure: 33K6-4-41-1

Interval: 6 months Accuracy: MFGR SPECS

Next Calibration Due: 1 May 97 Received: Out of Tolerance

Remarks: LIMITED CAL TO 0.50 MILLIGRAMS DUE TO CORNER
LOAD

Out of Tolerance Data

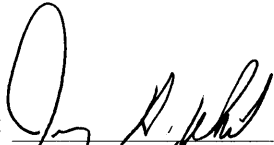
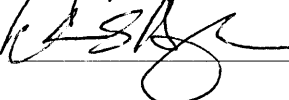
This unit was found to be in an Out of Tolerance condition, as indicated below. An evaluation should be made by the user to determine any adverse impact that may have occurred.

Out of Tolerance Date: 1 Nov 96 Last Valid Calibration Date: 14 May 96

STANDARD MASS	AS FOUND	AS RELEASED
200 GRAMS	199.99925*	200.00000
100 GRAMS	99.99964*	100.00002
1 GRAM	0.99990*	1.00001

*NOTES OUT OF TOLERANCE.
CORNERLOAD WAS ALSO OUT OF TOLERANCE.
CORNERLOAD RESULTS WAS A +0.55 MILLIGRAMS
WITH 200 GRAMS. TOLERANCE FOR THIS TEST IS
ONLY 0.25 MILLIGRAMS. LINEARITY TOLERANCE
IS 0.15 MILLIGRAMS AND REPRODUCIBILITY IS
0.15 MILLIGRAMS FOR 200G, 0.12 MILLIGRAMS
FOR 100G AND 0.06 MILLIGRAMS FOR 1G.

Certificate # 23196

Signed: 
Checked by: 



Technical Services
Balances and Scales
SERVICE REPORT

sartorius

Customer#: _____ PO#: _____ RGA#: _____
 Customer: Southwest Res Inst
 Bldg/Dept.: 57
 Street: 6220 Culebra Rd.
 City, State, Zip: SAN ANTONIO, TX 78238
 Contact: Jerry White
 Phone #: 210 522-3739 Date: 11/22-96
 Special Instructions: Calibration

PAGE 1 OF 1

Service Program		Incl. Zone
<input checked="" type="checkbox"/>	Routine Maintenance	S
<input type="checkbox"/>	Installation	A
<input type="checkbox"/>	Courtesy	B
<input type="checkbox"/>		C
<input type="checkbox"/>		D

ROUTINE MAINTENANCE

Line #	Model/Serial #	Manufacturer	Location	Certificate #
1	RC210P # 10704379	Sartorius	57	
2				
3				
4				
5				
6				
7				
8				

Total Labor Hours = 1

Total Units Serviced = 1

SPARE PART(S) USED FOR REPAIR(S)

Spare Part Number	Description	Qty Used	Qty to Bill	Used for Line #	Cost
					\$
					\$
					\$
					\$
					\$
SPARE PARTS					\$
C&C (LX95)					\$ 95.00
TOTAL					\$ 95.00

SERVICES PERFORMED

Comments: TESTED ADJUSTED CORNERS & CALIBRATED BALANCE AS PER M.T.G. SPECS. & AS PER CUSTOMER REQUEST.

Tech #: 760 Tech Name: Marky King Travel Time: TO: 1 FROM: 1
 Service Date: 11/22/96 Ref: S49A0894 Next Service Due: 5/97

Customer Signature: Jerry White Date: 1/1

Sartorius Corporation
31 Heartland Blvd.
Edgewood, New York 11717

(800) 645-3108
(516) 254-4249
Fax (516) 254-4252

CUSTOMER

PURCHASE REQUISITION



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

Certificate of Calibration

9 December 1996

Issued to: DARRELL DUNN DIV20 B57
Manufacturer/Model: SARTO RC210P
Description: ELECTRONIC BALANCE
Serial Number: 10704379
Asset Number: 002029

Environmental Conditions

Temperature: 71.0 Deg. F Humidity: 54%

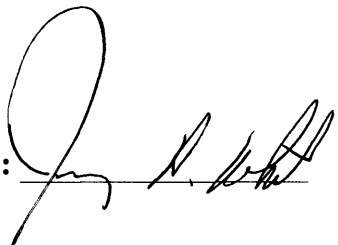
Calibration Information

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: 22 Nov 96 Calibration Procedure: MFGR
Interval: 6 months Accuracy: MFGR SPECS
Next Calibration Due: 22 May 97 Received: In Tolerance

Remarks: CORNOR LOAD WAS SET BY SARTORIOUS AND
BALANCE WAS RECHECKED AND FOUND WITHIN TOL.

Certificate # 23196R

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

9 April 1997

Issued to: DARRELL DUNN DIV20 B57
Manufacturer/Model: SARTO RC210P
Description: ELECTRONIC BALANCE
Serial Number: 10704379
Asset Number: 002029

Environmental Conditions

Temperature: 74.0 Deg. F Humidity: 62%

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: 8 Apr 97 Calibration Procedure: CLCP-WB-001

Interval: 6 months Accuracy: MFGR SPECS

Next Calibration Due: 8 Oct 97 Received: In Tolerance

Remarks: BALANCE HAD BEEN CAL WITH EXTERNAL WEIGHT.
CALIBRATION WITH M2 WEIGHT WAS SAVED.

Standards Used

Asset	MFR	Model	Description	Serial No.	Due Cal
001708	RICE	10 GRAM	WEIGHT STANDARD	C863	19 Jul 97
001704	RICE	1 GRAM	WEIGHT STANDARD	C859	19 Jul 97
001710	RICE	20 GRAM	WEIGHT STANDARD	C865	19 Jul 97
001711	RICE	50 GRAM	WEIGHT STANDARD	C866	19 Jul 97
001712	RICE	100 GRAM	WEIGHT STANDARD	C867	19 Jul 97
005116	RICE LAKE	100G	STANDARD WEIGHT	T097	3 Oct 97
005117	RICE LAKE	200G	STANDARD WEIGHT	T098	3 Oct 97

Certificate # 25070

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

14 April 1997

Issued to: DARRELL DUNN DIV20 B57
Manufacturer/Model: SARTO RC210P
Description: ELECTRONIC BALANCE
Serial Number: 10704379
Asset Number: 002029

Environmental Conditions

Temperature: 74.0 Deg. F Humidity: 62%

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: 8 Apr 97 Calibration Procedure: CLCP-WB-001

Interval: 6 months Accuracy: MFGR SPECS

Next Calibration Due: 8 Oct 97 Received: In Tolerance

Remarks: BALANCE HAD BEEN CAL WITH EXTERNAL WEIGHT.
CALIBRATION WITH M2 WEIGHT WAS SAVED.

Comments: INCORRECT CERTIFICATE NUMBER ON ORIGINAL CERT.

CORRECTED CERTIFICATE NUMBER FROM 25070 TO 25063.

Certificate # 25063

Signed: 

AMENDED CERTIFICATE OF CALIBRATION

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

29 September 1997

Issued to: DARRELL DUNN DIV20 B57
Manufacturer/Model: SARTO RC210P
Description: ELECTRONIC BALANCE
Serial Number: 10704379
Asset Number: 002029

Environmental Conditions

Temperature: 76.0 Humidity: 54%

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: 29 Sep 97 Calibration Procedure: CLCP-WT-001
Interval: 6 months Uncertainty: MFGR SPECS
Next Calibration Due: 29 Mar 98 Received: Out of Tolerance

Remarks:

Out of Tolerance Data

This unit was found to be in an Out of Tolerance condition, as indicated below. An evaluation should be made by the user to determine any adverse impact that may have occurred.

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

Out of Tolerance Date: 29 Sep 97 Last Valid Calibration Date: 8 Apr 97

STANDARD WEIGHT	AS FOUND	AS RELEASED
200 GRAMS	*199.99905	200.00005
150 GRAMS	*149.99910	149.99990
120 GRAMS	*119.99935	119.99995
100 GRAMS	99.99955	99.99994
80 GRAMS	79.99955	79.99992
70 GRAMS	69.99956	69.99987
50 GRAMS	49.99968	49.99985
20 GRAMS	19.99979	19.99990
10 GRAMS	9.99990	9.99994

COMB UNCERTAINTY OF BALANCE IS 0.56 MILLIGRAMS.

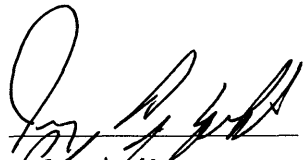
*NOTES OUT OF TOLERANCE.

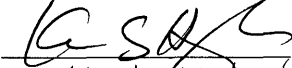
Certificate of Calibration

29 September 1997

Issued to: DARRELL DUNN DIV20 B57
Manufacturer/Model: SARTO RC210P
Description: ELECTRONIC BALANCE
Serial Number: 10704379
Asset Number: 002029

Certificate # 27011

Signed: 
Title: Cal Tech

Checked by: 
Title: Cal Lab Metrologist

LAST PAGE OF REPORT Total Pages Printed: 2



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

29 March 1999

Issued to: DARRELL DUNN DIV20 B57
Manufacturer/Model: SARTORIOUS RC210P
Description: ELECTRONIC BALANCE
Serial Number: 10704379
Asset Number: 002029

This certifies the above item was calibrated in compliance with MIL-STD-45662A and ANSI/NCSS 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: 72.0 Degrees Fahrenheit Humidity: 43 % RH

Calibration Date: 25 Mar 99 **Calibration Procedure:** CLCP-WT-001 AUG 97

Condition as Received: IN TOLERANCE

Condition as Released: IN TOLERANCE

Remarks: MEASURING UNCERTAINTY IS +/-0.48 MG(0 TO 60G), +/-0.54 MG(60 TO 110G) AND +/-0.56 MG(110 TO 210G)

Approved by:

Jim Patterson, Supervisor or Walt Hill, Metrologist

Certificate # 33816

m:\a2la.rpt Rev date 10 Mar 99

Measurements performed by:

Jerry White, Technician

Page 1 of 1



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

27 September 1999

Issued to: DARRELL DUNN DIV20 B57
Manufacturer/Model: SARTORIUS RC210P
Description: ELECTRONIC BALANCE
Serial Number: 10704379
Asset Number: 002029

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: 77.0 Degrees Fahrenheit Humidity: 46 % RH


Calibration Date: 24 Sep 99 **Calibration Procedure** CLCP-WT-001 AUG 97

Condition as Received: IN TOLERANCE

Condition as Released: IN TOLERANCE, ADJUSTED

Remarks:

Approved by:

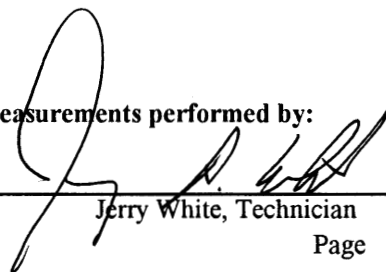


Jim Patterson, Supervisor or Walt Hill, Metrologist

Certificate # 36122

m:\a2la.rpt Rev date 10 Mar 99

Measurements performed by:



Jerry White, Technician

Page 1 of 1

SOUTHWEST RESEARCH INSTITUTE

CALIBRATION LABORATORY

6220 CULEBRA ROAD POST OFFICE DRAWER 28510 SAN ANTONIO, TEXAS 78228-0510 TEL (210) 522-5215 FAX (210) 522-3692

Receipt for Work Order 40565 Date Received 9/14/00

Asset No. 002029 Manufacturer SARTORIUS Model RC210P

Description ELECTRONIC BALANCE Serial Number 10704379

Accessory Received/Required NONE

Div/CC ID NONE Accessory to Asset No N/A Accuracy MFG SPECS

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 ONSITE

Receiving Inspection

Delivered By N/A Tel. 6090

CUSTOMER COMMENTS REQUESTED

The Calibration Laboratory staff is committed to good laboratory practice and providing our customers quality calibration services. Please rate how well we are meeting our goal and provide us with your recommendations for improvement.

Quality of service provided	_____	Rating Scale
Turn-around time	_____	4 = Excellent
Certificates	_____	3 = Good
Calibration labels	_____	2 = Acceptable
Recall notification	_____	1 = Needs improvement
Condition of returned equipment	_____	
Overall service	_____	

Please check all that apply: Equipment user _____ Delivery person _____ Custodian _____

IF WE PLEASE YOU, TELL OTHERS; IF NOT, TELL US.

COMMENTS:

Name _____

Tel. _____