#### 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

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#### Department of Quality Assurance Calibration Laboratory

Device Serial No: 10704379

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Calibration Date: 01/19/93

#### STANDARDS

Standard No: 1704 Manufact Nomenclature: WEIGHT STANDARD	urer: RICE LAKE	Model: 1 GRAM
Serial No: C859	Cal.Due: 07/08/93	Cal.Rec.No: 00000000
Standard No: 1708 Manufact Nomenclature: WEIGHT STANDARD	urer: RICE LAKE	Model: 10 GRAM
Serial No: C863	Cal.Due: 07/08/93	Cal.Rec.No: 00000000
Standard No: 1711 Manufact Nomenclature: WEIGHT STANDARD	urer: RICE LAKE	Model: 50 GRAM
Serial No: C866	Cal.Due: 07/08/93	Cal.Rec.No: 00000000
Standard No: 1712 Manufact Nomenclature: WEIGHT STANDARD	urer: RICE LAKE	Model: 100 GRAM
Serial No: C867	Cal.Due: 07/08/93	Cal.Rec.No: 00000000
Standard No: 1713 Manufact Nomenclature: WEIGHT STANDARD	urer: RICE LAKE	Model: 200 GRAM
Serial No: C868	Cal.Due: 07/08/93	Cal.Rec.No: 00000000
Standard No: 1720 Manufact Nomenclature: WEIGHT STANDARDS		Model: 1 - 500 MG
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.	10704	379		RANGE:	2109			CAI	LIBRATION	DATES
TEMPERATU	JRE: 1	/4	HUMIDIT	Y: 1/1						IEXT: <u>19 JUL 93</u>
CALIBRATED BY: JERRY A. White PRINT NAME BALANCE TOLERANCES 0.410									ANCES 0. 410	
BALANCE CAL #: $10554$ LIN. TOL.: $0.15$ REP. TOL.: $0.02/0.04/0.05$										
				RANGE	VERIFIC	ATION				POSITION GUIDE
		RANGE #1		F	ANGE #2			RANGE #3	3	GOIDE
	CALIB	RATION P	OINTS	CALIE	RATION P	OINTS	5 CALIBRATION POINTS			
	1	2	3	1	Ż	\$	Э	\$	5	
DATA PTS.	2009	150g	/	100g	509	109	30,	100 mg	10 mg	4 CENTON 2 04 Kg 2
RUN #1	200.00005	148.99990		98.98980	49.99980	9. 99994	1.00001	100.00	10.01	
RUN #2	200.0000 5	149.98990		99,9997 <b>8</b>	49.99979	9.99995	1.00001	100.00	10.01	3
RUN #3	200.00005	49.99985		79.99976	49.99976	9.99995	1.00001	100.01	10.02	1 2
MEAN	00.00005				49.99978	9.98994	1.00001	100.003	10.013	
STD. DEV,	.00	.001		.00	.0003	,000	00	.005-	.305	3 4
	SHI	FT VERIF	ICATION						,	
SELF CALI	BRATION	Y/N INTE	RNAL:	_ EXTERN	AL: /	COMMENTS: Add to 5 ys Van. Total uncertainty				
WEIGHT -	<u></u>	PAN	POSITION			a son Le is . 410 mg (2000 und to cal scale)				rad to card scale)
VALUE	1	2	1	3	4			(_)	, , ,	/
		Ľ				SIGNAT	URE:	Jung	A. White	

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Department of Quality Assurance Calibration Laboratory

CERTIFICATE OF CALIBRATION

Issued	to:	DIV20	B57	NARASI	SRIDHAR

Device No: 2029

3 Mo.

Manufacturer: SARTORIUS Model: RC210P

Nomenclature: ELECTRONIC BALANCE

Serial Number: 10704379

Remarks

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Accuracy: MFGRS SPEC

Procedure: SWRI

Cal interval

#### ENVIRONMENT

SwRI No: NONE

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 Octrober 19, 1993. Per memorandum from division 20 Narasi Sridhar, dated August 16, 1993.

Certificat Newised 8/30/93 8

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

Next Calibration Due: 10/19/93

Record Number: 00011808

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 1712 Standard No: Manufacturer: RICE LAKE Model: 100 GRAM Nomenclature: WEIGHT STANDARD Cal.Due: 06/30/94 Cal.Rec.No: 00011764 Serial No: C867 Manufacturer: RICE LAKE Model: 200 GRAM Standard No: 1713 Nomenclature: WEIGHT STANDARD Cal.Due: 06/30/94 Serial No: C868 Cal.Rec.No: 00011765 Manufacturer: RICE LAKE Model: 200 GRAM Standard No: 1714 Nomenclature: WEIGHT STANDARD Cal.Due: 06/30/94 Serial No: C869 Cal.Rec.No: 00011766 Standard No: 1720 Manufacturer: RICE LAKE Model: 1 - 500 MG Nomenclature: WEIGHT STANDARDS Cal.Due: 06/30/94 Cal.Rec.No: 00011772 Serial No: C858

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> Department of Quality Assurance Calibration Laboratory

CERTIFICATE OF CALIBRATION

Issued to: DIV20 B57 NARASI SRIDHAR Device No: 2029 Model: RC210P Manufacturer: SARTORIUS Nomenclature: ELECTRONIC BALANCE

SwRI No: NONE Cal interval Serial Number: 10704379 3 Mo.

Remarks

Accuracy: MFGRS SPEC

Procedure: SWRI

#### ENVIRONMENT

Temperature: 70 Location: SWRI DIV20 BLDG. 57 Humidity: 40

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

Department of Quality Assurance Calibration Laboratory

Device Serial No: 10704379

Calibration Date: 10/22/93

#### STANDARDS

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

				BALA	NCE CALI	BRATION VE	RIFICATION	FORM		
DATE: 2 <sup>2</sup>	\$753		MFGR:	brTOR,	105				MODE	el: <u>RC 210 P</u>
SER. NO. <u>/</u>	70437	2009		CALIBRATION DATES						
SER. NO. 10704379 RANGE: 2009   TEMPERATURE:							1AST 19	JUL 93		NEXT: 22JAN 94
CALIBRATED										
CALIBRATED	BY:	<u> </u>					BA	LANCE TOL	ERANCES	2
BALANCE CA	L #:	2629				LINE. TO	DL.:		Rep. Tol.: <u>-</u>	
			F	ANGE VER	IFICATION	<u> </u>	<del></del>			POSITION GUIDE
		RANGE #1	RANGE #2	2	RANGE #3			POSITION GUIDE		
	CALI	CALIBRATION POINTS CALIBRATION PO				OINTS	NTS CALIBRATION POINTS			
. <u></u>	1	2	3	1	2	3	1	2	3	
DATA PTS.	200 9	1007			100mg					$\left(\begin{array}{c}4\\\\\end{array}\right)^{2}$
RUN #1	200.00000	100.00002	9.9 8995	98 99 9	<u>67999</u>					3
RUN #2	200.000.0	110.0000-	7.59954	.75551	09593					
RUN #3	200.60060	100.00007	9.59575	58998	09991					
MEAN										
STD. DEV.										3 4
		SHIFT VERIF					. <u> </u>	······································		
SELF CALIBR	ATION Y/N IN			/	• ••••••			}		
WEIGHT VALUE	1	P	AN POSITIO	N 3	4			/	1	$-\eta$
507	50.0000			<u> </u>	4	SIGNATURE	$\rightarrow$	m	N. KT	
	00,000			l						

SwRI FORM QA-153-0

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Department of Quality Assurance Calibration Laboratory

CERTIFICATE OF CALIBRATION

Issued to: DIV20 B57 NARASI SRIDHAR

Device No: 2029

3 Mo.

Manufacturer: SARTORIUS Model: RC210P

Nomenclature: ELECTRONIC BALANCE

Serial Number: 10704379

Remarks

Accuracy: MFGRS SPEC

Procedure: SWRI

Cal interval

#### ENVIRONMENT

SwRI No: NONE

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

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Department of Quality Assurance Calibration Laboratory

Device Serial No: 10704379

Calibration Date: 01/24/94

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	STANDARDS	
Standard No: 1704 Manufact Nomenclature: WEIGHT STANDARD	urer: RICE LAKE	Model: 1 GRAM
Serial No: C859	Cal.Due: 06/30/94	Cal.Rec.No: 00011756
Standard No: 1708 Manufact Nomenclature: WEIGHT STANDARD	urer: RICE LAKE	Model: 10 GRAM
Serial No: C863	Cal.Due: 06/30/94	Cal.Rec.No: 00011760
Standard No: 1710 Manufact Nomenclature: WEIGHT STANDARD	urer: RICE LAKE	Model: 20 GRAM
Serial No: C865	Cal.Due: 06/30/94	Cal.Rec.No: 00011762
Standard No: 1711 Manufact Nomenclature: WEIGHT STANDARD	urer: RICE LAKE	Model: 50 GRAM
Serial No: C866	Cal.Due: 06/30/94	Cal.Rec.No: 00011763
Standard No: 1712 Manufact Nomenclature: WEIGHT STANDARD	urer: RICE LAKE	Model: 100 GRAM
Serial No: C867	Cal.Due: 06/30/94	Cal.Rec.No: 00011764
Standard No: 1713 Manufact Nomenclature: WEIGHT STANDARD		Model: 200 GRAM
Serial No: C868	Cal.Due: 06/30/94	Cal.Rec.No: 00011765

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			В	ALANCE CALLE	BRATION V	ERIFICATION	FORM		
DATE: 2	4JAU 94	Mf	GR: <u>SANT</u>	ORIUS				MODEL:	RCZIOP
SER. NO. ∠	0704379	<u>}</u>	RANGE:	>			CA	LIBRATION DATES	6
			2			72	0,197	2	APR 94
				4010		LAST:	00/13	NEX1	r: <u>////////////////////////////////////</u>
CALIBRATED	) вү:	Erry P.	White						
		l				BA	LANCE TO	LERANCES	
BALANCE C	AL #:				LINE.	rol.: <u> </u>	5	REP. TOL.: 0.02	1.04/.05
			RANGE \	/ERIFICATION					/
		RANGE #1		RANGE #2	·····		RANGE #3	3	POSITION GUI
	CALIBRATION POINTS			CALIBRATION P	CALIBRATION POINTS		OINTS		
	1	2	3 1	ź	3	٦ د	#	3	
DATA PTS.	2005	150 A	£ 100	. 70,		500	105	15	4
RUN #1	200. <b>0000</b> 0	199.99998	/	98 70 0000		48.79988		9999¥	
RUN #2	127.99995	499995	25.989	70.00000	/	45.52999	1000000	.79989	
RUN #3	198.9999 *		7	7 70.0000	<u> </u>	45.999997			1
MEAN	89.899 5			78 70,00000		45.999981	10.000000	959286	
STD. DEV.				-	1				3
		SHIFT VERIFICA	TION			·	1 11000	tank	.410 m (200, 40)
SELF CALIBF	RATION Y/N IN	TERNAL:	EXTERNAL		COMMENTS	to ent	Parte	AT MONTY IS	Ste my ( - wy - w
WEIGHT		PAN	POSITION						
VALUE	1	2	3	4	SIGNATURE	. 5/.	n,	A. What	5

Department of Quality Assurance Calibration Laboratory

CERTIFICATE OF CALIBRATION

Issued to: DIV20 B57 NARASI SRIDH	AR	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: I

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

Department of Quality Assurance Calibration Laboratory

Device Serial No: 10704379

Calibration Date: 04/26/94

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: 1710 Manufacturer: RICE LAKE Model: 20 GRAM Nomenclature: WEIGHT STANDARD Serial No: C865 Cal.Due: 06/30/94 Cal.Rec.No: 00011762 Standard No: 1711 Manufacturer: RICE LAKE Model: 50 GRAM Nomenclature: WEIGHT STANDARD Cal.Due: 06/30/94 Serial No: C866 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: 1714 Manufacturer: RICE LAKE Model: 200 GRAM Nomenclature: WEIGHT STANDARD Serial No: C869 Cal.Due: 06/30/94 Cal.Rec.No: 00011766

BALANCE CALIBRATION VERIFICATION FORM										
DATE: 26	DATE: 26 APR 94 MFGR: SARTORIUS MODEL: RC210P									
SER. NO. <u>/</u>	SER. NO. 10704379 RANGE: 2003 CALIBRATION DATES									
TEMPERATUR	RE:		- HUMIDI	TY:			LAST: <u>24</u> /	JAN 94	<u> </u>	NEXT: 26 JUL 94
CALIBRATED BY: A. White BALANCE TOLERANCES										
BALANCE CAI	BALANCE CAL #: I3932 LINE. TOL.: _0.15 REP. TOL.: _02/.04/.05									
RANGE VERIFICATION POSITION GUIDE										
		RANGE #1			RANGE #2			RANGE #3		
	CALIBRATION POINTS CALIBRATION PO				DINTS	NTS CALIBRATION POINTS				
	1	2	3	1	2	3	1	2	3	
DATA PTS.	2007	1505	/	1005	79		50,	105	15	40 + 42
RUN #1	199.59995	149.99995		97.9999 P	69.55996		<b>\$</b> 9.99996	10.00001	.9999P	
RUN #2	157.999 5	149.99995		89.99591	6955998		48.59981	10.00001	.999 98	
RUN #3	199.9599 5	145.959 5	/	77.59998	69.55988		45.5997P	10.00002	85998	
MEAN										
STD. DEV.			1			/				3 4
		SHIFT VERIF				COMMENTS	: Tot4	2 UNCE	rtanity	of 200, cal whight
SELF CALIBRA	SELF CALIBRATION Y/N INTERNAL: EXTERNAL									
WEIGHT		P	AN POSITIO	N						
VALUE	1	2		3	4	SIGNATURE	. (/	, A	A. Juff	/
507	50.00003	50.000	4 50.0	50066 S	0.0000\$			7		

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SwRI FORM QA-153-0

Department of Quality Assurance Calibration Laboratory

CERTIFICATE OF CALIBRATION

Issued to: DIV20 B57 NARASI SRIDH	AR	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:

cks: 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

Department of Quality Assurance Calibration Laboratory

Device Serial No: 10704379

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Calibration Date: 08/02/94

STANDARDS

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

				BALA	NCE CALIB	RATION VE	RIFICATION	FORM	<u> </u>		
DATE: <u>2<i>A</i>0</u>	UG 94	:	MFGR:	SARTO	R1123	MODEL:					
SER. NO. 10704379 RANGE: 2005 CALIBRATION							IBRATION DA	ATES			
TEMPERATUR	TEMPERATURE: HUMIDITY: LAST: 24 Ph 24 NEXT: 24 A/0094							NEXT: <u>2/1/0094</u>			
CALIBRATED	CALIBRATED BY: Knay N. White BALANCE TOLERANCES										
BALANCE CAL	_ #:				<u> </u>	LINE. T	OL.: <u>0./</u> 3		REP. TOL.: <u>. «</u>	02/.04/.05-	
				RANGE VER	IFICATION					POSITION GUIDE	
		RANGE #1			RANGE #2			RANGE #3	<b> </b>		
	CALI	BRATION PO	INTS	CAL	IBRATION PO	DINTS	CAL	IBRATION P	OINTS		
	1	2	3	1	2	3	1	2	3		
DATA PTS.	2003	1501		100	705		500	19	15	4 2	
RUN #1	199 95555	150,00000			70.00005		50.0000 4	10.00004	a 95958		
RUN #2	288325			100 00004	70.00005		50.0000y	10.00004	9.55954		
	5.55955		•••• •••• •••• •••• ••••	100.0000.5			50.00.00-			1 2	
	559955 /			100,0005			50,00005	18.00004	0.95998		
STD. DEV.										3 4	
		SHIFT VERIF	ICATION	-	<u></u>	COMMENTS	· Tot	1 0100	to ile	Prop Cal unalt	
SELF CALIBR	ATION Y/N IN	ITERNAL: 🗠		INAL		COMMENTS: Total orcuntarily of 200, Cal warght					
WEIGHT		P	AN POSITIC	)N							
VALUE	1	2		3	4	SIGNATURE		N. 1	hR		
505	50.0000	3 50,0000	5 50.	00000 5	0.00000		- Jan	JV : L			

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#### Department of Quality Assurance Calibration Laboratory

#### CERTIFICATE OF CALIBRATION 01/25/95

Issued to:	NARASI SRIDHAR DIV20 ,B57	Asset Number: 002029
Manufacturer:	SARTO	Model Number: RC210P
Nomenclature:	ELECTRONIC BALANCE	
Serial Number:	10704379	SwRI Capital Number: NONE
	ENVIRONMENTAL CONDITIONS	

Temperature: 70.9F

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Relative Humidity: 50 %

#### CALIBRATION INFORMATION

Location:	B57	Technician: 7213
Procedure Number:	SWRI	Accuracy: MFGR SPECS
Remarks:	UNCERTANITY OF 200G CAL WEIGHT IS +/-0.410MG	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

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Certified by :

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

Certificate#: 16303

			÷	BALA	NCE CALIB	RATION VE	RIFICATION	FORM		
DATE: 25	TRN 95		MFGR:	SARTOR	105				MODEL	L: <u>RCZIB</u> P
SER. NO. <u>/</u> 0	704379	)	RANGE: _					CALI	BRATION DA	ATES
TEMPERATUR	IE: <u>70.</u>	9	HUMIDI	TY: <u>50</u>	7,		LAST:	4UG94	N	NEXT: _25 APR 95
CALIBRATED	вү:	Enny 1	A. Wh:	+=			BAI	ANCE TOL	ERANCES	
BALANCE CAL	_ #:	16303	3			LINE. T	OL.: <u>015</u>	F	rep. Tol.: <u>-</u>	.02/.04/.05
		<u>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</u>	F	RANGE VER	IFICATION		9	<u></u>		POSITION GUIDE
		RANGE #1			RANGE #2			RANGE #3		
	CAL	BRATION PO	INTS	CAL	IBRATION PO	DINTS	CALI	BRATION PO	DINTS	
	1	2	3	1	2	3	1	2	3	
DATA PTS.	200	150,								
RUN #1 2	00.00000	149.99990		99.99855	69.98995		19.9119 5	7.98997	.99798	
RUN #2	10.00001	45.59992	S	5.54595	9.59895		45.57575	9.55958	5855 P	
DUN #2	000000			0.000-0	72.00000	4	5.59595	P. 88952	48485	
MEAN			<del>.</del>				7			
STD. DEV.			3 .	R						3 4
-		SHIFT VERIF	ICATION			COMMENTS	3: Total	- Uncernor	anite of	zog chl wight
SELF CALIBR	ATION Y/N II	NTERNAL: 🗹		NAL			1		110 mg	, , ,
WEIGHT		P.	AN POSITIC	N		]			Ţ	$\mathcal{O}_{\mathcal{I}}$
VALUE	1	2		3	4		<u> </u>	/	D lut	[4]
	50.0000.	50.000	o \$7.5	5259 5 4	45,59995		-:	$\overline{)}$		

#### Department of Quality Assurance Calibration Laboratory

#### CERTIFICATE OF CALIBRATION 05/05/95

Issued to:	DARRELL DUNN	DIV20	<b>,</b> B57	Asset Number: 002029	
Manufacturer:	SARTO			Model Number: RC210P	
Nomenclature:	ELECTRONIC BALAN	CE			
Serial Number:	10704379			SwRI/Div. I.D. #: NONE	E
		ENVIRONM	ENTAL CONDITION	IS	
Temperature: 74	4.OF			Relative Humidity: 589	b
		CALIBRAT	ION INFORMATION	T	
Procedure Numbe	er: SWRI			Accuracy: MFGR SPECS	5

UNCERTANITY OF CAL WEIGHT IS +/-0.410MG

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 :

Received IN Tolerance

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

Certificate#: 17214

Remarks:

			. BA	LANCE CALIB	RATION VERI	FICATION	FORM		
DATE: 28	NPR 95	MFC	GR:5-	ANTORIUS	;		· · · · · · · · · · · · · · · · · · ·	MODEL	: RC2107
SER. NO. <u>/0</u> .	704379	) R	ANGE:	4			CALI	BRATION DA	ATES
TEMPERATUR	E:7	/		77	L	AST: 252	SET 74	N	NEXT: 28 BL798
		721 4	White		LINE. TO		ANCE TOL		.02/.07/.05
			RANGE V	ERIFICATION					
		RANGE #1		RANGE #2			RANGE #3		POSITION GUIDE
	CALIBRATION POINTS CALIBRATION F				DINTS	CALI	BRATION PO		
	1	2	3 1	2	3	1	2	3	
DATA PTS.	2007	1507	1007			50	10		4 2
RUN #1 20	0.00000	49.99925	99.799	4 69.99794	4	9.99957	10.00004	1.000 10	
RUN #2 20	0.000-6 /	49.59985		4 68 58784		95958	10.00007	1.000/2	
	.00000			4 69.78584			10 0000 6		1 2
MEAN									
STD. DEV.						·····			3 4
	<b>1</b>	SHIFT VERIFICA	TION	1		Total	mandan	the at 20	og ent wayt
SELF CALIBRA	TION Y/N IN	TERNAL:	EXTERNAL					-	
WEIGHT		PAN	POSITION		]	/	/ / _		
VALUE	1	2	3	4	-SIGNATURE:	/	1		here and the second sec
	50.00000	50.00000	49.57995~	45.5595 5			7	<u> </u>	

#### Department of Quality Assurance Calibration Laboratory

#### CERTIFICATE OF CALIBRATION 08/03/95

Issued to:	DARRELL DUNN DIV20	<b>,</b> B57	Asset Number: 002029
Manufacturer:	SARTO		Model Number: RC210P
Nomenclature:	ELECTRONIC BALANCE		
Serial Number:	10704379		SwRI/Div. I.D. #: NONE
Notes:			

#### ENVIRONMENTAL CONDITIONS

Temperature: 74.0F

#### CALIBRATION INFORMATION

Procedure Number:	SWRI	Accuracy:	MFGR SPECS
Remarks:	UNCERTAINTY OF CAL WEIGHT IS 0.28MG.	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
	001714 001712 001711 001710 001708	001714 C869 001712 C867 001711 C866 001710 C865 001708 C863	001714     C869     RICE       001712     C867     RICE       001711     C866     RICE       001710     C865     RICE       001708     C863     RICE	001714     C869     RICE     200 GRAM       001712     C867     RICE     100 GRAM       001711     C866     RICE     50 GRAM       001710     C865     RICE     20 GRAM       001708     C863     RICE     10 GRAM	001714C869RICE200GRAMWEIGHTSTANDARD001712C867RICE100GRAMWEIGHTSTANDARD001711C866RICE50GRAMWEIGHTSTANDARD001710C865RICE20GRAMWEIGHTSTANDARD001708C863RICE10GRAMWEIGHTSTANDARD	001714     C869     RICE     200 GRAM     WEIGHT STANDARD     06/23/95       001712     C867     RICE     100 GRAM     WEIGHT STANDARD     06/23/95       001711     C866     RICE     50 GRAM     WEIGHT STANDARD     06/23/95       001710     C865     RICE     20 GRAM     WEIGHT STANDARD     06/23/95       001710     C865     RICE     20 GRAM     WEIGHT STANDARD     06/23/95       001708     C863     RICE     10 GRAM     WEIGHT STANDARD     06/23/95	001714     C869     RICE     200 GRAM     WEIGHT STANDARD     06/23/95     12       001712     C867     RICE     100 GRAM     WEIGHT STANDARD     06/23/95     12       001711     C866     RICE     50 GRAM     WEIGHT STANDARD     06/23/95     12       001710     C865     RICE     20 GRAM     WEIGHT STANDARD     06/23/95     12       001708     C863     RICE     10 GRAM     WEIGHT STANDARD     06/23/95     12

Certified by :

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

Relative Humidity: 41%

Certificate#: 18186

				BALAN	ICE CALIBR	RATION V	ERIFICATION	FORM		
DATE: 3	AUG95		MFGR:	SARTO	RIUS				MODEL:	RCZIOP
SER. NO. //	070437	7	RANGE:	2000				CAL	IBRATION DAT	TES
	ае: <u>74</u>			4/				5111/		EXT: 2 NOV 95
							LAST:	<u> </u>		
CALIBRATED	BY: JER	any h	. WI	i te			RAI	ANCE TOL	ERANCES	
	L #:	18,81								
BALANCE CA	L #:	0105			-	LINE.	TOL.: <u>(1.75</u>		REP. TOL.: <u>-</u>	2/.04/.05
				RANGE VERI	FICATION					POSITION GUIDE
		RANGE #1			RANGE #2			RANGE #3		POSITION GOIDE
	CALIBRATION POINTS			CALI	BRATION PO	INTS	CALIBRATION POINTS			
	1	2	3	1	2	3	1	2 3		
DATA PTS.	200,	1500		1007	70;		50	10	19	4 2
RUN #1	79.99815	149.99,930		99. 9888L	67.99716		47.99931	9.99977	9.99986	
RUN #2	159.59818,	49.95830		99.55881	65.9971		4585931	R.98977	9.55884	
RUN #3	9.978JE	45.99830		\$9.99 <b>1</b> 81	15.99916		49.9993/	9. 559 77	9.559 81	
MEAN										
STD. DEV.										3 4
		SHIFT VERIFI				COMMENT	'S:	VT + 1	5 LERNI	v CE
SELF CALIBR	ATION Y/N IN	ITERNAL:	EXTER	RNAL	-			nTRIAT,	v of z	200 MAM WEISH (CNL
		P/	AN POSITI	NC		WEEK	1) is (	3.28 pg		- <u>A</u> A
WEIGHT VALUE	1		1	3	4	· · ·	- 1	10		

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				BALA	NCE CALIBR	RATION VEI	RIFICATION	FORM		
	AUG 95	M	IFGR:	SPR	TORIUS	5			_ MODEL:	REZIOP
SER. NO. <u>//</u>	<u> </u>	2	RANGE: _	2001					BRATION DATI	
	74	/	HUMIDI	тү. <i>4</i> /	1		LAST 5	MM 95	NF	XT. 2 NOV95
		Enn A	/.) / · /	/ / ~	·					XT: <u>2 NOV95</u>
CALIBRATED	BY:		Mill	2			BA	LANCE TOLI	ERANCES	
BALANCE CA	L#: /	18185				LINE. TO	OL: 6.15	F	REP. TOL.: . 07	2/.04/.05
		DANCE #1	F	ANGE VERI	RANGE #2	RANGE #3				POSITION GUIDE
	CALIBRATION POINTS			CALI	BRATION PC	DINTS	CALIBRATION POINTS			
	1	2	3	1 2		3	1	2	3	
DATA PTS.	2009									(4 2)
RUN #1	95.999975	149.95990		97.9992	69.99¥98		1. 85999	9.99996	.99999	
RUN #2	55.59595	149.9999 0		97,9999L	69.99978	4	<i>17.55559</i>	9.99991	.99919	
RUN #3 /	95.95995	149.99990		35,55992	599598	4	5.99999	8.99991	,99889	1 2
MEAN										
STD. DEV.					[					3 4
		SHIFT VERIFIC		NAL ZOCI	,	COMMENTS	:		<u></u>	
	ATION Y/N IN					l		$\bigwedge$		
			N POSITIC			{	/	′/		M
WEIGHT VALUE	1	2	1	3	4		(		N. UH	

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#### 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 B	357	Asset Number: 00202	Э	
Manufacturer:	SARTO			Model Number: RC210	P	
Nomenclature:	ELECTRONIC BALANC	E				
Serial Number:	10704379			SwRI Capital Number:	NON	IE
Accuracy:	MFGR SPECS			Calibration Interval	: 3	months

#### DEVIATION

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

#### REMARKS

Balance reading	ERROR
199.99815	1.95 mg
149.99830	1.59 mg
99.99886	1.05 mg
69.99916	0.78 mg
49.99931	0.67 mg
9.99977	0.21 mg

Standard 200.00010g 149.99989g 99.99991g 69.99994g 49.99998g 9.99998g

The linearity of the balance is 0.15 millgrams

Signed Checked by 1

# **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

Manufacturer:SARTOModel Number: RC210PNomenclature:ELECTRONIC BALANCESerial Number:10704379Accuracy:MFGR SPECSCalibration Interval:3 months	Issued to:	DARRELL DUNN	DIV20 B5	57	Asset	Number	: 002029		
Serial Number: 10704379 SwRI Capital Number: NONE	Manufacturer:	SARTO			Model	Number	: RC210P		
	Nomenclature:	ELECTRONIC BALANCE	Ξ						
Accuracy: MFGR SPECS Calibration Interval: 3 months	Serial Number:	10704379			SwRI	Capital	Number:	NON	E
	Accuracy:	MFGR SPECS			Calib	ration	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 millgrams

Signed Checked by

## **OUT OF TOLERANCE**

#### 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

Accuracy: MFGR SPECS Received IN Tolerance

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

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: <u>2</u> 1	10095		/FGR:	JANTO,	RIUS				MODEL:	RC210P		
SER. NO. 10 70437 RANGE: 200 CALIBRATION DATES												
TEMPERATURE:												
CALIBRATED BY: M. White												
BALANCE TOLERANCES												
BALANCE CAL	#:_ <u>/</u> 9	167			-	LINE. 1	OL:	F	REP. TOL: <u>12/</u>	04.05		
				RANGE VERI	FICATION					POSITION GUIDE		
		RANGE #1			RANGE #2			RANGE #3		POSITION GUIDE		
	CALI	BRATION PO	NTS	CALI	BRATION PO	DINTS	CALI	BRATION PO	DINTS			
	1	2	3	1	2	3	1	2	3			
DATA PTS.	2003	150,		1003	723		50	10	19	4 2		
RUN #1	193.95590	145.99980		99,99994	70.0008		0.00000	10.00008	1.00009			
RUN #2	185,55940	149.55180		95.88996	70.0000 C		30.00002	10.00008	10000 P			
RUN #3	195.55985	145.55985		85.99 99 4	70.000 K		50.00000	0.00009	1.00009	1 2		
MEAN												
STD. DEV.							1	·		3 4		
		SHIFT VERIFI	CATION			COMMENT	S:	<b></b>	<u>kan na n</u>			
SELF CALIBR	ATION Y/N IN	TERNAL:		RNAL		1		TA OF	1 200 mgan	m word (and worth		
WEIGHT		P/	N POSITI	ON		1	O.Z.V.A	/ /				
VALUE	1	2		3	4	SIGNATUR	F. ()	Im	D. hos	1		
								7				

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SWRI FORM QA-153-0

#### Department of Quality Assurance Calibration Laboratory

#### CERTIFICATE OF CALIBRATION 02/07/96

Issued to: DARRELL DUNN DIV20 ,857 Manufacturer/Model: SARTO/RC210P Nomenclature: ELECTRONIC BALANCE Serial Number: 10704379 Asset Number: 002029 Notes:

#### ENVIRONMENTAL CONDITIONS

Temperature: 71.0F

Relative Humidity: 50%

#### CALIBRATION INFORMATION

Accuracy: MFGR SPECS Received IN Tolerance

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

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	06/2 <b>3</b> /95	12	06/23/96

Certified by :

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

Certificate#: 20000

ID 2029

DATE:	FEB96		AFGR:	SHRTC	orius				MODEL:	REZIO 1	
	070437								BRATION DATES		
TEMPERATU	re: <u>21</u>		HUMID	<b>m:</b> <u>502</u>	3		LAST:	NOV96	NEXT:	EMAV196	
	BY:									/	
		/						ANCE TOU			
BALANCE CA	L #:	20000			-	LINE. T	OL: <u>015</u>	F	EP. TOL:	. 04/.65	
				RANGE VERM	FICATION						
		RANGE #1			RANGE #2			RANGE #3		Position Guide	
	CALI	BRATION PO	NTS	CALI	BRATION PC	XNTS	CALI	BRATION PC	INTS		
	1	2	3	1	2	3	1	2	3	( )	
DATA PTS.	200	150		1005	703		50,	105	4	4 2	
RUN #1	129.97979	419.99990		100.00006	70.00004		\$ 9.95995	9.99995-	, 88998		
RUN #2	57.99959	49.97585		100.0005	70.00008		49.95995	9,57595-	.55994		
RUN #3	199.51899,	45.89985		100.00005	40001.00		4951595	9.89995	. 959 <b>78</b>		
MEAN											
										3 4	
STD. DEV.						COMMENTS	: Une	lanter 5	1 200 gray	will ( extrapt to 0.	
	1	SHIFT VERIFI	UNION								
STD. DEV.	RATION Y/N IN			RNAL				$\bigtriangleup'$			
STD. DEV.		ITERNAL:						$\bigwedge$			

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### **Certificate of Calibration**

17 May 1996

Issued to:DARRELL DUNNDIV20B57Manufacturer/Model:SARTORC210PDescription:ELECTRONIC BALANCESerial Number:10704379Asset 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

1. John Signed:

LAST PAGE OF REPORT Total Pages Printed: 1



### **Certificate of Calibration**

14 August 1996

Issued to:DARRELL DUNNDIV20B57Manufacturer/Model:SARTORC210PDescription:ELECTRONIC BALANCESerial Number:10704379Asset Number:002029

Environmental Conditions

Temperature: 76.0

67%

Humidity:

**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: 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

D. pl Signed:

### AMENDED CERTIFICATE OF CALIBRATION

LAST PAGE OF REPORT Total Pages Printed: 1



### **Certificate of Calibration**

11 November 19

Issued to:DARRELL DUNNDIV20B57Manufacturer/Model:SARTORC210PDescription:ELECTRONIC BALANCESerial Number:10704379Asset 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.

Signed: Checked by:

Certificate # 23196

### **Certificate of Calibration**

11 November 19

Issued to:DARRELL DUNNDIV20B57Manufacturer/Model:SARTORC210PDescription:ELECTRONIC BALANCESerial Number:10704379Asset Number:002029

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g/Dept.:	[	Service Program	1	n.vel Inni
et: 6220 Cutebra Re		Routine Maintenance	· · ·	S
State, Zip: San Antonio TX 78-238		Installation		A
act: JErry lehite		Courtesy		B
ne #: 310 522 - 3739 Date: "22 - 96		an a		C
cial Instructions: Calibration				D

	· · · · · · · · · · · · · · · · · · ·	KUUTINE MAT	NIENANCE		
Line #		Manufacturer	Location	Certificate #	
1	RC2101 #10704379	Sartorius	57		<b>_</b> ,
2					
3					
4	-				
5					
6					
7					
8					
otal Lab	or Hours =		T	otal Units Serviced =	

SPARE PART(S) USED FOR REPAIR(S)

				<b>\-</b> /		
Spare Part Number	Descrip	otion	Qiy Used	Qty te Bill	Used for Line #	Cost
						\$
a series and a series of the ser						\$
2.						\$
		· · ·				\$
					9	\$
				SPARE	PARTS	50
				(&( (_	LX251	395.00
	SER	VICES PERFOR	MED	TOTAL	<b></b>	\$ 95.00
Comments: TESter	Adjusted	COINER.		CAL: 6	atal	· · · · · · · · · · · · · · · · · · ·
BALANCE	AS JER	M. P. G.	Sire	s.	¢.	
AS DER	customer	reaves			. •	
Tech #: 760	Tech Name:	ath 1 th	ingo-	7 Travel Til	me: TO:	/ FROM:/
Service Date: 11 / 22/9	Ref: S49A0894	0,		Next Servi	ce Due:	5 197
Customer Signature:	for R. le	h		•	Date: ,	
artorius Corporation 31 Heartland Blvd.				·		(800) 645-3 (516) 254-4
dgewood, New York 11717		· .				Fax (516) 254-4
		CUSTOMER				

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### **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/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: 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 SA BALANCE WAS RECHECKED AN Certificate # 23196R	
LAST PAG	E OF REPORT
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## **Certificate of Calibration**

9 April 1997

Issued to:DARRELL DUNNDIV20B57Manufacturer/Model:SARTO RC210PDescription:ELECTRONIC BALANCESerial Number:10704379Asset 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/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: 8 Apr 97	Calibration Procedure:	CLCP-WB-001
Interval: 6 months	Accuracy: MFGR SPE	ECS
Next Calibration Due: 8 Oct 97	Received: In Tolerance	
Remarks: BALANCE HAD BEEN CAL WITH	EXTERNIAL WEIGHT	

CALIBRATION WITH M2 WEIGHT WAS SAVED.

Standards Used

<b>Asset</b> 001708 001704	MFR RICE RICE	<b>Model</b> 10 GRAM 1 GRAM	<b>Description</b> WEIGHT STANDARD WEIGHT STANDARD	<b>Serial No.</b> C863 C859	<b>Due Cai</b> 19 Jul 97 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

RAN Signed:

LAST PAGE OF REPORT Total Pages Printed: 1



### **Certificate of Calibration**

14 April 1997

Issued to:DARRELL DUNNDIV20B57Manufacturer/Model:SARTORC210PDescription:ELECTRONIC BALANCESerial Number:10704379Asset 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/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: 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 I CALIBRATION WITH M2 WEIGHT	
Comments: INCORRECT CERTIFICATE	NUMBER ON ORIGINAL CERT.
CORRECTED CERTIFICATE NUMBER FROM 2	25070 TO 25063.
Certificate # 25063	Signed:

### AMENDED CERTIFICATE OF CALIBRATION

LAST PAGE OF REPORT Total Pages Printed: 1



### **Certificate of Calibration**

29 September 1997

Issued to:DARRELL DUNNDIV20B57Manufacturer/Model:SARTORC210PDescription:ELECTRONIC BALANCESerial Number:10704379Asset Number:002029

**Environmental Conditions** 

Temperature: 76.0

Humidity: 54%

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: 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 Da	te: 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

B57

Issued to:DARRELL DUNNDIV20Manufacturer/Model:SARTO RC210PDescription:ELECTRONIC BALANCESerial Number:10704379Asset Number:002029

Certificate # 27011

1

Signed: Title: Checked by: Title:

LAST PAGE OF REPORT Total Pages Printed: 2





### **Certificate of Calibration**

29 September 1998

**DIV20** 

B57

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

#### 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.

This laboratory is accredited by the American Association for Laboratory Accreditation (A2LA) and the results shown in this calibration certificate have been determined in accordance with the laboratory's terms of accreditation unless stated otherwise in the report. The uncertainty of the calibration was sufficient to determine that the instrument met the manufacturer's specifications.

Temperatu	re: 72.	0 Deg. F	Humidity:	67	% RH	
Calibration	n Date:	28 Sep 98	Calibration	n Pro	cedure:	CLCP-WT-001
Interval:	6	months	Received:	IN T	OLERANC	E
Next Calib	ration D	ue: 28 Mar 99				

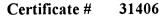
**Remarks:** 

#### Standards Used

Asset	MFR Model Description		et MFR Model		Description	Serial No.	Due Cal
			,				
001706	RICE LAKE	2G	WEIGHT STANDARD	C861	25 Jun 99		
001708	RICE LAKE	10G	WEIGHT STANDARD	C863	25 Jun 99		
001710	RICE LAKE	20G	WEIGHT STANDARD	C865	25 Jun 99		
001711	RICE LAKE	50G	WEIGHT STANDARD	C866	25 Jun 99		
005116	RICE LAKE	100G	WEIGHT STANDARD	T097	26 Jun 99		
005117	RICE LAKE	200G	WEIGHT STANDARD	T098	26 Jun 99		

Signed: Title:

LAST PAGE OF REPORT Total Pages Printed: 1







Certificate # 0972-01

### **Certificate of Calibration**

29 March 1999

Issued to:DARRELL DUNN DIV20 B57Manufacturer/Model:SARTORIOUS RC210PDescription:ELECTRONIC BALANCESerial Number:10704379Asset 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: 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: White, Technician

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Accredited



Certificate # 0972-01

### **Certificate of Calibration**

27 September 1999

Issued to:DARRELL DUNN DIV20 B57Manufacturer/Model:SARTORIUS RC210PDescription:ELECTRONIC BALANCESerial Number:10704379Asset 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: Jérrv White, Technician Page 1 of 1

CALIBRATION LABORATORY

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

Receipt for Wo	rk Order	40565				Date Recei	ved	9/14/00
Asset No. 0020	029 M	anufacturer	SARTORIL	JS	Model	RC	210P	
Description ELECTRONIC BALANCE					Serial Number 10704379		379	
Accessory Received/Required NONE								
Div/CC ID	NONE	Accessor	y to Asset No	N/A	Acc	ouracy M	IFG SI	PECS
Div/CC DI	<b>/</b> 20	Location	B57	Custodiar	DARR	ELL DUNN	Tel.	6090
Charge/Project	No	20.00751.006	Proprietary/Co	nfidental _	N Da	ate Required	R	OUTINE
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.

workreq.rpt Rev 30 Jan 00