

INSTRUMENTATION SERVICES

The instrumentation department caters to the needs of the various divisions of the institute by providing them with valuable technical expertise and prompt services in the use of numerous instruments available at the institute. The department activities include maintenance and repair of Electrical, Electronics, Electro-mechanical, Refrigeration and A/C equipment. Their work involves helping the scientific staff from preparing the specifications for their equipment, floating inquiries, scrutinizing the offers received, preparing comparative statements, ordering the equipment, making prerequisite arrangements for installation, installing the

equipment (Table 40) and finally helping the members of the staff in utilizing the equipment to its optimum level. To top it all the instrumentation staff strives hard to maintain all these instruments in working condition by providing timely repairs, procuring required spares and stocking them to keep the down time to a minimum.

The activities of the instruments department can be broadly categorized into the following divisions:

- I. Procurement and Installation of new equipment.
- II. Maintenance of all existing equipment at the institute.

I. Procurement and installation of new equipment

Table 40. List of new instruments installed

No	Name of the Equipment	Make	Model
1.	Micro Balance Afcoset-4nos.	AND	ER-120
2.	Mini Vertical Electrophoresis -4nos.	OWL	P8DS-2
3.	Midi Vertical Electrophoresis -2nos.	OWL	P9DS-2
4.	Binocular Microscope-1No.	Nikon	YS-100
5.	Thermal Cycler Gene Amp-2nos.	Applied Biosystems	System 9700 PCR
6.	Protein Purification System -1no.	Bio-Rad	Bio Logic LP
7.	Mini Transblot Electrophoresis Transfer cell -3nos	Bio-Rad	Cat. No. 170-3930/35
8.	Sub gel Electrophoresis System-2nos.	Bio-Rad	Cat. No. 170-4401 to 06 & 4481 to 86
9.	Mini protein 3 cell-3nos.	Bio-Rad	Cat. No. 165-3301/02
10.	Dot Blot Micro Filtration Apparatus-2nos.	Bio-Rad	Cat. No. 165-6545/47
11.	HPLC with UV-Visible, Fluorescence, RI Detectors & Auto injector + Degasser -1no.	Shimadzu	Advanced VP series
12.	Thermal Cycler with Vortexer for RNA	MGM instruments	DTS-400 Gene Probe Aptima
13.	Luminescence Analyzer along with IBM PC, Monitor E-54 and HP Desk jet Printer model -6122	MGM Instruments Inc.	Leader 450 HC+
14.	Dry Heat Bath Vortexer - 4 Nos. (PCR machine)	MGM Instruments Inc.	SB-100
15.	Microwave Digestion System	Cem Mars	X-Press (1500Watts)
16.	Atomic Absorption Spectrometer with Hydride Generator Graphite Furnace	GBC-Scientific	Avanta PM
17.	ELSD Low Temperature EvaporativeELSD for HPLC	SEDEXLT-ELSD	SEDEX-75
18.	2D-Gel electrophoresis system	Bio-Rad	2D-Gel-ES
19.	Ref. Centrifuge-2nos.	Eppendorf	5810
20.	Ultrasonic Bath -1no.	Oscar	MIC-103
21.	Auto Stainer-1no.	Sakura	DRS 2000J-D2
22.	Hybridization Oven -1no.	Apollo	Hp-9310
23.	Flash Evaporator-1no.	Buchi	R205V-800

List of new instruments installed (contd..)

No	Name of the Equipment	Make	Model
24.	Rota Rod Treadmill	TSE	337500R/A
25.	Tissue Embedding unit	Thermo	
26.	Blood Lead Analyzer	E.S.A.	
27.	Protein Purification System	Amersham	Akta Prime
28.	Automatic Cages washing machine	IWT,	9LAVE611
29.	TurboVap Evaporator	Zymark	LV 96
30.	Refrigerated Incubator Shaker	New Brunswick Scientific	Innova 4230
31.	Generator-1no.	Kirloskar	SC-90

III. Training programmes.

IV. Audio Visual arrangements.

II. Maintenance of Existing Equipment

Table 41. Details of complaints registered and attended

Name of the Divisions	Complaints Received	Completed	Pending
Electronics	209	202	7
Electromechanical	171	166	5
Refrigeration & Air-Conditioning	321	320	1
Total	701	688	13

The Electrical Department completed the process of Energising the Primate Facility, obtaining all required permissions from the Central Electrical Authority, Chennai.

III. Training Programmes

✍ Conducted Training course on Analytical Equipment's for two trainees of COVA from Govt. Polytechnic College for Minorities, Guntur, from 10-05-2005 to 03-06-2005. The topics covered were on the operating principles and maintenance of pH meters, conductivity meters, Electrophoresis, Spectrophotometers, Gas Chromatography, Liquid Chromatography, Centrifuges, Balances and Practical demonstrations on these instruments.

✍ An in-plant Training programme in the Operation and maintenance of Laboratory equipment in Bio-Medical Engineering was organized for a period of six weeks from 11-07-2005 to 19-08-2005 to two candidates deputed by the Advanced Training Institute, Ramanthapur, Hyderabad, under the aegis of Ministry of

Labour, Govt. of India. This in-plant training is a part of the course and the Ministry of Labour, Govt. of India, considers the training as a nation building activity.

Deputation

✍ Mr. Ramchandra Chaugule, Sr. Technical Officer and Mr. Micheal Fernandes, Technical Assistant, Instrumentation Division, were deputed to the RMRC Bhubaneshwer, from 14-02-2005 to 22-02-2005 to repair and service laboratory electronic analytical instruments and refrigeration equipment. They attended to more than 43 instruments, out of which 29 instruments were brought to working condition. Appropriate suggestions have been provided to RMRC, regarding the maintenance of rest of the equipment.

✍ Mr. Ramchandra Chaugule, Sr. Technical Officer was deputed to RMRC Jabalpur, from 31-08-2005 to 22-09-2005 for the installation of WALLAC make, Model 1409, Liquid Scintillation Counter at the centre. Appropriate reports have been submitted .

Seminar

- 1) Mr. V. Satish Babu, Technical Officer and Mrs. Vijaya Durga, Technician Instrumentation Division has attended a Technical Seminar on HPLC Chemstation Software and HPLC system organized by Agilent Technologies, India , Hyderabad on 7th April 2005 and 12th Sept. 2005, respectively.
- 2) Mr. B. Ramulu, Technical Officer, Instrumentation Division attended a Seminar on Refrigerants HVAC Systems organized by GMP Compliance India at Hyderabad.