

**List of Equipment/Facilities procured/created each costing over Rs. 50 lakh since year 2000**

S.No	Name of the Institute/ University	Name of Equipment /machine/ specialized research facilities	Site/place where facility is existing	Make	Specification	Applications (use)	Contact Person for sharing the facilities	Provision for training.
1	ANGRU, Rajendranagar, Hyderabad	Transmission Electron Microscope along with Accessories	Ruska Lab, ANGRAU Campus Rajendranagar Hyderabad	Hitachi Japan	Model H. 7500 ID (P/No. 0503) with DP plus, with accessories	1. Ultrastructural studies and disease diagnosis etc. 2.Characterisations of virus and bacteria	Professor and University Head, Department of Microbiology, College of Veterinary Science, R' nagar, Hyderabad.	-
2	ANGRU, Rajendranagar, Hyderabad	Scanning Electron Microscope	Ruska Lab, ANGRAU Campus Rajendranagar Hyderabad	M/s Leo Electron Microscopy Ltd. Cambridge UK (Origin Japan)	LEO 1420 VP Compact variable pressure Digital SEM	1. Ultrastructural studies and disease diagnosis etc. 2.Characterisations of virus and bacteria	Professor and University Head, Department of Microbiology, College of Veterinary Science, R' nagar, Hyderabad.	-
3	CAKHPKV, Palampur	Atomic Absorption spectrophotometer	Contr AA-700	Deptt. of Soil Science	High resolution continuum source AAS for flame&Graphide Furnance	To determine micronutrients	Dr.BB Kanwar, Dept. of soil science.	No,
4	CCS HAU, Hissar,	DNA sequencing system and accessories	Department of Animal Biotechnology	Applied Biosystems	Applied Biosystem 3130xl, 16 capillaries	Used in sequencing of the genes and their phylogentic analysis	Dr. Gaya Prasad, gaya@hau.ernet.in, 01662289132	With the permission of competent authority
5	CIRCOT, Mumbai	X-Pert Pro - XRD	QEID, CIRCOT, Mumbai	PANalytical, Netherlands	XRD system for powder diffraction and textile analysis	Structural studies of materials mainly textile fibres	Dr. R.P. Nachane, Head, Quality Evaluation and Improvement Diuision, CIRCOT, Mumbai 400 019. Tel. 022-24127273/76, Fax. 022-24130835, e.mail-circot@vsnl.com	Yes

6	CIRCOT, Mumbai	AFIS	QEID, CIRCOT, Mumbai	Uster Technologies Ltd., USA	Length, linear density, maturity, etc. determination of individual fibres in cotton sample	This is a dedicated facility for determination of cotton fibre characteristics	Dr. R.P. Nachane, Head, Quality Evaluation and Improvement Division, CIRCOT, Mumbai 400 019. Tel. 022-24127273/76, Fax. 022-24130835, e.mail-circot@vsnl.com	Yes
7	CIRCOT, Mumbai	DREF-3000 Friction Spinning Machine	Mechanical Processing Division, CIRCOT, Mumbai	Schlafhast Sahrer	A 3 head laboratory DREF spinning machine	Production of technical yarn on core sheath principle	Dr. S.K. Chattopadhyay, Sr. Scientist, Tel. 022-24127273/76, Fax. 022-24130835, e.mail-circot@vsnl.com; drskchattopadhyay@gmail.com	Yes
8	IARI, New Delhi	NMR 400 MH2	Division of Agri. Chemicals	Brucker	400 MH2	Structural analysis of organic molecules	Head Division of Agricultural Chemical - 25843272 pd_dureja@yahoo.com	No
9	IARI, New Delhi	LC-MS	Division of Agri. Chemicals	Thermo Finnigan	Structural analysys	Pesticides residues and molecules from natural resources	Head Division of Agriculture Chemical- 25843272 pd_dureja@yahoo.com	As per ICAR / IARI guidelines
10	JAU, Junagadh	ICP-MS	Deptt. of Biochemistry & Biotechnology, Junagadh Agricultural University, Junagadh	Perkin Elmar	ICP-MS SPECIFICATION Elan 9000 ICP= MS System, Dell GX-620 Window XP Service Pack 2, Refrigerated Recirculated Cooling System, Autosampler, Purification Panel wih tubing, manifold and misc. items	Heavy metal analysis, (30 elements)	Dr. B.A. Golakiya, Professor & Head	Yes

11	MA & FSU, Nagpur	API2000 LC MS-MS with UV-VIS Dector	Dept. of Veterinary Public health	M/S Applied bio-system & M/S Perkin Elmer	API 2000 LC/MS/MS system High Performance triple quadruple mass spectrometer	For detection of anti-microbial & some of the pesticide in animal origin food	Dr. A.M.Paturkar,Dept.of VPH ashish.paturkar@rediffmail.com	Yes, Hands on training on LC MS-MS for residue analysis on any one compound on above equipment for 3 days charging Rs.5000/ per person.
12	MA & FSU, Nagpur	Millennium Gamma Camera system	Dept. of Veterinary Public health	General Electricals	Millennium Gamma Camera with accessories (ECG Trigger,LEGP,MEGP,Pin Hole collimator,Genie acquisition station and e ntegra work station	to conduct scintigraphy studies in various animals to assess the function of various systems.	Dr. A.Samad. Dean, Bombay Veterniary college emal:- vetsamad@hotmail.com	training on chargable basis.
13	NAU, Navsari Gujrat	DNA seqencer	Department of Biotechnology	Applied Biosystems	4 capillary with dell workstation	Gene sequencing	Dr RR Shah, Professor & Head Department of Biotechnology, NAU, Navasari E Mail: rehendrakumar@hotmail.com	No
14	NBAGR,Karnal	Automated DNA Sequencer	DNA Sequencing Lab,	Applied Biosystems USA	4 capillary machine 3100-Avant	Microsatellite Genotyping, DNA Sequencing, SNP genotyping.	Dr. M S Tantia	-

15	NRC for M & A P Boriavi- (Anand), Gujarat.	LC-MS/MS	NRC(MAP)	Sciex, Applied Biosystem, USA	Mass Analyser Triple Quadrupole Mass Range (m/z) 5-1700 amu (Atomic mass Unit) Ion Source • Electro spray ionisation source and Atmospheric pressure chemical ionization source . • The ion source able to accept in volatile HPLC buffer • Positive and negative ionisation capabilities Scanning Facility .Precursor ion scan, Product ion scan, Neutral loss scan,. Multiple reaction monitoring Software • The MS control software with window based platform . • Facility for data acquisition, peak integration, calibration and quantification.	Qualitative and Quantative analysis of natural products (Med & aromatic plants)	The Director, NRCMAP, Boriavi,Anand	Yes
16	NRC Grapes	Automated genetic analyzer	Biotechnology laboratory, NRC for Grapes	ABI	4 capillary system with data collection and genemapper software	Presently used for microsatellite and AFLP analysis. Can be used for DNA sequencing	Director, NRC for Grapes Phone: 020-26914245; Fax: 020-26914246	As per ICAR norms.
17	NRC Grapes	API 2000/ LCMS	NRL	Applied Biosystem	HPLC hyphenated to Triple Quadrupole mass spectrometer with electrospray ionisation (ESI) and atmospheric pressure chemical ionisation (APCI)	Pesticide residue analysis	Director, NRC for Grapes Phone: 020-26914245; Fax: 020-26914246	As per ICAR norms.
18	NRC Grapes	API 4000 Q Trap	NRL	Applied Biosystem	Triple quadrupole with ion trap functionality, ESI, APCI and Atmospheric pressure photo ionisation (APPI)	Pesticide residue analysis	Director, NRC for Grapes Phone: 020-26914245; Fax: 020-26914246	As per ICAR norms.
19	NRC Grapes	GCxGC- Time of Flight Mass Spectrometer	NRL	Leco Pegasus IV connected to Agilent 6890N GC stsyem	2 dimensional GCxGC hyphenated to time of filght mass spectrometer	Pesticide residue analysis	Director, NRC for Grapes Phone: 020-26914245; Fax: 020-26914246	As per ICAR norms.

20	NRC Grapes	GC- MS/MS	NRL	Polaris Q ion trap system with Trace GC ultra	Ion trap GC-MS/MS system	Pesticide residue analysis	Director, NRC for Grapes Phone: 020-26914245; Fax: 020-26914246	As per ICAR norms.
21	NRC Grapes	ICP-MS	NRL	Thermo ICP-MS	Quadrupole MS system	Heavy metal analysis	Director, NRC for Grapes Phone: 020-26914245; Fax: 020-26914246	As per ICAR norms.
22	NRC(PB), Pusa Campus, New Delhi	DNA Sequencer (Gel Based)	NRCPB, LBS Building, Pusa, New Delhi	ABI	Automated DNA Sequencing System (Gel Based)	DNA Sequencing	Dr. P. Ananda Kumar, Project Director Fax. No. 011 25843984	Yes
23	NRC(PB), Pusa Campus, New Delhi	DNA Sequencer (Capillary Based)	NRCPB, LBS Building, Pusa, New Delhi	Amersham	Automated DNA Sequencing System (Capillary Based)	DNA Sequencing	Dr. P. Ananda Kumar, Project Director Fax. No. 011 25843985	Yes
24	NRC(PB), Pusa Campus, New Delhi	DNA Sequencer (Megabace 4000)	NRCPB, LBS Building, Pusa, New Delhi	Amersham	Automated DNA Sequencing System; MegaBace 4000	High throughput DNA sequencing	Dr. P. Ananda Kumar, Project Director Fax. No. 011 25843986	Yes
25	NRC(PB), Pusa Campus, New Delhi	SUN Server	NRCPB, LBS Building, Pusa, New Delhi	SUN Microsystems	CMC SUN Server	TCF, Data Storage & Management	Dr. P. Ananda Kumar, Project Director Fax. No. 011 25843987	Yes
26	NRC(PB), Pusa Campus, New Delhi	Maldi T of	NRCPB, LBS Building, Pusa, New Delhi	Sequenom	Massarray Autoflex System with Server and accessories	Mass calibration and the determination of mass resolution and sensitivity	Dr. P. Ananda Kumar, Project Director Fax. No. 011 25843988	Yes
27	NRC(PB), Pusa Campus, New Delhi	Microarray	NRCPB, LBS Building, Pusa, New Delhi	Affymatrix	Affymatrix GeneChip 300 7G system, 200V with accessories	Gene expression profiling, Genotyping, Array comparative genomic hybridization (aCGH), Profiling of biomarkers, Analysis of protein activities, Fluorescence in situ hybridization (FISH)	Dr. P. Ananda Kumar, Project Director Fax. No. 011 25843989	Yes

28	NRC(PB), Pusa Campus, New Delhi	DHPLC	NRCPB, LBS Building, Pusa, New Delhi	Transgenomic	Wave-99-3500-WAVE Nucleic Acid Fragment Analysis System Model 3500	Screen and discover DNA sequence polymorphisms or changes in DNA sequences, including single nucleotide polymorphisms	Dr. P. Ananda Kumar, Project Director Fax. No. 011 25843990	Yes
29	NRC(PB), Pusa Campus, New Delhi	Proteomics	NRCPB, LBS Building, Pusa, New Delhi	GE	Proteomics System	Qualitative and Quantitative Protein Profiling for Target Identification Studies	Dr. P. Ananda Kumar, Project Director Fax. No. 011 25843991	Yes
30	NRC(PB), Pusa Campus, New Delhi	Maldi-Tof-Tof	NRCPB, LBS Building, Pusa, New Delhi	Bruker	Ultraflex-III ToF/ToF 200 Maldi-Tof System	Mass calibration and the determination of mass resolution and sensitivity	Dr. P. Ananda Kumar, Project Director Fax. No. 011 25843992	Yes
31	NRC(PB), Pusa Campus, New Delhi	SUN Server	NRCPB, LBS Building, Pusa, New Delhi	SUN Microsystems	Sun Cluster Server, Storage & Application Software	TCF, Data Storage & Management	Dr. P. Ananda Kumar, Project Director Fax. No. 011 25843993	Yes
32	SKUAST, (Kashmir)	Transmission Electron Microscope	FOA, Chatha	M/S Jeol Asia PTE Ltd.	Transmission Electron Microscope with accessories and CCD Camera Attachment Digital CCD Camera	Transmission Electron Microscope with accessories Electron microscope Double Cap CL Ploepipe	Dy. Director Research /VC Telefax: 0191-2474995 (o)	-

33	SKUAST, (Kashmir)	GCMS System	FOA, Chatha	Model Clarus 600 Including N665-000A Clarus 600 Gas Chromatograph N665-0b00 For 230V	Perkin Elmer Clarus 600 GC-MS system with Turbomatrix Headspace sampler N665-9ECD perkin Elmer Gas Chromatograph Model Clarus 600 Including N665-0B00 For 230V N665-10F0 Programmable Split/Splitless capillary Injector with PPC N665-20C0 Electron Capture Detector with PPC N665-30B0 Dotl INK Integral LINK for Clarus 600 & Titaichrom Software N6 12-0020 Capillary column adaptor N600-0968 Capillary Column adaptor for ECD N650-0123 Installation Kit N612-0102 Programmable Split/Splitless Injector Starter Kit. Includes universal connectors (5), 0.53-mm i.d. quartz Liner, glass hourglass Liner, 1/16-inch stainless steel nuts (5), 0.5-mm graphite ferrules (10), 0.8-mm graphits ferrules (10), Viton o-rings (6), Graphite o-ring (5),untreated quartz wool, wafer scribes (10), Thermogreen septa (50). N931-6102 Elite-5 Capillary Column 30m x 0.53mm i.d x 0.50um MASS DETECTOR 600T N665-8603 Clarus 600 T Mass Spectrometer Including Electorn Lonisation 255/sec Turbemoleular Pump Mass Range; 1 to 1200 amu Quadrupole Mass Spectrometer; Transmission type with pre filter Linear Dynamic Range; 10 (6)- 10(7) Transfer line / Interface.	For analysis of pesticides reidues	Dy. Director Research /VC Telefax: 0191-2474995 (o)	-
34	TNV&ASU Chennai	Twins Screw extruder	Shore Laboratory, Dept. of Fish Processing Technology, FC&RI, Thoothukudi -8	M/s. Brasender Germany	Model DSF 35/12D No.834401	Ready to eat expanded snack food prepration	Dr. V.K. Venka taramani Dean 0461-2340154 0461-2340554	Training fee Rs. 7000/person

35	UAS, Bangalore	Isotope Ratio Mass Spectrometer	Crop Physiology UAS, GKVK Bangalore 560065	Delta +	Elemental analyzers, interfaced with IRMS through continuous flow device	Determination of stable isotope ratios for high throughput determination of water use efficiency, transpiration rate and several physiological biotransformation processes.		-
36	Veterinary College & Research Institute, Namakkal, Tamil Nadu	Carcass and byproducts utilization plant	Veterinary College & Research Institute, Namakkal, Tamil Nadu	M/s.Precision Products Pvt.Ltd. Ahemdabad	Dry matter capacity 800 liters/batch processing	Disposal of dead animals/birds by dry rendering	Dean, Veterinary College & Research Institute, Namakkal, Phone: 04286266491-93 Fax: 04286-266484 E mail deanvcricri@yahoo.co.in	Yes, on payment basis as per the charges fixed by the university committee