

RESEARCH PROJECTS**Projects completed**

S.No	Title of the Project	Funded Agency	Amount Funded	Tenure
1	Development of Optode for Fluoride by Digital Color Analysis	DST	27.64 Lakhs	2014-16
2	Surfactant impregnated chitosan as adsorbent for the removal of dyes from industrial effluents.	UGC	3.40 Lakhs	2014-16
3	Nitrite ion and fluoride ion footprints in the ground water of some selected coastal villages of Vizianagaram district- some investigations	UGC	2.90 Lakhs	2014-16

The department is housing four laboratories, where two are exclusively for regular laboratory course work of B.Tech courses and the remaining two are for carrying the research in advanced topics, funded research and aiming the services of social concern. The four laboratories in the department are as follows

- ❖ ENGINEERING CHEMISTRY LAB-I
- ❖ ENGINEERING CHEMISTRY LAB-II
- ❖ CENTRAL RESEARCH FACILITY (DEPARTMENT OF CHEMISTRY)
- ❖ WATER QUALITY TESTING LAB (WQTL)

Engineering Chemistry Laboratory- I**List of Equipment:**

S.No	Name of the Equipment	Make	Model No.	Numbers Available
1	Analytical Balance	Keroy	K5	04
2	Centrifuge	Kumar	--	01
3	Electronic balance	Infra Digi	--	01
4	Glassware and Titrimetric Apparatus	--	--	--
5	Hot Air Oven	Kumar	KUM300	01
6	Lab Fume Hood	Kemi	KFH 3	01
7	Melting Point Apparatus	Kumar		04
8	Thin Layer Chromatography Unit	Besto	TLC - 37	01
9	Redwood Viscometer			04
10	Saybolt Viscometer			01
11	Cleveland open-cup apparatus			01

Engineering Chemistry Laboratory- II

List of Equipment:

S.No	Name of the Equipment	Make	Model No.	Numbers Available
1	Analytical Balance	Keroy	K5	02
2	Colorimeter	Elico	CL223	01
3	Colorimeter	Systronics	112	01
4	Conductivity meters	Elico	CM180	05
5	Conductivity meters	Zeal - Tech	09122	03
6	Deionizer	Wation	DSD 200	01
7	Electronic balance	Infra Digi	Max: 300g Min: 0.01g	01
8	Glassware and Titrimetric Apparatus	Borosil or Qualigens	--	--
9	pH meters	Elico	LI 120	02
10	pH Meters	Zeal - tech	09112	02
11	Polarimeter	Besto		01
12	Potentiometers	Zeal - Tech	09102	05
13	Refrigerator	Godrej	210 L capacity	01

Central Research Facility

A facility to carry out studies on advanced topics, research and funded projects is identified where in the faculty and the students can carry out their research projects and experimental work leading to publications etc.,. This laboratory is designed to strengthen the faculty and the students aiming for higher learning.

List of Equipment

S. No	Name of the Equipment	Make	Model No.	Specifications	Numbers Available
1	Conductivity Meter	Zeal - Tech	09122	Microprocessor based instrument with electronic calibration	01
2	Constant Temperature Water Bath	KEMI	KCTB - 1	Temp: - 5°C to 80° C Thermostat Accuracy : ± 5°C	01
3	Digital Analytical Balance	Mettler Toledo	ML 104	Max: 120g Min: 10mg d: 0.1mg	01
4	Digital Analytical Balance	Mettler Toledo	ME 303	Max: 120g Min: 10mg d: 0.1mg	01
5	Digital Analytical	Shimadzu	ELB 300	Max: 320g	01

	Balance	u		Min: 0.2g d: 1 mg	
6	Fluoride Ion Selective Electrode with Ion Selectometer	Thermo	Accumet XL 250	Microprocessor based instrument capable of measuring with an ORP or electrode in various modes. Contains RS232 interface.	01
7	pH meter	Elico	LI 120	Microprocessor based instrument Manual 2 point calibration for pH Measures pH and EMF	01
8	Spectrophotometer	Jasco	V 750	True double beam Instrument Wave length Range: 200-900 nm With Diffusive Reflectance Accessory Color measurement software 0.1nm slit width	01
9	Spectrophotometer	Elico	SL 177	Microprocessor based Scanning Visible Spectrophotometer covering Near UV, Visible and Near IR Spectral Region. Automatic 6 position cuvette holder for 10 mm path length cuvettes.	01
10	UV - Cabinet	KEMI	KUVC 1	Contains UV lamp at 254 nm and Fluorescent lamp	01
11	Water Bath	KEMI	KWB 210 A	---	01
12	Spincoter	Apex	Spin NXG-p1	To coat thin films	01
13	Ultrasonicator	Cintex	CIE116	Green reactions	01

Water Quality Testing Laboratory

Department of chemistry is facilitated with a testing laboratory, in which various parameters related to water and its quality can be analyzed as per ASTM test methods. This laboratory is established aiming to provide services on social concern.

List of Equipment:

S.No	Name of the Equipment	Make	Model No.	Specifications	Numbers Available
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1	Conductivity meter	Zeal - Tech	09122	Microprocessor based Instrument	01
2	Centrifuge	Remi	BMLC 14	Speed	01
3	Deionizer	Wation	DSD 200	Capacity 200 L per hour	01
4	Distillation Unit	Borosil		Capacity 1L per hour	03
5	Electrical balance	Dhona	160D	Max : 160g Min : 10mg d: 0.01g	01
6	Flame Photometer	Elico	CL 378	Microprocessor based, User friendly, Menu driven with Printer Interface Automatic ignition Automatic gas shut off in case of power failure	01
7	Hot Plates	Kemi	KHPE 3 - SS	Thermostat Accuracy : $\pm 5^{\circ}\text{C}$	02
8	pH meter	Elico	Li - 120	Micro Processor based Instrument	01
9	DO meter	Eutech	---	WQTL	01
10	Turbidity meter	Eutech	---	WQTL	01
11	Ion selective meter		---	WQTL	01