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# Laboratory Effluent Waste Management

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A Policy for Rajiv Gandhi University



**RAJIV GANDHI UNIVERSITY**

RONO HILLS, DOIMUKH  
ARUNACHAL PRADESH

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## **ABBREVIATION(S)**

RGU: Rajiv Gandhi University

Lab: Laboratory

## **ABOUT RGU**

The foundation stone of the Rajiv Gandhi University formerly known as Arunachal University was laid on 04<sup>th</sup> February 1984 by the then Prime Minister of India Smt. Indira Gandhi as a State University. However, in the year 2007, the University attained the status of a Central University and was renamed Rajiv Gandhi University, the nomenclature was done in the name of the former Prime Minister of India Shri Rajiv Gandhi. The University is on the hilltop of Rono Hills, Doimukh, Itanagar in the State of Arunachal Pradesh. The Rajiv Gandhi University is one of the oldest premier institutions for higher education in the state. Since its inception, the teaching and research programs of the University is focused on teaching, learning, and research. The research programs are designed with a view to playing a positive role in the socio-economic and cultural development of the State and the Nation. Despite infrastructural constraints and remote location, the University has been able to maintain its academic excellence. At present, the University has 43 departments under 12 faculties that offer various courses like Post Graduation, Diploma, Post Graduation Diploma, Certificate Courses, BFA, and PhD. with approximately 3200 students including research scholars. There are more than 30 colleges and institutions affiliated to the Rajiv Gandhi University which are in various locations of the State.

## **INTRODUCTION**

The Rajiv Gandhi (Central) University is located in Arunachal Pradesh, a state considered to be rich in bio-diversity and the region is adequately green as compared to other parts of the country. RGU being one of the pioneer higher educational institutes of the region is working tirelessly towards achieving the goal of protecting its green environment also be managing the wastes produced by the laboratories of the University. The Laboratory Effluent Waste Management policy for RGU is to management so that it has a minimum impact on the environment. Laboratory waste is the waste that is generated from laboratories in industries and in educational institutions such as the RGU. There are different categories of wastes such as Hazardous, Clinical, Biological, Electrical and Laboratory.

The Laboratory Effluent Waste Management is binding for all the scientific laboratories of the institution and applies to all its stakeholders, specially the departments having the facilities of laboratories within the campus and to the various activities undertaken by the institution. This will ultimately help implant efficiency and environmental awareness into everyday activities, hence helping us to realize our responsibilities and commitment to

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conservation of natural resources and to for a proper and systematic waste management that is produced by our laboratories.

## **PURPOSE**

Rajiv Gandhi (Central) University, Rono Hills, Doimukh, Arunachal Pradesh recognizes the importance of the environment and its importance with regards to the proper management of the laboratory effluent waste so as to minimize its impact on the environment.

## **POLICIES**

### **Policy for Reduction of Laboratory Waste**

1. The best strategy for managing laboratory waste aims to maximize safety and minimize environmental impact, and considers these objectives from the time of purchase.
2. Reducing laboratory waste will have a number of benefits like saving money and reducing disposal costs while also encouraging safety in the lab(s).
3. We can reduce the lab disposals from the stage of purchasing of the lab products like purchasing the minimum required products.
4. To find a reliable supplier who shall deliver small amounts of chemicals at short notice. We can also ask them will they take back the unused chemicals.
5. All chemicals and the wastes in the lab should be labeled. This labeling system should be standardized.
6. Separate waste into the following streams for treatment, reuse or disposal:
  - a. Sharps including scalpels and syringes
  - b. Glassware
  - c. Biological samples
  - d. General lab waste such as wipes, gloves, tissues
  - e. Chemicals

### **Policy for Reuse of Laboratory Waste**

1. Incorporating recovery activities during the experiment
2. A chemical swap might be possible with other institutions in and around RGU
3. All waste will be segregated based on chemical incompatibilities e.g. hazardous and non-hazardous wastes shall not be mixed together.
4. All waste will be segregated for organic and inorganic wastes.
5. Waste consisting of the same material type can be segregated.

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6. Waste streams that are capable of being recycled should be stored separately i.e. recoverable metals or solvents.

### **Policy for Recycle of Laboratory Waste**

1. All the wastes generated in the lab are not hazardous waste such as papers and packaging waste, such wastes can be recycled.
2. The recycle bins should be prominently labeled by placing a label on the bin stating paper only, ensuring that hazardous wastes such as chemicals are not placed in the bin.
3. Bins for the collection of hazardous materials should be placed in the lab, which must be emptied regularly and must be monitored by the lab personnel of the lab technicians.
4. All wastes from the lab should be collected by a waste collector with a valid waste collection license, who is specialized in hazardous waste collection and who is licensed to treat and dispose of the waste.

### **Policy for Disposal of Laboratory Waste**

1. Lab glassware is not suitable for recycling, as its melting point is higher than that of conventional glass. Broken glassware should be collected in puncture proof containers and disposal of in large containers by technical staff. It should not be placed in a normal waste bin.
2. Sharp such as syringe and scalpel blades should be collected in containers labeled prominently as “Sharps”.
3. Biological waste such as agar plates, waste from dissections etc. should be separated and collected separately.

## **REVIEW OF THE POLICY**

The policies will be communicated to the employees and students of the University for implementation. Further, the policies can also be reviewed on a regular basis by the University Administration.



राजीव गाँधी विश्वविद्यालय  
**Rajiv Gandhi University**

रोनो हिल्स, दोइमुख – 791112,  
अरुणाचल प्रदेश, भारत  
**Rono Hills, Doimukh – 791112,  
Arunachal Pradesh, INDIA**

**Website: [rgu.ac.in](http://rgu.ac.in)**