



# AVS College of Arts & Science



Attur Main Road, Ramalingapuram, Salem.

(Recognized under section 2(f) & 12(B) of UGC Act 1956 and Accredited by NAAC)

(Co - Educational Institution | Affiliated to Periyar University, Salem

ISO 9001 : 2015 Certified Institution)

[principal@avscollege.ac.in](mailto:principal@avscollege.ac.in) | [www.avscollege.ac.in](http://www.avscollege.ac.in)



**SECOND CYCLE NAAC ACCREDITATION**

**CRITERION VII**

**Institutional Values and Best Practices**

**7.1 Institutional Values and Social Responsibilities**

**Submitted to**



**THE NATIONAL ASSESSMENT AND ACCREDITATION COUNCIL**



# AVS College of Arts & Science

(Recognized Under Section 2(f) & 12(B) of UGC Act 1956 and Accredited by NAAC)

(Co-Educational Institution Affiliated to Periyar University, Salem)

## POLICY DOCUMENT FOR WASTE DISPOSAL

### DEPARTMENT OF BIOTECHNOLOGY

#### Institute encourages environment friendly practices as follows

Waste management practices are properly sustained by our Institution. The laboratory of Biotechnology strictly imposes the disposal practices and Laboratory procedures((SOPs and GLPs)viz., handling storage and disposal of chemicals, liquids and microbial wastes through harmless and secure method and helps to maintain the safe and eco friendly atmosphere in the campus.

#### **Solid waste management:**

The solid wastes mainly include solid media containing microbial waste, disposable petriplates, gels, syringes, needles, lancet, micropipette tips, ELISA microtitre wells and so on. Since they are considered as potent biohazards, they are disposed by deep landfills and detoxify those using microbes and other biological method recycling is rarely done.

#### **Broken Glassware:**

Broken glassware is usually collected in cardboard boxes for proper disposal off as land filling. Due to contamination, they are usually not suitable for recycling.

#### **Liquid wastes disposal**

Solvents are segregated into waste bottles and containers. Hazardous chemical are disposed by incineration and landfills, while others are poured down drains.

ORGANIC SOLVENTS	INORGANIC SALTS	AQUEOUS WASTE
<b>Chlorinated Solvents like:</b> DCM, Chloroform, Chlorobenzene etc.,		
<b>Non- Chlorinated Solvents like:</b> Toluene, Methanol, Hexane Ethylacetate etc.,	Some compounds with transition metals	Alcohol containing salts, Silica gel and Charcol etc.,
The above chemicals cleanse with excess amount water		

#### **Microbial waste Disposal Management**

Microbiological waste are properly sterilized using Autoclave (>121 c for 15 minutes at 15lbs) prior to disposal.



HOD



PRINCIPAL

PRINCIPAL  
AVS COLLEGE OF ARTS & SCIENCE  
RAMALINGAPURAM  
SALEM-636 106.

Head, Department of Biotechnology  
AVS College of Arts & Science,  
Ramalingapuram, Salem - 636 106.

Ph : 94427 00205.

E-mail : [principal@avscollege.ac.in](mailto:principal@avscollege.ac.in)  
Website: [www.avscollege.ac.in](http://www.avscollege.ac.in)



# AVS College of Arts & Science

(Recognized Under Section 2(f) & 12(B) of UGC Act 1956 and Accredited by NAAC)

( Co-Educational Institution Affiliated to Periyar University, Salem)

## POLICY DOCUMENT FOR WASTE DISPOSAL

### DEPARTMENT OF MICROBIOLOGY

Institute encourages environment friendly practice as follow

Our Institute has engaged clean and hygienic learning environment to increase students attention and focus ,promoting meaningful learning experiences, encouraging superior levels of student performance, and motives students to practice advanced thinking skills and practicing the proper laboratory safety rules and waste disposal procedures (SOPs and GLPs) for maintaining the environment

#### **Waste Management**

Waste Management in microbiology lab is the collection, transportation, and disposals of garbage, sewage, and other waste products. The process of waste management involves treating solid and liquid wastes.

#### **Solid waste Management**

All the solid waste are sterilized and discarded by autoclave, hot air oven and other surface sterilants before disposal. Devices used to transfer, inoculate, mixing of cultures, stocks, specimens contain organisms likely to be pathogenic to human. Cultures dishes and stocks are placed in an autoclavable plastic bag or thermostable container and sterilized according to the standard protocol,. Later they are transferred to larger solid waste bins and are still treated as biohazards.

#### **Liquid biological waste**

Liquid biological wastes are collected in containers for autoclaving or chemical disinfection then discharged into sewer system. We do not pour melted agarose down the drain. Cleaning and waste disposal services are strictly followed in our laboratory and adherence to applicable policies and procedures.

#### **Biological Waste**

Biological waste materials are potentially contaminated with microorganisms including human blood and body fluids. Our laboratories strictly follow practices with autoclave bags or disinfect all the microbial products before the bags are disposed of in regular trash.

*DSM.IK*  
HOD

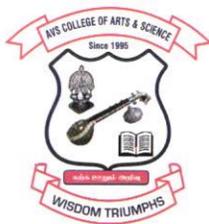


*[Signature]*  
PRINCIPAL  
PRINCIPAL  
AVS COLLEGE OF ARTS & SCIENCE  
RAMALINGAPURAM  
SALEM-636 106.

Attur Main Road,  
Ramalingapuram, Salem - 636 106.

Ph : 94427 00205.

E-mail : [principal@avscollege.ac.in](mailto:principal@avscollege.ac.in)  
Website: [www.avscollege.ac.in](http://www.avscollege.ac.in)



# AVS College of Arts & Science

(Recognized Under Section 2(f) & 12(B) of UGC Act 1956 and Accredited by NAAC)

( Co-Educational Institution Affiliated to Periyar University, Salem)

## POLICY DOCUMENT FOR WASTE DISPOSAL

### DEPARTMENT OF CHEMISTRY

Institute encourages environment friendly practice as follow

Our institution is responsible for the development and implementation of proper management practices for all the aspects of handling , storage , and disposal of chemical wastes that are generated the college . Our goal is to manage chemical waste by means of harmless and environmentally safe methods.

#### *Liquid waste management*

Chemical waste from chemistry laboratory are scientifically mixed either with waste or neutralizing agents .

Toxic chemicals are properly passed and are inactivated by chemical reduction and degradation through GLP recommended instruction. Further waste of excess of waste flushed out in a safe manner

#### **Chemical Waste Disposal Guideline**

<b>Organic Solvents</b>	<b>Inorganic salts</b>	<b>Innocuous aqueous waste</b>	<b>Solid Waste</b>
<b>Cholorinated Solvents like:</b> DCM , Chloroform , Chlorobenzene etc.,	Copper sulphate , Zinc chloride , Ferrous Sulphate, Ammonium sulphate , Magnesium sulphate etc.,	Acid (PH<4)Alkali (PH>10) Harmless soluble inorganic salts , drying agents	<b>Controlled waste like:</b> Gloves , Empty plastic vials/Centrifuge tubes, rubber and dirty papers should generally be placed in the waste bins available in laboratory and will be collected by the cleaners
<b>Non - Chlorinated Solvents like:</b> Toluene,Methanol,Ethylacetate,Hexane etc.,	Compounds with transition metals, Phosphides, Phosphorus ,Fluorides and Nitrites etc.,	Alcohol containing salts, silica gel and Charcoal etc.,	<b>Glassware:</b> Only clean broken glass wares, chemical bottles, droppers, sample tubes and waste plate glass are usually collected in card given by glass ware company for recycling purpose.
These chemicals should be washed down with excess water.			

*N. Kalitha*

HOD

Head of the Department  
PG & Research Department of Chemistry  
AVS College of Arts and Science  
Ramalingapuram, Salem - 636 106

Attur Main Road,

Ramalingapuram, Salem - 636 106.

Ph : 94427 00205.



PRINCIPAL

PRINCIPAL  
AVS COLLEGE OF ARTS & SCIENCE  
RAMALINGAPURAM  
SALEM-636 106.

E-mail : [principal@avscollege.ac.in](mailto:principal@avscollege.ac.in)  
Website: [www.avscollege.ac.in](http://www.avscollege.ac.in)



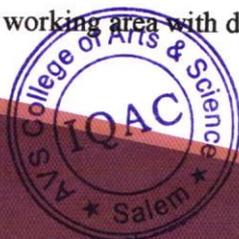
# AVS College of Arts & Science

(Recognized Under Section 2(f) & 12(B) of UGC Act 1956 and Accredited by NAAC)  
( Co-Educational Institution Affiliated to Periyar University, Salem)

## Standard Operating Procedures (SOPs) and Good laboratory PracticesGLPs )

- 1. Treat all microorganisms as potential pathogens:** Most of the microbes are not pathogenic to humans and do not cause illness unless under unusual circumstances very few microorganisms can act as pathogens . A student who has a health issue or the microbiology and Biotechnology laboratory
- 2. Sterilize equipment and materials.** A Glassware materials, media, tubes, plates, autoclaving , Otherwise, and other items, used for culturing microorganisms sterilized by autoclaving , Otherwise , commercially sterilized products should be used. The working mechanism and safety measure of all equipment and materials needs for the laboratory are understood before use and safe operating procedures to be followed .
- 3. Disinfect work areas before and after use.** Use a disinfectant , such as 70% ethanol solution , to wipe down all working areas like benches, laminar hoods, and inoculation chambers both before and after working with cultures in clean hands with soap and sanitizer.
- 4. Wash your hands.** Frequent cleaning of your hands is free from . Gloves and masks may be worn as extra protection from pathogens.
- 5. Never pipette by mouth .**Use pipette bulbs or Micropipette devices for the aspiration and dispensing of liquid cultures.
- 6. Wear proper hair put –up** and long hair should be pulled back to keep it away from bacterial cultures and open flame and nails must be cut down.
- 7. Do not eat or drink in the lab , or store food in areas where microorganisms are stored** . Keep your fingers out of your mouth , and wash your hands before and after the laboratory activity . Cover any cuts on your hands with bandage .
- 8. Label everything clearly .**All Cultures, Chemicals, disinfectants, and media should be clearly labeled with their names and date. If they are hazardous chemicals or carcinogens like Ethidium bromide , label them proper warning and about the cause of hazardous information . Students must recognize the international symbol for biohazards and their detailed information.
- 9. Autoclave or disinfect all waste material .**All items to be discarded after a laboratory hours , such as culture tube, Culture plates, swabs, toothpicks, wipe, disposable transfer needles, gels with EtBr, SDS-PAGE gels, and gloves should be placed in a biohazard autoclave bag and autoclaved 15 to 20 minutes at 121 \*C 15lbs pressure and dispose the contents in deep landfills. If no autoclave is available and you are not working with pathogens , the materials can be covered with a 10 % bleach solution and allowed to soak for at least 10 to 2 hours.
- 10. Clean up spills with care.** Wash the working area with disinfectant

Attur Main Road,  
Ramalingapuram, Salem - 636 106.  
Ph : 94427 00205.



  
PRINCIPAL  
AVS COLLEGE OF ARTS & SCIENCE  
RAMALINGAPURAM  
SALEM-636 106.

E-mail : [principal@avscollege.ac.in](mailto:principal@avscollege.ac.in)  
Website: [www.avscollege.ac.in](http://www.avscollege.ac.in)