

# **SOP on Cadaver Preservation**

**Department of Anatomy**

**Faculty of Medicine**

**UWUSL**

# **Standard Operating Procedure (SOP) on Cadaver Preservation**

**Issued By,**

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## **(1) Purpose**

To ensure proper preservation of cadavers for teaching, research, and surgical training while maintaining safety, hygiene, and ethical standards.

## **(2) Scope**

Applies to all personnel involved in cadaver handling, embalming, storage, and maintenance in the anatomy department.

## **(3) Responsibilities**

- Anatomy Department Staff: Perform embalming and maintenance.
- Technical Officers: Prepare solutions and manage storage.
- Faculty Members: Supervise procedures.
- Support Staff: Assist in transport and cleaning.

## **(4) Sources of Cadavers**

- Hospital mortuaries (unclaimed bodies under legal regulations).
- Body donation programs (willed bodies).
- Approved institutional sources.

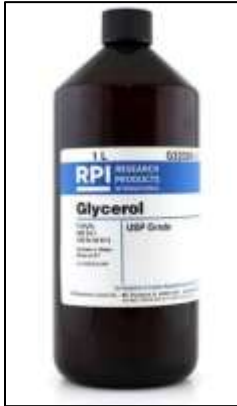
## **(5) Materials Required**

**Chemicals:**

- Formalin (10%),



- Glycerin



- Carboic acid (Phenol)



- Phenoxyethanol



**Equipment:**

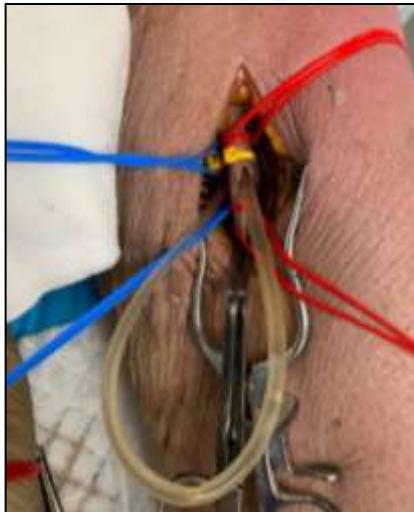
- Embalming pump



- Cannulas



- Tubing



- Storage tanks



- zipper bags



- PPE



## (6) Safety Precautions

- Use PPE (gloves, masks, gowns, eye protection).



- Work in well-ventilated areas.
- Handle formalin and phenol carefully.
- Follow biohazard waste disposal protocols

## (7) Procedure

### (a) Identification and Preparation

- Label cadaver with unique ID.



- Record details.

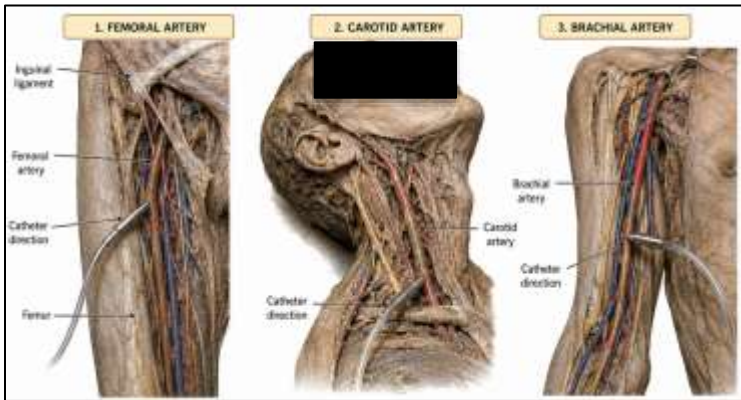


- Clean body and remove excess hair.

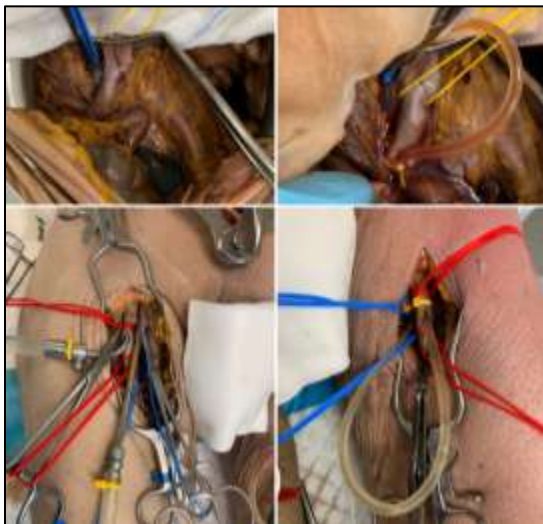


**(b) Arterial Embalming**

- Common sites: Femoral, Carotid, Brachial arteries.



- Insert cannula and inject embalming fluid using pressure pump.



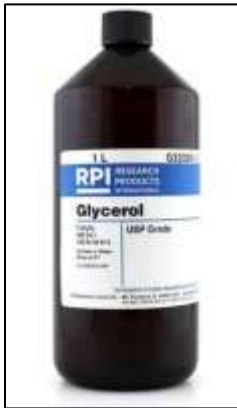
- Ensure uniform distribution.

**(c) Embalming Solutions**

- Traditional: Formalin, Glycerin, Carbolic acid.
- Modern: Ethanol, Glycerin, Water, Phenoxyethanol, small amount of formalin (~8L per cadaver)
  
- Formalin (10%)



- Glycerin



- Carbolic acid (Phenol)



- Phenoxyethanol



**(d) Post-Injection Care**

- Keep at room temperature for several days.



- Allow fixation.



- Additional head injection if needed.



## **(8) Storage**

### **(a) Traditional Method**

- Immerse in 10% formalin tank.



### **(b) Modern Method**

- Wrap in polythene.
- Store in zipper bags.
- Maintain temperature 10–25°C.



## (9) Maintenance

### Tank Maintenance

- Check levels and remove fungus every 2 weeks.



### Daily Maintenance

- Apply solution (Carbolic acid 1 g, Glycerin 35 ml, Water up to 100 ml).



- Cover with polythene after use.



### (10) Time to Use

- Traditional: ~3 months.
- Modern: ~6 months.

### (11) Advantages of Modern Method

- Better flexibility.
- Reduced odor.
- Improved color.
- No need for tanks.

**MODERN EMBALMING METHOD**



- FLEXIBILITY**  
Better flexibility for natural movement.
- ODOR**  
Reduced odor, more pleasant.
- COLOR**  
Improved, natural and healthy appearance.
- TANK REQUIREMENT**  
No need for tanks; uses plastic wrapping.



### **(12) Limitations of New Method**

- Higher cost.
- Requires quality storage materials

### **(13) Ethical Considerations**

- Maintain dignity.
- Use only for education/research.
- Ensure proper consent and documentation.

### **(14) Waste Disposal**

- Dispose chemicals as per guidelines.
- Follow biomedical waste protocols.

## References

1. Brenner E. Human body preservation - old and new techniques. J Anat. 2014 Mar;224(3):316-44. doi: 10.1111/joa.12160. Epub 2014 Jan 18. PMID: 24438435; PMCID: PMC3931544.

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