



STANDARD OPERATING PROCEDURE (SOP)

CHOCOLATE AND SUGAR CONFECTIONERY LABORATORY

of the Faculty of Engineering
Study Program in Family Welfare and Education

UNIVERSITAS NEGERI SURABAYA

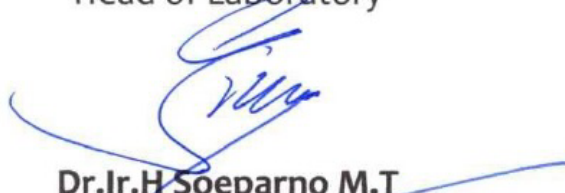
STANDARD OPERATING PROCEDURE (SOP)

FACULTY OF ENGINEERING

LABORATORY OF FAMILY WELFARE STUDY PROGRAM

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1. PURPOSE

This SOP regulates the operational procedures, safety management, and utilization of the facilities in the **Chocolate & Sugar Confectionery Laboratory** of the Family Welfare Study Program. It ensures that confectionery-related practical activities, research, and educational tasks are performed efficiently and safely.

2. SCOPE

This SOP applies to all users of the Chocolate & Sugar Confectionery Laboratory, including lecturers, students, technicians, and any other parties involved in the use of laboratory facilities. It includes:

- The use of equipment and facilities for chocolate and sugar confectionery projects.
 - Ensuring work safety and hygiene.
 - Maintenance and care of laboratory equipment.
 - Daily operational procedures.
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3. DEFINITIONS

- **Chocolate & Sugar Confectionery Laboratory:** A facility used for teaching, training, research, and development in chocolate and sugar confectionery under the Family Welfare Study Program.
 - **Laboratory Users:** Students, lecturers, technicians, or staff involved in laboratory activities.
 - **Personal Protective Equipment (PPE):** Equipment such as gloves, aprons, masks, and hairnets used to ensure hygiene and safety during confectionery preparation and handling.
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4. RESPONSIBILITIES

4.1. Head of Chocolate & Sugar Confectionery Laboratory

- Manages and supervises laboratory operations, including overseeing activities, approving equipment use, and maintaining facilities.
- Coordinates equipment maintenance and repair with technicians.
- Ensures all safety and hygiene protocols are followed by users.

4.2. Laboratory Technician

- Prepares all equipment, materials, and tools used in confectionery research and practical activities.
- Conducts regular maintenance, calibration, and repair of tools and equipment related to chocolate and sugar confectionery production.
- Ensures the safety of users and supervises laboratory activities.

4.3. Laboratory Users

- Responsible for maintaining cleanliness and order in the laboratory.
- Must report any damage or accidents to the technician or head of the laboratory.

**SOP Table for Chocolate and Sugar Con Laboratory of Family Welfare
Study Program**

No	Process	Responsibility	Description
1	Head of Laboratory	Head of Laboratory	Manages and supervises the laboratory operations, including approval for usage and maintenance of facilities and equipment.
2	Laboratory Preparation	Laboratory Technician	Prepares equipment, materials, and laboratory facilities for practical or research activities. Checks the condition of the laboratory and ensures equipment is ready for use.
3	Activity Supervision	Laboratory Technician	Supervises the activities in the laboratory and ensures that users follow safety procedures.

4	Laboratory Usage	Supervising Lecturer / Users	Laboratory users follow instructions from the technician and supervising lecturer for using the equipment. Any damages must be reported and logged in the logbook.
5	Equipment and Material Usage	Users (Students/Lecturers)	Students or lecturers use the equipment according to the instructions. Users are responsible for cleaning the equipment and work area after use.
6	Waste Disposal	Users (Students/Technicians)	Separate waste (organic, inorganic, chemical) according to the procedures.
7	Equipment Maintenance	Laboratory Technician	Technicians conduct regular maintenance of the equipment and facilities, perform calibration, and report if any equipment needs repair or replacement.
8	Emergency Response	All Parties	In case of emergency, such as fire or accidents, all parties must follow the established evacuation procedures. Fire extinguishers and first aid kits are available for use.

5. OPERATIONAL PROCEDURES

5.1. Preparation for Laboratory Use

1. Reservation for Use

- Users must reserve the Chocolate & Sugar Confectionery Laboratory at least 2 business days before the scheduled use via the administration system or by contacting the technician.
- Users must provide a detailed project plan, including the equipment needed and the number of participants.

2. Initial Inspection

- Before starting, the technician must inspect and prepare all equipment and tools to ensure readiness.

- Any issues or damages must be reported immediately and recorded in the **Laboratory Logbook**.

3. Personal Protective Equipment (PPE)

- PPE is mandatory during confectionery preparation and handling. This includes aprons, gloves, masks, and hairnets to ensure hygiene and safety. Users without PPE will not be allowed to continue laboratory activities.

5.2. Chocolate & Sugar Confectionery Laboratory Usage Procedure

1. Instructions and Supervision

- The supervising lecturer or technician will provide instructions on how to properly use the tools and equipment, along with hygiene and safety precautions.
- Users must follow these instructions to prevent contamination, accidents, or equipment damage.

2. Equipment and Tool Usage

- Users must inspect equipment and tools both before and after use. Any damage must be reported and logged in the **Damage Report Form**.
- All tools and equipment must be cleaned, disinfected, and returned to their proper place after use.

3. Food Safety and Waste Management

- All materials, including chocolate, sugar, and other confectionery ingredients, must be handled with proper hygiene practices, including regular handwashing and using clean utensils.
- Waste materials, such as food scraps and packaging, must be disposed of according to laboratory waste protocols (organic, inorganic, hazardous).

5.3. Exit Procedures from the Chocolate & Sugar Confectionery Laboratory

1. Cleaning the Work Area

- After completing activities, users must clean their workspace, ensuring all surfaces, tools, and equipment are sanitized and stored properly.

- Waste materials and unused resources must be disposed of according to laboratory waste disposal guidelines.

2. Shutting Down Equipment

- Turn off all cooking and confectionery appliances, electrical devices, and lights after use.
- Inform the laboratory technician once all activities are completed for final inspection.

3. Activity Log

- All users must record their use of equipment, duration of activities, and condition of equipment in the **Laboratory Logbook** before leaving the laboratory.

5.4. Equipment Maintenance

1. Routine Checks

- The laboratory technician will conduct weekly checks on all confectionery tools, machines, and equipment to ensure everything is functioning properly.
- Equipment requiring calibration (e.g., tempering machines, mixers, cooling systems) must be checked every six months.

2. Repairs and Replacement

- Any malfunctioning equipment must be reported to the technician for immediate repair or replacement.
- Equipment that cannot be repaired must be documented using the **Replacement Form**.

6. WORK SAFETY

6.1. Emergency Procedures

1. Fire

- In case of fire, users must activate the fire alarm and follow the evacuation route.

- Fire extinguishers and fire blankets are available in the laboratory and should only be used by trained personnel.

2. Workplace Injuries

- Any injuries must be reported to the technician immediately. First aid should be administered using the **First Aid Kit**.
 - For severe injuries, the campus health unit or emergency services should be contacted.
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7. PENALTIES

Users who violate the rules outlined in this SOP will face disciplinary action, depending on the severity of the infraction, which may include:

- Verbal or written warnings.
 - Temporary or permanent suspension from laboratory access.
 - Financial responsibility for damage caused to equipment due to negligence.
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8. CLOSING

This SOP takes effect from the date of issuance. It will be reviewed every two years or as needed to ensure smooth laboratory operations.