 <p>UNIVERSITAS NEGERI JAKARTA Mencerdaskan dan Memantabatkan Bangsa</p>	<p>MINISTRY OF EDUCATION AND CULTURE STATE UNIVERSITY OF JAKARTA</p> <p>BIOLOGY LABORATORY &amp; BIOLOGY EDUCATION</p> <p><b>FACULTY OF MATHEMATICS AND SCIENCE</b></p> <p>Hasjim Asjarie Building Lt 8-9 Jl. Rawamangun Muka Jakarta 13220 Tel/Fax 021-4894909</p>	<p><b>STANDAR OPERATING PROCEDURE (SOP)</b></p>	
		<p><b>STANDARD K3 LABORATORY</b></p>	
		<p><b>No. Document</b></p>	
		<p><b>Edition</b></p>	<p><b>01</b></p>
		<p><b>Revision</b></p>	<p><b>00</b></p>
		<p><b>Effective On</b></p>	<p><b>2022</b></p>
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## 1. PURPOSE

Become a guideline in Occupational Health and Safety (K3) for all work activities in the FMIPA Biology laboratory, especially practicum and research activities.

## 2. SCOPE

The implementation of this SOP applies in biology laboratories and biology education FMIPA, where the implementation of the SOP involves the head of the laboratory, PLP/lab assistant, lecturers and students, as well as related agencies.

## 3. DEFINITIONS

**Occupational Health and Safety (OHS)** are all activities to guarantee and protect individual safety and health through efforts to prevent work accidents and occupational diseases in the Biology laboratory.


**Personal Protective Equipment (PPE)** is a safety tool that is used by users to protect all or part of their body from the possibility of exposure to potential hazards of the work environment, contamination, and pathological materials in carrying out work in the laboratory.

## 4. LEGAL BASIS

- 4.1. UU no. 1 of 1970 concerning Work Safety
- 4.2. RI Law No. 20 of 2003 concerning the National Education System

## 5. GENERAL PROVISIONS

- 5.1. Every laboratory user who carries out activities in the laboratory must obtain permission from the laboratory assistant / PLP.
- 5.2. Recognize the hazards and risks in the room and the activities to be carried out. Hazards can be biological, chemical, physical, ergonomic hazards, etc.
- 5.3. Understand symbols and danger signs before entering the laboratory.
- 5.4. Laboratory users must wear laboratory coats and closed footwear, as well as other PPE (masks, gloves, lab goggles) according to the work category (attachment)
- 5.5. All work and use of equipment must follow the instructions (SOP) for the use of laboratory equipment.
- 5.6. Laboratory users are prohibited from eating and drinking in the laboratory room or in the lab corridor. Food and drink can be done in the lobby lab.
- 5.7. Laboratory users wash their hands with soap before and after activities in the laboratory.
- 5.8. Store chemicals according to their category by adding a tray as a base.
- 5.9. Keep away from flammable chemicals with electrical sources and fire sources as well as chemicals that are strong oxidizing agents.
- 5.10. Use of chemicals that emit toxic gases must use a fume hood and adequate PPE.
- 5.11. Transfer of chemicals to other containers must be accompanied by labeling with information on identity and date.

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- 5.12. Do not suck the pipette using your mouth when using chemicals.
- 5.13. Chemicals must be tightly closed immediately after use to avoid spillage or mixing of hazardous gases.
- 5.14. If a chemical spill occurs, immediately report it to the assistant or laboratory assistant.
- 5.15. Do not clean up chemical spills with a cloth or tissue, use the provided sand spill kit.
- 5.16. In the event of contact with hazardous, corrosive or toxic chemicals which do not react with water, rinse immediately with plenty of water. Then immediately report to the assistant or laboratory assistant.
- 5.17. If chemical spills get on your body, wash immediately with an emergency shower.
- 5.18. If a chemical spill gets into your eyes, wash them immediately with an emergency eye wash.
- 5.19. Laboratory activities that use electricity must pay attention to the condition of the power source, cables, and the environment around the equipment, if a short circuit occurs, please report it to the laboratory assistant or K3 staff.
- 5.20. Chemical waste remaining from activities must be disposed of in the waste disposal site provided. It is not permitted to throw chemical waste into the sink.
- 5.21. Waste in the form of microorganisms must be destroyed first before being disposed of.
- 5.22. Waste in the form of living things left over from activities is the responsibility of each group to bury according to procedures.
- 5.23. Use of glassware must be washed with soap and dried before being returned.
- 5.24. When working with biological materials, you have to be careful, because there may be germs, viruses, or potentially dangerous ones.
- 5.25. When working with heat and fire tools such as ovens, autoclaves and stoves, please pay attention to the conditions around the workplace whether there are flammable objects or liquids. Use a fire blanket if the fire gets bigger and gets out of control.
- 5.26. If an accident or work-related injury occurs, report it to the laboratory assistant or K3 staff for first aid treatment, if further treatment is needed, take it to the UNJ clinic.
- 5.27. If a fire occurs, use the APAR available in the hallway and turn on the warning alarm and call the fire department (113) or East Jakarta Fire Department 021.85904904.
- 5.28. In the event of an earthquake, avoid panic, use emergency stairs and gather at assembly points far from buildings.


## 6. SPECIAL PROVISIONS

- 6.1. Hazard symbol (Attachment).

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## 7. HSE PROCEDURE FOR BIOLOGY LABORATORY USERS

NO.	PROCESS	EXECUTOR				QUALITY STANDARDS		RELATED DOCUMENT
		User	Responsible lecturer	Head of lab	Laboratories	Time	Output	
1	Permission to enter the lab	v	v	v	v			
2	Identification of hazards according to activities and locations	v			v			
3	Preparation of tools, materials and PPE	v						
4	Work in the laboratory according to SOP	v						
5	Handling emergencies or accidents if they occur	v			v			
6	Cleaning the desk after work	v						
7	Dispose of waste according to SOP	v						
8	Report after finishing work in the laboratory	v			v			

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## 8. IMPLEMENTING ACTIVITIES

- 8.1. Lecturers and students in the biology clump, FMIPA and outside parties.
- 8.2. PLP / Laboratories

## 9. INTERNAL MONITORING

- 9.1. Report everything that happens in the laboratory related to K3
- 9.2. Replace the damaged / broken tool by filling out the replacement agreement form damaged / broken tool
- 9.3. PLP/ Laboran will provide a certificate for making laboratory free certificates, if there is no damage to category 1, 2 and 3 equipment or after replacement of damaged/broken equipment.

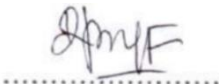
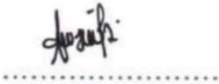



## 10. IMPLEMENTER PERFORMANCE EVALUATION


- 10.1. The head of the laboratory evaluates the implementation of laboratory K3




## 11. DOCUMENT CHANGE HISTORY


NO	REVISION TO	REVISION DATE	BEFORE REVISION	AFTER REVISION	PAGE
1	00	August 18, 2022	-	-	1-5
2					

## 12. LEGALIZATION

	Name	Position	Signature	Date
<p><b>Made by</b></p>	Deselina F	<p><b>PLP Biology Laboratory</b></p>		<p>28 August 2022</p>
	Hazleni M, S.Si			
	Sayid R, S.Si			
<p><b>Checked by</b></p>	Ns. Sri Rahayu, S. Kep., M. Biomed.	<p><b>Head of Lab. Biology</b></p>		<p>5 September 2022</p>
	Ade Suryanda, M.Si	<p><b>Head of Lab. Biology Education</b></p>		<p>7 September 2022</p>

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<p><b>Legalized by</b></p>	<p>Dr. Reni Indrayanti, M.Si</p>	<p><b>Coordinator of the Biology Study Program</b></p>		<p>12 September 2022</p>
	<p>Dr. Rusdi, M. Biomed</p>	<p><b>Coordinator of the Biology Education Study Program</b></p>		<p>13 September 2022</p>
	<p>Dr. Supriyatin, M.Si</p>	<p><b>Coordinator of the Biology Education Masters Study Program</b></p>		<p>15 September 2022</p>

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## Attachment

### Hazard Symbol



Eksplosif  
Swareaktif  
Peroksida organik



Toksistas akut (severe)



Karsinogen  
Sesitisasi pernapasan  
Toksik terhadap reproduksi  
Toksistas sistemik pada organ sasaran  
Mutagenitas



Oksidator  
Peroksida organik



Toksik terhadap lingkungan



Mudah menyala  
Swareaktif piroforik  
Swaganas melepaskan gas  
Mudah menyala



Menyebabkan iritasi sensitisasi kulit  
Toksistas akut (berbahaya)



Gas bertekanan



Korosif