



UNIVERSITY OF JEMBER  
FACULTY OF MATHEMATICS AND SCIENCE  
BACHELOR BIOLOGY

DOCUMENT CODE  
FORM PP-05

**STUDENT WORKSHEET PLAN**

Lecture : Syubbanul Wathon, S.Si.,M.Si.  
Subject : Health Biotechnology  
Teaching Model : Essay

**STUDENT IDENTITY**

Name	Oryza Sativa Roshaney
Student ID	191810401019
Meet	8
Day/Date	Thursday/28 April 2022
Score	90

**DISCUSSION MATERIAL**

Transmission blocking vaccine are aimed to block the development and maturity of parasite within vector. The vaccine candidate antigen that have shown transmission blocking immunity in model systems are in different stages of development. To improve your understanding related with development of transmission blocking vaccines: old friends and new prospects, please review this paper by the following link:

<https://journals.asm.org/doi/epub/10.1128/IAI.00775-18>

**DISCUSSION RESULTS**

In the progression of the life cycle of *Plasmodium falciparum*, a small proportion of asexual parasites differentiate into male or female sexual forms called gametocytes. Just like their asexual counterparts, gametocytes are contained within the infected host's erythrocytes (RBCs). However, unlike their asexual partners, they do not exit the RBC until they are taken up in a blood meal by a mosquito. In the mosquito midgut, they are stimulated to emerge from the RBC, undergo fertilization, and ultimately produce tens of thousands of sporozoites that are infectious to humans. This transmission cycle can be blocked by antibodies targeting proteins exposed on the parasite surface in the mosquito midgut, a process that has led to the development of candidate transmission-blocking vaccines (TBV), including some that are in clinical trials. Here we review the leading TBV antigens and highlight the ongoing search for additional gametocyte/gamete surface antigens, as well as antigens on the surfaces of

gametocyte-infected erythrocytes, which can potentially become a new group of TBV candidates. Additional effective transmission-blocking interventions are needed to complement current global malaria control and elimination efforts. A key process in the life cycle of *P. falciparum* parasites that enhances both disease and transmission is sequestration. Sequestration, which is thought to decrease recognition and clearance of the parasite by the spleen, has been extensively studied in the asexual parasite. Sequestration in the sexual-stage parasite has not gained as much attention, although it is assumed to be responsible for gametocyte development to maturity within the host without splenic clearance, which increases the likelihood of malaria transmission. A humanized mouse model with a human bone marrow transplant has recently been made available for the study of gametocyte sequestration and should enable us to better understand its mechanisms. Although there is some indirect evidence of gametocyte-specific giRBC surface antigens, no specific antigens have been identified. Enhancing immune recognition of giRBCs by using vaccine-induced antibodies to target a gametocyte-specific giRBC surface antigen could reduce the prevalence of mature and infective gametocytes, leading to a reduction in malaria transmission. A few studies have identified antibody responses that are specific to gametocyte carriage; however, the localization of these antigens on the giRBC or gamete is not currently known. Parasite diversity is a major challenge to malaria vaccine design. It has been observed that the licensed pre-erythrocytic-stage circumsporozoite protein (CSP) vaccine RTS,S is more effective against an infection with parasites whose genetic backbones are similar to that of the 3D7 vaccine strain than against genetically diverse parasites. This finding suggests that TBVs based on a single genetic backbone will likely be more effective against vaccine-like parasites. However, diversity in sexual-stage parasites is limited relative to that of asexual- and pre-erythrocytic-stage antigens, so TBVs based on sexual-stage parasites likely will be effective against more strains. Antigens on the surfaces of gametocytes and antigens exported by gametocytes to the surfaces of giRBCs have the potential to reduce and technically prevent malaria transmission. Apart from the well-described antigens Pfs25, Pfs230, and Pfs48/45, and the more recent demonstrations that HAP2, AnAPN1, and a region of Pfs47 may elicit TB antibodies, the presence of other gametocyte antigens that elicit TBA has yet to be discovered and/or validated. Identification of additional essential TB antigens could be important for the design and construction of effective TB vaccines.

### RUBRIC FOR ESSAY TEST

Course Name : Health Biotechnology  
Student Name/ Student ID : Oryza Sativa Roshaney/191810401019

All answers should be given in paragraphs with complete sentences; the point value may vary from one test to another, each lecture can use the percentages as rough guide for grading criteria for his/her topic test

No	Criteria	1 (<20)	2 (21-40)	3 (41-60)	4 (61-80)	5 (80-100)	Score
1	The answer should meet criteria, such as: a. Complete and detail answer b. contextual explanation of the answer is very thorough and easy to understand c. the answer is relevant to the topic question d. structured writing organization	Does not meet all of the criteria	meet one of the criteria	meet some of the criteria	meet most of the criteria	meet all the criteria	<b>90</b>



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STUDENT WORKSHEET PLAN

Lecture : Mukhamad Su'udi  
Subject : Natural Medicine  
Teaching Model : Poster – Case Study

STUDENT IDENTITY

Name Waki'atil Rosida

Student ID 181810401015

Meet 14

Day/Date Thursday/14 October 2021

Score

INSTRUCTION

At the beginning of the lecture meeting, all students were asked for exploring several kinds of natural medicine-based drugs. Each student has chosen and determined a topic and is obliged to make a poster.

Please pay attention to the rating rubric for posters to get a maximum points.

POSTER

# Sinom

"Refresing drink rich in benefits"

Score: 82.75

## Sinom simplicia

Jamu is a traditional herb that has been widely known by the public that aims to treat minor ailments, prevent disease and maintain healthy condition. Sinom is one of the herbs that has many benefits and is in great demand by the public because of its delicious taste. Sinom is an herbal drink made from tamarind leaves and turmeric. The basic ingredients of sinom can be served as simplicia to extend the shelf life of herbs. Simplicia is a natural ingredient used for treatment and has not been changed in any process or in the form of dried material. Herb simplicia has advantages because of its relatively small side effects compared to chemical drugs and is considered more suitable for treating metabolic and degenerative diseases.



## Turmeric

Helps maintain stamina, antioxidants, anti cancer, lowers blood pressure and relieve cough

## Tamarind leaves

Treat diabetes, antioxidants, cure inflammation and boost immunity



### Do You Know?

Consuming sinom regularly can improve body health and ward off various degenerative diseases such as coronary heart disease, diabetes mellitus, and cancer



## How to make sinom simplicia

Selection raw materials (turmeric rhizome) and tamarind leaves in good condition

Wet sorting by rinsing with running water

Chopping using knife (especially for turmeric rhizome)



Dry sorting, packing and store in appropriate places or container

Drying process naturally using sunlight

## Serving Suggestion for Sinom

Three to five pieces (turmeric and tamarind leaves) boiled with 250 ml of water and add small amount of plam sugar.

## References

- Fibrianto, K., & Dwihindarti, M. 2017. Profiling of Attributes of Jamu Kunyit Asam and Jamu Sinom Using the Rate-All-That-Apply Method in Several Cities in East Java. *Journal of Food Technology*. 10(1): 15-21.
- Hariyati, N. 2021. Sinom Fresh Herbal Drink Healthy Drinks for Communities Affected by the Covid 19 Pandemic. *Transformation and Innovation: Journal of Community Service*. 1(1):4 5-50.
- Widari, I. A. A., Mulyani, S., & Bambang Admadi, H. 2014. Turmeric Acid And Sinom Beverages Inhibition With -Glucosidase Enzyme Activity. *Journal of Engineering and Agroindustry Management*. 2(2): 26-35.

## RUBRIC for POSTER


Course/Code	:
Group Number	:
Student Name	: Waki'atil Rosida

Course learning outcome: students able to use bioscience in solving problems related to biological resources in tropical environments or students propose and implement project through laboratory or field works, literature/ web science study, or problem based;  
Each Course can use criteria 1-5 according to the type of project based learning implemented

No	Criteria	1 (<50)	2 (50-60)	3 (61-70)	4 (71-80)	5 (80<)	Weight	Score
1.	<b>Coverage of the topic:</b> a) Title of poster is in accordance with defined/ selected topic b) Title of poster used grammatical standard c) The topic are new issue or recently happening d) The topic is easy to understand by audience	Student does not fulfill any criteria requirement for coverage of the topic	Student only fulfill one criteria requirement for coverage of the topic	Student fulfill two criteria requirement for coverage of the topic	Student fulfill three criteria requirement for coverage of the topic	Student fulfill all criteria requirement for coverage of the topic	25	83
2.	<b>Content and organisation:</b> a) Material in poster is in line with the topic b) The poster are well organized and systematically c) Concise content and	Student does not fulfill any criteria requirement for poster content and	Student only fulfill one criteria requirement for poster content and organisation	Student fulfill two criteria requirement for poster content and organisation	Student fulfill three criteria requirement for poster content and organisation	Student fulfill all criteria requirement for poster content and organisation	40	85

	showing clarity d) Excellent writing organisation and correct spelling	organisation				n		
3.	<b>Lay out, graphics and design:</b> a) Appropriate text, font size and graphic proportion b) Excellent contrast color setting c) Supported with selection of color (smoot color) d) Supported with sufficient graphic and visual setting	Student does not fulfill all criteria requirement for poster lay outing, graphics and design	Student only fulfill one criteria requirement for poster lay outing, graphics and design	Student fulfill two criteria requirement for poster lay outing, graphics and design	Student fulfill three criteria requirement for poster lay outing, graphics and design	Student fulfill all criteria requiremen t for poster lay outing, graphics and design	35	80
		Total score					100	<b>82.75</b>

## STUDENT WORKSHEET

	<b>THE UNIVERSITY OF JEMBER</b> <b>FACULTY OF MATHEMATICS AND SCIENCE</b> <b>BACHELOR BIOLOGY</b>	<b>DOCUMENT CODE</b> <b>F1.03.07</b>
<b>STUDENT WORKSHEET</b>		
Lecturers : Husnatun Nihayah, S.Si., M.Biomed. Subject of courses : Hormonal disorder Learning method : Case Method		
<b>STUDENT IDENTITY</b>		
NME/IDN/Class	Nur Afni Helia Dewi (191810401002) Shafa Nashrullah (191810401003) Kiki Eva Fauziah (191810401010) Noor Aziza Gilani (191810401011) Oryza Sativa Roshaney (191810401057)	
Name of group member		
Number of activity	19	
Date/Days	Monday, June 13, 2022	
Score	73	
<b>DISCUSSION TOPIC</b>		
Based on the Student Assignment Plan that was delivered at the previous meeting, make powerpoints according to the topic of each group. Make a power point by following criteria: <ol style="list-style-type: none"> <li>1. Slides quality 10%                         <ol style="list-style-type: none"> <li>a. Text, font size and graphic proportion for each slide is excellent</li> <li>b. Excellent contrast color setting</li> <li>c. Supported by sufficient and fine graphic</li> <li>d. Supported by sufficient visual</li> </ol> </li> </ol>		



2. Slide content 50%

- a. The material delivered is in line with the topic of discussion
- b. Logical sequencing, concise content and clarity
- c. Excellent structured writing organization
- d. Correct spelling

Present a powerpoint by paying attention to the following criteria Presentation delivery 10%

- a. Clear volume and intonation
- b. Excellence confidence, body language, and connection in presenting the topic
- c. Excellent Timing organization in presentation delivery
- d. Smoothly and comprehension in presentation delivery
- e. Good attitude in responding to questions
- f. The respond is relevant with the question asked
- g. Giving reasonable answer
- h. Good cooperation between members in responding to questions

**DISCUSSION RESULTS**

*Write down the result of the dicussion in this part please!*

# HORMONAL DISORDER



## Group 4

Nur Afni Helia Dewi (191810401002)

Shafa Nashrullah (191810401003)

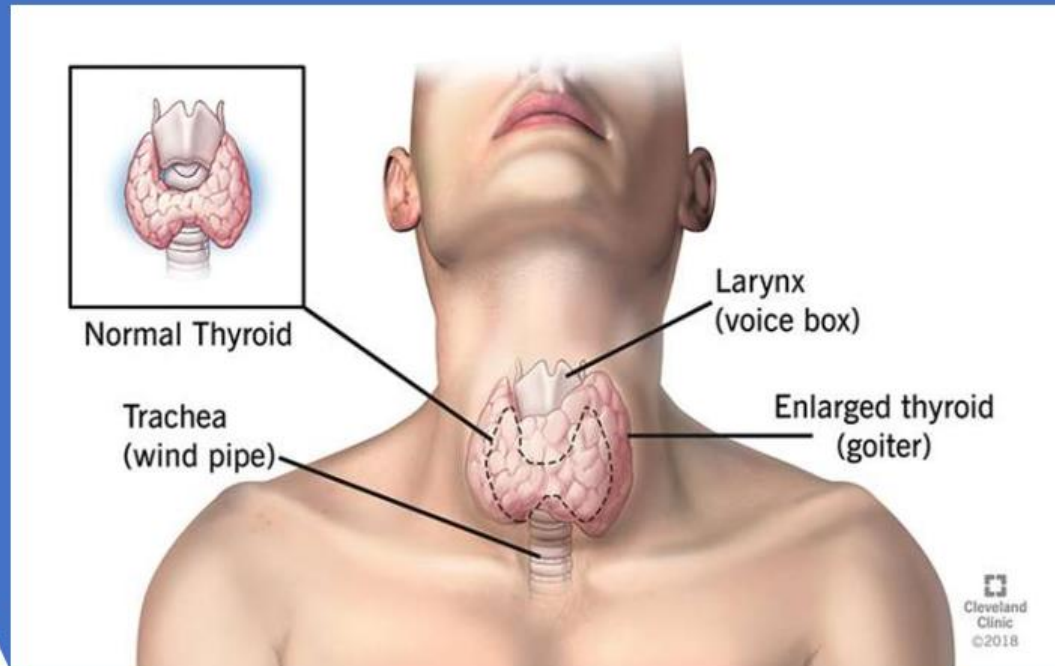
Kiki Eva Fauziah (191810401010)

Noor Aziza Gilani (191810401011)

Oryza Sativa Roshaney (191810401057)

# HYPERTIROIDISM

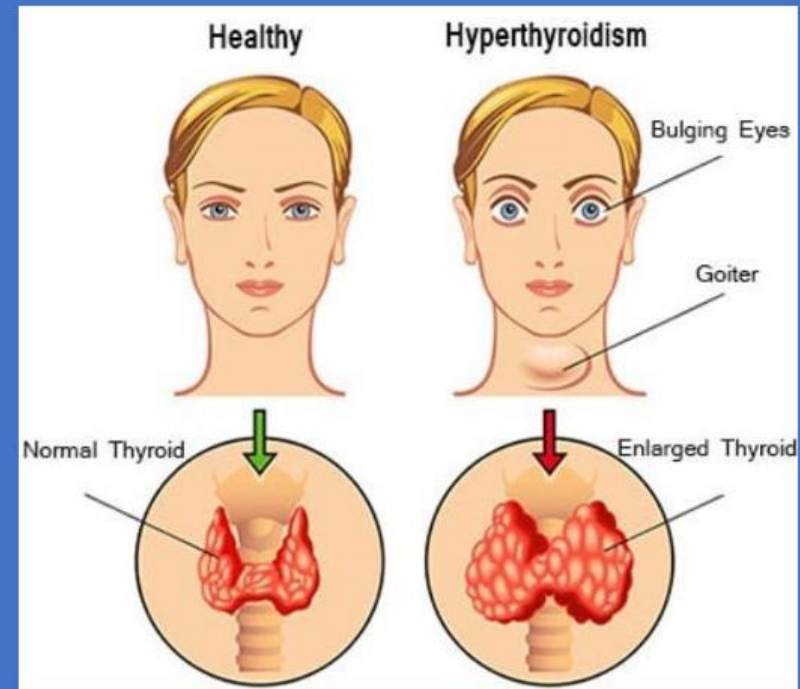
The thyroid gland makes more thyroid hormone than the body needs



# HYPERTIROIDISM

## Symptom

- High BMR
- Weight loss
- Rapid pulse, tremor, palpitations and other tachycardias (atrial fibrillation in the elderly), hypertension
- Restlessness, overanxiety, nervousness, irritability, hyperexcitability and emotional instability
- Eye changes
- Diffuse toxic goitre
- Serum T3/T4 levels are raised, but the serum TSH level is low



## Reason

- Overactive thyroid nodules
- Inflammation of the thyroid gland, called thyroiditis
- Too much iodine
- Too much thyroid hormone medication
- Non-cancerous tumors of the pituitary gland

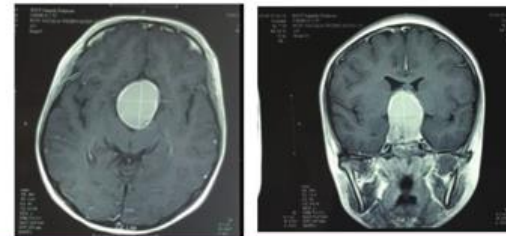
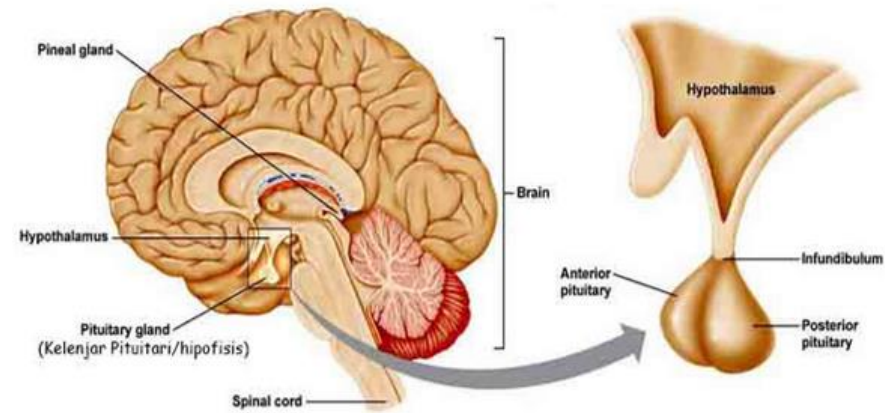
## Treatment

- antithyroid drugs
- radioactive iodine
- surgery

Quality Professional

# HYPOPITUITARISM

The pituitary gland **cannot produce** one or more hormones in sufficient quantities.




## Hormone products





## Reason

- Tumors and injuries
  - Infections around the brain, such as meningitis or cerebral malaria
  - Inflammation of the pituitary gland, for example from granulomatous hypophysitis and sarcoidosis
  - Diabetes
  - Subarachnoid hemorrhage
  - Lymphoma
  - Stroke
  - Sheehan's syndrome or postpartum hypopituitarism
  - Hemochromatosis
- 



# Symptom

- ACTH deficiency which has symptoms such as fatigue, dizziness, anorexia, weight loss, low blood sugar levels, low blood pressure and anemia
- .GH deficiency such as impaired growth, short stature, decreased strength and muscle mass, fatigue, impaired memory and focus.
- TSH deficiency includes, weight gain, fatigue, decreased metabolism.
- ADH deficiency includes increased urination and thirst.
- In women, a lack of FSH and LH can cause irregular menstruation, as well as infertility. Meanwhile, in men, the symptoms include decreased sexual desire and infertility

# Prevention

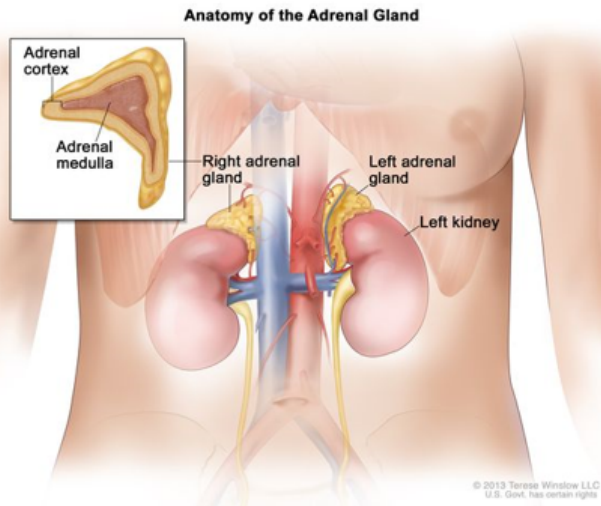
Hypopituitarism can be prevented in several ways, such as:

1. Good postnatal care to prevent hypopituitarism in the mother due to bleeding
2. Blood tests that can help with hormone deficits as a result of disorders of the pituitary gland.

As for the treatment of hypopituitarism, it can be done by taking medication to replace hormones that cannot be produced by the pituitary gland

Portfolio Designed

# Addison Disease



- ❑ inhibition of the production of the hormones cortisol and aldosterone in the adrenal cortex.
- ❑ cortisone to regulate the immune system
- ❑ Occurs in male or female at all ages which is estimated to have a frequency of <math><0.01\%</math> in the general population.

## Symptom



- Tiredness and malaise
- Nausea, vomiting, diarrhoea; fever; abdominal pain.
- Headache
- Increased skin pigmentation, hyperpigmentation,
- Anorexia and decrease in body weight



“

## Diagnosis

Blood test



ACTH test



MRI



”

# Treatment

- therapy with both glucocorticoid and mineralocorticoid compounds
- A combination of hydrocortisone and fludrocortisone (a synthetic mineralocorticoid: Florinef)
- Alternatively, cortisone acetate (Cortisyl), which possesses virtually equal glucocorticoid and mineralocorticoid activity, may be used
- Acute cases of adrenal insufficiency (adrenal crisis), as may intravenous infusion of hydrocortisone together with saline, to correct for low blood volume



Portfolio Designed



**Thank You**

Insert the Sub Title of  
Your Presentation

**PRESENTATION TASK ASSESSMENT RUBRIC: Presentation**

Subject Name/Code : Endocrinology / MAB 1615  
 Task Title : Hormonal disorder  
 Student Name : Nur Afni Helia Dewi (191810401002)  
                   Shafa Nashrullah (191810401003)  
                   Kiki Eva Fauziah (191810401010)  
                   Noor Aziza Gilani (191810401011)  
                   Oryza Sativa Roshaney (191810401057)  
 Group : 4

<b>Indicator</b>	<b>1 (&lt;50)</b>	<b>2 (50-60)</b>	<b>3 (61-70)</b>	<b>4 (71--80)</b>	<b>5 (80&lt;)</b>	<b>Weight</b>	<b>Score</b>
The quality of slides indicated by criteria below: a. Text, font size and graphic proportion for each slide is excellent b. Excellent contrast color setting c. supported by sufficient and fine graphic d. supported by sufficient visual	The quality of slides does not meet all criteria	The quality of slides meets one criteria	The quality of slides meets some criteria	The quality of slides meets most criteria	The quality of slides meets all criteria	10	64
The slide content should meet criteria: a. the material delivered is in line with the topic of discussion b. Logical sequencing, concise content and clarity c. excellent structured writing organization d. correct spelling	The slide content does not meet all criteria	The slide content meets one criteria	slide content meets some criteria	slide content meets most criteria	slide content meets all criteria	50	77
Presentation delivery should meet	The slide content	The slide content	slide content meets	slide content	slide content	10	65



<p>criteria:</p> <ul style="list-style-type: none"> <li>a. Clear volume and intonation</li> <li>b. Excellence confidence, body language, and connection in presenting the topic</li> <li>c. Excellent Timing organization in presentation delivery</li> <li>d. Smoothly and comprehension in presentation delivery</li> </ul>	<p>does not meet all criteria</p>	<p>meets one criteria</p>	<p>some criteria</p>	<p>meets most criteria</p>	<p>meets all criteria</p>		
<p>Respond to the question and good team work are indicated by criteria:</p> <ul style="list-style-type: none"> <li>a. good attitude in responding to questions</li> <li>b. The respond is relevant with the question asked</li> <li>c. Giving reasonable answer</li> <li>d. Good cooperation between members in responding to questions</li> </ul>	<p>Respond to the question does not meet all criteria</p>	<p>Respond to the question meets one criteria</p>	<p>Respond to the question meets some criteria</p>	<p>Respond to the question meets most criteria</p>	<p>Respond to the question meets all criteria</p>	<p>30</p>	<p>72</p>
<p><b>Score total</b></p>							<p><b>73</b></p>



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**DOCUMENT  
CODE  
FORM PP-05**

**STUDENT WORKSHEET PLAN**

Lecturer : Dr. Esti Utarti, S.P., M.Si  
Subject : The potential of microbes as inoculum in industry  
Teaching Modul : Group Discussion

**STUDENT IDENTITY**

Name/Student ID	Indria Sari Manda / 191810401008
Member of group	-
Meet	4
Day/Date	Tuesday, March 22, 2022
Score	90

**DISCUSSION MATERIALS**

Based on the material that has been delivered in lecture activities, please discuss and answer these questions individually:

1. What are the advantages of microbial use in industry over other organisms?
2. What are the criteria for microbes that are needed as a source of inoculum in industry?
3. Are there specific growth phase criteria for the use of microbes as sources of inoculum? How is the preparation technique?

**DISCUSSION RESULTS**

The advantages of using microbes in industry were:

1. Microbes grow relatively quickly, relatively cheaply
2. Easier and faster to extract the microbial product of industry
3. Easy to control,
4. Easy to genetically modified,
5. Does not require a large space to grow
6. Microbes can increase the economic value of a waste
7. Microbes are easier to manipulate genes related to the product you want to produce

Microbial criteria as a source of inoculum

1. Microbes that have high productivity and breeding tall.
2. The final product is not toxic,
3. Each microbe takes very little time to grow.
4. The growth that quickly promote high productivity
5. It has no pathogen properties
6. Does not produce by-products that harm the main product

7. It must have high productivity

Microbes as an inoculum must be in the exponential phase The preparation carried out to obtain the exponential growth phase of the microbe is through the determination of the growth pattern of the microbes. The measurement of microbial growth patterns depends on the type of microbe. Measurement of bacterial growth is usually done through plate count or cell density techniques, while for mold through measurements of the dry weight of the mycelium or spore density

## RUBRIC FOR ESSAY TEST

Course Name :

Student Name/NIM :

All answers should be given in paragraphs with complete sentences; the point value may vary from one test to another, each lecture can use the percentages as rough guide for grading criteria for his/her topic test

No	Criteria	1 (<20)	2 (21-40)	3 (41-60)	4 (61-80)	5 (80-100)	Weight	Score
1	The answer should meet criteria, such as: a. Complete and detail answer b. contextual explanation of the answer is very thorough and easy to understand c. the answer is relevant to the topic question d. structured writing organization	Does not meet all of the criteria	meet one of the criteria	meet some of the criteria	meet most of the criteria	meet all the criteria	4.5	90



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**DOCUMENT  
CODE  
FORM PP-05**

**STUDENT WORKSHEET PLAN**

Lecturer : Dr. Esti Utarti, S.P., M.Si  
Subject : Biosafety of Laboratory  
Teaching Modul : Group Discussion

**STUDENT IDENTITY**


Name/Student ID	Indria Sari Manda / 191810401008
Member of group	-
Meet	2
Day/Date	Thursday, March 10, 2022
Score	90

**DISCUSSION MATERIALS**

Based on the material that has been presented, discuss:

1. What is the importance of studying laboratory biosafety;
2. Make a review of 15 chemical specifications with the following formats





Task Format





No	Chemicals Symbols	Meaning of Symbols	Examples of Chemicals	The Function of Chemicals in Microbiological Activity	Action
1	 Corrosive	The material is corrosive, able to damage living tissues, can cause irritation to the skin, and itching	NaOH	Glycine-NaOH buffer	Avoid direct contact with skin and avoid metal object
2	Etc.				

**DISCUSSION RESULTS**



Write down the results of the discussion in this section!



No	Chemicals Symbols	Meaning of Symbols	Examples of Chemicals	The Function of Chemicals in Microbiological Activity	Action
1.		<p>Materials that have the symbol in addition to material that have properties good toxicity cause serious illness even up to death if inhaled or swallowed</p>	Methanol (CH <sub>2</sub> OH)	As a solution fixation replacement ethanol	Do not swallowed and don't inhaled, avoid contact direct with skin.
2.		<p>Materials that are very toxic and more so dangerous for good health too can cause chronic pain even Dead.</p>	Nitrobenzene	Solvent and for reagent electrophilic.	Avoid contact direct with body and system respiration
3.		<p>Materials that can be damage health body when in contact directly with body or through inhalation.</p>	Dichloromethane (Ethylene glycol)	Preservative on material control because anti bacteria.	Do not inhaled, don't swallow and avoid contact direct with skin.
4.		<p>Materials that can be cause irritation,</p>	Chlorine (Cl <sub>2</sub> )	Combined with alcohol 70% for hinder growth bacteria and	Avoid contact direct with skin.

		itching and can cause injury burn on the skin.		various types of microbes.	
5.		Flammable in under conditions ordinary atmosphere or have low flash point (below 21°C) and flammable in under the influence humidity.	Acetone	As laxative bacterial dye the weak and as fixation chemical.	Avoid from fire source, open fire and jump fire, and avoid influence on humidity certain.
6.		Chemicals that have a dot low flame, easy burning with fire bunsen, surface hot metal or sparks jump.	Oil turpentine	As blocker growth bacteria.	Keep away from things which potential Secrete fire.
7.		Chemicals that explosive as is heat or splash sparks, friction or collision.	Ammonium nitrate	For decipher organic matter which is involved aerobic bacteria.	Avoid blow, friction, warming up, fire and source of flame other even without oxygen atmospheric.
8.		Materials that are corrosive, can destroy network live, can cause	Sulfuric acid (H <sub>2</sub> SO <sub>4</sub> )	As hydraulic Polysaccharide with catalyze chemically.	Avoid contact direct with skin and avoid of things-things



		irritation on the skin, itching itchy and can make skin peel off.			that character metal.
9.		Chemicals are oxidizer, can cause fire with generate heat when in contact with organic matter and reducing agent	Hydrogen peroxide	As disinfectant most effective against bacteria	Avoid from the heat and reducing agents.
10.		Materials that can be react pretty hard with water.	Potassium	Capable help bacteria in dissolve excited about soil medium.	Keep away from water and save in the placedry/not moist.

## REFERENCES

- Musyarifah, Z., Dan S. Agus. 2018. Proses Fiksasi Pada Pemeriksaan Histopatologik. *Jurnal Kesehatan Andalas*. 7(3): 443-445.
- Muzhidah, T. Sukartini, A. Sunarno. 2009. Efektifitas Kombinasi Klorin 0,5% Dan Alcohol 70% Terhadap Pertumbuhan Kuman. *Jurnal Ners*. 4(1): 19-20
- Ramdja, A. F., R. A. Silalahi. N. Sihombing. 2010. Pengaruh Waktu, Temperature Dan Dosis H<sub>2</sub>SO<sub>4</sub> Pada Hidrolisis Asam Terhadap Kadar Etanol Berbahan Baku Alang-Alang. *Jurnal Teknik Kimia*. 17(2): 45-46
- Setiawan, D., J. Sibarani, I. E. Suprihatin. 2013. Perbandingan Efektifitas Dinfektan Kaporit, Hydrogen Peroksida, Dan Pereaksi Fenton (H<sub>2</sub>O<sub>2</sub>/Fe<sup>2+</sup>). *Cakra Kimia*. 1(2): 18-20
- Subamia, I. D. P., I.G. A. S. Wahyuni, Dan N. N. Wideasih. 2019. Analisis Resiko Bahan Kimia Berbahaya Di Laboratorium Kimia Organik. *Jurnal Matematika, Sains, dan Pembelajarannya*. 13(1): 57-60.

## RUBRIC FOR ESSAY TEST

Course Name :

Student Name/NIM :

All answers should be given in paragraphs with complete sentences; the point value may vary from one test to another, each lecture can use the percentages as rough guide for grading criteria for his/her topic test

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1	The answer should meet criteria, such as: a. Complete and detail answer b. contextual explanation of the answer is very thorough and easy to understand c. the answer is relevant to the topic question d. structured writing organization	Does not meet all of the criteria	meet one of the criteria	meet some of the criteria	meet most of the criteria	meet all the criteria	4.5	90