Title

Study of wastewater quality from industrial plants

In Trang Province

Researching team

Miss Puttachad Nakbun

Miss Sasitorn Aedkleing

Miss Lucksika Posoo

Advisor

Mrs. Kwanjai Karnchanasrimak

Miss Sutheera Thachin

January 2024

Wichienmatu School

Introduction

Research report on the study of wastewater quality from industrial factories in Trang Province.This issue is part of the study and knowledge creation course in the subject Communication and Presentation (IS2). It was created to make readers aware of wastewater quality information from dairy industry factories in Trang Province and use the knowledge gained from this report to be useful in various fields. and is beneficial to the education of children and youth including the general public who are interested

The organizing team hopes that the research report on the study of the quality of wastewater from industrial plants In Trang Province, this edition will be useful in various fields and is a source of research and knowledge for students, as well as those who are more or less interested in the quality of wastewater from industrial plants in Trang Province. If there is any mistake The production team also apologizes here.

Study of the quality of wastewater from industrial plants In Trang Province

Research team: Miss Puttachad Nakbun , Miss Sasitorn Aedkleing , Miss Lucksika Posoo

Grade level : High school

Advisor :Mrs. Kwanjai Karnchanasrimak

Miss Sutheera Thachin

school : Wichienmatu School

Abstract

This project's purpose is to study the quality of water released from industrial sources by measuring the Oxygen and the acidity and alkalinity of the water to study water quality. The results of the study found that this project's purpose was to study the quality of water released from industrial sources by measuring the oxygen value as well as the acidity and alkalinity of the water to study what the water quality is and how it affects fish in that area. By litmus paper in acidity and alkalinity, the results from the experiment found that The pH values of the water for the 1st, 2nd, and 3rd times were approximately equal to 6 all three times and had an average pH of 6 and used a Dissolved Oxygen as well to measure oxygen in water results from the experiment found that Dissolved oxygen values for the 1st, 2nd, and 3rd times are estimated values were 3.5mg/l, 4mg/l and 3.5mg/l respectively. and the average dissolved oxygen value was 3.67

Importance : Studying the quality of wastewater from industrial plants. In Trang Province

Origin and importance

Water is a natural resource that is an important component of the body of all living things and plants. Animals and humans all living things need water to survive. Especially humans need clean water for consumption. If there is a shortage of water or if the water is contaminated, Humans cannot endure or survive. The water that exists on the earth's surface is 97.3% salt water and only 2.7% of the freshwater that humans use for sustenance. This freshwater is divided into Only 1% surface water, 21% groundwater, and 88% water that evaporates in the air, and water in the soil cannot be directly used. Requires planning for water source management and considering the quality of water resources while using water resources Currently, there are problems such as polluted water and contaminants. Because all living things need water to survive. Data study about water quality will make you aware of water changes that may affect the ecosystem, including fish that grow in the water resource area. Therefore, the main objective of this study is to Study the quality of wastewater from industrial plants in Trang province.

Research question

Quality of wastewater from industrial plants In Trang Province, what is it like and how does it affect the ecosystem and the growth of fish in the study area or not

Research objectives

1. To study the quality of wastewater from industrial plants. In Trang Province

Results obtained from research

1. Be informed about the quality of water that contains contaminants from wastewater from industrial plants. In Trang Province

Research scope

Industrial factories within Trang Province

Operation

Materials

1) Thermometer

2) DO Meter

Methods

1) Set water sampling points according to the Globe principle by taking pictures of the water's characteristics.

2) Take a water sample stored in a container measure the oxygen level of the water with a DO Meter and record the results.

3) Take a sample of water stored in a container and measure the acidity with litmus paper and record the results

4) Repeat steps 2) and 3) 2 more times and record the results

Geographic coordinates

Chart 1 Geographic coordinates

Location of study

Conduct a study of water quality that contains contaminants from industrial wastewater. In Trang Province

Location of study	Geographic coordinates	
	Latitude (N)	Longitude (E)
Tha pap khanom jeen industry	7.568158	99.665686

Results

Indicator index table Quality of wastewater containing contaminants from industrial plants In Trang Province

Water quality index	Unit	Measurable concentration level			Average	Appropriate level of concentration
		1st	2nd	3rd		
Dissolved oxygen (DO)	Mg/L	3.5	4	3.5	3.67	Lowest 3

Water quality index	Unit	Measurable concentration level			Average	Appropriate level of concentration
		1st	2nd	3rd		
Acidity-Alkaline	-	6	6	6	6	5-9

Discussion and Conclusions

From the study, it was found that wastewater from industrial plants measured the acidity of the water for the 1st , 2nd , and 3rd times. It was approximately 6 all three times and an average pH of 6, it is weakly acidic. From the experimental results, the pH value is approximately 6. This will cause the fish in that area to grow slowly. Measurement of dissolved oxygen values 1 , 2 , and 3 were approximately 3.5 mg/l, 4 mg/l, and 3.5 mg/respectively, and an average dissolved oxygen value of 3.67 The oxygen value is about 3.67, which affects that area, meaning that only certain types of fish can live there.

Acknowledgments

Conducting environmental research on the study of the quality of wastewater from industrial plants in Trang Province, the Faculty of Providers would like to thank beloved teacher Kwanjai Karnchanasrimak for providing knowledge and a place to collect data. Thank you to Teacher Sutheera Thachin, who is an environmental research advisor and has provided guidance in preparing and providing information. In preparing it very well, thank you to friends who have given their help in doing environmental research.

Organizing team

Puttachad Nakbun

Sasitorn Aedkleing

Lucksika Posoo

Citations

1. Know the oxygen in water and its importance to living things [online] accessible from :

https://www.neonics.co.th/dissolved-oxygen/oxygen-in-water.html

2. Know the pH standards of water according to standards in Thailand [online] Accessible from:

https://www.neonics.co.th/litmus-papers/ph-std-drinking-water.html

3. Water properties and aquaculture [online] Accessible from:

https://www4.fisheries.go.th/local/index.php/main/view_announce/9/8055

4. Dissolved Oxygen Measurement [Online] Available from:

https://www.tools.in.th/water-quality/what-is-dissolved-oxygen/

5. Sample research project [online] available from:

http://sutir.sut.ac.th:8080/jspui/bitstream/123456789/9040/2/Fulltext.pdf

6. How to use litmus paper [online] Available from:

https://www.tools.in.th/ph-test-paper/how-to-use-litmus-papaer/

7. How does pH affect fish? [Online] Accessible from:

https://www4.fisheries.go.th/local/index.php/main/view_announce/9/8055