

REPORT ON
WATER PURIFICATION PLANT VISIT

INTRODUCTION

Mauli nursing college organized a field visit to Water Treatment Plant, parbhani as a part of curriculum. 56 B.sc students joined the visit under the guidance of faculty principal Dr. shanthi.T, Ms. Shital thoke & Ms. Vaishali tarfe. There a class about the plant was arranged by the Water Authority, Mr. Shaikh explained well about the structure and working of the water purification plant and offered us a visit to the concerned areas. Students got an excellent benefit by visiting the biggest water purification plant in parbhani with a capacity of 10 thousand liters /day and understand about the purification methods.

The objective of municipal and industrial waste water treatment is to extract pollutants, remove toxicants, neutralise coarse particles, kill pathogens so that quality of discharged water is improved to reach the permissible level of water to be discharged into water bodies or for agricultural land.

Name of teachers accompanying students: Ms. shital thoke & Ms vaishali tarfe .

Day/Date: 20/07/2022(wednesday)

Number of students: 56

AIM:

The main aim is to give the proper knowledge about the purification of water, its steps and how all this happens in plant.

OBJECTIVES:

The objectives of the visit to provide practical knowledge about purification of water.

1. To provide clean drinking water.
2. To make water potable (safe to drink) and palatable (pleasant to taste) while also ensuring that there is a sufficient supply of water to meet the community's needs.
3. To study the types of water treatment plant used.
4. To study the process of water treatment.

OVERVIEW:

We the staff of Mauli Nursing College Hatta .we have visited with our students of Bsc Nursing 1st year batch of 2021-22 at water purification plant and milk dairy parbhani , from Date 20/07/2022 for their academic Fulfillment . We started our Journey from Hatta to parbhani On 20/07/2022 in morning 10am we reached with the students on 11 am .Total Number of students are 56 and two staff have reached with full interest and with Proper attire.



Water treatment is whereby the used water or raw water from the river is treated in process to make the water more acceptable for a desired end-used. The goal of water treatment is to remove existing contaminants in the water, or reduce the concentration of such contaminants so the water becomes fit for its desired end-used. The process involved in treating water is solids separation using physical process and chemical process. Before the water is distributed into the public houses, the water has to undergo the water treatment process such as follows: - Aeration are to eliminate unneeded dissolved gases such as (CO₂, H₂S, NH₃).

- It is also to increase DO level in water and remove DOC
- Coagulation is the removal of turbidity from the water.
- Turbidity is a cloudy appearance of water caused by small particles suspended therein.

- Water with little or no turbidity will clear. Flocculation is mixing process in which particles are brought into contact in order to
- promote their agglomeration Sedimentation is to remove suspended material from water by the action of gravity.
- Filtration is to remove suspended particles from water by passing the water through
- medium such as sand. Disinfection is to destroy pathogens within a practicable period of time.
 - Water distribution is to satisfy the water requirements for a combination of domestic, commercial, industrial and fire-fighting purposes.

WATER TREATMENT PROCESS

COLLECTION:- The raw water which is supplied to the water treatment plant comes from periyar river.

COAGULATION:- The raw water is first treated with chemical coagulant alum. The dose of alum varies depending upon the turbidity, color, temperature & pH of the water.

FLASH MIXING:- Treated water is then subjected to violent agitation in a mixing chamber for a few minutes. This allows quick and rapid dissemination of alum throughout the bulk of the water. Flash mixing Field visit report 2020 4

FLOCCULATION:- This phase involves a slow and gentle stirring of the treated water in a flocculation chamber. The mechanized type of rotor is used. This causes the formation of thick copious white flocculent precipitate. The thicker the precipitate is, the higher is the settling velocity. Clariflocculator

SEDIMENTATION:- -The coagulated water is now lead into sedimentation tank where it is detained for 2-6 hrs when the flocculent precipitate together with impurities and bacteria settle down in the tank. -At least 95% of the flocculent precipitate needs to be removed from the water before it is admitted to the rapid filters.

FILTRATION:- -Each filter unit has 6 sand beds – coarse pebble, fine pebble, coarse gravel, fine gravel, coarse sand, fine sand. -The thickness of sand bed is 110 cm. -The under drains at the bottom of the filter bed collects the filter water. Field visit report 2020 5 -Sandfilters getting dirty and beginning to lose efficiency approaching 7-8 feet needing, backwashing. Sand filtration bed

BACKWASHING :- -As filter proceeds, the suspended impurities and bacteria clog the filters. - The filter soon becomes dirty and begin to lose their efficiency and are subjected to backwashing. -This is done by reversing the flow of water through the sand bed. -Washing is stopped when clear sand is visible and the wash water is sufficiently clean. -It takes about 15 minutes.

DISINFECTION :- -This is the last step before storage and distribution of this water. -The process used is chlorination. -The chlorine gas is used for effective disinfection.

RESERVOIR :- -We have visited the reservoir where the purified water was stored. -From there it was supplied to various parts of parbhani.



CONCLUSION

Water plays a very important role in human life, whether for daily routine purpose or human health. This field visit gave us the knowledge about the purification of water on large scale and made us aware about the quality of water since it may affect the human health especially. Also the trip made us realized that it is not easy to supply the water directly from the main supply to the people. Thus, thanks to the responsible party and the workers who invested in this project to ensure the health and convenience of the people in parbhani water purification plant and the faculties for planning this event smoothly.

THANK U!

REPORT

ON MILK DAIRY

INTRODUCTION

Students of mauli nursing college, hatta got first-hand exposure of how milk is processed, prepared and packed during their visit to milk dairy at parbhani.

Name of teachers accompanying students: Ms.shital thoke & Ms vaishali tarfe .

Day/Date: 20/07/2022(wednesday)

Number of students: 56



AIM:

To acquire knowledge regarding prevention and control of food borne diseases.

Objective:

To observe Pasteurization of milk and Microbiology Tests of quality of Milk and its hygienic process.

Prerequisites – What knowledge the students must know before going to tour / visit:

The students must have adequate knowledge about Pasteurization process and food borne diseases prevention and control. They are asked to read the topic from the books before attending the field visit.



The educational visit intended to give information regarding methods of preparation of various milk products, pasteurization, preservation of nutrients of milk products and dietary values of different milk products. After the visit, students will be preparing visit report of milk plant. This field trip to milk plant helped the students in the practical understanding of the concepts of nutrition.

The students learnt a lot from the visit and stated that the University was making constant efforts to initiate educational trips and they are a part of the MUHS curriculum. Such visits are not only educational but they also give a clear picture of the professional life that the students will be working for at later stages.

The students thanked their teachers and the staff of the mauli nursing college for making the visit successful.

How it is organized:

The department takes the requisite permission for the visit from the Manager of milk dairy by submitting a request letter on the College letter head with the permission of Principal. The permission when granted, on that date all students are asked to report accordingly in milk Dairy.

Approaches to teaching / learning and assessment: The department takes feedback report from the individual student after the field visit and necessary points of learning is evaluated. The feedback report is then written by the students in their journals.

BASIC .B. Sc(NURSING) FIRST YEAR**BATCH-2021-2022****THANK U!**