

INDUSTRIAL VISIT REPORT

Venue: BMC Water Purification Plant, Post Panjharpur, Tal:Bhivandi

Date: 07-Jan-2020



The Department of Chemistry, Guru Nanak College organized an Industrial visit under the STAR-DBT Scheme where 35 students from S.Y. and T.Y.B.Sc. visited BMC Water purification plant, Panjharpur on 7th January 2020.

Industrial visit began from **dosing pump house**. In alum dosing pump house turbid water comes from **Tansa River(Pisa dam)**. Previously alum was used for coagulation but now a days **poly aluminium chloride (PAC)** is used. PAC is easily available. PAC 9.5% Alumina is present by weight. It kills bacteria. The pH of water is maintained at 4.5. PAC settles down the impurities in the form of sludge. By using TLC purity of water is checked in the quality control laboratory

In turbid water when PAC is added flocks get formed. They are smaller in size at initial stage. There after impurities get attracted (inorganic material) to flocks. Flocks get bigger in size and it settles down and due to atmospheric pressure from top. At the bottom a 3-meter-thick sludge is formed and it itself act as a filter media. Sludge removal process depends on raw water turbidity. Normally this sludge removal takes place in 2 minutes but in monsoon season it takes about 30 minutes to remove the sludge from water.

After this process the water is passed to **recirculation pump house**. Rapid sand water filter is used which contain 4500 nosal where 36 hours washing takes place.

Finally, the filtered water is sent to chlorination pump house where gaseous chlorine is added to the water due to which the harmful bacteria and other pathogens present in the water gets destroyed and water becomes fit for drinking purpose. This purified water is sent to reservoir and there after it is distributed to Mumbai city.

We are thankful to Mrs. Tambane from BMC for giving us the opportunity to visit water purification plant and her valuable guidance during our visit.