

Chapter VII

CONCLUSION

The results of this study on oxidation with aerator can be concluded as follows :

1. Amount of oxygen demand

Amount of oxygen must be adequate to ensure aerobic condition and aeration rate is the rate to control biological reaction not the rate of oxygen diffusion.

2. pH

The value of pH must be controlled within the range of 7 - 7.2 Highly acid or alkali conditions will obstruct the biochemical stabilization. Therefore pH must be closely controlled.

3. Temperature

Wheeler, (1960) stated that the higher the temperature, the higher the rate of reaction, A rough approximation is that the reaction rate doubles for each 10° C increase in temperature.

4. Nutrient addition

Add only nitrogen at the ratio of nitrogen 1 part to BOD 20 parts, K_2HPO_4 used as buffer can supply phosphorus as a nutrient for bacteria in the waste.

5. Microorganisms

The microorganisms necessary for the reaction can be seeded in the stabilization apparatus, or they may naturally develop after time lag. While many microorganisms will perform biostabilization, including yeasts, fungi and bacteria,

bacteria have shown the highest rate of metabolism.

6. Per cent reduction of COD

From the result of experiments, the COD reduced rapidly by ninety per cent within 7 days.

