

## CHAPTER 9

## CONCLUSION AND RECOMMENDATION

The purpose of this study is to remove the finely divided suspended solids and the colloidal material from the textile dyeing wastewater. These contaminant can not be separated by sedimentation unless the long detention period is used. In this study we use two methods for treatment:

1. Coagulation
2. Activated carbon column

In coagulation process, this study uses jar test for finding the optimum value of the alum dosage. The results of using the alum dosage 300 ppm are

|                          |         |
|--------------------------|---------|
| COD removal              | 42-70 % |
| Color removal            | 15-78 % |
| Alkalinity removal       | 8-38 %  |
| Turbidity removal        | 22-90 % |
| Suspended solids removal | 87-90 % |

In activated carbon column, the results are

|                          |         |
|--------------------------|---------|
| COD removal              | 68-93 % |
| Alkalinity removal       | 17-79 % |
| Color removal            | 90-99 % |
| Turbidity removal        | 92-99 % |
| Suspended solids removal | 91-99 % |

When we compare these two methods, activated carbon column shows the results better than coagulation. Both methods are suitable fit for discharge to streams. In considering the cost and space requirement, coagulation is less than activated carbon column. So in treating this wastewater, coagulation is more preferably than activated carbon column.

SUGGESTION FOR FURTHER STUDY

1. Trying other type of coagulant aid in the coagulation process instead of activated carbon to give the better result.
2. Mixing the wastewater with sewage and treatment by chemical method.
3. Control of  $p^H$  by chemical additions when needed, and treatment by biological method.