

# Removal of iron from waste waters by precipitation using lime in conjunction with alum

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**SUMMARY :** In recent years, increasing awareness of the environmental impact of heavy metals has prompted a demand for the purification of industrial waste waters prior to discharge into natural waters. The purpose of this study was to evaluate the possibility of using lime in conjunction with alum to precipitate iron from synthetic solution under varied experimental conditions, viz., pH (8 to 12), alum dosage (400 to 1100 mg/l) and initial concentration of metal (Co 2 to 6 mg/l). Increase in removal efficiency with increase in pH, alum dosage upto certain limit was observed. Maximum removal efficiency of 98% was recorded at alum dosage of 700 mg/l, pH of 10, Co being 4 mg/l. However, all the dosages of alum, at all the pH values and Co, have successfully reduced the iron content in synthetic solution to permissible limits.

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