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## TECHNICAL UPDATE

## Waste Water Treatment

### Animal Processing Wastewater

#### Introduction

Ferric Chloride is widely used in the treatment of wastewater resulting from animal processing operations. Slaughter houses, rendering plants, poultry and fish processing facilities can all benefit from the use of ferric chloride to meet many of their unique treatment needs.

#### Fat, Oil, and Grease De-Emulsification

The strong positive charges associated with ferric chloride chemistry are extremely capable of breaking up fat, oil and grease emulsions in these treatment processes. Since ferric chloride has a charge density higher than many aluminum based coagulants, it has been proven more effective in situations where high levels of fats, oils and greases must be separated from the water source.

#### High Blood Content

The inherent acidity in ferric chloride solutions is a very effective tool for the removal of blood and blood components from the wastewater stream. The iron's higher affinity (vs. aluminum and polymers) for organic material makes it more effective in the coagulation of blood and blood components. This affinity for organics also makes ferric chloride the chemical of choice for highly colored waste streams.

#### Sulfide and Phosphorus

Ferric chloride is a very effective precipitant for the soluble sulfide and phosphorus that is present in many animal processing waste streams. The ferric chloride reacts with sulfide and phosphorus to form insoluble precipitates, which are then removed in separation equipment. Excess ferric chloride forms ferric hydroxide flocs, which further aid in the separation of the precipitated compounds.

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