



## Aktivox<sup>®</sup> Odor Control

### Introduction

Aktivox<sup>®</sup> is a proprietary, powerful, non-chlorinating oxidant that effectively controls odors and corrosion associated with wastewater collection and treatment. Aktivox<sup>®</sup> reacts virtually instantaneously with sulfides, and other odorous compounds, making it an ideal deodorizer for both solids pressing operations, wastewater pump stations, ponds, and lagoons. As an added benefit, Aktivox<sup>®</sup> provides residual odor control that lasts for hours after addition. (Figure C)

### Application Description

Sulfides are produced by both biological and chemical action. They are produced biologically by anaerobic bacteria and chemically by many industries including the chemical, petroleum, paper, and textile industries.

Many systems provide an environment that can promote the growth of a healthy biological community. Hydrogen sulfide formation in wastewater systems occurs primarily in the gelatinous slime layer (biofilm) that accumulates on pipe walls and in the sludge blankets of clarifiers and other solids processing units. The rate of sulfide production is dependent upon the concentrations of sulfate ions, organic matter, and dissolved oxygen, as well as other factors such as pH, temperature, retention-time, stream velocity, and surface area.

Hydrogen sulfide is naturally converted to sulfuric acid, which is corrosive towards steel and concrete, therefore its control results in increased life and lower maintenance cost for facilities and piping. In addition, worker safety is of concern as hydrogen sulfide is extremely toxic at levels above 500 ppm, which can be reached in confined spaces.

### Treatment Alternatives

Sulfide can be removed from a system by precipitation with iron or by oxidization. Various oxidizers including chlorine, hydrogen peroxide, and potassium permanganate are commonly used for oxidation of sulfide. Different treatment strategies are required depending on the application. Aktivox<sup>®</sup> is preferred where alternative oxidants are not effective such as when rapid destruction of sulfide is important (Figure B), or the formation of halogenated byproducts prevents treatment with chlorine.

Aktivox<sup>®</sup> reacts preferentially with hydrogen sulfide to form elemental sulfur (Figure A). Aktivox<sup>®</sup> will form soluble sulfate if applied in excess.

### Further Information:

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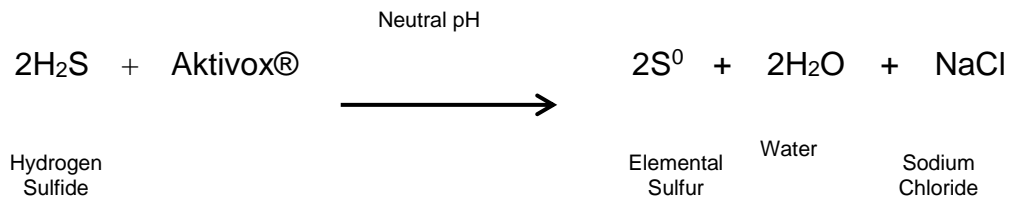
[OxyChem\\_Tech\\_Service@oxy.com](mailto:OxyChem_Tech_Service@oxy.com)

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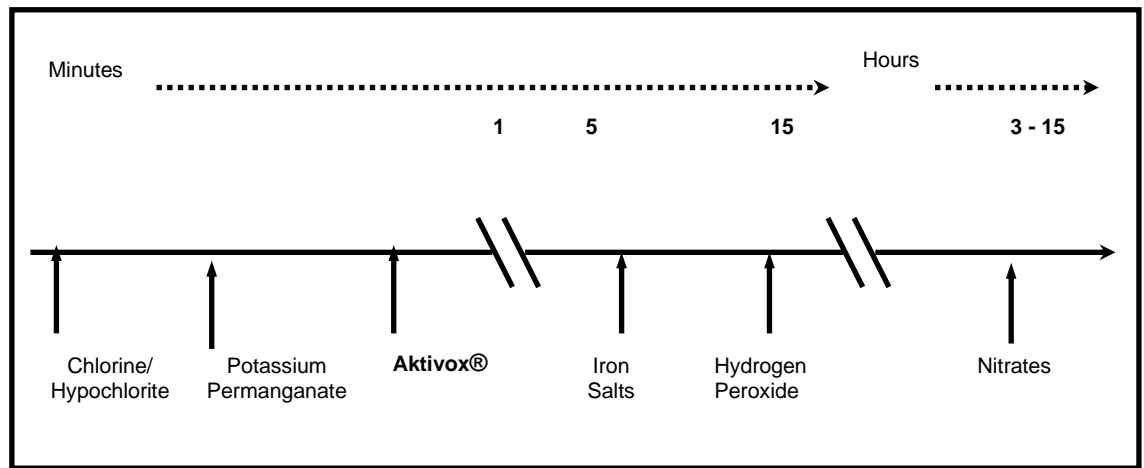


## Basic Chemicals

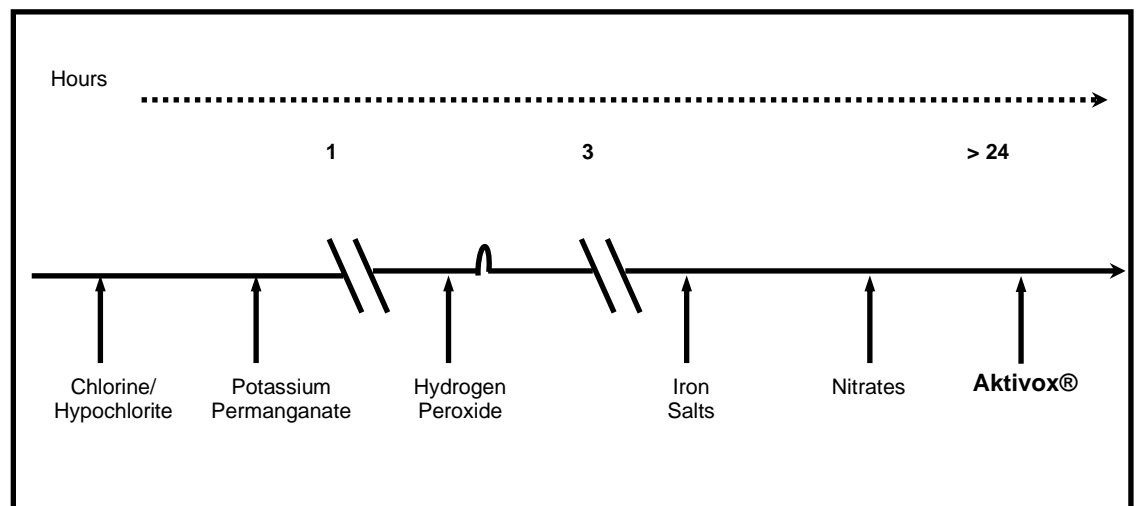
**Figure A:  
Chemical  
Reaction**



**Figure B:  
Speed  
of  
Reaction**



**Figure C:  
Duration  
of  
Control**



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