

# SafeGuard™ H2O

## Ferrate Reagent

One of the most powerful known water treatment chemicals is the oxidant ferrate, which has a higher oxidation potential than ozone and almost twice that of chlorine. This potent reagent has been widely documented to effectively address a wide range of the most challenging contaminants faced by the global drinking and wastewater treatment industry.

Until now, a ferrate solution has not been commercially available or widely used in treatment processes because it decomposes rapidly and cannot be manufactured, transported, or stored. With the proprietary SafeGuard™ H2O in-situ electrolytic ferrate reagent generation system from AMS, the commercial use of ferrate is a reality. The system generates a high-yield ferrate reagent (> 7,000 ppm as iron (VI)).

### Frozen Ferrate Test Kits

For facilities interested in studying the efficacy of ferrate for their contaminant-specific application needs, AMS also offers the ferrate solution in frozen form.

The frozen ferrate solution samples are fully representative of the high-yield reagent produced on-site by the SafeGuard H2O system, and they are easy to handle. The electrogenerated ferrate solution product is packed in Sunnyvale, California, then frozen, shipped, and stored at -28 °C for use as required.

Frozen samples are available in batches of two sizes to accommodate bench-scale or full-scale field testing:

- 2mL (batch of 25) for bench-scale
- 30mL (batch of 16) for field-testing

Chemical engineers, university researchers, water treatment specialists, and other professionals can conveniently use these frozen samples to evaluate the performance of ferrate for their specific application needs.

Contact [ferrate@ams-h2o.com](mailto:ferrate@ams-h2o.com) to learn more.



Frozen Ferrate Test Kits





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## Ferrate Reagent Frozen Test Kit Specifications

### PACKAGING

Package Size	25 vials of 2mL	16 vials of 30mL
Box Dimensions	3 x 3 x 2 in. 7.62 x 7.62 x 5.08 cm.	5.75 x 5.75 x 5 in. 14.6 x 14.6 x 12.7 cm.
Individual Vial Volume	2mL	30mL
Temperature Rating	-196°C to +121°C	-90°C to +121°C
Material	Polycarbonate box, Polypropylene vials	Polycarbonate box, Polypropylene vials
Purity	RNase, DNase, and Pyrogen Free	RNase, DNase, and Pyrogen Free

### REAGENT

Ferrate State	Solid, Frozen	Solid, Frozen
Temperature	Below -80°C	Below -80°C
Shelf Life	7 Days	7 Days
Concentration	20,000 to 25,000 ppm	20,000 to 25,000 ppm
Color	Purple	Purple
Safety		

\* Subject to change without prior notice. Note, the information provided contains general descriptions or characteristics of performance which in actual case of use do not always apply as described.