



## Technical Data Sheet

### DEHA Ceric Sulfate Method

**Applications and Industries:** Boiler water

**References:** Developed by CHEMetrics, Inc.

**Chemistry:** Sample is treated with an excess of ferric iron. DEHA (N,N-diethylhydroxylamine) reacts quantitatively with the ferric iron by reducing it to the ferrous state. The resulting ferrous iron is titrated with ceric sulfate. Ferroin is the endpoint indicator. Test results are expressed as ppm (mg/L) DEHA.

**Interference Information:**

Ferrous iron interferes positively if present at any level.

Reducing agents that reduce ferric iron to ferrous will cause false positive test results.

Sample constituents that are oxidized by ceric sulfate, including hydrogen peroxide and nitrite, will interfere positively.

Other oxygen scavengers may interfere positively.

Chromate may interfere by masking the endpoint.

Copper is not expected to interfere.

**Interpretation of Results:** At the endpoint of this titration, the color of the solution in the test ampoule changes from green to brownish-orange. If the ampoule is filled with sample but the color of the solution remains green (i.e. does not change to brownish-orange), the DEHA concentration is below the test range. If the solution in the ampoule changes to brownish-orange immediately upon introduction of the first small dose of sample, the DEHA concentration is above the test range.

**Safety Information:** Safety Data Sheets (SDS) are available upon request and at [www.chemetrics.com](http://www.chemetrics.com). Read SDS before using this product. Breaking the tip of an ampoule in air when a valve assembly is not attached may cause the glass ampoule to shatter. Wear safety glasses and protective gloves.

**Available Analysis Systems:** Titrimetric: Titrets®

**Storage Requirements:** Products should be stored in the dark and at room temperature.

**Shelf Life:** *When stored in the dark and at room temperature*, the DEHA Titrets kit has a 2-year shelf life.

**Accuracy:** Due to the non-linear nature of the ampoule's test scale, the accuracy of this test varies with the location of the test result on the scale. At twice the minimum concentration of the kit range, the accuracy is  $\pm 10\%$  error.

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