

Method

Carbohydrazide is added to boiler system water as an oxygen scavenger to control corrosion. It is a safer alternative to hydrazine, which is toxic. Carbohydrazide reacts with oxygen at low temperatures and pressures. The products of the reaction are volatile and do not contribute dissolved solids to the boiler water. Like hydrazine, carbohydrazide will also passivate metal surfaces.

The PDTS Method

Reference: G. Frederick Smith Chemical Co., *The Iron Reagents*, 3rd ed., p. 47 (1980).

The test kits employ the PDTS chemistry. Carbohydrazide reduces ferric iron to the ferrous state, and the ferrous iron reacts with PDTS (3-(2-pyridyl)-5,6-bis(4-phenylsulfonic acid)-1,2,4-triazine disodium salt) to form a peach-pink colored complex in direct proportion to the carbohydrazide concentration. Test results are expressed as ppm (mg/L) carbohydrazide.



Visual Kit

Range: 0-0.50 & 0.5-4.0 ppm
MDL: 0.05 ppm / Method: PDTS

	Cat#
CHEMets Kit	K-1805
CHEMets Refill, 30 ampoules	R-1805
Activator Solution Pack, six 10 mL bottles	A-1800
Low Range Comparator, Shelf-life 12 months 0, 0.05, 0.10, 0.15, 0.20, 0.30, 0.40, 0.50 ppm	C-1805
High Range Comparator, Shelf-life 12 months 0.5, 0.75, 1.0, 1.25, 1.5, 2.0, 2.5, 3.0, 4.0 ppm	C-1810
Kit comes in a plastic case and contains everything needed to perform 30 tests: Refill, Low and High Range Comparators, Activator Solution, 25 mL sample cup, instructions, and MSDS.	



Instrumental Kit

V-2000 Multi-Analyte Photometer

(See page 14 for instrumental features)

Range: 0.10-2.50 ppm
Method: PDTS

	Cat#
Vacu-vials Kit	K-1803
Kit comes in a cardboard box and contains everything needed to perform 30 tests: thirty ampoules, Activator Solution, 25 mL sample cup, ampoule blank, instructions, and MSDS.	

Vacu-vials Kits require the use of the V-2000 Photometer or a spectrophotometer capable of accepting a 13 mm diameter round cell. Instrument sold separately.

Kit Components common to Carbohydrazide

Description	Cat#
Sample Cup Pack, 25 mL (6 ea)	A-0013
Ampoule Blank Pack (5 ea)	A-0023

Instructions and MSDS(s) are posted on our website.

If no shelf-life is listed for a product, then the shelf-life is at least 2 years.

