

Thermo Fisher Scientific Mercuric Chloride Generator Information Update

Thermo Fisher Scientific is proud to have released the Mercuric Chloride generator for use with the Mercury Freedom System. This module produces mercuric chloride for the weekly system integrity check as mandated by EPA 40 CFR Parts 60 & 75.

The generation process uses no liquids and produces no waste. The principle of operation is gas phase titration whereby elemental mercury vapor from the 81i calibrator is combined with dilute chlorine gas from a small cylinder to form mercuric chloride. The mercuric chloride is then injected into the probe filter and through the entire system to calculate the conversion efficiency. .

The mercuric chloride generator is located in the probe so there's no need for transport of HgCl₂ in the sample lines. The unit can be retrofitted into either the 83i standard or modified probes as well as the 83i GC probe.

By examining MSDS, you will find that dilute chlorine gas is similar in hazard to your other CEMS calibration gases and actually much less dangerous than the liquid mercuric chloride required by other methods

The chlorine cylinders and regulators are procured separately and may be purchased from your local, qualified, calibration gas supplier. The specification for the gas is 900ppm chlorine in nitrogen balance with accuracy of +/- 10% and a purity of 99.99+. A small cylinder (lecture bottle size) can be utilized as the amount of chlorine used in the process is minimal. Used for a weekly integrity test, a small cylinder will last > 1 year. Thermo Fisher recommends a dual stage stainless steel regulator designed appropriately for the type of cylinder utilized.

Ordering information form Thermo Fisher Scientific, 866-282-0430

Hg-MCC – Mercuric Chloride Generator \$30,000.00

Ordering information for Spectra Gases, Inc., 800-932-0624

900ppm Chlorine in Nitrogen cylinder # ENCKTHERM2-CL5A \$660.00

Size 5A cylinder is disposable

Dimensions of 5A cylinder: approx 3" wide by 11 3/4" tall.

Cylinder pressure: 2000psi

Volume: 170L

Concentration Accuracy: +/- 10%

Purity: 99.99+

Regulator: Protocol Station regulator part number F7003S312002 CGA180 \$1,945.00