



Technical Bulletin

by The Purification X-perts™ at X-ZAM® LABS

NFPA 99 Recommendation for Health Care Facilities

“Use Only a Skilled and Accredited Testing Lab”

As cited on page 58 of the NFPA 99 handbook, dated August 14th, 1996:

• *Medical Gases (Oxygen) Concentration Test.* After purging each system with the gas of system designation, the following shall be performed:

1. Each pressure gas source and outlet shall be analyzed for concentration of a gas, by volume.
2. Analysis shall be with instruments designed to measure the specific gas dispensed.
3. Allowable concentrations shall be within the following:

Medical Air 19.5 percent to 23.5 percent oxygen

• *Medical Air purity Test (Compressor System).* The medical air source shall be analyzed for concentration of contaminants by volume. Sample(s) shall be taken for the air system test at a sample point as specified in 4-3.1.1.9(h). The test results shall not exceed the following parameters:

Dew Point	39° F (4°C) @ 50 psig
Carbon Monoxide	10 ppm
Carbon Dioxide - Air	500 ppm
Gaseous Hydrocarbons - Air	25 ppm (as methane)
Halogenated Hydrocarbons - Air	2 ppm

Three Cases of Suspected Carbon Monoxide Asphyxiation

Illinois-July/August 97

40 year old volunteer fire chief asphyxiated by carbon monoxide and carbon dioxide fumes while saving a salvage company worker. Autopsy revealed a carbon monoxide level of 50.4% percent. (*Information retrieved from the NFPA Journal, July/August 1997*)

Pinellas County, FL- July 97

4th of July weekend, 42 year old diver, Garry Tuomey, died from air contaminated with Carbon Monoxide (CO). According to the medical examiners, the remaining air in his tank tested with high levels of Carbon Monoxide. Tragically, Tuomey drowned because he was sickened from the deadly gas. (*Information retrieved from local sources*)

Key West, FL-April 94

Following the diving death of a tourist, the Monroe County Medical Examiner's Office determined that elevated levels of carbon monoxide (CO) in the blood contributed to the fatality. Subsequent testing of the tanks the diver used show CO levels as high as 2,600 parts per million...more than twice what is considered lethal and more than 260 times the level recommended by the Compressed Gas Association for Level E breathing air. (*by Cathy Cush, Reprinted with permission from Divers Alert Network (DAN)-Alert Diver, September/October 1995*)



4740 NW 157th Street, Miami Lakes, FL 33014
Phone: (305) 430-0550 Fax: (305) 430-0864
email: L-factor@ix.netcom.com
web page: www.lawrence-factor.com
800-338-5493