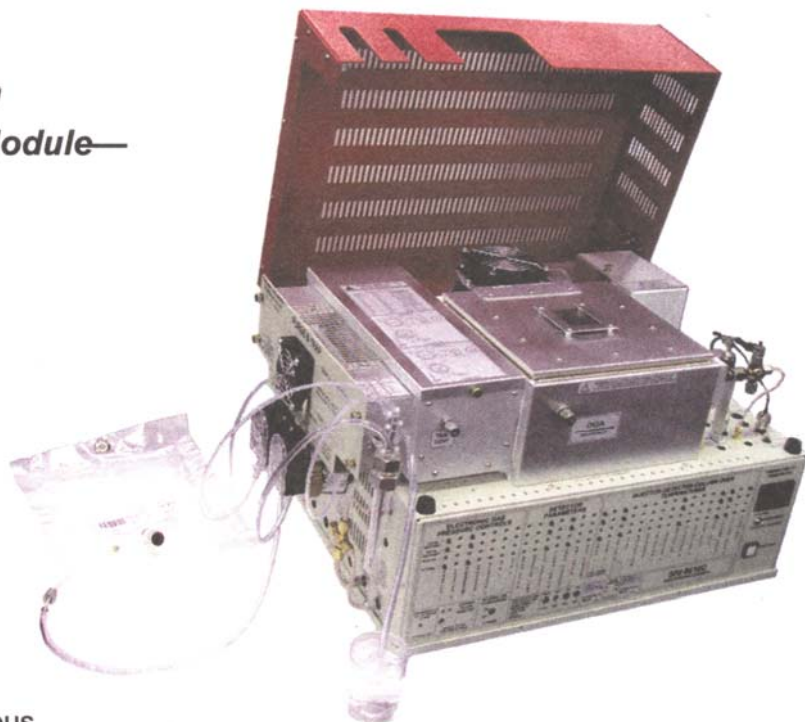


Dissolved Gas Analyzer (DGA) GC System

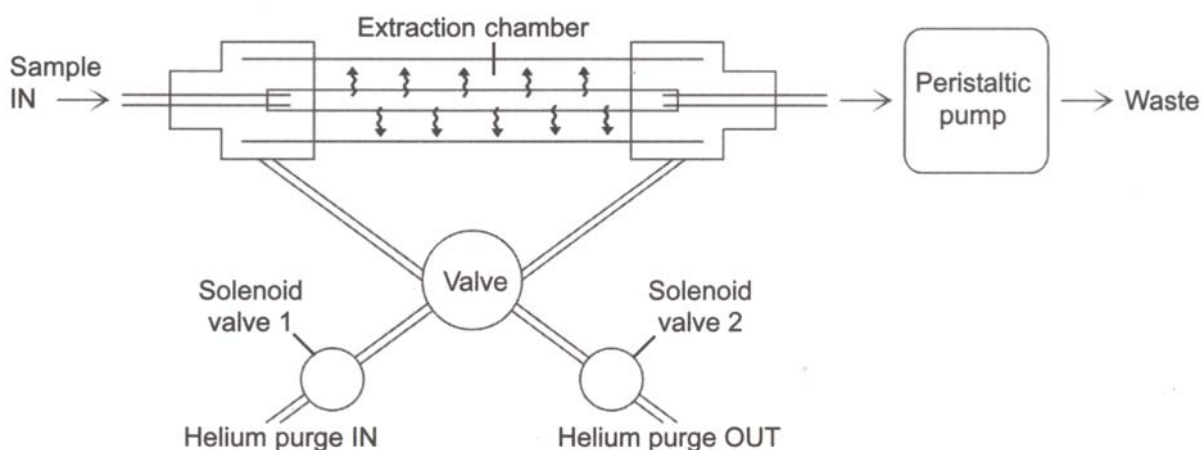
For measuring gases dissolved in water, seawater, wastewater, oil, and other liquids.

- *HID, FID and/or TCD Detectors*
- *Built-in PeakSimple Data System*
- *Built-in Standards Preparation Module—
Make Your Own Standards*
- *10-port Gas Sampling Valve*
- *Gas Extraction Loop*
- *...on the compact 8610C chassis*



The DGA GC System from SRI is designed to make dissolved gas analysis easier and less expensive than other methods. No sample preparation is necessary prior to injection into the DGA GC; this helps to avoid contamination made possible by transferring the sample between various containers. The DGA GC may also be used online. For example, you could place the sample inlet tube directly into the ocean and analyze the dissolved gases in seawater.

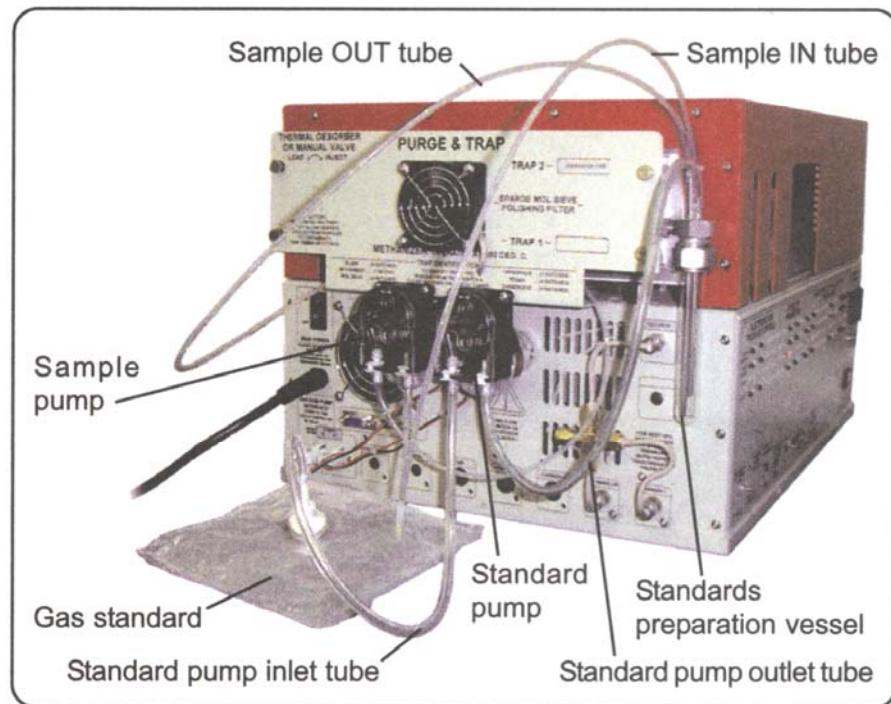
In the SRI DGA GC, the sample is injected by peristaltic pump through a unique gas extraction loop. The gas extraction loop consists of permeation tubing encapsulated in a trap-heated glass tube. The permeation tubing is plumbed to the sample inlet, the 10-port gas sampling valve, and the waste/sample outlet.



When the sample is pumped through the gas extraction loop, the dissolved gases permeate through the membrane into the extraction chamber. Solenoid valves are included for purging the gas extraction loop with helium between runs.

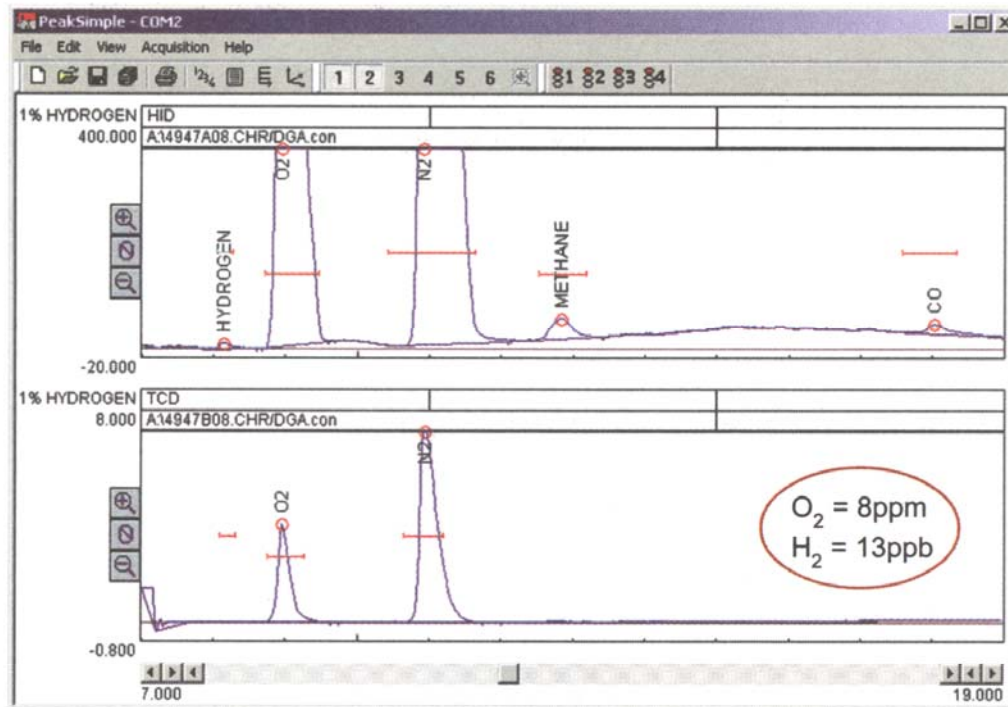
Dissolved Gas Analyzer (DGA) GC System

By reconnecting a few tubing lines, the DGA GC can be configured to prepare dissolved gas standards. A Tedlar bag (or other container) filled with gas standard at a known concentration is connected to the standard pump. The standards preparation vessel is filled with sample liquid, such as seawater or wastewater. The standard pump bubbles gas standard into the standards preparation vessel, equilibrating the liquid over time to the known concentration. Equilibration takes about one hour.



Solubility of Gases in Water at 1%:

Hydrogen	0.016ppm
Oxygen	0.43ppm



To obtain these chromatograms, the DGA GC standards preparation module was used to create 13ppb hydrogen gas by weight in water: 1% hydrogen gas standard was pumped through water in the standards preparation vessel for a length of time sufficient to achieve equilibration. The water in the standards preparation vessel was then pumped into the gas extraction loop and run as the sample. The TCD quantifies the large oxygen and nitrogen peaks, while the sensitive HID detects hydrogen down to 13ppb.

8610-0035 DGA GC System with HID Detector & 1 channel data system

8610-0036 DGA GC System with TCD & HID Detectors, & 4 channel data system



OPTIONS & UPGRADES: additional detectors, 6 channel USB PeakSimple data system.
(VOLTAGE: for 110VAC, use 8610-5405-1; for 220VAC, use 8610-5405-2)

Preconfigured GC Systems