

LIQUID STANDARDS GENERATOR

Applications

- **Waste Water Monitors in Petrochemical Plants**
- **TOC Monitors for Food and Drug Process Water**
- **Water Quality Monitoring for Semiconductor Processing**

THE LSG DYNAMICALLY BLENDS VOC-IN-WATER STANDARDS FOR CALIBRATING AND VALIDATING ON-LINE WATER QUALITY MONITORS.

INTRODUCTION

Environmental regulations and process requirements necessitate monitoring a variety of process water streams for benzene and other toxic organic compounds. These analytical systems require calibration with liquid standards. Since the concentrations needed are low, and the components are often volatile, the standards typically do not store well and must be prepared fresh for use. These standards are prepared manually in the laboratory in a very labor intensive process which requires a high level of skill. At best, this is a serious nuisance, which leads to poor data quality and, in turn, can lead to noncompliance fines and/or lost production.

The **LSG** eliminates the tedious, time consuming process of manually mixing volatile, liquid standards and removes the risk and frustration of dealing with the wide variance in data resulting from hand-mixed standards. Plus, it minimizes personnel health risk. The **LSG** uses a special **certified cell** to continuously add a small, known flow of analyte to a clean water stream; generating a flow of accurately known, low concentration (ppb-ppm), liquid standard that is repeatable and reliable.



MODEL LSG

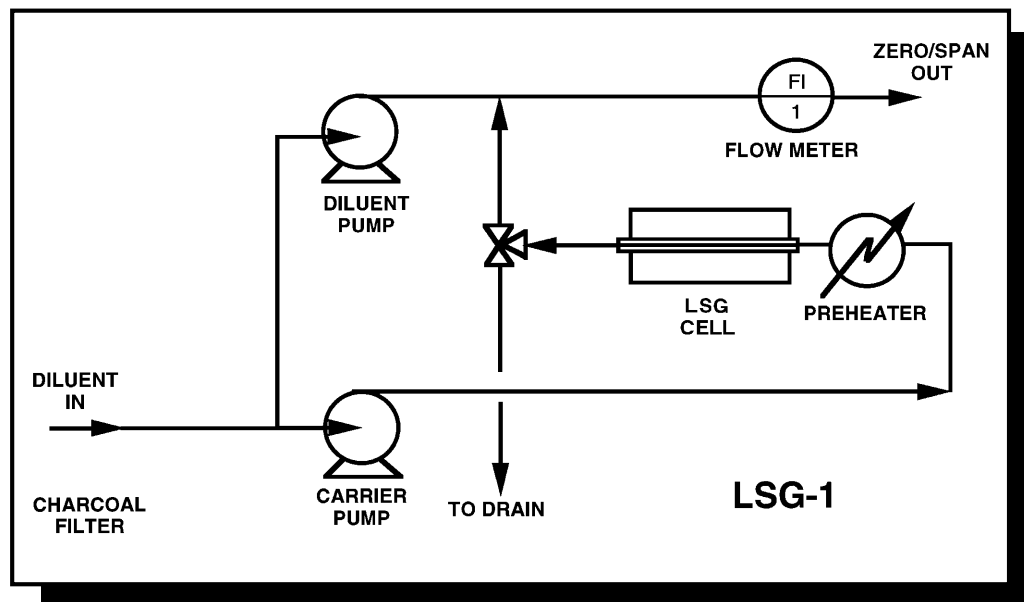
Benefits

- ✓ **Easy to use**
- ✓ **Low maintenance**
- ✓ **Mixture is always fresh**
- ✓ **Instant availability of Standard**
- ✓ **Standard simulates actual sample**
- ✓ **Documentable accuracy and reliability**

DESCRIPTION

In the **LSG-1**, a precision metering pump maintains a small carrier flow (10 to 15 cc/min) of clean water through a preheater. It then passes through the **LSG** cell where it mixes with the analyte flow emitted by the **LSG** cell. A second metering pump controls the main dilution flow of “zero” water. The zero and carrier flows are mixed to form the “span” mixture.

Precision control of the **LSG** cell and preheater temperature as well as dilution water flow insure constant span mixture concentration.



FLOW DIAGRAM FOR SINGLE POINT
LIQUID STANDARDS GENERATOR

SPECIFICATIONS

Flow Range:	10-100 ml/min
Flow Control Accuracy:	±0.1%
Temperature Range:	40-80° C
Temperature Control:	±0.1°C
Power Requirement:	115V/5A
Dimensions:	26" w x 44" h x 11" d
Concentration Range:	Typ. 1 ppb - 10 ppm (depends on analyte)
Single Point Calibration:	LSG-1
Multi Point Calibration:	LSG-2

An application note on this product is available on request. Contact our sales department.