

EQUILIBRATOR™ DIFFUSION SAMPLER

Sample VOCs without Bailing or Purging!

Diffusion sampling is a proven and accepted technique for determining concentrations of Volatile Organic Compounds (VOCs) in groundwater monitoring wells.

EON DIFFUSION SAMPLERS™ are Practical and Easy to Use!

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A semi-permeable sample chamber is filled with inexpensive deionized or distilled water, then lowered into the well screen and left in place. VOCs in the

groundwater diffuse into the sampler until the concentration gradient equilibrates between the water in the formation and the sampler. The sampler is retrieved and the contents easily emptied into VOA vials for laboratory analysis.

Save Sampling Time!

Install samplers during one round of sampling and retrieve them during the next round.

Reliable and Inexpensive!

Results correlate with bailing and low-flow sampling without expensive equipment and labor intensive purging. The Interstate Technology Regulatory Council (ITRC) has evaluated passive diffusion sampling case histories and technical studies, and published a position paper endorsing the technology.

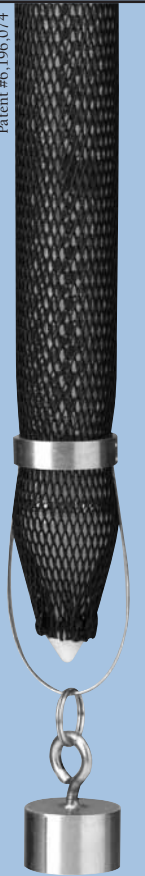
www.itrcweb.org

EON DIFFUSION SAMPLERS™

are currently in use at U.S. DoD sites, EPA-monitored sites, major industrial sites, and small petroleum monitoring sites across the U.S. Patented design allows field, factory, or lab filling options. Diffusion sampling technology is licensed by the U.S. Government.*

* EON supplies all installation accessories and field supplies.
Ask about ready-to-install, factory prepared tethers.

Patent #6,196,074

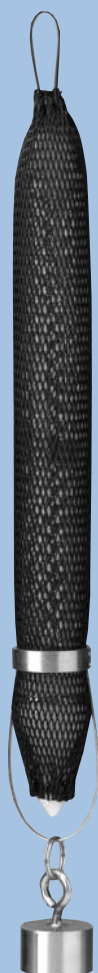
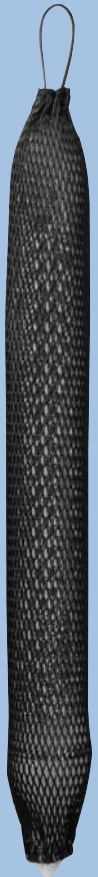


- Reduce Field Cost by 50% or More
- Eliminate Bailing & Pumping
 - Profile Contaminants Vertically
- Reduce Sampling Error & Improve Repeatability
- No Purge Water Disposal

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*Licensed under U.S. Patent No. 5,804,743.



EON DIFFUSION SAMPLERS™ are widely in use at sites where volatile organic compounds require on-going periodic monitoring. The elimination of well purging, and ease of use, result in substantially lower sampling costs. This simple technology combined with excellent correlation of analytical results to other methods has propelled diffusion sampling into acceptance and use by industry, consultants, and regulators alike.

Principle of Operation

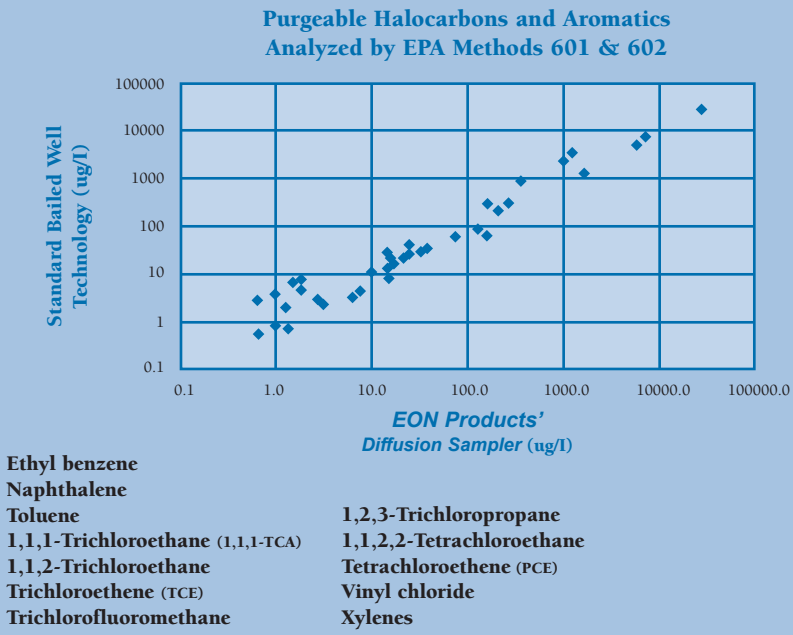
Diffusion sampling is based on the underlying principle that water in the screened interval is in constant dynamic equilibrium with the aquifer so that there is constant flow from the aquifer through the screen. This flow has been shown to be mostly laminar and horizontal. In addition to natural groundwater flow, molecular diffusion causes soluble compounds to remain evenly dispersed and in equilibrium from the aquifer through the screened portion of the well. The same dynamics hold true within the water-producing fracture zones of rock wells.

Comparative Data

Numerous installations exist from which correlative data compare the results of diffusion sampling with other techniques such as bailing and low-flow sampling. One such comparison, conducted by Bunnell-Lammons Engineering, Inc. (BLE) and shown graphically below, is based on a 28-well comparative study. For analytical data and case histories see the USGS Guidance Document “User’s Guide for Polyethylene-Based Passive Diffusion Bag Samplers...”, Report 01-4061.

Sampled Compounds:

- Benzene
- Bromodichloromethane
- Bromoform
- Chlorobenzene
- Carbon tetrachloride
- Chloroethane
- Chloroform
- Chloromethane
- 2Chlorovinyl ether
- Dibromochloromethane
- Dibromomethane
- 1,2-Dichlorobenzene
- 1,3-Dichlorobenzene
- 1,4-Dichlorobenzene
- Dichlorodifluoromethane
- 1,1-Dichloroethene
- cis-1,2-dichloroethene (1,2-DCE)
- 1,2-dichloropropane (1,2-DCP)
- 1,2-dichloroethane (1,2-DCA)
- 1,1-dichloroethene (1,1-DCE)
- cis-Dichloropropene
- Dibromochloromethane
- Trans-1,3-Dichloropropene



- Ethyl benzene
- Naphthalene
- Toluene
- 1,1,1-Trichloroethane (1,1,1-TCA)
- 1,1,2-Trichloroethane
- Trichloroethene (TCE)
- Trichlorofluoromethane
- 1,2,3-Trichloropropane
- 1,1,2,2-Tetrachloroethane
- Tetrachloroethene (PCE)
- Vinyl chloride
- Xylenes

Simple as 1,2,3.

1. Fill the Sampler with deionized water and lower into the sample zone.
2. Leave the Sampler in place 2 weeks or until the next sampling event.
3. Remove the Sampler and discharge contents into VOA Vials.

EON Products, Inc. is licensed by the U.S. Government to provide the patented diffusion sampling technology for use worldwide.