

No Pump Needed!

Nitrous Oxide Passive Sampler

- ◎ Accurate and reliable sampling of ppm-level nitrous oxide
- ◎ User-filled with supplied sorbent to maintain low background
- ◎ Miniature unobtrusive sampler clips in breathing zone
- ◎ No reverse diffusion
- ◎ Built-in vial adapter to facilitate sorbent transfer
- ◎ Samples can be stored for up to 3 weeks in a freezer
- ◎ Economical — no pump needed
- ◎ Sensitive thermal desorption
- ◎ Validated from 15 minutes to 8 hours
- ◎ Available with or without analysis



The SKC Nitrous Oxide (N₂O) Passive Sampler provides accurate and reliable sampling of nitrous oxide in the 50 to 450 ppm range (12.75 to 890 ppm-hours dose range) for 15 minutes to 8 hours. The sampler clips easily to employee clothing in the breathing zone and does not interfere with activities. A secondary diffusion barrier ensures the proper sampling rate of 0.81 ml/min. The sampler features a built-in vial adapter for direct sorbent transfer from vial to sampler and sampler to vial. Samples are thermally desorbed and analyzed by gas chromatography with electron capture detector (GC-ECD). Designed primarily for the healthcare industry, these samplers may be used in other industries, such as the food industry, for nitrous oxide exposure sampling.



Nitrous Oxide Passive Sampler

Accurate, Reliable N₂O Sampling Without a Pump

The SKC Nitrous Oxide Passive Sampler makes sampling easy!

1. Fill the sampler housing with sorbent supplied in vial.
2. Install secondary diffusion barrier and clip sampler on employee clothing in the breathing zone.
3. When sampling is complete, unclip sampler, package it, and ship it to a laboratory for analysis.

About Nitrous Oxide

Nitrous Oxide (N₂O) or laughing gas is a colorless gas with a sweetish odor and taste. It is very stable and inert chemically at room temperatures. Nitrous oxide is not classifiable as a human carcinogen; however, it is a narcotic at high concentrations. Nitrous oxide is used as an anesthetic in dentistry and surgery, as a propellant gas in food aerosols such as whipped cream, and as an inert gas to displace bacteria-inducing oxygen when filling packages of chips and other similar snack foods. Nitrous oxide can also be used for leak detection and in motor racing as an oxidizer to increase the power output of engines.

Performance Profile

Sorbent/Amount:	Molecular Sieve 5A 60/80, 736 mg (supplied in glass vial)
Housing Material:	Nylon, non-sterile
Diameter:	1.4 in (3.5 cm)
Length (including clip):	2.5 in (6.3 cm)
Depth:	0.6 in (1.5 cm)
Concentration Range:	50 to 450 ppm (12.75 to 890 ppm hrs)
Analysis:	Thermal desorption; gas chromatography (GC) with electron capture detector (ECD)
Shelf-life:	6 months from date of manufacture Store at < 39.2 F (4 C)
Sample Storage:	3 weeks at < 39.2 F (4 C) or 1 week at ambient temperature
Sample Time:	Validated for 15 min to 8 hrs
Sampling Rate:	0.81 ml/min ± 12% RSD

Ordering Information

Description	Cat. No.
Nitrous Oxide Passive Samplers include empty sampler housings*, secondary diffusion barriers, and sealed glass vials of 736 mg cleaned/purged Molecular Sieve 5A sorbent, pk/5	590-300
Nitrous Oxide Passive Sampler with Analysis includes empty sampler housing*, secondary diffusion barrier, sealed glass vial of 736 mg cleaned/purged Molecular Sieve 5A sorbent, voucher for analysis, chain-of-custody form, and prepaid return mailer	590-300A
Replacement Sorbent Vial , glass vial with PTFE-lined cap filled with 736 mg cleaned/purged Molecular Sieve 5A sorbent	590-268

* Samplers are non-sterile.

Analysis Accessory

Description	Cat. No.
Transfer Funnel , aluminum, facilitates transfer of sorbent from vial to 0.25-inch OD thermal desorption tube	590-264
Thermal Desorption Tube , Perkin Elmer, 0.25 x 3.5 inch, includes screens and end caps	P226530

Reference

Kuhlman, C. and Coyne, L., Validation of Nitrous Oxide Using SKC Passive Sampler 590-300, SKC Inc., Mar. 2008, <http://www.skinc.com/pdf/1762.pdf>

SKC Limited Warranty and Return Policy

SKC products are subject to the SKC Limited Warranty and Return Policy, which provides SKC's sole liability and the buyer's exclusive remedy. To view the complete SKC Limited Warranty and Return Policy, go to <http://www.skinc.com/warranty.asp>.

