



# Chemical Fact File®

## Nitrous oxide — NIOSH 6600

The working range of NIOSH Method 6600 is 10 ppm (v/v) to more than 1% (v/v) N<sub>2</sub>O. This method may be used for the sequential determination of two or more analyses by changing the analytical wavelength and pathlength. There are no identified interferences to this method.

### Required Equipment:

1. An **air sampling pump** capable of sampling at the recommended flow rate with the sampling medium in line, such as:

- SKC **Universal Sampler** with exhaust port fitting installed
- SKC **222 Sampler**

2. An **air flow calibrator**, such as:

- **Defender Primary Standard Flowmeter** Cat. No. 717 Series

3. SKC **Tedlar® Sampling Bag** Cat. No. 231-05

4. SKC **PTFE Tubing** Cat. No. 231-9-23

**Note:** PTFE tubing is normally used for bag sampling to avoid loss of sample by adsorption to the tubing surface. However, Tygon® tubing (Cat. No. 225-13-4) may be used when sampling inert substances such as nitrous oxide.

### SKC Application Guides:

1. Sampling Train — Air Sample Bags, #1167
2. Calibrating a Pump Using an Electronic Calibrator, #1366

	<b>TWA</b>
Flow Rate	varies
Sample Time	varies
Air Volume	3 liters
NIOSH REL	25 ppm

(NIOSH Manual of Analytical Methods [NMAM], Fourth Edition, 8/15/94)

### Sampling and Analysis:

1. Calibrate the pump to the desired flow rate. *Request SKC Application Guide #1366 for more information on calibrating a pump.*
2. For sampling, attach a piece of tubing to the hose/valve fitting on the bag. Connect the other end of the tubing to the outlet fitting on the pump. Place the pump in the work area to be monitored and open the valve on the bag. Turn on the pump. *Request SKC Application Guide #1167 for further information on setting up a sampling train using air sample bags.*

3. Sample at an accurately known flow rate for the recommended period of time.

4. At the end of the sampling period, turn off the pump, close the valve on the bag by turning it clockwise, and note the ending time. Remove the bag and record any pertinent sampling information.

5. Calibrate the pump to verify that the flow has not changed by more than 5%.

6. The sample can be either analyzed directly from the bag using a portable gas chromatograph or sent to a laboratory for analysis. Sample bags sent out for analysis should be packed loosely and padded to minimize the danger of being punctured during shipment. All pertinent sampling information should be included. Do not ship the bags by air unless they are stored in a pressurized cabin. Shipments of filled sample bags must comply with regulations concerning hazardous materials.

### Storage:

For best results, analyze the sample within 2 hours of collection.

### Analyzing Method:

Portable infrared spectrophotometer (P IS)

Copyright 1992 - 2011

**Notice:** This publication is intended for general information only and should not be used as a substitute for reviewing applicable government regulations, equipment operating instructions, or legal standards. The information contained in this document should not be construed as legal advice or opinion nor as a final authority on legal or regulatory procedures.

Publication 1028 Rev 1105

SKC Inc. 724-941-9701

SKC South 434-352-7149

SKC Gulf Coast 281-859-8050

SKC West 714-992-2780

www.skcinc.com