1.3.3. The analytical procedure is quick, sensitive, and reproducible.

1.3.4. Reanalysis of the samples is possible.

1.3.5. It may be possible to determine other nitrosamines simultaneously.

1.3.6. The effects of potential interferences are reduced through the use of a selective detector (the TEA) and can be further reduced by proper selection of GC parameters.

1.3.7. The air sampler is composed of commercially available materials.

1.4. Disadvantages

1.4.1. At this time the sampling method has not been field tested.

1.4.2. The cost of the TEA may be prohibitive to small laboratories.

2. Sampling Procedure

2.1. Apparatus

2.1.1. An approved and calibrated personal sampling pump whose flow can be determined to ±5% at the recommended flow rate.

2.1.2. Florisil and Polar Partition adsorbent tubes: Glass tubes, 6-mm o.d., 4-mm i.d., 7-cm length, containing 100-mg front and 50-mg rear (separated by a 2-mm portion of urethane foam or silylated glass wool) sections of 20/40 mesh Florisil and Polar Partition adsorbent. SKC Inc. Catalog No. 226-39 and 226-26 or equivalent. Each tube is pretreated with 10 mg (±) ascorbic acid. Instructions for the preparation of the coated sampling tubes are given in Section 4.9.

2.2. Reagents

None required.

2.3. Sampling technique

2.3.1. The air sampler is composed of a treated Polar Partition tube followed by a treated Florisil tube in series. The tubes are easily connected with an end cap that has been modified by cutting off the closed portion.

2.3.2. Connect the air sampler to the sampling pump with flexible tubing. The 50-mg section of each tube should be positioned toward the sampling pump. Cover each tube of the air sampler with masking tape or other suitable material to prevent light from reaching the adsorbent.

2.3.3. The air sampler should be placed in a vertical position during sampling to minimize channeling.

2.3.4. Sampled air should not pass through any hose or tubing before entering the sampling device.

2.3.5. Immediately after sampling, separate the air sampler into its component tubes, identify each tube as front or backup and seal each tube with plastic end caps. Also, wrap each sample end to end with official OSHA seals.

2.3.6. With each batch of samples, submit at least one blank tube of each adsorbent material from the same lot used for samples. These tubes should be subjected to exactly the same handling as the samples (seal, transport) except that no air is drawn through them.

2.3.7. Transport the samples (and corresponding paperwork) to the lab for analysis.

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