



Gases

Separation of nitrous oxide and phosphine with flame-photometric detection (FPD)

Application Note

Environmental

Authors

Agilent Technologies, Inc.

Introduction

Under the right conditions of the flame of the FPD in the phosphor mode, it is found that not only phosphine gives a detector signal, but also nitrous oxide can be detected. The retention and inertness of the Agilent PorapLOT Q column provides the right separation and peak shape, also at trace levels.



Agilent Technologies

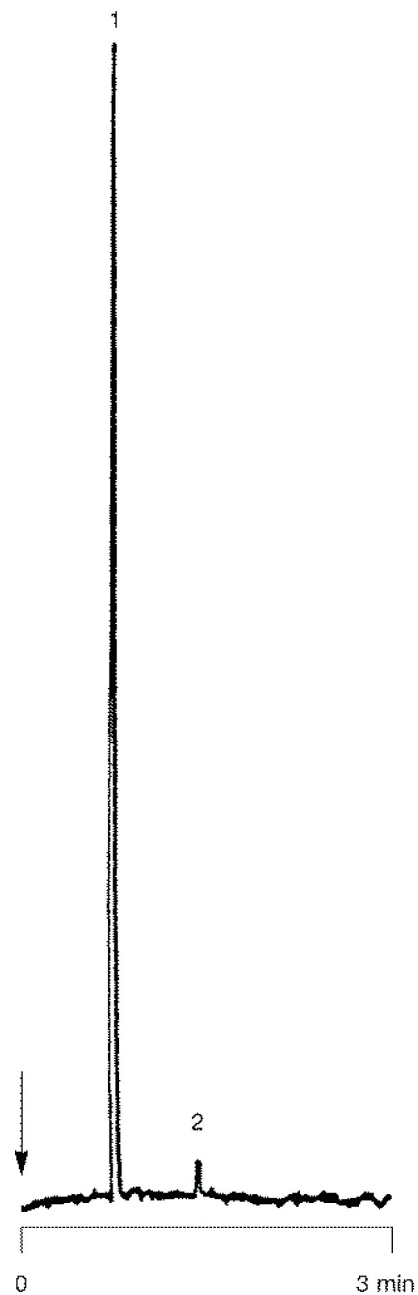
Conditions

Technique : GC-capillary
Column : Agilent PoraPLOT Q, 0.32 mm x 10 m fused silica
WCOT (df = 10 μ m) (Part no. CP7550)
Temperature : 40 $^{\circ}$ C
Carrier Gas : H₂, 100 kPa (1.0 bar, 14 psi), 2.8 mL/min
Injector : fused silica loop/trap
Detector : P-FPD, 526 nm
T = 175 $^{\circ}$ C
Sample Size : 2.3 μ L

Courtesy : Dr. G. Gassman, Biologische Anstalt Helgoland,
Hamburg, Germany

Peak identification

1. nitrous oxide (N ₂ O)	540 nL
2. phosphine (PH ₃)	275 μ L



www.agilent.com/chem

This information is subject to change without notice.

© Agilent Technologies, Inc. 2011

Printed in the USA

31 October, 2011

First published prior to 11 May, 2010

A01437



Agilent Technologies