Chlorine/gases

Analysis of chlorine using its reaction with acetone

Application Note

Materials Testing & Research

Authors

Agilent Technologies, Inc.

Introduction

Gas chromatography with an Agilent CP-Sil 8 CB column is used to analyze chlorine by employing its reaction with acetone, giving results in ten minutes.

Agilent Technologies

Conditio

Technique	:	GC-capillary
Column	:	Agilent CP-Sil 8 CB, 0.32 mm x 50 m fused silica WCOT CP-Sil 8 CB (df = 0.4 µm) (Part no. CP7789)
Temperature	:	60 °C → 150 °C, 10 °C/min
Carrier Gas	:	H_2
Injector	:	Splitter, 120 mL/min
Detector	:	FID
Sample Size	:	0.1 µL

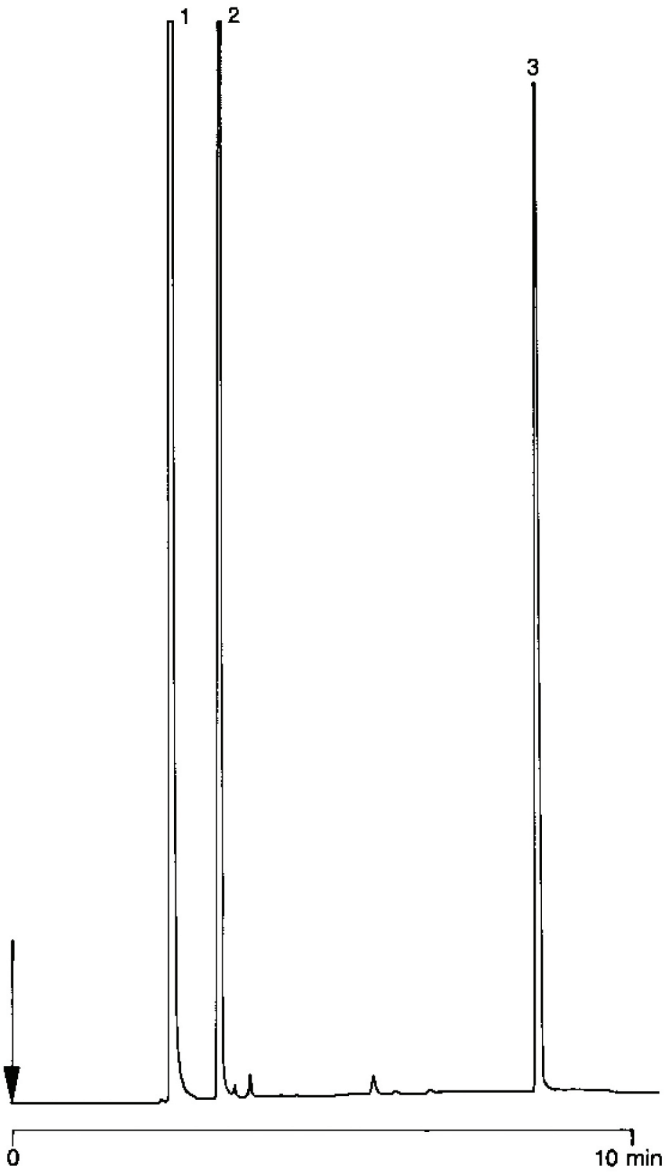
Sample preparation

Injection of 1 µL of a sample of around 10 mL of acetone after reaction of 0.78 g of chlorine and addition of 1 mL of n-decane added as internal standard

Note: The reaction of chlorine with acetone can be explosive so take care that you don't mix too much chlorine with acetone at the same time.

Peak identification

1. acetone
2. mono-chloro-acetone
3. decane



www.agilent.com/chem

Printed in the USA
31 October, 2011
First published prior to 11 May, 2010
A00897

Agilent Technologies