Permanent Gas Analysis – Separation of Helium, Neon and Hydrogen a MolSieve 5A column using the Agilent 490 Micro GC

Application Note

Micro Gas Chromatography, Permanent Gas Analysis

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Introduction

This application note shows an example of the permanent gas analysis in a sample with high % level of Oxygen and Nitrogen (Air) on an Agilent 490 Micro GC, including the separation of Helium, Neon, and Hydrogen (ppm level). The separation of these compounds is done on a 10 m MolSieve 5A column and requires the use of Argon as carrier gas to detect all potential other carrier gases like Helium, Hydrogen, and Nitrogen.

The advantage of the Agilent 490 Micro GC, is the ease-of-use and the speed of analysis, resulting in a total analysis time of less than 40 seconds.

The Agilent 490 Micro GC is a rugged, compact, and portable lab-quality gas analysis platform. When the composition of gas mixtures is critical, count on this fifth generation micro gas chromatography.

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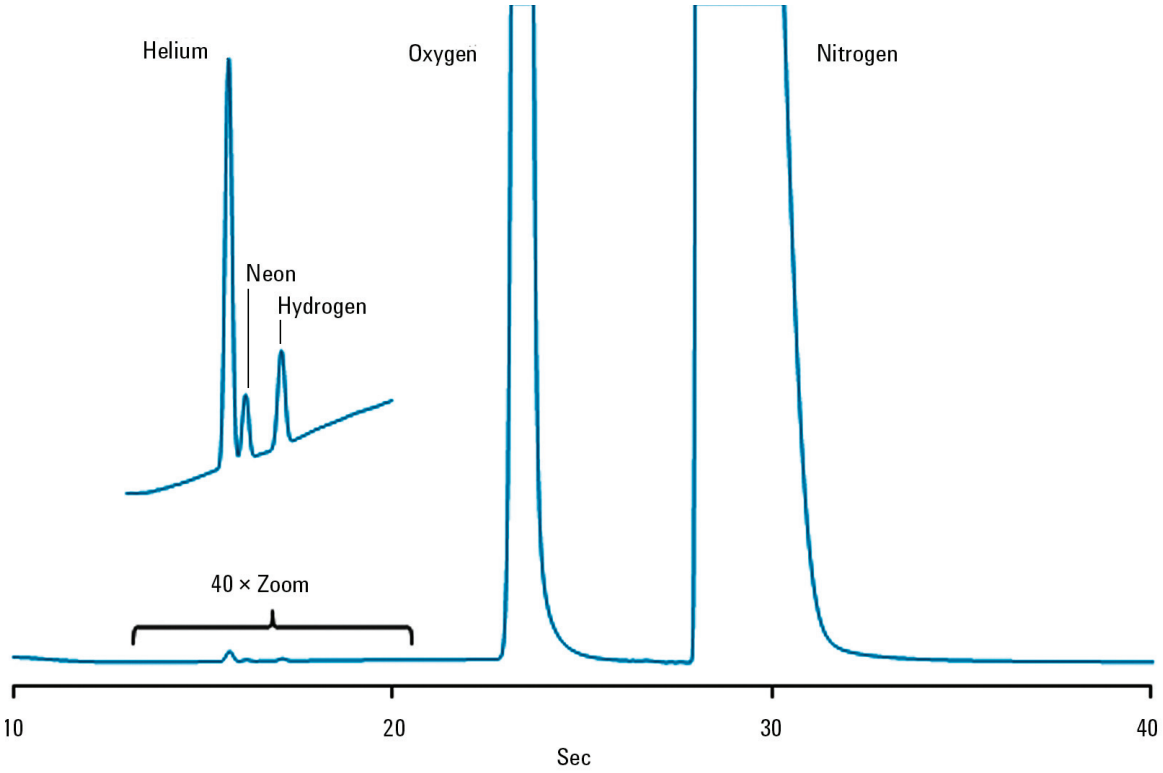
Instrumentation

Instrument	Agilent 490 Micro GC (G3581A)
Column channel	MolSieve 5A, 10 m
Column temperature	80 °C
Carrier gas	Argon, 240 kPa
Injector temperature	60 °C
Injection time	60 msec

Sample information

Helium	ppm level
Neon	ppm level
Hydrogen	ppm level
Oxygen	high % level
Nitrogen	high % level



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