



Drugs

Analysis of emergency toxicology plasma extracts

Application Note

Clinical Research

Authors

Agilent Technologies, Inc.

Introduction

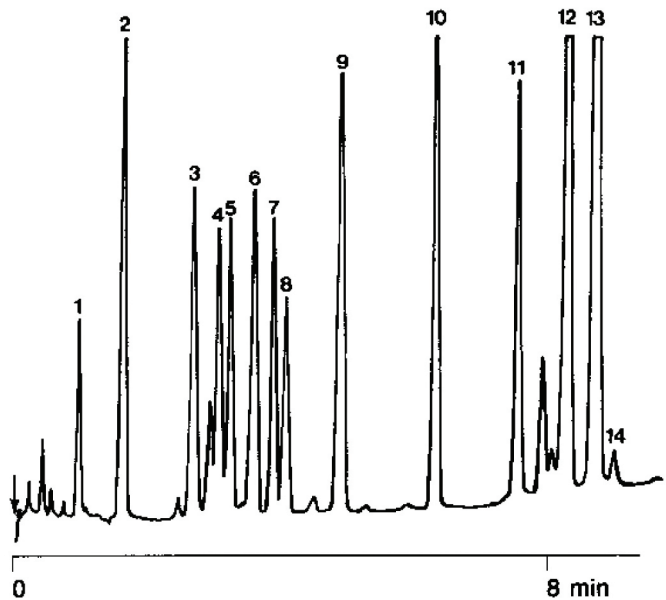
Gas chromatography with an Agilent CP-Sil 8 CB column separates 14 drugs from emergency toxicology plasma extracts in eight minutes.



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Conditions

Technique : GC-capillary
Column : Agilent CP-Sil 8 CB, 0.53 mm x 10 m fused silica
WCOT CP-Sil 8 CB (5.0 μ m) (Part no. CP7646)
Temperature : 150 °C (0.1 min) \rightarrow 300 °C, 10 °C/min
Carrier Gas : He, 15 mL/min
Injector : direct
T = 220 °C
Detector : NPD
T = 300 °C
Sample Size : 1 μ L
Solvent sample : methanol
Courtesy : Robert F. Foery, PhD, DABCC Reference Laboratory,
Newbury Park, California



Plasma Standard 1

Peak Identification	Concentration of drug In standard (μ g/mL)
1. nicotine	
2. barbital (IS)	10
3. butabarbital	10
4. amobarbital	10
5. pentobarbital	10
6. secobarbital	10
7. caffeine	
8. glutethimide	10
9. phenobarbital	30
10. methaqualone	3
11. oxazepam	5
12. diazepam	10
13. nordiazepam	10
14. norpropoxyphene	10

Plasma Standard 2

Peak Identification

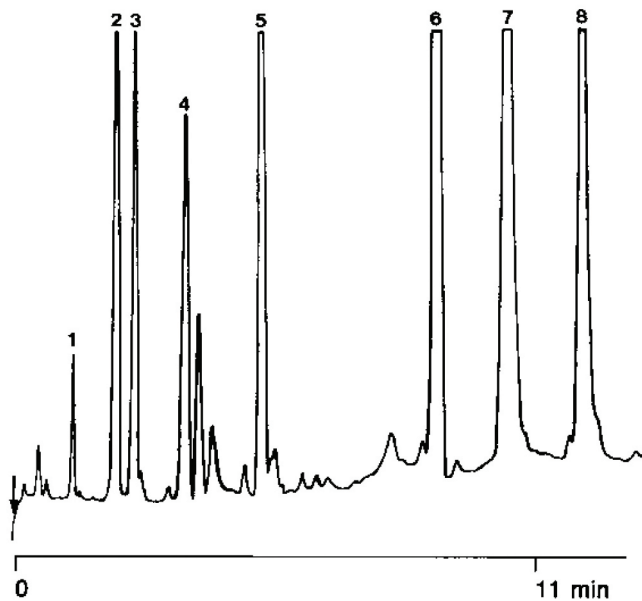
1. nicotine
2. barbital (IS)
3. methyprylon
4. butalbital
5. caffeine
6. propoxyphene
7. dilantin
8. chlordiazepoxide

Concentration of drug in standard ($\mu\text{g/mL}$)

- 10
- 5
- 10
- 1
- 10
- 20
- 10

Sample preparation

Adjust pH of plasma to 4.5, extract with butyl chloride, flash down, pick up in MeOH, inject $1\mu\text{L}$ on column.



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Printed in the USA

Updated 18 May, 2015

First published prior to 11 May, 2010

A00321



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