

Heterocyclic amines

Application Note

Environmental

Authors

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Introduction

Heterocyclic aromatic amines are formed in small quantities during the cooking of meat. They are suspected to play a role in the formation of human cancer. The two most abundant amines are 2-amino-3,8-dimethylimidazo(4,5-f)quinoxaline (MeIQx) and 2-amino-1-methyl-6-phenylimidazo(4,5-b)pyridine (PhIP), measured in urine as biomarkers for exposure to heterocyclic amines after exposure to fried chicken.



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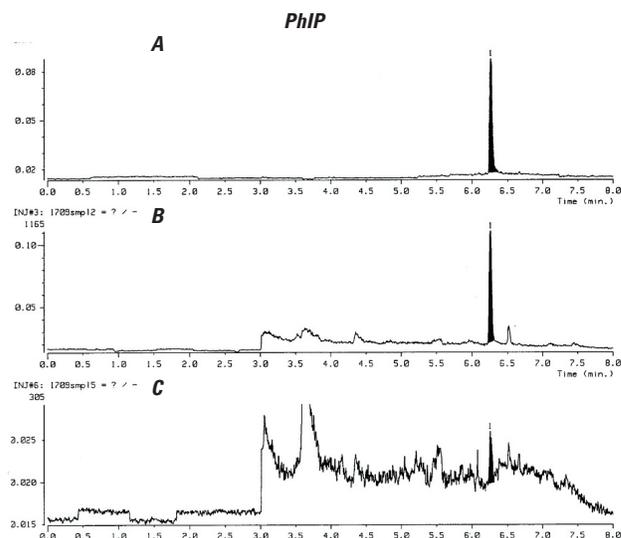
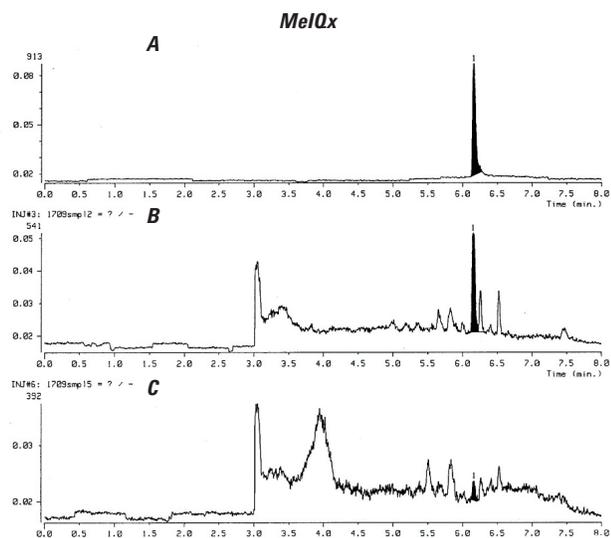
Conditions

Technique : GC
Column : Agilent CP-Sil 8 CB Low-Bleed/MS, 0.25 mm x 30 m fused silica (df = 0.25 µm) (Part no. CP5860)
Temperature : 200 °C (0.5 min) → 300 °C, 20 °C/min, 10 min, 300 °C
Carrier Gas : He, 20 psi, 145 kPa
Injector : Splitless, T = 250 °C
Detector : MS, SIM mode; Ionization: EI-Positive
Sample Size : 1.0 µL
Derivatization : acylation with heptafluorobutyric acid anhydride
Solvent Sample : isooctane
Concentration : 100 ng/mL

Courtesy : Edwin Moonen, University Maastricht

Peak identification

- A. standard MeIQx and PhIP
- B. spiked urine sample
- C. urine sample



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This information is subject to change without notice.

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