



Analysis of Bendiocarb and Metabolite by HPLC

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Environmental

Abstract

The bendiocarb insecticide can be extracted from soil either with Soxhlet equipment or by ultrasonic treatment in solution and from water by either a liquid–solid or a liquid–liquid technique.

Separation

Figure 1 shows the separation on a 2.1 mm internal diameter Hypersil ODS column. A constant oven temperature of 40 °C is important here.

- UV-visible detection
- Diode-array detection—for simultaneous multiple wave-lengths and peak identity confirmation by spectra.

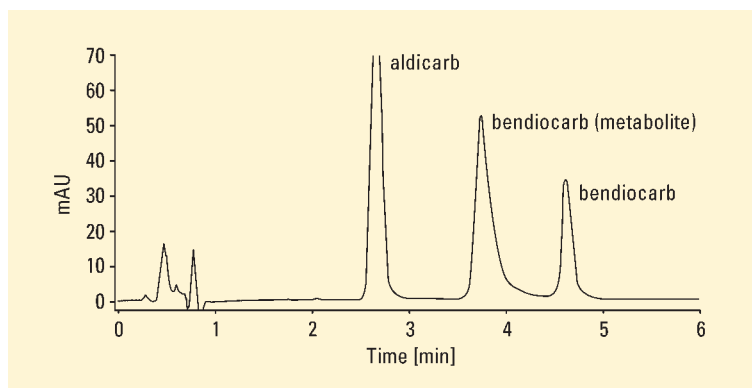


Figure 1
Separation of a 20 µl injection containing aldicarb, bendiocarb and metabolite monitored at 212 nm

Conditions

Column

100 x 2.1-mm Hypersil ODS C18, 5 µm

Mobile phase

Water–acetonitrile
(65:35 isocratic mixture)

Flow rate

0.36 ml/min

Temperature

40 °C

Detection

212 nm (16 nm bandwidth)
reference 450 nm (100 nm bandwidth)

Diode array detector performance

Detection limit 4 µg/l
(without sample enrichment)



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Sample preparation

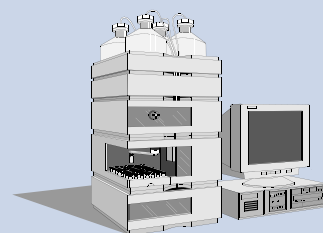
Narrow-bore technology for
lowest solvent consumption and highest sensitivity.

Equipment

Agilent 1100 Series

- binary pump
- autosampler
- thermostatted column compartment
- diode array detector

Agilent ChemStation +
software



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