



SPE Application Note for Clean-up of Pesticide extracts from Vegetables

This method was developed for the clean-up of a non-polar solvent extract of vegetable material. The methodology is applicable to a wide range of organochlorine and organophosphorus pesticides, and a number of vegetable types.

EXTRACTION PROCEDURE

ISOLUTE® SPE Column: SAX/PSA 1 g/6 mL (Part # 924-0100-C)

- Pre-treatment:**
1. Homogenize sample (20 g) with acetonitrile (100 mL) for 5 minutes. Filter the homogenate.
 2. Concentrate the acetonitrile to 25 mL. Add 50 mL of NaCl saturated water to the concentrated solution.
 3. Extract the aqueous mixture with dichloromethane (2 x 50 mL). Dry the DCM layer with anhydrous sodium sulfate (available in the form of a drying column, Part # 802-0250-M). Evaporate to dryness, and reconstitute with acetone:hexane (5:95, v/v, 2 mL).

Solvation: Condition the column with acetone:hexane (5:95, v/v, 10 mL).

Equilibration: N/A

Sample application: Apply the sample (2 mL) to the column at a flow rate of 1-2 mL/min.

Interference elution: N/A

Analyte elution: Elute analytes with acetone:hexane (5:95, v/v, 10 mL). Evaporate, and reconstitute with acetone:hexane (5:95, v/v, 4 mL).

Structure Various.

Structural considerations The analytes are relatively non-polar, and will not be strongly retained by polar/anion exchange sorbents.

Matrix considerations The matrices vary in characteristics, but contain various relatively polar interference components, such as pigments and fats. These will be more strongly retained on the SPE column than the analytes.

IST 1027 A

Last Revised: 16-Feb-06

Page 1 of 2



Analytical method GC, GC-MS

Reagents

General comments 1. For particularly fatty matrices, a cleaner extract may be achieved if the following step is included in the sample pre-treatment, immediately after filtration of the acetonitrile extract (i.e. after step 1):

Add 75 mL hexane (saturated with acetonitrile) to the filtrate. Shake well for 1 minute. Remove and discard the hexane layer.

ISOLUTE column part numbers represent the product configuration of choice for use with a vacuum sample processing station. For 96-well and alternative column configurations compatible with any SPE automation system, please contact Biotage.

© 2006 Argonaut Technologies, now Biotage company. All rights reserved. ISOLUTE is a registered trademark of Argonaut Technologies, now a Biotage company.

United States and Canada

T: + 1 434 9792319
Toll-Free: +1 800 446 4752
ordermailbox@biotage.com

Sweden

Biotage
T: + 46 18 56 59 00
order@eu.biotage.com

United Kingdom, EIRE

Biotage
T: + 44 1443 811811
eurosales@eu.biotage.com

Japan

Biotage
T: + 81 422 281233
order@biotage.co.jp

