# MAIA SALTS

Salts for matrix extraction in the use of MAIA Pesticide MultiTest.

## TYPICAL FORMULA (g/ 100 g of powder)

| | |
|---|---|
| Magnesium Sulphate Anhydrous | 80.0 |
| Sodium Acetate Anhydrous | 20.0 |

## DESCRIPTION

**MAIA SALTS** are salts for matrix extraction in the use of MAIA Pesticide MultiTest.

## PRINCIPLE

The method of Acetylcholinesterase – Microplate Acetylcholinesterase Inhibition Assay (MAIA) – for the detection of organophosphate, organochloride and carbamate pesticides residues in hydro-acetonitrilic extracts of solid/liquid food matrices is based on testing in microtitre plates of Acetylcholinesterase (AChE) activity inhibition by pesticide molecules. The AChE is preincubated with the desiccated extract to accentuate the pesticide's inhibition effect on AChE, if present in the food matrix in examination.

## PREPARATION

| **Preparation of liquid matrix Extract (Δt ~20')** | **Preparation of the solid matrix Extract (Δt ~25')** |
|---|---|
| • Introduce 4 mL of liquid sample in a test tube.<br>• Add 4 mL of acetonitrile.<br>• Put the cup to the tube and shake strongly for 1' roughly (by hand or Vortex).<br>• Remove the cup and add 2 g of salts.<br>• Shake strongly for 1' roughly.<br>• Centrifuge at 3000 rpm per 10'. The postcentrifugation supernatant is the Extract. | • Mince by electric mixer an aliquot of 50 g, statistically representative of the animal or vegetal, fresh or frozen matrix.<br>• Introduce 4 g of minced foodstuff, 1 mL of ultrapure water and 4 mL of acetonitrile into a 10 mL tube.<br>• Homogenize by dispersing homogenizer for 30" roughly.<br>• Add 2 g of salts and put the cup to the tube.<br>• Shake strongly for 1' roughly.<br>• Centrifuge at 3000 rpm per 10'. The postcentrifugation supernatant is the Extract. |

## TECHNIQUE

Dispense 100 µL of each Extract into Samples wells. Desiccate the Extracts in wells under a direct air flow, at room temperature. The desiccation time varies depending on laboratory temperature.

## STORAGE

10-30°C away from light, until the expiry date on the label or until signs of deterioration or contamination are evident.

## WARNING and PRECAUTIONS

The product is not classified as hazardous by current legislation and does not contain harmful substances in concentrations of ≥1%. The product must be used only by properly trained operators.

## DISPOSAL of WASTE

Disposal of waste must be carried out according to national and local regulations in force.

## REFERENCES

1. Anastassiades, M., S. J. Lehotay, D. Stajnbaher and F. J. Schenck. (2003). Fast and easy multiresidue method employing acetonitrile extraction/partitioning and dispersive solid-phase extraction for the determination of pesticide residues in produce. Journal of AOAC International 86(2), 412-31.
2. Ellman, G.L., K.D. Courtney, V. Andres, and R.M. Featherstone. (1961). A new and rapid colorimetric determination of acetylcholinesterase activity. Biochem. Pharmacol. 7, 88-95.

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# PRODUCT SPECIFICATIONS

## NAME
**MAIA SALTS**

## PRESENTATION
Dehydrated powder

## STORAGE
10-30 °C

## PACKAGE

| Code | Content | Packaging |
|---|---|---|
| 640001 | 100 g | 100 g of powder in plastic bottle |

## USE
**MAIA SALTS** are salts for matrix extraction in the use of MAIA Pesticide MultiTest.

## TECHNIQUE
Refer to technical sheet of the product.

## APPEARANCE OF THE POWDER
Appearance: free-flowing, homogeneous.
Colour: light beige

## SHELFLIFE
4 years

## QUALITY CONTROL
1. Control of general characteristics, label and print
2. Visual inspection of the appearance of the powder

## TABLE OF SYMBOLS

| | | | |
|---|---|---|---|
| LOT Batch code | Caution, consult accompanying documents | Manufacturer | Contains sufficient for <n> tests |
| REF Catalogue number | Temperature limitation | Use by | |

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