

## Pesticides in Food for Example Tomatoes

Andrea Köhler  
FRITSCH GmbH • Milling and Sizing  
Industriestrasse 8 • 55743 Idar-Oberstein • Germany  
Phone: +49 67 84 70 146 • Fax: +49 67 84 70 11  
E-Mail: koehler@fritsch.de • Internet: http://www.fritsch.de



Pesticides in the broader sense are considered all crop protection products and all other pesticides. More understandable for the "average Joe" are maybe the terms with the following examples: to combat blight on grape vines a crop protection product is used, and to combat worms in apples, pears or also the cankers in cabbage, a pesticide is used.

Each analysis requires the provision of a representative sample from the entire sample amount. Therefore, as a rule larger amounts of the product are usually available and it has to be ensured that through comminution and sample dividing, that a representative sample is added to the analysis instrument.

Tomato plants are treated with various pesticides. Hereby the spray chemicals end up on directly on the fruit, as well as directly in the soil and therefore indirectly via the transport of nutrients into the fruit. The consumer though desires unpolluted food. The production of food in the demanded quality is without the use of pesticides impossible. Consequently the necessity arises to inspect



food in regards to possible residues. Often the sought after substances are temperature sensitive. This plays a major part during the preparation of the sample.

Preparing tomatoes for analytical purposes is possible with the Mortar Mill PULVERISETTE 2, if the tomatoes are chopped into small chunks and embrittled with liquid nitrogen.

For this application, the FRITSCH (Germany) offers as accessories for the Mortar-Mill, a grinding bowl completely made of stainless steel. This bowl can be cooled down with liquid nitrogen and during the comminution liquid nitrogen may also be added. Therefore an absolutely cryogenic comminution in liquid nitrogen is possible.



After a few minutes a fine homogenous powder is obtained



With the in this manner prepared sample a small amount can be weighed in for analysis.

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VELP Scientifica srl  
via Stazione 16  
20040 Usmate (MI) Italy  
inse@velp.it  
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## New Detection Solutions for Phthalate Toys and Children's Products



PerkinElmer (USA) announce it has developed new phthalate detection solutions in response to growing concern over hazardous content of consumer products. The Company's GC/MS systems help to ensure that consumer products comply with the current European Union (EU) regulations for plasticizer content in toys and other children's products.

A recent study by the Danish Environmental Protection Agency regarding the exposure of two-year olds to chemical substances in consumer products has drawn attention to the risk of cumulative exposure of children to plasticizers, such as phthalates. Plasticizers are added to plastics, primarily vinyl, to soften and increase their flexibility. Many children's products, including plates, cups, mattress liners and diapers, are made of durable, low cost plastic materials. However, the study highlights the need to extend the current safety testing regulations beyond just children's products, to include a broader range of consumer products that use plasticizers, including clothes, jewelry and shoes.

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## New User Friendly GC/MS Interface

Joint Analytical Systems GmbH (Germany), has introduced - a user-friendly GC/MS interface which enables a 100% tool-free column exchange without MS venting. A narrow, special deactivated transfer tube is used as a connection between the analytical column and the MS source.

Swap'n Go is an easy-to-use, self-installable robust device, which enables the operator to exchange capillary columns fast and simple - completely tool-free and without MS venting. Unscheduled disruption in analytical work due to column exchange is avoided.

The analytical column (200, 250 and 320  $\mu$ m ID) is fixed only hand-tight to the Swap'n Go adapter by a special designed JAS-Tight nut sealed with a JAS-Tight ferrule. The column is also connected only hand-tight to the S/SL injector by means of a special JAS injector adapter. Instrument-specific systems are available for Agilent and Thermo instruments.



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