

Food Testing

FAPAS® Food Testing Program*

Laboratories testing food quality and safety are encouraged to routinely perform proficiency tests. Proficiency testing is an external check of quality. It provides an independent and unbiased assessment of the performance of all aspects of the laboratory, both human and hardware. Each participating laboratory is encouraged to use its normal analytical method, thereby simulating the testing of a routine laboratory sample as closely as possible. While the outcome of the analysis may depend on the choice of method, it also could be affected by the performance of the laboratory equipment or the competence of the analyst. Using proficiency testing, those laboratories performing well can ensure high standards are maintained and those performing unsatisfactorily can implement corrective action rapidly. In an environment in which analytical laboratories compete intensively for work, proficiency testing provides the means by which external customers can compare competence in carrying out specific tests. Together with laboratory accreditation and the use of validated methods, proficiency tests are an important requirement of the EU Additional Measures Directive 93/99/EEC applying to laboratories entrusted with the official control of food.

FAPAS® Series 5 OC Pesticide Mix 1 (19 components)

Equal concentration of all compounds. Suitable for GC/MS analysis.

aldrin	dieldrin
α-BHC	α-endosulfan (I)
β-BHC	β-endosulfan (II)
γ-BHC (lindane)	endosulfan sulfate
α-chlordane (cis)	endrin
γ-chlordane (trans)	heptachlor
4,4'-DDD	heptachlor epoxide (isomer B)
4,4'-DDE	hexachlorobenzene
2,4'-DDT	oxychlordane
4,4'-DDT	

100µg/mL each in acetone, 1mL/ampul
cat. # 32412 (ea.)

FAPAS® Series 5 OC Pesticide Mix 2 (19 components)

Varied concentrations. Suitable for GC/ECD analysis.

aldrin	10µg/mL	dieldrin	20
α-BHC	10	α-endosulfan (I)	10
β-BHC	10	β-endosulfan (II)	20
γ-BHC (lindane)	10	endosulfan sulfate	20
α-chlordane (cis)	10	endrin	20
γ-chlordane (trans)	10	heptachlor	10
4,4'-DDD	20	heptachlor epoxide (isomer B)	10
4,4'-DDE	20	hexachlorobenzene	10
2,4'-DDT	20	oxychlordane	10
4,4'-DDT	20		

In acetone, 1mL/ampul
cat. # 32414 (ea.)

FAPAS® Series 9 OP Pesticide Mix 1 (10 components)

Equal concentration of all compounds. Suitable for GC/FPD, GC/NPD, & GC/MS analysis.

chlorpyrifos	fenitrothion
chlorpyrifos-methyl	malathion
diazinon	methacriphos
dichlorvos	phosphamidon
etrimphos	pirimiphos-methyl

100µg/mL each in acetone, 1mL/ampul
cat. # 32413 (ea.)

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ASTM Method D6042-96 (Plastic Container Testing)

American Society for Testing and Materials (ASTM International) Method D6042-96—*Test Method for Determination of Phenolic Antioxidants and Erucamide Slip Additives in Polypropylene Homopolymer Formulations Using Liquid Chromatography*—is a “consensus” or “referee” method used among plastic manufacturers and the pharmaceutical companies that purchase plastic containers. Plastic container manufacturers use this test to ensure the quality of their product to their pharmaceutical customers. Pharmaceutical companies also specify this test and provide their own lists of target compounds and concentration limits in purchase agreements.

This test calls for isopropanol extraction, HPLC separation, and UV detection. Restek offers a variety of reversed phase HPLC columns suitable for these separations. Restek also designed an analytical reference material to validate this method. This mixture contains the common antioxidants and slips listed in ASTM D6042-96, along with BHT.

ASTM D6042-96 Calibration Mix (7 components)

BHT	Irganox 3114
erucamide slip	Irganox 1010
vitamin E	Irganox 1076
Irgafos 168	

50µg/mL each in isopropanol, 1mL/ampul
cat. # 31628 (ea.)

No data pack available.

ASTM D6042-96 Internal Standard Mix

Tinuvin P

51.8µg/mL in isopropanol, 1mL/ampul
cat. # 31629 (ea.)

No data pack available.

Other Additives Available From Restek on a Custom Basis

Similar methods for extractables in plastic pharmaceutical containers are cited in the United States Pharmacopeia (USP), British Pharmacopoeia (BP), European Pharmacopoeia (EP), and Japanese Pharmacopoeia (JP). Customers may also have formulation-specific or product-specific test mixtures. Please contact us for a custom mixture. Our current inventory of raw materials includes these popular antioxidants. We have many more not listed and can obtain most compounds you may need.

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|---------------|----------------|----------------|---------------|
| • Ethanox 323 | • Irganox L64 | • Ultranox 626 | • Vanlube PCX |
| • Ethanox 330 | • Irganox L109 | • Vanlube 81 | • Vanlube SL |
| • Ethanox 702 | • Irganox L134 | • Vanlube 848 | • Vanlube SS |
| • Ethanox 703 | • Irganox L135 | • Vanlube 7723 | |
| • Irganox L06 | • Irganox 1035 | • Vanlube AZ | |
| • Irganox L57 | • Santanox R | • Vanlube NA | |

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*Use of Restek calibration mixtures by laboratories participating in the FAPAS program is voluntary and no endorsement of any Restek product has been made by the Central Science Laboratory. To obtain further information regarding the FAPAS program, or to participate, contact fpas@csl.gov.uk.