



HERE'S HOW SIMPLE VICAM TESTS ARE TO USE:

EXTRACT SAMPLE

- Grind and weigh sample
- Add salt and methanol/
water mixture
- Filter

DILUTE AND FILTER

- Dilute extract
- Filter

ABSORB AND ELUTE

- Pass filtrate over selected
affinity column
- Wash column
- Elute toxin and collect in a cuvette

MEASURE

- Add developers and place cuvette
into a calibrated fluorometer, or
- Dilute and inject eluate into
HPLC or UPLC[®]
- Determine toxin concentration

Mycotoxin Analysis in Dried Fruit

Healthful, nutritious, and densely sweet, dried fruit has come a long way since it began as a vital economic and dietary staple for ancient civilizations. Offering natural flavors, high fiber, vitamins, minerals, and phytonutrients, dried fruits are still sought after for their nutritive value and flavor contributions to a myriad of modern culinary delights.

Mold growth at any stage of cultivation, production, or storage increases the risk of mycotoxin contamination in most dried fruits including raisins, dried figs, sultanas, prunes, persimmons, mangoes, and more. Aflatoxin and ochratoxin A are the mycotoxins most frequently isolated from dried fruits. Aflatoxin is a Group I carcinogen according to the International Agency on Research on Cancer (IARC). Ochratoxin A causes severe kidney damage and is a suspect carcinogen.

The European Union (EU), Brazil, United States (US), and several Asian countries regulate maximum allowable levels for aflatoxins and ochratoxin A. The EU regulates aflatoxin B1 at 2 parts per billion (ppb) and total aflatoxins (B1, B2, G1, & G2) at 4 ppb in ready-to-eat dried fruits and 10 ppb for those intended for further processing, while the ochratoxin A maximum is set at 10 ppb. The United States Food and Drug Administration (US FDA) allows 20 ppb maximum in all food products intended for human consumption.

VICAM offers a complete family of rapid, quantitative solutions which empower you to detect single or multiple mycotoxins in a single dried fruit sample.

- **Safeguard your dried fruit products**
- **Meet regulatory requirements**
- **Protect your brand**

VICAM NARROW BORE COLUMNS



BENEFITS		AflaTest	OchraTest
Durable	Long shelf life; requires no refrigeration	X	X
Versatile	Can be used with a variety of samples	X	X
Convenient	For use with fluorometric or HPLC	X	X
Easy	No special skills required, test can be performed virtually anywhere	X	X
Quick	Less than 10 minutes to isolate toxin	X	X
Safe	Requires less toxic materials than other methods	X	X

VICAM WIDE BORE COLUMNS



BENEFITS		AflaTest WB	OchraTest WB
Durable	Long shelf life; requires no refrigeration	X	X
Versatile	Can be used with a variety of samples	X	X
Exclusive	Specifically for HPLC, UPLC or LC/MS/MS use	X	X
Quick	10 minutes to isolate toxin	X	X
Wide Range	Detects levels as high as 300–500 ppb	X	X
Fast Flow	Passes more volume over the column	X	X

VICAM MULTI-ANALYTE COLUMNS



BENEFITS		AflaOchra HPLC
Convenient	Only one sample and one procedure required to detect multiple toxins	X
Durable	Long shelf life	X
Economical	One test provides results for multiple toxins, saving time and materials	X
Wide Range	Detects levels as high as 100 ppb for OTA and aflatoxin	X
Fast Flow	Passes more volume over the column	X
Exclusive	Specifically for HPLC use	X

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