



## PHOTOCHEMICAL REACTOR

# UVE

### PHOTOCHEMICAL REACTOR

#### Detection Enhancement for Aflatoxins, Phenylurea Pesticides, Barbiturates and Other Compounds

Photochemical derivatization is a simple, inexpensive and flexible technique that improves sensitivity and selectivity of detection for a broad range of analytes. Among the applications for the photochemical reactor are analysis of Aflatoxins in foods, Phenylurea Pesticides in water and Barbiturates in biological samples. Photochemical derivatization also allows identification of closely related compounds such as polyphenols.

Pickering Laboratories Multi residue Mycotoxins method for DON, Aflatoxins, Fumonisin, Ochratoxin A and Zearalenone employs photochemical derivatization for Aflatoxins allowing detection at sub-ppb levels.

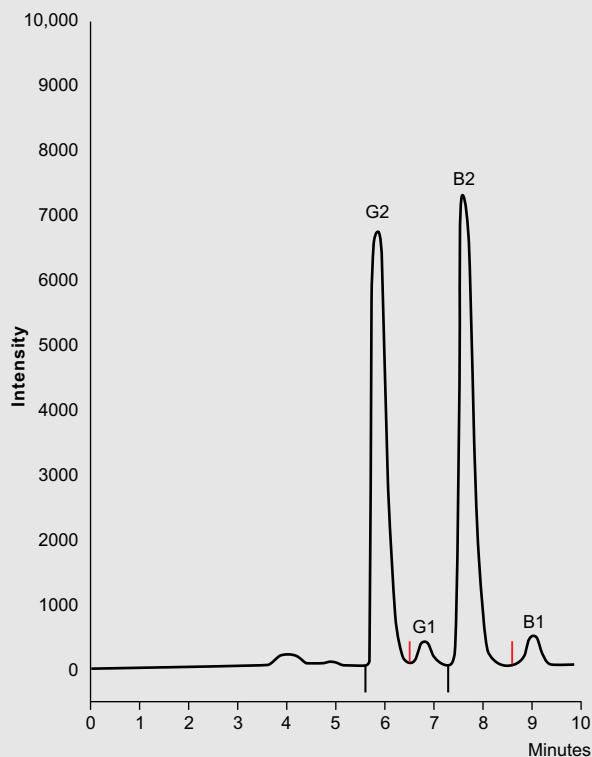
The photochemical reactor has a 254 nm lamp and a knitted reactor coil.

### FEATURE HIGHLIGHTS

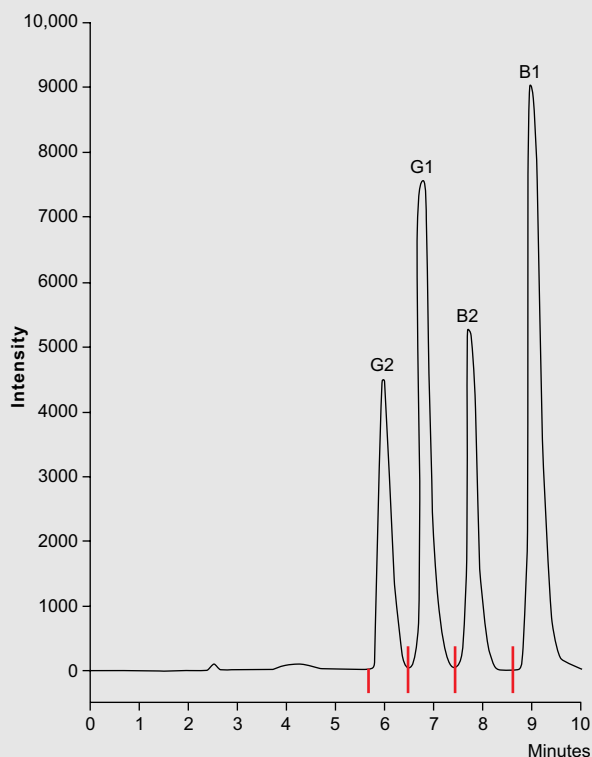
- ➔ 254 NM UV LOW PRESSURE LAMP WITH COOLED REFLECTOR TUBE
- ➔ LONG TERM STABILITY OF LAMP AND COIL
- ➔ HIGH LIGHT TRANSMISSION
- ➔ ROBUST STEEL HOUSING TO MEET LABORATORY REQUIREMENTS
- ➔ SPECIAL DESIGNED FLUOROCARBON COIL
- ➔ PHOTOCHEMICAL POST-COLUMN DERIVATIZATION OF AFLATOXINS IN A SPECIAL REACTOR LOOP WITH UV LIGHT
- ➔ RESULT: CLEAR PEAKS
- ➔ COMPARABLE TO ELECTROCHEMICAL DERIVATIZATION WITH COBRA CELL (*DG Joint Research Center of the European Commission in the Institute for Health and Consumer Protection*)
- ➔ AOAC ACCEPTED METHODOLOGY
- ➔ STANDARD REACTOR VOLUME IS 1.0 ML

## UV DERIVATIZATION RESULTS IN CLEAR PEAKS FOR ALL AFLATOXINS

Note the short run time B1 elutes at 9.5 Min

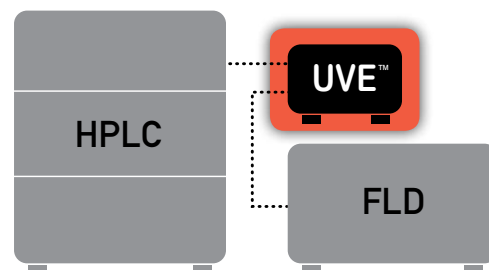


*Without UVE: Low response for G1 and B1*

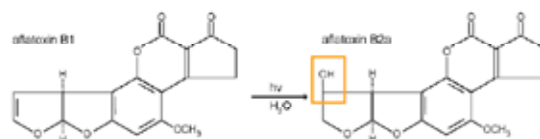


*With UVE: High response and no band spreading*

Pickering Laboratories, Inc.  
1280 Space Park Way / Mountain View, CA 94043  
sales@pickeringlabs.com / support@pickeringlabs.com  
800-654-3330 / 650-694-6700 / Fax: 650-968-0749

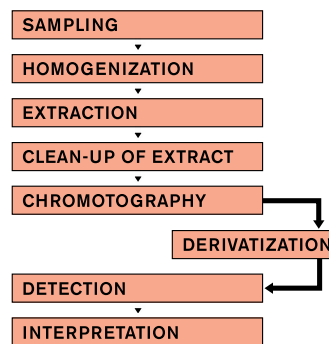


*Easy Handling: Simply put the UVE between your HPLC device and detector, switch it on - ready to use!*



*What actually happens?*

*Aflatoxins B1 and G1 are transformed to stable fluorescent derivatives resulting in clear peaks*



## SPECIFICATIONS

CE CERTIFIED	Yes
UV LAMP	254 nm
REACTOR COIL	Special
DIMENSIONS	14.5 x 8.5 x 27 cm
POWER INPUT	50 W
WEIGHT	3 kg

ORDERING INFORMATION	
PART NO.	DESCRIPTION
1100-3347	Photochemical Reactor 1.0 mL, 120 V
1100-3348	Photochemical Reactor 1.0 mL, 240 V
1552-0024	Lamp, 254 UV, Photochemical