



# Agilent Technologies

## Agilent Bond Elut Plexa

A collection of citations to advance your research

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# Environmental

[Determination of 61 organic pollutants in drinking water by solid phase extraction followed by liquid and gas chromatography coupled to tandem mass spectrometry: an analytical strategy for a routine laboratory](#)

*International Journal of Environmental Analytical Chemistry*, **93**, 707-726 (2013)  
Georgina Fortuny *et al.*

## Tags

Bond Elut Plexa, Bond Elut PPL, Bond Elut ENV, Bond Elut C18, VF-5ms, environmental, water analysis

## Abstract

A method for determination of 61 organic pollutants (polycyclic aromatic hydrocarbons and organochlorine, organophosphorus and organonitrogen pesticides) is proposed. It is based on solid phase extraction (SPE) and subsequent analysis of the extract by liquid and gas chromatography coupled to tandem mass spectrometry. Method validation yielded to the following values: limits of quantification, from 0.005 to 0.020  $\mu\text{g L}^{-1}$ ; trueness, 95% to 113% and reproducibility (as percent relative standard deviation), 2% to 15%. Additionally, the method performed well in various proficiency tests. ©2012 Taylor & Francis.

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## Food testing and agriculture

### [HT-2 Toxin 4-Glucuronide as New T-2 Toxin Metabolite: Enzymatic Synthesis, Analysis, and Species Specific Formation of T-2 and HT-2 Toxin Glucuronides by Rat, Mouse, Pig, and Human Liver Microsomes](#)

*Journal of Agricultural and Food Chemistry*, **60**,  
10170-10178 (2012)  
Tanja Welsch, Hans-Ulrich Humpf

**Tags**  
Bond Elut Plexa, ZORBAX Eclipse XDB-C18,  
food testing and agriculture, mycotoxins and  
biotoxins

#### **Abstract**

Glucuronides of the mycotoxin T-2 toxin and its phase I metabolite HT-2 toxin are important phase II metabolites under *in vivo* and *in vitro* conditions. Since standard substances are essential for the direct quantitation of these glucuronides, a method for the enzymatic synthesis of T-2 and HT-2 toxin glucuronides employing liver microsomes was optimized. Structure elucidation by nuclear magnetic resonance spectroscopy (NMR) and mass spectrometry revealed that besides T-2 toxin glucuronide and HT-2 toxin 3-glucuronide also the newly identified isomer HT-2 toxin 4-glucuronide was formed. Glucuronidation of T-2 and HT-2 toxin in liver microsomes of rat, mouse, pig, and human was compared and metabolites were analyzed directly by liquid chromatography coupled with tandem mass spectrometry (LC-MS/MS). A distinct, species specific pattern of glucuronidation of T-2 and HT-2 toxin was observed with interesting interindividual differences. Until recently, glucuronides have frequently been analyzed indirectly by quantitation of the aglycone after enzymatic cleavage of the glucuronides by  $\beta$ -glucuronidase. Therefore, the hydrolysis efficiencies of T-2 and HT-2 toxin glucuronides using  $\beta$ -glucuronidases from *Helix pomatia*, bovine liver, and *Escherichia coli* were compared. Reprinted with permission from the *Journal of Agricultural and Food Chemistry* © 2012 American Chemical Society.

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### [Ultrasound-assisted dispersive extraction for the high pressure liquid chromatographic determination of tetracyclines residues in milk with diode array detection](#)

*Food Chemistry*, **150**, 328-334 (2014)  
Eftichia Karageorgou *et al.*

**Tags**  
Bond Elut QuEChERS, Bond Elut Plexa, food  
testing and agriculture, veterinary drugs

#### **Abstract**

Using a MSPD approach, Agilent Bond Elut Plexa and d-SPE with Bond Elut QuEChERS gave best recoveries in an investigation of tetracyclines residues in milk. Published by Elsevier B. V.

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[Misleading measures in Vitamin D analysis: A novel LC-MS/MS assay to account for epimers and isobars](#)

*Nutrition Journal*, **10** (2011)  
Iltaf Shah *et al.*

**Tags**

Bond Elut SI, Bond Elut Plexa, Bond Elut LMS, Bond Elut PPL, SampliQ OPT, SampliQ DVB, ZORBAX RRHD SB-C18, Ultron ES-OVM, food testing and agriculture, dietary supplements, natural compounds and additives

**Abstract**

Recently, the accuracies of many commercially available immunoassays for Vitamin D have been questioned. Liquid chromatography tandem mass spectrometry (LC- MS/MS) has been shown to facilitate accurate separation and quantification of the major circulating metabolite 25-hydroxyvitamin-D3 (25OHD3) and 25-hydroxyvitamin-D2 (25OHD2) collectively termed as 25OHD. However, among other interferents, this method may be compromised by overlapping peaks and identical masses of epimers and isobars, resulting in inaccuracies in circulating 25OHD measurements. The aim of this study was to develop a novel LC-MS/MS method that can accurately identify and quantitate 25OHD3 and 25OHD2 through chromatographic separation of 25OHD from its epimers and isobars. © The Authors.

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[Multiresidue LC–MS/MS analysis of cephalosporins and quinolones in milk following ultrasound-assisted matrix solid-phase dispersive extraction combined with the quick, easy, cheap, effective, rugged, and safe methodology](#)

*Journal of Separation Science*, **36**, 2020-2027  
(2013)  
Eftichia Karageorgou *et al.*

**Tags**

Bond Elut QuEChERS, Bond Elut Plexa, food testing and agriculture, veterinary drugs

**Abstract**

Agilent Bond Elut QuEChERS and Bond Elut Plexa delivered effective sample extraction in an examination of antibiotics in milk. Published by Elsevier B. V.

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[Ultrasound-assisted dispersive extraction for the high pressure liquid chromatographic determination of tetracyclines residues in milk with diode array detection](#)

*Food Chemistry*, **150**, 328-334 (2014)  
Eftichia Karageorgou et al.

**Tags**  
Bond Elut QuEChERS, Bond Elut Plexa, food testing and agriculture, veterinary drugs

**Abstract**

The authors used a matrix solid phase dispersion approach and discovered that Agilent Bond Elut Plexa and d-SPE gave the best recoveries of tetracyclines from milk. Published by Elsevier B. V.

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The Measure of Confidence

