



# Agilent Technologies

## **Agilent Bond Elut Nexus**

A collection of citations to advance your research

### **Table of contents**

[Environmental](#)

[Food testing and agriculture](#)

[Forensics and toxicology](#)

## Environmental

[Analysis of nitroaromatic compounds in complex samples using solid-phase microextraction and isotope dilution quantification gas chromatography–electron-capture negative ionisation mass spectrometry](#)

*Journal of Chromatography A*, **1164**, 65-73  
(2007)  
S. Jönsson, L. Gustavsson, B. van Bavel

**Tags**  
Bond Elut ENV, Bond Elut NEXUS, 6890 GC,  
5973 MSD, environmental, water analysis

### Abstract

Agilent Bond Elut was among best performing SPE cartridges in an analysis of nitroaromatic compounds. Published by Elsevier B.V.

---

[Development of a solid phase extraction method for agricultural pesticides in large-volume water samples](#)

*Talanta*, **81**, 1380-1386 (2010)  
Georges-Marie Momplaisir *et al.*

**Tags**  
Bond Elut PPL, Bond Elut C18, Bond Elut  
NEXUS, 6890A GC, 5973N MSD, environmental,  
water analysis

### Abstract

Agilent Bond Elut NEXUS in bulk, i.e. 8 g for a 100 L water sample, was used to extract pesticides from large volumes of water. Agilent Bond Elut PPL and Bond Elut C18 were also used. Published by Elsevier B. V.

---

## Food testing and agriculture

### [Application of ultrasound-assisted matrix solid-phase dispersion extraction to the HPLC confirmatory determination of cephalosporin residues](#)

*Journal of Separation Science*, **33**, 2862-2871 (2010)  
Eftichia G. Karageorgou, Victoria F. Samanidou

**Tags**  
Bond Elut NEXUS, food testing and agriculture, veterinary drugs

#### **Abstract**

Agilent Bond Elut NEXUS outperformed a non-Agilent product for sample extraction in an examination of antibiotics in milk. Published by Elsevier B. V.

---

### [Development and Validation of an HPLC Confirmatory Method for the Determination of Seven Tetracycline Antibiotics Residues in Bovine and Porcine Muscle Tissues According to 2002/657/EC](#)

*Journal of Liquid Chromatography & Related Technologies*, **31**, 3032-3054 (2008)  
Konstantina I. Nikolaidou, Victoria F. Samanidou, Ioannis N. Papadoyannis

**Tags**  
Bond Elut NEXUS, food testing and agriculture, veterinary drugs

#### **Abstract**

An HPLC method with diode array detection, at 355 nm, was developed and validated for the determination of seven tetracyclines (TCs) in bovine and porcine muscle tissues. Examined tetracyclines include: minocycline (MNC), tetracycline (TC), oxytetracycline (OTC), methacycline (MTC), demeclocycline (DMC), chlortetracycline (CTC), and doxycycline (DC). These were extracted from tissues using oxalate buffer (pH 4). Samples were purified by SPE on Nexus cartridges, using MeOH/ACN/0.05 M C<sub>2</sub>H<sub>2</sub>O<sub>4</sub> (30:30:40 v/v/v) as elution solvent. The separation was achieved on a Kromasil C<sub>18</sub>, 5 µm, 250 × 4 mm, analytical column, operating at ambient temperature. The mobile phase, a mixture of A: 0.01 M oxalic acid and B: CH<sub>3</sub>CN, was delivered using a gradient program. The procedure was validated according to the Decision 2002/657/EC, by determining selectivity, stability, decision limit, detection capability, accuracy, and precision. Overall recoveries of TCs from bovine and porcine samples ranged from 89–114.1%. All RSD values were lower than 8.5%. The decision limits CC<sub>a</sub> in bovine tissues ranged from 103.2 to 111.1 µg/kg, while detection capability CC<sub>b</sub> from 105.2 to 114.9 µg/kg. Respective values in porcine tissues were 102.5–106.4 µg/kg for CC<sub>a</sub> and 105.3–108.7 µg/kg for CC<sub>b</sub>. © 2008 Taylor & Francis.

---

## [Identification of Anthocyanins in the Liver, Eye, and Brain of Blueberry-Fed Pigs](#)

*Journal of Agricultural and Food Chemistry*, **56**,  
705-712 (2008)  
Wilhelmina Kalt *et al.*

### **Tags**

Bond Elut NEXUS, ZORBAX Eclipse XDB-C18,  
ZORBAX SB-C18, 1100 Series, food testing and  
agriculture

### **Abstract**

Dietary intervention with anthocyanins may confer benefits in brain function, including vision. Research to date indicates that animals have only a limited capacity to absorb anthocyanins, compared to other types of flavonoids. Pigs, which are a suitable model for human digestive absorption, were used to examine the deposition of anthocyanins in tissues including the liver, eye, and brain tissue. Pigs were fed diets supplemented with 0, 1, 2, or 4% w/w blueberries (*Vaccinium corymbosum* L. 'Jersey') for 4 weeks. Prior to euthanasia, pigs were fasted for 18–21 h. Although no anthocyanins were detected in the plasma or urine of the fasted animals, intact anthocyanins were detected in all tissues where they were sought. LC-MS/MS results are presented for the relative concentration of 11 intact anthocyanins in the liver, eye, cortex, and cerebellum. The results suggest that anthocyanins can accumulate in tissues, including tissues beyond the blood–brain barrier. Reprinted with permission from the Journal of Agricultural and Food Chemistry. ©2008 American Chemical Society.

---

## [Liquid chromatographic method development for anabolic androgenic steroids using a monolithic column: Application to animal feed samples](#)

*Analytica Chimica*, **611**, 103-112 (2008)  
R. Muñoz-Valencia *et al.*

### **Tags**

Bond Elut NEXUS, food testing and agriculture,  
veterinary drugs

### **Abstract**

The authors developed and validated an isocratic HPLC method to screen fluoxymesterone, boldenone, nortestosterone, metandrostenolone, norethindrone, methyltestosterone, and bolasterone, used as growth promoting agents, in finishing pig feeds. They used saponification prior to SPE to reduce extraction of oil in the sample. Agilent Bond Elut Nexus outperformed other sample prep methods. Published by Elsevier B. V.

---

# Forensics and toxicology

[Establishing a universal swabbing and clean-up protocol for the combined recovery of organic and inorganic explosive residues](#)

*Forensic Science International*, **223**, 136-147  
(2012)  
Nopporn Song-im, Sarah Benson, Chris Lennard

**Tags**  
Bond Elut ENV, Bond Elut NEXUS,  
ZORBAX Eclipse XDB-C18, 1100 Series,  
forensics and toxicology, criminalistics

## Abstract

Pre-conditioned Agilent Bond Elut NEXUS was chosen as the preferred SPE technology in the development of a cleanup protocol for explosives. A ZORBAX Eclipse XDB-C18 LC column was used for the final analysis. Published by Elsevier B.V.

---

[www.agilent.com/chem](http://www.agilent.com/chem)

Agilent shall not be liable for errors contained herein or for incidental or consequential damages in connection with the furnishing, performance, or use of this material. Information, descriptions, and specifications in this publication are subject to change without notice.

© Agilent Technologies, Inc., 2014

Printed in the UK  
29 October, 2014

5991-4508EN

The Measure of Confidence



**Agilent Technologies**