



Agilent Technologies

Agilent J&W DB-1701

A collection of citations to advance your research

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Energy and chemicals

[Stacked Injection with Low Thermal Mass Gas Chromatography for PPB Level Detection of Oxygenated Compounds in Hydrocarbons](#)

Journal of Chromatographic Science, **44**, 219-226 (2006)
Jim Luong *et al.*

Tags
VF-35ms, VF-1ms, VF-5ms, VF-17ms, DB-XLB, DB-1701, 6890A GC, energy and chemicals, petrochemicals

Abstract

A range of Agilent J&W GC columns were found applicable for the analysis of oxygenated compounds in hydrocarbons. Published by OUP.

[Development of heart-cutting multidimensional gas chromatography coupled to time of flight mass spectrometry for silicon speciation at trace levels in gasoline samples](#)

Journal of Chromatography A, **1264**, 80-86 (2012)
Fabien Chainet *et al.*

Tags
DB-5ms UI, DB-1701, 7890 GC, energy and chemicals, refining

Abstract

Hydrotreatment catalyst poisoning was evaluated using Agilent J&W GC columns fitted to an Agilent 7890 GC. Published by Elsevier B. V.

Environmental

[Study To Elucidate Formation Pathways of Selected Roast-Smelling Odorants upon Extrusion Cooking](#)

Journal of Agricultural and Food Chemistry, **61**,
10215–10219 (2013)
Tomas Davidek *et al.*

Tags

DB-5ms Ultra Inert, DB-1701, DB-WAX, 7890A
GC, environmental, air analysis

Abstract

The formation pathways of the N-containing roast-smelling compounds 2-acetyl-1-pyrroline, 2-acetyl-1(or 3),4,5,6-tetrahydropyridine, and their structural analogues 2-propionyl-1-pyrroline and 2-propionyl-1(or 3),4,5,6-tetrahydropyridine were studied upon extrusion cooking using the CAMOLA approach. The samples were produced under moderate extrusion conditions (135 °C, 20% moisture, 400 rpm) employing a rice-based model recipe enriched with flavor precursors ([U-13C6]-d-glucose, d-glucose, glycine, l-proline, and l-ornithine). The obtained data indicate that the formation of these compounds upon extrusion follows pathways similar to those reported for nonsheared model systems containing d-glucose and l-proline. 2-Acetyl-1-pyrroline is formed (i) by acylation of 1-pyrroline via C2 sugar fragments (major pathway) and (ii) via ring-opening of 1-pyrroline incorporating C3 sugar fragments (minor pathway), whereas 2-propionyl-1-pyrroline incorporates exclusively C3 sugar fragments. 2-Acetyl-1(or 3),4,5,6-tetrahydropyridine and the corresponding propionyl analogue incorporate C3 and C4 sugar fragments, respectively. In addition, it has been shown that the formation of 2-acetyl-1-pyrroline in low-moisture systems depends on the pH value of the reaction mixture. Reprinted with permission from the *Journal of Agricultural and Food Chemistry*. ©2013 American Chemical Society.

Food testing and agriculture

[Discrimination of roast and ground coffee aroma](#)

Flavour, **1**, (2012)
Ian Denis Fisk *et al.*

Tags
DB-1701, VF-1701ms, 6890 GC, 7890A GC, 5975C MS, food testing and agriculture, food processing and packaging

Abstract

Background: Four analytical approaches were used to evaluate the aroma profile at key stages in roast and ground coffee brew preparation (concentration within the roast and ground coffee and respective coffee brew; concentration in the headspace of the roast and ground coffee and respective brew). Each method was evaluated by the analysis of 15 diverse key aroma compounds that were predefined by odour port analysis. Results: Different methods offered complimentary results for the discrimination of products; the concentration in the coffee brew was found to be the least discriminatory and concentration in the headspace above the roast and ground coffee was shown to be most discriminatory. Conclusions: All approaches should be taken into consideration when classifying roast and ground coffee especially for alignment to sensory perception and consumer insight data as all offer markedly different discrimination abilities due to the variation in volatility, hydrophobicity, air-water partition coefficient and other physicochemical parameters of the key aroma compounds present. © The Authors.

[Rapid analysis of multi-pesticide residues in lotus seeds by a modified QuEChERS-based extraction and GC–ECD](#)

Chemosphere, **91**, 955-962 (2013)
Qing Miao *et al.*

Tags
DB-1701, 6890 GC, 7683 Autosampler, food testing and agriculture, pesticides

Abstract

Pesticide analyses were carried out on an Agilent 6890N gas chromatograph equipped with an ECD detector, an Agilent 7683 autosampler and an injector. All pesticides were separated through an Agilent J&W DB-1701 GC capillary column. Published by Elsevier B. V.

[Development and validation of a gas chromatography/mass spectrometry method for the simultaneous determination of melamine and cyromazine in animal feeds](#)

Journal of Animal and Veterinary Advances, **10**,
73-80 (2011)
Binru Shang *et al.*

Tags

SampliQ SCX, HP-INNOWax, DB-1701, DB-5ms,
6890 Plus GC, 7683 Autosampler, 5973N MSD,
food testing and agriculture, veterinary drugs

Abstract

A new method for simultaneous determination of melamine and cyromazine in animal feeds using Gas Chromatography-Mass Spectrometry (GC-MS) was developed and validated. Samples were extracted with trichloroacetic acid solution cleaned up by cation exchange solid-phase extraction cartridges and derivatized with N, O-bis (trimethylsilyl) trifluoroacetamide containing 1% trimethylchlorosilane followed by GC separation and MS detection. The limits of quantification were 0.10 mg kg⁻¹ for both melamine and cyromazine. Recoveries from feeds spiked at levels between 0.1 and 50 mg kg⁻¹ ranged from 84.2-99.5% with Relative Standard Deviation (RSD) <8% with the exception of a 10.2% RSD for 0.1 mg kg⁻¹ melamine. This validated method was successfully applied to commercial feed samples showing that it can be used as a routine tool for the surveillance and evaluation of the presence of melamine and cyromazine in animal feeds. ©Medwell Journals.

[A rapid multi-residue method for the determination of pesticide residues in choi sum, yardlong beans and aubergines](#)

Food Chemistry, **131**, 611-616 (2012)
Lian-Kuet Chai *et al.*

Tags

Ultra 1, DB-1701, HP-5, 6890 GC, food testing
and agriculture, pesticides

Abstract

In an investigation of pesticide residues in choi sum, yardlong beans and aubergines, an Agilent 6890 GC equipped with a Flame Photometric detector and an Agilent J&W HP-5 column was used for the determination of organophosphate pesticides. The same instrument but with ECD and an Agilent J&W Ultra 1 column was used for the analysis of organochlorine and pyrethroid pesticides. Published by Elsevier B. V.

Small molecule pharmaceuticals

Rapid simultaneous determination of organochlorine and pyrethroid pesticide residues in *Lycium barbarum* L. using gas chromatography with electron-capture detector

Analytical Methods, **4**, 1132-1141 (2012)
Xiaohui Huang *et al.*

Tags
DB-1701, HP-5, Bond Elut Florisil, 7890A GC,
small molecule pharmaceuticals, traditional
medicines

Abstract

A fast gas chromatographic method for simultaneous determination of 50 organochlorine and pyrethroid pesticides in herbal medicine used Agilent J&W GC columns fitted to an Agilent 7890A GC with ECD. Published by Elsevier B. V.

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The Measure of Confidence

