Agilent Technologies

Agilent CP-Chirasil Val

A collection of citations to advance your research

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Environmental

Enantiomeric separation of volatile organics by gas chromatography for the in situ analysis of extraterrestrial materials: Kinetics and thermodynamics investigation of various chiral stationary phases

Journal of Chromatography A, **1306**, 59-71 (2013)
C. Freissinet *et al.*

Tags
CP-Chirasil Dex CB, CP-Chirasil-Val, environmental, soils, sludges and sediments

Abstract
The authors assessed several chiral GC columns to select one for the Sample Analysis at Mars experiment on the Martian rover. The Agilent J&W CP-Chirasil Dex CB column was chosen as the only chiral column for this space mission, and for the next Martian mission, ExoMars. Published by Elsevier B. V.

Food testing and agriculture

Absolute configuration of anabasine form *Messor* and *Aphaenogaster* ants

Journal of Chemical Ecology, **27**, 945-952 (2001)
S. Leclerq *et al.*

Tags
CP-Chirasil Val, CP-Sil 5 CB, food testing and agriculture, mycotoxins and biotoxins

Abstract
A method was developed to analyze alkaloid anabasines from ants, using Agilent J&W CP-Chirasil Val and CP-Sil 5 CB GC columns. Published by Springer.

A new monoterpene glycoside from *Siparuna thecaphora*

Natural Products Research, **28,** 57-60 (2014)
Mariela Beatriz Vera Saltos *et al.*

Tags
CP-Chirasil Val, food testing and agriculture, dietary supplements, natural compounds and additives

Abstract
Phytochemical investigation of the extracts of the leaves of *Siparuna thecaphor*a (Poepp. et Endl.) A. DC. (Siparunaceae) allowed the isolation of one monoterpene glycoside, named trans-thujane-1a,7-diol 1-O-b-D-glucopyranoside (1) along with rutin, quercetin 3-O-b-D-glucopyranoside and 3,4-dihydroxybenzaldehyde. Their structural characterization was obtained on the basis of extensive spectroscopic analyses, including 1D and 2D NMR experiments and HR-ESI-MS. Published by Taylor and Francis.

Phenolic Compounds from the Roots of Jordanian Viper's Grass, *Scorzonera judaica*

Journal of Natural Products, **74,** 1421-1426 (2011)
Ammar Bader *et al.*

Tags
CP-Chirasil Val, food testing and agriculture, dietary supplements, natural compounds and additives

Abstract
Nine new phenolic compounds, 3S-hydrangenol 4′-O-α-l-rhamnopyranoysl-(1⟶3)-β-d-glucopyranoside (1), thunberginol F 7-O-β-d-glucopyranoside (2), 2-hydroxy-6-[2-(4-hydroxyphenyl)-2-oxo-ethyl]benzoic acid (3), 2-hydroxy-6-[2-(3,4-dihydroxyphenyl)-2-oxo-ethyl]benzoic acid (4), 2-hydroxy-6-[2-(3,4-dihydroxyphenyl-5-methoxy)-2-oxo-ethyl]benzoic acid (5), hydrangeic acid 4′-O-β-d-glucopyranoside (6), E-3-(3,4-dihydroxybenzylidene)-5-(3,4-dihydroxyphenyl)dihydrofuran-2-one (7), Z-3-(3,4-dihydroxybenzylidene)-5-(3,4-dihydroxyphenyl)-2(3H)-furanone (8), and 4-[β-d-glucopyranosyl)hydroxy]pinoresinol (9), and nine known compounds were isolated from the roots of *Scorzonera judaica*. Structures of 1–9 were elucidated by mass spectrometry, extensive 1D and 2D NMR spectroscopy, and CD spectroscopy. All compounds were evaluated for cytotoxic activity.

Antiproliferative oleanane saponins from *Meryta denhamii*

Journal of Natural Products, **71,** 1000-1004 (2008)
Giuseppina Cioffi *et al.*

Tags
CP-Chirasil Val, food testing and agriculture, dietary supplements, natural compounds and additives

Abstract
Eight new oleanane saponins (**1**–**8**) together with four know saponins (**9**–**12**) were isolated from the aerial parts of *Meryta denhamii*. Their structures were elucidated by 1D and 2D NMR experiments including 1D TOCSY, DQF-COSY, ROESY, HSQC, and HMBC spectroscopy, as well as ESIMS analysis. The antiproliferative activity of all compounds was evaluated using three murine and human cancer cell lines: J774.A1, HEK-293, and WEHI-164.

Benzophenone Glycosides from *Hypericum humifusum* ssp. *austral*

Journal of Natural Products, **76,** 979-982 (2013)
Zyed Rouis *et al.*

Tags
CP-Chirasil Val, food testing and agriculture, dietary supplements, natural compounds and additives

Abstract
Six new benzophenone glycosides, 2,3′,4,5′,6-pentahydroxybenzophenone 4-*O*-(6″-benzoyl)-β-d-glucopyranoside (1), 2,3′,4,5′,6-pentahydroxybenzophenone 4-*O*-β-d-glucopyranoside (2), 2,3′,4,5′,6-pentahydroxybenzophenone 2-*O*-(2″-benzoyl)-α-l-arabinopyranoside (3), 2,3′,4,5′,6-pentahydroxybenzophenone 2-*O*-α-l-arabinopyranoside (4), 2,3′,4,5′,6-pentahydroxybenzophenone 2-*O*-(4″-acetyl)-β-d-xylopyranoside (5), and 2,3′,4,5′,6-pentahydroxybenzophenone 3-*C*-(4″-benzoyl)-β-d-glucopyranoside (6), and five known compounds were isolated from the aerial parts of *Hypericum humifusum* ssp. *austral*. The structures of 1–6 were elucidated by mass spectrometry and extensive 1D and 2D NMR spectroscopy.

Gypsins A– D from *Gypsophila arabica*

Journal of Natural Products, **71,** 1336-1342 (2008)

Maryan Bruzual De Abreu *et al.*

Tags
CP-Chirasil Val, food testing and agriculture, dietary supplements, natural compounds and additives

Abstract
Four new cyclopeptides, named gypsins A–D (**1**–**4**), together with one known oleanane saponin, were isolated from the roots of *Gypsophila arabica*. The structures of *cyclo*(-Leu1-Pro2-Leu3-Trp4-Pro5-Gly6-) (**1**), *cyclo*(-Leu1-Pro2-Tyr3-Phe4-Pro5-Gly6-) (**2**), *cyclo*(-Ala1-Pro2-Tyr3-Leu4-Leu5-Pro6-Pro7-Ala8-) (**3**), and *cyclo*(-Leu1-Trp2-Pro3-Gly4-Gly5-Ser6-Ser7-) (**4**) were elucidated by 1D and 2D NMR spectroscopy including 1D-TOCSY, DQF-COSY, 2D-ROESY, HSQC, and HMBC experiments, as well as ESI tandem mass spectrometric fragmentation analysis and chemical evidence. Reprinted with permission from the Journal of Natural Products. © 2008 American Chemical Society and American Society of Pharmacognosy.

Small molecule pharmaceuticals and generics

Chemical Constituents from the Leaves of *Manglietia phuthoensis* and Their Effects on Osteoblastic MC3T3-E1 Cells

Chemical and Pharmaceutical Bulletin, **58**, 1270-1275 (2008)
Phan Van Kiem *et al.*

Tags
CP-Chirasil Val, small molecule pharmaceuticals and generics, traditional medicines

Abstract
New glycosides and known lignans were isolated from leaves of *Manglietia phuthoensis* using an Agilent J&W CP-Chiarasil Val column in an assessment of their effect on osteoblasts. Published by the Pharmaceutical Society of Japan.

Triterpene saponins of *Maesa lanceolata* stem wood

Journal of Asian Natural Products Research, **14**, 987-1001 (2012)
Lawrence Onyango A. Manguro *et al.*

Tags
CP-Chirasil Val, small molecule pharmaceuticals and generics, traditional medicines

Abstract
Phytochemical analysis of aqueous MeOH extract of *Maesa lanceolata* stem wood has led to the isolation of four new triterpene saponins characterized as 16α,21β-diacetoxy-22α-angeloyl-28-hydroxyolean-12-ene 3-*O*-[α-rhamnopyranosyl-(1‴ → 6‴)-β-glucopyranosyl-(1‴ → 3′)][β-glucopyranosyl-(1″ → 2′)]-β-glucuronopyranoside (**1**), 16α-acetoxy-21β-hydroxy-22α-angeloyl-13β,28-oxydoolean-28α-ol 3-*O*-[α-rhamnopyranosyl-(1‴ → 6‴)-β-glucopyranosyl-(1‴ → 4′)][β-glucopyranosyl-(1″ → 2′)]-α-arabinopyranoside (**2**), 16α-acetoxy-21β,22α-diangeloyl-13β,28-epoxyoleanane 3-*O*-[α-rhamnopyranosyl-(1‴ → 6‴)-β-glucopyranosyl-(1‴ → 4′)][β-glucopyranosyl-(1″ → 2′)]-β-xylopyranoside (**3**), and 16α,22α-diacetoxy-13β,28-oxydoolean-28α-ol 3-*O*-[β-glucopyranosyl-(1″ → 2′)][β-glucopyranosyl-(1‴ → 3′)]-β-glucuronopyranoside (**4**), together with the known compounds β-acetylamyrin, physcion, emodin, chrysophanol, ursolic acid, 16α-hydroxy-12-oleanene 3-*O*-glucoside, β-amyrin, sitosterol 3-*O*-β-glucoside, stigmasterol, and 3β,28-dihydroxyolean-12-ene. Their structural elucidation was accomplished by homo- and heteronuclear 2D NMR technique as well as comparison with data from known compounds. The *in vitro* antibacterial activity of the aqueous MeOH extract was also investigated and zones of inhibition ranging from 32 ± 1.1 to 14 ± 0.2 mm were observed. Among the isolates, compound **1** was the most active with a minimum inhibitory concentration value of 25 µg/ml against *Staphylococcus aureus*. Published by Taylor and Francis.

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