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# Charged Aerosol Detection Bibliography

Discover what you're missing

Literature references from 2005 to 2021

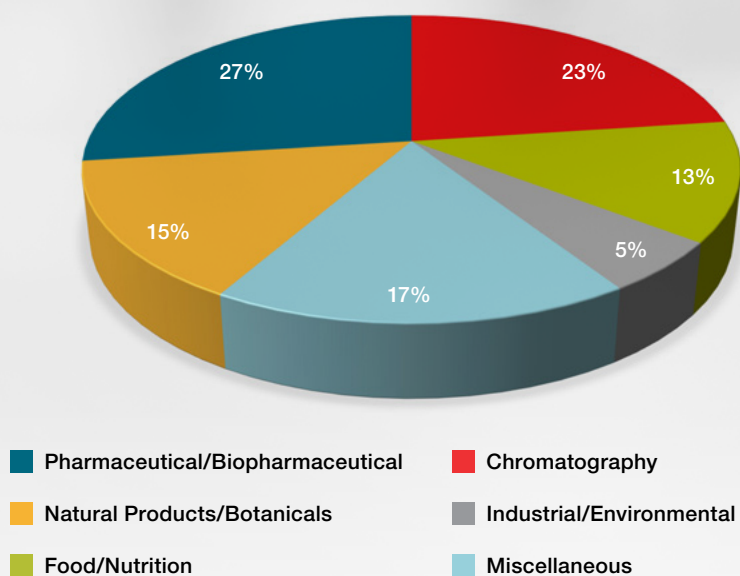
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# Introduction

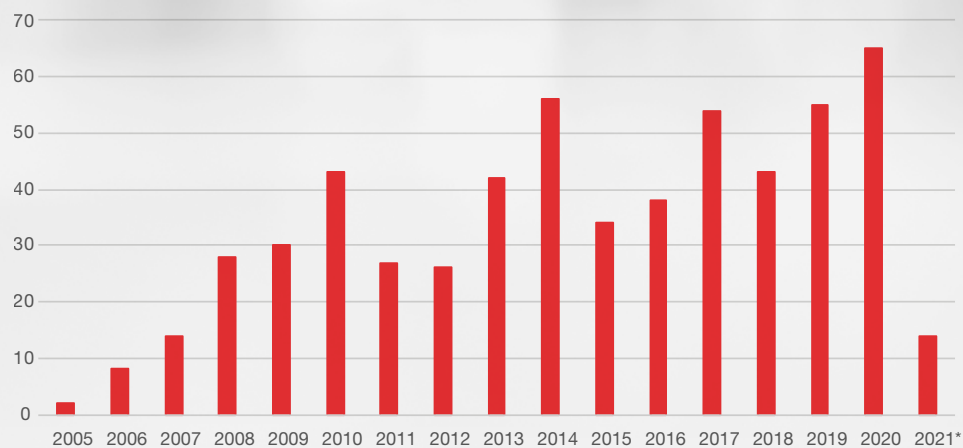
Since its introduction in 2005, charged aerosol detection has become the preferred universal LC detector for both routine and complex analyses. This bibliography is a resource designed to readily show the analytical capabilities of charged aerosol detection and highlights the breadth and scope of the different analytical methods found in the literature.

For ease of use, the document is divided into different categories based on the relevant field of application (e.g., Pharmaceutical/Biopharmaceutical, Food/Nutrition). Each publication is hyperlinked so that you can obtain more information about the article including analytes being measured and sample matrices.

Publications by area



Number of publications

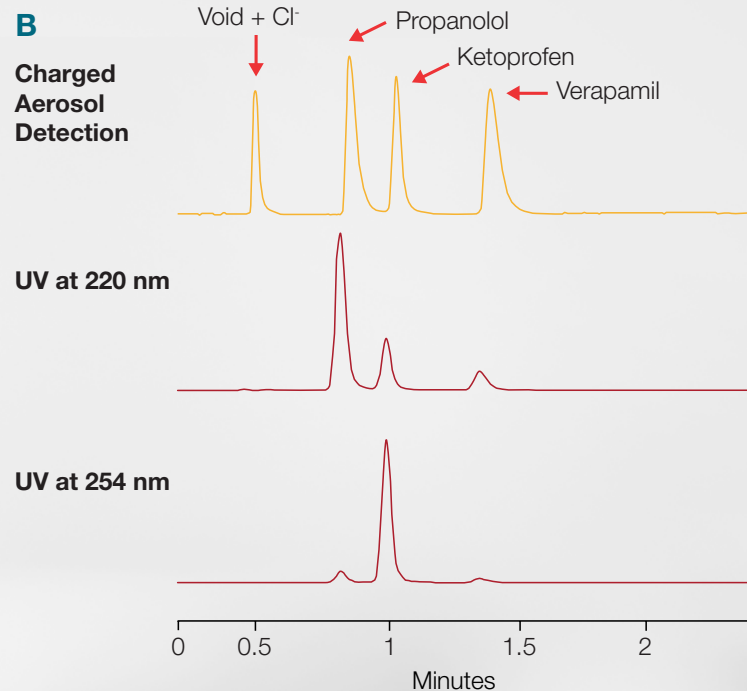
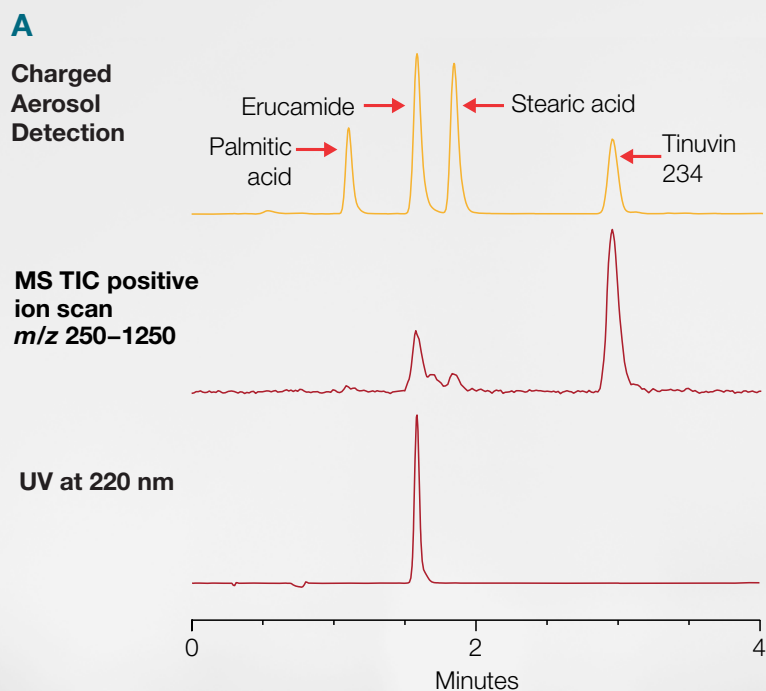


\*2021 includes first quarter publications only

# The analyte detection challenge

No single detection method delivers ideal results for LC analysis. Often, one analyte responds more strongly to one form of detection method than another, or it may not respond at all. What is most needed is the ability to detect a wide range of analytes (universal detection) with a response that enables accurate quantitation. Charged aerosol detection is a reliable technology that will change the way you view every sample. The Charged Aerosol Detector (CAD) can detect all non-volatile, and many semi-volatile analytes, with uniform response.

Charged aerosol detection has the flexibility and performance for analytical R&D, as well as the simplicity and reproducibility needed for manufacturing QA/QC. CAD can be used for the analysis of pharmaceuticals (large and small molecule), biomolecules, food and beverages, surfactants and emulsifiers, specialty chemicals, and polymers.



**The CAD can measure all analytes in the two samples shown above. Other detectors are more limited in scope.** For example, mass spectrometry (MS) requires that analytes form gas phase ions (A) while response by a UV detector depends upon the nature of the chromophore (A and B).

# Uniform response with charged aerosol detection

What is most desired in a universal detector is a uniform response—the ability to obtain the same response for all components.

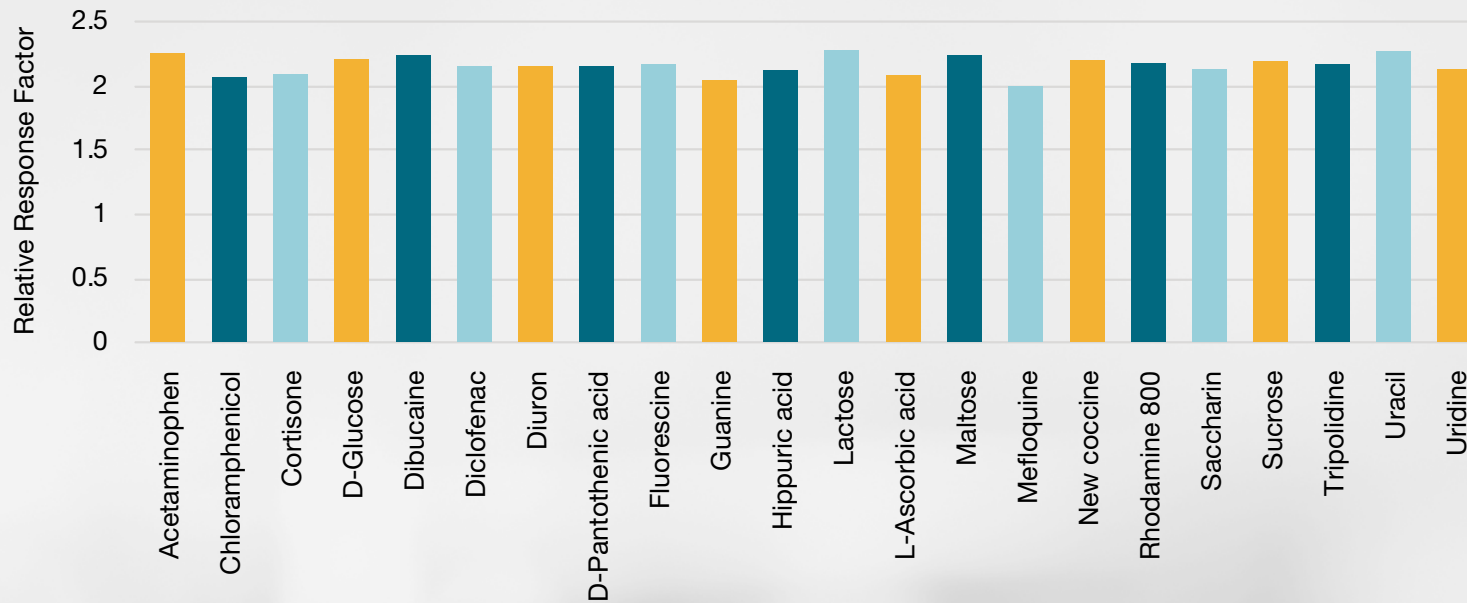
- Detector response is independent of analyte structure for all non-volatile compounds

- Fully gradient compatible

- Detector response is dependent on mobile phase composition. The impact of gradient elution on response can be minimized using the [Thermo Scientific™ Vanquish™ Duo UHPLC system](#)

- Excellent sensitivity coupled with wide dynamic range for unrivaled performance

- [Single calibrant for quantification](#) of multiple analytes when individual standards are not available



The CAD shows uniform response (<5% RSD variation) among all non-volatile analytes (0.5 µg; flow injection analysis).  
More information can be found in [Technical Note TN72806](#)

# Three simple steps to charged aerosol detection

## 1. Nebulization

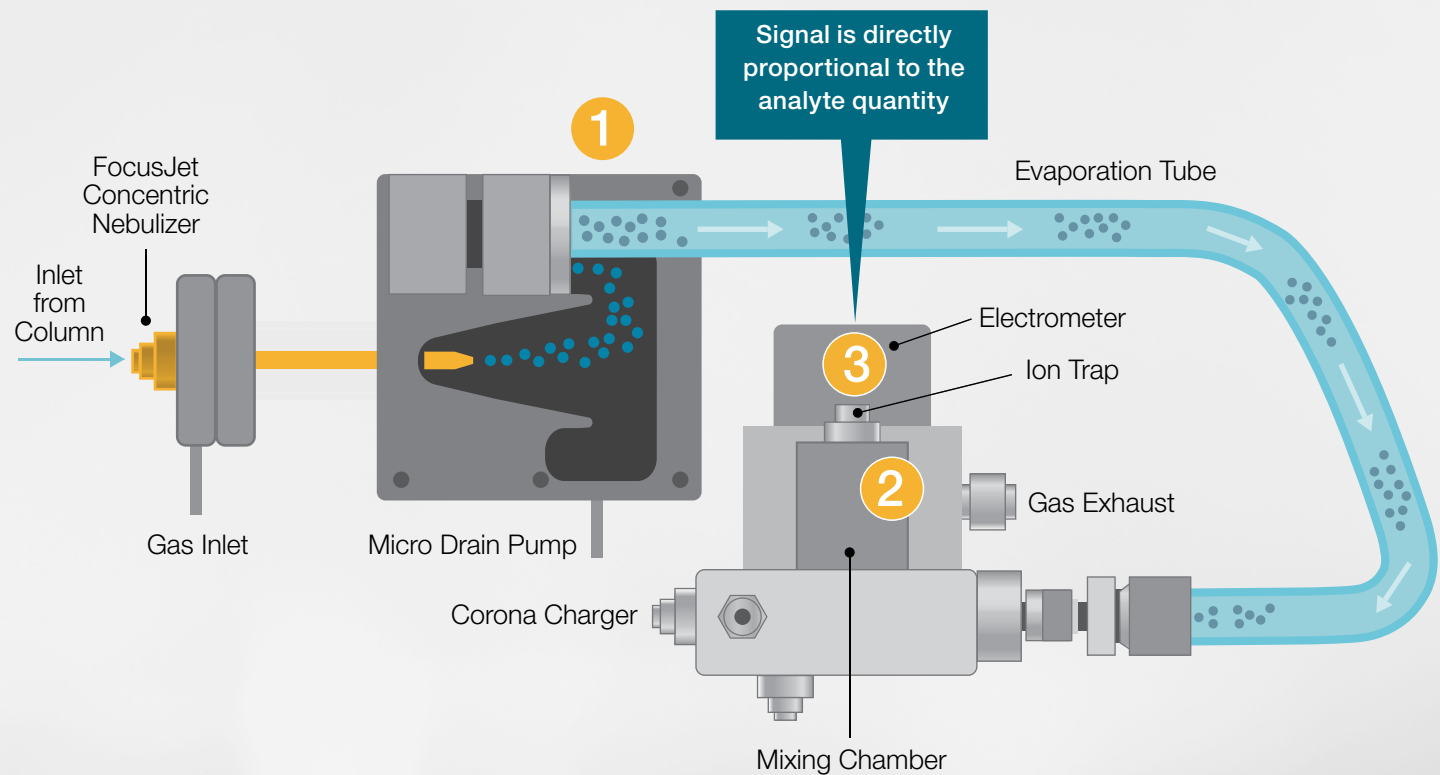
Charged aerosol detection begins by nebulizing the column eluent into droplets, which are subsequently dried into particles. The particle size increases with the amount of analyte.

## 2. Charging

In the mixing chamber, a stream of ionized nitrogen gas collides with the analyte particles. The charge is then transferred to the particles—the larger the particle, the greater the charge.

## 3. Detection

The charged particles are transferred to a collector where the aggregate charge is measured by a highly sensitive electrometer. This generates a signal directly proportional to the mass of analyte present.



Schematic of CAD technology

More information can be found in [CAD Technology video](#)

# The Thermo Scientific Charged Aerosol Detector family

**Innovative technology built in modern instrumentation empowers chromatographers to measure the previously unmeasurable and deliver results without compromise.**

Thermo Scientific Charged Aerosol Detectors seamlessly combine with Thermo Scientific HPLC and UHPLC systems, leading column technologies, and advanced data handling to help you:

- Characterize many classes of compounds
- Analyze a broad range of samples
- Profile or quantify substances



Thermo Scientific™ Vanquish™ Flex UHPLC System with Vanquish Charged Aerosol Detector

**Thermo Scientific™ Vanquish™ Charged Aerosol Detectors and Thermo Scientific™ Corona™ Veo™ Charged Aerosol Detectors provide:**

- Simple, intuitive operation
- Wide linear and dynamic range
- Sub-nanogram sensitivity
- Method flexibility covering micro-flow HPLC and UHPLC applications with a single nebulizer
- Adjustable evaporation temperature to optimize signal-to-noise ratio



Corona Veo Charged Aerosol Detector

More information: Discover what you're missing—Thermo Scientific Charged Aerosol Detectors, [brochure BR70735](#)

# LC that takes your productivity to new heights

## Vanquish HPLC and UHPLC systems

Thermo Scientific™ Vanquish™ HPLC and UHPLC Systems were designed from the ground up to improve performance and repeatability with no trade-offs in quality, robustness, or ease-of-use. Vanquish platform users have all they need to solve their toughest analytical challenges with confidence.

## Vanquish platform benefits

- Precision and reproducibility to meet every application demand
- Wide portfolio of detection technologies
- Reduced maintenance, easier set-up with Thermo Scientific™ Viper™ fingertight fittings
- Dedicated solutions for exceptional LC-MS performance

Learn more about the modular systems of the Vanquish HPLC and UHPLC product family in this brochure: [BR73115](#)

## Summary

Charged aerosol detectors give the simplicity, reproducibility and performance required for a full range of applications from basic research to manufacturing QC/QA. With charged aerosol detection, you get predictable responses to measure analytes in direct proportion to their relative amounts for quantitation without actual standards (single calibrant quantification). These detectors offer the flexibility to use traditional HPLC, accelerated UHPLC or even microflow LC methods. And, in many cases, they eliminate the need for derivatization or sample pretreatment to provide real dilute-and-shoot simplicity.

This bibliography provides an overview of the analytical capabilities of charged aerosol detection and highlights the breadth and scope of the different analytical methods found in the literature.



Discover what you're missing—hidden peaks revealed



## Chromatography

Title	Authors	Journal	Date
HPLC analysis of nonvolatile analytes using charged aerosol detection	Gamache, P.; McCarthy, R.; Freeto, S.; Asa, D.	LCGC	2005
Universal response in liquid chromatography using charged aerosol detection	Gorecki, T.; Lynen, F.; Szucs, R.; Sandra, P.	Analytical Chemistry	2006
The analysis of lipids via HPLC with a charged aerosol detector	Moreau, R. A.	Lipids	2006
The corona charged aerosol detector for liquid chromatography and high field asymmetric waveform ion mobility spectrometry combined with liquid chromatography/mass spectrometry and gas chromatography	Sherma, J.; Larkin, J. D.; Larkin, F. H.	Journal of AOAC International	2006
Evaluation of column bleed by using an ultraviolet and a charged aerosol detector coupled to a high-temperature liquid chromatographic system	Teutenberg, T.; Tuerk J.; Holzhauser, M.; Kiffmeyer, T. K.	Journal of Chromatography A	2006
Comparison of universal detectors for high-temperature micro liquid chromatography	Hazotte, A.; Libong, D.; Matoga, A.; Chaminade, P.	Journal of Chromatography A	2007
Direct detection method of oligosaccharides by high-performance liquid chromatography with charged aerosol detection	Inagaki, S.; Min, J. Z.; Toyo'oka, T.	Biomedical Chromatography	2007
HPLC determinations of enantiomeric ratios	Wipf, P.; Werner, S.; Twining, L. A.; Kendall, C.	Chirality	2007
Chemotaxonomic differentiation between <i>Cortinarius infractus</i> and <i>Cortinarius subtortus</i> by supercritical fluid chromatography connected to a multi-detection system	Brondz, I.; Høiland, K.	Trends in Chromatography	2008
Direct stability-indicating method development and validation for analysis of etidronate disodium using a mixed-mode column and charged aerosol detector	Liu, X. K.; Fang, J. B.; Cauchon, N.; Zhou, P. Z.	Journal of Pharmaceutical and Biomedical Analysis	2008
Serial coupling of reversed-phase and hydrophilic interaction liquid chromatography to broaden the elution window for the analysis of pharmaceutical compounds	Louw, S.; Pereira, A. S.; Lynen, F.; Hanna-Brown, M.; Sandra, P.	Journal of Chromatography A	2008
Polyketide analysis using mass spectrometry, evaporative light scattering, and charged aerosol detector systems	Pistorino, M.; Pfeifer, B. A.	Analytical and Bioanalytical Chemistry	2008
Comparison between charged aerosol detection and light scattering detection for the analysis of <i>Leishmania</i> membrane phospholipids	Ramos, RG; Libong, D; Rakotomanga, M; Gaudin, K; Loiseau, P. M.; Chaminade, P.	Journal of Chromatography A	2008
Implementation of charged aerosol detection in routine reversed phase liquid chromatography methods	Reilly, J.; Everatt, B.; Aldcroft, C.	Journal of Liquid Chromatography and Related Technologies	2008
Analysis of quaternary ammonium and phosphonium ionic liquids by reversed-phase high-performance liquid chromatography with charged aerosol detection and unified calibration	Stojanovic, A.; Lämmerhofer, M.; Kogelnig, D.; Schiesel, S.; Sturm, M.; Galanski, M.; Lindner, W.	Journal of Chromatography A	2008
Determination of relative response factors of impurities in paclitaxel with high performance liquid chromatography equipped with ultraviolet and charged aerosol detectors	Sun, P.; Wang, X.; Alquier, L.; Maryanoff, C. A.	Journal of Chromatography A	2008





## Chromatography

Title	Authors	Journal	Date
Performance evaluation of evaporative light scattering detection and charged aerosol detection in reversed phase liquid chromatography	Vervoort, N.; Daemen, D.; Torok, G.	Journal of Chromatography A	2008
Advances in HPLC detection—towards universal detection	Zhang, B.; Li, X.; Yan, B.	Analytical and Bioanalytical Chemistry	2008
Evaluation of methods for the simultaneous analysis of cations and anions using HPLC with charged aerosol detection and a zwitterionic stationary phase	Crafts, C.; Bailey, B.; Plante, M.; Acworth, I.	Journal of Chromatographic Science	2009
Composition analysis of positional isomers of phosphatidylinositol by high-performance liquid chromatography	Iwasaki, Y.; Masayama, A.; Mori, A.; Ikeda, C.; Nakano, H.	Journal of Chromatography A	2009
Size exclusion chromatography with Corona charged aerosol detector for the analysis of polyethylene glycol polymer	Kou, D.; Manius, G.; Zhan, S.; Chokshi, H. P.	Journal of Chromatography A	2009
Comparison of the sensitivity of evaporative universal detectors and LC/MS in the HILIC and the reversed-phase HPLC modes	Mitchell, C. R.; Bao, Y.; Benz, N. J.; Zhang, S. H.	Journal of Chromatography B	2009
Lipid analysis via HPLC with a charged aerosol detector	Moreau, R. A.	Lipid Technology	2009
Hydrophilic interaction liquid chromatography—charged aerosol detection as a straightforward solution for simultaneous analysis of ascorbic acid and dehydroascorbic acid	Novakova, L.; Solichova, D.; Solich, P.	Journal of Chromatography A	2009
The use of Charged Aerosol Detection with HPLC for the measurement of lipids	Plante, M.; Bailey, B.; Acworth, I.	Book: Lipidomics	2009
Charged aerosol detection: Factors for consideration in its use as a generic quantitative detector	Sinclair, I.; Gallagher, R.	Chromatography Today	2009
Determination of relative response factors for chromatographic investigations using NMR spectrometry	Webster, G. K.; Marsden, I.; Pommerening, C. A. ; Tyrakowski, C. M.; Tobias, B.	Journal of Pharmaceutical and Biomedical Analysis	2009
Single calibrant approach for the analysis of unknowns using dual gradient pump and charged aerosol detection	Crafts, C.; Bailey, B.; Acworth, I.	LCGC	2010
Selectivity issues in targeted metabolomics: Separation of phosphorylated carbohydrate isomers by mixed-mode hydrophilic interaction/weak anion exchange chromatography	Hinterwirth, H.; Lämmerhofer, M.; Preinerstorfer, B.; Gargano, A.; Reischl, R.; Bicker, W.; Lindner, W.	Journal of Separation Science	2010
Universal response model for a corona charged aerosol detector	Hutchinson, J. P.; Li, J. F.; Farrell, W.; Groeber, E.; Szucs, R.; Dicoski, G.; Haddad, P. R.	Journal of Chromatography A	2010
Analysis of polysorbate 80 using fast HPLC and charged aerosol detection	Lobback, C.; Backensfeild, T.; Funke, A.; Weltschies, W.	Pharmaceutical Technology	2010
Solvent effects on the retention of oligosaccharides in porous graphitic carbon liquid chromatography	Melmer, M.; Stangler, T.; Premstaller, A.; Lindner, W.	Journal of Chromatography A	2010



## Chromatography

Title	Authors	Journal	Date
Comparison of ultraviolet detection, evaporative light scattering detection and charged aerosol detection methods for liquid-chromatographic determination of anti-diabetic drugs	Shaodong, J.; Lee, W. J.; Ee, J. W.; Park, J. H.; Kwon, S. W.; Lee, J.	Journal of Pharmaceutical and Biomedical Analysis	2010
HPLC detectors: A brief review	Swartz, M.	Journal of Liquid Chromatography and Related Technologies	2010
Review of operating principle and applications of the charged aerosol detector	Vehovec, T.; Obreza, A.	Journal of Chromatography A	2010
Determination of impurities in 17 beta-estradiol reagent by HPLC with Charged Aerosol Detector	Yamazaki, T.; Ihara, T.; Nakamura, S.; Kato, K.	Bunseki Kagaku	2010
Chapter 5: Evaporative light scattering and Charged Aerosol Detector	Chaminade, P.	Book: Hyphenated and Alternative Methods of Detection in Chromatography	2011
Investigating the stability of the nonionic surfactants tocopheryl polyethylene glycol succinate and sucrose laurate by HPLC-MS, DAD, and CAD	Christiansen, A.; Backensfeld, T.; Kühn, S.; Weitschies, W.	Journal of Pharmaceutical Sciences	2011
Stability of the non-ionic surfactant polysorbate 80 investigated by HPLC-MS and charged aerosol detector	Christiansen, A.; Backensfeld, T.; Kühn, S.; Weitschies, W.	Die Pharmazie	2011
Characterization of hydroxypropylmethylcellulose (HPMC) using comprehensive two-dimensional liquid chromatography	Greiderer, A.; Steeneken, L.; Aalbers, T.; Vivó-Truyols, G.; Schoenmakers, P.	Journal of Chromatography A	2011
Comparison of the response of four aerosol detectors used with ultra high pressure liquid chromatography	Hutchinson, J. P.; Li, J. F.; Farrell, W.; Groeber, E.; Szucs, R.; Dicoski, G.; Haddad, P. R.	Journal of Chromatography A	2011
Comparison of amino acid analysis in GABA tea via HILIC and ERLIC separation coupled with fluorescence/charged aerosol detection	LaFon, W.	242nd National Meeting of the American-Chemical-Society	2011
Direct separation and detection of biogenic amines by ion- pair liquid chromatography with chemiluminescent nitrogen detector	Sun, J.; Guo, H. X.; Semin, D.; Cheetham, J.	Journal of Chromatography A	2011
Analysis of volatile bases by high performance liquid chromatography with aerosol-based detection	Cohen, R. D.; Liu, Y.; Gong, X.	Journal of Chromatography A	2012
Investigation of polar organic solvents compatible with Corona Charged Aerosol Detection and their use for the determination of sugars by hydrophilic interaction liquid chromatography	Hutchinson, J. P.; Remenyi, T.; Nesterenko, P.; Farrell, W.; Groeber, E.; Szucs, R.; Dicoski, G.; Haddad, P. R.	Analytica Chimica Acta	2012
Use of suppressors for signal enhancement of weakly-acidic analytes in ion chromatography with universal detection methods	Karu, N.; Dicoski, G. W.; Haddad, P. R.	TrAC Trends in Analytical Chemistry	2012
Determination of pharmaceutically related compounds by suppressed ion chromatography: IV. Interfacing ion chromatography with universal detectors	Karu, N.; Hutchinson, J. P.; Dicoski, G. W.; Hanna-Brown, M.; Srinivasan, K.; Pohl, C. A.; Haddad, P. R.	Journal of Chromatography A	2012
Study of xanthophyll concentration in spinach leaves by means of HPLC coupled with UV-Vis and Corona CAD detectors	Ligor, M.; Buszewski, B.	Food Analytical Methods volume	2012



## Chromatography

Title	Authors	Journal	Date
Comprehensive impurity profiling of nutritional infusion solutions by multidimensional off-line reversed-phase liquid chromatography x hydrophilic interaction chromatography-ion trap mass-spectrometry and charged aerosol detection with universal calibration	Schiesel, S.; Lammerhofer, M.; Lindner, W.	Journal of Chromatography A	2012
Separation and quantification of microalgal carbohydrates	Templeton, D. W.; Quinn, M.; Van Wychen, S.; Hyman, D.; Laurens, L. M. L.	Journal of Chromatography A	2012
A comparative study on the analytical performance of a charged aerosol detector and an ultraviolet detector for the RP-LC analysis of dabigatran etexilate in capsules	Bernardi, R. M.; D'Avila, F. B.; Todeschini, V.; Froehlich, P. E.; Bergold, A. M.	Analytical Methods	2013
Hydrophilic interaction chromatography with aerosol-based detectors (ELSD, CAD, NQAD) for polar compounds lacking a UV chromophore in an intravenous formulation	Cintron, J. M.; Risley, D. S.	Journal of Pharmaceutical and Biomedical Analysis	2013
Simple and efficient profiling of phospholipids in phospholipase D-modified soy lecithin by HPLC with charged aerosol detection	Damjanović, J.; Nakano, H.; Iwasaki, Y.	Journal of the American Oil Chemists' Society	2013
Charged aerosol detection to characterize components of dispersed-phase formulations	Fox, C. B.; Sivananthan, S. J.; Mikasa, T. J.; Lin, S.; Parker, S. C.	Advances in Colloid and Interface Science	2013
Direct high-performance liquid chromatographic enantioseparation of free $\alpha$ -, $\beta$ - and $\gamma$ -aminophosphonic acids employing cinchona-based chiral zwitterionic ion exchangers	Gargano, A. F. G.; Kohout, M.; Macíková, P.; Lämmerhofer, M.; Lindner, W.	Analytical and Bioanalytical Chemistry	2013
Analysis of fatty acids using high-performance liquid chromatography with charged aerosol detection	Jaquinod, L. F.	Sacramento State Scholarworks	2013
Effects of eluent temperature and elution bandwidth on detection response for aerosol-based detectors	Khandagale, M. M.; Hutchinson, J. P.; Dicinowski, G. W.; Haddad, P. R.	Journal of Chromatography A	2013
Rapid quantification of yeast lipid using microwave-assisted total lipid extraction and HPLC-CAD	Khoomrung, S; Chumnanpuen, P; Jansa-Ard, S; Stahlman, M; Nookaew, I; Boren, J; Nielsen, J.	Analytical Chemistry	2013
Elution strategies for reversed-phase high-performance liquid chromatography analysis of sucrose alkanolate regioisomers with charged aerosol detection	Lie, A.; Pedersen, L. H.	Journal of Chromatography A	2013
Design of experiments and multivariate analysis for evaluation of reversed-phase high-performance liquid chromatography with charged aerosol detection of sucrose caprate regioisomers	Lie, A.; Wimmer, R.; Pedersen L. H.	Journal of Chromatography A	2013
Corona-Charged Aerosol Detection: An analytical approach	Ligor, M.; Studzinska, S.; Horna, A.; Buszewski, B.	Critical Reviews in Analytical Chemistry	2013
Rapid purification method for fumonisins B1 using centrifugal partition chromatography	Szekeres, A.; Lorántfy, L.; Bencsik, O.; Kecskeméti, A.; Szécsi, Á.; Mesterházy, Á.; Vágvölgyi, C.	Food Additives & Contaminants: Part A	2013



## Chromatography

Title	Authors	Journal	Date
Quantification aspects of constant pressure (ultra) high pressure liquid chromatography using mass-sensitive detectors with a nebulizing interface	Verstraeten, M.; Broeckhoven, K.; Lynen, F.; Choikhet, K.; Landt, K.; Dittmann, M.; Witt, K.; Sandra, P.; Desmet, G.	Journal of Chromatography A	2013
Application of cinchona-sulfonate-based chiral zwitterionic ion exchangers for the separation of proline-containing dipeptide rotamers and determination of on-column isomerization parameters from dynamic elution profiles	Wernisch, S.; Trapp, O.; Lindner, W.	Analytica Chimica Acta	2013
Material identification by HPLC with charged aerosol detection	Wigman, L.; Scott, B.; Zhang, K.	LCGC	2013
Charged aerosol detection and evaporative light scattering detection—Fundamental differences affecting analytical performance	Acworth, I. N.; Thomas, D.	Planta Medica	2014
Chapter 1: Advances in aerosol-based detectors	Cohen, R. D.; Liu, Y.	Book: Advances in Chromatography	2014
Comparison of ultraviolet detection and charged aerosol detection methods for liquid-chromatographic determination of protoescigenin	Filip, K., Gryniewicz, G.; Gruza, M.; Jatozak, K.; Zagrodzki, B.	Acta Poloniae Pharmaceutica	2014
Simultaneous separation and determination of erythritol, xylitol, sorbitol, mannitol, maltitol, fructose, glucose, sucrose and maltose in food products by high performance liquid chromatography coupled to charged aerosol detector	Grembecka M.; Lebidzińska, A.; Szefer, P.	Microchemical Journal	2014
Direct enantioseparation of underivatized aliphatic 3-hydroxyalkanoic acids with a quinine-based zwitterionic chiral stationary phase	Ianni, F.; Pataj, Z.; Gross, H.; Sardella, R.; Natalini, B.; Lindner, W.; Lämmerhofer, M.	Journal of Chromatography A	2014
Combination of a sub-3 µm superficially porous particle packed column with charged aerosol detection for the simple and sensitive measurement of nine macrolides in human urine	Jia, S.; Song, I. G.; Jeong, K. M.; Li, J.; Park, J. H.; Lee, J.; Kwon, S. W.	Journal of Separation Science	2014
Assessment of the complementarity of temperature and flow-rate for response normalisation of aerosol-based detectors	Khandagale, M. M.; Hilder, E. F.; Shellie, R. A.; Haddad, P. R.	Journal of Chromatography A	2014
HPLC analysis of phthalates using Corona Charged Aerosol Detector	Matsuyama, M.; Kinugasa, S.; Ohtani, H.	Bunseki Kagaku	2014
A single step reversed-phase high performance liquid chromatography separation of polar and non-polar lipids	Olsson, P.; Holmback, J.; Herslof, B.	Journal of Chromatography A	2014
Chromatographic methods for characterization of poly (ethylene glycol)-modified polyamidoamine dendrimers	Park, E. J.; Cho, H.; Kim, S. W.; Na, D. H.	Analytical Biochemistry	2014
Determination of fibanserin and tadalafil in supplements for women sexual desire enhancement using high-performance liquid chromatography with tandem mass spectrometer, diode array detector and charged aerosol detector	Poplawska, M.; Blazewicz, A.; Zolek, P.; Fijalek, Z.	Journal of Pharmaceutical and Biomedical Analysis	2014
Determination of erythrocin in chicken manure by high performance liquid chromatography-Corona-charged aerosol detection coupled with on-line solid phase extraction	Zhou, Q.; Chen, M.; Zhu, L.; Yao-Bin, D.	Chinese Journal of Analytical Chemistry	2014



## Chromatography

Title	Authors	Journal	Date
Sensitive and direct determination of lithium by mixed-mode chromatography and charged aerosol detection	Dai, L. L.; Wigman, L.; Zhang, K.	Journal of Chromatography A	2015
Acetone as a greener alternative to acetonitrile in liquid chromatographic fingerprinting	Funari, C. S.; Carneiro, R. L.; Khandagale, M. M.; Cavalheiro, A. J.; Hilder, E. F.	Journal of Separation Science	2015
Ion-pair-reversed phase liquid chromatography with ultraviolet detection for analysis of ultraviolet transparent cations	He, Y.; Cook, K. S.; Littlepage, E.; Cundy, J.; Mangalathillam, R.; Jones, M. T.	Journal of Chromatography A	2015
Recent advances in the application of hydrophilic interaction chromatography for the analysis of biological matrices	Hendrickx, S.; Adams, E.; Cabooter, D.	Bioanalysis	2015
Positional analysis of phosphatidylcholine and phosphatidylethanolamine via LC with a charged aerosol detector	Kielbowicz, G.; Chojnacka, A.; Gliszczynska, A.; Gladkowski, W.; Klobucki, M.; Niezgodna, N.; Wawrzenczyk, C.	Talanta	2015
Decoding glycome of <i>Astragalus membranaceus</i> based on pressurized liquid extraction, microwave-assisted hydrolysis and chromatographic analysis	Lv, G. P.; Hu, D. J.; Cheong, K. L.; Li, Z. Y.; Qing, X. M.; Zhao, J.; Li, S. P.	Journal of Chromatography A	2015
Aerosol-based detectors for liquid chromatography	Magnusson, L. E.; Risley, D. S.; Koropchak, J. A.	Journal of Chromatography A	2015
Chapter 11: Inline Detectors	Rao, R. N.; Rao, P. N.	Book: Analytical Separation Science	2015
Analysis of fatty acid samples by hydrophilic interaction liquid chromatography and charged aerosol detector	Roy, C. E.; Kauss, T.; Prevot, S.; Barthelemy, P.; Gaudin, K.	Journal of Chromatography A	2015
Performance of charged aerosol detection with hydrophilic interaction chromatography	Russell, J. J.; Heaton, J. C.; Underwood, T.; Boughtflower, R.; McCalley, D. V.	Journal of Chromatography A	2015
A fully automatic HPLC-CAD-DAD method coupled with ASE and online SPE for simultaneous determination of seven antibiotics in bio-matrices	Zhou, Q.; Wang, N.; Zhu, L. H.; Tang, H. Q.	Chromatographia	2015
High performance liquid chromatography-charged aerosol detection applying an inverse gradient for quantification of rhamnolipid biosurfactants	Behrens, B.; Baune, M.; Jungkeit, J.; Tiso, T.; Blank, L. M.; Hayen, H.	Journal of Chromatography A	2016
Rhamnolipid biosurfactant analysis using online turbulent flow chromatography-liquid chromatography-tandem mass spectrometry	Behrens, B.; Helmer, P. O.; Tiso, T.; Blank, L. M.; Hayen, H.	Journal of Chromatography A	2016
Method development and validation for determination of cocaine, its main metabolites and pyrolytic products by HPLC-UV-CAD	Pereira, A. G.; D'Avila, F. B.; Ferreira, P. C. L.; Holler, M. G.; Limberguer, R. P.; Froehlich, P. E.	Chromatographia	2016
Direct determination of amino acids by hydrophilic interaction liquid chromatography with charged aerosol detection	Socia, A.; Foley, J. P.	Journal of Chromatography A	2016
Neutral monosaccharide composition analysis of plant-derived oligo- and polysaccharides by high performance liquid chromatography	Yan, J.; Shi, S. S.; Wang, H. W.; Liu, R. M.; Li, N.; Chen, Y. L.; Wang, S. C.	Carbohydrate Polymers	2016
Optimization of normal phase chromatographic conditions for lipid analysis and comparison of associated detection techniques	Abreu, S.; Solgadi, A.; Chaminade, P.	Journal of Chromatography A	2017



## Chromatography

Title	Authors	Journal	Date
Comparative study on the liquid chromatographic enantioseparation of cyclic $\beta$ -amino acids and the related cyclic $\beta$ -aminohydroxamic acids on Cinchona alkaloid-based zwitterionic chiral stationary phases	Bajtai, A.; Fekete, B.; Palkó, M.; Fülöp, F.; Lindner, W.; Kohout, M.; Ilisz, I.; Péter, A.	Journal of Separation Science	2017
Chapter 10: Multiple parallel mass spectrometry for liquid chromatography	Byrdwell, W. C.	Book: Handbook of Advanced Chromatography/Mass Spectrometry Techniques	2017
Fast and simple determination of 3-aminopiperidine without derivatization using high performance liquid chromatography-charged aerosol detector with an ion-exchange/reversed-phase mixed-mode column	Dong, S.; Yan, Z.; Yang, H.; Long, Z.	Analytical Sciences	2017
Analysis of sorghum wax and carnauba wax by reversed phase liquid chromatography mass spectrometry	Harron, A. F.; Powell, M. J.; Nunez, A.; Moreau, R. A.	Industrial Crops and Products	2017
Evaluation of a hydrophilic interaction liquid chromatography design space for sugars and sugar alcohols	Hetrick, E. M.; Kramer, T. T.; Risley, D. S.	Journal of Chromatography A	2017
Enablement of the direct analysis of excipients in monoclonal antibody formulations through the incorporation of a wide pore C18 protein trap with hydrophilic interaction liquid chromatography	Huang, J.C.; Zongyun, S. L.; Huang, Z.; Bolgar, M. S.	Journal of Chromatography B	2017
Nebulizer for charged aerosol detection (CAD) system	Yim, A.; McCarthy, R.; Gamache, P.	US Patent	2017
Quantitative analysis of underivatized amino acids in the sub- to several-nanomolar range by ion-pair HPLC using a corona-charged aerosol detector (HPLC-CAD)	Furota, S.; Ogawa, N. O.; Takano, Y.; Yoshimura, T.; Ohkouchi, N.	Journal of Chromatography B	2018
State-of-the-art and trends for the SI traceable value assignment of the purity of peptides using the model compound angiotensin I	Josephs, R. D.; Stoppacher, N.; Daireaux, A.; Choteau, T.; Lippa, K. A.; Phinney, K. W.; Westwood, S.; Wielgosz, R. I.	TrAC Trends in Analytical Chemistry	2018
A HPLC method to monitor the occurrence of lipid peroxidation in intravenous lipid emulsions used in parenteral nutrition using in-line UV and charged aerosol detection	King, H. M.; Cosslett, A. G.; Thomas, C. P.; Price-Davies, R.	Clinical Nutrition ESPEN	2018
Resolution and signal-to-noise in analysis of carbohydrate isomers by graphitised carbon chromatography with charged aerosol detection	Lie, A.; Pedersen, L. H.	Journal of Chromatography A	2018
Effects of N-methylation and amidination of cyclic $\beta$ -amino acids on enantio selectivity and retention characteristics using cinchona alkaloid- and sulfonic acid-based chiral zwitterionic stationary phases	Orosza, T.; Forró, E.; Fülöp, F.; Lindner, W.; Ilisz, I.; Péter, A.	Journal of Chromatography A	2018
Chemometric-assisted method development in hydrophilic interaction liquid chromatography: A review	Taraji, M.; Haddad, P. R.; Amos, R. I.; Talebi, M.; Szucs, R.; Dolan, J. W.; Pohl, C. A.	Analytica Chimica Acta	2018
Simultaneous separation of water- and fat-soluble vitamins by selective comprehensive HILIC $\times$ RPLC (high-resolution sampling) and active solvent modulation	Bäurer, S.; Guo, W.; Polnick, S.; Lämmerhofer, M.	Chromatographia	2019



## Chromatography

Title	Authors	Journal	Date
Quantitative structure-property relationship modeling of polar analytes lacking UV chromophores to charged aerosol detector response	Schilling, K.; Krmar, J.; Maljurić, N.; Pawellek, R.; Protić, A.; Holzgrabe, U.	Analytical and Bioanalytical Chemistry	2019
Analytical development of underivatized amino acids and short-chain peptide molecules	Takano, Y.; Furota, S.; Ogawa, N. O.; Ohkouchi, N.	Annual Meteoritical Society	2019
Improved quantitation of lipid classes using supercritical fluid chromatography with charged aerosol detector	Takeda, H.; Takahashi, M.; Hara, T.; Izumi, Y.; Bamba, T.	Journal of Lipid Research	2019
Tips for liquid chromatography coupled with charged aerosol detection	Ahmad, I. A. H.; Stoll, D. R.	LCGC Online	2020
Mixed-mode chromatography characteristics of chiralpak ZWIX(+) and ZWIX(-) and elucidation of their chromatographic orthogonality for LC X LC application	Baurer, S.; Ferri, M.; Carotti, A.; Neubauer, S.; Sardella, R.; Lammerhofer, M.	Analytica Chimica Acta	2020
Separation of carbohydrate isomers and anomers on poly-N-(1H-tetrazole-5-yl)-methacrylamide-bonded stationary phase by hydrophilic interaction chromatography as well as determination of anomer interconversion energy barriers	Fu, X.; Cebo, M.; Ikegami, T.; Lämmerhofer, M.	Journal of Chromatography A	2020
A polar stationary phase obtained by surface-initiated polymerization of hyperbranched polyglycerol onto silica	Geng, H.; Jing, J.; Zhang, F.; Zhang, F.; Yang, B.	Talanta	2020
Simultaneous measurements of the molar radioactivity, radiochemical purity and chemical impurity in the [ <sup>14</sup> C]choline injection using radio-HPLC with a corona-charged aerosol detector	Hashimoto, H.; Furutsuka, K.; Kawamura, K.; Ohkubo, T.; Ogawa, M.; Kurihara, Y.; Nengaki, N.; Zhang, M-R.	Applied Radiation and Isotopes	2020
Development of an LC-NMR system using a diode array detector and a charged aerosol detector	Kanbayashi, Y.; Tsutsumi, Y.; Mizukoshi, T.; Yamaguchi, H.	Bunseki Kagaku	2020
A selective comprehensive reversed-phase/reversed-phase 2D-liquid chromatography approach with multiple complementary detectors as advanced generic method for the quality control of synthetic and therapeutic peptides	Karongo, R.; Ikegami, T.; Stoll, D. R.; Lämmerhofer, M.	Journal of Chromatography A	2020
Rapid sample preparation for ganglioside analysis by liquid chromatography mass spectrometry	Khoury, S.; Masson, E.; Sibille, E.; Cabaret, S.; Berdeaux, O.	Journal of Chromatography B	2020
A new strategy for development of eco-friendly RP-HPLC method using Corona Charged Aerosol Detector and its application for simultaneous analysis of risperidone and its related impurities	Maljurić, N.; Otašević, B.; Golubović, J.; Krmar, J.; Zečević, M.; Protić, A.	Microchemical Journal	2020
Enhancing online protein isolation as intact species from soy flour samples by actively modulated two-dimensional liquid chromatography (2D-LC)	Nardiello, D.; Melfi, M. T.; Pignatelli, C.; Centonze, D.	Journal of Pharmaceutical and Biomedical Analysis	2020
Semiquantitation of paralytic shellfish toxins by hydrophilic interaction liquid chromatography-mass spectrometry using relative molar response factors	Qiu, J.; Wright, E. J.; Thomas, K.; Li, A.; McCarron, P.; Beach, D. G.	Toxins	2020



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Title	Authors	Journal	Date
Hyphenation of supercritical fluid chromatography with different detection methods for identification and quantification of liamocin biosurfactants	Scholz, K.; Lipphardt, A.; Wienken, C. M.; Tiso, T.; Hayen, H.	Journal of Chromatography A	2020
Comprehensive liamocin biosurfactants analysis by reversed phase liquid chromatography coupled to mass spectrometric and charged aerosol detection	Scholz, K.; Seyfried, M.; Brumhard, O.; Blank, L. M.; Tiso, T.; Hayen, H.	Journal of Chromatography A	2020
A method for stable carbon isotope measurement of underivatized individual amino acids by multi-dimensional high-performance liquid chromatography and elemental analyzer/isotope ratio mass spectrometry	Sun, Y.; Ishikawa, N. F.; Ogawa, N. O.; Kawahata, H.; Takano, Y.; Ohkouchi, N.	Rapid Communications in Mass Spectrometry	2020
Integration of micro-fractionation, high-performance liquid chromatography-ultraviolet detector-charged aerosol detector-mass spectrometry analysis and cellular dynamic mass redistribution assay to accelerate alkaloid drug discovery	Wang, R.; Liu, Y.; Zhou, H.; Chen, Y.; Wang, J.; Zhang, X.; Yu, R.; Liang, X.	Journal of Chromatography A	2020
The many faces of quantitative charged aerosol detection: selection of regression models at optimum power function value in early and late-stage pharmaceutical development	Ahmad, I.; Blasko, A.; Wang, H.; Lu, T.; Mangion, I.; Regalado, E.	Journal of Chromatography A	2021
Standardization of chromatographic signals—Part II: Expanding instrument-agnostic fingerprints to reverse phase liquid chromatography	Cuadros-Rodríguez, L.; Martín-Torres, S.; Ortega-Gavilán, S.; Jiménez-Carvelo, A. M.; López-Ruiz, R.; Garrido-Frenich, A.; Graci, M.	Journal of Chromatography A	2021
Synthesis and chromatographic evaluation of pyrazinedicarboxylic anhydride bonded stationary phase	Jin, G.; Ding, J.; Zhou, Y.; Xia, D.; Guo, Z.	Journal of Chromatography A	2021
Comprehensive ethoxymer characterization of complex alcohol ethoxy sulphate products by mixed-mode high-performance liquid chromatography coupled to charged aerosol detection	Lezana, P.; García-Mayoral, M-F.; Lamothe, B.; Pena-Abaurrea, M.	Journal of Chromatography A	2021
Universal response method for the quantitative analysis of multi-components in josamycin and midecamycin using liquid chromatography coupled with charged aerosol detector	Liu, G.; Zhu, B.; Ren, X.; Wang, J.	Journal of Pharmaceutical and Biomedical Analysis	2021
Power function setting in charged aerosol detection for the linearization of detector response optimization strategies and their application	Pawellek, R.; Muellner, T.; Gamache, P.; Holzgrabe, U.	Journal of Chromatography A	2021
Analytical development of seamless procedures on cation-exchange chromatography and ion-pair chromatography with high-precision mass spectrometry for short-chain peptides	Takano, Y.; Oba, Y.; Furota, S.; Naraoka, H.; Ogawa, N.; Blattmann, T.M.; Ohkouchi, N.	International Journal of Mass Spectrometry	2021





## Food/Nutrition

Title	Authors	Journal	Date
Development of analytical procedures to study changes in the composition of meat phospholipids caused by induced oxidation	Cascone, A.; Eerola, S.; Ritieni, A.; Rizzo, A.	Journal of Chromatography A	2006
Quantitative determination of folic acid in multivitamin/multielement tablets using liquid chromatography/tandem mass spectrometry	Nelson, B.; Sharpless, K.; Sander, L.	Journal of Chromatography A	2006
Quantitation of triacylglycerols from plant oils using charged aerosol detection with gradient compensation	Lisa, M.; Lynen, F.; Holcapek, M.; Sandra, P.	Journal of Chromatography A	2007
Photostability of rebaudioside A and stevioside in beverages	Clos, J. F.; DuBois, G. E.; Prakash, I.	Journal of Agricultural and Food Chemistry	2008
Unfrozen water in amylosic molecules is dependent on the molecular structures—A differential scanning calorimetric study	Suzuki, S.; Kitamura, S.	Food Hydrocolloids	2008
Single run ion analysis using charged aerosol detection: Ion content of commercially available mineral water	Crafts, C.; Acworth, I.	LCGC	2009
Simultaneous analysis for carbohydrates in drinks by high performance liquid chromatography with charged aerosol detector	Tamura, M.; Takahashi, A.; Uyama, A.; Mochizuki, N.	Bunseki Kagaku	2010
The use of the online two-dimensional liquid chromatography coupled with a universal detector for the screening of non-volatile potential migrants in food packaging materials	Yoon, C-S.; Lee, K-T.	Korean Journal of Packaging Science and Technology	2010
Simple and direct analysis of faltarinol and other polyacetylenic oxylipins in carrots by reverse phase HPLC and charged aerosol detection	Acworth, I. N.; Plante, M.; Bailey, B.; Crafts, C.; Waraska, J.	Planta Medica	2011
Quantitation of underivatized omega-3 and omega-6 fatty acids in foods by HPLC and charged aerosol detection	Acworth, I. N.; Plante, M.; Crafts, C.; Bailey, B.	Planta Medica	2011
Quantification of triacylglycerols in olive oils using HPLC-CAD	de la Mata-Espinosa, P.; Bosque-Sendra, J. M.; Cuadros-Rodríguez, L.	Food Analytical Methods	2011
Discriminating olive and non-olive oils using HPLC-CAD and chemometrics	de la Mata-Espinosa, P.; Bosque-Sendra, J. M.; Bro, R.; Cuadros-Rodríguez, L.	Analytical and Bioanalytical Chemistry	2011
Olive oil quantification of edible vegetable oil blends using triacylglycerols chromatographic fingerprints and chemometric tools	de la Mata-Espinosa, P.; Bosque-Sendra, J. M.; Bro, R.; Cuadros-Rodríguez, L.	Talanta	2011
Chapter 6: Extraction and analysis of food lipids	Moreau, R. A.; Winkler-Moser, J. K.	Book: Methods of Analysis of Food Components and Additives	2011
Combining chromatography and chemometrics for the characterization and authentication of fats and oils from triacylglycerol compositional data—A review	Bosque-Sendra, J. M.; Cuadros-Rodríguez, L.; Ruiz-Samblás, C.; de la Mata, A. P.	Analytica Chimica Acta	2012
Simultaneous determination of caffeine and aspartame in diet supplements and non-alcoholic beverages using liquid-chromatography coupled to Corona CAD and UV-DAD detectors	Grembecka, M.; Szefer, P.	Food Analytical Methods	2012



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Title	Authors	Journal	Date
Improvement liquid chromatography-charged aerosol detector method for determination of polysorbates in foods	Lee, J.; Yoon, C.; Kim, Y.; Choi, S.; Shin, Y.	Korean Society of Analysis and Science	2012
Quadruple parallel mass spectrometry for analysis of vitamin D and triacylglycerols in a dietary supplement	Byrdwell, W. C.	Journal of Chromatography A	2013
A new liquid chromatography method with charge aerosol detector (CAD) for the determination of phospholipid classes. Application to milk phospholipids	Kielbowicz, G.; Micek, P.; Wawrzeńczyk, C.	Talanta	2013
Determination of water-soluble vitamins in infant milk and dietary supplement using a liquid chromatography on-line coupled to a corona-charged aerosol detector	Marquez-Sillero, I.; Cardenas, S.; Valcarcel, M.	Journal of Chromatography A	2013
Comparison of two evaporative universal detectors for the determination of sugars in food samples by liquid chromatography	Márquez-Sillero, I.; Cárdenas, S.; Valcárcel, M.	Microchemical Journal	2013
Authentication of geographical origin of palm oil by chromatographic fingerprinting of triacylglycerols and partial least square-discriminant analysis	Ruiz-Samblas, C; Arrebola-Pascual, C; Tres, A; van Ruth, S; Cuadros-Rodríguez, L.	Talanta	2013
Determination of saikosaponins in Bupleurum radix from different locations by HPLC-CAD method and its immunomodulation effects on mouse splenocytes	Wang, L. N.; Chen, B.; Wang, W.; Xu, N.; Jia, T. Z.	Food Chemistry	2013
Determination of theanine in tea-extraction by HPLC with a compensate after column and charged aerosol detection	Zhao, L.; Que, F.; Zhou, X-H.; Liu, L-Y.	Science and Technology of Food Industry	2013
Simultaneous determination of aspartame, acesulfame-K, saccharin, citric acid and sodium benzoate in various food products using HPLC-CAD-UV/DAD	Grembecka, M.; Baran, P.; Blazewicz, A.; Fijalek, .Z; Szefer, P.	European Food Research and Technology volume	2014
Determination of sucralose with post-column compensation and liquid chromatography-Charged Aerosol Detection technique in beverage	Huang, C. Q.; Liu, L. Y.; Lu, C. H.; Lou, C. J.; Jin, Y.	Chinese Journal Analytical Chemistry	2014
Simple assay of trehalose in industrial yeast	Kus-Liśkiewicz, M.; Górka, A.; Gonchar, M.	Food Chemistry	2014
Determination of inulin-type fructooligosaccharides in edible plants by high-performance liquid chromatography with charged aerosol detector	Li, J.; Hu, D.; Zong, W.; Lv, G.; Zhao, J.; Li, S.	Journal of Agricultural and Food Chemistry	2014
Effect of temperature towards lipid oxidation and non-enzymatic browning reactions in krill oil upon storage	Lu, F. S. H.; Bruheim, I.; Haugsgjerd, B. O.; Jacobsen, C.	Food Chemistry	2014
Compositional and thermal characteristics of palm olein-based diacylglycerol in blends with palm super olein	Ng, S. P.; Lai, O. M.; Abas, F.; Lim, H. K.; Beh, B. K.; Ling, T. C.; Tan, C. P.	Food Research International	2014
Quantification of individual phenolic compounds' contribution to antioxidant capacity in apple: A novel analytical tool based on liquid chromatography with diode array, electrochemical, and charged aerosol detection	Plaza, M.; Kariuki, J.; Turner, C.	Journal of Agricultural and Food Chemistry	2014
Fumonisin measurement from maize samples by high-performance liquid chromatography coupled with corona charged aerosol detector	Szekeres, A.; Budai, A.; Bencsik, O.; Németh, L.; Bartók, T.; Szécsi, Á.; Vágvölgyi, C.	Journal of Chromatographic Science	2014



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Title	Authors	Journal	Date
Separation and quantification of phospholipid and neutral lipid classes by HPLC–CAD: Application to egg yolk lipids	Kielbowicz, G.; Trziszka, T.; Wawrzenczyk, C.	Journal of Liquid Chromatography & Related Technologies	2015
Analysis of selected chemical parameters in Piemontese wines	Stępień, A. E.; Stawarczyk, K.; Bilek, M.; Kędziora, K. M.	Roczniki Państwowego Zakładu Higieny	2015
Comparison of dairy phospholipid preparative extraction protocols in combination with analysis by high performance liquid chromatography coupled to a charged aerosol detector	Barry, K. M.; Dinan, T. G.; Murray, B.; Kelly, P. M.	International Dairy Journal	2016
Ion-pair dispersive liquid-liquid microextraction solidification of floating organic droplets method for the rapid and sensitive detection of phenolic acids in wine samples using liquid chromatography combined with a core-shell particle column	Li, J.; Jia, S.; Yoon, S.J.; Lee, S. J.; Kwon, S. W.; Lee, J.	Journal of Food Composition and Analysis	2016
An investigation into the fatty acid content of selected fish-based commercial infant foods in the UK and the impact of commonly practiced re-heating treatments used by parents for the preparation of infant formula milks	Loughrill, E.; Zand, N.	Food Chemistry	2016
Identification of unknown compounds from polyester cans coatings that may potentially migrate into food or food simulants	Paseiro-Cerrato, R.; MacMahon, S.; Ridge, C. D.; Noonan, G. O.; Begley, T. H.	Journal of Chromatography A	2016
Alterations in the plasma metabolite profile associated with improved hepatic function and glycemia in mice fed lingonberry supplemented high-fat diets	Al Hamimi, S.; Heyman-Lindén, L.; Plaza, M.; Turner, C.; Berger, K.; Spégel, P.	Molecular Nutrition and Food Research	2017
Pilot scale production of a phospholipid-enriched dairy ingredient by means of an optimised integrated process employing enzymatic hydrolysis, ultrafiltration and super-critical fluid extraction	Barry, K. M.; Dinan, T. G.; Kelly, P. M.	Innovative Food Science & Emerging Technologies	2017
Microdialysis as a new technique for extracting phenolic compounds from extra virgin olive oil	Bazzu, G.; Molinu, M. G.; Dore, A.; Serra, P. A.	Journal of Agricultural and Food Chemistry	2017
HPLC-UV and HPLC-CAD chromatographic data fusion for the authentication of the geographical origin of palm oil	Obisesan, K. A.; Jiménez-Carvelo, A. M.; Cuadros-Rodriguez, L.; Ruisánchez, I.; Callao, M. P.	Talanta	2017
Green and efficient extraction method to determine polyphenols in cocoa and cocoa products	Plaza, M.; Oliveira, D.; Nilsson, A.; Turner, C.	Food Analytical Methods	2017
Investigation of the neurotrophic effect of dairy phospholipids on cortical neuron outgrowth and stimulation	Barry, K. M.; Dinan, T. G.; Stanton, C.; Kelly, P. M.	Journal of Functional Foods	2018
Improved analysis of olive oils triacylglycerols by UHPLC-charged aerosol detection	Lucci, P.; Moret, S.; Buchini, F.; Ferlat, G.; Conte, L.	Journal of Food Composition and Analysis	2018
Combination of sugar and stable isotopes analyses to detect the use of nongrape sugars in balsamic vinegar must	Perini, M.; Nardin, T.; Camin, F.; Malacarne, M.; Larcher, R.	Journal of Mass Spectrometry	2018



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Title	Authors	Journal	Date
Identification of <i>cis/trans</i> isomers of menaquinone-7 in food as exemplified by dietary supplements	Szterk, A., Zmyslowski, A., Bus, K.	Food Chemistry	2018
Analysis of phosphatidylethanolamine, phosphatidylcholine, and plasmalogen molecular species in food lipids using an improved 2D high performance liquid chromatography system	Takahashi, R.; Nakaya, M.; Kotaniguchi, M.; Shojo, A.; Kitamura, S.	Journal of Chromatography B	2018
Development and validation of a novel high performance liquid chromatography-coupled with Corona charged aerosol detector method for quantification of glucosamine in dietary supplements	Asthana, C.; Peterson, G. M.; Shastri, M. D.; Patel, R. P.	PLoS One	2019
Effect of the solar drying process on the sensory and chemical quality of cocoa ( <i>Theobroma cacao L.</i> ) cultivated in Antioquia, Colombia	Barrientosa, L. D. P.; Oquendob, J. D. T.; Garzón, M. A. G.; Álvarez, O. L. M.	Food Research International	2019
Release and migration of cyclic polyester oligomers from bisphenol A non-intent polyester-phenol-coatings into food simulants and infant food—a comprehensive study	Eckardt, M.; Hetzel, L.; Brenz, F.; Simat, T.	Food Additives and Contaminants, A	2019
HPLC with charged aerosol detector (CAD) as a quality control platform for analysis as a quality control platform for analysis of carbohydrate polymers	Ghosh, R.; Kline, P.	BMC Research Notes	2019
Simultaneous quantification of L-arginine and monosaccharides during fermentation: An advanced chromatography approach	Ginésy, M.; Enman, J.; Rusanova-Naydenova, D.; Rova, U.	Molecules	2019
Destiny of <i>Dendrobium officinale</i> polysaccharide after oral administration: indigestible and nonabsorbing, ends in modulating gut microbiota	Li, L.; Yao, H.; Li, X.; Zhang, Q.; Wu, X.; Wong, T.; Zheng, H.; Fung, H.; Yang, B.; Ma, D.; Leung, C.; Zhang, G.; Bian, Z.; Lu, A.; Han, Q.	Journal of Agricultural and Food Chemistry	2019
Differentiation of avocados according to their botanical variety using liquid chromatographic fingerprinting and multivariate classification tree	Martín-Torres, S.; Jiménez-Carvelo, A. M.; González-Casado, A.; Cuadros-Rodríguez, L.	Journal of the Science of Food and Agriculture	2019
High sensitivity analysis and food processing stability of rare sugars	Miyoshi, M.; Kimura, I.; Inazu, T.; Izumori, K.	Food Science and Technology Research	2019
Profiling and qualitative assessment of enzymatically and thermally oxidized egg yolk phospholipids using a two-step high-performance liquid chromatography protocol	Parchem, K.; Kuszniereicz, B.; Chmiel, T.; Maciołek, P.; Bartoszek, A.	Journal of the American Oil Chemists' Society	2019
Hydrophilic interaction chromatography coupled with charged aerosol detection for simultaneous quantitation of carbohydrates, polyols and ions in food and beverages	Pitsch, J.; Weghuber, J.	Molecules	2019
Effect of triacylglycerol compositions and physical properties on the granular crystal formation of fat blends	Shimomura, Y.; Tsuchiya, M.; Ueno, S.; Shiota, M.	Journal of the American Oil Chemists' Society	2019
Authentication of the geographical origin of extra-virgin olive oil of the Arbequina cultivar by chromatographic fingerprinting and chemometrics	Vera, D. N.; Jiménez-Carvelo, A.M.; Cuadros-Rodríguez, L.; Ruisánchez, I.; Pilar Callao, M.	Talanta	2019
The chemistry of olive oil: An endless story	Conte, L.	OCL	2020



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Title	Authors	Journal	Date
Matrix effect on quantification of sugars and mannitol developed during the postharvest of cocoa: an alternative method for traceability of aroma precursors by liquid chromatography with an evaporative detector	Gil, M.; Llano, S.; Jaramillo, Y.; Quijano, J.; Londono-Londono, J.	Journal of Food Science and Technology	2020
A rapid method for the detection of extra virgin olive oil adulteration using UHPLC-CAD profiling of triacylglycerols and PCA	Green, H. S.; Li, X.; De Pra, M.; Lovejoy, K. S.; Steiner, F.; Acworth, I. N.; Wang, S. C.	Food Control	2020
Determination of seven oligosaccharides and sucrose in <i>Pseudostellaria heterophylla</i> by pressurized liquid extraction and ultra-high performance liquid chromatography with charged aerosol detector and tandem mass spectrometry	Hu, D.; Han, B.; Chen, C.; Chen, N.; Zhu, B.; Zhao, J.; Lia, S.	Journal of Chromatography A	2020
Analysis of linoleoyl and oleoyl macroglycerides by high performance liquid chromatography coupled to the atmospheric pressure photoionization mass spectrometry	Kemel, K.; Libong, D.; Solgadi, A.; Tfaili, S.; Baillet-Guffroy, A.; Laugel, C.	OCL	2020
Determining high-intensity sweeteners in white spirits using an Ultrahigh Performance Liquid Chromatograph with a photo-diode array detector and charged aerosol detector	Ma, K.; Li, X.; Zhang, Y.; Liu, F.	Molecules	2020
Optimum conditions of enzymatic reactions for production of isomaltooligosaccharides from rice flour	Park, Ji-In.; Shin, Jiyoung.; Yang, Ji-Y.	Journal of Food Hygiene and Safety	2020
Chapter 13: Analysis of lipids and lipid oxidation products	Pérez-Palacios, T.; Estévez, M.	Book: Meat Quality Analysis	2020
Sustainable palm oil—the role of screening and advanced analytical techniques for geographical traceability and authenticity verification	Ramli, U.; Tahir, N.; Rozali, N.; Othman, A.; Muhammad, N.; Muhammad, S.; Haizam, A.; Tarmizi, A.; Hashim, N.; Sambanthamurthi, R.; Singh, R.; Arif, M.; Manaf, A.; Parveez, G.	Molecules	2020
Improving the extraction of dairy phospholipids by the combined effect of ultrasound pretreatment and switchable solvents	Rathnakumar, K.; Ortega-Anaya, J.; Jimenez-Flores, R.; Reineke, J.; Martínez-Monteagudo, S. I.	Journal of Dairy Science	2020
High-performance liquid chromatography determination of free sugars and mannitol in mushrooms using corona charged aerosol detection	Stawińska, A.; Jabłońska-Ryś, E.; Stachniuk, A.	Food Analytical Methods	2020
Lipolysis products formation during <i>in vitro</i> gastric digestion is affected by the emulsion interfacial composition	Infantes-Garcia, M. R.; Verkempinck, S. H. E.; Gonzalez-Fuentes, P. G.; Hendrickx, M. E.; Grauwet, T.	Food Hydrocolloids	2021
Polyacetylene (9Z,16S)-16-hydroxy-9,17-octadecadiene-12,14-dienoic acid in <i>Dendropanax moribifera</i> leaves	Kim, M-O.; Kang, M-J.; Lee, S-U.; Kim, D-Y.; Jang, H-J.; An, J. H. Lee, H-S.; Ryu, H-W.; Oh, S-R.	Food Bioscience	2021
Monosaccharide composition analysis of polysaccharides from natural sources: Hydrolysis condition and detection method development	Liu, D.; Tang, W.; Yin, J-Y.; Nie, S-P.; Xie, M-Y.	Food Hydrocolloids	2021
Improvements in the extraction of milk phospholipids from beta-serum using ultrasound prior to tertiary amine extraction	Rathnakumar, K.; Ortega-Anaya, J.; Jimenez-Flores, R.; Martínez-Monteagudo, S. I.	LWT	2021
Application of new emerging techniques in combination with classical methods for the determination of the quality and authenticity of olive oil: A review	Zaroual, H.; Chénè, C.; El Hadrami, E.; Karoui, R.	Critical Reviews in Food Science and Nutrition	2021



## Industrial/Environmental

Title	Authors	Journal	Date
Enzymatic reaction coupled with flow-injection analysis with charged aerosol, coulometric, or amperometric detection for estimation of contamination of the environment by pesticides	Mikelova, R.; Prokop, Z.; Stejskal, K.; Adam, V.; Beklova, M.; Trnkova, L.; Kizek, R.	Chromatographia	2008
Quantitative comparison of a corona-charged aerosol detector and an evaporative light-scattering detector for the analysis of a synthetic polymer by supercritical fluid chromatography	Takahashi, K.; Kinugasa, S.; Senda, M.; Kimizuka, K.; Fukushima, K.; Matsumoto, T.; Christensen, J.	Journal of Chromatography A	2008
Oil field data / return analysis: A comparison of scale inhibitor return concentrations obtained with a novel analytical method and current commercial techniques	Thompson, A.; Gangstad, A.; Kotlar, H. K.	SPE International Oilfield Scale Conference	2008
Acylglycerol determination in biodiesel by RSLC with charged aerosol detection	Hurum, D.; Rohrer, J.	LCGC	2010
A review of separation methods for the determination of estrogens and plastics-derived estrogen mimics from aqueous systems	LaFleur, A. D.; Schug, K. A.	Analytica Chimica Acta	2011
An easy way to a fast universal method for surfactant analysis	Steiner, F.; Plante, M.; Bailey, B.; Acworth, I.	LCGC	2012
Challenges in polymer analysis by liquid chromatography	Uliyanchenko, E.; van der Wal, S.; Schoenmakers, P. J.	Polymer Chemistry	2012
Quantitation and characterization of copper plating bath additives by liquid chromatography with charged aerosol detection and electrochemical detection	Acworth, I.; Plante, M.; Bailey, B.	LCGC	2014
Batch production of FAEE-biodiesel using a liquid lipase formulation	Pedersen, A. T.; Nordblad, M.; Nielsen, P. M.; Woodley, J. M.	Journal of Molecular Catalysis B: Enzymatic	2014
Enhancing bioethanol production from delactosed whey permeate by upstream desalination techniques	Wagner, C.; Benecke, C.; Buchholz, H.; Beutel, S.	Engineering in Life Sciences	2014
Azide improves triglyceride yield in microalgae	Zalogin, T. R.; Pick, U.	Algal Research	2014
Effects of densities of brominated flame retardants on the detection response for HPLC analysis with a Corona-Charged Aerosol Detector	Matsuyama, S.; Orihara, Y.; Kinugasa, S.; Ohtani, H.	Analytical Sciences	2015
Effect of temperature on the analysis of asphaltenes by the on-column filtration/redissolution method	Ovalles, C.; Rogel, E.; Moir, M. E.; Morazan, H.	Fuel	2015
Evaluation of analytical methods for determination of kinetic hydrate inhibitor (KHI) in produced waters	Turkmen, I. R.; Upadhyay, N.; Adham, S.; Gharfeh, S.	Journal of Petroleum Science and Engineering	2015
Determination of perfluorinated carboxylic acids in water using liquid chromatography coupled to a corona-charged aerosol detector	Zhou, Q.; Chen, M.; Zhu, L.; Tang, H.	Talanta	2015
Evaluation and analysis of environmentally sustainable methodologies for extraction of betulin from birch bark with a focus on industrial feasibility	Friden, M. E.; Jumaah, F.; Gustavsson, C.; Enmark, M.; Fornstedt, T.; Turner, C.; Sjoberg, P. J. R.; Samuelsson, J.	Green Chemistry	2016



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Title	Authors	Journal	Date
Simultaneous analysis of silicon and boron dissolved in water by combination of electro-dialytic salt removal and ion-exclusion chromatography with corona charged aerosol detection	Mori, M.; Sagara, K.; Arai, K.; Nakatani, N.; Ohira, S.; Toda, K.; Itabashi, H.; Kozaki, D.; Sugo, Y.; Watanabe, S.; Ishioka, N. S.; Tanaka, K.	Journal of Chromatography A	2016
The simultaneous determination of silicic, boric and carbonic acids in natural water via ion-exclusion chromatography with a charged aerosol detector	Otsuka, Y.; Nakatani, N.; Takahashi, T.; Kozaki, D.; Mori, M.; Tanaka, K.	Separations	2016
Chapter 15: Applications of charged aerosol detection for characterization of industrial polymers	Cools, P.; Brooijmans, T.	Book: Charged Aerosol Detection for Liquid Chromatography and Related Separation Techniques	2017
Chapter 8: Polymers and surfactants	Kou, D.; Manius, G.; Tian, H., Chokshi, H. P.	Book: Charged Aerosol Detection for Liquid Chromatography and Related Separation Techniques	2017
Chapter 14: Charged aerosol detection of scale inhibiting polymers in oilfield chemistry applications	Thompson, A. K.	Book: Charged Aerosol Detection for Liquid Chromatography and Related Separation Techniques	2017
Universal response quantification approach using a Corona Charged Aerosol Detector (CAD)—Application on linear and cyclic oligomers extractable from polycondensate plastics polyesters, polyamides and polyarylsulfones	Eckardt, M.; Kubicova, M.; Simat, T. J.	Journal of Chromatography A	2018
Development of a LC-MS/MS method for the quantification of goniodomins A and B and its application to <i>Alexandrium pseudogonyaulax</i> strains and plankton field samples of Danish coastal waters	Krock, B.; Tillmann, U.; Wen, Y.; Hansen, P. J.; Larsen, T. O.; Andersen, A. J. C.	Toxicon	2018
Simultaneous determination of anionic, amphoteric and cationic surfactants mixtures in surface water	Paun, I.; Iancu, V. I.; Cruceru, L.; Niculescu, M.; Chiriac, F. L.	Rev Chim (Bucharest)	2018
Comprehensive two-dimensional liquid chromatography of heavy oil	van Beek, F. T.; Edam, R.; Pirok, B. W. J.; Genuit, W. J. L.; Schoenmakers, P. J.	Journal of Chromatography A	2018
Molecular characterization of nonionic surfactant components of the Corexit® 9500 oil spill dispersant by high-resolution mass spectrometry	Choyke, S.; Ferguson, P. L.	Rapid Communications in Mass Spectrometry	2019
Microwave-assisted synthesis and characterization of stearic acid sucrose ester: A bio-based surfactant	Kondamudi, N.; McDougal, O. M.	Journal of Surfactants and Detergents	2019
Determination of bisphenol analogues in food-contact plastics using diode array detector, charged aerosol detector and evaporative light-scattering detector	Wang, H.; Song, S.; Shao, M.; Gao, Y.; Yang, C.; Li, Y.; Wang, W.; He, Y.; Li, P.	Ecotoxicology and Environmental Safety	2019
Determination of color developers replacing bisphenol A in thermal paper receipts using diode array and Corona charged aerosol detection—A German market analysis 2018/2019	Eckardt, M.; Kubicova, M.; Tong, D.; Simat, T. J.	Journal of Chromatography A	2020



## Industrial/Environmental

Title	Authors	Journal	Date
Detection challenges in quantitative polymer analysis by liquid chromatography	Knol, W. C.; Pirok, B. W.; Peters, R. A.	Journal of Separation Science	2020
Investigations of polymer samples of polyamide 11 concerning the content of monomer, oligomers, and the oxidation stabilizer Irganox 1098 by utilizing inverse gradient HPLC in combination with a triple detection system (diode array detection/mass spectrometry/charged aerosol detection)	Scherer, B.; Matysik, F-M.	Talanta Open	2021





## Natural Products/Botanicals

Title	Authors	Journal	Date
The real nature of the indole alkaloids in <i>Cortinarius infractus</i> : Evaluation of artifact formation through solvent extraction method development	Brondz, I.; Ekeberg, D.; Høiland, K.; Bell, D.; Annino, A.	Journal of Chromatography A	2007
Sensitive determination of saponins in <i>Radix et Rhizoma Notoginseng</i> by Charged Aerosol Detector coupled with HPLC	Bai, C. C.; Han, S. Y.; Chai, X. Y.; Jiang, Y.; Li, P.; Tu, P. F.	Journal of Liquid Chromatography & Related Technologies	2009
Certification of a pure reference material for the ginsenoside Rg <sub>1</sub>	Kim, D.; Chang, J.; Sohn, H.; Cho, B.; Ko, S.; Nho, K.; Jang, D.; Lee, S.	Accreditation and Quality Assurance	2009
Performance evaluation of Charged Aerosol and Evaporative Light Scattering detection for the determination of ginsenosides by LC	Wang, L.; He, W. S.; Yan, H. X.; Jiang, Y.; Bi, K. S.; Tu, P. F.	Chromatographia	2009
HPLC in natural product analysis: The detection issue	Wolfender, J. L.	Planta Medica	2009
Assessment of microcystin purity using charged aerosol detection	Edwards, C.; Lawton, L. A.	Journal of Chromatography A	2010
Comparison between evaporative light scattering detection and charged aerosol detection for the analysis of saikosaponins	Eom, H. Y.; Park, S. Y.; Kim, M. K.; Suh, J. H.; Yeom, H.; Min, J. W.; Kim, U.; Lee, J.; Youm, J. R.; Han, S. B.	Journal of Chromatography A	2010
Analysis of terpene lactones in a Ginkgo leaf extract by high-performance liquid chromatography using charged aerosol detection	Kakigi, Y.; Mochizuki, N.; Icho, T.; Hakamatsuka, T.; Goda, Y.	Bioscience, Biotechnology, and Biochemistry	2010
Optimization of pressurized liquid extraction for spicatoside A in <i>Liriope platyphylla</i>	Kim, S. H.; Kim, H. K.; Yang, E. S.; Lee, K. Y.; Du Kim, S.; Kim, Y. C.; Sung, S. H.	Separation and Purification Technology	2010
Chapter 13: Photodiode array (PDA) and other detection methods in HPLC of plant metabolites	Markowski, W.; Waksmundzka- Hajnos, M.	Book: High Performance Liquid Chromatography in Phytochemical Analysis	2010
A biosynthetic pathway for BE-7585A, a 2-thiosugar-containing angucycline-type natural product	Sasaki, E.; Ogasawara, Y.; Liu, H. W.	Journal of the American Chemical Society	2010
Simultaneous determination of triterpenoid saponins from <i>Pulsatilla koreana</i> using high performance liquid chromatography coupled with a charged aerosol detector (HPLC-CAD)	Yeom, H.; Suh, J. H.; Youm, J. R.; Han, S. B.	Bulletin of the Korean Chemical Society	2010
Simple and direct analysis of phytosterols in red palm oil by reverse phase HPLC and charged aerosol detection	Acworth, I. N.; Bailey, B.; Plante, M.; Gamache, P.	Planta Medica	2011
“Dilute-and-shoot” triple parallel mass spectrometry method for analysis of vitamin D and triacylglycerols in dietary supplements	Byrdwell, W. C.	Analytical and Bioanalytical Chemistry	2011
Utilization of RP-HPLC fingerprinting analysis for the identification of diterpene glycosides from <i>Stevia rebaudiana</i>	Chaturvedula, V.; Prakash, I.	International Journal of Research in Phytochemistry and Pharmacology	2011
Acid and alkaline hydrolysis studies of stevioside and rebaudioside A	Chaturvedula, V.; Prakash, I.	Journal of Applied Pharmaceutical Science	2011
High-performance liquid chromatography analysis of plant saponins: An update 2005-2010	Negi, J. S.; Singh, P.; Pant, G. J.; Rawat, M. S.	Pharmacognosy Reviews	2011



## Natural Products/Botanicals

Title	Authors	Journal	Date
Isolation and analysis of ginseng: advances and challenges	Qi, L.; Wang, C.; Yuan, C.	Natural Product Reports	2011
Recent methodology in ginseng analysis	Baek, S.; Bae, O.; Park, J.	Journal of Ginseng Research	2012
Spectral analysis and chemical studies of the sweet constituent, rebaudioside A	Chaturvedula, V.; Prakash, I.	European Journal of Medicinal Plants	2012
Conceptual process synthesis for isolation and purification of natural products from plants—A case study of artemisinin from <i>Artemisia annua</i>	Malwade, C.; Qu, H.; Rong, B-G. H.; Christensen, L. P.	Computer Aided Chemical Engineering	2012
Profiling Hoodia extracts by HPLC with Charged Aerosol Detection and electrochemical array detection and pattern recognition	Acworth, I.; Zhang, Q.; Thomas, D.	Planta Medica	2013
A new application of Charged Aerosol Detection in liquid chromatography for the simultaneous determination of polar and less polar ginsenosides in ginseng products	Jia, S.; Li, J.; Yunusova, N.; Park, J. H.; Kwon, S. W.; Lee, J.	Phytochemical Analysis	2013
Effects of Korean red ginseng extract on acute renal failure induced by gentamicin and pharmacokinetic changes by metformin in rats	Lee, Y. K.; Chin, Y-W.; Choi, Y. H.	Food and Chemical Toxicology	2013
Application of high-performance liquid chromatography with charged aerosol detection for universal quantitation of undeclared phosphodiesterase-5 inhibitors in herbal dietary supplements	Poplawska, M.; Blazewicz, A.; Bukowinska, K.; Fijalek, Z.	Journal of Pharmaceutical and Biomedical Analysis	2013
Quality control of traditional Chinese medicines: A review	Song, X-Y.; Li, Y. D.; Shi, Y-P.; Jin, L.; Chen, J.	Chinese Journal of Natural Medicines	2013
Ginseng total saponins reverse corticosterone-induced changes in depression-like behavior and hippocampal plasticity-related proteins by interfering with GSK-3 $\beta$ -CREB signaling pathway	Chen, L.; Dai, J.; Wang, Z.; Zhang, H.; Huang, Y.; Zhao Y.	Evidence-Based Complementary and Alternative Medicine	2014
Origin of $\beta$ -carotene-rich plastoglobuli in <i>Dunaliella bardawil</i>	Davidi, L.; Shimoni, E.; Khozin-Goldberg, I.; Zamir, A.; Pick, U.	Plant Physiology	2014
Determination of C-glucosidic ellagitannins in <i>Lythri salicariaeherba</i> by Ultra-High Performance Liquid chromatography coupled with charged aerosol detector: Method development and validation	Granica, S.; Piwowarski, J. P.; Kiss, A. K.	Phytochemical Analysis	2014
Phytochemical investigations of <i>Polygonum aviculare</i> , <i>Agrimonia eupatoria</i> and <i>Lythrum salicaria</i> by HPLC-DAD-MS3-CAD method—application of corona charged aerosol detection (CAD) for analysis of plant phenolics	Granica, S.; Piwowarski, J.; Klbowska, A.; Krupa, K.; Kiss, A.	Planta Medica	2014
UHPLC/UV/CAD/HRMS analysis of <i>Ginkgo biloba</i> extracts. An approach for comparison of similar botanicals	Krivos, K. L.; Regg, B. T.; Price, J. M.; McMillan, D. A.; Baker, T. R.	Planta Medica	2014
Determination of total ginsenosides in ginseng extracts using charged aerosol detection with post-column compensation of the gradient	Ouyang, L. F.; Wang, Z. L.; Dai, J. G.; Chen, L.; Zhao, Y. N.	Chinese Journal of Natural Medicines	2014
Structural characterization of the degradation products of a minor natural sweet diterpene glycoside rebaudioside M under acidic conditions	Prakash, I.; Chaturvedula, V. S. P.; Markosyan, A.	International Journal of Molecular Science	2014



## Natural Products/Botanicals

Title	Authors	Journal	Date
Profiling and quantitating the constituents of red clover extracts using UHPLC/UV/CAD/HRMS: A component of the safety assessment process	Price, J. M.; Little, J. G.; Baker, T. R.	Planta Medica	2014
Dual-gradient liquid chromatography-tandem charged aerosol detector for detection of macromolecules in traditional Chinese medicine injections	Zhang, T.; Wang, Y.; Gu, D.; Zhang, L.; Jin, Y.	Chinese Journal of Analytical Chemistry	2014
Simultaneous determination of four lignans in <i>Magnoliae flos</i> extract by high performance liquid chromatography-electrospray ionization mass spectrometry	Zhao, X.; Yang, G.; Zheng, G.; Hang, T.; Fan, G.	Chinese Journal of Analytical Chemistry	2014
Preparation and quality assessment of high-purity ginseng total saponins by ion exchange resin combined with macroporous adsorption resin separation	Zhao, Y. N.; Wang, Z. L.; Dai, J. G.; Chen, L.; Huang, Y. F.	Chinese Journal of Natural Medicines	2014
Quantitative and qualitative investigations of pharmacopoeial plant material <i>Polygoni avicularis herba</i> by UHPLC-CAD and UHPLC-ESI-MS methods	Granica, S.	Phytochemical Analysis	2015
Qualitative and quantitative analyses of secondary metabolites in aerial and subaerial of <i>Scorzonera hispanica</i> L. (black salsify)	Granica, S.; Lohwasser, U.; Jöhrer, K.; Zidorn, C.	Food Chemistry	2015
A non-derivative method for the quantitative analysis of isosteroidal alkaloids from <i>Fritillaria</i> by high performance liquid chromatography combined with charged aerosol detection	Long, Z.; Guo, Z. M.; Acworth, I. N.; Liu, X. D.; Jin, Y.; Liu, X.G.; Liu, L.; Liang, L. N.	Talanta	2016
Structure-based prediction of CAD response factors of dammarane-type tetracyclic triterpenoid saponins and its application to the analysis of saponin contents in raw and processed <i>Panax notoginseng</i>	Peng, M.; Zhang, T.; Ding, Y.; Yi, Y. X.; Yang, Y. J.; Le, J.	RSC Advances	2016
Quantitation of phenylpropanoids and iridoids in insulin-sensitising extracts of <i>Leonurus sibiricus</i> L. ( <i>Lamiaceae</i> )	Pitschmann, A.; Zehl, M.; Heiss, E.; Purevsuren, S.; Urban, E.; Dirsch, V. M.; Glasl, S.	Phytochemical Analysis	2016
Comprehensive quantitative analysis of Chinese patent drug YinHuang drop pill by ultra high-performance liquid chromatography quadrupole time of flight mass spectrometry	Wong, T. L.; An, Y. Q.; Yan, B. C.; Yue, R. Q.; Zhang, T. B.; Ho, H. M.; Ren, T. J.; Fung, H. Y.; Ma, D. L.; Leung, C. H.; Liu, Z. L.; Pu, J. X.; Han, Q. B.; Sun, H. D.	Journal of Pharmaceutical and Biomedical Analysis	2016
Quantitative analysis of toosendanin in the fruit of <i>Melia toosendan</i> Sieb. Et Zucc ( <i>Meliaceae</i> ) by high-performance liquid chromatography coupled with charged aerosol detection	Zhang, C. N.; Sun, X. G.; Zhao, Y.; Zhang, J.; Ma, F. X.; Long, Z.; Liang, L. N.; Wang, Y. Z.; Ma, B. P.	Chromatographia	2016
Quantitative determination of 15 bioactive triterpenoid saponins in different parts of <i>Acanthopanax henryi</i> by HPLC with charged aerosol detection and confirmation by LC-ESI-TOF-MS	Zhang, X. D.; Li, Z.; Liu, G. Z.; Wang, X.; Kwon, O. K.; Lee, H. K.; Whang, W. K.; Liu, X. Q.	Journal of Separation Science	2016
A UHPLC method for the rapid separation and quantification of phytosterols using tandem UV/Charged aerosol detection—A comparison of both detection techniques	Fibigr, J.; Šatinský, D.; Solich, P.	Journal of Pharmaceutical and Biomedical Analysis	2017
Comprehensive quantitative analysis of 32 chemical ingredients of a Chinese patented drug sanhuang tablet	Fung, H. Y.; Lang, Y.; Ho, H. M.; Wong, T. L.; Ma, D. L.; Leung, C. H.; Han, Q. B.	Molecules	2017



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Title	Authors	Journal	Date
Chapter 9: Application of charged aerosol detection in traditional herbal medicines	Liang, L.; Jiang, Y.; Tu, P.	Book: Charged Aerosol Detection for Liquid Chromatography and Related Separation Techniques	2017
<i>In silico</i> approach to safety of botanical dietary supplement ingredients utilizing constituent-level characterization	Little, J. G.; Marsman, D. S.; Baker, T. R.; Mahony, C.	Food and Chemical Toxicology	2017
Optimization of ultrasonic-assisted extraction of fatty acids in seeds of <i>Brucea javanica</i> (L.) Merr. from different sources and simultaneous analysis using high-performance liquid chromatography with Charged Aerosol Detection	Wu, Z.; Li, L.; Li, N.; Zhang, T.; Pu, Y.; Zhang, X.; Zhang, Y.; Wang, B.	Molecules	2017
Techniques for the analysis of pentacyclic triterpenoids in medicinal plants	Xu, C.; Wang, B.; Pu, Y.; Tao, J.; Zhang, T.	Journal of Separation Science	2017
A modification on the vector cosine algorithm of similarity analysis for improved discriminative capacity and its application to the quality control of <i>Magnoliae Flos</i>	Yang, G.; Zhao, X.; Fan, G.	Journal of Chromatography A	2017
Simultaneous fingerprint, quantitative analysis and anti-oxidative based screening of components in <i>Rhizoma Smilacis Glabrae</i> using liquid chromatography coupled with Charged Aerosol and Coulometric array Detection	Yang, G.; Zhao, X.; Wen, J.; Zhou, T.; Fan, G.	Journal of Chromatography B	2017
Determination of three saponins in rhizoma and fibrous root of <i>Trillium tschonoskii</i> and <i>Trillium kamtschaticum</i>	Yang, Y. J.; Sun, X. G.; Yang, J.; Li, Q.; Zhang, J.; Zhao, Y.; Ma, B. P.; Guo, B. L.	Zhongguo Zhong Yao Za Zhi	2017
Chromatographic fingerprint analysis of <i>Toosendan fructus</i> by HPLC-CAD coupled with chemometrics methods	Zhang, C. N.; Wang, Y. Z.; Sun, X. G.; Zhao, Y.; Zheng, W.; Li, W. H.; Long, Z.; Ma, B. P.	Yao Xue Xue Bao	2017
Rapid separation and simultaneous quantitative determination of 13 constituents in <i>Psoraleae fructus</i> by a single marker using high-performance liquid chromatography with diode array detection	Zhang, Y.; Chen, Z.; Xu, X.; Zhou, Q.; Liu, X.; Liao, L.; Zhang, Z.; Wang, Z.	Journal of Separation Science	2017
A multi-detector chromatographic approach for characterization and quantitation of botanical constituents to enable <i>in silico</i> safety assessments	Baker, T. R.; Regg, B. T.	Analytical and Bioanalytical Chemistry	2018
Preparation and identification of oligosaccharides in lotus seeds and determination of their distribution in different parts of lotus	Chen, L.; Hu, D.; Liang, X.; Zhao, J.; Li, S.	Electrophoresis	2018
Analysis of raffinose family oligosaccharides in selected plants using high-performance liquid chromatography with charged aerosol detector	Chen, L-X.; Wu, D-T.; Zhao, J. Li, S-P.	Chinese Journal of Pharmaceutical Analysis	2018
Laser microdissection hyphenated with high performance gel permeation chromatography-charged aerosol detector and ultraperformance liquid chromatography-triple quadrupole mass spectrometry for histochemical analysis of polysaccharides in herbal medicine: Ginseng, a case study	Chen, Q-L.; Chen, Y-J.; Zhou, S-S.; Yip, K-M.; Xua, J.; Chen, H-B.; Zhao, Z-Z.	International Journal of Biological Macromolecules	2018
Development and application of bio-sample quantification to evaluate stability and pharmacokinetics of inulin-type fructo-oligosaccharides from <i>Morinda officinalis</i>	Chia, L.; Chena, L.; Zhangb, J.; Zhaoa, J.; Lia, S.; Zheng, Y.	Journal of Pharmaceutical and Biomedical Analysis	2018



## Natural Products/Botanicals

Title	Authors	Journal	Date
Determination of terpene lactones in ginkgo leaf extract by high performance liquid chromatography-charged aerosol detector	Liu, L-N.; Jin, H-Y.; Pan, Y-Y.; Liu, X-D.; Jin, Y.; Shuang-cheng, M. A.	Chinese Journal of Pharmaceutical Analysis	2018
Application of high-performance liquid chromatography with charged aerosol detection (LC-CAD) for unified quantification of synthetic cannabinoids in herbal blends and comparison with quantitative NMR results	Poplawska, M.; Błażewicz, A.; Kamiński, K.; Bednarek, E.; Fijałek, Z.; Kozerski, L.	Forensic Toxicology	2018
Multi-detector characterization of grape seed extract to enable <i>in silico</i> safety assessment	Sica, V. P.; Mahony, C.; Baker, T. R.	Frontiers in Chemistry	2018
Determination of fatty acids in the seeds of <i>Lepidium apetalum Willdenow</i> , <i>Descurainia sophia (L.) Webb ex Prantl</i> , and <i>Draba nemorosa L.</i> by ultra-high-performance liquid chromatography equipped with a charged aerosol detector	Kim, H. S.; Moon, B. C.; Sungyu Yang, Song, J-H.; Chun, J. M.; Kwon, B-I.; Yeong Lee, A.	Journal of Liquid Chromatography and Related Technologies	2019
A validated UHPLC-CAD method for quantitative determination of Astragaloside VII	Kurt, M. U.; Bedir, O. T.	Planta Medica	2019
Yuccalechins A–C from the <i>Yucca schidigera</i> Roezli ex Ortgies bark: Elucidation of the relative and absolute configurations of three new spiroflavonoids and their cholinesterase inhibitory activities	Pecio, Ł.; Alilou, M.; Kozachok, S.; Orhan, I. E.; Eren, G.; Deniz, F. S.; Stuppner, H.; Oleszek, W.	Molecules	2019
Evaluating sufficient similarity of botanical dietary supplements: Combining chemical and <i>in vitro</i> biological data	Ryan, K.; Huang, M.; Ferguson, S.; Waidyanatha, S.; Ramaiahgari, S.; Rice, J.; Dunlap, P.; Auerbach, S.; Mutlu, E.; Cristy, T.; Peirfelice, J.; DeVito, M.; Smith-Roe, S.; Rider, C.	Toxicological Sciences	2019
Phytochemical analysis of <i>Brasolia</i> , <i>Elleanthus</i> , and <i>Sobralia</i> . Three genera of orchids with antibacterial potential against <i>Staphylococcus aureus</i>	Rykaczewska, M.; Krauze-Baranowskab, M.; Żuchowski, J.; Krychowiak-Maśnickad, M.; Fikowicz-Krośkod, J.; Królickad, A.	Phytochemistry Letters	2019
Rapid securing of reference substances from <i>Peucedanum japonicum Thunberg</i> by recycling preparative high-performance liquid chromatography	Won, H. J.; Lee, S. M.; Kim, D-Y.; Kwon, O-K.; Park, M. H.; Kim, J-H.; Ryu, H. W.; Oha, S-R.	Journal of Chromatography B	2019
Analytical methods and biological activities of <i>Panax notoginseng</i> saponins: Recent trends	Xu, C.; Wang, W.; Wang, B.; Zhang, T.; Cui, X.; Pu, Y.; Li, N.	Journal of Ethnopharmacology	2019
Fast and non-derivative method based on high-performance liquid chromatography-charged aerosol detection for the determination of fatty acids from <i>Agastache rugosa (Fisch. et Mey.) O. Ktze.</i> seeds	Yang, R.; Wu, Z.; Pu, Y.; Zhang, T.; Wang, B.	Natural Product Research	2019
Quality assessment of <i>Astragali radix</i> from different production areas by simultaneous determination of thirteen major compounds using tandem UV/charged aerosol detector	Zhang, C-E.; Liang, L-J.; Yu, X-H.; Wu, H.; Tub, P-F.; Ma,Z-J.; Zhao, K-J.	Journal of Pharmaceutical and Biomedical Analysis	2019
Comparative quality of the forms of decoction pieces evaluated by multidimensional chemical analysis and chemometrics: <i>Poria cocos</i> , a pilot study	Zhu, L-X.; Xu, J.; Wu, Y.; Su, L-F.; Lam, K. Y. C.; Qi, E. R.; Dong, X-P.; Chen, H-B.; Liu, Y-D.	Journal of Food and Drug Analysis	2019



## Natural Products/Botanicals

Title	Authors	Journal	Date
Development of a comprehensive method combining UHPLC-CAD fingerprint, multi-components quantitative analysis for quality evaluation of Zishen Yutai Pills: A step towards quality control of Chinese patent medicine	Cao, J.; Lei, T.; Wu, S.; Li, H.; Deng, Y.; Lin, R.; Ning, N.; Geng, C.; Wang, S.; Wu, X.; Li, P.; Wang, Y.	Journal of Pharmaceutical and Biomedical Analysis	2020
Fructo-oligosaccharides from <i>Morinda officinalis</i> remodeled gut microbiota and alleviated depression features in a stress rat model	Chi, L.; Khan, I.; Lin, Z.; Zhang, J.; Lee, M. Y. S.; Leong, W.; Hsiao, W. L. W.; Zheng, Y.	Phytomedicine	2020
Recent advances in untargeted and targeted approaches applied in herbal-extracts and essential-oils fingerprinting—A review	Kharbach, M.; Marmouzi, I.; El Jemli, M.; Bouklouze, A.; Heyden, Y. V.	Journal of Pharmaceutical and Biomedical Analysis	2020
Reinvestigation of <i>Herniaria glabra</i> L. saponins and their biological activity	Kozachok, S.; Pecio, L.; Orhan, I. E.; Deniz, F. S. S.; Marchyshyn, S.; Oleszeka, W.	Phytochemistry	2020
Simultaneous determination of five saponins in Yaobitong capsule by HPLC-CAD	Si, L-T.; Ni, H-F.; Li, Q.; Luan, L-J.; Chen, Y.; Liu, X-S.; Wu, Y-J.	Acta Pharmaceutica Sinica	2020
Response of blood platelets to phenolic fraction and non-polar fraction from the leaves and twigs of <i>Elaeagnus rhamnoides</i> (L.) A. Nelson <i>in vitro</i>	Skalski, B.; Stochmal, A.; Żuchowski, J.; Grabarczyk, L.; Olas, B.	Biomedicine and Pharmacotherapy	2020
A strategy for test article selection and phytochemical characterization of <i>Echinacea purpurea</i> extract for safety testing	Waidyanatha, S.; Pierfelice, J.; Cristy, T.; Mutlu, E.; Burbach, B.; Rider, C. V.; Ryan, K.	Food and Chemical Toxicology	2020
Comparison between charged aerosol detector and evaporative light scattering detector for analysis of sugar in <i>Zhusheyong Yiqi Fumai</i> and study on accuracy of methods	Ying, W.; Yuan-Xi, L.; Hong-Shui, Y.; Wei-Yi, X. U.; Jian-Ming, C.; Hong-Yu, J.; Shuang-Cheng, M. A.	Zhongguo Zhong Yao Za Zhi	2020
Fingerprinting analysis of non-saponins from water-soluble part and determination of dencichine from <i>Panax notoginseng</i> , <i>P. ginseng</i> and <i>P. quinquefolium</i> based on liquid chromatography coupled with charged aerosol detection	Zhang, Y. H.; Yang, Y. G.; Shi, L.; Jin, Y.; Wang, Z-T.	China Journal Chinese Material Medica	2020
Qualitative and quantitative characterization of carbohydrate profiles in three different parts of <i>Poria cocos</i>	Zhu, L.; Wang, X.; Li, S.; Qi, E. R.; Meng, J.; Lam, K.; Dong, X.; Xu, J.; Chen, H.; Zhao, Z.		2020
Identification and determination of fructooligosaccharides in snow chrysanthemum ( <i>Coreopsis tinctoria nutt.</i> )	Chen, L-X.; Hu, D-J.; Xu, W-F.; Li, S-P.; Zhao, J.	World Journal of Traditional Chinese Medicine	2021
A <i>Citrullus colocynthis</i> fruit extract acutely enhances insulin-induced GLUT4 translocation and glucose uptake in adipocytes by increasing PKB phosphorylation	Drissi, F.; Lahfa, F.; Gonzalez, T.; Peiretti, F.; Tanti, J-F.; Haddad, M.; Fabre, N.; Govers, R.	Journal of Ethnopharmacology	2021
Miniaturized solid-phase extraction using a mesoporous molecular sieve SBA-15 as sorbent for the determination of triterpenoid saponins from <i>Pulsatilla chinensis</i> by ultrahigh-performance liquid chromatography-charged aerosol detection	Jiang, H.; Zhang, W.; Yang, J.; Xue, G.; Su, S.; Li, C.; Wang, Q.; Guo, W.; Xu, H.	Journal of Pharmaceutical and Biomedical Analysis	2021



## Natural Products/Botanicals

Title	Authors	Journal	Date
Leaves of <i>Cleome amblyocarpa</i> Barr. And Murb. And <i>Cleome arabica</i> L.: Assessment of nutritional composition and chemical profile (LC-ESI-MS/MS), anti-inflammatory and analgesic effects of their extracts	Khlifi, A.; Pecio, L.; Lobo, J. C.; Melo, D.; Ayache, S. B.; Flamini, G.; Oliveira, M.; Oleszek, W.; Achour, L.	Journal of Ethnopharmacology	2021
Quantitative determination of 7 saikosaponins in xiaochaihu granules using High-Performance Liquid Chromatography with charged aerosol detection	Liu, A.; Xu, T.; Yang, W.; Zhou, D.; Sha, Y.	Journal of Analytical Methods in Chemistry	2021
Establishment and validation of the quantitative analysis of multi-components by single marker for the quality control of Qishen Yiqi dripping pills by high-performance liquid chromatography with charged aerosol detection	Wu, L.; Zhang, S.; Zhou, L.; Xiong, H.; Gong, X.; Zhang, S.; Pan, J.; Qu, H.	Phytochemical Analysis	2021
Identification and target-pathway deconvolution of FFA4 agonists with anti-diabetic activity from <i>Arnebia euchroma</i> (Royle) Johnston	Xu, F.; Wang, P.; Zhang, X.; Hou, T.; Qu, L.; Wang, C.; Wang, J.; Liu, Y.; Liang, X.	Pharmacological Research	2021



## Pharmaceutical/Biopharmaceuticals

Title	Authors	Journal	Date
Compound purity assessment and impurity testing with Corona CAD	Asa, D.	G.I.T. Laboratory Journal	2005
Corona-charged aerosol detection in supercritical fluid chromatography for pharmaceutical analysis	Brunelli, C.; Gorecki, T.; Zhao, Y.; Sandra, P.	Analytical Chemistry	2007
A charged aerosol detector that reduces vaccine development time	Fireman, J.; Carter, D.; Wallace, M.	American Laboratory	2007
Determination of phospholipid and its degradation products in liposomes for injection by HPLC-Charged Aerosol Detection (CAD)	Jiang, Q-W.; Yang, R.; Mei, X-G.	Chinese Pharmaceutical Journal	2007
Evaluation of charged aerosol detection (CAD) as a complementary technique for high-throughput LC-MS-UV-ELSD analysis of drug discovery screening libraries	Loughlin, J.; Phan, H.; Wan, M.; Guo, S.; May, K.; Lin, B. W.	American Laboratory	2007
HPLC with charged aerosol detection for pharmaceutical cleaning validation	Snow, N.; Forsatz, B.	LCGC	2007
Quantitation of acetol in common pharmaceutical excipients using LC-MS	Beilin, E.; Baker, L.; Culbert, P.; Tolft, N.	Journal of Pharmaceutical and Biomedical Analysis	2008
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Determination of inorganic pharmaceutical counterions using hydrophilic interaction chromatography coupled with a Corona® CAD detector	Huang, Z.; Richards, M. A.; Zha, Y.; Francis, R.; Lozano, R.; Ruan, J.	Journal of Pharmaceutical and Biomedical Analysis	2009
Aerosol based detectors for the investigation of phospholipid hydrolysis in a pharmaceutical suspension formulation	Nair, L. M.; Werling, J. O.	Journal of Pharmaceutical and Biomedical Analysis	2009
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Simple and precise detection of lipid compounds present within liposomal formulations using a charged aerosol detector	Schönherr, C.; Touchene, S.; Wilser, G.; Peschka-Süss, R.; Francese, G.	Journal Chromatography, A	2009
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Validated HPLC method for the quantitative analysis of a 4-methanesulfonyl-piperidine hydrochloride salt	Soman, A.; Jerfy, M.; Swanek, F.	Journal of Liquid Chromatography & Related Technologies	2009
An overview of Corona charged aerosol detection in pharmaceutical analysis	Swartz, M.; Emanuele, M.; Awad, A.; Grenier, A.; Hartley, D.	Synomics Pharma White Paper	2009
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Determination of pancuronium and its impurities in pharmaceutical preparation by LC with Charged Aerosol Detection	Blazewicz, A.; Fijalek, Z.; Sarna, K.; Warowna-Grzeskiewicz, M.	Chromatographia	2010
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Development and validation of a RP-HPLC method for the determination of gentamicin sulfate and its related substances in a pharmaceutical cream using a short pentafluorophenyl column and a charged aerosol detector	Joseph, A.; Rustum, A.	Journal of Pharmaceutical and Biomedical Analysis	2010
Determination of phospholipid and its degradation products in liposomes for injection by HPLC-charged aerosol detection CAD	Qingwei, J.; Rui, Y.; Xingguo, M.	Europe PMC	2010



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Determination of gentamicin sulphate composition and related substances in pharmaceutical preparations by LC with Charged Aerosol Detection	Stypulkowska, K.; Blazewicz, A.; Fijalek, Z.; Sarna, K.	Chromatographia	2010
Simultaneous determination of positive and negative pharmaceutical counterions using mixed-mode chromatography coupled with charged aerosol detector	Zhang, K.; Dai, L.; Chetwyn, N. P.	Journal of Chromatography A	2010
Identification and control of impurities in streptomycin sulfate by high-performance liquid chromatography coupled with mass detection and corona charged-aerosol detection	Holzgrabe, U.; Nap, C. J.; Kunz, N.; Almeling, S.	Journal of Pharmaceutical and Biomedical Analysis	2011
Development of a reversed-phase HPLC impurity method for a UV variable isomeric mixture of a CRF drug substance intermediate with the assistance of Corona CAD	Huang, Z. Y.; Neverovitch, M.; Lozano, R.; Tattersall, P.; Ruan, J.	Journal of Pharmaceutical Innovation	2011
Comparison of two aerosol-based detectors for the analysis of gabapentin in pharmaceutical formulations by hydrophilic interaction chromatography	Jia, S.; Park, J. H.; Lee, J.; Kwon, S. W.	Talanta	2011
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Charged aerosol detection in pharmaceutical analysis	Almeling, S.; Ilko, D.; Holzgrabe, U.	Journal of Pharmaceutical and Biomedical Analysis	2012
Chapter 10: Comprehensive approaches for measurement of active pharmaceutical ingredients, counter-ions, and excipients using HPLC with charged aerosol detection	Crafts, C.; Bailey, B.; Gamache, P.; Liu, X.; Acworth, I.	Book: Applications of Ion Chromatography for Pharmaceutical and Biological Products	2012
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On-line coupling of size exclusion chromatography with mixed-mode liquid chromatography for comprehensive profiling of biopharmaceutical drug product	He, Y.; Friese, O. V.; Schlittler, M. R.; Wang, Q.; Yang, X.; Bass, L. A.; Jones, M. T.	Journal of Chromatography A	2012
Strategies for the analysis of pharmaceutical cocrystals using HPLC with Charged Aerosol Detection	Jacob, S.; Mendonsa, S. D.	Chromatographia	2012
A novel sample selection strategy by near-infrared spectroscopy-based high throughput tablet tester for content uniformity in early-phase pharmaceutical product development	Shi, Z.; Hermiller, J. G.; Gunter, T. Z.; Zhang, X.; Reed, D. E.	Journal of Pharmaceutical Sciences	2012
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Forced degradation studies to assess the stability of drugs and products	Singh, S.; Junwal, M.; Modhe, G.; Tiwari, H.; Kurmi, M.; Parashar, N.; Sidduri, P.	TrAC Trends in Analytical Chemistry	2013
Determination of neomycin and related substances in pharmaceutical preparations by reversed-phase high performance liquid chromatography with mass spectrometry and charged aerosol detection	Stypulkowska, K.; Blazewicz, A.; Fijalek, Z.; Warowna-Grzeskiewicz, M.; Srebrzynska, K.	Journal of Pharmaceutical and Biomedical Analysis	2013
Analysis of pharmaceutical impurities using multi-heartcutting 2D LC coupled with UV-charged aerosol MS detection	Zhang, K.; Li, Y.; Tsang, M.; Chetwyn, N. P.	Journal of Separation Science	2013
Amino alcohol cationic lipids for nucleotide delivery	Budzik, B. W.; Colletti, S.L.; Seifried, D. D.; Stanton, M. G.; Tian, L.	US Patent	2014
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Validation and application of an HPLC-CAD-TOF/MS method for identification and quantification of pharmaceutical counterions	Ilko, D.; Nap, C. J.; Holzgrabe, U.; Almeling, S.	Pharmeuropa Bio and Scientific Notes	2014
Characterization and stability study of polysorbate 20 in therapeutic monoclonal antibody formulation by multidimensional Ultrahigh-Performance Liquid Chromatography-Charged Aerosol Detection-Mass Spectrometry	Li, Y.; Hewitt, D.; Lentz, Y. K.; Ji, J. Y. A.; Zhang, T. Y.; Zhang, K.	Analytical Chemistry	2014
Impurity profiling of carbocisteine by HPLC-CAD, qNMR and UV/vis spectroscopy	Wahl, O.; Holzgrabe, U.	Journal of Pharmaceutical and Biomedical Analysis	2014
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A charged aerosol detector/chemiluminescent nitrogen detector/liquid chromatography/mass spectrometry system for regular and fragment compound analysis in drug discovery	Jiang, Y.; Hascall, D.; Li, D.; Pease, J. H.	Journal of Chromatography A	2015
Determination of the purity of valine by isocratic liquid chromatography coupled with charged aerosol detection (CAD)	Lodi, A.; Angus, M.; Nap, C. J.; Skellern, G.; Nicolas, A.	Pharmeuropa Bio and Scientific Notes	2015
Validated stability-indicating method for alendronate sodium employing zwitterionic hydrophilic interaction chromatography coupled with charged aerosol detection	Raju, S. P. K.; Narayanam, M.; Kumar, B. K.; Tejaswee, S.; Singh, S.	Chromatographia	2015
A new approach for quantitative determination of $\gamma$ -cyclodextrin in aqueous solutions: Application in aggregate determinations and solubility in hydrocortisone/ $\gamma$ -cyclodextrin inclusion complex	Saokham, P.; Loftsson, T.	Journal of Pharmaceutical Sciences	2015
A highly sensitive method for the quantitation of polysorbate 20 and 80 to study the compatibility between polysorbates and <i>m</i> -cresol in the peptide formulation	Shi, S.; Chen, Z.; Rizzo, J. M.; Semple, A.; Mittal, S.	Journal of Analytical & Bioanalytical Techniques	2015
Quantitative analysis of PEG-functionalized colloidal gold nanoparticles using charged aerosol detection	Smith, M. C.; Crist, R. M.; Clogston, J. D.; McNeil, S. E.	Analytical and Bioanalytical Chemistry	2015
Development of high performance liquid chromatography methods with charged aerosol detection for the determination of lincomycin, spectinomycin and its impurities in pharmaceutical products	Stypulkowska, K.; Blazewicz, A.; Brudzikowska, A.; Warowna-Grzeskiewicz, M.; Sarna, K.; Fijalek, Z.	Journal of Pharmaceutical and Biomedical Analysis	2015
Impurity profiling of ibandronate sodium by HPLC-CAD	Wahl, O.; Holzgrabe, U.	Journal of Pharmaceutical and Biomedical Analysis	2015
Development of a purity control strategy for pemetrexed disodium and validation of associated analytical methodology	Warner, A.; Piraner, I.; Weimer, H.; White, K.	Journal of Pharmaceutical and Biomedical Analysis	2015
Quantitative analysis of five antiviral drugs by hydrophilic interaction liquid chromatography-charged aerosol detection	Zhen, L.; Yan, J.; Xiaoda, L.; Zhimou, G.; Aijin, S.; Xingjuan, H.; Ningpeng, W.	Chinese Journal of Chromatography	2015
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Residual host cell protein promotes polysorbate 20 degradation in a sulfatase drug product leading to free fatty acid particles	Dixit, N.; Salamat-Miller, N.; Salinas, P. A.; Taylor, K. D.; Basu, S. K.	Journal of Pharmaceutical Sciences	2016
Analytical advances in pharmaceutical impurity profiling	Holm, R.; Elder, D. P.	European Journal of Pharmaceutical Sciences	2016
A sensitive non-derivatization method for apramycin and impurities analysis using hydrophilic interaction liquid chromatography and charged aerosol detection	Long, Z.; Guo, Z. M.; Liu, X. D.; Zhang, Q.; Liu, X. G.; Jin, Y.; Liang, L. N.; Li, H. S.; Wei, J.; Wu, N. P.	Talanta	2016
Topiramate: A review of analytical approaches for the drug substance, its impurities and pharmaceutical formulations	Pinto, E. C.; Dolzan, M. D.; Cabral, L. M.; Armstrong, D. W.; de Sousa, V. P.	Journal of Chromatographic Sciences	2016
Development and validation of a stability-indicating RP-HPL C-CAD method for gabapentin and its related impurities in presence of degradation products	Ragham, P. K.; Chandrasekhar, K. B.	Journal of Pharmaceutical and Biomedical Analysis	2016
Amino acid analysis for <i>pharmacopoeial</i> purposes	Wahl, O.; Holzgrabe, U.	Talanta	2016
Development and validation of a hydrophilic interaction chromatography method coupled with a charged aerosol detector for quantitative analysis of nonchromophoric alpha-hydroxyamines, organic impurities of metoprolol	Xu, Q.; Tan, S.; Petrova, K.	Journal of Pharmaceutical and Biomedical Analysis	2016
Integrated platform for expedited synthesis–purification–testing of small molecule libraries	Baranczak, A.; Tu, N. P.; Marjanovic, J.; Searle, P. A.; Vasudevan, A.; Djuric, S. W.	ACS Medicinal Chemistry Letters	2017
Analytical stability-indicating methods for alogliptin in tablets by LC-CAD and LC-UV	Bertol, C. D.; Friedrich, M. T.; Carlos, G.; Froehlich, P. E.	Journal of AOAC International	2017
Chapter 13: Determination of quaternary ammonium muscle relaxants with their impurities in pharmaceutical preparations by LC-CAD	Blazewicz, A.; Poplawska, M.; Warowna-Grzeskiewicz, M.; Sarna, K.; Fijalek, Z.	Book: Charged Aerosol Detection for Liquid Chromatography and Related Separation Techniques	2017
Development and validation of a chromatography method using tandem UV/charged aerosol detector for simultaneous determination of amlodipine besylate and olmesartan medoxomil: Application to drug-excipient compatibility study	Brondi, A. M.; Garcia, J. S.; Trevisan, M. G.	Journal of Analytical Methods in Chemistry	2017
Phosphatidylcholine coatings deliver local antimicrobials and reduce infection in a murine model: A preliminary study	Harris, M. A.; Beenken, K. E.; Smeltzer, M. S.; Haggard, W. O.; Jennings, J. A.	Clinical Orthopaedics and Related Research	2017



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Chapter 12: Applying charged aerosol detection to amino glycosides: Development and validation of an RP-HPLC method for gentamicin and netilmicin	Joseph, A.; Rustum, A.	Book: Charged Aerosol Detection for Liquid Chromatography and Related Separation Techniques	2017
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Pharmaceutical and biomedical applications of dispersive liquid-liquid microextraction	Mansour, F. R.; Khairy, M. A.	Journal of Chromatography B	2017
Trends on analytical characterization of polysorbates and their degradation products in biopharmaceutical formulations	Martos, A.; Koch, W.; Jiskoot, W.; Winter, G.; Friess, W.; Hawe, A.	Journal of Pharmaceutical Sciences	2017
Analytical characterization of an oil-in-water adjuvant emulsion	Sun, J.; Remmele, R. L. Jr.; Sanyal, G.	AAPS PharmSciTech volume	2017
Chapter 10: Charged Aerosol Detection in pharmaceutical analysis	Swartz, M.; Emanuele, M.; Awad, A.	Book: Charged Aerosol Detection for Liquid Chromatography and Related Separation Techniques	2017
Impurity profiling of <i>N,N'</i> -ethylenebis-L-cysteine diethyl ester (Bicisate)	Wahl, O.; Cleyhens, J.; Verbruggen, A. M.; Holzgrabe, U.	Journal of Pharmaceutical and Biomedical Analysis	2017
Preparation of core-crosslinked linear-dendritic copolymer micelles with enhanced stability and their application for drug solubilisation	Zhou, Z.; Forbes, R. T.; D'Emanuele, A.	International Journal of Pharmaceutics	2017
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A newly identified impurity in polysorbate 80, the long-chain ketone 12-tricosanone, forms visible particles in a biopharmaceutical drug product	HAMPL, V.; Guo, X.; Ehrenstrasser, C.; Viertler, M.; Rayner, L.; Campanelli, G.; Schiplinger, R.; Thewes, K.; Cerreti, A.; Boehm, S.; Sonderegger, C.	Journal of Pharmaceutical Sciences	2018
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Direct analysis of chiral active pharmaceutical ingredients and their counterions by ultra high performance liquid chromatography with macrocyclic glycopeptide-based chiral stationary phase	Ismail, O. H.; Antonelli, M.; Ciogli, A.; De Martino, M.; Catani, M.; Villani, C.; Cavazzini, A.; Ye, M.; Bell, D. S.; Gasparini, F.	Journal of Chromatography A	2018
Fast simultaneous determination of main components and impurity sodium ion in PAMA injection by mixed-mode chromatography	Li, P.; Sun, W.; Zuo, L.; Zhu, Z.; Zhao, T.; Wang, R.; Zhu, M.; Leng, X.; Qiu, X.; Bai, L.; Shan, G.	Journal of Pharmaceutical and Biomedical Analysis	2018
Development and validation of a RP-HPLC method for roflumilast and its degradation products	Pinheiro, M. S.; de Cássia, R.; Marins, E. E.; Cabral, L. M.; de Sousa, V. P.	Journal of Liquid Chromatography & Related Technologies	2018



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Title	Authors	Journal	Date
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Influence of charged aerosol detector instrument settings on the ultra-high-performance liquid chromatography analysis of fatty acids in polysorbate 80	Schilling, K.; Pawellek, R.; Lovejoy, K.; Muellner, T.; Holzgrabe, U.	Journal of Chromatography A	2018
PEG quantitation using reversed-phase high-performance liquid chromatography and charged aerosol detection	Smith, M. C.; Clogston, J. D.	Methods in Molecular Biology	2018
Critical <i>in vitro</i> characterization methods of lipid-based formulations for oral delivery: A comprehensive review	Swarnakar, N. K.; Venkatesan, N.; Betageri, G.	AAPS PharmSciTech	2018
A four parameter optimization and troubleshooting of a RPLC-charged aerosol detection stability indicating method for determination of S-lysophosphatidylcholines in a phospholipid formulation	Tam, J.; Ahmad, I. A. H.; Blasko, A.	Journal of Pharmaceutical and Biomedical Analysis	2018
Analytical control strategies for mutagenic impurities: Current challenges and future opportunities?	Tesadale, A.; Elder, D. P.	TrAC Trends in Analytical Chemistry	2018
Characterization of polydisperse macrogols and macrogol-based excipients via HPLC and charged aerosol detection	Theiss, C.; Holzgrabe, U.	Journal of Pharmaceutical and Biomedical Analysis	2018
Chapter 47: Analytical Methods	Traylor, M. J.; Bernhardt, P.; Tangarone, B. S.; Varghese, J.	Book: Biopharmaceutical Processing	2018
Impurity profiling of N,N'-ethylenebis-l-cysteine diethyl ester (bicisate)	Wahl, O.; Cleyhens, J.; Verbruggen, A. M.; Holzgrabe, U.	Journal of Pharmaceutical and Biomedical Analysis	2018
Determination of Eudragit® L100 in an enteric-coated tablet formulation using size-exclusion chromatography with charged-aerosol detection	Widjaja, M.; Gan, J.; Sunder, J.; Talpaneni, R.; Rubianto Tjandrawinata, R.	Scientia Pharmaceutica	2018
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On-line coupling of hydrophobic interaction column with reverse phase column-charged aerosol detector/mass spectrometer to characterize polysorbates in therapeutic protein formulations	He, Y.; Brown, P.; Bailey, M. R. P.; Carroll, J. A.; Jones, M. T.	Journal of Chromatography A	2019
Investigation of unknown impurities of paromomycin in a 15% topical cream by liquid chromatography combined with mass spectrometry	Hertzler, S.; Knuth, K.; Preston, R.; Adams, R.; Lawrence, K.	Rapid Communications in Mass Spectrometry	2019



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The identification and pharmacological evaluation of potent, selective and orally available ACC1 inhibitor	Mizojiri, R.; Asano, M.; Sasaki, M.; Satoh, Y.; Yamamoto, Y.; Sumi, H.; Maezaki, H.	Bioorganic and Medicinal Chemistry Letters	2019
Design and synthesis of a novel 1 <i>H</i> -pyrrolo[3,2- <i>b</i> ]pyridine-3-carboxamide derivative as an orally available ACC1 inhibitor	Mizojiri, R.; Niia, N.; Asanob, M.; Sasaki, M.; Satoh, Y.; Yamamoto, Y.; Sumid, H.; Maezaki, Y.	Bioorganic and Medicinal Chemistry	2019
The potential of corona charged aerosol detector for investigation of telmisartan- $\beta$ -cyclodextrin inclusion complexes	Nevena, M.; Jelena, G.; Biljana, O.; Jovana, K.; Mira, Z.; Ana, P.	Arhiv za farmaciju	2019
Doxycycline and monocaprin in situ hydrogel: effect on stability, mucoadhesion and texture analysis and <i>in vitro</i> release	Patlolla, V.; Holbrook, W.; Gizurason, S.; Kristmundsdottir, T.	Gels	2019
The role of mass spectrometry and related techniques in the analysis of extractable and leachable chemicals	Sica, V. P.; Krivos, K. L.; Kiehl, D. E.; Pulliam, C. J.; Henry, I. D.; Baker, T. R.	Mass Spectrometry Reviews	2019
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Quantitative analysis of 3-isopropylamino-1,2-propanediol as a degradation product of metoprolol in pharmaceutical dosage forms by HILIC-CAD	Xu, Q.; Tan, S.	Journal of Pharmaceutical Analysis	2019
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Identification of monomethyl sulfate and sulfate impurities in zidebactam using LC-MS and application of mixed-mode liquid chromatography with charged aerosol detection and ion chromatography for quantification	Ahirrao, V. K.; Rane, V. P.; Patil, K. R.; Jadhav, R. A.; Bhamare, V. S.; Yadav, D. S.; Yeole, R. D.	Chromatographia	2020
Degradation of polysorbates 20 and 80 catalysed by histidine chloride buffer	Brovč, E. V.; Mravljak, J.; Šink, R.; Pajk, S.	European Journal of Pharmaceutics and Biopharmaceutics	2020
Improving prediction of free fatty acid particle formation in biopharmaceutical drug products: Incorporating ester distribution during polysorbate 20 degradation	Doshi, N.; Martin, J.; Tomlinson, A.	Molecular Pharmaceutics	2020





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Title	Authors	Journal	Date
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Characterization of polysorbate ester fractions and implications in protein drug product stability	Tomlinson, A.; Zarraga, I. E.; Demeule, B.	Molecular Pharmaceutics	2020
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Putative phospholipase $\beta$ -like 2 is not responsible for polysorbate degradation in monoclonal antibody drug products	Zhang, S.; Xiao, H.; Goren, M.; Burakov, D.; Chen, G.; Li, N.; Tustian, A.; Adams, B.; Mattila, J.; Bak, H.	Journal of Pharmaceutical Sciences	2020
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Corona charged aerosol detector in studying retention and $\beta$ -cyclodextrin complex stability using RP-HPLC	Đajić, N.; Otašević, B.; Malenović, A.; Zečević, M.; Holzgrabe, U.; Protić, A.	Journal of Pharmaceutical and Biomedical Analysis	2021
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Chemosensitisation of drug-resistant and drug-sensitive yeast cells to antifungals	Cernicka, J.; Kozovska, Z.; Hnatova, M.; Valachovic, M.; Hapala, I.; Riedl, Z.; Hajós, G.; Subik, J.	International Journal of Antimicrobial Agents	2007
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Aqueous extract of <i>Astragali Radix</i> induces human natriuresis through enhancement of renal response to atrial natriuretic peptide	Ai, P.; Yong, G.; Dingkun, G.; Qiuyu, Z.; Kaiyuan, Z.; Shanyan, L.	Journal of Ethnopharmacology	2008
Characterization of an endoglucanase belonging to a new subfamily of glycoside hydrolase family 45 of the <i>Basidiomycete Phanerochaete chrysosporium</i>	Igarashi, K.; Ishida, T.; Hori, C.; Samejima, M.	Applied and Environmental Microbiology	2008
Differential selectivity of the <i>Escherichia coli</i> cell membrane shifts the equilibrium for the enzyme-catalyzed isomerization of galactose to tagatose	Kim, J. H.; Lim, B. C.; Yeom, S. J.; Kim, Y. S.; Kim, H. J.; Lee, J. K.; Lee, S. H.; Kim, S. W.; Oh, D. K.	Applied and Environmental Microbiology	2008
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Isolation and quantification of the cortical granule lectin ligand oligosaccharides and elucidation of their role in the block to polyspermic fertilization in <i>Xenopus laevis</i>	Kiedrowski, N. P.	Sacramento State Scholarworks	2010
Production of surfactin and iturin by <i>Bacillus licheniformis</i> N1 responsible for plant disease control activity	Kong, H. G.; Kim, J. C.; Choi, G. J.; Lee, K. Y.; Kim, H. J.; Hwang, E. C.; Moon, B. J.; Lee, S. W.	The Plant Pathology Journal	2010
Determination of parabens in cosmetic products using multi-walled carbon nanotubes as solid phase extraction sorbent and corona-charged aerosol detection system	Marquez-Sillero, I.; Aguilera-Herrador, E.; Cardenas, S.; Valcarcel, M.	Journal of Chromatography A	2010
Quantitative study of the <i>stratum corneum</i> lipid classes by normal phase liquid chromatography: comparison between two universal detectors	Merle, C.; Laugel, C.; Chaminade, P.; Baillet-Guffroy, A.	Journal of Liquid Chromatography & Related Technologies	2010
Lovastatin decreases acute mucosal inflammation via 15-epi-lipoxin A4. Mucosal immunology	Planagumà, A.; Pfeffer, M. A.; Rubin, G.; Croze, R.; Uddin, M.; Serhan, C. N.; Levy, B. D.	Mucosal Immunology	2010
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An LC method for the analysis of phosphatidylcholine hydrolysis products and its application to the monitoring of the acyl migration process	Kielbowicz, G.; Smuga, D.; Gładkowski, W.; Chojnacka, A.; Wawrzęczyk, C.	Talanta	2012
Engineering of acetyl-CoA metabolism for the improved production of polyhydroxybutyrate in <i>Saccharomyces cerevisiae</i>	Kocharin, K.; Chen, Y.; Siewers, V.; Nielsen, J.	AMB Express	2012
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Analytical method for detecting sulfated oligosaccharides	Wang, C.; Huang, J.; Wu, C.; Chiang, Y.; Chao, H.	US Patent	2013
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Construction of a wireless communication contact closure system for liquid chromatography with multiple parallel mass spectrometers and other detectors	Byrdwell, W. C.	Journal of Laboratory Automation	2014
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The relationship between plasma concentration of metoprolol and CYP2D6 genotype in patients with ischemic heart disease	Wojtczak, A.; Wojtczak, M.; Skretkiewicz, J.	Pharmacological Reports	2014
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Fast, sensitive method for trisaccharide biomarker detection in mucopolysaccharidosis type 1	Makino, E.; Klodnitsky, H.; Leonard, J.; Lillie, J.; Lund, T. C.; Marshall, J.; Nietupski, J.; Orchard, P. J.; Miller, W. P.; Phaneuf, C.; Tietz, D.; Varban, M. L.; Donovan, M.; Belenki, A.	Scientific Reports	2018
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Reengineering lipid biosynthetic pathways of <i>Aspergillus oryzae</i> for enhanced production of $\gamma$ -linolenic acid and dihomogamma-linolenic acid	Jeennor, A.; Anantayanon, J.; Panchanawaporn, S.; Khoomrung, S.; Chutrakul, C.; Laoteng, K.	Gene	2019
Partitioning of amino acids and proteins into decanol using phase transfer agents towards understanding life in non-polar liquids	Thompson, B.; Burt, K.; Lee, A.; Lingard, K.; Maurer, S. E.	Scientific Reports	2019
Seeking universal detectors for analytical characterizations	Zhang, K.; Kurita, K. L.; Venkatramani, C.; Russell, D.	Journal of Pharmaceutical and Biomedical Analysis	2019
A novel and sensitive HILIC-CAD method for glucosamine quantification in plasma and its application to a human pharmacokinetic study	Asthana, C.; Peterson, G. M.; Shastri, M. D.; Patel, R. P.	Journal of Pharmaceutical and Biomedical Analysis	2020
Liquid chromatographic isolation of individual amino acids extracted from sediments for radiocarbon analysis	Blattmann, T. M.; Montluçon, D. B.; Haghypour, N.; Ishikawa, N. F.; Eglinton, T. I.	Frontiers in Marine Science	2020
Fungal biocatalysts for labdane diterpene hydroxylation	Cruz de Carvalho, T.; de Oliveira Silva, E.; Soares, G. A.; Parreira, L.; Ambrósio, S.; Furtado, N.	Bioprocess and Biosystems Engineering	2020
Efficient laccase/TEMPO oxidation of alkyl glycosides: Effects of carbohydrate group and alkyl chain length	Ngo, N. T. N.; Grey, C.; Adlercreutz, P.	Journal of Biotechnology: X	2020
Aphid-infested beans divert ant attendance from the rosy apple aphid in apple-bean intercropping	Pålsson, J.; Porcel, M.; Hansen, M. F.; Offenberg, J.; Nardin, T.; Larcher, R.; Tasin, M.	Scientific Reports	2020
Mutations in the nucleotide-binding domain of putative sterol importers <i>Aus1</i> and <i>Pdr11</i> selectively affect utilization of exogenous sterol species in yeast	Papay, M.; Klein, C.; Hapala, I.; Petriskova, L.; Kuchler, K.; Valachovic, M.	Yeast	2020
The effect of zinc and/or herbal nutraceuticals on rumen fermentation, microbiota and histopathology in lambs	Petrič, D.; Mravčáková, D.; Kucková, K.; Kišidayová, S.; Cieslak, A.; Szumacher-Strabel, M.; Huang, H.; Kolodziejcki, P.; Lukomska, A.; Slusarczyk, S.; Čobanová, K.; Varadyova, Z.	Research Square	2020
Extraction and detection of structurally diverse siderophores in soil	Rai, V.; Fisher, N.; Duckworth, O. W.; Baars, O.	Frontiers in Microbiology	2020
Pharmacologic inhibition of Ketohexokinase prevents fructose-induced metabolic dysfunction	Gutierrez, J. A.; Liu, W.; Perez, S.; Xing, G.; Sonnenberg, G.; Kou, K.; Blatnik, M.; Allen, R.; Weng, Y. <i>et al.</i>	Molecular Metabolism	2021
Cardiolipin content controls mitochondrial coupling and energetic efficiency in muscle	Prola, A.; Blondelle, J.; Vandestienne, A.; Piquereau, J.; Denis, R. G. P.; Guyot, S.; Chauvin, H.; Mourier, A.; Maurer, M.; Henry, C.; <i>et al.</i>	Science Advances	2021
Short-term resistance that persists: Rapidly induced silicon anti-herbivore defense affects carbon-based plant defenses	Waterman, J. M.; Hall, C. R.; Mikhael, M.; Cazzonelli, C. I.; Hartley, S. E.; Johnson, S. N.	Functional Ecology	2021
Upcycling of hydrolyzed PET by microbial conversion to a fatty acid derivative	Welsing, G.; Wolter, B.; Hintzen, H.; Tiso, T.; Blank, L. M.	Methods in Enzymology	2021



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Title	Authors	Journal	Date	Application Area
Improving the quantitation of unknown impurity analysis using dual-gradient HPLC with charged aerosol detection	Crafts, C.; Bailey, B.; Plante, M.; Waraska, J.; Acworth, I.	LPN 2666	2010	Chromatography
Characterization of castor oil by HPLC and charged aerosol detection	Crafts, C.; Plante, M.; Bailey, B.; Acworth, I.	LPN 2822	2011	Chromatography
Validating analytical methods with charged aerosol detection	Crafts, C.; Bailey, B.; Plante, M.; Acworth, I.	LPN 2949	2011	Chromatography
Analysis of cationic surfactants on the Acclaim Surfactant Plus HPLC column	Foley, D.; Faulkner, W.	AN20574	2012	Chromatography
Enhancement of linearity and response in charged aerosol detection	Crafts, C.; Plante, M.; Bailey, B.; Acworth, I.	PN70003	2016	Chromatography
Use of C30 as a general-purpose stationary phase for a broad range of applications	Heidorn, M.; Liu, X.; Tracy, M.; Pohl, C.	LPN2868	2016	Chromatography
Towards standard-free quantitative and qualitative analysis in liquid chromatography	Martin, M.; Heidorn, M.; Steiner, F.; Plante, M.; McLeod, F.	LPN2881	2016	Chromatography
Optimizing and monitoring solvent quality for UV-Vis absorption, fluorescence and Charged Aerosol Detectors	Neubauer, M.; Franz, H.	TN70818	2016	Chromatography
Fast and sensitive determination of quaternary amines by UHPLC	Plante, M.; Acworth, I.; Bailey, B.; Sneekes, E-J.; Steiner, F.	PN71688	2016	Chromatography
An improved global method for the quantitation and characterization of lipids by high performance liquid chromatography and Corona charged aerosol detection	Plante, M.; Bailey, B.; Acworth, I.; Crafts, C.	PN70533	2016	Chromatography
Analysis of phospholipids in natural samples by normal phase HPLC and Corona charged aerosol detection	Plante, M.; Bailey, B.; Acworth, I.; Crafts, C.	PN71006	2016	Chromatography
Guidelines for method transfer and optimization of the Corona Veo Charged Aerosol Detector	Plante, M.; Bailey, B.; Gamache, P.; Acworth, I.	PN64690	2016	Chromatography
Effect of mobile phase quality on analytical performance of Corona Charged Aerosol Detectors	Plante, M.; Bailey, B.; Kusnitz, F.; Acworth, I.	TN71390	2016	Chromatography
Determination of polymerized triglycerides by high pressure liquid chromatography and Corona Veo Charged Aerosol Detector	Plante, M.; Bailey, B.; Thomas, D.; Acworth, I.	PN7156	2016	Chromatography
Analysis of gentamicin using a pH stable specialty column for aminoglycoside antibiotics separation	Sun, X.; Liu, X.	AN21438	2016	Chromatography
Charged aerosol detection and evaporative light scattering detection—fundamental differences affecting analytical performance	Thomas, D.; Bailey, B.; Plante, M.; Acworth, I.	PN70990	2016	Chromatography
Separation of biochemical buffering agents using multi-mode liquid chromatography with charged aerosol detection	Tracy, M.; Liu, X.	AN20977	2016	Chromatography
Guidelines for the method transfer and optimization—from earlier model Corona detectors to Corona Veo and Vanquish charged aerosol detectors	Bailey, B.; Gamache, P.; Acworth, I.	TN72398	2017	Chromatography



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Title	Authors	Journal	Date	Application Area
Advanced UHPLC setups to overcome limitations of nebulizer-based detectors	Paul, C.	TN70922	2017	Chromatography
A multi-detector platform comprising UV/Vis, charged aerosol, and single quadrupole mass spectrometric detection for comprehensive sample analysis	Meding, S.; Lovejoy, K.; Swart, R.; Steiner, F.; Ruehl, M.	AN72869	2018	Chromatography
Charged aerosol detection—factors affecting uniform response	Menz, M.; Eggart, B.; Lovejoy, K.; Acworth, I.; Gamache, P.; Steiner, F.	TN72806	2018	Chromatography
Achieving standard free quantitation: Thermo Scientific Charged Aerosol Detectors	Anon	SP73026	2019	Chromatography
Charged aerosol detection—use of the power function and robust calibration practices to achieve the best quantitative results	Gamache, P.; Muellner, T.; Eggart, B.; Lovejoy, K.; Acworth, I.	TN73299	2019	Chromatography
Charged aerosol detection and method transfer of compendial, including USP, methods	Lovejoy, K.; Acworth, I. Gamache, P.	PO72934	2019	Chromatography
Why use charged aerosol detection with inverse gradient?	Grosse, S.; Muellner, T.; Lovejoy, K.; Acworth, I.; Gamache, P.	TN73449	2020	Chromatography
Getting the most out of your charged aerosol detector: Factors influencing charged aerosol detector performance	Muellner, T.; Acworth, I.; Gamache, P.	TG73914	2021	Chromatography
Analysis of commercially available products containing stevia	Crafts, C.; Plante, M.; Bailey, B.; Acworth, I.	AN1040	2012	Food/Nutrition/Supplements
Determination of olive oil adulteration by principal component analysis with HPLC—charged aerosol detector data	Plante, M.; Bailey, B.; Acworth, I.; Crafts, C.	PN70689	2014	Food/Nutrition/Supplements
Characterization of used cooking oils by high performance liquid chromatography and Corona charged aerosol detection	Plante, M.; Bailey, B.; Acworth, I.	PN70536	2014	Food/Nutrition/Supplements
Direct carbohydrate analysis in beverages and foods using pulsed amperometric detection or charged aerosol detection	Zhang, Q.; Acworth, I.; Mohindra, D.	PN21431	2015	Food/Nutrition/Supplements
Determination of A-type and B-type procyanidins in apple, cocoa and cinnamon extracts	Glinski, J.; Thomas, D.; Wong, A.; Glinski, V.; Acworth, I.	PN71527	2016	Food/Nutrition/Supplements
Mogroside V determination by HPLC with charged aerosol and UV detections	Hurum, D.; Rohrer, J.	AU184	2016	Food/Nutrition/Supplements
Determination of virginiamycin; erythromycin; and penicillin in dried distillers grains with solubles	Perati, P.; De Borba, B.; Rohrer, J.	AN70519	2016	Food/Nutrition/Supplements
A new approach to the simultaneous analysis of underivatized ionophoric antibiotics using liquid chromatography with charged aerosol detection	Plante, M.; Bailey, B.; Acworth, I.; Crafts, C.	PN70054	2016	Food/Nutrition/Supplements
Analysis of emulsifiers in foods by high pressure liquid chromatography and Corona charged aerosol detection	Plante, M.; Bailey, B.; Acworth, I.; Crafts, C.	PN70995	2016	Food/Nutrition/Supplements
A fast and efficient method to assess 2D-HPLC column and method combinations for food metabolomics studies	Steiner, F.; Grübner, M.; Dunkel, A.; Hofmann, T.	PN71130	2016	Food/Nutrition/Supplements



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Title	Authors	Journal	Date	Application Area
Separation of calcium, magnesium and counterions in a dietary supplement using multi-mode liquid chromatography with charged aerosol detection	Tracy, M.; Liu, X.	AN20871	2016	Food/Nutrition/Supplements
Analysis of a sports beverage for electrolytes and sugars using multi-mode chromatography with charged aerosol detection	Tracy, M.; Liu, X.	AN20847	2016	Food/Nutrition/Supplements
Carbohydrate analysis in beverages and foods using pulsed amperometric detection or charged aerosol detection	Zhang, Q.; Hvizd, M.; Bailey, B.; Thomas, D.; Plante, M.; Acworth, I.	PN71433	2016	Food/Nutrition/Supplements
Authenticity control of olive oils by triglycerides LC analysis: Method improvement using charged aerosol detection	Lucci, P.; Buchini, F.; Moret, S.; Pippit, J.; Conte, L.	None	2017	Food/Nutrition/Supplements
Determination of olive oil purity based on triacylglycerols profiling by UHPLC-CAD and principal component analysis	Green, H. S.; Li, X.; De Pra, M.; Lovejoy, K.; Steiner, F.; Acworth, I. N.; Wang, S. C.	AN73174	2019	Food/Nutrition/Supplements
Fighting food fraud—a unique approach to tackle extra virgin olive oil adulteration	Acworth, I.; Fabel, S.	CS73322	2020	Food/Nutrition/Supplements
Determination of residual acylglycerols in biodiesel	Hurum, D.; Rohrer, J.	AB70486	2016	Industrial/Environmental
Quantitative determination of disinfection byproduct haloacetic acids in drinking water using a new mixed-mode column and liquid chromatography tandem mass spectrometry haloacetic acid	Jack, R.; Wang, L.; Jiang, G.; Liu, X.	ASMS13	2016	Industrial/Environmental
A single method for the direct determination of total glycerols in all biodiesels using liquid chromatography and charged aerosol detection	Plante, M.; Bailey, B.; Acworth, I.; Crafts, C.	PN70046	2016	Industrial/Environmental
Quantitation and characterization of copper and nickel plating bath additives by liquid chromatography	Plante, M.; Bailey, B.; Acworth, I.	PN71179	2016	Industrial/Environmental
Analysis of silicone oils by high performance liquid chromatography and Corona charged aerosol detection	Plante, M.; Bailey, B.; Acworth, I.; Crafts, C.	PN70538	2016	Industrial/Environmental
Quantitation and characterization of copper plating bath additives by liquid chromatography with charged aerosol detection	Plante, M.; Bailey, B.; Acworth, I.; Crafts, C.	PN10326	2016	Industrial/Environmental
Quantitation of hindered amine light stabilizers (HALS) by liquid chromatography and charged aerosol detection	Plante, M.; Bailey, B.; Acworth, I.; Crafts, C.	PN70022	2016	Industrial/Environmental
Determination of polyacrylic acid in boiler water using size-exclusion chromatography with charged aerosol detection	Tracy, M.; Liu, X.; Acworth, I.; Bailey, B.	PN70717	2016	Industrial/Environmental
Comprehensive analysis of components and degradation products in coolants	Grosse, S.; Ispan, D. A.; Pietsch, M.; Neufang, R.; Fischer, T.; Steiner, F.	AN73755	2020	Industrial/Environmental
Determination of astragaloside IV in <i>astragalus</i> and compounds by online solid-phase purification method with Charged Aerosol Detector	Anon	AN-C_LC-8	2012	Natural Products/Botanicals



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Title	Authors	Journal	Date	Application Area
Traditional Chinese medicine HPLC applications notebook	Acworth, I.	AN71120	2016	Natural Products/Botanicals
Profiling hodia extracts by HPLC with charged aerosol detection, electrochemical array detection, and principal component analysis	Acworth, I.; Bailey, B.; Plante, M.; Zhang, Q.; Thomas, D.	PN70540	2016	Natural Products/Botanicals
Novel, universal approach for the measurement of natural products in a variety of botanicals and supplements	Acworth, I.; Bailey, B.; Plante, M.; Crafts, C.; Thomas, D.; Roman, M.	PN70021	2016	Natural Products/Botanicals
Novel, universal approach for the measurement of natural products in a variety of botanicals and supplements, Part 2	Acworth, I.; Bailey, B.; Plante, M.; Zhang, Q.; Thomas, D.; Roman, M.	PN70543	2016	Natural Products/Botanicals
Steviol glycoside determination by HPLC with charged aerosol and UV detections using the Acclaim Trintiy P1 column	Hurum, D.; Rohrer, J.	AN293	2016	Natural Products/Botanicals
Improved universal approach to measure natural products in a variety of botanicals and supplements	Plante, M.; Acworth, I.; Bailey, B.; Zhang, Q.; Thomas, D.	PN-70543	2016	Natural Products/Botanicals
Sensitive HPLC method for triterpenoid analysis using charged aerosol detection with improved resolution	Plante, M.; Bailey, B.; Crafts, C.; Acworth, I.	PN70037	2016	Natural Products/Botanicals
Determination of pyrethrins in pyrethrum oil extracts by UHPLC with charged aerosol detection	Thomas, D.; Glinski, J.; Wong, A.; Acworth, I.; Mohindra, D.	PN64681	2016	Natural Products/Botanicals
Dietary supplements and botanical natural products applications notebook	Acworth, I.; Fabel, S.	EB73582	2020	Natural Products/Botanicals
Using charged aerosol detection as a universal approach to analyze pharmaceutical salts including inorganic and organic counterions	Crafts, C.; Plante, M.; Bailey, B.; Gamache, P.; Waraska, J.; Acworth, I.; Srinivasan, K.	LPN 2611	2010	Pharmaceutical/ Biopharmaceutical
New approaches for simultaneous API and counterion analysis using charged aerosol detection	Crafts, C.; Plante, M.; Bailey, B.; Gamache, P.; Waraska, J.; Acworth, I.; Srinivasan, K.	LPN 2610	2010	Pharmaceutical/ Biopharmaceutical
Semiquantitative analysis for high-throughput screening of compound libraries	Crafts, C.; Plante, M.; Malek, G.; Neely, M.; Acworth, I.	—	2011	Pharmaceutical/ Biopharmaceutical
Simple, sensitive, and semiquantitative analytical approach for cleaning validation studies	Hvzd, M.; Crafts, C.; Bailey, B.; Plante, M.; Acworth, I.	—	2011	Pharmaceutical/ Biopharmaceutical
Use of charged aerosol detection as an orthogonal quantification technique for Drug Metabolites in Safety Testing (MIST)	Malek, G.; Crafts, C.; Plante, M.; Neely, M.; Bailey, B.	—	2011	Pharmaceutical/ Biopharmaceutical
A gentamicin sulfate assay using HPLC-charged aerosol detection with an ion-pairing reagent gradient	Li, R.; Hurrum, D.; Wang, J.; Rohrer, J.	PO70136	2014	Pharmaceutical/ Biopharmaceutical
Metoprolol and select impurities analysis using a HILIC method with combined UV and CAD	Bailey, B.	AN71611	2015	Pharmaceutical/ Biopharmaceutical
Application of charged aerosol HPLC detection in biopharmaceutical analysis	Kopaciewicz, B.; Thomas, D.; Bailey, B.; Zhang, Qi.; Plante, M.; Acworth, I.	PN7180	2015	Pharmaceutical/ Biopharmaceutical



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Title	Authors	Journal	Date	Application Area
Metoprolol and select impurities analysis using a hydrophilic interaction chromatography method with combined UV and charged aerosol detection	Bailey, B.; Acworth, I.; Sneekes, E-J.; Steiner, F.	PN71689	2016	Pharmaceutical/ Biopharmaceutical
Characterization of a biologic therapeutic: Reversed phase analysis of protein and excipients	Bailey, B.; Acworth, I.; Pippitt, J.; Steiner, F.; Sneekes, E-J.	PN72089	2016	Pharmaceutical/ Biopharmaceutical
Simultaneous determination of tartaric acid and tolterodine in tolterodine tartrate	Chantarasukon, C.; Tukkeeree, S.; Rohrer, J.	AN70356	2016	Pharmaceutical/ Biopharmaceutical
Quantification of drug metabolites in early-stage drug discovery testing	Crafts, C.; Bailey, B.; Waraska, J.; Acworth, I.	PN70036	2016	Pharmaceutical/ Biopharmaceutical
Novel analytical methods to verify effectiveness of cleaning processes	Crafts, C.; Plante, M.; Bailey, B.; Acworth, I.	PN70035	2016	Pharmaceutical/ Biopharmaceutical
Sensitive analysis of underivatized amino acids using UHPLC with charged aerosol detection	Crafts, C.; Plante, M.; Bailey, B.; Acworth, I.	PN70038	2016	Pharmaceutical/ Biopharmaceutical
Analytical methods to qualify and quantify PEG and PEGylated biopharmaceuticals	Crafts, C.; Bailey, B.; Plante, M.; Acworth, I.	PN70052	2016	Pharmaceutical/ Biopharmaceutical
Gentamicin sulfate assay by HPLC with charged aerosol detection	Li, R.; Hurum, D.; Wang, J.; Rohrer, J.	AN70016	2016	Pharmaceutical/ Biopharmaceutical
A platform method for pharmaceutical counterion analysis by HPLC	Liu, X.; Tracy, M.; Pohl, C.	PN20948	2016	Pharmaceutical/ Biopharmaceutical
Simultaneous determination of metformin and its chloride counterion using multi-mode liquid chromatography with charged aerosol detection	Liu, X.; Travy, M.	AN20868	2016	Pharmaceutical/ Biopharmaceutical
A sensitive method for direct analysis of impurities in apramycin and other aminoglycoside antibiotics using charged aerosol detection	Long, Z.; Zhang, Q.; Jin, Y.; Bailey, B.; Acworth, I.; Mohindra, D.	PN64683	2016	Pharmaceutical/ Biopharmaceutical
Quantitation of APIs and impurities in multi-component drugs by ternary gradient reversed phase chromatography with charged aerosol detection	Lovejoy, K.; de Pra, M.; Steiner, F.	??	2016	Pharmaceutical/ Biopharmaceutical
Characterization and lot-to-lot variability of complex surfactants by high performance liquid chromatography and charged aerosol detection	Plante, M.; Acworth, I.; Bailey, B.; Sneekes, E-J.; Steiner, F.	PN64687	2016	Pharmaceutical/ Biopharmaceutical
Quantitation of pluronics by high performance liquid chromatography and Corona charged aerosol detection	Plante, M.; Bailey, B.; Acworth, I.	PN70535	2016	Pharmaceutical/ Biopharmaceutical
Quantitation of surfactants in samples by high performance liquid chromatography and Corona charged aerosol detection	Plante, M.; Bailey, B.; Acworth, I.	PN70539	2016	Pharmaceutical/ Biopharmaceutical
Direct analysis of surfactants using HPLC with charged aerosol detection	Plante, M.; Bailey, B.; Acworth, I.; Crafts, C.	PN70055	2016	Pharmaceutical/ Biopharmaceutical



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Title	Authors	Journal	Date	Application Area
Multi-modal analyte detection of cyclodextrin and ketoprofen inclusion complex using UV and CAD on an integrated UHPLC system	Plante, M.; Bailey, B.; Acworth, I.; Sneekes, E-J.; Steiner, F.	PN71690	2016	Pharmaceutical/ Biopharmaceutical
Determination of proteins and carbohydrates by 2D HPLC (RPLC and HILIC) with charged aerosol and ultraviolet detection	Plante, M.; Acworth, I.; Bailey, B.; Sneekes, E-J.; Steiner, F.	PN64685	2016	Pharmaceutical/ Biopharmaceutical
2D analysis of protein therapeutics and amino acid excipients with combined UV and charged aerosol detection	Thomas, D.; Acworth, I.; Bauder, R., Plante, M.; Kast, L.	PN71849	2016	Pharmaceutical/ Biopharmaceutical
Label-free analysis by HPLC with charged aerosol detection of glycans separated by charge, size and isomeric structure	Thomas, D.; Acworth, I.	PN64682	2016	Pharmaceutical/ Biopharmaceutical
Direct analysis of multicomponent adjuvants by HPLC with charged aerosol detection	Thomas, D.; Acworth, I.; Bailey, B.; Plante, B.	PN70333	2016	Pharmaceutical/ Biopharmaceutical
Direct determination of native N-linked glycans by UHPLC with charged aerosol detection	Thomas, D.; Acworth, I.; Bailey, B.; Plante, M.; Zhang, Q.	PN70903	2016	Pharmaceutical/ Biopharmaceutical
Label-free profiling of O-linked glycans by UHPLC with charged aerosol detection	Thomas, D.; Acworth, I.; Bauder, R.; Plante, M.; Kast, L.	PN64691	2016	Pharmaceutical/ Biopharmaceutical
Monitoring peptide PEGylation by HPLC with charged aerosol detection	Thomas, D.; Acworth, I.; Meier, S.; Kaboord, B.; Yang, H.; Fisher, C.	PN72093	2016	Pharmaceutical/ Biopharmaceutical
API and counterions in Adderall® using multi-mode liquid chromatography with charged aerosol detection	Tracy, M.; Liu, X.	AN20870	2016	Pharmaceutical/ Biopharmaceutical
Direct measurement of sialic acid released from glycoproteins by high performance liquid chromatography and charged aerosol detection	Zhang, Q.; Acworth, I.	PN64686	2016	Pharmaceutical/ Biopharmaceutical
A highly sensitive high-performance liquid chromatography-charged aerosol detection method for the quantitative analysis of polysorbate 80 in protein solution	Long, Z.; Shen, G.; Neubauer, M.; Lovejoy, K.; Liu, L.; Liu, X.; Jin, Y.; Liu, X.	AN72398	2017	Pharmaceutical/ Biopharmaceutical
Deoxycholic acid method transfer from the Corona ultra RS Charged Aerosol Detector to the Corona Veo (or Vanquish) Charged Aerosol Detector	Lovejoy, K.; Gamache, P.; Millner, T.; Acworth, I.	AN72600	2018	Pharmaceutical/ Biopharmaceutical
Quantification of paclitaxel using UHPLC with charged aerosol detection (inverse gradient)	Menz, M.; Steiner, F.; Acworth, I.	AN72594	2018	Pharmaceutical/ Biopharmaceutical
List of compendial methods	Anon	FL73052	2019	Pharmaceutical/ Biopharmaceutical
Quantitation of tenofovir and impurities in multi-component drug products by ternary gradient reversed-phase chromatography with charged aerosol detection	Lovejoy, K.	AN72944	2019	Pharmaceutical/ Biopharmaceutical



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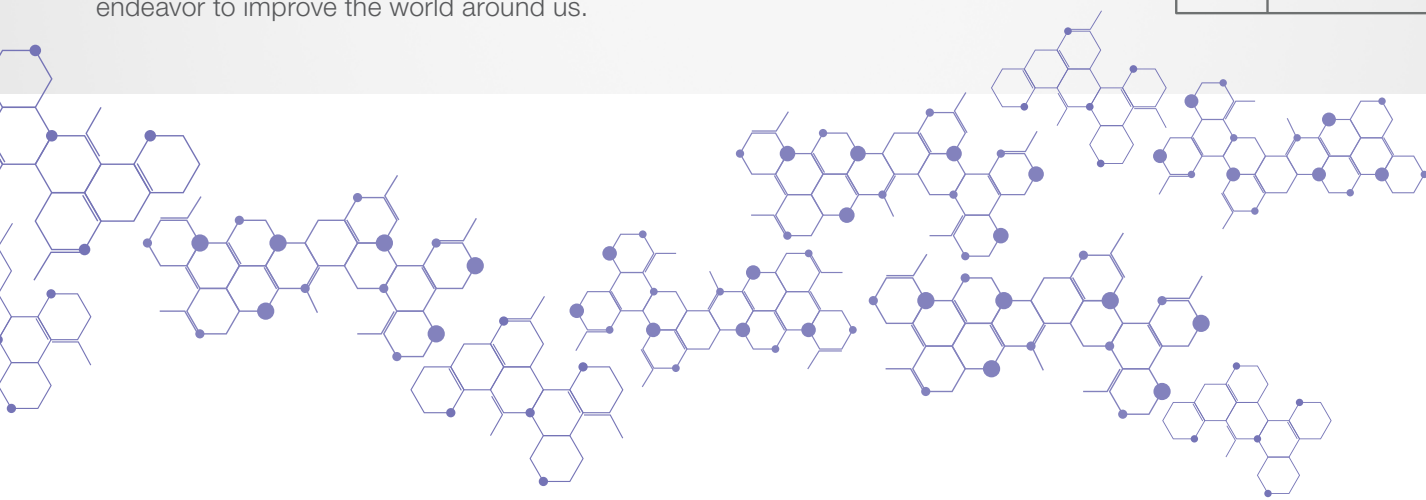
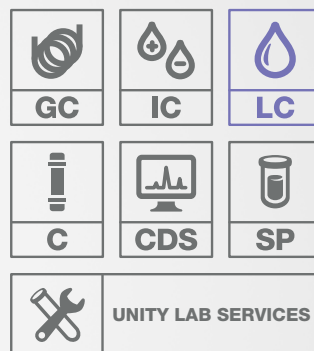
Title	Authors	Journal	Date	Application Area
HPLC-charged aerosol detection surfactant and emulsifier applications notebook	Acworth, I.; Fabel, S.	AN71101	2020	Pharmaceutical/ Biopharmaceutical
HPLC-Charged Aerosol Detection Excipients applications notebook— Complex substances, universal chromatographic analysis	Acworth, I.; Fabel, S.	EB73172	2020	Pharmaceutical/ Biopharmaceutical
Quality control of choline as a dietary supplement by high performance liquid chromatography coupled to a charged aerosol detector	Lovejoy, K.; Gamache, P.	AN73917	2020	Pharmaceutical/ Biopharmaceutical
Impurity analysis of L-aspartic acid and glycine by HPLC-UV-CAD	Pawellek, R.; Leistner, A.; Holzgrabe, U.	CAN73761	2020	Pharmaceutical/ Biopharmaceutical



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