

GC/GCMS Application Book Reader Service 250



Shimadzu offers a 76-page application book covering a variety of GC/GCMS topics. Innovative methods such as Fast GC/GCMS are explained and its usefulness shown for pesticide or fatty acid analysis. A chapter is dedicated to food analysis and other methods described include SPME (solid-phase micro extraction) and pyrolysis GCMS. Hot topics include the quality control of textiles and the determination of allergens in perfume. Furthermore, the analysis of biodiesel is also shown. In

addition, information on the usage of selected software issues including 21 CFR Part 11 is given.

Shimadzu Deutschland GmbH, Duisburg, Germany.

Determination of FAMES by ultra fast GC Reader Service 251

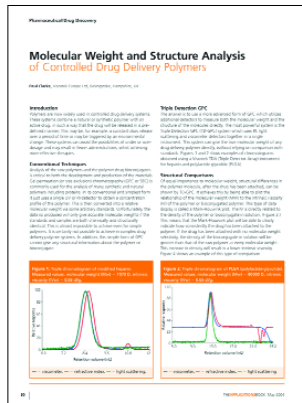


Thermo Electron has released an application note providing a method for the determination of fatty acid methyl esters with up to a 20-fold speed increase over conventional GC methods. The company's TRACE™ GC:Ultra equipped with the ultra fast option is used in this application and the TriPlus™ autosampler offers further productivity. Tested with different real sample matrices, the Ultra Fast system has proved to be a robust and reliable alternative to

conventional GC.

Thermo Electron Corp., Milan, Italy.

Controlled drug delivery polymers Reader Service 252

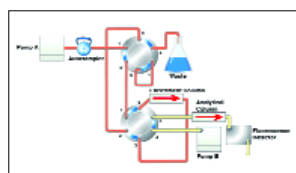


Natural and synthetic polymers are now widely used in controlled drug delivery systems where they are combined with an active drug so that the drug is released in a pre-defined manner. Accurate characterization of the polymer is essential to the development of these systems. In this application note, it is shown that Triple Detection GPC can not only help in the accurate characterization of the polymer but can also measure the structural changes in the

polymer-drug conjugate.

Viscotek Europe Ltd, Crowthorne, Berkshire, UK.

Analysis of PAHs Reader Service 253



Summit dual-gradient HPLC system is used to perform the separation together with a range of complementary instrumentation. The application allows direct injection of edible oils without prior sample treatment.

Dionex Corp., Sunnyvale, California, USA.

SPE extraction Reader Service 254



Phenomenex offers an application note TN-008, providing details of a simple solid-phase extraction (SPE) method for extraction of basic drugs from biological samples. Analysis of basic compounds in urine or blood is hampered by the presence of endogenous compounds in the sample. These interferences are present in higher concentrations than the target analytes and may mask their presence. The note describes how a 33 µm mixed mode polymeric resin, strata™ X-C is used for the extraction.

Phenomenex Inc., Torrance, California, USA.

Protein separation Reader Service 255



PSS Polymer offers an application note describing an example for a separation of four different proteins in two buffer systems with a PSS PROTEEMA column. One system uses phosphate buffer pH = 6.6, 0.3 m NaCl and the other does not use salt. The addition of the NaCl increases the separation potential for the protein mixture of different molar masses. Application note 10268 is available from the company's application database.

PSS Polymer Standards Service GmbH, Mainz, Germany.

Technical guide

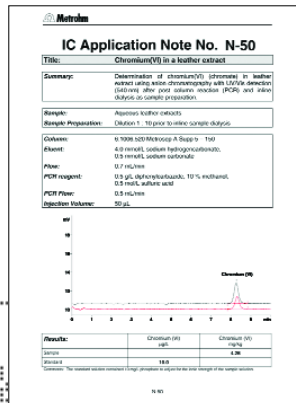
Reader Service 256



Thermo Electron offers a 20-page technical guide on the company's Hypersil GOLD HPLC columns. Peak shape, enhanced sensitivity and improved resolution is described. The guide contains many new applications, including numerous, difficult to analyse, pharmaceutical compounds, with chromatograms and run conditions. A copy can be obtained by visiting the company's website. **Thermo Electron Corp., Austin, Texas, USA.**

Chromate determination

Reader Service 259



Metrohm has published an application note describing a method for the determination of chromate (chromium VI) in the single digit µL/L range in leather extracts. The detection of the chromate is performed by post column reaction with diphenylcarbazide followed by photometric detection. Copies can be obtained from the company and is entitled Metrohm IC Application Note No. N-50.

Metrohm Ltd, Herisau, Switzerland.

Bacterial protein identification

Reader Service 257

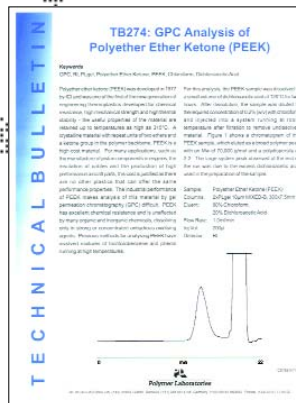


Available from Bruker Daltonics is an application note describing the identification of bacterial proteins allowing conclusions to be drawn on the sequence in the genome. Separation, digestion and individual analysis by mass spectrometry (both ESI and MALDI) is described for a cell culture. Application Note MT-73 concentrates on the detailed analysis of selected gel spots leading to the detection of protein modifications and sequence errors in the genome.

Bruker Daltonik GmbH, Bremen, Germany.

PEEK analysis

Reader Service 260



Polymer Laboratories has published a technical bulletin describing GPC analysis of polyether ether ketone (PEEK). PEEK is an engineering thermoplastic developed for chemical resistance, high mechanical strength and high thermal stability. This application analyses PEEK without using the traditional methods involving trichlorobenzene and phenol running at high temperatures. The bulletin, TB274, can be obtained from the company.

Polymer Laboratories, Church Stretton, Shropshire, UK.

Copolymer compositional analysis

Reader Service 258

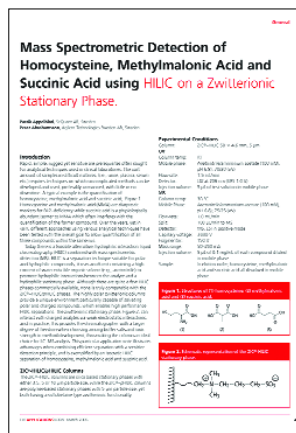


This application note from Viscotek outlines the use of multidetection gel permeation chromatography (GPC or SEC) methods to analyse copolymers. In some instances, copolymers present no difficulties and can be treated as homopolymers but in most instances the use of different, selective concentration detectors is required. This is because the two parts of the copolymer give differing responses on each detector. Only in this way can the calculation of an accurate molecular weight be achieved.

Viscotek Europe Ltd, Crowthorne, Berkshire, UK.

Hydrophilic interaction LC

Reader Service 261

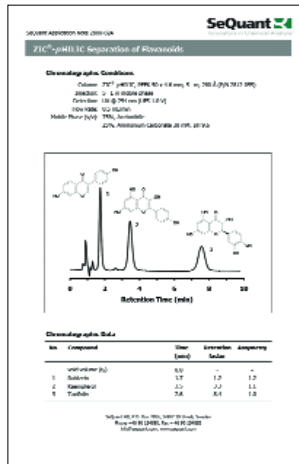


SeQuant has produced an application note describing how homocysteine, methylmalonic acid and succinic acid can be quantified employing a ZIC®-HILIC hydrophilic interaction liquid chromatography column coupled to a mass spectrometer. The ZIC®-HILIC column is a suitable tool for the separation of other polar and hydrophilic analytes and its hydrophilic zwitterionic properties can facilitate the quantification of many compounds experiencing poor retention or selectivity.

SeQuant AB, Umeå, Sweden.

HILIC mode separation

Reader Service 262

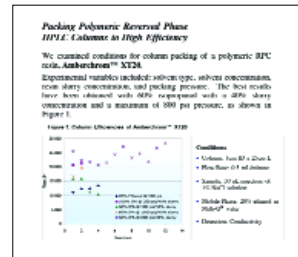


SeQuant offers an application note illustrating the advantages of performing HILIC separations of phenolic compounds at elevated pH. The application uses the company's polymeric ZIC®-pHILIC column and is exemplified by the separation of flavanoids, where the retention and selectivity increase at high pH. By taking advantage of the weak electrostatic interactions between the analytes and the overall zwitterionic stationary phase, and performing proper tuning of the mobile phase with respect to organic modifier, buffer salt, ionic strength and pH, the column is reported to show a unique selectivity in the analysis of many compounds.

SeQuant AB, Umeå, Sweden.

Column packing

Reader Service 265



Available from Rohm & Haas is an application note examining conditions for column packing of a polymeric RPC resin, Amberchrom™ XT20. Experimental variables include solvent type, solvent concentration, resin slurry concentration and packing pressure. Results were obtained with 60% isopropanol with a 40% slurry concentration and a maximum of 800 psi pressure.

Rohm & Haas Company — Advanced Biosciences, Paris, France.

Polycaprolactam analysis

Reader Service 263

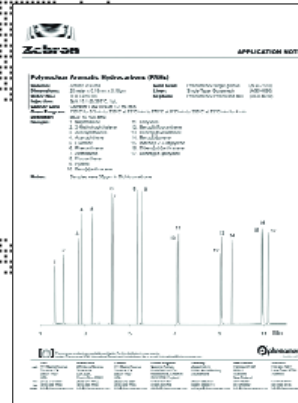


Available from Polymer Laboratories is a technical bulletin (TB275) describing GPC analysis of polycaprolactam, a polymer that biodegrades by enzymatic cleavage of ester bonds under conditions found within the human body. The note explains how the molecular weight of biodegradable polymers can be determined using the company's columns.

Polymer Laboratories Ltd, Church Stretton, Shropshire, UK.

Decrease PAH run times

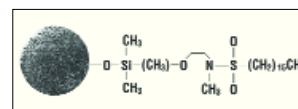
Reader Service 266



Available from Phenomenex is an application note entitled "Polynuclear Aromatic Hydrocarbons (PAHs)" App ID 15560. This application describes how the Zebron ZB-5 ms fast GC columns can be used to minimize analysis time to less than 12 minutes per run for PAHs. For additional GC applications contact Phenomenex at international@phenomenex.com.

Carbamate pesticide analysis

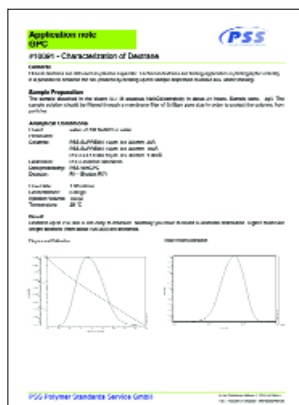
Reader Service 267



Available from Dionex is an application note describing carbamate pesticide analysis using the company's Acclaim®

High resolution characterization

Reader Service 264



Application note 10091 from PSS shows a unimodal molar mass distribution of a broad technical dextran sample. Three Suprema columns (10 μ, 8 × 300 mm 30 Å, 100 Å, 1.000 Å) and a guard column are used. Technical dextranes have a broad distribution with molar masses covering several decades and to achieve a high resolution characterization, a combination of different porosities is required. PSS SUPREMA is a universal material designed for neutral polymers and polyanions in aqueous eluents.

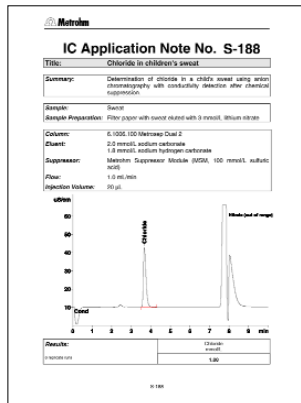
PSS Polymer Standards Service GmbH, Mainz, Germany.

PolarAdvantage column, a reversed-phase column based on bonding a unique embedded C16 sulphonamide functionality to 3- or 5 μm diameter particles of high-purity silica. The note explains how the instrumentation used offers the selectivity required for a wide range of environmental applications.

Dionex Corp., Sunnyvale, California, USA.

Chloride determination

Reader Service 268

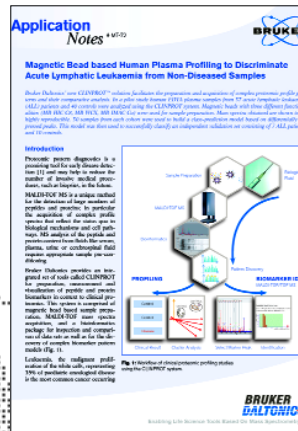


Metrohm application note S-188 describes the method for a non-invasive diagnostic tool for the determination of excessive chloride in children's sweat. Significantly elevated chloride concentration in children's sweat is an indicator of cystic fibrosis. Samples collected are too small for titration, therefore, suppressed ion IC, requiring only small volumes of injection and having low detection limits for chloride, offers the opportunity of multiple sample analysis.

Metrohm Ltd, Herisau, Switzerland.

Proteomic profile patterns

Reader Service 269



Bruker Daltonics has released an application note describing how the company's CLINPROT™ solution facilitates the preparation and acquisition of complex proteomic profile patterns and their comparative analysis. In a pilot study, human EDTA plasma samples from 37 acute lymphatic leukaemia patients and 40 controls were analysed. This model was then successfully used to classify an independent validation set consisting of 7 patients and 10 controls.

Bruker Daltonik GmbH, Bremen, Germany.

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