

SMS Publication List by Market Sector

Pharmaceuticals:

DVS Application Notes

- 03 Polymorphism in Spray Dried Lactose
- 04 Measuring the Vapour Pressure of Solid Pharmaceutical Compounds using a Knudsen Cell Method
- 10 Direct Visualisation of Moisture Induced Morphological Transformations using a combination of DVS and in-situ Colour Video Microscopy
- 12 Absolute Measurement of Moisture Diffusion into Blister Packaging Systems
- 13 Moisture Sorption of Hydrophobic Pharmaceutical Substances
- 17 Measurement of the Surface Energies of Powders using Organic Vapour Probes and DVS
- 18 Measuring BET Surface Areas Using Organic Probe Molecules
- 26 Isotherm Types and Adsorption Mechanisms of Solvents on Pharmaceutical Excipients
- 30 Calculation of Diffusion Constants in a Pharmaceutical Powder using DVS
- 33 Moisture Sorption Measurements on a Lyophilised Bovine Serum Albumin Sample
- 34 A New Gravimetric Method to Calculate Low Levels of Amorphous Content
- 35 Determining the Moisture-Induced Glass Transition in an Amorphous Pharmaceutical Material
- 36 Investigation of Hydrate Formation and Loss Using DVS
- 40 Using the DVS to Study the Water Sorption Properties of Multi-Component Systems
- 41 Using the DVS to Study the Formation of Solvates
- 42 Using the DVS to Investigate Moisture-Induced Crystallization Kinetics
- 44 Determining Amorphous Contents without a Standard: Hydrate/Solvate Stoichiometry
- 45 Investigation of Desolvation Kinetics Using the DVS
- 46 Combining Raman Spectroscopy with Gravimetric Vapour Sorption Analysis for Pharmaceutical Materials
- 50 The Use of Flow or Vacuum Methods for Gravimetric Water Sorption Characterisation of Pharmaceutical Materials
- 101 The Characterisation of Pharmaceutical Materials by Dynamic Vapour Sorption

IGC Application Notes

- 202 Determination of the dispersive surface energy of Paracetamol by pulse inverse gas chromatography at infinite dilution
- 203 Heat of sorption studies on micro crystalline cellulose by pulse inverse gas chromatography at infinite dilution
- 204 Determination of the glass transition temperatures T_g of maltose and its dependence on relative humidity by infinite dilution inverse gas chromatography
- 207 Characterisation of drug polymorphs by inverse gas chromatography
- 212 The characterisation of amorphous materials by inverse gas chromatography
- 214 The determination of the permeability and the activation energy of diffusion of drug powders by infinite dilution inverse gas chromatography
- 301 A new instrumental technique for characterising the physico-chemical properties of pharmaceutical materials

Case Studies

- 601 Identification of Batch-to-Batch variations in the dissolution rate of a pharmaceutical drug by Inverse Gas Chromatography
- 603 Correlating drug-binder adhesive strengths measured using Inverse Gas Chromatography with tablet performance
- 605 The effect of primary particle surface energy on agglomeration rate in fluidised bed wet granulation
- 608 Characterizing Disorder in Pharmaceutical Materials by Vapor Sorption Techniques
- 610 Correlating Mixing Properties of Model Excipient-API Blends to Spreading Coefficients Determined via Inverse Gas Chromatography

Food:

DVS Application Notes

- 03 Polymorphism in Spray Dried Lactose
- 08 Moisture Sorption of Coffee Granules studied using DVS and in-situ Video Microscopy
- 11 Moisture Stability of Powdered Milk Formulations
- 16 Calculation of Diffusion Constants in Thin Polymer Films using DVS
- 20 Caking of Lemon Flavour Powdered Drink Using DVS Humidity Cycling
- 21 Moisture Sorption on Tobacco of Various Origins
- 22 A Simple Shelf Life Prediction of Crackers
- 23 The Water Sorption Properties of Ramyun Noodles
- 27 Hygroscopicity of Japanese Green Tea Powder
- 28 Water pickup in Monosodium Glutamate
- 40 Using the DVS to Study the Water Sorption Properties of Multi-Component Systems
- 102 Moisture Sorption Properties of Food Products and Packaging Materials Studied by DVS

IGC Application Notes

- 203 Heat of sorption studies on micro crystalline cellulose by pulse inverse gas chromatography at infinite dilution
- 204 Determination of the glass transition temperatures T_g of maltose and its dependence on relative humidity by infinite dilution inverse gas chromatography
- 205 The determination of the solubility parameter of different starch types by infinite dilution inverse gas chromatography
- 206 Determination of permeability coefficients of alkanes in polyethylene powder by infinite dilution inverse gas chromatography

Polymers/Films:

DVS Application Notes

- 07 Measurement of Diffusion of Liquids and Vapours Through Real Polymer Tube Packaging Devices
- 12 Absolute Measurement of Moisture Diffusion into Blister Packaging Systems
- 16 Calculation of Diffusion Constants in Thin Polymer Films using DVS
- 31 Measurement of Moisture Ingress in Microelectronic Device Packaging
- 39 Measuring Moisture Sorption and Diffusion Kinetics on Proton Exchange Membranes Using the DVS
- 49 Measuring Water Vapor Flux Across Model Proton Exchange Membranes

IGC Application Notes

- 205 The determination of the solubility parameter of different starch types by infinite dilution inverse gas chromatography
- 206 Determination of permeability coefficients of alkanes in polyethylene powder by infinite dilution inverse gas chromatography
- 218 The determination of solubility parameters of polymers by inverse gas chromatography
- 303 A new instrumental technique for characterising the physico-chemical properties of polymers

Case Studies

- 604 Determination of Carbon Fibre-Polymer Interactions by Inverse Gas Chromatography
- 606 Correlating Surface Energies to Adhesion Data for Thermoplastic Polyolefins via Inverse Gas Chromatography
- 607 Surface Energy and Water Sorption Characterization of Fuel Cell Components at Different Relative Humidity Conditions
- 609 Comparing Surface Energy/Thermodynamic Adhesion Values with Mechanical Performance in Nanocomposites

Inorganic Materials (fibers, zeolites, oxides, carbons etc.):

DVS Application Notes

- 05 Adsorption of High Concentrations of Organic Vapours on Activated Carbon
- 09 Measuring the Moisture Sorption Kinetics of Cements using DVS
- 14 Moisture Sorption of Activated Carbon
- 24 Moisture Sorption on Commercial Humic Acids
- 25 Moisture Sorption on Bohemian Brown Coal Humic Acids
- 37 Hysteresis Effects in Vapour Sorption
- 38 Determination of Mesopore Size Distribution by Organic Vapour Sorption
- 43 Determination of Surface Energetics of Mineral Aggregates Used in Asphalt by DVS
- 104 Vapour Sorption Properties of Building Materials using Gravimetric Sorption Instrumentation - an Overview

IGC Application Notes

- 209 An investigation of Chromosorb silicas as support materials for inverse gas chromatography
- 211 An investigation of minerals used in asphalt by inverse gas chromatography
- 215 A sorption study on microporous materials by finite dilution inverse gas Chromatography
- 216 Characterisation of surface properties of glass fibres by inverse gas chromatography
- 222 The determination of the surface heterogeneity of graphite by inverse gas chromatography
- 223 Determination of energy parameters on microporous activated carbons
- 302 Characterisation of strong solid-vapour interactions by inverse gas chromatography
- 304 Characterisation of alumina and related surfaces by inverse gas chromatography

Case Studies

- 602 Investigation of the acid-base properties of an MCM-supported Ruthenium oxide catalyst by Inverse Gas Chromatography and Dynamic Gravimetric Vapour Sorption
- 604 Determination of Carbon Fibre-Polymer Interactions by Inverse Gas Chromatography
- 607 Surface Energy and Water Sorption Characterization of Fuel Cell Components at Different Relative Humidity Conditions
- 609 Comparing Surface Energy/Thermodynamic Adhesion Values with Mechanical Performance in Nanocomposites

General (across all markets):

DVS Application Notes

- 01 Validation of Relative Humidity using Saturated Salt Solutions
- 02 Moisture Sorption of EC Standard Reference Material RM 302 on a DVS-1 Instrument
- 06 Automated Measurement of Sorption Isotherms using a Dynamic Vacuum Method
- 10 Direct Visualisation of Moisture Induced Morphological Transformations using a combination of DVS and in-situ Colour Video Microscopy
- 15 Faster Sorption Isotherms using Helium Carrier Gas
- 17 Measurement of the Surface Energies of Powders using Organic Vapour Probes and DVS
- 18 Measuring BET Surface Areas Using Organic Probe Molecules
- 19 Determining the Heat of Sorption on Organic and Inorganic Powders using DVS
- 32 Accelerated Moisture Sorption Measurements by DVS Microsample Analysis
- 37 Hysteresis Effects in Vapour Sorption
- 38 Determination of Mesopore Size Distribution by Organic Vapour Sorption
- 40 Using the DVS to Study the Water Sorption Properties of Multi-Component Systems
- 47 Determination of True Density by Dynamic Vapour Sorption
- 103 Organic Solvent Sorption using a Dynamic Vapour Sorption Instrument-an Overview

IGC Application Notes

- 201 Gas phase diffusion studies of cyclohexane by infinite dilution inverse gas chromatography
- 202 Determination of the dispersive surface energy of Paracetamol by pulse inverse gas chromatography at infinite dilution
- 203 Heat of sorption studies on micro crystalline cellulose by pulse inverse gas chromatography at infinite dilution
- 204 Determination of the glass transition temperatures T_g of maltose and its dependence on relative humidity by infinite dilution inverse gas chromatography
- 205 The determination of the solubility parameter of different starch types by infinite dilution inverse gas chromatography
- 206 Determination of permeability coefficients of alkanes in polyethylene powder by infinite dilution inverse gas chromatography
- 208 The measurement of isotherms by pulse inverse gas chromatography
- 212 The characterisation of amorphous materials by inverse gas chromatography
- 213 Determination of thermodynamic parameters by frontal inverse gas chromatography
- 221 The determination of acid-base parameters by inverse gas chromatography

Other Markets:

DVS Application Notes

- 29 Moisture Desorption of Creams and Calculation of Diffusion Constants
- 48 Vapour Pressure Measurement of Pesticides using the DVS Knudsen method
- 104 Vapour Sorption Properties of Building Materials using Gravimetric Sorption Instrumentation - an Overview

IGC Application Notes

- 210 Investigation of the influence of bleaching conditions on surface properties of standard hair samples by inverse gas chromatography
- 219 The determination of the heterogeneity and surface area of hair by inverse gas chromatography
- 220 The characterisation of cotton fabrics and the interaction with perfume molecules by inverse gas chromatography
- 305 A new instrumental technique for characterising the physico-chemical properties of personal care products

