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Spectrophotometric Determination of Hydrochlorothiazide and Reserpine in Combination

An accurate and simple method is proposed for the determination of hydrochlorothiazide and reserpine. The former is determined by the application of the differential spectrophotometric method and the latter by formation of a charge-transfer complex with iodine. The procedure has been applied successfully to the determination of hydrochlorothiazide and reserpine when present in combination with a concentration of hydrochlorothiazide $100\times$ that of reserpine.

Keywords: Hydrochlorothiazide determination; reserpine determination; spectrophotometry

H. ABDINE, M. ABDEL-HADY ELSAYED and YOUSRY M. ELSAYED

Department of Pharmaceutical Analytical Chemistry, Faculty of Pharmacy, University of Alexandria, Alexandria, Egypt.

Analyst, 1978, **103**, 354–358.

Fluorescence Properties of Metoclopramide and Its Determination in Pharmaceutical Dosage Forms

The native fluorescence characteristics of metoclopramide in various solvents and at different pH values were determined qualitatively and quantitatively. Fluorimetric determinations can be performed directly and are based on an intense emission at 360 nm that occurs when the sample is excited at 310 nm following dilution in pH 2.0 buffer solution to a final concentration up to $6\text{ }\mu\text{g ml}^{-1}$. The detection limit is $3 \times 10^{-2}\text{ }\mu\text{g ml}^{-1}$.

A comparison is made between the fluorescence behaviour of metoclopramide and the structurally analogous procainamide molecule. Finally, metoclopramide has been converted into its monoacetyl derivative at the primary aromatic amine function. Spectral data confirming the structure are reported. Apart from the second-order excitation shoulder at 275 nm, no significant difference concerning fluorescence behaviour, qualitative or quantitative, between the acetyl derivative and the original molecule is established.

Keywords: Fluorimetry; metoclopramide fluorescence properties; metoclopramide determination; pharmaceutical analysis

W. BAEYENS and P. De MOERLOOSE

State University of Ghent, Faculty of Pharmaceutical Sciences, Department of Pharmaceutical Chemistry and Drug Quality Control, Akademisch Ziekenhuis, De Pintelaan 135, B-9000 Ghent, Belgium.

Analyst, 1978, **103**, 359–367.

Determination of Substituted Ureas and Some Related Herbicide Residues in Soils by Gas Chromatography

A method for the determination of 11 substituted ureas and related herbicides in soils is described. Acetone extraction is followed by alkaline hydrolysis, steam distillation and concentration of anilines in toluene, the last three steps being carried out in a single operation using a liquid-liquid extractor. The anilines, after partition into hydrobromic acid, are brominated and determined by gas chromatography with an electron-capture detector. The procedure is sufficiently sensitive for investigations into problems of crop damage and can be applied to a wide variety of soil types. An additional step to remove interference due to the presence of aniline metabolites is also described. The limit of detection is 0.01 mg kg^{-1} and recoveries at residual levels are generally better than 80%.

Keywords: Substituted urea determination; herbicide residue determination; gas chromatography

DAVID J. CAVERLY

Ministry of Agriculture, Fisheries and Food, Agricultural Development and Advisory Service, Olantigh Road, Wye, Ashford, Kent, TN25 5EL.

and RONALD C. DENNEY

School of Chemistry, Thames Polytechnic, Woolwich, London, SE18 6PF.

Analyst, 1978, **103**, 368–374.

Application of Gas - Liquid Chromatography to the Analysis of Essential Oils

Part VI. Determination of Limonene and 1,8-Cineole in Oils of Peppermint (Varieties *Mentha*)

Report prepared by the Essential Oils Sub-Committee.

Keywords: Limonene determination; 1,8-cineole determination; oils of peppermint; gas - liquid chromatography

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Analyst, 1978, **103**, 375-381.

Microbiological Determination of Zinc Bacitracin in Animal Feedingstuffs

Report prepared by the Antibiotics in Animal Feedingstuffs Sub-Committee.

Keywords: Zinc bacitracin determination; microbiological assay; animal feedingstuffs; antibiotics

ANALYTICAL METHODS COMMITTEE

The Chemical Society, Burlington House, London, W1V 0BN.

Analyst, 1978, **103**, 382-390.

Standardised General Method for the Determination of Iron with 1,10-Phenanthroline

Report prepared by the Iron Sub-Committee.

Keywords: Iron determination; 1,10-phenanthroline; spectrophotometry

ANALYTICAL METHODS COMMITTEE

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Analyst, 1978, **103**, 391-396.

Gas-chromatographic Determination of Some Sulphur Gases at the Volumes per Million Level in Air Using Tenax-GC

Short Paper

Keywords: Sulphur gas determination; gas chromatography; Tenax-GC; air analysis

D. S. WALKER

Department of Industry, Warren Spring Laboratory, P.O. Box 20, Gunnels Wood Road, Stevenage, Hertfordshire, SG1 2BX.

Analyst, 1978, **103**, 397-400.

Development of Acidity in Non-ionic Surfactants: Formic and Acetic Acids

Short Paper

Keywords: Non-ionic surfactant decomposition; pharmaceutical adjuvants; degradation; storage

M. DONBROW, R. HAMBURGER, E. AZAZ and A. PILLERSDORF

Pharmacy Department, School of Pharmacy, Hebrew University of Jerusalem, P.O. Box 12065, Jerusalem, Israel.

Analyst, 1978, **103**, 400-402.

Comparison of Different Forms of Cadmium as Reducing Agents for the Batch Determination of Nitrate*Short Paper**Keywords: Nitrate batch determination; cadmium reduction; spectrophotometry; water analysis***W. DAVISON and C. WOOF**

Freshwater Biological Association, Windermere Laboratory, Ambleside, Cumbria, LA22 0LP.

Analyst, 1978, **103**, 403–406.**Determination of Nitrogen with Copper as Catalyst for High-temperature Digestion***Short Paper**Keywords: Nitrogen determination; clinical analysis; automatic analysis; digestion; spectrophotometry***PER TINGVALL**

Vitrum Institute for Human Nutrition, Box 12170, 10224 Stockholm 12, Sweden.

Analyst, 1978, **103**, 406–409.**Improvement of the Nebuliser Pattern of a Flame Photometer***Short Paper**Keywords: Flame photometer; nebuliser pattern; glycerol; plant digests***R. VAN ECK**

Department of Soils and Fertilisers, Agricultural University, De Dreijen 3, Wageningen, The Netherlands.

Analyst, 1978, **103**, 409–410.**Effect of Cyanoethylation on End-point Sharpness in Catalytic Thermometric Titrations with Acrylonitrile as the Indicator Reagent***Communication**Keywords: Cyanoethylation; anionic polymerisation; catalytic thermometric titrimetry***E. J. GREENHOW, A. NADJAFI and L. DAJER DE TORRIJOS**

Department of Chemistry, Chelsea College, University of London, Manresa Road, London, SW3 6LX.

Analyst, 1978, **103**, 411–412.

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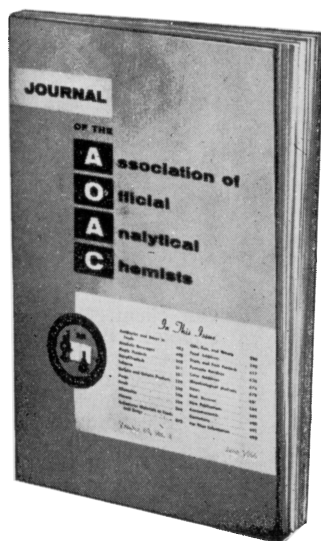
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