

A major breakthrough
in electrode measuring technology

ORION 901

THE THINKING METER

THE ELECTRODE POTENTIAL IS NOW -104.5mV
(IT WAS -142.7mV IN THE 1.00 STANDARD SOLUTION.)
AND THE ELECTRODE SLOPE IS $+59.16\text{mV PER DECADE}$,
AND THE BLANK CORRECTION IS 0.17PPM , THEN —
THE UNKNOWN
CONCENTRATION IS . . . **4.98PPM!**



The Model 901 combines the precision of a research pH/mV meter with the calculation ability of a microprocessor. This pre-programmed instrument has eleven operating modes that simplify pH, specific ion, and gas-sensing electrode analyses.

The 901 does away with calibration curves, tables, nomograms, and calculations. It is simple to operate — just dial in the operating mode (pH, concentration, known addition, analate addition, etc.), the standard solution value, the electrode slope . . . and the 901 is ready to go.

Standardization and blank correction are accomplished at the push of a button. Volume corrections, if they apply, are automatically calculated. Results are continuously updated and reported on the floating decimal point LED display.

Price? Not much more than you'd pay for a quality research-grade pH meter. Send for details now.



MSE Scientific Instruments

Manor Royal, Crawley, West Sussex, England. Telephone: Crawley 31100 Telex: 87119
A member of the Fisons group of Companies

Rapid Method for Determining Fluoride in Vegetation Using an Ion-selective Electrode

Fluoride was extracted from dried vegetation by stirring with 0.1 N perchloric acid for 20 min at 20 °C. The fluoride content was determined in this extract (pH 1) using the method of standard additions, thus eliminating the need to de-complex fluoride prior to analysis. The presence of up to 2.0% of silicon, 0.06% of iron, 0.1% of aluminium, 0.7% of magnesium and 1.2% of calcium did not result in any interferences and recoveries of 98–102% were obtained. The fluoride contents of standard samples determined by this method were highly correlated ($r = 0.999$) with those obtained by reference methods over the range 4–2000 $\mu\text{g g}^{-1}$ of fluoride in the dry matter.

Keywords: Fluoride determination; fluoride ion-selective electrode; fluoride in vegetation; perchloric acid extraction

ALBERTO ENRIQUE VILLA

Environmental Research Department, ALUAR Aluminio Argentino SAIC, 9120 Puerto Madryn, Chubut, Argentina.

Analyst, 1979, **104**, 545–551.

Automated Catalytic Method for the Routine Determination of Molybdenum in Plant Material

Molybdenum is determined by its catalytic effect on the liberation of iodine from iodide by hydrogen peroxide. The detection limit (twice the standard deviation of the blank) is 0.01 p.p.m. in plant material, using a 0.25-g sample. Interference from iron is eliminated by preventing any reduction to iron(II) before complexation with fluoride. High concentrations of salts, other metals and phosphate do not interfere, and agreement with established routine methods is very good.

Keywords: Molybdenum determination; plant material analysis; automated catalytic analysis

B. F. QUIN and P. H. WOODS

Winchmore Irrigation Research Station, Ministry of Agriculture and Fisheries, Private Bag, Ashburton, New Zealand.

Analyst, 1979, **104**, 552–559.

Determination of the Prostaglandin $F_{2\alpha}$ Content of Pharmaceutical Preparations with Triangle Programmed Bromimetric Titration in Flowing Solutions

A survey of the different methods for prostaglandin analysis is given. The use of bromine as a reagent for the accurate determination of prostaglandin $F_{2\alpha}$ is indicated from its chemical structure. Several reasons, however, hinder the use of classical bromimetry.

In this paper the application of a new analytical method, the so-called triangle programmed titration technique, is described for prostaglandin analysis. This method permits the simple and effective use of bromine as a reagent by performing the titration in a continuous-flow system. The reagent is generated coulometrically during the titration.

Methods are described for the determination of the prostaglandin $F_{2\alpha}$ content of different pharmaceutical preparations.

Keywords: Prostaglandin $F_{2\alpha}$ determination; coulometry; biamperometry; triangle programmed bromimetric titration; flow-through analysis

Zs. FEHÉR, G. NAGY, K. TÓTH and E. PUNGOR

Institute for General and Analytical Chemistry, Technical University, Budapest, Hungary.

and A. TÓTH

Chinoin Pharmaceutical and Chemical Works, Budapest, Hungary.

Analyst, 1979, **104**, 560–565.

Chemists in-the-know about methods know about

- ▶ Collaborative studies
- ▶ Original papers on
 - new techniques,
 - applications,
 - authentic data of composition studies leading to methods development
- ▶ Referee reports

**MARCH issue contains:
Official actions of the AOAC
New or changed methods**

Published six times annually.

Official publication of the Association of Official Analytical Chemists—the internationally known organization devoted to developing and publishing reliable thoroughly tested methods of analysis for:

- ▶ foods
- ▶ drugs
- ▶ cosmetics
- ▶ colors
- ▶ beverages
- ▶ flavors
- ▶ vitamins
- ▶ preservatives
- ▶ fats and oils
- ▶ feeds
- ▶ fertilizers
- ▶ pesticides
- ▶ disinfectants
- ▶ hazardous substances



ASSOCIATION OF
OFFICIAL
ANALYTICAL
CHEMISTS
JOURNAL



Association of Official Analytical Chemists
Box 540, Benjamin Franklin Station
Washington, D. C. 20044
U.S.A.

Please enter _____ subscription(s) to JOURNAL OF THE AOAC for 197____. (Subscriptions are on calendar basis for 6 issues: January, March, May, July, September, November. Back issues are sent to subscribers.)
Price: \$45.00 (domestic); \$50.00 (foreign). \$12.00 single copy.

Name _____
(please print)

Address _____

City _____ Zip Code _____

State or Country _____

☐ Payment enclosed

☐ Send invoice

Signature _____ Date _____

Determination of Phenindione Using Organic Brominating Agents*Short Paper**Keywords: Phenindione determination; bromination; titrimetry***A. ABOU OUF, M. I. WALASH, M. RIZK and F. BELAL**

Faculty of Pharmacy, Mansoura University, Mansoura, Egypt.

Analyst, 1979, **104**, 566–568.**Application of Difference Spectrophotometry to the Determination of Dipyrone***Short Paper**Keywords: Dipyrone determination; difference spectrophotometry***M. ABDEL-HADY ELSAYED, H. ABDINE and M. E. ABDEL-HAMID**

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

Analyst, 1979, **104**, 568–572.**Spectrophotometric Determination of Cobalt(II) with 2,2'-Pyridil Bis(2-quinolyldrazone)***Short Paper**Keywords: 2,2'-Pyridil bis-2(quinolyldrazone) reagent; cobalt determination; alloy analysis; spectrophotometry***H. KULSHRESHTHA, R. B. SINGH and R. P. SINGH**

Department of Chemistry, University of Delhi, Delhi-110007, India.

Analyst, 1979, **104**, 572–575.**Determination of Osmium(VIII) Alone or in Binary Mixtures with Some Group VIII Cations by Potentiometric Titration of Iodide***Short Paper**Keywords: Osmium(VIII) determination; potentiometric titration; silver electrode***H. KHALIFA, N. T. ABDEL GHANI and M. S. RIZK**

Faculty of Science, Cairo University, Giza, Cairo, Egypt.

Analyst, 1979, **104**, 576–579.**Gas Chromatographic - Mass Spectrometric Analysis of Polyethylene Bottle Packed Intravenous Solutions Contaminated with N-Ethylaniline from the Rubber Part of the Two-component Closure***Communication**Keywords: N-Ethylaniline migration; rubber disc; polyethylene plastics; intravenous solutions; gas chromatography - mass spectrometry***G. A. ULSAKER and G. TEIEN**

National Centre for Medicinal Products Control, Sven Oftedalsvei 8, Oslo 9, Norway.

Analyst, 1979, **104**, 580–582.

Fresenius' Zeitschrift für Analytische Chemie

Edited by W. Fresenius
in collaboration with the
Analytical Chemistry Division
of the German Chemical Society,
represented by H. Bode,
K. Kienitz, H. Specker, G. Tölg

International Editorial Board
D. Betteridge, Swansea, U.K.;
J.T. Clerc, Zurich, Switzerland;
A. Dijkstra, Utrecht, Netherlands;
H. Malissa, Vienna,
Austria; E. Pungor, Budapest,
Hungary; Yu. A. Zolotov,
Moscow, USSR

Founded in 1862 by Professor Remigius Fresenius

The journal fulfills the following aims:

Publishes new experimental research results in the form of
detailed original papers or rapidly published short communi-
cations.

Documents the international literature on analytical chemistry
by annually publishing approximately 6,000 abstracts, which
are listed in a subject and author index as well as a cumulative
general index.

Publishes special bulletins informing readers about conventions,
exhibitions and congresses.

Contains contributions in English and German.

Does not ask a page charge of authors.

With its NEW EQUIPMENT AND CHEMICALS section the
journal provides yet another valid source of information for
those active in research and industry.

Provides an additional MICROFICHE copy at a 25% discount
of the normal journal price.

Subscription conditions:

1978. Vols. 289-293 (5 issues each):

DM 840,— plus postage and handling

ORDER FORM



Send to:

Fresenius' Zeitschrift für Analytische Chemie ISSN 0016-1152

Ulrich Grunwald c/o Springer-Verlag – Postfach 105280 –
D-6900 Heidelberg 1, FRG
or your bookseller

I would like more information about this journal.

☐ A sample copy

☐ A promotional brochure/leaflet

☐ A subscription for 1978

☐ Information about microform/
microfiche

Name _____

Address _____



Springer-Verlag
Berlin
Heidelberg
New York

Luminescence Characteristics of Tubocurarine Chloride

Communication

Keywords: Tubocurarine chloride; luminescence characteristics

ERNEST P. GIBSON and JAMES H. TURNBULL