Contents: Volume 13

JANUARY

Editorial
Kinetic Aspects of Cyanmethemoglobin Formation from Carboxyhemoglobin
F. Lee Rodkey 1

A Method for the Rapid Detection of Acute Iron Toxicity
David S. Fischer 2

Determination of Uric Acid: An adaptation of the Archibald method on the Auto-Analyzer
H. Harold Nishi 6

3-Methoxy-4-Hydroxymandelic Acid (VMA) by Microfiber Chromatography
Joseph A. Preston 12

The Automated Fluorometric Determination of Serum Magnesium: II. Procedure using 8-hydroxyquinoline-5-sulfonic acid
Bernard Klein and Morris Oklander 26

Microtitration of Free Fatty Acids in Plasma
J. E. Goss and Allen Lein 36

Determination of Copper and Zinc in Biological Material
Mary M. Parker, Fred L. Humoller, and Delmar J. Mahler 40

A Modified Copper Method for the Estimation of a-Amino Nitrogen in Urine
C. C. Clayton and Betty F. Steele 49

What is a Standard?
Nathan Radin 55

Scientific Notes
Modifications of the Automated Procedure for Blood Phenylalanine
John B. Hill, George K. Summer, and Hoyle D. Hill 77

Letters to the Editor
81

The Clinical Chemist
83

FEBRUARY

A Simplified Method for the Analysis of Ultracentrifuge Film Records of Low-Density Lipoproteins of Human Serum
Oliver F. de Lalla, Robert K. Tandy, and Harold G. Loeb 85

Determination of Calcium in Urine and Serum by Atomic Absorption Spectrophotometry (AAS)
David L. Trudeau and Esther E. Freier 101

Spectrophotometric Measurements of Serum Nickel
F. William Sunderman, Jr. Milton Corn and Robert Berberich 115

Rapid Fluorometric Assay for Plasma Warfarin
126

Distribution Patterns of Uric Acid in Coronary Artery Disease
Morris London and Mary Hums 132

A Micromethod for the Determination of Ferroxidase (Ceruloplasmin) in Human Serums
D. A. Johnson, S. Osaki, and E. Frieden 142

Calcium Determinations in Kinetic Studies I. A new method for low urinary calcium concentrations
A. J. W. Hitchman, Joan E. Harrison, and J. M. Finlay 151

Hyperfibrinogenemia in Schizophrenia
Ulysses S. Sen, William R. Swaim, and Harold Eist 160

Scientific Notes
A Source of Error in an AutoAnalyzer Determination of Serum Iron
Arthur L. Babson and Norman M. Kleinman 163

Books Received
167

The Clinical Chemist
168
MARCH

Determination of Glutamic Oxaloacetic Transaminase Activity by Coupling of Oxalacetate with Diazonium Salts \textit{Sylvan M. Sax and John J. Moore} 175

Acid Hydrolysis of Urinary Estriol \textit{Adolf E. Schindler, Vannes Ratanasopa, and Walter L. Herrmann} 186

Lactate Dehydrogenase Isoenzymes: A comparison of pyruvate-to-lactate and lactate-to-pyruvate assays \textit{Arthur F. Krieger, Lawrence J. Rosenblum, and John B. Henry} 196

Determination of Calcium and Magnesium in Serum, Urine, Diet, and Stool by Atomic Absorption Spectrophotometry \textit{Elisabeth G. Gimblet, Amy F. Marney, and Roy W. Bonnes} 204

Determination of Unconjugated and Total N-Acetyl-p-aminophenol (NAPA) in Urine and Serum \textit{Karel P. M. Heirwegh and Johan Fecery} 215


Determination of Sodium in Urine by Specific Ion Electrode \textit{Joseph S. Annino} 227

Automated Method for the Determination of Serum Creatine Kinase Activity \textit{Gerard A. Fleisher} 233

Estimation of the Antitrypsin Activity of Serum \textit{Albert A. Diets, LaVerne K. Hodges, Herbert M. Rubinstein, and Robert R. Briney} 242

Books Received 255

The Clinical Chemist 256

APRIL

Alkaline Degradation of Inulin and its Structural Implications \textit{J. N. BeMiller, T. R. Steinheimer, and Earl E. Allen, Jr.} 261


Dumbbell-Diffusion Screening for Carbon Monoxide, Volatile Alcohols, and Chlorinated Hydrocarbons in Blood \textit{Sidney Nobel and Alayne Ricker} 276

An Automated Alkaline Phosphatase Assay with Phenolphthalein Monophosphate as Substrate \textit{Kirsten Hvid} 281

Automated Alkaline Phosphatase Determination: III. Evaluation of phenolphthalein monophosphate \textit{Bernard Klein and James H. Kaufman} 290

Measurement of DNA and RNA in Human Peripheral Blood Lymphocytes \textit{A. C. A. Glen} 299

Rapid Enzymatic Measurement of Blood Lactate and Pyruvate: Use and significance of metaphosphoric acid as a common precipitant \textit{Edward P. Marbach and Max Harry Wel} 314

Microdetermination of Inorganic Phosphate, Phosphohlipids, and Total Phosphate in Biologic Materials \textit{E. S. Baginski, P. P. Fob, and B. Zak} 326

Gas Chromatography of Meprobamate \textit{R. K. Maddock, Jr., and H. A. Bloomer} 333

Abstracts of Contributed Papers Delivered Before the American Association of Clinical Chemists Sections: 133rd Annual Meeting of the American Association for the Advancement of Science 339

The Clinical Chemist 344

MAY

Abbreviation of the Glucose Tolerance Test \textit{Adrian Haimline, Jr., and Dan F. Keller} 351
Correlation of Serum and Urine Enzyme Activity in Patients with Acute Myocardial Infarction

Albert A. Diets, LaVerne K. Hodges, and Donald T. Foxworthy 359

Porphyrin Patterns in Different Types of Porphyria

T. C. Chu and Edith Ju-Hwa Chu 371

Determination of Serum Calcium by Automated Atomic Absorption Spectroscopy

Bernard Klein, James H. Kaufman, and Stanley Morgenstern 388

Interference by Formaldehydogenic Drugs in the Quantitative Determination of Urinary Hydroxyindoleacetic Acid

Maurice E. Shils 397


Saul L. Kanter 406

Stability of Plasma Enzymes During Storage

Per Juel 416

Scientific Notes
Recalibration of the Gilford Absorbance Indicator

H. Bruce Collier 423

Letters to the Editor

426

Books Received

427

The Clinical Chemist

430

JUNE

Automated Potentiometric Determination of Inorganic Blood Constituents (Na⁺, K⁺, H⁺, Cl⁻)

H. Dahms 437

Kinetic Parameters of Continuous Flow Analysis


Effects of Tomatine on the Colorimetric Determination of Cholesterol by the Zak Procedure

Cleamond D. Eskelson, Arthur L. Dunn, and Clarence R. Cazee 468

Hippuric Acid Analysis of Urine Using the Hofmann Rearrangement

Horst Kehl 475

The Reitman-Frankel Colorimetric Transaminase Procedure in Suspected Myocardial Infarction

Leonard V. Crowley 482

Electrophoretic Determination of Vanilmandelic Acid (VMA) in Urine by Direct Application to Cellulose Acetate

Thorne J. Butler 488

A Rapid Assay for Urinary Porphyrins by Thin-Layer Chromatography

C. Ronald Scott, Robert F. Labbe, and Janet Nutter 493

A Rapid Spectrophotometric Method for the Determination of Citric Acid in Blood

Bennie J. Camp and Lynette Farmer 501

Methanalysis of the Intervertebral Disc

David Chan, E. Wayne Hull, Marvin Fields, and Earl McNall 506

An Automated Method for the Determination of Serum Calcium with Glyoxal Bis(2-Hydroxyanil)

Genevieve Farese, Janice L. Schmidt, and Milton Mager 515

The Clinical Chemist

521

JULY

Inborn Errors of Metabolism: A Symposium Sponsored by the American Association of Clinical Chemists at the 133rd Annual Meeting of the American Association for the Advancement of Science, Dec. 26–30, 1966, Washington, D. C.

Martin Rubin 541

The Clinical Chemistry and Pathologic Physiology of Thyroid Tissue

J. B. Stanbury and Leslie J. DeGroot 542

Genetic and Molecular Basis of Human Hereditary Diseases

J. Edwin Seegmiller 554
Enzymatic Abnormalities in Diseases of Sphingolipid Metabolism

Roscoe O. Brady

565

Structure of Sickle Cell Hemoglobin and Molecular Mechanism of the Sickling Phenomenon

Makio Murayama

578

Rapid Determination of Glutethimide (Doriden) by Gas-Liquid Chromatography

Seymour Winsen and Daniel Brody

589

Precision Estimates in Clinical Chemistry. I. Variability of analytic results in a survey reference sample related to the use of a nonhuman serum alkaline phosphatase

G. N. Bowers, Jr., M. L. Kelley, and R. B. McComb

595

Scientific Notes

Continuous Spectrophotometric Measurement of Serum Alkaline Phosphatase Activity: Relative molecular activity and sensitivity of nine self-indicating phenolic substrates in 2-amino-2-methyl-1-propanol buffer

George N. Bowers, Jr., Mari-Lou Kelley, and Robert B. McComb

The Clinical Chemist

608

AUGUST

A Manual Fluorometric Paper Disc Method for Detecting Phenylketonuria

Bernard Searle, Milutin B. Mijuskovic, Daniel Widelock, and Bernard Davidow

621

Sulfur Content of Paper Electrophoretic Fractions in Human Serum

Samuel Natelson and Rodney Stellate

626

Simplified Microestimation of Fibrinogen and Seromucoid in Plasma

J. D. Pryce

650

Abstracts of Papers from Scientific Sessions: 19th National Meeting of the American Association of Clinical Chemists

658

SEPTEMBER

Determination of Neutral Urinary 17-Oxosteroids with Hydroxide of Hyamine 10-X in the Zimmermann Reaction

Solveig Bjerre and Rose Kita

717

Method for the Determination of Acetylsalicylic Acid in the Blood

J. T. Bouch, N. A. Shane, E. G. Arredondo, and W. D. Paul

734

Automated Colorimetric Determination of Free Fatty Acids in Biologic Fluids

C. Dalton and C. Kowalski

744

Comparison Between p-Nitrophenyl Glucuronide and Phenolphthalein Glucuronide as Substrates in the Assay of β-Glucuronidase

Gabor Szasz

752

Calcium Determinations in Kinetic Studies: II. Blood- and urine-specific activity determinations

Joan Harrison, A. J. W. Hitchman, and J. M. Finlay

760

An Improved Extraction Procedure for the Determination of Triglycerides and Cholesterol in Plasma or Serum

Will G. Ryan and Oshana M. Rasho

769

Application of Thin-layer Chromatography to the Quantitation of Plasma Neutral Lipids and Free Fatty Acids

Robert T. Louis-Ferdinand, Donald G. Therriault, William F. Blatt, and Milton Mager

773

Scientific Notes

Automated Atomic Absorption Spectrophotometry: II. The determination of serum magnesium

Bernard Klein, James H. Kaufman, and Morris Oklander

788

Automated Atomic Absorption Spectrophotometry: III. Calcium in urine and spinal fluid

Bernard Klein, James H. Kaufman, and Morris Oklander

797

Abstracts of Contributed Papers, Regional Conference on Clinical Chemistry: Cleveland, Michigan, Midwest, Ohio Valley, and Pittsburgh Sections of AACC

806
Scientific Notes

Hemoglobin Sodium Nitrite vs. Hemoglobin Potassium Ferricyanide
George B. Theil and James E. Auer 1010

A Convenient System for Esterification of Fatty Acids
Robert L. Dryer 1014

Improving the Specificity of the Nitrosonaphthol Procedure for Urinary 5-
Hydroxyindoleacetic Acid
A. H. Anton and D. F. Sayre 1017

Serum Magnesium Concentration in Schizophrenia and Epilepsy
Ulysses S. Seal and Harold Eist 1021

New Table Design for the Equation: \((-\log \% T) \times 10^3\)
A. H. Anton and D. F. Sayre 1024

Fibrinogen Assay
William R. Swaim and Marija B. Feders 1026

The Clinical Chemist

DECEMBER

The Use of Ultraviolet Irradiation in the Estimation of Retinol (Vitamin A
Alcohol) and Its Derivatives: With special reference to the unusual
stability of retinoic acid
Burton S. Sherman 1039

Turbidimetric Method for the Determination of Pentachlorophenol in Urine
Eric G. Comstock, Betsy S. Comstock, and Katherine Ellison 1050

An Evaluation of Turbidimetric Technics for Estimation of Plasma Fibrinogen
Jesse F. Goodwin 1057

Dynamic Changes of Different Serum Glycoproteins after Bone Fractures
Malv Herzberg, Z. Oberman, S. L. Weissman, and H. Z. Herold 1065

Scientific Notes

Automated Simultaneous Calcium and Phosphorus Analysis
Bernard Klein, James H. Kaufman, and John Isaacs 1071

Automated Atomic Absorption Spectrophotometry: IV. Simultaneous determina-
tion of calcium and phosphate
Bernard Klein and James H. Kaufman 1079

AACC Scientific Sessions, 134th Annual Meeting, American Association for the
Advancement of Science
1088

Book Review
1099

The Clinical Chemist
1100

Index to Volume 13

Authors
1109

Titles and Subjects
1117