



- 1 Information for Authors**
- 5 A Clinical Evaluation of Various Delta Check Methods**
Lawrence A. Wheeler and Lewis B. Sheiner
- 10 Detection of Pentazocine and Tripeleminamine in Urine**
Ralston W. Reid and Claire M. Gerbeck
- 14 Effect of Outlying Standard Points on Curve Fitting in Radioimmunoassay**
F. J. Hawker and G. S. Challand
- 18 Combined Enzymic-Jaffé Method for Determination of Creatinine in Serum**
Parvesh Masson, Per Ohlsson, and Ingemar Björkhem
- 22 Homogeneous Substrate-Labeled Fluorescent Immunoassay for Theophylline in Serum**
Thomas M. Li, Jeffrey L. Benovic, Robert T. Buckler, and John F. Burd
- 27 Extended Clinical Trial and Evaluation of Glucose Determination with the Eastman Kodak Ektachem GLU/BUN Analyzer**
Zoltan L. Bandi, John B. Fuller, David E. Bee, and Gordon P. James
- 35 Effect on Serum-Constituents Analyses: Effect of Duration and Temperature of Storage of Clotted Blood**
Takeshi Ono, Katsumi Kitaguchi, Masafumi Takehara, Mitsuru Shiiba, and Kiyoshi Hayami
- 39 Double-Antibody Radioimmunoassay of Thyroid Microsomal Antibody in Serum**
Viola T. Kung, Paul M. Weber, and Leo V. dos Remedios
- 43 Urinary Metanephrine Radioimmunoassay: Comparison with the Colorimetric Assay**
William J. Raum and Ronald S. Swerdloff
- 48 γ -Glutamyltransferase and Alkaline Phosphatase Activities Compared in Serum of Normal Children and Children with Liver Disease**
Joseph A. Knight and Russell E. Haymond
- 52 Lectins Used to Prepare Serum Free of Glycoprotein Hormones for Use as a Matrix in Radioimmunoassay**
Margaret C. Stuart, Susan Ellis, Lucinda Gowlland, and Sheenah Tuff
- 57 Creatine Kinase B-Subunit Activity in Human Sera: Temporal Aspects of Its Sensitivity after Myocardial Infarction**
Robert C. Elser and Kevin McKenna
- 61 Acetylcholinesterase and Fetal Malformations: Modified Qualitative Technique for Diagnosis of Neural Tube Defects**
James E. Haddow, Mark E. Morin, Mary S. Holman, and Wayne A. Miller
- 64 Automated Particle-Counting Immunoassay for Alpha-Fetoprotein**
D. Collet-Cassart, C. G. M. Magnusson, J. G. Ratcliffe, C. L. Cambiaso, and P. L. Masson
- 68 Polarized Zeeman-Effect Flameless Atomic Absorption Spectrometry of Cadmium, Copper, Lead, and Manganese in Human Kidney Cortex**
Patricia A. Pleban, Julius Kerkay, and Karl H. Pearson
- 73 Zinc Determined in 10- μ L Serum or Urine Samples by Flameless Atomic Absorption Spectrometry**
Nancy E. Vieira and James W. Hansen
- 78 Day-to-Day Variation in Serum Ferritin Concentration in Healthy Subjects**
Vernon A. Pilon, Peter J. Howanitz, Joan H. Howanitz, and Nancy Domres
- 83 Sensitive and Specific Radioimmunoassay for Creatine Kinase BB Isoenzyme in Serum, with Use of an Autoantibody**
Petter Urdal and Peter Kierulf
- 88 Purification of Lactate Dehydrogenase Isoenzyme-5 from Human Liver**
Sabina M. Pettit, Daniel A. Nealon, and Arthur R. Henderson
- 94 Sources of Variation in the Column-Chromatographic Determination of Glycohemoglobin (HbA_{1c})**
Andries P. M. Schellekens, Gerard T. B. Sanders, Wayne Thornton, and Theo van Groenestein
- 100 Assay of δ -Aminolaevulinic Dehydratase in 10 μ L of Blood**
Donald C. Wigfield and Jean-Pierre Farant
- 104 Increased Activity in Serum of an Alkaline Phosphatase Isoenzyme in Cancer: Analytical Method and Preliminary Clinical Studies**
Lawrence Kahan, Vay Liang W. Go, and Frank C. Larson
- 108 Melanoma Detection by Enzyme-Radioimmunoassay of L-Dopa, Dopamine, and 3-O-Methyldopamine in Urine**
Bahjat A. Faraj, David H. Lawson, Daniel W. Nixon, Douglas R. Murray, Vernon M. Camp, Farouk M. Ali, Marcus Black, Wayne Stacciarini, and Yavuz Tarcan
- 113 Gas-Chromatographic Assay for Thiopental in Plasma, with Use of a Nitrogen-Specific Detector**
Donald Jung, Michael Mayersohn, and Donald Perrier
- 116 Evaluation of Quality-Control Materials for High-Density-Lipoprotein Cholesterol Quantitation**
G. Russell Warnick, Cathy Mayfield, and John J. Albers
- 124 Direct Quantitation of Glycosaminoglycans in 2 mL of Urine from Patients with Mucopolysaccharidoses**
Rufus W. Burlingame, George H. Thomas, Richard L. Stevens, Karl Schmid, and Hugo W. Moser
- 129 A Single Liquid-Chromatographic Procedure for Therapeutic Monitoring of Theophylline, Acetaminophen, or Ethosuximide**
Alfred J. Quattrone and Robert S. Putnam
- 133 Relation between Maternal Weight and Serum Alpha-Fetoprotein Concentration during the Second Trimester**
James E. Haddow, Edward M. Kloza, George J. Knight, and Dwight E. Smith
- 135 4-Nitrophenyl Phosphate—Characterization of High-Purity Materials for Measuring Alkaline Phosphatase Activity in Human Serum**
George N. Bowers, Jr., Robert B. McComb, and Amapoli Upreti
- 156 Evaluation of the IFCC-Recommended Procedure for Serum Aspartate Aminotransferase As Modified for Use with the Centrifugal Analyzer**
David E. Bruns, John Savory, Ann C. Titheradge, Robert E. Cross, and Michael R. Willis
- 160 Colorimetric vs Liquid-Chromatographic Determination of Urinary 5-Hydroxyindole-3-acetic Acid**
Russell P. Tracy, Lester E. Wold, James D. Jones, and Mary F. Burritt
- 163 Measurement of Serum Lipase Activity with the Oxygen Electrode**
Robert J. Griebel, Edward C. Knoblock, and Thomas R. Koch
- 166 The "Ultra-Free" Ultrafiltration Technique Compared with Equilibrium Dialysis for Determination of Unbound Thiopental Concentrations in Serum**
Donald Jung, Michael Mayersohn, and Donald Perrier
- 169 Evaluation of a New Valproic Acid Enzyme Immunoassay and Comparison with a Capillary Gas-Chromatographic Method**
Siegfried Lorenz Braun, Annedore Tausch, Wolfgang Vogt, Karl Jacob, and Maximilian Knedel
- 173 Liquid Chromatography of 3-Methoxy-4-Hydroxyphenylethylene Glycol in Urine with Fluorescence Detection**
James T. Taylor, Sharon Freeman, and Patricia Brewer
- 175 A Cellulose Acetate Electrophoretic Procedure Evaluated for Quantitation of High-Density Lipoprotein Cholesterol**
Ron B. Schiffman, Peter F. Brumbaugh, Douglas Grover, Paul R. Finley, and Edward J. Harrow
- PROPOSED SELECTED METHOD**
- 179 Assay of Creatinine in Serum, with Use of Fuller's Earth to Remove Interferents**
R. Haekkel
- CASE REPORT**
- 184 Diagnosis of Self-Induced Hyperinsulinism in an Insulin-Dependent Diabetic Patient by Radioimmunoassay of Free C-Peptide**
Mary T. Meistas, Manjula S. Kumar, and O. P. Schumacher
- SPECIAL REPORT**
- 187 Provisional Guidelines (1979) for Listing Specifications of Spectrometers in Clinical Chemistry**
R. Haekkel, Ch. Collombel, T. D. Geary, F. L. Mitchell, R. G. Nadeau, and K. Okuda
- HISTORY**
- 192 History of the Philadelphia Section, AACC**
Seymour Winsten and Leonard Sideman
- LETTERS**
- 195 More Practical Modification of a 5'-Nucleotidase Assay**
Raffi G. Simon
- 195 Uricase Immobilized on Walls of Glass Tubes Used as Reactors in Continuous-Flow Analyzers**
Asfaha Iob and Horacia A. Mottola
- SCIENTIFIC NOTES**
- 144 Optimizing Determination of Plasma Albumin by the Bromocresol Green Dye-Binding Method**
William S. Robertson
- 146 Liquid-Chromatographic Quantification of Plasma Phenylalanine, Tyrosine, and Tryptophan**
Leonard M. Neckers, Lynn E. Delisi, and Richard Jed Wyatt
- 149 Evaluation of Free and Total L-Thyroxine in Serum by a Commercial Procedure**
M. J. Obregon, A. Kurtz, R. Ekins, and G. Morreale de Escobar
- 153 Measurement of Near-Normal Concentrations of**

clinical chemistry



Journal of the American Association for Clinical Chemistry

J. Stanton King, *Executive Editor*

Virginia Shires Marcum, *Assistant Editor*

Board of Editors

Theodore Peters, Jr.,

Chairman

Bernard Berne

Gerald R. Cooper

Basil T. Doumas

Joseph W. Goldzieher

Harold J. Grady

Hanns-Dieter Gruemer

Eugene K. Harris

Peter I. Jatlow

Thomas R. Koch

Jack Ladenson

Robert B. McComb

Robert F. Ritchie

John Savory

Robert Schaffer

F. William Sunderman, Jr.

Marlo Werner

Graham M. Widdowson

Michael R. Wills

Robert Wolen

Advisory Board

Samuel H. Brooks (U.S.A.)

André De Leenheer (Belgium)

Eloise Eavenson (U.S.A.)

F. Peter Woodford (England)

Editorial Board, *Selected Methods*

Gerald R. Cooper, *Chairman*

Willard R. Faulkner, *Co-Chairman*

Robert W. Burnett

Merle A. Evenson

Martin Fleisher

Donald T. Forman

Christopher Frings

Richard H. Gadsden

Judith A. Hopkins

Lawrence M. Killingsworth

Thomas R. Koch

Samuel Meites

George E. Nichoals

Henry C. Nipper

Thomas C. Stewart

Raymond E. Vanderlinde

- 196 **Blood-Brain Barrier vs Blood-CSF Barrier: Precision in Terminology**
Lawrence M. Killingsworth
(Reply)
Albert A. Keshgegian
- 196 **Diethylamine Prevents Precipitation in the Alkaline Buffer Reagent for the Kinetic Jaffé Determination of Serum Creatinine**
Richard S. Schifreen, James Sindab, Denise Bologna, Claire Cameron, and Robert W. Burnett
- 197 **Demonstration of Heterogeneity in a High-Density Lipoprotein Subfraction**
Nicholas M. Papadopoulos, Ernst J. Schaefer, and David W. Anderson
- 198 **Assessment of a New Method for Determination of Xylose in Serum and Urine**
J. P. Straub
- 198 **Improved Sample Treatment before Liquid-Chromatographic Determination of Anticonvulsants in Serum**
Ronald C. George
- 199 **An Enzymic Bicarbonate Reagent That is Free of**

- Pyruvate Interference**
Nina Peled
- 200 **Improved β -Zone Resolution in Agarose Gel Electrophoresis**
Marian Doren, Dennis Conlon, and Larry Blankstein
- 200 **Postcoital Enzyme Activities in the Vagina**
E. Rutter and P. H. Whitehead
(Reply)
Wadie F. Gohara
- 202 **Observations on Comparisons of Within-Run and Day-to-Day Precision**
Jan S. Krouwer
- 202 **Sulfasalazine Interferes with Coulometry of Serum Iron**
Patrick Jaynes and Gordon F. Kapke
- 203 **In Vitro Stability of Normifensine in Plasma**
Iain M. McIntyre, Trevor R. Norman, and Graham D. Burrows
- 204 **Effects of Bilirubin on Ionized Calcium**
Gary M. Chan, K. Owen Ash, Wayne Hentschel, and James Wu

- 205 **Microassay of Lead in Blood, with an Improved Procedure for Standardization of Reagent Tubes**
Ed J. M. de Haas and Frederik A. de Wolff
- 205 **Pyridoxal Phosphate Activation of Aminotransferases in Serum of Patients with Kidney Transplants**
Klaus Jung, Brigitte Ohrich, Dietmar Mildner, and Dietmar Scholz
- 206 **Nonspecific Binding in Thyrotropin Radioimmunoassay with Double-Antibody Separation**
I-Wen Chen, Linda A. Heminger, and Harry R. Maxon
- 207 **Urinary Excretion of Material with β -Endorphin Immunoreactivity**
Charles W. Denko, Patricia Gabriel, and Mark Petricevic
- 208 **Investigation of Captopril for Methodological Interference in Continuous-Flow (SMAC) Profiles**
Frank A. Sedor and Cathy M. Holleman
- 211 **THE CLINICAL CHEMIST**
J. Stanton King

Marian Hartness, *Editorial Assistant*

Eline Van Anden, *Copy Editor*

Editorial Office Tel. (919) 725-0208
Box 5218
Winston-Salem, NC 27103

Business Office Tel. (202) 857-0717
1725 K St., NW
Washington, DC 20006

The contents of advertisements or articles of *Clinical Chemistry* (ISSN 0009-9147) are not to be construed as official statements, evaluations, or endorsements by the Board of Editors of the American Association for Clinical Chemistry.

COPYRIGHT © 1981 THE AMERICAN ASSOCIATION FOR CLINICAL CHEMISTRY

General Information. Manuscripts, editorial inquiries, and books for review should be addressed to the Editorial Office (address above). All subscriptions and circulation inquiries should be sent to the Business Office (address above). Information for Authors appears in the January issue.

Subscription: *Clinical Chemistry* is issued monthly. Subscriptions are to be paid in advance; payment should accompany the order. Price per year, \$50.00 in the U.S.A. and possessions; \$60.00 in North America outside the U.S.; \$70.00 elsewhere. Members, domestic and

foreign, \$25.00 (included in dues). All subscriptions before Oct. 1 start with the first issue of the current volume. Single copies of current-volume issues \$7.50; ask Special-Issue Sales for back-issue prices. Claims for missing numbers will not be allowed (a) unless we are notified no later than three months after the issue date for domestic and Canadian subscribers, four months after the issue date for foreign subscribers; (b) if notice of a recent change of address has not been received; or (c) if the reason for claim is "missing from files." Advertising inquiries should be sent to Scherago Associates, Inc., 1515 Broadway, 10th Fl., New York, NY 10036. Second class postage paid at Washington, DC 20006 and additional mailing offices. Published monthly by the American Association for Clinical Chemistry, Inc., P.O. Box 5218, Winston-Salem, NC 27103. Printed at 20th and Northampton Sts., Easton, PA 18042.