

# **INDUSTRIAL and ENGINEERING CHEMISTRY**

**ANALYTICAL EDITION**

**Volume 16—1944**

*Published by the*  
**AMERICAN CHEMICAL SOCIETY**  
1155 Sixteenth Street, N. W., Washington 6, D. C.



*Editor:* WALTER J. MURPHY

*Associate Editor:* Lawrence T. Hallett

*Assistant to Editor:* N. A. Parkinson

*Manuscript Editor:* G. G. Gordon

*Make-up Editor:* Bertha Reynolds

*Manuscript Assistant:* Stella Anderson

*Make-up Assistant:* C. C. Sayre

#### *Advisory Board*

R. P. Chapman

T. R. Cunningham

R. H. Müller

J. R. Churchill

G. E. F. Lundell

B. L. Oser

B. L. Clarke

M. G. Mellon

H. H. Willard



P.1058/44

~~P.539/44/A~~

# AUTHOR INDEX

VOLUME 16—1944

ACREE, FRED, JR. <i>See</i> Jacobson, Martin.		
AIKEN, W. H. <i>See</i> Doty, P. M.		
ALBANESE, A. A., WAGNER, D. L., FRANKSTON, J. E., AND IRBY, VIRGINIA. Amino Acid Analysis of Some Common Vegetables. Method for Carbohydrate-Free Extraction of Nitrogen from Fresh Vegetables.	609	
ALLEN, C. C., AND DUCKWALL, H. W. Sulfuric Acid Extraction in Hydrocarbon Type Analysis. (Correction, 727)	558	
ALTHOUSE, P. M., AND TRIEROLD, H. O. Physical Constants of Methyl Esters of Commonly Occurring Fatty Acids. Vapor Pressure.	605	
AMOROSI, A. M. <i>See</i> McKinney, D. S.		
AMSTUTZ, E. D. <i>See</i> Fehnel, F. A.		
APPLEZWEIG, NORMAN. Large-Capacity Continuous Solids Extractor.	472	
APPLING, J. W. <i>See</i> Wise, L. E.		
ARCHIBALD, R. M. <i>See</i> Hamilton, P. B.		
ARNOLD, M. R. <i>See</i> Dunbar, R. E.		
ASHBURN, GILBERT, AND FRANK, R. L. Constant-Rate Dropping Funnel.	418	
ASHLEY, S. E. Q. <i>See</i> Murray, W. M., Jr.		
ATKIN, LAWRENCE, WILLIAMS, W. L., SCHULTZ, A. S., AND FREY, C. N. Yeast Microbiological Methods for Determination of Vitamins. Pantethenic Acid.	67	
AUERBACH, M. E. Colorimetric Assay of Quaternary Ammonium Salts.	739	
BAER, ERICH. Improved Distilling Flask.	399	
BAIER, W. E. Adaptor for Angle Centrifuge Tests.	193	
BAKER, IRVIN, MILLER, MARTIN, AND GIBBS, R. S. Colorimetric Microdetermination of Tin with Silicomolybdate.	289	
BANDEMER, S. L., AND SCHAILBLE, P. J. Aid in Ashing Certain Materials. Determination of Iron. Study of <i>o</i> -Phenanthroline Method.	417	
BANGERT, W. M. <i>See</i> Boericke, F. S.	317	
BARNES, R. B., WILLIAMS, VAN ZANDT, DAVIS, A. R., AND GIESECKE, PAUL. Physical Methods of Analysis of Synthetic and Natural Rubber. (Correction, 486)	9	
BARNES, R. H., RUSOFF, I. I., MILLER, E. S., AND BURR, G. O. Relationship between Unsaturation and Ultraviolet Absorption Spectra of Various Fats and Fatty Acids.	385	
BARTHEL, W. F. Improved Vacuum Distilling Head. AND LAFORGE, F. B. Determination of Carbon-Linked Methyl Groups. <i>See also</i> Bowen, C. V.	374	
BARTON, C. J., AND PRUTTON, A. J. Photometric Method for Determination of Hemicellulose.		
BATEN, W. D., AND DEWITT, C. C. Use of Discriminant Function in Comparison of Proximate Coal Analyses.		
BATTISTA, O. A. Molecular Weight of Cellulose. Measurement of Average Degree of Polymerization.		
BAYLEY, C. H. <i>See</i> Weatherburn, A. S.		
BECK, CLYDE. <i>See</i> Lang, O. W.		
BENJAMIN, HENRY. Fluorocolorimetric Determination of Blended Oils and Oil in Oil-Water Emulsions.	331	
BENNE, E. J. Washing Sesar Filtering Crucibles by Reverse Flow. <i>See also</i> Comar, C. L.	277	
BERG, RUTH. <i>See</i> Gawron, Oscar.		
BERKOWITZ, DONALD AND BERNSTEIN, RUBIN. Analysis of Soap-Synthetic Detergent Mixtures in Bar Form.	239	
BERNSTEIN, RUBIN. <i>See</i> preceding item.		
BERSHETOOR, A. W., GREENE, L. M., AND STENGER, V. A. Determining Phenols in Dilute Solutions. Notes on Gibbs Method.	694	
BIGGS, B. S., AND ERICKSON, R. H. Determining Plasticizer Content of Cellulose Esters.	93	
BIMMERMAN, H. G., AND KEEN, W. N. Use of Alternating Current Solenoid in Freeze Tests.	588	
BLACK, G. S. <i>See</i> Webb, G. A.		
BLISS, HARDING. <i>See</i> Rowe, R. G.		
BLODGETT, GERTRUDE. <i>See</i> Satterlee, H. S.		
BLUE, D. D. <i>See</i> Olsen, A. L.		
BOATNER, C. H., CARAVELLA, MAIZIE, AND KYAME, LILLIAN. Quantitative Determination of Extractable Gossypol in Cottonseed and Cottonseed Meal. Spectrophotometric Method.		
BOERICKE, F. S., AND BANGERT, W. M. Controlled-Atmosphere Induction Melting Furnace for Laboratory.		
BOGGS, W. A. Constant-Level Float Valve. Hot Distilled Water Reservoir.	302	
BOHART, G. S. <i>See</i> Nielsen, J. P.	201	
BOLIN, D. W., AND STAMBERG, O. E. Rapid Digestion Method for Microdetermination of Phosphorus.	345	
BOOTH, H. S., AND McNABNEY, RALPH. Improved Fractionating Column for Gases.	131	
BORUFF, C. S. <i>See</i> Tarnutzer, C. A.		
BOVIE, R. W. <i>See</i> Conner, H. A.		
BOWEN, C. V., AND BARTHEL, W. F. Identification of Nornicotine in Tobacco.	377	
BOYD, T. F. <i>See</i> Weinberg, Sidney.		
BOYD, W. E. Crucible Holder for Use with Rubber Extraction Apparatus.	721	
Take-Off for Recovering Solvent from Rubber Extraction Apparatus.	722	
BOYER, P. D., SPITZER, ROBERT, JENSEN, CURTIS, AND PHILLIPS, P. H. Determination of Vitamin A and Carotene in Milk. Rapid Extraction Procedure.	101	
BOYLE, A. J., CASTO, C. C., AND HANEY, R. M. Determination of Magnesia in Magnesite and Dolomite. Potentiometric Method.	313	
HUGHES, V. V., AND CASTO, C. C. Rapid Estimation of Chlorate Ion Employing Catalysis.	370	
<i>See also</i> Miller, L. G., and Whitehead Thomas, Jr.		
BRABSON, J. A., HARVEY, I. W., MAXWELL, G. E., AND SCHAEFFER, O. A. Photometric Determination of Silica in Aluminous Materials by Molybdenum Blue Reaction.	705	
KARCHNER, J. H., AND KATZ, M. S. Photometric Determination of Phosphorus in Limestone.	553	
BRADSTREET, R. B. <i>See</i> Lewis, J. B.		
BRADY, L. J. Infrared Analysis of Butadiene.	422	
BRODE, W. R., PATTERSON, J. W., BROWN, J. B., AND FRANKEL, JEHOME. Studies on Chemistry of Fatty Acids. Absorption Spectra Analysis of Conjugation in Fatty Acid.	77	
BROOKES, M. H. <i>See</i> Hinman, W. F.		
BROWN, F. M. <i>See</i> Tuttle, Clifton.		
BROWN, J. B. <i>See</i> Brode, W. R.		
BROWN, R. E. <i>See</i> Clausen, D. F.		
BROWNE, H. H. Quantitative Method for Determination of Maltose in Presence of Glucose.	582	
BRYANT, E. F., PALMER, G. H., AND JOSEPH, G. H. Microdetermination of Pectin in Biological Materials. Modification of Pentose-Furfural Method.	74	
BUNTING, W. E. Determination of Soluble Silica in Very Low Concentrations.	612	
BURAS, E. M., JR., AND REID, J. D. Simplified Conductometric Titration Apparatus.	591	
BURCHFIELD, H. P. Identification of Natural and Synthetic Rubbers.	424	
BURNETT, R. S., AND MERRIFIELD, A. L. Device for Renewing Filter-Cake Surface in Small-Scale Vacuum Filtrations.	365	
BURR, G. O. <i>See</i> Barnes, R. H.		
BURSTEIN, H. N. <i>See</i> Snider, S. R.		
BUSH, M. T., AND GOTHE, ANDRES. Laboratory Spray Extraction Column. <i>See also</i> Goth, Andres.	528	
BUSWELL, R. J. <i>See</i> Norris, F. A.		
BUTLER, A. Q. <i>See</i> Wickers, Edward.		
CALDWELL, C. W., PARKER, R. C., AND DIEHL, HARVEY. Apparatus for Automatic Control of Electrodeposition with Graded Cathode Potential.	532	
CANNON, M. R. Viscosity Measurement. Master Viscometers.	708	
CANTINO, E. C. Elimination of Nitrate Impurities from 30 Per Cent Hydrogen Peroxide. Simple Microtitration Rack.	181	
CARAVELLA, MAIZIE. <i>See</i> Boatner, C. H.	346	
CARL, FRED. <i>See</i> Clark, G. L.		
CASE, O. P. Direct Photometric Determination of Silicon in Copper-Base Alloys.	309	
CASKEY, C. D., JR., AND KNAPP, F. C. Method for Detecting inadequately Heated Soybean Oil Meal.	640	
CASSIL, C. C., AND HANSEN, J. W. Colorimetric Analysis of Xanthone Spray Residues.	35	
CASTO, C. C. <i>See</i> Boyle, A. J.		
CEALSKE, N. H., AND KESSLINGER, S. A. Photoelectric Automatic Liquid Level Control.	393	
CHAMBERS, W. A., JR. <i>See</i> Singer, Louis.		
CHAPIN, D. S. <i>See</i> Schrenk, W. G.		
CHARKEY, L. W., AND WILGUS, H. S., JR. Chromatographic Determination of Carotene in Alfalfa.	184	
CHASTAIN, S. M. Device for Rapid Closing of Weighing Bottles.	579	
CHISHOLM, R. D., AND KOBLITSKY, LOUIS. Modification of Ethanolamine Hydrolysis Method for Determination of Methyl Bromide.	538	
CHOLAK, JACOB, AND HUBBARD, D. M. Microdetermination of Cadmium in Biological Material. Spectrographic, Polarographic, and Colorimetric Methods. Spectrochemical Analysis with Air-Acetylene Flame.	333	
CHU, L. J.-Y. <i>See</i> Lo, Chien-Pen.	728	
CHUN, H. H. Q. <i>See</i> Siders, C. P.		
CHURCHILL, J. R. Techniques of Quantitative Spectrographic Analysis.		
CIPONELLI, TONY. Electric Heater for Microprocedures and Melting Points.	653	
CLARDY, F. B. <i>See</i> McDowell, T. B.	134	
CLARK, G. L., KAYE, W. I., SEABURY, R. L., AND CARL, FRED. Spectrophotometric Study of Oxidation of Quenching Oils.	740	
CLAUSEN, D. F., AND BROWN, R. E. Determination of Thiamine by Thiochrome Method. Effects of Temperature and Dissolved Oxygen on Fluorescence of Quinine Standard and of Thiochrome.	572	
CLAYTON, J. O. <i>See</i> Lindeken, C. L.		
CLELAND, J. E., EVANS, J. W., FAUSER, E. E., AND FETZER, W. R. Refractive Index-Dry Substance Tables for Starch Conversion Products.		
COAHAN, L. H., SOHN, MADELINE, AND STEINBERG, MARTIN. Determination of Rate of Cure of GR-I and Natural Rubber.	161	
COAHAN, L. H., SOHN, MADELINE, AND STEINBERG, MARTIN. Determination of Rate of Cure for Natural and Synthetic Rubber.	562	
COLEMAN, A. M. <i>See</i> Shaw, J. A.	15	
COLEMAN, G. H. <i>See</i> McCloskey, C. M.		
COLLINS, W. D. <i>See</i> Wickers, Edward.		
COMAR, C. L., MILLER, E. J., RICHARD, M. N., AND BENNE, E. J. Adaptation of Waring Blender for Continuous Emulsification.	717	
CONNER, H. A., AND BOVIE, R. W. Ground Starch as Indicator in Iodometry.	772	
CONRAD, C. M. Determination of Wax in Cotton Fiber. New Alcohol Extraction Method.	745	
CONRAD, R. M. <i>See</i> Schrenk, W. G.		
COOK, E. V. <i>See</i> Elliott, J. H.		
CORWIN, A. H. Microchemical Balances. Errors of Kuhlmann Balance.	258	
COWAN, J. C., FALKENBURG, L. B., AND TEETER, H. M. Analysis of Bodied Drying and Semidrying Oils.	90	
CRAFT, C. H. <i>See</i> Makepeace, G. R.		
CRAIG, L. C., AND POST, O. W. Improved Apparatus for Solubility Determination or for Small-Scale Recrystallization.	413	
CROWELL, W. R., AND KÖNIG, OTTO. Improved Microapparatus for Use in Chromatography.	347	
CURRY, JAMES, AND HUGUS, Z. Z., JR. Circulating Device for Use with Hydrogen Electrode.	58	

DACUS, E. N. Simple Microtorch.....	142
DASSOW, JOHN. See Stansby, M. E.	
DAVIS, A. R. Physical Methods of Analysis of Synthetic and Natural Rubber (Correction).....	486
See also Barnes, R. B.	
DAVIS, R. O. E. See Yee, J. Y.	
DAVISON, J. A. See Lipkin, M. R.	
DEAN, E. W., WILLIAMS, A. A., AND FISHER, N. E. Operating Procedure for Determining Heat of Combustion of Gasoline.....	182
DEAN, M. R., AND LEGATESKI, T. W. Specific Gravity of Butadiene.....	7
DEICHMANN, W. B. Phenol Studies. Qualitative Tests for Phenol and o-, m-, and p-Cresol.....	37
DEWITT, C. C. See Baten, W. D.	
DICKEY, L. W., AND HENRY, ROY. Gum Content of Distillate Diesel Fuels.....	710
DIENHL, HARVEY. See Caldwell, C. W.	
DOTY, P. M., AIKEN, W. H., AND MARK, HERMANN. Water Vapor Permeability of Organic Films.....	686
DOUSLIN, D. R., AND WALLS, W. S. Semiautomatic Pressure Control in Low-Pressure, Low-Temperature Laboratory Fractionation.....	40
DOYLE, C. D. Determination of Total Phthalic Anhydride in Modified Alkyd Resins.....	200
DUCKWALL, H. W. See Allen, C. C.	
DUKE, F. R. Color Test for Carbonyl Group.....	110
Salicylimines as Organic Precipitants. Quantitative Precipitation of Nickel and Copper and Determination of Copper in Brass or Bronze.....	
AND STONE, K. G. Preparation of Standard Cerate Solutions from Cerium Titration Residues.....	
DUNBAR, R. E., AND ARNOLD, M. R. Preparation and Reclamation of Copper-Chromium Oxide Catalyst.....	441
DUNPHY, R. A. See Sherry, W. B.	
DUSTIN, JAMES. See Mitchell, D. T.	
 EARLEY, E. B. Determining Phytin Phosphorus. Stoichiometric Relation of Iron and Phosphorus in Ferric Phytate.....	
ELLIOTT, J. H., AND COOK, E. V. Determination of Alpha, Para-Dimethylstyrene in Presence of Para-Methylstyrene, Styrene, and Para-Cymene.....	389
ELVING, P. J., AND LAMKIN, J. C. Titrimetric Determination of Zinc. Application to Alloy Analysis.....	20
ENGLES, D. T., AND HANAHAN, D. J. Determination of Vanillin and Coumarin in Flavoring Extracts. Ultraviolet Absorption Method.....	194
ENGLISH, JAMES, JR. Microapparatus for Purification of Solids.....	505
EPPRIGHT, M. A., AND WILLIAMS, R. J. Thiamine Determination. Comparative Study of Yeast-Growth, Yeast-Fermentation, and Thiochrome Methods.....	478
ERICKSON, R. H. See Biggs, B. S.	
EVANS, J. W. See Cleland, J. E.	
EVANS, R. J., AND ST. JOHN, J. L. Determination of Total Sulfur in Feeds. Modified Nitric and Perchloric Acid Digestion Procedure.....	630
 FALKENBURG, L. B. See Cowan, J. C.	
FARBER, LIONEL. See Lang, O. W.	
FAUSER, E. E. See Cleland, J. E.	
FEHNN, E. A., AND AMSTUTZ, E. D. Ethylbis-2,4-dinitrophenylacetate, New pH Indicator. Determination of Saponification Equivalents in Dark-Colored Oils.....	53
AND MIRANDA, L. I. Selective Spot Microreaction for Cadmium. FETTER, E. S., JR. Modifications of Apparatus for Deuterium Oxide Microdetermination by Falling Drop.....	141
FETZER, W. R. See Cleland, J. E.	
FILEK, L. J., JR. See Mattil, K. F.	
FISCHER, PHILIP, SPIERS, ROBERT, AND LISAN, PHILIP. Spectrographic Determination of Small Amounts of Tungsten in Steel.....	607
FISHER, N. E. See Dean, E. W.	
FLEISHER, HARRY. Sensitive Indicator for Volumetric Determination of Boiler Feedwater Alkalinity (Addition).....	273
FLISIK, H. F. See Swinehart, C. F.	
FORD, LORNE. Support for Flasks on Steam and Water Baths.....	
FOX, R. P. See Kochakian, C. D.	
FRANEK, R. L. See Ashburn, Gilbert.	
FRANKEL, JEROME. See Brode, W. R.	
FRANKESTON, J. E. See Albanese, A. A.	
FREYVEL, L. K. Chemical Analysis by Powder Diffraction.....	209
FREY, C. N. See Atkin, Lawrence.	
FRIZZELL, L. D. Quantitative Separations with Exchange Adsorber.	615
FRONT, JACQUELINE. Support for Kjeldahl Flasks.....	324
FRUNDT, R. J. L. See Reed, Gerald.	
FRYLING, C. F. Emulsion Polymerization of Synthetic Rubber in 10-Gram Systems. Experimental Technique.....	
FULMER, E. I., KOLFENBACH, J. J., AND UNDERKOFLER, L. A. Quantitative Determination of Mixtures of Methyl Vinyl Ketone and Diacetyl. Dropping Mercury Electrode Method. See also Kolfenbach, J. J.	1
FURBEE, K. D. See McDow, T. B.	
FURMAN, N. H. See Stone, K. G.	
FURNAS, C. C. See Rowe, R. G.	
 GARRIS, W. E., JR. See Hoiberg, A. J.	
GAWRON, OSCAR, AND BERG, RUTH. Estimation of Vitamin C in Presence of Iron Salts. Stepwise Determination of Vitamin C and Ferrous Iron with Dichlorophenolindophenol.....	757
GAYLE, F. L. See Schwartz, M. C.	
GEE, E. A. See Olsen, A. L.	
GELBACH, R. W. See Henry, J. L.	
GENUNG, L. B. See Malm, C. J.	
GIBBS, R. S. See Baker, Irvin	
GIESECKE, PAUL. See Barnes, R. B.	
GILDON, M. A. See Gordon, P. L.	
GOLDBERG, A. I. Determination of Total Phthalic Anhydride in Oil-Modified Alkyd Resins.....	198
GOLDSTONE, N. I., AND JACOBS, M. B. Chlorometry. Titrimetric Procedure Available for Microanalysis.....	206
GONICK, HARRY, AND MILANO, J. J. Determination of Tetraethyllead in Gasoline.....	
GOODHUE, L. D. See Smith, C. M.	
GORDON, P. L., AND GILDON, M. A. Determination of Dry Hiding of Pigmented Coatings.....	442
GOTH, ANDRES, AND BUSH, M. T. Rapid Method for Estimation of Penicillin.....	451
See also Bush, M. T.	
GRABOWSKI, H. A. See Straub, F. G.	
GRAFF, M. M., O'CONNOR, R. T., AND SKAU, E. L. Purification of Solvents for Absorption Spectroscopy. Adsorption Method.....	556
GRAVES, STUART. Needed Improvement in Baking Control Methods for Organic Finishes.....	599
GREEN, L. F. See Zacheile, F. P.	
GREENBERG, L. A. Bomb Furnace for Carius Digestion.....	308
GREENE, L. M. See Besagetoer, A. W.	
GRIFFITH, R. B., AND JEFFREY, R. N. Determining Chlorophyll, Carotene, and Xanthophyll in Plants.....	438
GROSS, S. T., AND MARTIN, D. E. Quantitative Determination of Crystalline Materials by X-Ray Diffraction.....	95
GUETTEL, C. L. Emission Spectrographic Equipment Used in Quantitative Analysis. Proposed Minimum Requirements.....	670
GUNN, HELEN. See Sears, G. W.	
GURRY, R. W., AND TRIGG, HASTINGS. Determination of Carbon in Low-Carbon Steel. Precision and Accuracy of Low-Pressure Combustion Method.....	248
GUTHRIE, J. D. See Hoffpauir, C. L., and Steiner, E. T.	
 HAAG, H. B. See Larson, P. S.	
HAARIS, F. W. Microstaining Rubber in Ground or Milled Plant Tissues.....	480
HAINES, G. S. See Williams, Dwight.	
HALL, J. F., JR. See Smaller, Bernard.	
HALLER, H. L. Some Color Tests for Rotenone Not Specific. See also Jacobson, Martin, and Schechter, M. S.	277
HALLETT, L. T. A.S.T.M. Attracts Large Attendance of Analytical Chemists.....	482
HALLIDAY, E. G. See Hinman, W. F.	
HAMILTON, P. B., AND ARCHIBALD, R. M. Dialysis Cell for Rapid Quantitative Analytical Microdetermination of Diffusible Components in Blood Plasma.....	136
HAMILTON, R. H. Photoelectric Photometry. Analysis of Errors at High and at Low Absorption.....	123
HAMM, W. S. See Shockley, C. F.	
HAMMACK, LOREN, AND NAEGELIN, C. L. Modified Bailey Buret.....	357
HANAHAN, D. J. See Englis, D. T.	
HANEY, R. M. See Boyle, A. J.	
HANSEN, J. W. See Cassil, C. C.	
HARRISON, R. W. See Stansby, M. E.	
HARTIGAN, R. H. See Shaw, J. A.	
HARVEY, E. H. See Petersen, R. B.	
HARVEY, I. W. See Brabson, J. A.	
HARVEY, W. T. See Lipkin, M. R.	
HATCH, R. S. Cupriethylene Diamine as Solvent for Precise Determination of Cellulose Viscosity.....	104
HAUGE, S. M. See Zacheile, F. P.	
HAWKINGS, R. C., AND THODE, H. G. Polarographic Microdetermination of Copper, Lead, and Cadmium in High-Purity Zinc Alloys.....	71
HAYWOOD, P. J. C. See Kay, J.	
HEATH, D. P. See Stevens, Lester.	
HENNESSY, D. J., WAPNER, SAMUEL, AND TRUHLAR, JOSEPH. Thiamine Content of Pharmaceuticals. Comparative Study of Rat-Curative, Thiochrome, and Fermentation Micromethods.....	478
HENRY, J. L., AND GELBACH, R. W. Dichromate Determination of Iron. Using Silver Reducto.....	49
HENRY, R. L. See Zacheile, F. P.	
HENRY, ROY. See Dickey, L. W.	
HILL, R. T., AND JACOBS, W. L. Device to Relieve Bumpy Distillations.....	722
HILLSON, H. D. Determination of Large Amounts of Manganese. Modified Persulfate Method.....	560
HINMAN, W. F., HALLIDAY, E. G., AND BROOKES, M. H. Thiamine in Beef Muscles. Comparison of Values by Thiochrome Reaction Applied with and without Adsorption.....	116
HOERR, C. W. See Ralston, A. W.	
HOFFPAUER, C. L., AND GUTHRIE, J. D. Determination of Small Amounts of Sulfate in Cellulose Nitrate and Other Cellulose Esters.....	391
HOIBERG, A. J., AND GARRIS, W. E., JR. Analytical Fractionation of Asphalts.....	294
HOLLER, A. C., AND YEAGER, J. P. Determination of Sulfur in Brass and Bronze by Combustion Method.....	349
HOLMES, F. E. Fractionating Column for Continuous Production of Distilled Water of High Purity.....	748
HOLLOWCHAK, JOSEPH. See Rehner, John, Jr.	
HONOLD, EDITH, AND WAKEHAM, HELMUT. Analysis Data for Ternary System Acetone-Benzene-Water.....	490
HOOD, S. L., PARKS, R. Q., AND HURWITZ, CHARLES. Mineral Contamination Resulting from Grinding Plant Microsamples.....	202
HUBBARD, D. M. See Cholak, Jacob.	
HUGHEY, V. V. See Boyle, A. J.	
HUGONET, J. J. See Seaman, Wm.	
HUGUS, Z. Z., JR. See Curry, James.	
HUME, D. N., AND KOLTHOFF, I. M. Iodometric Determination of Iodates, Bromates, or Permanganates in Presence of Copper. Determination of Copper in Presence of Oxidizing Agents.....	103
HURWITZ, CHARLES. See Hood, S. L.	
 IRBY, VIRGINIA. See Albanese, A. A.	
JACOBS, M. B. See Goldstone, N. I.	
JACOBS, W. L. See Hill, R. T.	
JACOBSON, MARTIN, ACREE, FRED, JR., AND HALLER, H. L. Determination of Sesamin.....	166
JANSEN, E. F., WAISBROD, S. W., AND RIETZ, EDWARD. Errors in Zeisel Methoxyl Values for Pectin Due to Retained Alcohol.....	523
JEFFREY, R. N. See Griffith, R. B.	
JELINEK, V. C. Flow Characteristics of Dispersions of Cotton and Regenerated Cellulose Rayon Fabrics in Cuprammonium. Their Significance in Fluidity Calculations.....	172

JENSEN, CURTIS. <i>See</i> Boyer, P. D.	
JOHNSON, C. M. <i>See</i> Prater, A. N., and Williams, K. T.	
JOHNSON, M. J. Determination of 2,3-Butylene Glycol in Fermentation.	626
<i>See also</i> Perlman, David.	
JONES, A. L. <i>See</i> Yoe, J. H.	
JONES, R. G. Gravimetric Determination of 1-Diethylamino-4-aminopentane.	431
JONNARD, RAYMOND. Design of Large-Size Laboratory Extraction Glass Apparatus.	61
JOSEPH, G. H. <i>See</i> Bryant, E. F.	
JOY, A. B. Determination of Potassium in Fertilizer Mixtures. Removal of Ammonia and Organic Matter without Ignition.	383
KALLMANN, SILVE. Determination of Lithium in Its Minerals.	712
KAMLET, JONAS. Qualitative Differentiation of Methylcarbinols and Methyl Ketones.	362
KARCHMER, J. H. <i>See</i> Brabson, J. A.	
KATZ, M. S. <i>See</i> Brabson, J. A.	
KAY, J., HAYWOOD, P. J. C., AND SEAMAN, WM. <i>o</i> -Cresol in Phenol (Correspondence).	772
KAYE, W. I. <i>See</i> Clark, G. L.	
KEEN, W. N. <i>See</i> Bimberman, H. G.	
KESSLINGER, S. A. <i>See</i> Ceaglske, N. H.	
KIESELBACH, RICHARD. Funnel for Use with Standard Taper Flasks. Joining Plastic Tubing to Glass.	293
Microdetermination of Nitrates by Devarda Method.	275
Microdetermination of Nitric Oxide in Gases.	764
Simplified Fritted-Glass Bubbler.	766
KING, W. II., AND LUHORN, D. A. Determination of Fluoride. Detection and Determination of Acutely Toxic Quantities in Foods and Biological Material.	538
<i>See also</i> Schrenk, W. G., and Silker, R. E.	
KIPNIS, FRANK. Separation of Catalysts from Hydrogenation Reaction Mixtures.	
KITSON, R. E., WITH MELLON, M. G. Color of Aqueous Potassium Dichromate Solutions.	637
Colorimetric Determination of Germanium as Molybdenum Acid.	
Colorimetric Determination of Phosphorus as Molybdenumphosphoric Acid.	
Further Studies of Molybdenum Blue Reaction.	
KLEIBER, MAX. <i>See</i> Smith, F. R.	
KLEIN, BERNARD. Microdetermination of Sulfate. Colorimetric Estimation of Benzidine Sulfate Precipitate.	
KNAPP, F. C. <i>See</i> Caskey, C. D. Jr.	536
KOBE, K. A. Dropping Funnel.	42
KOBITSKY, LOUIS. <i>See</i> Chisholm, R. D.	
KOCH, J. M. Analysis of Petroleum Oil-Soluble Sodium Sulfonates by Adsorption.	
KOCH, LOUIS, MILLIGAN, R. F., AND ZUCKERMAN, SAMUEL. Identification of Some Important Unsulfonated Azo-2-naphthol Dyes.	
KOCHAKIAN, C. D., AND FOX, R. P. Microdetermination of Calcium by Titration of Oxalate with Ammonium Hexanitratocerate.	
KÖNIG, OTTO. <i>See</i> Crowell, W. R.	
KOLB, J. J. Stability of Standard Solutions of Copper Perchlorate and Potassium Iodate.	
KOLFENBACH, J. J., KOOL, E. R., FULMER, E. I., AND UNDERKOFLER, L. A. Laboratory Continuous Countercurrent Liquid-Liquid Extractor.	38
<i>See also</i> Fulmer, E. I.	
KOLTHOFF, I. M. <i>See</i> Hume, D. N., and Watters, J. I.	
KONEN, H. J. <i>See</i> McQuarrie, E. B.	
KOOL, E. R. <i>See</i> Kolfenbach, J. J.	
KOUTEN, J. W., SHOHAN, J. B., AND MUNN, W. F. Compact Field Apparatus for Determination of Lewisite or Mustard Gas.	25
KRIEGER, K. A. Apparatus for Surface Area Measurement.	255
KURTZ, S. S., JR. <i>See</i> Lipkin, M. R.	398
KYAME, LILLIAN. <i>See</i> Boatner, C. H.	
LADD, W. A. Electron Microscope Studies of Colloidal Carbon in Vulcanized Rubber.	
LAFORGE, F. B. <i>See</i> Barthel, W. F.	642
LAMEIN, J. C. <i>See</i> Elving, P. J.	
LANG, O. W., FARRIER, LIONEL, BECK, CLYDE, AND YERMAN, FRED. Determination of Spoilage in Protein Foodstuffs, with Particular Reference to Fish.	
LANGDON, W. M., AND O'BRIEN, G. M., JR. General Utility Laboratory Distillation Column.	490
LANNING, J. H., AND ROSZMAN, C. A. Estimation of Pyridine Content of Pyridine-Acetic Acid Mixture Used in Riboflavin Determination.	639
LARDY, H. A. <i>See</i> Perlman, David.	
LARSON, I. O. <i>See</i> Miceli, A. S.	
LARSON, P. S. AND HAAG, H. B. Quantitative Determination of Nicotine and Nornicotine in Mixtures.	86
LEGATESKI, T. W. <i>See</i> Dean, M. R.	
LE ROY, D. J., AND STACIE, E. W. R. Microdetermination of Nitric Oxide Using Solid Reagents.	341
LEVINE, JOSEPH. Microchemical Identification of Demerol.	408
<i>See also</i> Wollner, H. J.	
LEVINE, W. S. AND SEAMAN, HENRY. Electrolytic Determination of Copper in Steel and Cast Iron with Supplementary Colorimetric Procedure for Certain Alloy Steels.	
LEWIS, J. B., AND BRADSTREET, R. B. Substitution of Bromine When Determining Unsaturation of Straight and Branched-Chain Olefins.	80
LIEBER, EUGENE. <i>See</i> Rice, H. T.	
LIEBHAFSKY, H. A. The (Predictable) Concentrating of Standard Solutions Owing to Evaporation.	349
LINDEKEN, C. L., CLAYTON, J. O., AND SKOGG, D. A. Determination of Ethyl Acetate in Presence of Acetaldehyde.	734
LINDSAY, W. N., AND MANSFIELD, TOM. Determination of Moisture in Whole Egg Powder.	628
LINGANE, J. J. Apparatus for Rapid Polarographic Analysis. Systematic Polarographic Metal Analysis. Analysis of Copper Group with Aid of Electrolytic Separations.	329
LIPKIN, M. R., DAIVISON, J. A., HARVEY, W. T., AND KURTZ, S. S., JR. Pycnometer for Volatile Liquids. Control of Diffusion as Aid in Precision Pycnometry.	147
LISAN, PHILIP. <i>See</i> Fischer, Philip.	55
LITTLE, R. W. Destructive Irradiation Technique of Spectrophotometric Vitamin A Assay.	
LITTEN, H. Z. Fixing Rubber Connections.	
LO, CHIEN-PEN, AND CHU, L. J.-Y. Qualitative Study of Color Reaction of Phosphomolybdic Acid.	
LONG, W. D. Versatile Liquid-Liquid Extractor.	
LOVELL, E. L. Viscometric Chain Length of Wood Cellulose in Triton F Solution.	
LUCAS, E. H. Microdetermining Ascorbic Acid in Large Numbers of Plant Samples.	
LUCE, E. N. <i>See</i> Marquardt, R. P.	
LUCKMANN, F. H. <i>See</i> Neal, R. H.	
LUHORN, D. A. <i>See</i> King, W. H.	
LUKE, C. L. Determination of Antimony in Tin-Base Alloys.	
LYKEEN, LOUIS, PORTER, PAUL, RULIFFSON, H. D., AND TUENMLER, F. D. Potentiometric Determination of Acidity in Highly Colored Materials. Application to New and Used Petroleum Lubricants Containing Additives.	219
MCAFEE, JERRY. Positive Displacement Flowmeter.	303
MCARDLE, E. H., AND ROBERTSON, A. E. Evaporation Indices of Hydrocarbon Thinners.	690
MCCLOSKEY, C. M., SUNDBERG, R. L., AND COLEMAN, G. H. Vacuum-Jacketed Ground-Glass Joint for High-Vacuum Distillations at Elevated Temperatures.	94
McDOW, T. B., FUNKEE, K. D., AND CLARDY, F. B. Determination of Tin by Modified Iodometric Method.	555
McKEE, L. G. <i>See</i> Shockley, C. F.	
McKINLEY, J. B., NICKELS, J. E., AND SIDHU, S. S. Phenyl Isocyanate Derivatives of Certain Alkylated Phenols. Melting Points and X-Ray Powder Diffraction Data.	304
McKINNEY, D. S., AND AMOROSI, A. M. Determination of Carbon Dioxide in Water.	315
MACKINNEY, G. <i>See</i> Prater, A. N.	
MCLENDON, VERDA. <i>See</i> Olsen, A. L.	
McMILLAN, W. R. Improved Timing Siphon.	592
MCNABB, W. M. <i>See</i> Snyder, M. D.	
MCNABREY, RALPH. <i>See</i> Booth, H. S.	
MCQUARRIE, E. B., AND KONEN, H. J. Glass Electrode Assembly for Titrating Microbiological Vitamin Assays.	205
MAGES, STEPHEN. <i>See</i> Wachs, Herman.	
MAGNUSON, H. J., AND WATSON, E. B. Microdetermination of Arsenic in Biological Materials.	339
MAKEPEACE, G. R., AND CRAFT, C. H. Colorimetric Determination of Nickel in Steel.	375
MALM, C. J., GENUNG, L. B., WILLIAMS, R. F., JR., AND PILE, M. A. Analysis of Cellulose Derivatives. Total Acyl in Cellulose Organic Esters by Saponification in Solution.	501
MANSFIELD, TOM. <i>See</i> Lindsay, W. N.	
MARK, HERMANN. <i>See</i> Doty, P. M.	
MAREHAM, A. E. Determination of Noncondensables in Gas.	681
MARQUARDT, R. P., AND LUCE, E. N. Determination of <i>o</i> -Xylene in Recycle Styrene.	751
MARTIN, D. E. <i>See</i> Gross, S. T.	
MASBAD, E. A. <i>See</i> Seaman, Wm.	
MATCHETT, J. R. <i>See</i> Wollner, H. J.	
MATTIL, K. F., AND FILER, L. J., JR. Determination of Gallic Acid Added to Fats and Oils.	427
MAXWELL, G. E. <i>See</i> Brabson, J. A.	
MELLON, M. G. <i>See</i> Kitson, R. E.	
MENDENHALL, E. E. <i>See</i> Wilson, J. L.	
MERRIFIELD, A. L. <i>See</i> Burnett, R. S.	
MERRITT, L. L., JR. Determination of Small Amounts of Zinc by Measurement of Fluorescent Turbidities.	
AND WALKER, J. K. 8-Hydroxyquinoline as Analytical Reagent.	758
MESINGER, P. H. <i>See</i> Wickers, Edward.	387
METZLER, D. E., MYERS, R. J., AND SWIFT, E. H. Use of Iodine Monochloride in Standardization of Permanganate Solutions with Arsenious Oxide.	625
MICELI, A. S., AND LARSON, I. O. Determination of Zinc in Cyanide Brass-Plating Baths.	165
MILANO, J. J. <i>See</i> Gonick, Harry.	
MILLER, E. J. <i>See</i> Comar, C. L.	
MILLER, E. S. <i>See</i> Barnes, R. H.	
MILLER, L. G., BOYLE, A. J., AND NEILL, R. B. Routine Determination of Zinc in Magnesium Alloys. Volumetric Method.	256
MILLER, MARTIN. <i>See</i> Baker, Irvin.	
MILLIGAN, R. F. <i>See</i> Koch, Louis.	
MIRANDA, L. I. <i>See</i> Feigl, Fritz.	
MITCHELL, D. T., SHILDNECK, PAUL, AND DUSTIN, JAMES. Laboratory-Size Glass Circulating Evaporator.	754
MITCHELL, H. II. Determination of Nutritive Value of Proteins of Food Products.	696
MITCHELL, JOHN, JR., SMITH, D. M., AND MONEY, F. S. Semimicro-saponification of Esters.	410
MONEY, F. S. <i>See</i> Mitchell, John, Jr.	
MORRIELLO, CHARLES. <i>See</i> Wachs, Herman.	
MORRIS, D. L. Observation of Possible Value for Sugar Determinations. (Correction, 693).	537
MOSHIER, R. W. <i>See</i> Whitnack, G. C.	
MUNN, W. F. <i>See</i> Kouten, J. W.	
MURRAY, W. M., JR., AND ASHLEY, S. E. O. Determination of Carbon by Low-Pressure Combustion Method.	242
AND NIEDRACH, L. W. Determination of Carbon. Simplification of Low-Pressure Combustion Apparatus.	634
MYERS, R. J. <i>See</i> Metzler, D. E.	
NAEGELIN, C. L. <i>See</i> Hammack, Loren.	
NASH, H. A. <i>See</i> Zscheile, F. P.	
NEAL, R. H., AND LUCKMANN, F. H. Determination of Vitamin A Content of Margarine. Spectrophotometric Method.	358
NEILL, R. B. <i>See</i> Miller, L. G.	
NICHOLS, M. L., AND ROGERS, L. H. Microdetermination of Small Amounts of Molybdenum in Plants and Soils.	137
NICKELS, J. E. <i>See</i> McKinley, J. B.	
NIEDRACH, L. W. <i>See</i> Murray, W. M., Jr.	
NIELSEN, J. P., AND BOHART, G. S. Determination of Crude Lipid in Vegetable Matter.	701

NORRIS, F. A., AND BUSWELL, R. J. Stability of Wijs Solution for Iodine Number Determinations.....	417
NORTON, A. R. <i>See</i> Seaman, Wm.	
NORWICK, BRAHAM. Textile Finishes and Fiber Identification Stains.....	274
O'BRIEN, G. M., JR. <i>See</i> Langdon, W. M.	
O'CONNOR, R. T. <i>See</i> Graff, M. M.	
OGBURN, S. C. <i>See</i> Sherry, W. B.	
OLSEN, A. L., GEE, E. A., AND McLENDON, VERDA. Precision and Accuracy of Colorimetric Procedures as Analytical Control Methods. Determination of Aluminum.....	169
GEE, E. A., McLENDON, VERDA, AND BLUE, D. D. Precision and Accuracy of Colorimetric Procedures as Analytical Control Methods. Determination of Silica.....	462
OSBORN, R. A. <i>See</i> Wickers, Edward.	
PAGEL, H. A. Carbon Dioxide Generator for Dumas Micro-method of Determining Nitrogen.....	344
PALMER, G. H. <i>See</i> Bryant, E. F.	
PARKER, R. C. <i>See</i> Caldwell, C. W.	
PARKS, R. Q. <i>See</i> Hood, S. L.	
PATTERSON, G. D., AND SLOAN, C. K. Laboratory Evaluation of Corrosion-Inhibitive Pigments.....	234
PATTERSON, J. W. <i>See</i> Brode, W. R.	
PEARL, I. A. Continuous Liquid-Liquid Extractor.....	62
PEARLSON, W. H. Vacuum Stopcock Lubricant Unaffected by Hydrocarbons.....	415
PERLMAN, DAVID, LARDY, H. A., AND JOHNSON, M. J. Determination of Citric Acid in Fermentation Media and Biological Materials.....	515
PETERSEN, G. W., AND RADKE, H. H. Microdetermination of Small Amounts of Acrylonitrile in Air.....	63
PETERSEN, R. B., AND HARVEY, E. H. Colorimetric Method for Determination of Ergosterol.....	495
PHILLIPS, P. H. <i>See</i> Boyer, P. D.	
PILE, M. A. <i>See</i> Malm, C. J.	
PLATNER, W. S. Stable Starch Solution for Dissolved Oxygen Determinations.....	369
PLEIN, E. M., AND POE, C. F. Determination of Camphor and Alcohol in Spirit of Camphor by Refractive Index and Specific Gravity.	168
POE, C. F. <i>See</i> preceding item	
POOL, M. F. <i>See</i> Prater, A. N.	
PORTER, PAUL. <i>See</i> Lykken, Louis.	
POST, O. W. <i>See</i> Cring, L. C.	
PRATER, A. N., JOHNSON, C. M., POOL, M. F., AND MACKINNEY, G. Determination of Sulfur Dioxide in Dehydrated Foods.....	153
PRUTTON, A. J. <i>See</i> Barton, C. J.	
PUDDINGTON, I. E. Simple Automatic Pump for Collecting Gases at Low Pressures. Stopcock Lubricants for Use with Organic Vapors.....	592
<i>See also</i> Patterson, G. D.	415
RADER, G. A. Safety Cap for Laboratory Glass Distillation Equipment.....	276
RADKE, H. H. <i>See</i> Petersen, G. W.	
RALSTON, A. W., AND HOERR, C. W. Quantitative Determination of High Molecular Weight Primary Aliphatic Amines.....	459
REED, GERALD, WISE, E. C., AND FRUNST, R. J. L. Quantitative Separation of Alcohol and Ester Forms of Vitamin A by Solvent Extraction and Chromatographic Methods.....	509
REINHER, JOHN, JR., AND HOLOWCHAK, JOSEPH. Determination of Total and Combined Sulfur in Butyl Rubber.....	98
REID, J. D. <i>See</i> Buras, E. M., Jr.	
RICE, H. T., AND LIEBER, EUGENE. Furfural Solution Temperatures of Hydrocarbons. Evaluation of Mixed Aniline Point Determination and Application of Furfural.....	107
RICHARD, M. N. <i>See</i> Comar, C. L.	
RICHTER, F. P. <i>See</i> Smith, G. F.	
RIEMAN, WM., III. New Type of Microburet.....	475
RIETZ, EDWARD. <i>See</i> Jansen, E. F.	
RITTSCHOF, L. A. <i>See</i> Tarnutzer, C. A.	
ROBERTSON, A. E. <i>See</i> McArdle, E. H.	
ROBINSON, F. B. Pigment Determination in Carbon Black and Iron Blue Paints.....	364
ROGERS, H. R. Furfural Determination. Iodine Method for Hydrolyzed Wood Liquors.....	319
ROGERS, L. H. <i>See</i> Nichols, M. L.	
ROSSIN, JOSEPH. <i>See</i> Wickers, Edward.	
ROSS, J. F. <i>See</i> Wickers, Edward.	
ROSSMANN, C. A. <i>See</i> Lanning, J. H.	
ROWE, R. G., FURNAS, C. C., AND BLISS, HARDING. Iodine Number Method for Tall Oil.....	371
RUDERMAN, I. W. Versatile Continuous Laboratory Extractor.....	332
RULIFFSON, H. D. <i>See</i> Lykken, Louis.	
RUBOFF, I. I. <i>See</i> Barnes, R. H.	
ST. JOHN, J. L. <i>See</i> Evans, R. J.	
SANDELL, E. B. Colorimetric Determination of Traces of Osmium.	342
SATER, MARIE. <i>See</i> Stansby, M. E.	
SATTERLEE, H. S., AND BLODGETT, GERTRUDE. Ultramicrodetermination of Arsenic by Gutzeit Spot-Filtration under Vacuum. Rapid Technique Employing Photometric Calibration and Permanent Photographic Standards.....	400
SCHAFFER, O. A. <i>See</i> Brabson, J. A.	
SCHAIBLE, P. J. <i>See</i> Bandemer, S. L.	
SCHIECHTER, M. S., AND HALLER, H. L. Colorimetric Determination of 1-Chloro-2,4-dinitrobenzene as Impurity in 2,4-Dinitroanisole. Colorimetric Determination of 2,4-Dinitroanisole. Weighing Funnels.....	326
<i>See also</i> Schley, C. R. Apparatus for Washing Selas Crucibles. Facilitating Reading of Volumes in Determinations of Moisture by Distillation.....	325
<i>See also</i> Schley, C. R. Apparatus for Washing Selas Crucibles. Facilitating Reading of Volumes in Determinations of Moisture by Distillation.....	133
<i>See also</i> Schley, C. R. Apparatus for Washing Selas Crucibles. Facilitating Reading of Volumes in Determinations of Moisture by Distillation.....	539
<i>See also</i> Schley, C. R. Apparatus for Washing Selas Crucibles. Facilitating Reading of Volumes in Determinations of Moisture by Distillation.....	720
<i>See also</i> Schneider, Frank. SCHREINER, W. G., CHAPIN, D. S., AND CONRAD, R. M. Determination of Vitamin A in Dehydrated Eggs.....	632
SILKER, R. E., AND KING, H. H. Effects of Beta-Carotene Isomerization on its Absorption at 328 Millimicrons. <i>See also</i> Silker, R. E.	328
SCHULTZ, A. S. <i>See</i> Atkin, Lawrence.	
SCHWARTZ, M. C., AND GAYLE, F. L. Constant-Level Feeder for Continuous Evaporation in Determination of Total Solids.....	120
SEABURY, R. L. <i>See</i> Clark, G. L.	
SEAMAN, HENRY. Colorimetric Determination of Nickel in Bronze. <i>See also</i> Levine, W. S.	354
SEAMAN, WM., NORTON, A. R., WOODS, J. T., AND HUGONET, J. J. Spectrophotometric Microdetermination of Leuco Crystal Violet after Oxidation with Benzoyl Peroxide.....	336
NORTON, A. R., WOODS, J. T., AND MASSAD, E. A. Analysis of Acetylulfanilyl Chloride by Karl Fischer Reagent. <i>See also</i> Kay, J.	517
SEARS, G. W., AND GUNG, HELEN. Use of Color Indicator in Tannin Method for Determination of Beryllium and Aluminum.....	598
SHAEFER, W. E. Analysis of Solutions of Ethyl Ether, Benzene, Ethyl Alcohol, and Water.....	432
SHANTZ, E. M. Antimony Trichloride Reaction of Vitamin D.....	179
SHAW, J. A., HARTIGAN, R. H., AND COLEMAN, A. M. Determination of Hydroxyamic Acid, Especially in Coke-Oven Gas.....	550
SHAW, T. P. G. Systematic Procedure for Identification of Synthetic Resins and Plastics.....	541
SHERRY, W. B., SWINEHART, C. F., DUNPHY, R. A., AND OGBURN, S. C. Methods of Analysis for Anhydrous Hydrofluoric Acid. Manufacturing Chemists' Association Committee Report.....	483
SHILDNECK, PAUL. <i>See</i> Mitchell, D. T.	
SHOCKLEY, C. F., MCKEE, L. G., AND HAMM, W. S. Instrument for Measuring Changes in Texture of Dehydrated Fish.....	638
SHOCHAN, J. B. <i>See</i> Kouten, J. W.	
SHREWSBURY, C. L. <i>See</i> Zacheile, F. P.	
SHUMAN, A. C. Apparatus for Measuring Gas Permeability of Film Materials of Low Permeability.....	58
SIDERIS, C. P., YOUNG, H. Y., AND CHUN, H. H. Q. Improvements in Determination of Iron by Nitroso R Salt Method.....	276
SIDHU, S. S. <i>See</i> McKinley, J. B.	
SILKER, R. E., SCHRENK, W. G., AND KING, H. H. Determination of Carotene in Dried Alfalfa. Simplified Method. <i>See also</i> Schrenk, W. G.	513
SILVERMAN, SHIRLEIGH. Photoelectric Photometer for Determining Carbon Disulfide in Atmosphere (Correction). <i>See also</i> Singer, Louis, and Chambers, W. A., Jr.	250
SINGER, LOUIS, AND CHAMBERS, W. A., JR. Colorimetric Determination of Chromium in Steel.....	507
SKAU, E. L. <i>See</i> Graff, M. M.	
SKOOG, D. A. <i>See</i> Lindeken, C. L.	
SLOAN, C. K. <i>See</i> Patterson, G. D.	
SMALLER, BERNARD, AND HALL, J. F., JR. Spectrophotometric Microdetermination of Iodine Liberated in Oxidation of Carbon Monoxide by Iodine Pentoxide.....	64
SMITH, C. M., AND GOODHUE, L. D. Increase in Concentration of Insecticide in Freon-12 Accompanying Transfer or Discharge of Aerosol-Producing Solution.....	355
SMITH, D. M. <i>See</i> Mitchell, John, Jr.	
SMITH, F. R., AND KLEIBER, MAX. Apparatus for Measuring Rate of Gas Penetration through Food-Packaging Materials.....	586
SMITH, G. F., AND RICHTER, F. P. Substituted 1,10-Phenanthroline Ferrous Complex Oxidation-Reduction Indicators. Potential Determinations as Function of Acid Concentration.....	580
SMITH, S. B., AND STRENFFER, J. F. Determination of Phthalate.....	416
SNIDER, S. R., AND BURSTEIN, H. N. Detection of Destructively Distilled Wood Turpentine in Other Kinds of Turpentine by Means of Aniline Point.....	603
SNYDER, J. C., AND STEUER, WALTER. Simple Constant Reflux Take-Off for Distillation Systems.....	454
SNYDER, M. D., AND McNABB, W. M. Semimicrodetermination of Arsenic in Insecticides.....	414
SOHN, MADELINE. <i>See</i> Cohan, L. H.	
SOLOMON, ERNEST. Analysis of n-Butane-Isobutane Mixtures by Density Method.....	348
SPATT, CARL, AND SCHNEIDER, FRANK. Microtechnique of Qualitative Organic Analysis. Identification of Organic Acids by Partition Method.....	479
SPEEK, R. M. <i>See</i> Turer, Jack.	
SPIERS, ROBERT. <i>See</i> Fischer, Philip.	
SPITZER, ROBERT. <i>See</i> Boyer, P. D.	
STAMBERG, O. E. <i>See</i> Bohm, D. W.	
STANDEN, G. W. Qualitative Spectrographic Analysis.....	675
STANBY, M. E., HARRISON, R. W., DASSOW, JOHN, AND SATER, MARIE. Determining Volatile Bases in Fish. Comparison of Precision of Certain Micromethods.....	593
STEACIE, E. W. R. <i>See</i> Le Roy, D. J.	
STEFFENS, LESTER, AND HEATH, D. P. Automatic Distillation Apparatus for Gasoline Analysis.....	525
STEINBERG, MARTIN. <i>See</i> Cohan, L. H.	
STEINER, E. T., AND GUTHRIE, J. D. Determination of Starch in Sweet Potato Products and Other Plant Materials.....	736
STENDER, V. A. <i>See</i> Besghetoor, A. W.	
STEUBER, WALTER. <i>See</i> Snyder, J. C.	
STONE, K. G., AND FURMAN, N. H. Polarographic Use of Micro-organic Reagents. Magnesium with 8-Hydroxyquinoline. <i>See also</i> Duke, F. R.	596
STRAUB, F. G., AND GRABOWSKI, H. A. Photometric Determination of Silica in Condensed Steam in Presence of Phosphates.....	574
STREMPFER, J. F. <i>See</i> Smith, S. B.	
STUBBLEFIELD, F. M. Determination of Nitrogen Dioxide by Cerate Oxidimetry.....	366
SUEN, TZENG-JUEQ, AND WANG, MAO-CHIEN. Estimation of Tung Oil as Adulterant.....	511
SUNDBERG, R. L. <i>See</i> McCloskey, C. M.	
SWAIN, L. A. Carr-Price Reagent Dispenser.....	241
SWEENEY, W. J. Applicability of Newer Physical Methods for Hydrocarbon Analysis.....	723
SWERDLOW, M. A. <i>See</i> Vestling, C. S.	
SWIFT, E. H. <i>See</i> Metzler, D. E.	
SWINEHART, C. F., AND ELISIK, H. F. Sampling and Analysis of Anhydrous Hydrogen Fluoride. <i>See also</i> Sherry, W. B.	419
SYCHEFF, V. M. Extraction of Oil and Vitamin A in Shark Liver Analysis. Xylene-Centrifuge Method.....	126
TARNUTZER, C. A., RITTSCHOF, L. A., AND BORUFF, C. S. Absorption Spectra of Volatile Essential Oils. Detection of Alpha-Dicarbonyl Compounds.....	621
TEETER, H. M. <i>See</i> Cowan, J. C.	
THACHER, H. C., JR. Nomographic Chart for Correcting Weights to Vacuum.....	275

THODE, H. G. <i>See</i> Hawkins, R. C.	
THOMPSON, J. B. Microdetermination of Iron in Food Products	646
THORNTON, W. M., Jr. Precise Measurement of Volume in Titrimetric Analysis	50
TODD, FLOYD. New Design of Humidity Cabinet for Corrosion Testing	394
TOKOS, J. V. <i>See</i> West, P. W.	
TOWNE, R. S. Precision Head for Small Fractionating Columns	584
TRIEBOLD, H. O. <i>See</i> Althouse, P. M.	
TRIOG, HASTINGS. <i>See</i> Gurry, R. W.	
TRUHLAR, JOSEPH. <i>See</i> Hennessy, D. J.	
TUEMMER, F. D. <i>See</i> Lykken, Louis.	
TURER, JACK, AND SPECK, R. M. Determination of Fatty Acid Monoesters of <i>L</i> -Ascorbic and <i>d</i> -Isoascorbic Acids in Fats and Oils	464
TUTTLE, CLIFTON, AND BROWN, F. M. Device for Projecting Micro-image of Reading Scale	645
 UNDERKOFLER, L. A. <i>See</i> Fulmer, E. I., and Kolfenbach, J. J.	
 VESTLING, C. S., AND SWERDLOW, M. A. Use of Synthetic Detergents in Van Slyke Determination of Oxygen Capacity	581
 WACHS, HERMAN, MORIELLO, CHARLES, AND MAGES, STEPHEN. Determination of Freon-Insoluble Solids in Twenty Per Cent Pyrethrum Extracts	
WADDLE, H. M. Improved Distillation Receiver	453
WAGNER, D. L. <i>See</i> Albanese, A. A.	537
WAGNER, R. H. Osmometry of High-Polymer Solutions: Apparatus	520
WAISBROT, S. W. <i>See</i> Jansen, E. F.	
WAKEHAM, HELMUT. <i>See</i> Honold, Edith.	
WALKER, A. O. Funnel for Filling Microcapillaries	343
WALKER, J. K. <i>See</i> Merritt, L. L., Jr.	
WALLS, W. S. <i>See</i> Douslin, D. R.	
WANG, MAO-CHIEN. <i>See</i> Suen, Tzeng-Jiueq.	
WAPNER, SAMUEL. <i>See</i> Hennessy, D. J.	
WATSON, E. B. <i>See</i> Magnuson, H. J.	
WATTERS, J. I., AND KOLTHOFF, I. M. Determination of Manganese after Oxidation to Tri-Dihydrogen Pyrophosphotomanganate. Use of Pyridine to Separate Iron, Chromium, Vanadium, and Cerium from Manganese	
WEATHERBURN, A. S., WEATHERBURN, M. W., AND BAYLEY, C. H. Determination of Copper and Zinc in Their Naphthenates	187
WEATHERBURN, M. W. <i>See</i> preceding item	703
WEBB, G. A., AND BLACK, G. S. Determining Hydrogen in Gases with Thermal-Conductivity Apparatus	719
WEINBERG, SIDNEY, AND BOYD, T. F. Rapid Determination of Zinc in Magnesium Alloys	
WEISSLER, ALFRED. Determination of Germanium in Steel	
WEST, P. W., AND TOKOS, J. V. Detection of Bismuth by Means of Brucine Citrate	
WHITE, C. E. Benzoin as Fluorescent Reagent for Zinc (Correction)	
WHITE, E. P. Thiosulfate Washers in Alkoxy Microdeterminations	
WHITE, J. W., JR. <i>See</i> Zscheile, F. P.	207
WHITEHEAD, THOMAS, JR., AND BOYLE, A. J. Spectrographic Method for Small Amounts of Calcium in Magnesium Metal	
WHITNACK, G. C., AND MOSHIER, R. W. Determination of Formaldehyde in Presence of Acrolein and Other Aldehydes by Polarographic Method. (Correction, 693)	455
WICHERS, EDWARD, BUTLER, A. Q., COLLINS, W. D., MESSINGER, P.	496
H., OSBORN, R. A., ROSIN, JOSEPH, AND ROSA, J. F. Recommended Specifications for Analytical Reagent Chemicals. Acid Hydriodic with Preservative, Acid Perchloric, Dimethylglyoxime, Lead Subacetate (for Sugar Analysis), Manganese Sulfate Monohydrate, Mercuric Oxide Yellow, Phosphorus Pentoxide, Sodium Phosphate Dibasic Heptahydrate, Zinc	281
WILGUS, H. S., JR. <i>See</i> Charkey, L. W.	
WILLARD, H. H., AND ZUEHLKE, C. W. Gravimetric and Volumetric Determination of Germanium	322
WILLIAMS, A. A. <i>See</i> Dean, E. W.	
WILLIAMS, DWIGHT, AND HAINES, G. S. Alundum Gas Diffusers. Determination of Sodium in Potassium Hydroxide	680
WILLIAMS, K. T., AND JOHNSON, C. M. Determination of Soluble Pectin and Pectic Acid by Electrodeposition	157
WILLIAMS, R. F., JR. <i>See</i> Malm, C. J.	
WILLIAMS, R. J. <i>See</i> Eppright, M. A.	
WILLIAMS, VAN ZANDT. <i>See</i> Barnes, R. B.	
WILLIAMS, W. L. <i>See</i> Atkin, Lawrence.	
WILSON, J. L., AND MENDENHALL, E. E. Measurement of Detergency: Determination of Rate of Hard Water Film Formation in Washing of Glass Objects. 253; Photometer for Determination of Films on Transparent Surfaces	251
WISE, E. C. <i>See</i> Reed, Gerald.	
WISE, L. E., AND APPLING, J. W. Quantitative Determination of <i>d</i> -Galactose by Selective Fermentation with Special Reference to Plant Nucleic Acids	28
WOLF, BENJAMIN. Determination of Nitrate, Nitrite, and Ammonium Nitrogen. Rapid Photometric Determination in Soil and Plant Extracts	446
Rapid Photometric Determination of Total Nitrogen, Phosphorus, and Potassium in Plant Material	121
WOLLNER, H. J., MATCHETT, J. R., AND LEVINE, JOSEPH. Fractionating Molecular Still	529
WOODS, J. T. <i>See</i> Seaman, Wm.	
 YEAGER, J. P. <i>See</i> Holler, A. C.	
YEE, J. Y. Determining Hygroscopicity of Fertilizers	367
AND DAVIS, R. O. E. Accelerated Method for Determining Moisture Absorption	487
YERMAN, FRED. <i>See</i> Lang, O. W.	
YOE, J. H., AND JONES, A. L. Colorimetric Determination of Iron with Disodium-1,2-dihydroxybenzene-3,5-disulfonate	111
Gravimetric Determination of Tungsten with Anti-1,5-di-( <i>p</i> -methoxyphenyl)-1-hydroxylamino-3-oximino-4-pentene	45
YOUNG, H. Y. <i>See</i> Sideris, C. P.	
YOUNG, R. S. Monel Metal Pouring Plate for Silica Fusions	590
 ZENTNER, E. T. Delivery of Liquids at Low and Constant Rates	471
ZSCHEILE, F. P., AND HENRY, R. L. Spectroscopic Study of Fish Liver Oils in Relation to Vitamin A	436
HENRY, R. L., WHITE, J. W., JR., NASH, H. A., SHREWSBURY, C. L., AND HAUGE, S. M. Determination of Vitamin A and Carotenoids in Butterfat. Spectroscopic Characteristics of Butterfat Fractions and Problems Involved in Biological Interpretations	190
NASH, H. A., HENRY, R. L., AND GREEN, L. F. Determination of Vitamin A and Carotenoids in Butterfat. Comparison of Direct Spectrophotometry with Filter Photometry and Use of Antimony Trichloride Reaction	83
ZUCKERMAN, SAMUEL. <i>See</i> Koch, Louis.	
ZUEHLKE, C. W. <i>See</i> Willard, H. H.	

## SUBJECT INDEX

VOLUME 16—1944

ACETALDEHYDE, Ethyl Acetate Determination in Presence of... Acetic Acid, Pyridine Estimation in Mixture with, for Riboflavin Determination	734
Acetone-Benzene-Water System, Analysis Data for	583
Acetylene-Air Flame for Spectrochemical Analysis	499
Acetylulfanilyl Chloride Analysis by Karl Fischer Reagent	528
ACIDS Determination in Highly Colored Materials. Petroleum Lubricants Containing Additives	517
Fatty, Absorption Spectra Analysis of Conjugation in Organic, Microidentification by Partition Method (See also individual acid)	479
Acrolein, Formaldehyde Determination in Presence of. (Correction, 693)	219
Acrylonitrile Microdetermination in Air	77
Acyl Determination in Cellulose Organic Esters	63
Aerosol-Producing Solution. Insecticide Concentration Increased in Freon-12	501
AIR Acrylonitrile Microdetermination in Carbon Disulfide Determination in (Correction) Carbon Monoxide Determination in, by Iodine Pentoxide Method. Microdetermination of Iodine Liberated Contaminant Collection with Midget Impinger	355
Alcohol Dehydrogenation Catalysts. Copper-Chromium Oxide Preparation and Reclamation (See also Ethanol.)	441
Aldehydes. Formaldehyde Determination in Presence of Other Aldehydes. (Correction, 693)	496
Alfalfa, Carotene Determination in	184, 513
Alkalinity of Boiler Water, Indicator for Determination of (Correspondence)	273
Alkaloids. Demerol Microidentification	408
Alkoxy Microdeterminations, Thiosulfate Washers in	207
Alkyd Resins, Phthalic Anhydride Determination in	198, 200

ALLOYS of Aluminum, Quenching Oils for. Spectrophotometric Study of Oil Oxidation	740
Brass	165, 349, 750
Bronze	269, 309, 349, 354, 750
of Copper, Silicon Determination in	309
of Devarda, for Nitrate Microdetermination	764
of Magnesium, Zinc Determination in	256, 460
Monel Metal Pouring Plate for Silica Fusions	590
Raney Nickel Separation from Hydrogenation Reaction Mixtures	637
Tin, Antimony Determination in	448
Tin Determination in, by Iodometric Method	555
Zinc Determination in, by Titrimetric Method	194
(See also Steel.)	71
Alumina, Calcined, Silica Determination in, by Molybdenum Blue Reaction	705
ALUMINUM Alloy-Casting Quenching Oils. Spectrophotometric Study of Oxidation of	740
Determination by Colorimetric Methods	169, 598
Determination with 8-Hydroxyquininaline	387
Silicon Determination in, by Molybdenum Blue Reaction	705
Spectrographic Quantitative Techniques for	653
Alundum Gas Diffusers	680
Amines, Primary Aliphatic, of High Molecular Weight Determined Quantitatively	459
Amino Acid Analysis of Vegetables	609
4-Aminopentane, 1-Diethylamino, Purification and Determination	431
Ammonium Hexanitratocerate for Calcium Microdetermination as Oxalate	762
Ammonium Nitrogen Determination in Soil and Plant Extracts by Photometric Method	446
Ammonium Quaternary Salts, Colorimetric Assay of	739
Aniline Point, Turpentine Adulteration Detected by	603
Anisole, 2,4-Dinitro-, Determination of	325, 326

Anti-1,5-di-( <i>p</i> -methoxyphenyl)-1-hydroxylamino-3-oximino-4-pentene for Tungsten Determination.....	45	
Antimony Determination in Tin-Base Alloys.....	448	
<b>ANTIMONY TRICHLORIDE</b>		
Dispenser for Chloroform Solution of.....	241	
for Gossypol Determination in Cottonseed and Meal.....	566	
for Vitamin A and Carotenoid Determination in Butterfat.....	83	
for Vitamin D Estimation.....	179	
<b>ARSENIC</b>		
Microdetermination in Biological Materials.....	339	
Semimicrodetermination in Insecticides.....	414	
Ultramicrodetermination by Gutzeit Spot Filtration under Vacuum.....	400	
Arsenious Oxide in Permanganate Solution Standardization.....	625	
<i>L</i> -Ascorbic Acid Esters Determined in Fats and Oils.....	464	
Ascorbic Acid Microdetermination in Plant Samples.....	649	
Ashing Procedure.....	417	
Asphalt, Acidity Determination in, by Potentiometric Method.....	219	
Asphalt Fractionation by Solvent Separation.....	294	
Azo-2-naphthol Dyes, Unsulfonated, Identification of.....	755	
<b>BAILEY</b> Buret for Weighing.....	357	
Baking Instrument for Organic Finishes, with Automatic Control Balances, Micro-. Device for Projecting Image of Reading Scale.....	599	
Balances, Micro-, of Kuhlmann, Errors in.....	645	
Base Microdetermination in Fish.....	258	
Baths. Flask Support on Steam and Water Baths.....	593	
Beef Muscles, Thiamine Determination in.....	332	
Benzene-Acetone-Water System, Analysis Data for.....	116	
Benzene-Ethyl Ether-Ethanol-Water Solutions Analyzed.....	499	
Benzidine Sulfate Precipitation for Microdetermination of Sulfate.....	432	
Benzoin as Fluorescent Microreagent for Zinc (Correction).....	536	
Benzoyl Peroxide in Microdetermination of Leuco Crystal Violet.....	102	
Beryllium Determination by Tannin Colorimetric Method.....	336	
<b>BIOLOGICAL MATERIAL</b>		
Arsenic Microdetermination in.....	339	
Cadmium Microdetermination in.....	333	
Citric Acid Determination in.....	515	
Extraction Spray Column for.....	528	
Fluoride Determination in Toxic Quantities.....	457	
Pectin Microdetermination in.....	74	
Spectrochemical Analysis with Air-Acetylene Flame.....	728	
(See also individual biological material.)		
Bismuth Microdetection by Brucine Citrate.....	761	
Bismuth. Polarographic Analysis of Copper Group.....	147	
Blendor of Waring Adapted to Continuous Emulsification.....	717	
Blood Oxygen-Capacity Determination by Van Slyke Method Using Detergents.....	581	
Blood Plasma. Dialysis Cell for Microdetermination of Diffusible Components.....	136	
Boiler Scale, Powder Diffraction of.....	209	
Boiler Water, Alkalinity Indicator for (Correspondence).....	273	
Bomb Furnace for Carius Digestion.....	308	
Book Reviews.....	722	
<b>BRASS</b>		
Copper Determination in, with Salicylimines.....	750	
Sulfur Determination in, by Combustion.....	349	
Zinc Determination in Cyanide Plating Baths for.....	165	
Bromate Determination Iodometrically in Presence of Copper.....	103	
Bromine, Unsaturation of Olefins Determined by Substitution with.....	617	
<b>BRONZE</b>		
Copper Determination in, with Salicylimines.....	354	
Nickel Determination in, by Colorimetric Method.....	309	
Silicon Determination in Manganese Bronzes.....	349	
Sulfur Determination in, by Combustion.....	269	
Tin Microdetermination with Silicomolybdate in Manganese Bronze.....	761	
Bromine Citrate for Bismuth Microdetection.....	538	
Bubbler of Fritted Glass.....		
<b>BUNA S (GR-S)</b>		
Analysis, Compounded with Natural Rubber. (Correction, 486).....	9	
Curing Rate Determination.....	15	
o-Xylene Determination in Recycle Styrene.....	751	
<b>BURETS</b>		
Calibration for Volume Measurement in Titrimetry.....	50	
Micro.....	475	
for Weighing, Modified Bailey Type of.....	357	
Butadiene, Infrared Analysis of.....	422	
Butadiene, Specific Gravity of.....	7	
n-Butane-Isobutane Mixtures Analyzed by Density Method.....	348	
Butterfat, Vitamin A and Carotenoids Determined in.....	83	
Butyl Rubber (GR-I), Curing Rate Determination of.....	190	
Butyl Rubber, Sulfur Determination in.....	562	
2,3-Butylene Glycol Determination in Fermentations.....	98	
<b>CABBAGE</b> , Dehydrated, Sulfur Dioxide Determination in.....	153	
<b>CADMUM</b>		
Microdetermination in Biological Material. Spectrographic, Polarographic, and Colorimetric Methods.....	333	
Microdetermination in Zinc Alloys.....	71	
Polarographic Analysis of Copper Group.....	147	
Selective Spot Reactions for.....	141	
Calcium Determination in Magnesium by Spectrographic Method.....	455	
Calcium Microdetermination as Oxalate by Titration with Ammonium Hexanitrocetate.....	762	
Camphor Determination in Spirit of Camphor by Refractive Index and Specific Gravity.....	168	
Capillary Tube, Funnel for Filling of.....	343	
Carbinols, Methyl-, Differentiated from Methyl Ketones.....	362	
Carbon, Determination by Low-Pressure Combustion.....	242, 248	
Carbon, in Vulcanized Rubber Studied with Electron Microscope.....	642	
Carbon Black, Pigment Determination in Paints Containing.....	364	
Carbon Dioxide Determination in Water.....	315	
Carbon Dioxide Generator for Dumas Nitrogen Micromethod.....	344	
Carbon Disulfide Determination in Air (Correction).....	250	
Carbon Monoxide, Iodine Microdetermination in Oxidation of, by Iodine Pentoxide.....	64	
Carbonyl Group, Color Test for.....	110	
Carborundum as Carrier for Copper-Chromium Oxide Catalyst.....	441	
Carius Digestion, Bomb Furnace for.....	308	
<b>CAROTENE DETERMINATION</b>		
in Alfalfa.....	184, 513	
Effect of <i>β</i> -Carotene Isomerization on Absorption at 326 Milli- microns.....	328	
in Milk.....	101	
in Plants.....	438	
Carotenoid Determination in Butterfat.....	83, 190	
Carrots, Dehydrated, Sulfur Dioxide Determination in.....	153	
<b>CATALYSTS</b>		
for Chlorate Ion Estimation.....	370	
Copper-Chromium Oxide Preparation and Reclamation.....	441	
Hydrogen Determination in Exhaust Gases as Evaluation of Activity of.....	719	
Separation from Hydrogenation Reaction Mixtures.....	637	
Cathode Potential. <i>See</i> Electrodeposition.....		
Cellite as Carrier for Copper-Chromium Oxide Catalyst.....	441	
Cell for Polarographic Analysis.....	329	
<b>CELLULOSE</b>		
Hemi-, Photometric Determination of Molecular Weight. Measurement of Average Degree of Polymeriza- tion.....	429	
Regenerated Rayon Fabric Dispersion in Cuprammonium, Flow Characteristics of.....	351	
Viscosity Determination with Cupriethylene Diamine as Solvent from Wood. Viscometric Chain Length in Triton F.....	172	
<b>CELLULOSE ESTERS</b>		
Acyl Determination in, by Saponification in Solution.....	501	
Plasticizer Determination in.....	93	
Sulfate Determination in.....	391	
Centrifuge. Adaptor for Angle Centrifuge Tests.....	193	
Cerate Oxidimetry for Nitrogen Dioxide Determination.....	366	
Cerat Standard Solutions Prepared from Cerium. Titration Residues. Cerium Titration Residues. <i>See preceding item.</i>	721	
Chemicals, Analytical Reagent, Recommended Specifications for.....	281	
Chlorate Estimation by Catalysis.....	370	
1-Chloro-2,4-dinitrobenzene Determination as Impurity in 2,4-Dinitro- anisole.....	326	
Chloroform Solution of Antimony Chloride, Dispenser for.....	241	
Chlorometry as Titrimetric Microprocedure.....	206	
Chlorophyll Determination in Plants.....	438	
Chromatography, Microapparatus Improved for.....	347	
Chromium Determination in Steel by Colorimetric Method.....	507	
Chromium Oxide-Copper Catalyst Preparation and Reclamation.....	441	
Circulating Device for Use with Hydrogen Electrode.....	585	
Citric Acid Determination in Fermentation Media and Biological Materials.....	515	
Coal Proximate Analyses by Discriminant Function.....	32	
Coke-Oven Gas, Hydrocyanic Acid Determination in.....	550	
<b>COLORIMETRY</b>		
Molybdenum Blue Reaction Studied.....	466	
Phosphomolybdate Acid Reaction Studied Qualitatively.....	637	
Potassium Dichromate Solutions as Standards in.....	42	
Precision and Accuracy as Control Method: Aluminium Determini- nation, 169; Silica Determination.....	462	
<b>COLUMNS</b>		
Distillation, of General Utility.....	639	
for Distilled Water of High Purity.....	748	
for Extraction by Spray Device.....	528	
Fractionating, for Gases.....	131	
Fractionating, Precision Head for.....	584	
Combustion Heat of Gasoline Determined.....	182	
Conductometric Titration Apparatus.....	591	
<b>COPPER</b>		
Alloys, Silicon Determination in.....	309	
Carbon Determination in, by Low-Pressure Combustion.....	242	
-Chromium Oxide Catalyst, Preparation and Reclamation.....	441	
Cupric Ion Determination with 8-Hydroxyquinoline.....	387	
Determination in Naphthalene of Copper.....	703	
Determination in Presence of Oxidizing Agents.....	103	
Determination in Steel and Cast Iron. Colorimetric Procedure for Alloy Steels.....	80	
Group, Polarographic Analysis with Electrolytic Separations.....	147	
Microdetermination in Zinc Alloys.....	71	
Precipitation and Determination with Salicylimines.....	750	
Separation from Tin in Electrodeposition Apparatus.....	532	
Copper Perchlorate Standard Solutions, Stability of.....	38	
Coriander Seed Oil, <i>α</i> -Dicarbonyl Detection in.....	621	
<b>CORN</b>		
Grain, Phytin Phosphorus Determination in.....	389	
Lipid Determination in, as Measurement of Maturity.....	701	
Starch Conversion Products, Refractive Index-Dry Substance Tables for.....	161	
Corrections.....	102, 250, 284, 486, 693, 727	
Correspondence.....	273, 276, 772	
Corrosion, Humidity Cabinet for Tests of.....	394	
<b>COTTON</b>		
Fabric Dispersion in Cuprammonium, Flow Characteristics of Molecular Weight of Cellulose.....	172	
Wax Determination in Fiber by Alcohol Extraction.....	351	
Cottonseed, Gossypol Determination by Spectrophotometric Method.....	745	
Coumarin Determination in Flavoring Extracts.....	566	
o-Cresol Determination in Phenol by Cloud Point (Correspondence).....	505	
Creosols, Ortho-, Meta-, Para-, Qualitative Tests for Phenol and.....	772	
Crucible for Filtration, Washing of.....	37	
Crucible Holder for Rubber Extraction Apparatus.....	277, 539	
Crystalline Materials Determined by X-Ray Diffraction.....	721	
Crystallization. Microapparatus for Recrystallization.....	95	
Cuprammonium, Flow Characteristics of Dispersion of Cotton and Regenerated Rayon Fabrics in.....	413, 478	
Cupric Ion. <i>See</i> Copper.....	172	
Cupriethylene Diamine as Solvent in Determination of Cellulose Viscosity.....	104	
Cyanide Brass-Plating Baths, Zinc Determination in.....	165	
Cyanide Determination as Hydrocyanic Acid, Especially in Coke-Oven Gas.....	550	
Cyanogen Bromide in Determination of Nicotine and Nornicotine.....	86	
p-Cymene, <i>α</i> , <i>p</i> -Dimethylstyrene Determination in Presence of.....	20	
<b>DEHYDRATED Foods and Feeds.....</b>	153, 513, 628, 632, 638	
Demeral (Ethyl-1-methyl-4-phenylpiperidine-4-carboxylate). Micro- identification of.....	408	
<b>DETERGENTS</b>		
Film Determination on Transparent Surfaces.....	251, 253	
in Oxygen-Capacity Determination by Van Slyke Method.....	581	
Soap Mixtures Analyzed in Bar Form.....	239	

Deuterium Oxide Microdetermination, Falling Drop Apparatus for.	412
Devarda's Alloy. <i>See</i> Alloys.	
Diacetyl Determination in Mixtures with Ketones.	469
Dialysis Cell for Microdetermination of Diffusible Components in Blood Plasma.	136
α-Dicarbonyl Detection in Volatile Essential Oils.	621
Dichlorodifluoromethane. <i>See</i> Freon-12.	
Dichromate. <i>See</i> Potassium Dichromate.	
Diesel Distillate Fuels, Gum Content of.	710
1-Diethyl-4-aminopentane Purification and Determination.	431
Diffraction. <i>See</i> X-Rays.	
Diffusers for Gas, Made of Alundum.	680
o-Dihydroxybenzene Derivative, Iron Determination with Dimethylbibenzylammonium Hydroxide. <i>See</i> Triton F.	111
Dimethylglyoxime, Recommended Specification for.	281
α,β-Dimethylstyrene Determination in Presence of p-Methylstyrene, Styrene, and p-Cymene.	20
2,4-Dinitroanisole Determination.	325, 326
Disodium-1,2-dihydroxybenzene-3,5-disulfonate in Iron Determination.	111
Dispenser for Carr-Price Reagent.	241
<b>DISTILLATION</b>	
Apparatus for Gasoline Analysis.	525
Bumping Prevention Device.	722
Column of General Utility.	639
Flask of General Applicability.	399
Head for Vacuum Distilling.	374
under High Vacuum, Ground-Glass Joint for.	94
Moisture Determination by, Volume Reading Facilitated in.	720
Molecular Fractionating Still.	529
Receiver.	537
Reflux Take-off with Constant Control.	454
Safety Cap for Glass Equipment.	276
Dolomite, Magnesia Determination in.	313
Dropping Funnel of Constant-Rate Type.	418
Dumas Method. <i>See</i> Nitrogen.	
Dyes, Azo-2-naphthol Unsulfonated, Identification of.	755
Dyes for Textile-Finish and Fiber Identification.	274
<b>EGGS</b>	
Ashing Procedure for Liquid White.	417
Dehydrated, Vitamin A Determination in.	632
Iron Determination in, by o-Phenanthroline Method.	317
Moisture Determination in Whole Powder of.	628
Electrode, Glass, for Vitamin Microbiological Assay.	205
Electrode, Hydrogen, Circulating Device for Use with.	585
Electrodeposition. Automatic Control Apparatus with Graded Cathode Potential.	532
Electron Microscope. <i>See</i> Microscope.	
<b>EMULSIONS</b>	
Acidity Determination by Potentiometric Method.	219
Extractor for Mixtures Tending to Emulsify.	62
Oil Determination in, by Fluorocolorimetric Method.	331
Polymerization of Synthetic Rubber in 10-Gram Systems.	1
Waring Blender Adapted to Continuous Preparation of.	717
Enamel Baking Control Methods. ( <i>See also</i> Paint.)	599
Equipment, New.	143, 278, 350, 418, 539, 652, 722
Ergosterol Determination by Colorimetric Method.	495
Ester Saponification by Semimicroprocedure.	410
<b>ETHANOL</b>	
Determination in Spirit of Camphor by Refractive Index and Specific Gravity.	168
-Ethyl Ether-Benzene-Water Solutions Analyzed.	432
Wax Determination in Cotton Fiber by Extraction with.	745
Ethanolamine Hydrolysis for Determination of Methyl Bromide.	538
Ethyl Acetate Determination in Presence of Acetaldehyde.	734
Ethylbis-2,4-dinitrophenyl Acetate as pH Indicator.	53
Ethyl Ether-Benzene-Ethanol-Water Solutions Analyzed.	432
Ethyl-1-methyl-4-phenylpiperidine-4-carboxylate. <i>See</i> Demerol.	♦
Evaporation of Standard Solutions, (Predictable) Concentration Resulting from.	349
Evaporator, Constant-Level, for Determination of Total Solids.	120
Evaporator, Rapid-Circulating, of Glass.	754
<b>EXTRACTORS</b>	
Continuous Versatile Type of.	332
Large Glass Apparatus.	61
Liquid-Liquid.	62, 180, 473
for Solids, Large Continuous Type of.	472
Spray Column.	528
<b>FABRICS</b> , Cotton and Regenerated Rayon. Flow Characteristics of Dispersions in Cuprammonium.	172
<b>FATS</b>	
Acidity Determination in, by Potentiometric Method.	219
Ascorbyl Ester Determination in.	464
Butter, Vitamin A and Carotenoids Determined in.	83, 190
Gallie Acid Determination as Antioxidant in.	427
Margarine, Vitamin A Determination in.	358
Unsaturated, Ultraviolet Absorption Spectra of.	385
<b>FATTY ACIDS</b>	
Amines, Primary Aliphatic, of High Molecular Weight Determined in.	459
Conjugation, Absorption Spectra Analysis of.	77
Esters of l-Ascorbic and d-Isoascorbic Acids Determined in Fats and Oils.	464
Methyl Esters, Vapor Pressures of.	605
Unsaturated, Ultraviolet Absorption Spectra of.	385
Feeds, Sulfur Determination in.	630
<b>FERMENTATIONS</b>	
2,3-Butylene Glycol Determination in.	626
Citric Acid Determination in Media for.	515
for d-Galactose Determination by Quantitative Method.	28
Ferric Ion. <i>See</i> Iron.	
<b>FERTILIZER</b>	
Hygroscopicity Determination.	367
Moisture Absorption Determined by Accelerated Method.	487
Potassium Determination. Removal of Ammonia and Organic Matter without Ignition.	383
Fiber of Cotton, Wax Determination in, by Alcohol Extraction.	745
Fiber Identification Stains.	274
Film Permeability to Gases, Apparatus for Measurement of Films, Organic, Water Vapor Permeability of.	58
Filter-Cake Surface Renewal in Vacuum Filtrations.	686
Filter Crucible, Washing of.	365
Fischer, Karl, Reagent for Analysis of Acetylisononyl Chloride.	277, 539
FISH	
Dehydrated, Instrument for Measuring Changes in Texture of.	638
Liver Oils, Vitamin A Potency of.	126, 288, 436, 509
Liver Oils, Vitamin D Estimation with Antimony Trichloride.	170
Spoilage Determination in.	490, 593
Flame of Acetylene-Air for Spectrochemical Analysis.	728
Flame, Microtorch for.	142
<b>FLASKS</b>	
for Distillation, of General Applicability.	399
Funnel for Standard Taper Type of.	293
Support for Kjeldahl Type of.	324
Support on Steam and Water Baths.	332
Flow of Cellulose-Cuprammonium Dispersions.	172
Flow, Liquid Delivery at Low and Constant Rates of.	471
Flowmeter of Positive Displacement Type.	303
Fluoride Determination in Foods and Biological Material.	457
FOOD	
Dehydrated, Sulfur Dioxide Determination in.	153
Fluoride Determination in Toxic Quantities.	457
Iron Microdetermination in.	646
Packaging Materials, Apparatus for Measuring Rate of Gas Penetration through.	586
Protein Nutritive Value Determined in.	696
Proteinaceous, Spoilage Determined in, Particularly Fish. ( <i>See also</i> individual food.)	490
Formaldehyde Determination in Presence of Acrolein and Other Aldehydes. (Correction, 693).	496
<b>FRACTIONATION</b>	
of Asphalts by Solvent Separation.	294
Column for Distilled Water of High Purity.	748
Column for Gases.	131
Columns, Precision Head for.	584
Pressure Control in, at Low Pressure and Temperature.	40
( <i>See also</i> Distillation.)	
Freeze Tests, Alternating Current Solenoid for.	588
<b>FREON-12 (DICHLORODIFLUOROMETHANE)</b>	
Insecticide Concentration Increased in Aerosol-Producing Solution of.	355
Noncondensables Determined in.	681
Pyrethrum Solubility Determined in.	453
<b>FUNNELS</b>	
for Capillary Tube Filling.	343
Dropping Type of.	418, 641
for Standard Taper Flasks.	293
for Weighing.	133
<b>FURFURAL</b>	
Determination. Iodine Method for Hydrolyzed Wood Liquors in Hydrocarbon Solution-Temperature Determination.	319
-Pentose Method for Pectin Microdetermination in Biological Materials.	107
Furnace Bomb for Carius Digestion.	74
Furnace with Controlled Atmosphere for Induction Melting.	308
FURNACE	
d-GALACTOSE Determination by Selective Fermentation.	28
Gallic Acid Determination as Antioxidant in Fats and Oils.	427
<b>GASES</b>	
Coke-Oven, Hydrocyanic Acid Determination in.	550
Collection at Low Pressures with Automatic Pump.	592
Diffusers Made of Alundum.	680
Fractionating Column.	131
Hydrogen Determination in Exhaust from Catalytic Dehydrogenation Unit.	719
Nitric Oxide Microdetermination in.	706
Noncondensables Determined in.	681
Penetration through Food-Packaging Materials, Apparatus for Measuring Rate of.	586
Permeability of Films of Low Permeability to, Apparatus for Measurement of.	58
( <i>See also</i> individual gas.)	
<b>GASOLINE</b>	
Analysis in Automatic Distillation Apparatus.	525
Combustion Heat Determined for.	182
Tetraethyllead Determination in.	4
<b>GERMANIUM DETERMINATION</b>	
by Gravimetric and Volumetric Methods.	322
as Molybdisgermanic Acid.	128
in Steel by Gravimetric Method.	311
Gibbs Method. <i>See</i> Phenols.	
<b>GLASS</b>	
Bubbler of Fritted Glass.	538
Detergent-Hard Water Film Determination on.	251, 253
Distillation Equipment, Safety Cap for.	276
Electrode for Titrating Microbiological Vitamin Assays.	205
Evaporator of Rapid Circulating Type.	754
Extraction Apparatus of Large Size.	61
Joint for High-Vacuum Distillation.	94
Midget Impinger Unit.	346
Plastic Tubing Joined to.	275
Glucose, Maltose Determination in Presence of.	582
Gossypol Determination in Cottonseed and Meal by Spectrophotometric Method.	566
GR-I. <i>See</i> Butyl Rubber.	
GR-S. <i>See</i> Buna S.	
Grinding Plant Samples, Mineral Contamination from.	202
Guayule, Staining Rubber in Ground or Milled Tissues of.	480
Gum Content of Distillate Diesel Fuels.	710
Gutzzeit Spot Filtration for Ultramicrodetermination of Arsenic.	400
<b>HALLETT, L. T., Appointed Associate Editor.</b>	272
Heater, Electric, for Microprocedures and Melting Points.	134
Hemicellulose. <i>See</i> Cellulose.	
Humidity Cabinet for Corrosion Testing.	394
Hydriodic Acid, Recommended Specification for.	281
<b>HYDROCARBONS</b>	
Analysis by Sulfuric Acid Extraction. (Correction, 727).	558
Liquids Purified as Solvents for Absorption Spectroscopy.	556
Olefin Unsaturation Determined by Bromine Substitution.	617

Physical Methods of Analysis.....	723	
Pycnometer for Volatile Liquids.....	55	
Solution Temperatures Determined with Furfural.....	107	
Standard Samples of Bureau of Standards.....	273	
Stopcock Lubricant Unaffected by.....	415	
Thinner, Evaporation Indices of.....	415	
Hydrocyanic Acid Determination, Especially in Coke-Oven Gas.....	550	
Hydrogen Determination in Gaseous Exhaust with Thermal-Conductivity Apparatus.....	719	
Hydrogen Fluoride, Anhydrous, Sampling and Analysis of.....	419, 483	
Hydrogen-Ion Concentration Indicator, Ethylbis-2,4-dinitrophenyl Acetate.....	53	
Hydrogen Peroxide, Nitrate Removal from.....	181	
Hydrogenation Reaction Mixtures, Catalyst Separation from.....	637	
Hydroxylamine Hydrochloride Color Test for Carbonyl Group.....	110	
8-Hydroxyquinoline as Analytical Reagent.....	387	
8-Hydroxyquinoline in Magnesium Microdetermination.....	598	
 IMPINGER, Glass Midget Type of.....	346	
Infrared. See Spectrometry.		
 INSECTICIDES		
Aerosol-Producing Solution in Freon-12, Increasing Concentration of.....	355	
Arsenic Semimicrodetermination in.....	414	
2,4-Dinitroanisole Determination.....	325, 326	
Pyrethrum Solubility in Freon Determined.....	453	
Xanthone Spray Residues Analyzed Colorimetrically.....	35	
Iodate Determination Iodometrically in Presence of Copper.....	103	
Iodine for Furfural Determination in Hydrolyzed Wood Liquors.....	319	
Iodine Microdetermination in Oxidation of Carbon Monoxide by Iodine Pentoxyde.....	64	
Iodine Monochloride in Permanganate Solution Standardization against Arsenious Oxide.....	625	
Iodine Number Determination for Tallow Oil.....	371	
Iodine Number, Wij's Solution Stabilized for Determination of.....	417	
Iodine Pentoxide Oxidation of Carbon Monoxide, Iodine Microdetermination in.....	64	
Iodometry, Starch Prepared as Indicator for.....	772	
Ion-Exchange Adsorber, Quantitative Separations with.....	615	
Ion Exchangers in Determination of Pectin and Pectic Acid.....	23	
 IRON		
Carbon Determination in, by Low-Pressure Combustion.....	242, 634	
Cast, Copper Determination in, by Electrolytic Method.....	80	
Determination with Dichromate, Using Silver Reductor.....	49	
Determination by <i>o</i> -Phenanthroline Method.....	317	
Ferric, Determined with Disodium-1,2-dihydroxybenzene-3,5-disulfonate.....	111	
Ferric Ion Determination with 8-Hydroxyquinoline.....	387	
Meteoric, Osmium Trace Determination in.....	342	
Microdetermination in Food Products.....	646	
Microdetermination by Nitroso R Salt Method Improved.....	276	
-Phosphorus Stoichiometric Relation in Ferric Phytate.....	389	
Vitamin C Estimation in Presence of Salts of.....	757	
Iron Blue Paint, Pigment Determination in.....	384	
d-Isoscorbic Acid Esters Determined in Fats and Oils.....	484	
Isobutane-n-Butane Mixtures Analyzed by Density Method.....	348	
 JOINT of Ground Glass for High-Vacuum Distillations.....	94	
Juniper Berry Oil, $\alpha$ -Dicarbonyl Detection in.....	621	
 KETONES, Methyl, Differentiated from Methylcarbinols.....	362	
Ketones, Methyl Vinyl, Determination in Mixtures with Methylvinylcarbinol and Methyl Ethyl Ketone.....	469	
Kjeldahl. See Nitrogen.		
Kuhmann Microbalance, Errors of.....	258	
 LABORATORY of American Hotel Association.....	539	
Leach Liquors, Colorimetric Procedures for: Aluminum Determination, 169; Silica Determination.....	462	
 LEAD		
Determination in Gasoline as Tetraethyl.....	4	
Microdetermination in Zinc Alloys.....	71	
Polarographic Analysis of Copper Group.....	147	
Lead Subacetate, Recommended Specification for.....	281	
Leuco Crystal Violet Microdetermination after Oxidation with Benzoyl Peroxide.....	336	
Level Control for Liquids by Photoelectric Relay.....	393	
Lewisite Determined in Compact Field Apparatus.....	255	
Limestone, Phosphorus Determination in, by Photometric Method.....	553	
Linoleic Acid Conjugation, Absorption Spectra Analysis of.....	77	
Linseed Oil, Heat-Bodied, Analysis of.....	90	
Lipid Determination in Vegetable Matter.....	701	
Liquids		
Delivery at Low and Constant Rates.....	471	
Extractors for.....	62, 180, 473	
Level Control by Photoelectric Relay.....	303	
Volatile, Pycnometer for.....	55	
Lithium Determination in Minerals.....	712	
Lubricants from Petroleum Containing Additives. Acid Determination by Potentiometric Method.....	219	
Lubricants for Stopcocks.....	415	
 MAGNESIA Determination in Magnesite and Dolomite.....	313	
Magnesite. See preceding item.		
 MAGNESIUM		
Alloys, Zinc Determination in.....	256, 460	
Calcium Determination in, by Spectrographic Method.....	455	
Determination with 8-Hydroxyquinoline.....	387	
Microdetermination with 8-Hydroxyquinoline by Polarographic Method.....	596	
Maltose Determination in Presence of Glucose.....	582	
Manganese Determination in Large Amounts by Persulfate Method.....	560	
Manganese Determination after Oxidation to Tri-Dihydrogen Pyrophosphatomanganate.....	187	
Manganese Sulfate Monohydrate, Recommended Specification for.....	281	
Margarine, Vitamin A Determination in.....	358	
Meal, Cottonseed, Gossypol Determination in.....	566	
Meal, Soybean, Detection of Inadequate Heat Treatment of.....	640	
Melting Point, Electric Heater for.....	134	
Mercuric Oxide (Yellow), Recommended Specification for.....	281	
 METAL		
Furnace for Melting of.....	302	
Paint Pigment Evaluation.....	234	
Phosphomolybdic Acid Color Reaction with.....	637	
Polarographic Analysis. Copper Group.....	147	
Spectrographic Qualitative Analysis.....	675	
(See also Alloys and individual metal.)		
Meteoric Iron. See Iron.		
Methoxy Determination in Pectin. Errors in Zeisel Method Due to Retained Alcohol.....	523	
Methyl Bromide Determination by Ethanolamine Hydrolysis.....	538	
Methyl Esters of Fatty Acids Identified by Vapor Pressure Curves.....	605	
Methyl Groups Linked by Carbons, Determination of.....	434	
Methyl Ketone Differentiation from Methylcarbinols.....	362	
Methyl Vinyl Ketone Determination in Mixtures with Methylvinylcarbinol and Methyl Ethyl Ketone.....	469	
Methylcarbinol Differentiation from Methyl Ketones.....	362	
p-Methylstyrene, Determination of <i>o,p</i> -Dimethylstyrene in Presence of.....	20	
Microchemical Balances. Errors of Kublmann Balance.....	258	
Microchemistry.....	63, 134, 202, 258, 333, 400, 475, 536, 593, 642	
Microprocedures, Electric Heater for.....	134	
Microscope, Electron, Carbon in Vulcanized Rubber Studied with.....	642	
Milk, Vitamin A and Carotene Determined in.....	101	
Minerals, Lithium Determination in.....	712	
Minerals as Plant-Sample Contamination after Grinding.....	202	
Moisture. See Water.		
Molecular Fractionating Still.....	529	
Molybdenum, Microdetermination in Plants and Soils.....	137	
Molybdenum Blue Reaction Studied.....	466	
Molybdenum Blue for Silica Determination in Aluminous Materials.....	705	
Molybdigermanic Acid, Germanium Determination as.....	128	
Molybdivanadophosphoric Acid, Colorimetric Determination of Phosphorus as.....	379	
Monel Metal Pouring Plate for Silica Fusions.....	590	
Mucilages from Plants. d-Galactose Determination by Selective Fermentation of.....	28	
Muscle of Beef, Thiamine Determination in.....	116	
Muscle, Vitamin A Assay by Destructive Irradiation of.....	288	
Mustard Gas Determined in Compact Field Apparatus.....	255	
 NAPHTHAS. Evaporation Indices of Hydrocarbon Thinners.....	690	
Naphthenates of Copper and Zinc, Determination of Copper and Zinc in.....	703	
2-Naphthol, Az-, Dyes, Unsulfonated, Identification of.....	755	
 NICKEL		
Determination in Bronze by Colorimetric Method.....	354	
Determination in Steel by Colorimetric Method.....	375	
Precipitation with Salicylimines.....	750	
Raney, as Catalyst. Separation from Hydrogenation Reaction Mixtures.....	637	
Nicotine Determination in Mixture with Nicotine.....	86	
 NITRATE		
Determination in Soil and Plant Extracts by Photometric Method.....	446	
Microdetermination by Devarda Method.....	764	
Removal from Hydrogen Peroxide of 30% Strength.....	181	
Nitric Oxide Microdetermination in Gases.....	766	
Nitric Oxide Microdetermination with Solid Reagents.....	341	
Nitrite Determination in Soil and Plant Extracts by Photometric Method.....	446	
Nitrocellulose, Sulfate Determination in.....	391	
 NITROGEN		
Determination in Plant Material by Photometric Method.....	121	
Determination in Soil and Plant Extracts as Nitrate, Nitrite, and Ammonium.....	446	
Dumas Micromethod, Carbon Dioxide Generator for.....	344	
Extraction from Vegetables, Free of Carbohydrate.....	609	
Kjeldahl Flasks, Support for.....	324	
Nitrogen Dioxide Determination by Cerate Oxidimetry.....	386	
Nitroso R Salt Method for Microdetermination of Iron Improved.....	276	
Nomograph for Weight Correction to Vacuum.....	275	
Nornicotine Determination in Mixture with Nicotine.....	86	
Nornicotine Identification in Tobacco.....	377	
 OAT Grain Contamination from Grinding.....	202	
OILS		
Acidity Determination by Potentiometric Method.....	219	
Ascorbyl Ester Determination in.....	446	
of Dark Color, Ethylbis-2,4-dinitrophenyl Acetate as pH Indicator for.....	53	
Determination in Blends and Emulsions by Fluorocolorimetric Method.....	331	
Drying and Semidrying. Analysis When Heat-Bodied.....	90	
Essential Volatile, $\alpha$ -Dicarbonyl Detection in.....	621	
Fish Liver, Vitamin Potency of.....	126, 179, 438	
Gallic Acid Determination as Antioxidant in.....	509	
for Quenching Aluminum Alloy Castings, Spectrophotometric Study of Oxidation of.....	427	
Sesame, Determination of Sesamin in.....	740	
Tung Estimation as Adulterant in Other Oils.....	166	
Vitamin A Assay by Destructive Irradiation.....	511	
Olein Unsaturation Determined by Bromine Substitution.....	617	
Orange Peel Oil, $\alpha$ -Dicarbonyl Detection in.....	621	
 ORGANIC COMPOUNDS		
Acid Microidentification by Partition Method.....	479	
Bomb Furnace for Carius Digestion.....	308	
Vapors, Stopcock Lubricants for Use with.....	415	
 ORGANIC MATTER		
Arsenic Ultramicrodetermination in, by Gutzeit Spot Filtration.....	400	
Phosphorus Microdetermination in, by Rapid Digestion.....	345	
(See also Biological Material.)		
Osmium Trace Determination by Colorimetric Method.....	342	
Osmometry of High-Polymer Solutions.....	520	
Oxidation-Reduction Indicators, Substituted 1,10-Phenanthroline Complexes as.....	580	
 OXYGEN		
Capacity Determination in Blood, Using Detergents.....	581	

Determination of Penetration Rate of, into Food-Packaging Materials.....	588	Pouring Plate of Monel Metal for Silica Fusions.....	590
Dissolved, Stable Starch Solution for Determination of.....	389	Powder Diffraction. <i>See</i> X-Rays.	698
<b>PAINT</b>		Precipitants, Salicylimines as Organic Type of.....	750
Dry Hiding Power Determination of.....	442	<b>PRESSURE</b>	
Pigment Determination in Carbon Black and Iron Blue Types of.....	364	Control in Fractionation at Low Pressure and Temperature.....	40
Pigment Evaluation for Metal Protection.....	234	Fatty Acid Methyl Esters Identified by Vapor Pressure Curves.....	605
Thinner. Evaporation Indices of Solvent Naphthas. ( <i>See also</i> Enamel.)	690	Osmotic, Measured for High-Polymer Solutions.....	520
Palladium Separation from Hydrogenation Reaction Mixtures.....	637	<b>PROTEIN</b>	
Pantothenic Acid Determination by Yeast Microbiological Method.....	67	Filtration under Vacuum. Device for Renewing Filter-Cake Surface.....	365
Paper Package Coatings, Apparatus for Measuring Gas Permeability of.....	58	in Food, Determination of Nutritive Value of.....	698
Peanut Oil, Tung Oil Estimation as Adulterant in.....	511	Foodstuffs, Determination of Spoilage in, Particularly Fish.....	490
Pectic Acid Determination in Solution by Electrodeposition. <b>PECTIN</b>	23	Pulp. Hemicellulose Determination by Photometric Method.....	429
Methoxyl Determination in. Errors in Zeisel Method Due to Retained Alcohol.....	523	Pulp from Wood. Molecular Weight of Cellulose.....	351
Microdetermination in Biological Materials.....	74	Pump for Gas Collection Automatically at Low Pressures.....	592
Soluble, Determination by Electrodeposition.....	23	Pycnometer for Volatile Liquids.....	55
Penicillin Estimation by Rapid Method.....	451	Pyrethrolone, Determination of Carbon-Linked Methyl Groups in.....	434
4-Pentene, Anti-1,5-di-( <i>p</i> -methoxyphenyl)-1-hydroxylamino-3-oxime, for Tungsten Determination.....	45	Pyrethrum Solubility in Freon Determined.....	453
Pentose-Furfural Method for Pectin Microdetermination in Biological Materials.....	74	Pyridine Estimation in Mixture with Acetic Acid for Riboflavin Determination.....	583
Perchloric Acid, Recommended Specification for.....	281	Pyridine for Manganese Separation from Iron, Chromium, Vanadium, and Cerium.....	187
Perilla Oil, Heat-Bodied, Analysis of.....	90	<b>QUALITATIVE</b> Analysis, Spectrographic Techniques for.....	675
Permanganate Determination Iodometrically in Presence of Copper. Permanganate Solution Standardization against Arsenious Oxide with Iodine Monochloride.....	103	Quantitative Analysis, Spectrographic Emission Equipment for. Proposed Minimum Requirements.....	670
Permeability of Film Material to Gas, Apparatus for Measurement of.....	625	Quantitative Analysis, Spectrographic Techniques for.....	653
Permeability of Organic Films to Water Vapor.....	58	Quenching Oil. <i>See</i> Oils.	
<b>PETROLEUM</b>		Quinacrine Hydrochloride, Amino Side-Chain Analysis of.....	431
Distillate Diesel Fuels, Gun Content of.....	688	Quinine as Standard in Thiamine Determination. Effect of Temperature and Dissolved Oxygen.....	572
Fractions, Furfural Solution Temperatures of.....	710	<b>RACK</b> for Semimicrotitration.....	346
Hydrocarbon Analysis by Sulfuric Acid Extraction. (Correction, 727).....	107	Raney Nickel Separation from Hydrogenation Reaction Mixtures.....	637
Hydrocarbons. Physical Methods of Analysis.....	558	Rapeseed Oil, Tung Oil Estimation as Adulterant in.....	511
Oil-Soluble Sodium Sulfonates Analyzed by Adsorption. ( <i>See also</i> Gasoline and Lubricants.)	723	<b>RAYON</b>	
Pharmaceuticals, Thiamine Microdetermination in.....	25	Hemicellulose Determination by Photometric Method.....	429
1,10-Phenanthroline Ferrous Complexes as Oxidation-Reduction Indicators.....	476	Molecular Weight of Cellulose.....	351
<i>o</i> -Phenanthroline Method for Iron Determination. <b>PHENOLS</b>	580	Regenerated Fabric Dispersions in Cuprammonium, Flow Characteristics of.....	172
Alkylated, Phenyl Isocyanate Derivatives of. Melting Points and X-Ray Diffraction.....	317	Reading Scale of Microbalance, Device for Projecting Image of.....	645
<i>o</i> -Cresol Determination in, by Cloud Point (Correspondence).....	304	Reagent Analytical Chemicals, Recommended Specifications for.....	281
Determination in Dilute Solutions by Gibbs Method.....	772	Reducing Agents, Phosphomolybdic Acid Color Reaction with.....	637
Qualitative Tests for <i>o</i> -, <i>m</i> -, <i>n</i> -Cresols and.....	694	Reduction-Oxidation Indicators, Substituted 1,10-Phenanthroline Ferrous Complexes as.....	580
Phenyl Isocyanate Derivatives of Alkylated Phenols. Melting Points and X-Ray Diffraction.....	37	Reflux. <i>See</i> Distillation.	
Phosphates, Silica Determination in Condensed Steam in Presence of. Phosphomolybdic Acid Color Reaction Studied Qualitatively.....	553	Refractive Index, Spirit of Camphor Analysis by Specific Gravity and.....	168
<b>PHOSPHORUS</b>		Refractive Index of Starch Conversion Products.....	181
Determination in Limestone by Photometric Method.....	304	Reservoir for Hot Distilled Water.....	201
Determination by Molybdenum Blue Reaction.....	574	<b>RESINS</b>	
Determination as Molybdatevanadophosphoric Acid.....	637	Acidity Determination by Potentiometric Method.....	219
Determination as Phytate. Iron-Phosphorus Relation in Ferric Phytate.....	379	Alkyd Oil-Modified, Phthalic Anhydride Determination in.....	198
Determination in Plant Material by Photometric Method.....	389	( <i>See also</i> Plastics.) Identification by Systematic Procedure.....	200
Microdetermination by Rapid Digestion.....	121	Riboflavin Determination, Pyridine Content of Pyridine-Acetic Acid Mixture Used in.....	583
Phosphorus Pentoxide, Recommended Specification for. <b>PHOTOMETRY</b>	345	Rotenone Color Tests Not Specific.....	277
Analysis of Errors at High and Low Absorptions.....	281	<b>RUBBER</b>	
Liquid Level Automatic Control in.....	123	Analysis, Compounded with Synthetic Rubber. (Correction, 486).....	9
Photometer for Carbon Disulfide Determination in Air (Correction). Photometer for Film Determination in Detergent Processes.....	393	Carbon-Reinforced, Electron Microscope Study of.....	642
Phthalate Determination.....	250	Connections to Glass Tubes.....	348
Phthalic Anhydride Determination in Oil-Modified Alkyd Resins. <i>See</i> Paint. Phytin Phosphorus Determination.....	416	Curing Rate Determination.....	15
Pigments. <i>See</i> Paint.	389	Extraction Apparatus, Crucible Holder for.....	562
<b>PLANT MATERIAL</b>		Extraction Apparatus, Solvent-Recovery Take-Off Device for.....	722
Ascorbic Acid Microdetermination in Large Numbers of Samples.....	649	Freeze Tests, Alternating Current Solenoid for.....	538
Carotene Determination in, by Chromatographic Method.....	184	Identification of Elastomers by Rapid Method.....	424
Chlorophyll, Carotene, and Xanthophyll Determination in.....	438	Staining in Ground or Milled Plant Tissues.....	480
Magnesium Microdetermination in, with 8-Hydroxyquinoline.....	596	<b>RUBBER, SYNTHETIC</b>	
Mineral Contamination in Grinding of.....	202	Analysis, Compounded with Natural Rubber. (Correction, 486).....	9
Molybdenum Microdetermination in.....	137	Buna S. <i>o</i> -Xylene Determination in Recycle Styrene.....	751
Nitrate Determination, Purification of 30% Hydrogen Peroxide for. Nitrite, Nitrite, and Ammonium Nitrogen Determination in Extracts of.....	181	Butadiene Specific Gravity.....	7
Nitrogen, Phosphorus, and Potassium Determination in. Staining Rubber in, When Ground or Milled.....	446	Butyl, Curing Rate Determination of.....	562
Starch Determination in, by Polarimetric Method.....	121	Butyl, Sulfur Determination in.....	98
Plasma. <i>See</i> Blood.	480	Carbon-Reinforced, Electron Microscope Study of.....	642
Plastic Determination in Cellulose Esters.....	736	Curing Rate Determination.....	15
Films, Water Vapor Permeability of.....	93	Emulsion Polymerization in 10-Gram Systems.....	1
Identification by Systematic Procedure.....	686	Freeze Tests, Alternating Current Solenoid for.....	588
Tubing Joined to Glass. ( <i>See also</i> Resins.)	541	Identification of Natural Rubber and.....	424
Platinum Separation from Hydrogenation Reaction Mixtures.....	275	<b>SAFETY</b> Cap for Glass Distillation Equipment.....	276
Polarographic Cell for Rapid Analysis.....	637	Salicylimines as Organic Precipitants.....	750
Polarographic Metal Analysis. Copper Group.....	329	Saponification of Esters by Semimicroprocedure.....	410
Polymerization by Emulsion of Synthetic Rubber in 10-Gram Systems. Polymers. Acidity Determination by Potentiometric Method.....	147	Sesame Oil, Sesamin Determination in.....	166
Polymers. Osmometry of High-Polymer Solutions.....	219	Sesame Oil, Tung Oil Estimation as Adulterant in.....	511
Potassium Determination in Fertilizer Mixtures. Removal of Ammonium and Organic Matter without Ignition.....	520	Sesamin Determination in Sesame Oil.....	106
Potassium Determination in Plant Material by Photometric Method.....	383	Shark Liver, Extraction of Oil and Vitamin A from.....	126
Potassium Dichromate Aqueous Solutions, Color of.....	121	<b>SILICA</b>	
Potassium Dichromate in Iron Determination, Using Silver Reductor. Potassium Ferricyanide and Ferrocyanide. <i>See</i> Cyanide.	42	Determination in Aluminous Materials by Molybdenum Blue Reaction.....	705
Potassium Hydroxide, Sodium Determination in.....	49	Determination by Colorimetric Methods.....	482
Potassium Iodate Standard Solutions, Stability of.....	157	Determination, Dissolved in Water.....	612
Potassium Permanganate Standardization against Arsenious Oxide with Iodine Monochloride.....	38	Determination in Steam in Presence of Phosphates.....	574
Potato, Dehydrated, Sulfur Dioxide Determination in.....	625	Fusions, Monel Metal Pouring Plate for.....	590
Potato, Sweet, Starch Determination in Products from.....	153	Silicomolybdate in Tin Microdetermination by Colorimetric Method.....	289
Potentiometric Acidity Determination in Highly Colored Materials. Petroleum Lubricants Containing Additives.....	736	Silicon Determination in Aluminum.....	705
	219	Silver Reducto in Iron Determination with Dichromate.....	49
		Siphon for Timing.....	592
		Sirup from Corn, Refractive Index-Dry Substance Tables for.....	161
		Soap-Detergent Mixtures Analyzed in Bar Form.....	239
		Soap-Oil Mixtures Analyzed by Adsorption of Sodium Sulfonates.....	25
		Sodium Determination in Potassium Hydroxide.....	157
		Sodium Aluminate, Silica Determination in Solutions of.....	705
		Sodium Hypochlorite in Titrimetric Microanalysis.....	206
		Sodium Phosphate (Dibasic, Heptahydrate), Recommended Specification for.....	281
		Sodium Sulfonates Soluble in Petroleum Oil, Analyzed by Adsorption.....	25
		Sodium Thiosulfate Standardization for Titrations.....	38
		Soil, Molybdenum Microdetermination in.....	137
		Soil, Nitrate, Nitrite, and Ammonium Nitrogen Determination in Extracts of.....	449

Solenoid of Alternating Current Type for Freeze Tests.....	588	Turpentine, Destructively Distilled. Detection in Other Turpentines by Aniline Point.....	603
SOLIDS			
Analysis by Powder Diffraction.....	209		
Extractor of Large Continuous Type.....	472		
Microapparatus for Purification of.....	478		
Total. Apparatus for Determination in Water.....	120		
Solubility Microdetermination, Apparatus for.....	413		
Solution Concentration (Predictable) Owing to Evaporation.....	349		
Solvent Hydrocarbons Purified for Absorption Spectroscopy.....	556		
Solvent Recovery by Take-Off Device for Rubber Extraction Apparatus.....	556		
SORBEAN			
Lipid Determination in, as Measurement of Maturity.....	722	VALVE of Constant-Level Float Type.....	201
Meal, Detection of Inadequate Heat Treatment of.....	640	Van Slyke Method. See Blood.	
Oil, Heat-Bodied, Analysis of.....	90	Vanilla Extracts, Vanillin and Coumarin Determined in.....	505
Specific Gravity Determinations. Pycnometer for Volatile Liquids.....	55	Vegetables, Amino Acid Analysis of. Carbohydrate-Free Extraction of Nitrogen.....	600
Specific Gravity, Spirit of Camphor Analysis by Refractive Index and.....	168	Vegetables, Lipid Determination in, as Measurement of Maturity.....	701
Specifications for Reagent Analytical Chemicals.....	281	Viscosity of Cellulose, Precise Method for.....	104
SPECTROMETRY		Viscosity Measurement. Calibrated Master Viscometers.....	708
Absorption Solvents Purified for.....	556		
Acetylene-Air Flame for.....	728	A, Alcohol and Ester Forms Separated by Solvent Extraction and Chromatographic Methods.....	509
Emission Equipment for Quantitative Analysis. Proposed Minimum Requirements.....	670	A, and Carotene Determined in Milk.....	101
Infrared Analysis of Butadiene.....	422	A, and Carotenoids Determined in Butterfat.....	83, 190
Qualitative Techniques.....	675	A, Determination in Dehydrated Eggs.....	632
Quantitative Techniques.....	653	A, Determination in Fish Liver Oils by Spectroscopic Method.....	436
Ultraviolet Absorption of Unsaturated Fats and Fatty Acids.....	385	A, Determination in Margarine by Spectrophotometric Method.....	358
Spoilage Determination in Protein Foodstuffs and Fish.....	490	A, Reagent Dispenser for Determination of.....	241
Spoilage in Fish, Volatile Base Microdetermination as Index of.....	593	A, Shark Liver Analysis for Oil and.....	126
Spot Reaction for Cadmium.....	141	A, Spectrophotometric Assay by Destructive Irradiation.....	288
Spray Residues of Xanthone Analyzed Colorimetrically.....	35	Ascorbic Acid Microdetermination in Plant Samples.....	649
STARCH		Ascorbyl Esters Determined in Fats and Oils.....	464
Conversion Products, Refractive Index-Dry Substance Tables for.....	161	Assays, Electrode for Microtitration of.....	205
Determination in Sweet Potato Products and Other Plant Materials.....	736	C, Estimation in Presence of Iron Salts.....	757
Ground as Indicator in Iodometry.....	772	Carotene, Chlorophyll, and Xanthophyll Determination in Plants.....	438
Solution Stabilized for Dissolved Oxygen Determinations.....	369	Carotene Determination in Alfalfa.....	184, 513
STEAM, Silica Determination in.....	574, 612	β-Carotene Isomerization as Affecting Absorption at 326 Micrometers.....	328
STEEL		D, Antimony Trichloride Reaction of.....	179
Carbon Determination in, by Low-Pressure Combustion.....	242, 248, 634	Ergosterol Determination by Colorimetric Method.....	495
Chromium Determination in, by Colorimetric Method.....	507	Pantothenic Acid, Yeast Microbiological Determination of.....	67
Copper Determination in, by Colorimetric Procedure.....	80	Riboflavin Determination, Estimation of Pyridine in Acetic Acid-Pyridine Mixture for.....	583
Germanium Determination in, by Gravimetric Method.....	311	Thiamine Determinations.....	116, 476, 572, 576
Nickel Determination in, by Colorimetric Method.....	375	Volume Measured Precisely in Titrimetric Analysis.....	50
Phosphorus Determination in, as Molybdatevanadophosphoric Acid.....	379	Volume Reading Facilitated in Moisture Determinations by Distillation.....	720
Tin Microdetermination in, with Silicomolybdate.....	269		
Tungsten Determination in.....	45, 607		
Still. See Distillation.			
Stopcock Lubricants.....	415	WARING Blender for Continuous Emulsification.....	717
Styrene, α,p-Dimethylstyrene Determination in Presence of.....	20	Wastes, Industrial. Phenol Determination in Dilute Solutions.....	694
Styrene, o-Xylene Determination in.....	731	WATER	
SUGARS		Absorption Determined by Accelerated Method.....	487
Analysis, Lead Subacetate Specifications as Reagent for.....	281	Alkalinity Indicator for Boiler Feedwater (Correspondence).....	273
d-Galactose Determination by Selective Fermentation.....	28	Carbon Dioxide Determination in.....	315
Maltose Determination in Presence of Glucose.....	582	Detergent Film Determination on Transparent Surfaces.....	251
Microdetermination, Sichert and Bleyer Reagent Modified for. (Correction, 693).....	537	Determination by Distillation, Volume Reading Facilitated in.....	720
Phosphomolybdc Acid Color Reaction with.....	637	Determination in Egg Powder.....	628
Sulfamyl Chloride, Acetyl-, Analysis by Karl Fischer Reagent.....	517	Distilled, of High Purity, Column for Continuous Production of. -Ethyl Ether-Benzene-Ethanol Solutions Analyzed.....	748
SULFATE		Evaporator for Determination of Total Solids in.....	432
Determination in Cellulose Nitrate and Other Esters.....	391	Ion-Exchange Adsorbents for.....	616
Microdetermination by Benzidine Sulfate Precipitate.....	536	Magnesium Microdetermination in, with 8-Hydroxyquinoline.....	595
SULFUR DETERMINATION		Phenol Determination in, by Gibbs Method.....	694
in Brass and Bronze by Combustion.....	349	Reservoir for Hot Distilled Water.....	201
in Butyl Rubber, Total and Combined.....	98	Silica Determination, Dissolved in.....	612
in Foods by Nitric and Perchloric Acid Digestion.....	630	Valve of Constant-Level Float Type for Filling Bottles.....	201
Sulfur Dioxide Determination in Dehydrated Foods.....	153	Vapor Permeability of Organic Films.....	686
Sulfuric Acid, Hydrocarbon Analysis by Extraction with. (Correction, 721).....	558	(See also Humidity and Steam.)	
Surface Area, Apparatus for Measurement of.....	398	Wax Determination in Cotton Fiber by Alcohol Extraction.....	745
Sweet Potato. See Potato.		WEIGHING	
TALL OIL, Iodine Number Method for.....	371	Bottles, Device for Rapid Closing of.....	579
Tannin Colorimetric Method for Beryllium and Aluminum.....	598	Buret, Modified Bailey Type of.....	357
Tenderness of Dehydrated Fish Determined in Instrument for Measuring Texture Changes.....	638	Funnels.....	133
Ternary System Acetone-Benzene-Water Analyzed.....	499	Weights Corrected to Vacuum, Nomograph for.....	275
Tetraethyllead Determination in Gasoline.....	4	Wijs Solution. See Iodine Number.	
Textile-Finish Identification Stains.....	274	WOOD	
THIAMINE DETERMINATION		Cellulose. Viscometric Chain Length in Triton F.....	683
in Beef Muscles. Comparison of Methods.....	116	Furfural Determination by Iodine Method in Hydrolyzed Liquors from.....	319
in Pharmaceuticals. Rat-Curvative, Thiochrome, and Fermentation Methods.....	476	(See also Pulp.)	
by Thiochrome Method.....	572	X-RAY	
by Yeast-Growth, Yeast-Fermentation, and Thiochrome Methods.....	576	Camera, Funnel for Filling Capillaries of.....	343
Thiochrome. See Thiamine.		Crystalline Materials Determined by Diffraction Patterns.....	95
Thiosulfate Washers in Alkoxy Microdeterminations.....	207	Phenyl Isocyanate Derivatives of Alkylated Phenols Identified by Powder Diffraction for Chemical Analysis.....	304
Timing Siphon.....	592	XANTHONE Spray Residues, Colorimetric Analysis of.....	35
TIN		Xanthophyll Determination in Plants.....	438
Alloys, Antimony Determination in.....	443	o-Xylene Determination in Styrene Recycle.....	751
Determination by Iodometric Method.....	555	Xylene in Extraction of Oil and Vitamin A from Shark Liver.....	126
Microdetermination with Silicomolybdate.....	269		
Separation from Copper in Electrodeposition Apparatus.....	532		
TITRIMETRY		YEAST Growth or Fermentation Methods for Thiamine Determination.....	576
Chlorometry as Procedure for Microanalysis.....	203	Yeast Microbiological Determination of Pantothenic Acid.....	67
Conductometric Apparatus for.....	591		
Microburet for.....	475		
Rack for Semimicroanalyses.....	346	ZEISEL Method. See Methoxyl.	
Volume Measured Precisely in.....	50	Zeo-Karb as Exchange Adsorber, Quantitative Separations with.....	615
Tobacco, Nicotine and Nornicotine Determined in.....	86	ZINC	
Tobacco, Nornicotine Identification in.....	377	Alloys, Microdetermination of Copper, Lead, and Cadmium in. Benzoin as Fluorescent Microreagent for (Correction).....	71
Torch, Micro.....	142	Determination in Cyanide Brass-Plating Baths.....	102
Toxicity of Acrylonitrile in Air, Microtests for.....	63	Determination with 8-Hydroxyquinoline.....	387
Triton F (Dimethyldibenzylammonium Hydroxide), Viscometric Chain Length of Wood Cellulose in.....	683	Determination in Magnesium Alloys.....	256, 480
Tung Oil Estimation as Adulterant.....	511	Determination in Naphthalene of Zinc.....	703
Tung Oil, Heat-Bodied, Analysis of.....	90	Determination by Titrimetric Method.....	194
Tungsten Determination Gravimetrically with Anti-1,5-di-(p-methoxy-phenyl)-1-hydroxylamino-3-oximino-4-pentene.....	45	Microdetermination by Fluorescent Turbidity Measurement.....	758
Tungsten Determination in Steel Spectrographically.....	607	Reagent Chemical, Recommended Specification for.....	281



BIBLIOTEKA GŁÓWNA  
Politechniki Śląskiej

P1058144