

# SUBJECT INDEX

## INDUSTRIAL AND ENGINEERING CHEMISTRY

### ANALYTICAL EDITION

### VOLUME 9—1937

<b>ABSORPTION Apparatus for Gases in Laboratory.</b> M. W. Brenner and G. L. Poland.....	480
Acetic Acid, Magnesium Separated as Oxalate in Concentrated Solution of. P. J. Elving and E. R. Caley.....	558
Acetone Estimation. C. O. Haughton.....	167
Acetyl Microdetermination, Especially in O-Acetyl Compounds. E. P. Clark.....	539
Acetylmethylcarbinol Determination. A. F. Langlykke and W. H. Peterson.....	163
<b>ACIDS:</b>	
Acidimetry, Borax as Standard for. II. F. H. Hurley, Jr.....	237
Acidimetry, Sodium Carbonate as Reference Standard in. G. F. Smith and G. F. Croad.....	141
Determination of, from Tar by Extraction. C. H. Fisher and Abner Eisner.....	213
in Oxidized Petroleum Oils, Electrometric Titration of. A. R. Rescorla, F. L. Carnahan, and M. R. Fenske.....	505
(See also kind of acid.)	
Air, Carbon Dioxide Determination in. J. G. Waugh.....	96
Air, Carbon Monoxide Determination in. A. A. Christman, W. D. Block, and Julius Schultz.....	153
Air Conditioning of Structures, Determination of Odor Concentration in. V. A. Gant and H. D. Shaw.....	16
<b>ALCOHOLS:</b>	
Butanol, Kauri Microtest for Solvent Power. II. E. L. Balde-schwiler, M. D. Morgan, and W. J. Troeller.....	540
Ethyl, Blend with Gasoline. See Fuel, Motor.	
Ethyl, Dehydration Rate with Metallic Calcium. G. F. Smith and C. A. Getz.....	100
Fusel Oil Determination in Distilled Liquors. W. B. D. Penniman, D. C. Smith, and E. I. Lawshe.....	91
Alkali Determination in Pollucite: J. C. Hillyer.....	236
R. C. Wells and R. E. Stevens.....	236
<b>ALLOYS:</b>	
of Aluminum, Determination of Silicon in. H. V. Churchill, R. W. Bridges, and M. F. Lee. (Correspondence, L. H. Callendar; Churchill, Bridges, and Lee, 533).....	201
Arsenic Determination in. C. W. Anderson.....	569
Wood's Metal Reductor. G. F. Smith and C. S. Wilcox.....	419
<b>ALUMINUM:</b>	
Determination by Precipitation with Urea. H. H. Willard and N. K. Tang.....	357
Fluorescent Test for. C. E. White and C. S. Lowe.....	430
Silicon Determination in, and in Alloys of. H. V. Churchill, R. W. Bridges, and M. F. Lee. (Correspondence, L. H. Callendar; Churchill, Bridges, and Lee, 533).....	201
Amalgam of Zinc-Sodium, Analysis of. H. A. Liebafsky.....	176
Amines, Aromatic, Titration with Nitrous Acid. Joseph Phillips and Alexander Lowy.....	381
Amino Acids, Mono-, Extractor for. D. W. Woolley.....	433
Aniline Determination in Food Dyes. O. L. Evenson, J. A. Kime, and S. S. Forrest.....	74
Aniline Point Determination in Dark Petroleum Products. Leon Donn, Archeology, Microchemical Analysis of Pigments in Fossae of In-cisions of Chinese Oracle Bones. A. A. Benedetti-Pichler.....	202
149	
Areometric Estimation of Sulfate as Barium Sulfate. V. R. Damerell and P. Spremulli.....	123
Arsanilic Acid, Cerium Detection by. J. F. Miller.....	181
Arsenate, Zirconium Determination by. W. C. Schumb and E. J. Nolan. (Addendum, 562).....	371
<b>ARSENIC:</b>	
Determination in Mineral Oil Solutions. J. B. Lewis and E. L. Baldeschwieler.....	405
Determination in White Metals. C. W. Anderson.....	569
Microdetermination in Biological Materials. H. J. Morris and H. O. Calvery. (Correction, 591).....	447
Arsenous Oxide in Potassium Permanganate Standardization. H. A. Bright.....	577
<b>ASPHALT:</b>	
Consistency, Effect of Temperature on. H. G. Nevitt and L. C. Krehma.....	119
Physical Properties, Viscosity-Temperature Susceptibility. Se-ward Mason, R. J. Loomis, S. D. Patterson, H. G. Nevitt, and L. C. Krehma.....	138
Saponification Value Determined in Asphalt Oils and. J. E. Fratis and D. H. Condit.....	576
Stain Number Determined. H. E. Schwyer and H. C. Howell.....	563
Authors, Note to.....	1, 306
<b>BALANCE Room.</b> See Microchemistry, Apparatus.	
Balances, Micro-, Highly Sensitive to Temperature. Fritz Breuer... 354	
Barite Ores, Analysis of, Containing Calcium Fluoride. E. S. Hertzog... 336	
Barium Determination. S. J. Kocher..... 331	
Barium Sulfate, Areometric Estimation of Sulfate as. V. R. Damerell and P. Spremulli..... 123	
Bases, Determination of, from Tar by Extraction. C. H. Fisher and Abner Eisner..... 213	
Baumé Hydrometer. See Hydrometer.	
Beet Leafhopper. See Insects.	
Berl-Kullmann. See Melting Point Apparatus.	
Beryllium Separation in Presence of Complex Tartrates. H. S. Miller..... 221	
<b>BEVERAGES, ALCOHOLIC:</b>	
Distilled Liquors, Determination of Higher Alcohols in. W. B. D. Penniman, D. C. Smith, and E. I. Lawshe..... 91	
Whisky, Fusel Oil Determination in. W. B. D. Penniman, D. C. Smith, and E. I. Lawshe..... 91	
Wine, Iron Content of. John Byrne, L. G. Saywell, and W. V. Cruess..... 83	
<b>BIOLOGICAL MATERIAL:</b>	
Arsenic Microdetermination in. H. J. Morris and H. O. Calvery. (Correction, 591)..... 447	
Blood Serum, Calcium Determination in. H. K. Murer..... 27	
Gas Analysis by Micromethod. M. H. SeEVERS and R. T. Stormont. Lead Determination in. Comparison of Spectrographic, Dithizone, and Carbazide Methods. Jacob Cholak, D. M. Hubbard, R. R. McNary, and R. V. Story..... 488	
Lead Determination in. Photometric Dithizone Method. D. M. Hubbard..... 493	
Spectrographic Analysis of. II. Bismuth. Jacob Cholak..... 26	
Vitamin E Assay. Application to Wheat Germ and Wheat Germ Oil. L. S. Palmer..... 427	
Bismuth Determination in Biological Material by Spectrographic Method. Jacob Cholak..... 26	
Bismuth Determination in Lead-Zinc Ores by Internal Electrolysis. J. J. Lurie and L. B. Ginsburg..... 424	
Bituminous Substances, Ductility of, Improved Machine for Testing. R. R. Thurston and C. E. Cummings..... 286	
<b>Blood.</b> See Biological Material.	
Bomb, Micro-, of Elek and Hill, for Volumetric Determination of Iodine. Adalbert Elek and R. A. Harte..... 502	
Borax as Acidimetric Standard. II. F. H. Hurley, Jr..... 237	
Boron Determination by Spectroscopic Method. R. K. Calfee and J. S. McHargue..... 288	
Bromide Determination. L. A. Reber and W. M. McNabb..... 529	
Bromide Determination, Volumetric. I. M. Kolthoff and H. Yutzy. Buret-Filling Device for Portable Reagent Reservoirs. N. E. Rigler. Butanes, Separating Butenes from. M. P. Matuszak and F. E. Frey. Butanol. See Alcohols.	75
Butene Determination in Refinery Gases. W. A. McMillan..... 511	
Butenes, Separation of, from Butanes. M. P. Matuszak and F. E. Frey..... 111	
Butterfat. See Fats.	
<b>CABLE Insulation Oil, Chemical Changes in, Associated with Oxidation.</b> R. N. Evans and J. E. Davenport..... 321	
<b>CALCIUM:</b>	
Determination: in Blood Serum. H. K. Murer..... 27	
in Salt of High Purity. A. C. Shuman and N. E. Berry..... 77	
in Small Samples by Spectroscopic Method. D. T. Ewing, M. F. Wilson, and R. F. Hibbard..... 410	
Metallic, Rate of Dehydration of Ethyl Alcohol with. G. F. Smith and C. A. Getz..... 100	
Calcium Fluoride in Barite Ores, Analysis of. E. S. Hertzog..... 336	
Calcium Oxide, Uncombined, Determination in Portland Cement. D. R. MacPherson and L. R. Forbich..... 451	
Calcium Phosphate Determination in Mixtures of Calcium Ortho-phosphates. H. V. Tartar, I. S. Colman, and L. L. Krethmar... 384	
Carbazide for Lead Determination in Biological Materials. Jacob Cholak, D. M. Hubbard, R. R. McNary, and R. V. Story..... 488	
<b>CARBON:</b>	
Activated, Determination of Odor Concentration in Air-Conditioned Structures by Freezing-out and Osmoscope Method, and Reduction by. V. A. Gant and H. D. Shaw..... 16	
Determination: by Combustion. M. W. Renoll, Thomas Midgley, Jr., and A. L. Henne..... 566	
in Constant-Temperature Device. Frank Schneider and H. L. van Mater..... 295	
in Gasoline and Other Volatile Liquids. Harry Levin and Karl Uhrig..... 326	
in Presence of Nitrogen. C. T. Gayley..... 422	
Manometer for Pressure Regulation of Hydrogen and. W. H. Hamill..... 355	
Carbon Black Determination in Rubber Goods. E. W. Oldham and J. G. Harrison, Jr..... 278	
<b>CARBON DIOXIDE:</b>	
Determination in Air. J. G. Waugh..... 96	
Solid, Storage of Carbon Dioxide from, for Dumas Determinations. W. H. Hamill and J. A. Alicino..... 290	
Solid, Used in Generator for Micro-Dumas Determination of Nitro-gen. E. B. Hershberg and G. W. Wellwood..... 303	
Carbon Monoxide Determination in Air. A. A. Christman, W. D. Block, and Julius Schultz..... 153	
Carbonate Content of Oil Lye. J. E. S. Han..... 140	
Carbonate Microdetermination with Dilatometer. B. L. Clarke and H. W. Hermance..... 597	
Carius Method. See Halogen.	
Carotene Determination in Forage by Guilbert Method. W. J. Peter-son, J. S. Hughes, and H. F. Freeman..... 71	
Carotenoids in Yellow Corn, Estimation of. G. L. Clark and J. L. Gring..... 271	
Cautic Soda. See Sodium Hydroxide.	

Cell, Living, Physical Properties and Microchemical Reactions of Robert Chambers, M. J. Kopac, and C. G. Grand	143
Cellulose Analysis in Farm Wastes, J. D. Reid and D. F. J. Lynch	570
Cement, Portland, Calcium Oxide Determination in, D. R. MacPherson and L. R. Forbrich	451
Centrifuge, Micro-W. MacNevin	356
Cerium Detection by Arsanilic Acid, J. F. Miller	181
Cesium Determination in Pollucite: J. C. Hillyer	236
R. C. Wells and R. E. Stevens	236
Chimney of Metal for Fusions, L. J. Curtman and Leo Lehrman	225
Chloride Determination, L. A. Reber and W. M. McNabb	529
Chloroform Extract of Beet Leafhopper, Microdetermination of, R. A. Fulton	437
Chocolate, Fat in, Refractometric Determination of, Joseph Stanley	132
Chromite Ores. See following item.	
Chromium Determination in Chromite Ores, G. F. Smith and C. A. Getz	518
Chromium Determination in Ferrochrome, G. F. Smith and C. A. Getz	378
Circulator. See Stirrer.	
Citrate Solutions, Acid, Electrodeposition of Zinc from, R. Winchester and L. F. Yntema	254
Clover, Coumarin Determination in, I. J. Duncan and R. B. Dustman	471
Clover, Coumarin and Melilotic Acid Microdetermination in, W. L. Roberts and K. P. Link	438
COAL:	
Ash Determination in High-Carbonate Coal, O. W. Rees	307
Ash, Fusibility of, J. J. Brennan, D. F. Mitchell, F. P. Tierney, and W. C. Thompson	106
Plasticity, Apparatus for Precise Measurements at High Temperatures, H. K. Griffin and H. H. Storch	280
Cobalt Microdetermination, Colorimetric, C. P. Sideris	145
Cod Liver Oil. See Oils, Fish.	
COLORIMETRY:	
Arsenic in Biological Materials, Microdetermination of, H. J. Morris and H. O. Calvery (Correction, 591)	447
Cobalt Microdetermination, C. P. Sideris	145
Ferric Thiocyanate Color Developed in 2-Methoxyethanol, Intensity and Stability of, H. W. Winsor	453
Hop Analysis, Soft Resins in, D. E. Bullis	267
Iron by $\alpha$ -Phenanthroline Method, L. G. Saywell and B. B. Cunningham	67
Manganese Microdetermination in Plants or Soil, C. P. Sideris	445
Potassium Microdetermination, C. P. Sideris	145
Silicate Rocks, Determination of Copper, Zinc, and Lead in, E. B. Sandell	464
Spectrophotometry in, M. G. Mellon	51
COMBUSTION ANALYSES:	
Carbon and Hydrogen, M. W. Renoll, Thomas Midgley, Jr., and A. L. Henne	566
Carbon and Hydrogen in Gasoline and Other Volatile Liquids, Harry Levin and Karl Uhrig	326
Gas, by Capillary Combustion Unit, B. E. Christensen and Robert Carlton	400
Constant-Pair Method. See Platinum.	
COPPER DETERMINATION:	
in Lead-Zinc Ores by Internal Electrolysis, J. J. Lurie and L. B. Ginsburg	424
Quantitative Methods Compared, H. W. Foote and J. E. Vance, in Silicate Rocks, E. B. Sandell	205
by Spot Test, Herman Yagoda	464
Corn, Yellow, Estimation of Carotenoids in, G. L. Clark and J. L. Gring	271
Correspondence	250
Cottonseed Meal, Gossypol Estimation in, F. H. Smith	517
Cottonseed Meal, Gossypol Extraction from, with Different Ethers, J. O. Halverson and F. H. Smith	516
COUMARIN:	
Determination in Sweet Clover, I. J. Duncan and R. B. Dustman	471
Determination in Vanilla Extract, I. J. Duncan and R. B. Dustman	416
Microdetermination in Clover, W. L. Roberts and K. P. Link	438
Crucibles of Perforated Platinum, Support for, W. M. Thornton, Jr.	95
Crystallization Apparatus, Enclosed, for Laboratory, J. D. Piper and N. A. Kerstein	403
Crystals, Microcrystalline Profiles and Silhouettes, Angular Constants of, A. C. Shead	496
Cube. See Insecticides.	
DENSITY Microdetermination by Falling-Drop Method, Seymour Hochberg and V. K. La Mer	291
Dental Alloys, Platinum in, Spectrographic Determination, J. J. Manning and James Coull	28
Derris. See Insecticides.	
Dialysis, Protein, F. W. Bernhart, L. E. Arnow, and A. C. Bratton	387
Dialyzer, Electro-, for Serum Protein, D. B. Roxburgh and M. H. Power	578
Diethylene Glycol, Ester Saponification by Potassium Hydroxide in, C. E. Redemann and H. J. Lucas	521
2,4-Dihydroxyacetophenone, Ferric Iron Determined by, S. R. Cooper	334
Dilatometer for Microgasometric Analysis, B. L. Clarke and H. W. Hermance	597
Diphenylguanidine as Standard in Neutralization Processes, W. M. Thornton, Jr., and C. L. Christ	339
DISTILLATION:	
Apparatus:	
Bubble-Cap Still of Glass, Hundred-Plate Semiautomatic, for Laboratory, J. H. Bruun and W. B. M. Faulconer	192
Bubble-Cap Still for Low-Boiling Materials, Twenty-Plate, for Laboratory, J. H. Bruun and S. D. West	247
Micro-, for Fractionation, L. C. Craig	441
Molecular Stills, Constant-Temperature Bath for, O. A. Nelson and H. L. Haller	402
Pressure Regulator for Vacuum Distillation, R. L. Emerson and R. B. Woodward	347
Vacuum Flash Unit and, for Laboratory, C. E. Winters and J. E. Hedrick	189
Moisture Determination by, H. N. Calderwood and R. J. Piechowski	520
DITHIZONE:	
for Copper, Zinc, and Lead Determination in Silicate Rocks, E. B. Sandell	464
for Lead Determination in Biological Material, Comparison of Spectrographic, Dithizone, and Carbazide Methods, Jacob Choslav, D. M. Hubbard, R. R. McNary, and R. V. Story	488
for Lead Determination in Biological Material by Photometric Method, D. M. Hubbard	493
for Zinc Estimation, P. L. Hibbard	127
Doctor Test. See Mercaptans.	
Dry Ice. See Carbon Dioxide, Solid.	
Ductility of Bituminous Substances, Machine for Testing, R. R. Thurston and C. E. Cummings	286
Dumas Method. See Nitrogen.	
Dyes for Food, Determination of 2-Naphthylamine, Aniline, and <i>o</i> -Toluidine in, O. L. Evenson, J. A. Kime, and S. S. Forrest	74
ELECTRODES:	
Glass:	
Errors of, W. C. Gardiner and H. L. Sanders	274
Low-Resistance, H. Mouquin and R. L. Garman	287
for Rare Earth Salt Studies, J. A. C. Bowles and H. M. Partridge	124
Sensitive and Durable, A. E. Cameron	436
Metallic, Enclosed in Glass, O. J. Stewart and W. L. Carruth	581
Quinhydrone, Verner Schomaker and D. J. Brown	34
Electrolysis. See Dialysis.	
ELECTROMETRY:	
Acid Titration in Oxidized Petroleum Oils, A. R. Rescorla, F. L. Carnahan, and M. R. Fenske	505
Apparatus, Salt Bridge, W. M. Bright and E. L. Miller	346
Boiler Water and Condenser Leakage, Measurement of Foaming and Priming of, Richard Ulmer	172
Copper and Bismuth Determination in Lead-Zinc Ores by Internal Electrolysis without Diaphragms, J. J. Lurie and L. B. Ginsburg	424
Glycerol Titration with Dichromate, Procter & Gamble Company, Chemical Division	514
Silver Determination, H. Robinson and H. Hugg	565
Elek-Hill Microbomb. See Bomb.	
Eleostearic Acid Determination in Tung Oil, P. S. Ku. (Correction, 588)	103
Enzymes, Oil Differentiation and Butterfat Adulteration Determined by, K. V. Giri and P. N. Bhargava	395
Ester Analysis by Saponification with Potassium Hydroxide in Diethylene Glycol, C. E. Redemann and H. J. Lucas	521
Ethyl Alcohol. See Alcohols.	
Ethyl Ethers, Gossypol Extraction with Various Lots of, J. O. Halverson and F. H. Smith	516
Ethylene Glycol, Calcium Oxide Determination in Portland Cement by, D. R. MacPherson and L. R. Forbrich	451
Ethylene Glycol Determination in Dilute Aqueous Solution, A. G. Hovey and T. S. Hodgins	509
Extraction Apparatus for Liquids with Immiscible Solvents of Greater Density, L. H. Briggs	250
Extraction Apparatus for Monoamino Acids, D. W. Woolley	433
FARM Waste, Cellulose Analysis in, J. D. Reid and D. F. J. Lynch	570
Fats, Butter, Adulteration Detected by Enzymic Hydrolysis, K. V. Giri and P. N. Bhargava	395
Ferric Iron. See Iron.	
Ferric Thiocyanate Color Developed in 2-Methoxyethanol, Intensity and Stability of, H. W. Winsor	453
Ferrochrome, Chromium Determination in, G. F. Smith and C. A. Getz	378
Ferron, Iron Determination with, H. W. Swank with M. G. Mellon	406
Fiber, Crude, Apparatus for Determining, C. E. Weakley, Jr., and T. B. Leith	194
Films, Thin, Preparation of, T. P. Sager	156
Filter Crucible, Microchemical, A. J. Bailey	490
Filter, Macro- or Micro-Gooch, R. E. Dunbar	355
Fish Oil. See Oil.	
Flexometer. See Rubber.	
Fluorescent Method for Aluminum, C. E. White and C. S. Lowe	430
Fluorescent Method for Vitamin B <sub>2</sub> (Riboflavin or Lactoflavin), S. M. Weisberg and I. Levin	523
FLUORINE:	
Determination in Barite Ores as Calcium Fluoride, E. S. Hertzog	336
Determination, Interference of Phosphorus in, H. V. Churchill, R. W. Bridges, and R. J. Rowley	222
Titration in Aqueous Solutions with Thorium Nitrate, R. J. Rowley and H. V. Churchill	551
Foaming. See Water, Boiler.	
Food Dyes, Determination of 2-Naphthylamine, Aniline, and <i>o</i> -Toluidine in, O. L. Evenson, J. A. Kime, and S. S. Forrest	74
Forage, Carotene Determination in, W. J. Peterson, J. S. Hughes, and H. F. Freeman	71
Freezing-out Method. See Odor.	
Freezing Point Determination, Apparatus for, D. Quiggle, C. O. Tongberg, and E. M. Fry	579
Fuel, Motor, Reaction of Alcohol-Gasoline Blends to Doctor Test, W. K. McPherson and L. M. Christensen	433
Furfural Analysis in Mixtures with Methylfurfural, E. E. Hughes and S. F. Acree	318
Fusel Oil. See Alcohols.	
Fusions, Chimney of Metal for, L. J. Curtman and Leo Lehrman	225
GASES:	
Analysis, Capillary Combustion Unit for, B. E. Christensen and Robert Carlton	400
Apparatus, Thermoregulator, R. M. Kingsbury	333
Apparatus, Washing or Absorption Unit for Laboratory, M. W. Brenner and G. L. Poland	480
Butene Determination in, from Refinery, W. A. McMillan	511
Hydrogen Determination in Mixtures of, by New Solution, D. T. Bonney with W. J. Huff	157
Microanalysis, IV, Nitrous Oxide and Methane, F. E. Blacet and D. H. Volman	44
Microanalysis for Biological Studies, M. H. Severs and R. T. Stormont	39
Microgasometric Analysis with Dilatometer, Carbonate Radical, B. L. Clarke and H. W. Hermance	597

Oxygen Determination in, in Small Quantities. I. J. W. MacHattie and J. E. Maconachie.....	364	<b>KAURI</b> Butanol Microtest for Solvent Power. II. E. L. Balde- schwiler, M. D. Morgan, and W. J. Troeller.....	540
Storage, Vessels for, Julius Sendroy, Jr.....	190	Kerosene, Refined, Sulfur Microdetermination in, by Modified Lamp Method. Edward Field and F. H. Dempster.....	547
Gasoline Blends with Alcohol. See Fuel, Motor.		<b>KJELDAHL METHOD:</b>	
Gasoline, Carbon and Hydrogen Determination in. Harry Levin and Karl Uhrig.....	326.	Apparatus:	
Glass Electrode. See Electrodes.		for Digestion. W. M. Clark.....	338
Glassware, Static Charges Removed from. F. W. van Straten and W. F. Ehret.....	443	Fume Absorber for Digestions. H. G. Cassidy.....	478
<b>GLYCEROL:</b>		Micro-. J. E. Scott and E. S. West.....	50
Determination in Dilute Aqueous Solution. A. G. Hovey and T. S. Hodgins.....	509	Nitrogen and Carbon Determination in Same Sample. C. T. Gayley.....	422
Determination in Dilute Solutions Containing Oxidizable Impurities. W. E. Shaefer.....	449	<b>LACQUER.</b> See Paint.	
Titration with Dichromate by Electrometric Method. Procter & Gamble Company, Chemical Division.....	514	Lactoflavin. See Vitamin B <sub>2</sub> .	
Glycol Determination in Dilute Solutions Containing Oxidizable Im- purities. W. E. Shaefer.....	449	Lane and Eynon Titration. See Sugar.	
<b>GOLD:</b>		Latex. See Rubber.	
Determination:		<b>LEAD:</b>	
by Dimethylglyoxime. S. O. Thompson, F. E. Beamish, and M. Scott.....	420	Assay Button for Osmium Determination. J. J. Russell, F. E. Beamish, and J. Seath.....	475
in Presence of Platinum Metals. F. E. Beamish, J. J. Russell, and J. Seath.....	174	Determination:	
by Recovery of Minute Amounts from Solution. W. E. Caldwell and K. N. McLeod.....	530	in Biological Material. Comparison of Spectrographic, Di- thizone, and Carbazide Methods. Jacob Cholak, D. M. Hub- bard, R. R. McNary, and R. V. Story.....	488
Separation from Platinum Metals by Silver Assay Bead. F. E. Beamish and M. Scott.....	460	in Biological Material by Photometric Dithizone Method. D. M. Hubbard.....	493
Separation from Tellurium and Selenium by Hydroquinone. J. Seath and F. E. Beamish.....	373	in Silicate Rocks. E. B. Sandell.....	464
Gooch Filter. See Filter.		Impurities in, Microdetermination and Separation of. I. Tin. B. L. Clarke, L. A. Wooten, and J. D. Struthers.....	349
Gossypol Estimation in Cottonseed Meal. F. H. Smith.....	517	Ores of Zinc and, Determination of Copper and Bismuth in. L. L. Lurie and L. B. Ginsburg.....	424
Gossypol Extraction from Cottonseed Meal with Different Ethers. J. O. Halverson and F. H. Smith.....	516	Lead Peroxide Determination. J. N. Mrgudich and G. L. Clark.....	256
Grapes, Iron Content of. John Byrne, L. G. Saywell, and W. V. Crues.....	83	Level, Suspended, Measurement of Viscosity and Other Properties of Liquids by. Leo Ubbelohde. (Correction, 418).....	85
Guilbert Method. See Carotene.		Lignin. See Wood.	
<b>HALOGEN:</b>		Lime. See Calcium Oxide.	
Alkyl and Aryl, Determination in Presence of Each Other. W. H. Rauscher.....	503	<b>LIQUIDS:</b>	
in Organic Compounds, Micro-, Semimicro-, and Macro-determina- tion. W. H. Rauscher.....	296	Extraction Apparatus for, with Immiscible Solvents of Greater Density. L. H. Briggs.....	250
in Organic Compounds, Semimicro- and Micro-Carius Determina- tion. R. H. Kimball, H. H. Wittenburg, and D. E. MacFadyen. .....	48	Measurement of Viscosity and Other Properties of, by Suspended Level. Leo Ubbelohde. (Correction, 418).....	85
<b>HEAT APPARATUS:</b>		Oxygen Determination in, in Small Quantities. I. J. W. Mac- Hattie and J. E. Maconachie.....	364
Electric. Fritz Breuer.....	363	Storage Vessels for. Julius Sendroy, Jr.....	190
Thermoregulator for Direct Control of Electric Circuit in Heating Bath. F. E. Holmes.....	481	<b>LUBRICATING OIL:</b>	
Thermoregulator for Gas. R. M. Kingsbury.....	333	Acid Content as Measure of Deterioration. A. R. Rescorla, F. L. Carnahan, and M. R. Fenske.....	574
Hops, Colorimetric Determination of Soft Resins in. D. E. Bullis.....	267	Micro-method for Determining Viscosity of. Harry Levin.....	147
<b>HYDROCARBONS:</b>		Oxidized, from Petroleum, Electrometric Titration of Acids in. A. R. Rescorla, F. L. Carnahan, and M. R. Fenske.....	505
Butene Determination in Hydrocarbon Gases. W. A. McMillan.....	511	<b>MAGNESIUM:</b>	
Butenes Separated from Butanes. M. P. Matuszak and F. E. Frey. Freezing Point, Apparatus for Determining. D. Quiggle, C. O. Tongberg, and E. M. Fry.....	111	Determination in Salt of High Purity. A. C. Shuman and N. E. Berry.....	77
Kauri Butanol Microtest for Solvent Power of. II. E. L. Balde- schwiler, M. D. Morgan, and W. J. Troeller.....	540	Determination in Small Samples by Spectroscopic Method. D. T. Ewing, M. F. Wilson, and R. P. Hibbard.....	410
Liquefied, Drying by Physical Method. E. E. Roper.....	414	Separation as Oxalate in Concentrated Acetic Acid. P. J. Elving and E. R. Caley.....	558
Oils, Graphic Analysis of, by Extraction with Sulfuric Acid. C. H. Fisher and Abner Eisner.....	366	Manganese Determination in Small Samples by Spectroscopic Method. D. T. Ewing, M. F. Wilson, and R. P. Hibbard.....	410
Sulfur Microdetermination in, by Modified Lamp Method. Victor Zahn.....	543	Manganese Microdetermination in Plants or Soil by Colorimetric Method. C. P. Sideris.....	445
Sulfur Microdetermination in Refined Kerosenes by Modified Lamp Method. Edward Field and F. H. Dempster.....	547	Manometer. See Pressure Apparatus.	
(See also Organic Compounds, Petroleum, and kind of hydrocarbon.)		Manuscripts, Note on Preparation of.....	1, 306
<b>HYDROGEN:</b>		Mellitic Acid, Microdetermination in Clover. W. L. Roberts and K. P. Link.....	438
Determination:		Melting Point Block of Berl and Kullmann Modified. F. W. Berg- strom.....	340
by Combustion. M. W. Renoll, Thomas Midgley, Jr., and A. L. Henne.....	566	Mercaptans, Doctor Test for, in Alcohol-Gasoline Blends. W. K. McPherson and L. M. Christensen.....	433
in Constant-Temperature Device. Frank Schneider and H. L. van Mater.....	295	Mercurous Chloride Determination in Mercury Ores. J. J. Fahey.....	477
in Gas Mixtures by New Solution. D. T. Bonney with W. J. Huff.....	157	<b>MERCURY:</b>	
in Gasoline and Other Volatile Liquids. Harry Levin and Karl Uhrig.....	326	Cleaning, Rapid Method for. H. F. Easley.....	82
Pressure Regulation, Manometer for. W. H. Hamill.....	355	Determination in Mercury Ores. J. J. Fahey.....	477
Hydrogen-Ion Concentration of Rare Earth Salts Determined by Glass Electrode. J. A. C. Bowles and H. M. Partridge.....	124	Seal for Stirrers. L. H. Briggs.....	168
Hydrometer, Baumé, Correction Table for Sodium Hydroxide Solu- tions. John Griswold.....	388	Metals of Platinum Group. See Platinum.	
Hydroquinone, Gold Precipitation by. F. E. Beamish, J. J. Russell, and J. Seath.....	174	Metals, White, Arsenic Determination in. C. W. Anderson.....	569
Hydroquinone, Gold Separation from Tellurium and Selenium by. J. Seath and F. E. Beamish.....	373	Methane in Gases, Microanalysis of. F. E. Blacet and D. H. Volman.....	44
<b>IMPACT</b> Machine. See Rubber Testing.		2-Methoxyethanol, Intensity and Stability of Ferric Thiocyanate Color Developed in. H. W. Winsor.....	453
Insecticides. Rotenone Determination in Derris and Cube. H. A. Jones.....	206	Methylfurfural Mixtures with Furfural, Analysis of. E. E. Hughes and S. F. Acree.....	318
Insects. Beet Leafhopper, Microdetermination of Chloroform Extract of. R. A. Fulton.....	437	<b>MICROCHEMISTRY:</b>	
Insulation for Cable, Oil as. Chemical Changes Associated with Oxidation. R. N. Evans and J. E. Davenport.....	321	Acetyl Determination. E. P. Clark.....	539
Iodate Microdetermination. V. J. Ahorn and H. Hunt.....	591	Apparatus:	
Iodine. Determination by Elek-Hill Microcomb. Adalbert Elek and R. A. Harte.....	502	Balance Room of Microanalytical Laboratory. W. R. Kirner.....	300
7-Iodo-5-hydroxyquinoline-5-sulfonic Acid. See Ferron.		Balances Highly Sensitive to Temperature. Fritz Breuer.....	354
Iodometric Method of Sugar Analysis, Effect of Time on. H. S. Miller.....	37	Carbon Dioxide Generator for Dumas Determination of Nitrogen. E. B. Hershberg and G. W. Wellwood.....	303
Iridium. See Platinum Metals.		Centrifuge. W. MacNevin.....	356
<b>IRON DETERMINATION:</b>		Constant-Temperature Device for Pregl Carbon-Hydrogen De- termination. Frank Schneider and H. L. van Mater.....	295
by Colorimetric <i>o</i> -Phenanthroline Method. L. G. Saywell and B. B. Cunningham.....	67	Filter Crucible. A. J. Bailey.....	490
Ferric, by 2,4-Dihydroxyacetophenone. S. R. Cooper.....	334	Filter, Macro- or Micro-Gooch. R. E. Dunbar.....	355
with 7-Iodo-5-hydroxyquinoline-5-sulfonic Acid (Ferron). H. W. Swank with M. G. Mellon.....	406	for Fractional Distillation. L. C. Craig.....	441
in Ores by Spectrophotometric Method. J. P. Mehlig.....	162	Kjeldahl. J. E. Scott and E. S. West.....	50
in Small Samples by Spectroscopic Method. D. T. Ewing, M. F. Wilson, and R. P. Hibbard.....	410	Manometer for Carbon and Hydrogen Pressure Regulation. W. H. Hamill.....	355
by Wood's Metal Reductor. G. F. Smith and C. S. Wilcox.....	419	Reaction Vessel. D. S. Binnington.....	353
		Arsenic Determination in Biological Material. H. J. Morris and H. O. Calvery. (Correction, 591).....	447
		Beet Leafhopper, Determination of Chloroform Extract of. R. A. Fulton.....	437
		Cell, Living, Reactions of. Robert Chambers, M. J. Kopac, and C. G. Grand.....	143
		Cobalt Determination by Colorimetric Method. C. P. Sideris.....	145
		Coumarin Determination in Clover. W. L. Roberts and K. P. Link.....	438
		Crystalline Profiles and Silhouettes, Angular Constants of. A. C. Shead.....	496
		Density Determination by Falling-Drop Method. Seymore Hoch- berg and V. K. La Mer.....	291

Gas Analysis. IV. Nitrous Oxide and Methane. F. E. Blacet and D. H. Volman.....	44	Determination in Fish Flesh. M. E. Stansby and J. M. Lemon... Liver, Vitamin A Measurement by Photoelectric Method. R. L. McFarlan, J. W. Reddie, and E. C. Merrill.....	341
Gas Analysis Method for Biological Studies. M. H. Seevers and R. T. Stormont.....	39	Lubricating. See Lubricating Oils.	324
Gasometric Analysis with Dilatometer. Carbonate Radical. B. L. Clarke and H. W. Hermance.....	597	Mineral. See Petroleum.	
Glassware, Removal of Static Charges from. F. W. van Straten and W. F. Ehret.....	443	Sulfonated, Fractionation and Composition of. Ralph Hart.....	177
Halogen Determination:		Tung, Determination of Eleostearic Acid in. P. S. Ku. (Correction, 588).....	103
Alkyl and Aryl. W. H. Rauscher.....	503	Wheat Germ, Biological Assay of Vitamin E in. L. S. Palmer.....	427
in Organic Compounds by Micro-, Semimicro-, and Macro-methods. W. H. Rauscher.....	296	ORES:	
in Organic Compounds by Semimicro- and Micro-Carius Methods. R. H. Kimball, H. H. Wittenburg, and D. E. MacFadyen....	48	Barite, Analysis of, Containing Calcium Fluoride. E. S. Hertzog... Chromite, Chromium Determination in. G. F. Smith and C. A. Getz.....	336
Iodate Determination. V. J. Anhorn and H. Hunt.....	591	Iron Determination in, by Spectrophotometric Method. J. P. Mehlig.....	162
Iodine Determination by Elek-Hill Microbomb. Adalbert Elek and R. A. Harte.....	502	Lead-Zinc, Determination of Copper and Bismuth in. J. J. Lurie and L. B. Ginsburg.....	424
Kauri Butanol Test for Solvent Power. II. E. L. Baldeschwieler, M. D. Morgan, and W. J. Troeller.....	540	Mercury, Determination of Mercurous Chloride and Total Mercury in. J. J. Fahey.....	477
Lead:		ORGANIC COMPOUNDS:	
Determination in Biological Material by Photometric Dithizone Method. D. M. Hubbard.....	493	Elements in, Detection of. R. H. Baker and Charles Barkenbus... Halogen Determination in, by Micro-, Semimicro-, and Macro-methods. W. H. Rauscher.....	135
Determination in Biological Materials. Comparison of Spectrographic, Dithizone, and Carbazide Methods. Jacob Cholak, D. M. Hubbard, R. R. McNary, and R. V. Story.....	488	Halogen Determination in, by Semimicro- and Micro-Carius Method. R. H. Kimball, H. H. Wittenburg, and D. E. MacFadyen....	48
Separation and Determination of Impurities in. I. Tin. B. L. Clarke, L. A. Wooten, and J. D. Struthers.....	340	Nitro Group in, Semimicro Test for. W. M. Hearon and R. G. Gustavson.....	352
Lubricating Oils, Viscosity Determination of. Harry Levin.....	147	Oxygen Determination in, by Hydrogenation. Paul Goodloe and J. C. W. Frazer.....	223
Manganese Determination in Plants and Soil by Colorimetric Method. C. P. Sideris.....	445	Oxygen Microdetermination in, by Hydrogenation. W. R. Kirner... Sulfur Determination in. William Saschek.....	535
Mellitic Acid Determination in Clover. W. L. Roberts and K. P. Link.....	438	Organic Finishes. See Paint.	491
Microgram Samples, Qualitative Analysis of. General Technic. A. A. Benedetti-Pichler.....	483	Osmium. See Platinum Metals.	
Nicotine Determination by Silicotungstic Acid Method. J. R. Spies.....	46	Osmoscope Method. See Odor.	
Nitro Group in Organic Compounds, Semimicro Test. W. M. Hearon and R. G. Gustavson.....	352	Oxidizing Agent, Sodium Chlorite in Volumetric Analysis. D. T. Jackson and J. L. Parsons. (Correspondence, G. R. Levi; Parsons, 250).....	14
Nitrogen:		OXYGEN:	
Analysis in Pyrimidines. D. F. Hayman and Sol Adler.....	197	Determination in Organic Compounds by Hydrogenation. Paul Goodloe and J. C. W. Frazer.....	223
Determination with Air-Free Carbon Dioxide. Fritz Breuer.....	354	Determination of Small Quantities of, in Gases and Liquids. I. J. W. MacHattie and J. E. Maconachie.....	364
Determination in Refractory Substances. J. R. Spies and T. H. Harris.....	304	Microdetermination in Organic Substances by Hydrogenation. W. R. Kirner.....	535
Oxygen Determination in Organic Substances by Hydrogenation. W. R. Kirner.....	535	Oxyquinone Derivative Solutions, Barium, Sulfur, and Sulfate Determinations by. S. J. Kochor.....	331
Paper as Medium for Analytical Reactions. I. Improvements in Spot Test Technic. B. L. Clarke and H. W. Hermance.....	292	Ozonizer for Laboratory. W. Sheehan and W. Carmody.....	8
Pigment Analysis in Fossae of Incisions of Chinese Oracle Bones. A. A. Benedetti-Pichler.....	149		
Potassium Determination by Colorimetric Method. C. P. Sideris... Pycnometric Analysis, New Method in. W. W. Russell.....	592	PAINT:	
Section on, Started in 1937.....	1	Organic Finishes, Distensibility Measurement of. A. E. Schuh and H. C. Theuerer.....	9
Selenium Group of Noyes and Bray Analyzed. A. A. Benedetti-Pichler and J. R. Rachele.....	589	Test Films of Shellac and Other Finishes Produced Uniformly. P. F. Bruins.....	376
Sulfate Determination by Volumetric Chromate Method. G. G. Manoy and P. L. Kirk.....	198	Thinner, Kauri Butanol Test for Solvent Power of. II. E. L. Baldeschwieler, M. D. Morgan, and W. J. Troeller.....	540
Sulfur Determination:		Vehicle Films, Preparation of, Free of Supporting Foundation. E. H. Bayer and L. Kampf.....	49
in Hydrocarbons by Modified Lamp Method. Victor Zahn.....	543	Palladium, Colloidal, in Reagent with Sodium Protobinate for Hydrogen Determination in Gas Mixtures. D. T. Bonney with W. J. Huff.....	157
in Organic Compounds. William Saschek.....	491	(See also Platinum Metals.)	
in Refined Kerosenes by Modified Lamp Method. Edward Field and F. H. Dempster.....	547	Paper as Medium for Analytical Reactions. I. Improvements in Spot Test Technic. B. L. Clarke and H. W. Hermance.....	292
Zinc Determination by Spectrographic and Chemical Methods. L. H. Rogers and O. E. Gall.....	42	PARTICLE SIZE:	
Mineral Oil. See Petroleum.		Average Diameter of Particles Just Passing 325-Mesh Sieve. S. S. Fritts.....	180
Moisture. See Water.		Distribution Measured by Optical Methods. H. E. Schweyer.....	211
Molecular Distillation. See Distillation.		of Rubber Pigments Measured. D. L. Gamble and C. E. Barnett.....	310
Morphine, Extraction of Minute Amounts with Pyrogallol. C. E. Morgan.....	383	Perchloric Acid, Chromium Determination in Ferrocchrome by Phosphoric Acid and Mixed Sulfuric and. G. F. Smith and C. A. Getz... Peroxide, Vanadium Determination by. E. R. Wright with M. G. Mellon.....	378
			375
2-NAPHTHYLAMINE Determination in Food Dyes. O. L. Evenson, J. A. Kime, and S. S. Forrest.....	74	PETROLEUM:	
Neoprene. See Rubber, Synthetic.		Fractions, Light, Analysis of. S. S. Kurtz, Jr., and C. E. Headington.....	21
Neutralization, Diphenylguanidine as Standard in. W. M. Thornton, Jr., and C. L. Christ.....	339	Fractions, Physical and Chemical Properties of. H. T. Rall. (Correction).....	222
Nickel Determination by Spot Test. Herman Yagoda.....	79	Insulating Oil, Chemical Changes Associated with Oxidation. R. N. Evans and J. E. Davenport.....	321
Nicotine Determination by Silicotungstic Acid Micromethod. J. R. Spies.....	46	Mineral Oil Solutions, Arsenic Determination in. J. B. Lewis and E. L. Baldeschwieler.....	405
Nitro Group in Organic Compounds, Semimicro Qualitative Test. W. M. Hearon and R. G. Gustavson.....	352	Oils, Phosphorus Determination in. Paul Goodloe.....	527
NITROGEN:		Products, Dark, Determining Aniline Point of. Leon Donn.....	202
Determination in Presence of Carbon. C. T. Gayley.....	422	(See also Asphalt, Distillation, Gasoline, Hydrocarbons, and Lubricating Oil.)	
Determination in Water. N. W. Rakestraw and V. M. Emmel....	344	o-Phenanthroline Method for Iron Determination. L. G. Saywell and B. B. Cunningham.....	67
Dumas Microdetermination:		Phosphates, Determination of Primary, in Presence of Ortho. H. V. Tartar, I. S. Colman, and L. L. Kretschmar.....	384
with Air-Free Carbon Dioxide. Fritz Breuer.....	354	Phosphoric Acid, Chromium Determined in Ferrocchrome by, with Mixed Perchloric and Sulfuric Acids. G. F. Smith and C. A. Getz... (See also Kjeldahl Method.)	378
Carbon Dioxide Generator for. E. B. Hershberg and G. W. Wellwood.....	303	PHOSPHORUS:	
in Pyrimidines. D. F. Hayman and Sol Adler.....	197	Analysis of Crude Phosphorus and Sludges Containing Phosphorus. E. H. Brown, H. H. Morgan, and E. R. Rushton.....	524
in Refractory Substances. J. R. Spies and T. H. Harris.....	304	Determination:	
Storage of Carbon Dioxide from Dry Ice for. W. H. Hamill and J. A. Alicino.....	290	in Oils. Paul Goodloe.....	527
(See also Kjeldahl Method.)		by Photoelectric Method. C. W. Eddy and Floyd DeEds.....	12
Nitrous Acid, Aromatic Amines Titrated with. Joseph Phillips and Alexander Lowy.....	351	in Small Samples by Spectroscopic Method. D. T. Ewing, M. F. Wilson, and R. P. Hibbard.....	410
Nitrous Oxide in Gases, Microanalysis of. F. E. Blacet and D. H. Volman.....	44	Interference in Fluorine Determination. H. V. Churchill, R. W. Bridges, and R. J. Rowley.....	222
Norris and Fay Method. See Selenium.		Phosphotungstate Method for Vanadium. E. R. Wright with M. G. Mellon.....	251
Noyes and Bray Selenium Group. See Selenium.		PHOTOELECTRIC DETERMINATIONS:	
ODOR Concentration in Air-Conditioned Structures. Determination by Freezing-out and Osmoscope Method and Reduction by Activated Carbon. V. A. Gant and H. D. Shaw.....	16	Lead in Biological Material by Dithizone Method. D. M. Hubbard... Phosphorus. C. W. Eddy and Floyd DeEds.....	493
Odor Determination in Water, Apparatus for. W. B. Hart.....	243	Phosphorus in Oils. Paul Goodloe.....	527
OILS:		Starch Gelatinization Temperature. D. H. Cook and J. H. Axtmayer.....	226
Differentiation by Enzymic Hydrolysis. K. V. Giri and P. N. Bhargava.....	395	Sugars and Their Solutions Graded by Reflectance and Transmittancy. J. C. Keane and B. A. Brice.....	258
Fish:			
Cod-Liver, Vitamin A Content of. Comparison of Spectrophotometric and Chemical Methods. A. D. Holmes, Francis Tripp, and G. H. Satterfield.....	456		

Vitamin A in Oils. R. L. McFarlan, J. W. Reddie, and E. C. Merrill.....	324	SELENIUM:	
Piezometer Ring. C. P. Baker and A. J. Komich.....	533	Determination, Qualitative. H. A. Ljung.....	328
Pigments, Microanalysis of, in Fossae of Incisions of Chinese Oracle Bones. A. A. Benedetti-Pichler.....	149	Determination Volumetrically by Norris and Fay Method. W. C. Coleman and C. R. McCrosky.....	431
Pipet, Autobubblers. Milton Burton and T. W. Davis.....	139	Group of Noyes and Bray, Microanalysis of. A. A. Benedetti-Pichler and J. R. Rachele.....	589
PLANT MATERIAL:		Separation from Gold and Tellurium. J. Seath and F. E. Beamish.....	373
Fiber, Crude, Apparatus for Determining. C. E. Weakley, Jr., and T. B. Leith.....	194	Serum Protein. See Protein.	
Manganese in, Colorimetric Microdetermination. C. P. Sideris.....	445	Shellac Test Films, Uniform, Production of. P. F. Bruins.....	376
Respiratory Activity of. Determination of Carbon Dioxide in Air. J. G. Waugh.....	96	Silicate, Determination of Quartz in Presence of. W. R. Line and P. W. Aradine.....	60
Sugar Determination in. W. Z. Hassid.....	228	Silicate, Estimation of Potassium in. J. E. Gieseking and H. J. Snider.....	232
Zinc Microdetermination in. L. H. Rogers and O. E. Gall.....	42	Silicate Rocks, Copper, Zinc, and Lead Determination in. E. B. Sandell.....	464
Plasticity Measurements at High Temperatures, Apparatus for. H. K. Griffin and H. H. Storch.....	280	Silicon Determination in Aluminum and Aluminum Alloys. H. V. Churchill, R. W. Bridges, and M. F. Lee. (Correspondence, L. H. Callendar; Churchill, Bridges, and Lee, 533).....	201
PLATINUM:		Silicotic Acid Micromethod for Determining Nicotine. J. R. Spies.....	46
Crucibles, Support for. W. M. Thornton, Jr.....	95	SILVER:	
Determination. S. O. Thompson, F. E. Beamish, and M. Scott.....	420	Assay Bead for Analysis of Platinum Metals. F. E. Beamish and M. Scott.....	460
Determination, Spectrographic, by Constant-Pair Method. J. J. Manning and James Coull.....	28	Assay Beads, Surface Effects of Platinum Metals on. E. C. Forbes and F. E. Beamish.....	397
Metals:		Determination by Electrometric Method. H. Robinson and H. Hugg.....	565
Analysis by Silver Assay Bead. F. E. Beamish and M. Scott.....	460	Determination by Recovery of Minute Amounts from Solution. W. E. Caldwell and K. N. McLeod.....	530
Detection of. S. O. Thompson, F. E. Beamish, and M. Scott.....	420	Siphon Starting Device. T. W. Chandler.....	249
Gold Separation from. F. E. Beamish, J. J. Russell, and J. Seath.....	174	Soap Analysis and Sampling, Revised Standard Methods. F. W. Smither, R. E. Divine, C. P. Long, M. L. Sheely, H. P. Trevithick, and P. H. Walker.....	2
Osmium Determination in Presence of, by Lead Assay Button. J. J. Russell, F. E. Beamish, and J. Seath.....	475	Soap. Glycerol Titration with Dichromate by Electrometric Method. Procter & Gamble Company, Chemical Division.....	514
Surface Effects on Silver Assay Beads. E. C. Forbes and F. E. Beamish.....	397	Sodium Amalgam with Zinc, Analysis of. H. A. Liebhafsky.....	176
Pollucite. See Cesium Determination.		Sodium Determination by Uranyl Zinc Acetate Method. Removal of Phosphorus. O. R. Overman and O. F. Garrett.....	72
POTASSIUM:		Sodium Acetate Analysis. C. B. Hurd and William Fiedler, Jr.....	116
Determination by Trisodium Cobaltinitrite. L. V. Wilcox.....	136	Sodium Carbonate, Anhydrous, as Reference Standard in Acidimetry. G. F. Smith and G. F. Croad.....	141
Determination in Small Samples by Spectroscopic Method. D. T. Ewing, M. F. Wilson, and R. P. Hibbard.....	410	Sodium Chloride of High Purity, Determination of Sulfate, Calcium, and Magnesium in. A. C. Shuman and N. E. Berry.....	77
Estimation in Silicates and Soils. J. E. Gieseking and H. J. Snider.....	232	Sodium Chlorite as Volumetric Oxidizing Agent. D. T. Jackson and J. L. Parsons. (Correspondence, G. R. Levi; Parsons, 250).....	14
Microdetermination by Colorimetric Method. C. P. Sideris.....	145	SODIUM HYDROXIDE:	
Potassium Dichromate, Glycerol Titration with, by Electrometric Method. Procter & Gamble Company, Chemical Division.....	514	Carbonate Content of Oil Lye. J. E. S. Han.....	140
Potassium Hydroxide, Ester Saponification by, in Diethylene Glycol. C. E. Redemann and H. J. Lucas.....	521	Concentration Determined by Baumé Hydrometer Correction Table. John Griswold.....	388
Potassium Permanganate, Arsenious Oxide in Standardization of. H. A. Bright.....	577	Ester Saponification by, in Diethylene Glycol. C. E. Redemann and H. J. Lucas.....	521
PRESSURE APPARATUS:		Sulfur Content Estimated. Gustave Heinemann and H. W. Rahn.....	458
Manometer for Carbon and Hydrogen. W. H. Hamill.....	355	Sodium Protobinate-Palladium Reagent for Hydrogen Determination in Gas Mixtures. D. T. Bonney with W. J. Huff.....	157
Manometer, Sloping. Milton Burton.....	335	Sodium Thiosulfate, Stability of. V. K. La Mer and H. M. Tomlinson.....	588
Piezometer Ring. C. P. Baker and A. J. Komich.....	533	Soil, Manganese in, Colorimetric Microdetermination. C. P. Sideris.....	445
Regulator for Vacuum Distillation. R. L. Emerson and R. B. Woodward.....	347	Soil, Potassium in, Estimation of. J. E. Gieseking and H. J. Snider.....	232
<i>n</i> -Propylarsonic Acid, Zirconium Determination in Steels by. H. H. Geist and G. C. Chandlee.....	169	Solvent Power, Kauri Butanol Microtest for. II. E. L. Balde-schwiler, M. D. Morgan, and W. J. Troeller.....	540
Protein Dialysis. F. W. Bernhart, L. E. Arnow, and A. C. Bratton.....	387	SPECTRUM ANALYSES:	
Protein Serum, Electrolyzer for. D. B. Roxburgh and M. H. Power.....	578	Bismuth in Biological Material. Jacob Cholak.....	26
Pulp, Moisture Determination in. A. J. Bailey.....	568	Boron Determination. R. K. Calfee and J. S. McHargue.....	288
Pycnometer, Self-Filling. G. F. Hennion.....	479	Carotenoids in Yellow Corn. G. L. Clark and J. L. Gring.....	271
Pycnometric Microanalysis, New Method in. W. W. Russell.....	592	in Colorimetry. M. G. Mellon.....	51
Pyrimidines, Nitrogen in, Microanalysis of. D. F. Hayman and Sol Adler.....	197	Iron in Ores. J. P. Mehlig.....	162
Pyrogallol, Morphine Extraction with. C. E. Morgan.....	383	Lead in Biological Materials. Jacob Cholak, D. M. Hubbard, R. R. McNary, and R. V. Story.....	488
QUARTZ Determination in Presence of Silicates. W. R. Line and P. W. Aradine.....	60	Metal in Small Samples. Calcium, Magnesium, Potassium, Manganese, Iron, and Phosphorus. D. T. Ewing, M. F. Wilson, and R. P. Hibbard.....	410
Quinhydrone Electrode. See Electrodes.		Particle Size and Size Distribution Measured by Scattering in the Near Infrared. D. L. Gamble and C. E. Barnett.....	310
RARE Earth Metals and Compounds. Thermal Analysis of Nitrate Mixtures. L. L. Quill, R. F. Robey, and Sam Seifter.....	389	Platinum Determination by Constant-Pair Method. J. J. Manning and James Coull.....	28
Rare Earth Salts, Precipitation and pH Studies with Glass Electrode. J. A. C. Bowles and H. M. Partridge.....	124	Quantitative, Logarithmic Sector Method in. H. A. Wilhelm.....	170
Reductor, Wood's Metal as. G. F. Smith and C. S. Wilcox.....	419	Vanadium by Peroxide Method. E. R. Wright with M. G. Mellon.....	375
Refractive Index of Strontium Nitrate. M. L. Yakowitz and P. S. Jorgensen.....	204	Vanadium by Phosphotungstate Method. E. R. Wright with M. G. Mellon.....	251
Refractometric Determination of Fat in Chocolate. Joseph Stanley.....	132	Vitamin A Content of Cod Liver Oil. A. D. Holmes, Francis Tripp, and G. H. Satterfield.....	456
Refractory Materials, Nitrogen Determination in. J. R. Spies and T. H. Harris.....	304	Zinc in Plants by Micromethod. L. H. Rogers and O. E. Gall.....	42
Resins, Alkyd, Glycerol and Ethylene Glycol Determination in Dilute Aqueous Solution. A. G. Hovey and T. S. Hodgins.....	509	Spot Test, Confined, Applications in Analytical Chemistry. Herman Yagoda.....	79
Respiration Activity of Leaves. Carbon Dioxide Determination in Air. J. G. Waugh.....	96	Spot Test Technic Improved. Paper as Medium for Analytical Reactions. I. B. L. Clarke and H. W. Hermance.....	292
Respiration. Carbon Monoxide Determination in Air. A. A. Christman, W. D. Block, and Julius Schultz.....	153	Starch Gelatinizing Temperature, Photoelectric Method for Determining. D. H. Cook and J. H. Axtmayer.....	226
Rhodium. See Platinum Metals.		Steel, Zirconium Determination in, with <i>n</i> -Propylarsonic Acid. H. H. Geist and G. C. Chandlee.....	169
Riboflavin. See Vitamin B.		STIRRERS:	
Rosin Saponification Number, Influence of Solvent on. W. C. Smith.....	469	Circulator, Noncorrodible, for Liquids. K. A. Freeman and P. J. Thompson.....	532
Rosin, Unsaponifiable Matter in, Determination of. I. E. Knapp.....	315	Gas-Tight, for Pasty Materials in Laboratory. A. H. Maude.....	196
Rotenone. See Insecticides.		Mercury Seal for. L. H. Briggs.....	168
RUBBER:		Sealed. Lionel Joseph.....	212
Carbon Black Determination in. E. W. Oldham and J. G. Harrison, Jr.....	278	Strontium Nitrate, Refractive Index Determination. M. L. Yakowitz and P. S. Jorgensen.....	204
Diarylamine Determination in. David Craig.....	56	SUGAR:	
Films, Thin, Preparation of. T. P. Sager.....	156	Analysis, Iodometric, Effect of Time on. H. S. Miller.....	37
Flexometer, Goodrich. E. T. Lessig.....	582	Determination in Plants. W. Z. Hassid.....	228
Latex:		Products, Determination of Ash Content by Sulfated Ash Method. R. Valdez and F. Camps-Camps.....	35
Examination. II. Chemical Testing Methods. D. E. Fowler.....	63	Products, Turbidity in. V. Color and Turbidity of Hard Refined Sugars. F. W. Zerban and Louis Sattler.....	229
Examination of, and of Compounds of. I. Physical Testing Methods. H. F. Jordan, P. D. Brass, and C. P. Roe.....	182	Raw, Absolute Turbidity of. F. W. Zerban and Louis Sattler.....	455
Testing Procedure, Physical. L. A. Wohler.....	117	Reducing, Electric Heater for Lane and Eynon Titration of. D. T. Englis and E. G. Lynn.....	314
Pigments. Particle Size and Size Distribution Measurements by Scattering in the Near Infrared. D. L. Gamble and C. E. Barnett.....	310	White, and Sugar Solutions, Photoelectric Grading by Reflectance and Transmittancy. J. C. Keane and B. A. Brice.....	258
Sulfur Determination in, by Tetrahydroxyquinone as Titration Indicator. R. T. Sheen, H. L. Kahler, and D. C. Cline.....	69	SULFATE DETERMINATION:	
Synthetic. Neoprene as Vibration Absorber. F. L. Yerzley.....	392	Areometric, as Barium Sulfate. Y. R. Damerell and P. Spremulli, by Microvolumetric Chromate Method. G. G. Manov and P. L. Kirk.....	123
Testing by Impact Machine. G. J. Albertoni.....	30	in Salt of High Purity. A. C. Shuman and N. E. Berry.....	77
Tires. Testing Tread Compounds by Air-Bomb Aging. E. W. Booth and D. J. Beaver.....	18	Volumetric. S. J. Kochor.....	331
as Vibration Absorber. F. L. Yerzley.....	392		
Vulcanization, Zinc Oxide Curing Rate in, T-50 Test for. G. S. Haslam and C. A. Klamann.....	552		
SALT. See Sodium Chloride.			
Salt Bridge for Electrometric Measurements. W. M. Bright and E. L. Miller.....	346		
Sawdust. See Wood.			

Sulfonated Oils. <i>See</i> Oils.		
<b>SULFUR:</b>		
Determination, Volumetric. S. J. Kocher.....	331	
Microdetermination:		
in Hydrocarbons by Modified Lamp Method. Victor Zahn.....	543	
in Organic Compounds. William Saschek.....	491	
in Refined Kerosenes by Modified Lamp Method. Edward Field and F. H. Dempster.....	547	
Reducible, Estimation of, in Sodium Hydroxide. Gustave Heine- mann and H. W. Rahn.....	458	
Sulfuric Acid, Chromium Determination in Ferrochrome by Phos- phoric Acid with Mixed Perchloric and. G. F. Smith and C. A. Getz.....	378	
Sulfuric Acid, Hydrocarbon Oil, Graphic Analysis by Extraction with. C. H. Fisher and Abner Eisner.....	366	
<b>TAR Acids and Bases, Determination by Extraction Methods. C. H. Fisher and Abner Eisner.....</b>	213	
Tartrates, Beryllium Separation in Presence of. H. S. Miller.....	221	
Tellurium Separation from Gold and Selenium. J. Seath and F. E. Beamish.....	373	
Thermoregulator. <i>See</i> Heat Apparatus.		
Thorium Nitrate, Fluorine Titration in Aqueous Solutions by. R. J. Rowley and H. V. Churchill.....	551	
Tin as Impurity in Lead, Separation and Determination of. B. L. Clarke, L. A. Wooten, and J. D. Struthers.....	349	
Tires. <i>See</i> Rubber Tires.		
<b>TITRATION:</b>		
of Acids in Oxidized Petroleum Oils by Electrometric Method. A. R. Rescorla, F. L. Carnahan, and M. R. Fenske.....	505	
of Amines, Aromatic, with Nitrous Acid. Joseph Phillips and Alexander Lowy.....	381	
Flask for Determining Saponification Value of Asphalts and As- phaltic Oils. J. E. Fratis and D. H. Condit.....	576	
of Fluorine, in Aqueous Solutions by Thorium Nitrate. R. J. Rowley and H. V. Churchill.....	551	
of Glycerol with Dichromate by Electrometric Method. Procter & Gamble Company, Chemical Division.....	514	
Tobacco Moisture Content, Determination of. R. M. Cone and L. H. Davis.....	219	
<i>o</i> -Toluidine Determination in Food Dyes. O. L. Evenson, J. A. Kime, and S. S. Forrest.....	74	
Transformer, Auto-, with Variable Voltage. D. H. Cook.....	248	
Trisodium Cobaltinitrite, Potassium Determination by. L. V. Wilcox. Tung Oil. <i>See</i> Oils.	136	
Turbidimetry. Particle-Size Distribution Measured by Optical Methods. H. E. Schwyer.....	211	
<b>URANYL Zinc Acetate Method for Sodium Determination. O. R. Overman and O. F. Garrett.....</b>	72	
Urea, Aluminum Determination by Precipitation with. H. H. Willard and N. K. Tang.....	357	
<b>VANADIUM Determination by Peroxide Method. E. R. Wright with M. G. Mellon.....</b>	375	
Vanadium Determination by Phosphotungstate Method. E. R. Wright with M. G. Mellon.....	251	
Vanilla Extract, Coumarin Determination in. I. J. Duncan and R. B. Dustman.....	416	
Vapor Pressure, Low, Apparatus for Direct Determination of. K. C. D. Hickman, J. C. Hecker, and N. D. Embree.....	264	
Varnish. <i>See</i> Paint.		
Viscosity Measurement by Suspended Level. Leo Ubbelohde. (Cor- rection, 418).....	85	
<b>VITAMINS:</b>		
A in Cod Liver Oil. Comparison of Spectrophotometric and Chemi- cal Methods. A. D. Holmes, Francis Tripp, and G. H. Satter- field.....	456	
A in Oils Measured by Photoelectric Method. R. L. McFarlan, J. W. Reddie, and E. C. Merrill.....	324	
B <sub>2</sub> (Riboflavin or Lactoflavin), Estimation by Fluorescent Method. S. M. Weisberg and I. Levin.....	523	
E, Biological Assay of, Application to Wheat Germ and Wheat Germ Oil. L. S. Palmer.....	427	
<b>WASTE. <i>See</i> Farm Waste.</b>		
<b>WATER:</b>		
Boiler Compound, Feeding Device for. J. L. Smith.....	330	
Boiler Foaming and Priming, Electrometric Measurement of. Richard Ulmer.....	172	
Moisture Determination by Distillation. H. N. Calderwood and R. J. Piechowski.....	520	
Moisture Tester, Rapid. Egbert Freyer.....	434	
Odor Determination in, Apparatus for. W. B. Hart.....	243	
Sea, Nitrogen Determination in. N. W. Rakestraw and V. M. Emmel.....	344	
Weights, Calibration of. F. H. Hurley, Jr.....	239	
Wheat Germ, Biological Assay of Vitamin E from. L. S. Palmer....	427	
Whisky. <i>See</i> Beverages, Alcoholic.		
White Metals. <i>See</i> Metals.		
Wine. <i>See</i> Beverages, Alcoholic.		
Wood Chips, Sawdust, and Pulp, Moisture Determination in. A. J. Bailey.....	568	
Wood Pretreatment with Hot Dilute Acid. Effect on Lignin Values. W. E. Cohen and E. E. Harris.....	234	
Wood's Metal. <i>See</i> Alloys.		
<b>ZINC:</b>		
Amalgam with Sodium, Analysis of. H. A. Liebhafsky.....	176	
Determination in Silicate Rocks. E. B. Sandell.....	464	
Electrodeposition from Acid Citrate Solutions. R. Winchester and L. F. Yntema.....	254	
Estimation in Small Amounts by Dithizone Method. P. L. Hib- bard.....	127	
Microdetermination in Plants by Spectrographic and Chemical Methods. L. H. Rogers and O. E. Gall.....	42	
Ores of Lead and, Determination of Copper and Bismuth in. J. J. Lurie and L. B. Ginsburg.....	424	
Zinc Oxides in Rubber Compounds, T-50 Test for. G. S. Haslam and C. A. Klamann.....	552	
Zirconium Determination by Arsenate Method. W. C. Schumb and E. J. Nolan. (Addendum, 562).....	371	
Zirconium Determination in Steels with <i>n</i> -Propylarsonic Acid. H. H. Geist and G. C. Chandlee.....	169	