

SUBJECT INDEX TO VOLUME 22

- Absorption, percutaneous, and role of skin appendages, 523
- Acacia gum*. See Gums.
- Acne, and functional disturbances of sebaceous glands, 783
- Aerosols, antiperspirants, physical behavior of aluminum chlorhydroxide suspensions for, 153
- cosmetic, determination of particle size distribution of, using Cascade Impactor and fluorometric and weight-by-difference methods, 867
- encapsulated perfumes in, 655
- hair sprays, application of semi- and wholly synthetic polymers in, 27
- Aluminum chlorhydroxide suspensions, for aerosol formulation, physical behavior, 153
- Amination of carene, 249
- Ammonium bisulfite, effect of, as reducing agent on fingernail keratin, 571
- Ammonium thioglycolate, effect of, as reducing agent on fingernail keratin, 571
- Anosmia, chiral, in study of odor and optical activity, 15
- Antibacterial soap, effect on microflora of skin, 369
- Antiperspirants, aerosol, physical behavior of aluminum chlorhydroxide suspensions for, 153
- Assimilation of selected cosmetic ingredients by microorganisms, 851
- Biosynthesis of terpenoid essential oils, 231
- Bleaching of human hair, chemical aspects, 339
- Bubbles, gas, mechanisms and control of, in cosmetics, 323
- Caranamines, caranols, and caranones, synthesis of, 249
- Carcinogens, and testing of new compounds for long-term toxicity, 825
- Carene, hydrogenation, hydroboration, pyrolysis, amination, oxidation, and photochemical isomerization of, 249
- Cellulose ethers, application in cosmetic gels, creams, and aerosol hair sprays, 27
- Chemical aspects, of bleaching human hair, 339
- Chemical structure, of emollients, correlation to their skin feel, 635
- of human hair, influence of hydrogen peroxide, 795
- of substrate, relationship between microbial assimilation and, 851
- Cholesterols, epidermogenic, importance in prevention of desiccation of skin, 769
- ethoxy, isolation from synthetic mixtures by laminar chromatography, 201
- Chromatography, gas-liquid, analysis of odoriferous vapors, 3
- ion-exchange, in study of influence of hydrogen peroxide on chemical structure of human hair, 795
- laminar, for isolation of individual ethoxy cholesterols from synthetic mixtures, 201
- molecular-sieve, in study of molecular weight distribution and course of degradations of *Acacia* gums, 61
- Cleaning efficacy of dentifrices, on extrinsic tooth stains, scoring system for measuring, 457
- Colloids, polymer microcrystals as new compositions for cosmetics, 561
- Color, measurement of, in instrumental study of optical characteristics of nacreous and interference pigments, 161
- of skin, *in vivo* measurement of, by reflectance spectrophotometry and visual colorimetry, 725
- Colorimetry, visual, for measurement of skin color *in vivo*, 725
- Comedo, human, study of internal structure by transmission scanning electron microscopy, 477
- Consumer research, use of, to increase research and development profitability, 549
- Cosmetics, aerosol, determination of particle size distribution of, using Cascade Impactor and fluorometric and weight-by-difference methods, 867
- application of guar gum in, 43
- application of semi- and wholly synthetic polymers in gels, creams, and aerosol hair sprays, 27
- assimilation by microorganisms of ingredients used in, 851
- attempts to determine experimentally oil components in, 303
- chemistry, interdependence with dermatology and pharmacology, in development of selected topical preparations, 315
- colloidal polymer microcrystals as new compositions for, 561

- dermatological protective agents, experimental damage of skin surface as model for testing of, 757
- effect on rate of transepidermal moisture loss, 361
- emollients, correlation of skin feel of, to chemical structure, 635
- fast analysis of trace amounts of lead in, by atomic absorption spectrophotometry, 589
- mechanisms and control of gas bubble formation in, 323
- problems of predictive testing for safety evaluation of, 349
- and testing of new compounds for long-term toxicity, 825
- trends in pressed powder technology for compact face powder, blusher, eyeliner, eyebrow, eyeshadow, and rouge, 599
- Creams, application of semi- and wholly synthetic polymers in, 27
- Cuticle, physicochemical properties of, and correlation to structure of hair, 839
- Cystine, in fingernails, effect of reducing agents on, 571
 - in hair, electron histochemical demonstration of distribution of, 477
- Dandruff, model system for investigation of, 187
- Dentifrices, effect on extrinsic tooth stains, scoring system for measurement of, 457
- Dermatology, and cosmetic-type protective agents, experimental damage of skin surface as model for testing of, 757
 - interdependence with cosmetic chemistry and pharmacology, in development of selected topical preparations, 315
- Desiccation of skin, origin, prevention, and therapy of, 769
- Design, experimental, in statistician's approach to sensory testing, 211
- Detergents, containing surfactants, comparison of predictive irritation tests with, on human and animal skin, 411
 - nonionic, in study of water absorption properties of lanolin, 421
 - thermal disorder in, and interaction with water, 505
- Dibutyl phthalate, containing linalol and ionone, in gas-liquid chromatographic studies of equilibrium in analysis of odoriferous vapors, 3
- Differentiative behavior of germinal cells of epidermis, study by transplantation of skin to unnatural sites, 109
- Disulfide bonds, oxidative degradation of, in bleaching human hair, 339
- Dithiothreitol, effect of, as reducing agent on fingernail keratin, 571
- Drugs, effects of surfactants and molecules on rates of photochemical reactions of, 83
- Dyes, anionic, reaction of Orange II with keratin fibers containing synthetic polymer, 579
- effects of surfactants and molecules on rates of photochemical reactions of, 83
- for hair, purification of nitro intermediates used in, 139
- semipermanent, indophenol and indamine, for coloring human hair, 379
- Eczema, caused by desiccation of skin, 769
 - and functional disturbances of sebaceous glands, 783
- Elasticity of human hair, light radiation effects, 667
- Electrophoresis, in investigations on esterases of human skin surface, 777
- Electrostatics, as basis for ionic reactions of keratin fibers containing synthetic polymer, 579
- Emollients, correlation of skin feel of, to their chemical structure, 635
- Emulsions, conceptual clarification of terms used to describe behavior of, 815
 - water-in-oil, use in therapy for desiccated skin, 769
- Encapsulated perfumes in aerosol products, 655
- Entrainment, external, of gas bubbles, mechanisms and control of, 323
- Equilibrium studies in analysis of odoriferous vapors, 3
- Essential oils. See Oils.
- Esterases of human skin surface, investigations on, 777
- Ethoxy cholesterols, isolation from synthetic mixtures by laminar chromatography, 201
- Extension properties, wet load, of hair fibers containing synthetic polymers, changes after reaction with metal salts, 179
- Extraction of hair lipid using diethyl ether, methylene chloride, and ethanol, 681
- Fatty acids, liberation of, in model system for dandruff investigation, 187
- Fatty chain substances, thermal disorder in, and interaction with water, 505
- Fibers, human hair, containing synthetic polymer, reactions of metal salts with, 179
- Fingernails, effect of reducing agents on keratin of, 571
- Fluorometric and weight-by-difference methods for determining particle size distribution of aerosol cosmetics using Cascade Impactor, 867
- Follicles, hair, dermal papilla of, influence on development and growth of hair, 741
 - hair, of guinea pig, in studies of hair growth rate, 701
 - hair, influence on percutaneous absorption, 523
- Formulations for pressed powder cosmetics, 599
- Fragrances. See Perfumes.

- Gamma radiation for product sterilization, 711
- Gas bubble formation in cosmetics, mechanisms and control of, 323
- Gels, application of semi- and wholly synthetic polymers in, 27
- Generation, internal, of gas bubbles, mechanisms and control of, 323
- Goniospectrophotometer, in study of optical characteristics of nacreous and interference pigments, 161
- Grafting of skin, heterotopic and other, to unnatural sites, for study of its regional differences, 109
- Gums, *Acacia*, recent advances in chemistry of, 61
- guar, sources, chemistry, physical properties, uses, and applications of, 43
- natural, displacement of, by semi- and wholly synthetic polymers, 27
- Guinea pig, hair follicle of, in studies of hair growth rate, 701
- model system for investigation of dandruff on, 187
- Hair, chemical aspects of bleaching of, 339
- coloring of, with semipermanent dyes, 379
- containing synthetic polymer, reactions of metal salts with, 179
- development and growth of, influence of dermal papilla, 741
- dyes for, purification of nitro intermediates used in, 139
- elasticity and tensile properties of, light radiation effects, 667
- extraction of lipid from, 681
- fibers containing synthetic polymer, ionic reactions of, 579
- follicle of guinea pig in studies of hair growth rate, 701
- follicles, influence on percutaneous absorption, 523
- influence of hydrogen peroxide on chemical structure of, 795
- scanning electron microscopy of, 477
- structure of, and physicochemical properties of cuticle, 839
- virgin and treated, oscillating beam method for study of mechanical properties of, 401
- Hair sprays, aerosol, application of semi- and wholly synthetic polymers in, 27
- objective and subjective methods for evaluation of, 287
- Hazards to skin from radioactive contamination, 535
- Head space analysis and analysis of odoriferous vapors, 3
- Hexachlorophene and triclocarban mixture, labeled, in soap, for measurement of accumulation and persistence of antibacterial agents in human skin, 369
- Hydroboration of carene, 249
- Hydrogen peroxide, influence of, on chemical structure of human hair, 795
- Hydrogenation of carene, 249
- Impurities in hair dye intermediates, elimination of, 139
- Indamine dyes, for coloring human hair, 379
- Indophenol dyes, for coloring human hair, 379
- Interfacial tension, benzene/water, effects of ethoxy cholesterols on, 201
- Ionic reactions of keratin fibers containing synthetic polymer, 579
- Ionones and derivatives, chemistry, natural occurrence, and biological origin of, 439
- Irritation tests, predictive, with surfactants, comparison on human and animal skin, 411
- Keratin, fibers containing synthetic polymer, ionic reactions of, 579
- fingernail, effect of reducing agents on, 571
- in hair, and physicochemical properties of cuticle, 839
- human hair, oscillating beam method for determining elastic modulus and loss modulus in fibers of, 401
- Keratinase use in isolation of subcellular components from human epidermis, 95
- Lanolin, water absorption properties of, 421
- Lead in cosmetics, fast analysis of trace amounts by atomic absorption spectrophotometry, 589
- Light radiation, ultraviolet and sunlight, effects on elasticity and tensile properties of human hair, 667
- Lipids, extraction of, from hair clippings, 681
- mixture, and scalp organisms in model system for dandruff investigation, 187
- of skin surface, amount and composition of, 783
- thermal disorder in, and interaction with water, 505
- Macromolecules, effects on rates of photochemical reactions of dyes and drugs, 83
- Maleic anhydride and methyl vinyl ether copolymers, application in cosmetic gels, creams, and aerosol hair sprays, 27
- Manufacturing techniques for pressed powder cosmetics, 599
- Metal salts, reactions with human hair fibers containing synthetic polymer, 179
- Methyl vinyl ether and maleic anhydride copolymers, application in cosmetic gels, creams, and aerosol hair sprays, 27
- Microcrystals of polymers, colloidal, as new compositions for cosmetics, 561
- Microorganisms, assimilation of selected cosmetic ingredients by, 851
- Microscopy, electron, scanning, of hair, skin, and tooth surfaces; cystine distribution in hair; identification of *Pityrosporum ovale*; and examination of internal structure of human comedo, 477
- Moisture, transepidermal loss of, *in vivo* measurement of, 361

- Nitro intermediates in hair dyes, purification of, by recrystallization, 139
- Occlusive thickness of product in measurement *in vivo* of transepidermal moisture loss, 361
- Odors, gas-liquid chromatography of, 3 and optical activity, optical antipodes for olfactive testing, 15
- Oils, components in cosmetics, value for practical application, 303 essential, terpenoid, biosynthesis of, 231
- Optical activity, discrimination by human olfactory system of optical antipodes of odorous compounds, 15
- Optical characteristics of nacreous and interference pigments, instrumental study, 161
- Organisms on scalp, and lipid mixture, in model system for dandruff investigation, 187
- Oscillating beam method for study of mechanical properties of virgin and treated human hair fibers, 401
- Oxidation of carene, 249
- Papilla, dermal, of hair follicle, and development and growth of hair, 741
- Particles, size distribution, of aerosol cosmetics, determination using Cascade Impactor and fluorometric and weight-by-difference methods, 867
- Pearlescence, instrumental study of optical characteristics of nacreous and interference pigments, 161
- Penetration of agents in skin, biophysical factors affecting, 615
- Perfumes, encapsulated, in aerosol products, 655
- Permeability barrier of fetal skin, 119
- Phosphonium chloride, tetrakis(hydroxymethyl)-, effect of, as reducing agent on fingernail keratin, 571
- Photochemical isomerization of carene, 249
- Photochemical reactions involving dyes and drugs, influence of polymers and surfactants on rates of, 83
- Physicochemical properties of cuticle and correlation to structure of hair, 839
- Pigments, nacreous and interference, instrumental study of optical characteristics of, 161
- Plants, radiation, for sterilization of products, operation and process control, 711
- Polarography in study of influence of hydrogen peroxide on chemical structure of human hair, 795
- Polymers, colloidal, microcrystals of, as new compositions for cosmetics, 561 effects on rates of photochemical reactions of dyes and drugs, 83 evolution of, from natural to synthetic, 27 in hair sprays, objective and subjective methods for evaluation of, 287 synthetic, ionic reactions of keratin fibers containing, 579 synthetic, reactions of metal salts with human hair containing, 179
- Powders, pressed, trends in technology, 599
- Predictive testing for safety of cosmetics, problems involved, 349
- Pressing techniques for pressed powder cosmetics, 599
- Probability in statistician's approach to sensory testing, 211
- Product development, objective and subjective methods for evaluation of hair sprays, suitability of, 287
- Profitability of research and development, use of consumer research for increase of, 549
- Purification, by recrystallization of nitro intermediates for permanent hair colors, 139
- Pyrolysis of carene, 249
- Radiation, gamma, for product sterilization, 711 ultraviolet and sunlight, effects on elasticity and tensile properties of human hair, 667
- Radioactive contamination of skin, 535
- Radioactivity, in measurement of accumulation and persistence of antibacterial agents in human skin, 369
- Recrystallization, in purification of nitro intermediates for permanent hair colors, 139
- Reducing agents, effects of ammonium bisulfite, dithiothreitol, ammonium thioglycolate, and tetrakis(hydroxymethyl)phosphonium chloride on fingernail keratin, 571
- Research and development, use of consumer research to increase profitability of, 549
- Rheological ground states of semisolids, 487
- Rodents, transplantation of skin of, to unnatural sites, for study of its regional differences, 109
- Rose, analysis of odoriferous vapors of, 3
- Safety evaluation of toiletries and cosmetics, test procedures, 349
- Scalp, organisms, in model system for dandruff investigation, 187 yeast, *Pityrosporum ovale*, identification of, by scanning electron microscopy, 477
- Scoring system, for measurement of cleaning efficacy of dentifrices on extrinsic tooth stains, 457
- Sebaceous glands, esterase secretion by, 777 influence on percutaneous absorption, 523 physiology and pathophysiology of, 783
- Sebum, importance in prevention of desiccation of skin, 769
- Semisolids, evaluation of rheological ground states of, 487
- Sensory testing, statistician's approach, 211
- Skin, appendages, dermal-epidermal interactions in development and growth of, 741 appendages, role of, in percutaneous absorption, 523

- biophysical factors affecting penetration of agents into, 615
desiccation of, origin, prevention, and therapy of, 769
experimental damage of, for testing dermatological-cosmetic protective agents, 757
feel on, of emollients, correlation to chemical structure, 635
fetal, barrier development, ultrastructure, and sulfhydryl content of, 119
grafting of, to unnatural sites, for study of its regional differences, 109
human, accumulation and persistence of antibacterial agents in, 369
human, problems involved in isolation of subcellular components from epidermis, 95
human and animal, comparison of predictive irritation tests with surfactants on, 411
in vivo measurement of color of, by reflectance spectrophotometry and visual colorimetry, 725
in vivo measurement of loss of water from, 361
radioactive contamination of, 535
spreading capacity of oil components on, 303
surface, investigations on esterases of, 777
surface, scanning electron microscopy of, 477
surface, surface tension of sweat from, 809
swelling of, and influence of skin surface lipids, 783
Soap, antibacterial, effect on microflora of skin, 369
Society of Cosmetic Chemists, Great Britain, Committees for 1970-71, 2
Medal Lecture, 546
Obituary, R. H. Marriott, 548
Officers and Council for 1970-71, 1
Publication Prize, 547
Society of Cosmetic Chemists, U.S.A., IFF Award, 152
Literature Award, 560
Medal Award, 178
Officers for 1971, 108
Shaw Mudge Award, 138
Spectrophotometry, atomic absorption, for fast analysis of trace amount of lead in cosmetics, 589
reflectance, for measurement of skin color *in vivo*, 725
Spreading coefficient of oil components in cosmetics on water and on skin, 303
Stability and instability of emulsions, clarification of terms used to describe, 815
Stains, extrinsic, removal from teeth as measure of cleaning efficacy of dentifrices, 457
Statistical approach to sensory testing, 211
Sterilization of products, gamma radiation for, 711
Structure, fine, of fetal skin, 119
of hair, and physicochemical properties of cuticle, 839
Subcellular components, isolation of, from human epidermis, 95
Sulfhydryl content of fetal skin, 119
Sunlight radiation effects on elasticity and tensile properties of human hair, 667
Surface tension of thermally stimulated sweat, measurement of, 809
Surfactants, cationic, reaction of cetyl pyridinium chloride with keratin fibers containing synthetic polymer, 579
in detergents, comparison of predictive irritation tests with, on human and animal skin, 411
effects on rates of photochemical reactions of dyes and drugs, 83
Suspensions of aluminum chlorhydroxide, for aerosol formulations, physical behavior, 153
Sweat, eccrine and apocrine, measurement of surface tension of, 809
Sweat glands, influence on percutaneous absorption, 523
Synthesis of caranols, caranones, caranamines and their rearrangement products, 249
Teeth, effect of dentifrices on extrinsic stains from, 457
scanning electron microscopy of abrasions on surface of, 477
Tensile properties of human hair, light radiation effects, 667
Terminology used to describe emulsion behavior, conceptual clarification of, 815
Terpenoids, mono-, and sesqui-, biosynthesis of, 231
Testing of new compounds for long-term toxicity, factors affecting, 825
Thermal disorder in lipids and detergents; interaction with water, 505
Thyme, analysis of odoriferous vapors of, 3
Topical preparations, dermatological and cosmetic aspects in development of, 315
Toxicity, chronic, testing of new compounds for, 825
Triclocarban and hexachlorophene mixture, labeled, in soap, for measurement of accumulation and persistence of antibacterial agents in human skin, 369
Ultraviolet light radiation effects on elasticity and tensile properties of human hair, 667
Vapors, odoriferous, gas-liquid chromatographic analysis of, 3
Water, absorption of, by lanolin, 421
interaction with, of lipids and detergents, 505
Weight-by-difference and fluorometric methods for determining particle size distribution of aerosol cosmetics using Cascade Impactor, 867
Wool wax alcohols, properties of ethoxy condensates of, 201