No. 1  Basic Sciences
Formic Acid in Human Single-Site Resting Plaque – Quantitative and Qualitative Aspects
Distler, W.; Kröncke, A  1
Studies of the Inhibitory Action of Intense Sweeteners on Oral Microorganisms Relating to Dental Health
Grenby, T.H.; Saldanha, M.G  7
Inorganic Phosphate Assay with the Ascorbic Acid or Stannous Chloride Method: Influence of Fluoride
Linden, A.H.I.M. v.d.; Meiring, H.D.; Bosch, J.J. ten; Arends, J  17
Experimental Evidence for a Gradient in the Solubility and in the Rate of Dissolution of Human Enamel
Theuns, H.M.; Driessens, F.C.M.; Dijk, J.W.E. van; Groeneveld, A  24
A Scanning Electron Microscope Study of Artificial Caries Lesion Formation
Ingram, G.S.; Fejerskov, O  32
Studies on the Formation of Laminations within Artificial Caries-Like Lesions of Enamel
Sato, K.; Yamamoto, H  40
In vivo Remineralization of Artificial Enamel Lesions by a Fluoride Dentifrice or Mouth-rinse
Corpron, R.E.; More, F.G.; Clark, J.W.; Korytnicki, D.; Kowalski, C.J  48
On the Properties of Fluoride Solutions Used for Topical Treatment and Mouth Rinse
Larsen, M.J.; Jensen, S.J  56
Influence of Fluoridating Varnishes on Dentine in vitro
Scholtanus, J.D.; Schuthof, J.; Arends, J  65
Animal Studies
Caries Activity in Hamsters Prenatally Exposed to Fluoride (Short Communication)
Fitzgerald, D.B.; Fitzgerald, R.J  71
Clinical Science
Radiographic and Observed Tissue Changes in Approximal Carious Lesions at the Time of Operative Treatment
Thylstrup, A.; Bille, J.; Qvist, V  75
Regression of Approximal Carious Lesions Diagnosed from Serial Standardized Bitewing Radiographs (Short Communication)
Pitts, N.B  85

IV  Contents
Bilateral Dental Caries from the Individual Perspective: a Definition and a Statistical Test for Its Existence (Short Communication)
Boffà, J.; Shwartz, ML; Ash, A.; Pliskin, J.S.; Gröndahl, H.G  91

No. 2  Basic Sciences
Early Natural Subsurface Caries. A SEM Study of the Enamel Surface before and after
Clinical Science
Effect of Cheese on Experimental Caries in Human Subjects
Suva, M.F. de A.; Jenkins, G.N.; Burgess, R.C.; Sandham, H.J 263
Action of Fluoride on Initiation of Early Enamel Caries in vivo. A Microradiographical Investigation
Øgaard, B.; Arends, J.; Schuthof, J.; Rølla, G.; Ekstrand, J.; Oliveby, A 270
Effect of a Chalk-Based Toothpaste on pH Changes in Dental Plaque in vivo
Duke, S.A 278
Relationship between Enamel Fluoride Levels, Degree of Fluorosis and Caries Experience in Communities with a Nearly Optimal and a High Fluoride Level in the Drinking Water (Short Communication)
Grobler, S.R.; van Wyk, C.W.; Kotze, D 284
No. 4 Basic Sciences
Effect of Pulsed Low Energy Infrared Laser Irradiation on Artificial Caries-Like Lesion Formation
Nelson, D.G.A.; Shariati, M.; Glenu, R.; Shields, C.P.; Featherstone, J.D.B 289
Developmental and Metabolic Aspects of a Monobacterial Plaque of Streptococcus mutans C 67-1 Grown on Human Enamel Slabs in an Artificial Mouth Model. I. Plaque Data
Noorda, W.D.; van Montfort, A.M.A.P.; Purdell-Lewis, D.J.; Weerkamp, A.H 300
Developmental and Metabolic Aspects of a Monobacterial Plaque of Streptococcus mutans C 67-1 Grown on Human Enamel Slabs in an Artificial Mouth Model. II. Enamel Data
Noorda, W.D.; Purdell-Lewis, D.J.; van Montfort, A.M.A.P.; Weerkamp, A.H 308
Effect of Under- and Supersaturation with Respect to Some Apatites in Demineralizing Buffers on Artificial Carious Lesion Formation in Human Tooth Enamel
Theuns, H.M.; Driessens, F.C.M.; van Dijk, J.W.E 315
Unstable Behavior of Magnesium-Containing Hydroxyapatites
Okazaki, M.; Takahashi, J.; Kimura, H 324
Fluoride Uptake from an Anti-Calculus NaF Dentifrice in vitro (Short Communication)
White, D.J.; Faller, R.V 332
Inhibition of Enamel Demineralization by Albumin in vitro (Short Communication)
Arends, J.; Schuthof, J.; Christoffersen, J 337
Potentiometric Study of Dentine Permeability (Short Communication)
Santini, A 341
VI Contents
Cell-Free Glucosyltransferase in Saliva (Short Communication)
Scheie, A.A.; Rølla, G 344
Clinical Science
Enamel Fluoride, Dental Fluorosis and Dental Caries among Immigrants to and Permanent Residents of Five Danish Fluoride Areas
Larsen, M.J.; Kirkegaard, E.; Poulsen, S.; Fejerskov, O 349
A Scanning Acoustic Microscope Study of the Small Caries Lesion in Human Enamel
Peck, S.D.; Briggs, G.A.D 356
Further Development of a Computer-Aided Image Analysis Method of Quantifying Radiolucencies in Approximal Enamel
Pitts, N.B.; Renson, C.E 361
Enamel Changes in Two Low-Fluoride Areas of Kenya
Manji, F.; Baelum, V.; Fejerskov, O.; Gemert, W 371
Effect Induced by a Chalk-Based Toothpaste on the pH Changes of Plaque Challenged by a High Sugar Diet over an 8-Hour Period (Short Communication)
Duke, S.A 381
Erratum 384
No. 5 Basic Sciences
In situ Appliance for the Investigation of Enamel De- and Remineralisation. A Pilot Study
Creanor, S.L.; Strang, R.; Telfer, S.; MacDonald, L; Smith, M.J.; Stephen, K.W. ... 385
Microbiology and Acid/Anion Profiles of Enamel Surface Plaque from an in situ Caries Appliance
Microradiography and Electron Microprobe Analysis of Some Natural White and Brown Spot Enamel Lesions with and without Laminations
A Proposed Mechanism for the Effects of Saccharin on Glucose Metabolism by Streptococcus mutans
Brown, A.T.; Best, G.M 406
Fluoridation of Partially Demineralized Human Enamel in vivo. A Comparison of SIMS and Microdrill Fluoride Analysis (Short Communication)
Reintsema, H.; Lodding, A.; Arends, J 419
Development and Initial Testing of a Model for in vitro Formation of Pit and Fissure Caries (Short Communication)
Katz, S.; Park, K.K.; Stookey, G.K.; Schemehorn, B.R 424
pH Determination of APF Gels by an Iridium Electrode (Short Communication)
Pinzauti, S.; Papeschi, G.; La Porta, E 429
Isolation, Purification and Some Properties of a Potential Cariostatic Factor in Cocoa that Lowers Enamel Solubility (Short Communication)
’s-Gravenmade, E.J.; Jenkins, G.N 433
Effect of Fluoride on Diffusion of Calcium in Mucine: A Possible Mechanism Affecting Remineralization of Carious Enamel (Short Communication)
Alhaique, F.; Riccieri, F.M.; Santucci, E.; Riccioni, G 437
Contents VII
Animal Studies
Cariogenicity of Lactitol in Program-Fed Rats (Short Communication)
van der Hoeven, J.S 441
Clinical Science
Comparison of Xeroradiographs and Two Types of Film for Detecting Caries in Approximal Surfaces of Primary Teeth
White, S.C.; McMullin, K 444
An Evaluation of Agreement between Clinical and Radiographical Diagnosis of Approximal Carious Lesions
Ruiken, H.M.H.M.; Truin, G.J.; König, K.G.; Elvers, J.W.H 451
0.25% and 0.4% Amine Fluoride Gel for Weekly Topical Application. An in vivo Study on Human Dental Enamel
Goorhuis, J.; Purdell-Lewis, D.J 458
Effects on Artificial Enamel Lesions in vivo by Exposure to NaF Lozenges

Fluoride, Altitude and Dental Fluorosis

Manji, F.; Bælum, V.; Fejerskov, 0 473
No. 6 Basic Sciences
In vivo Colonization of Salivary Pellicle by Haemophilus, Actinomyces and Streptococcus Species

Liljemark, W.F.; Fenner, L.J.; Bloomquist, C.G 481
Nonnutritive Sweeteners as Inhibitors of Acid Formation by Oral Microorganisms

Ziesenitz, S.C.; Siebert, G 498
Effects of Chewing Sorbitol Gum and Paraffin on Human Interproximal Plaque pH

Jensen, M.E 503
Lesion Formation in Abraded Human Enamel. Influence of the Gradient in Solubility and the Degree of Saturation of Buffer Solutions on the Lesion Characteristics

Theuns, H.M.; Driessens, F.C.M.; van Dijk, J.W.E 510
Bioavailability of Fluoride from Some Health Food Products in Man

Trautner, K.; Einwag, J 518
Use of the Single-Section Technique in Caries Research (Short Communication)

ten Cate, J.M.; Exterkate, R.A.M 525
Influence of the Consumption Frequency of Filled Chocolate Products on the Demineralization of Human Enamel in vivo. A Microhardness and Microradiographic Investigation (Short Communication)

van Herpen, B.P.J.M.; Arends, J 529
Clinical Science
Bille, J.; Hesselgren, K.; Thylstrup, A 534
Forecasting Future Caries Prevalence from Data in a National Recording System
Heidmann, J.; Poulsen, S 543
Caries-Preventive Effect of Duraphat® Varnish Applications versus Fluoride Mouthrinses: 5-Year Data
Kirkegaard, E.; Petersen, G.; Poulsen, S.; Holm, S.A.; Heidmann, J 548

VIII Contents
Animal Studies
The Effect of Low Levels of Sodium Fluoride in Drinking Water on the Incidence of Dental Caries in Rats (Short Communication)
Spuller, R.L.; Beiraghi, S.; Rosen, S.; Beck, F.M 556
Erratum 558
Announcements
34th Annual ORCA Congress 1987 559
ORCA-Rolex Prize; ORCA Summer School 560
Acknowledgements 561
Author Index 563
Subject Index 566