Contents, Vol. 15, 1981

No.1 Original Paper

Binding of Salivary Aggregating Factors for Streptococcus mutans Concanavalin A and Fucose-Binding Protein
Mirth, D.B.; Miller, C.J.; Kingman, A.; Bowen, W.H 1

Factors Affecting the Adsorption of Salivary Acidic Proline-Rich Proteins to Hydroxyapatite
Bennick, A.; Cannon, M.; Madapallimattam, G 9

Regulation of Lactic Acid Production by Leptotrichia buccalis
Brown, A.T.; Gross, M.L 21

The Source of Infection in the Intrafamilial Transfer of Streptococcus mutans
Rogers, A.H. (Adelaide) 26

Relationship between Fluoride Resistance of Streptococcus mutans 6715 and Medium pH
Schuster, G.S.; Whitford, G.M.; Lankford, M.T. 32

A Semi-Quantitative Determination of Streptococcus mutans Using Its Adherent Ability in a Selective Medium
Matsukubo, T; Ohta, K.; Maki, Y.; Takeuchi, M.; Takazoe, I 40

Effect on Rat Caries of Endogenous and Exogenous Hydrogen Peroxide
Mühlmann, H.R.; Schmid, R.; Firestone, A.R 46

Influence of Carbohydrates on in vitro Lesion Production
Huang, C.T.; Little, M.F.; Johnson, R 54

Remineralization of Artificial Enamel Lesions in vitro. IV. Influence of Fluorides and Diphosphonates on Short- and Long-Term Remineralization
Cate, J.M. ten; Jongebloed, W.L.; Arends, J 60

Distribution of Magnesium in Mature Human Enamel
Robinson, C; Weatherell, J.A.; Hallsworth, A.S 70

Ca and P Distribution in Sound, Demineralised and Remineralised Human Surface Enamel
Wöltgens, J.H.M.; Bervoets, T.J.M.; Witjes, F.; Houwink, B 78

Bone Fluoride Concentrations after 16 Years of Drinking Water Fluoridation
Hefti, A.; Marthaler, T.M ; 85

Fluoride Deposition in Enamel from Monofluorophosphate Application
Grøn, P.; Caslavska, V 90

Fluoride Tablets and Salivary Fluoride Levels
McCall, D.; Stephen, K.W.; McNeel, S.G 98

Effect of Fluoridated Citrus Beverage on Dental Caries and on Fluoride Concentration in the Surface Enamel of Children’s Teeth
Gedalia, I.; Galon, H.; Rennert, A.; Biderco, I.; Mohr, I 103

Relative Rates of Progress of Artificial Carious Lesions in Bovine, Ovine and Human Enamel
Featherstone, J.D.B.; Mellberg, J.R 109

Announcement
Original Paper
The Effect of Diagnostic Criteria on the Sensitivity of Dental Epidemiological Data
Howat, A.P.; Holloway, P.J.; Brandt, R.S

IV
Contents
Dental Caries and Fluorosis in Breast-Fed and Bottle-Fed Children
Walton, J.L.; Messer, L.B.
124
Remineralization of Natural and Artificial Lesions in Human Dental Enamel in vitro. Effect of Calcium Concentration of the Calcifying Fluid (with 1 color plate)
Silverstone, L.M.; Wefel, J.S.; Zimmerman, B.F.; Clarkson, B.H.; Featherstone, M.J
138
Redistribution of Enamel Fluoride during White Spot Lesion Formation: an in vitro Study on Human Dental Enamel
Clarkson, B.H.; Wefel, J.S.; Silverstone, L.M
158
Oral Starch Degradation and Its Influence on Acid Production in Human Dental Plaque
Mörmann, J.E.; Mühlemann, H.R
166
Short Communication
Effect of Fluoridation on Lesion Depth and Microhardness Indentations of Artificial White Spot Lesions
Arends, J.; Schuthof, J
176
Abstracts
Abstracts of Papers Presented at the 27th ORCA Congress, July 17-19,1980, Marburg, FRG
179
No. 3
Original Paper
Pharmacokinetics of Fluoride Gels in Children and Adults
Ekstrand, J.; Koch, G.; Lindgren, L.E.; Petersson, L.G
213
Physicochemical Requirements for Rapid Remineralization of Early Carious Lesions
Featherstone, J.D.B.; Rodgers, B.E.; Smith, M.W
221
Cariostatic Effect of Daily Use of a Fluoride-Containing Lozenge Compared to Fortnightly Rinses with 0.2% Sodium Fluoride
Poulsen, S.; Gadegaard, E.; Mortensen, B
236
Dissolution of Hydroxyapatites Treated with Salivary Glycoproteins and Fluoride
Voegel, J.C.; Belcourt, A.; Gillmeth, S
243
Effect of Fluoride Varnishes and Nuva-Seal Resin Treatment on the Formation of Artificial Carious Lesions
Dérand, T; Petersson, L.G
250
Effects on Dental Caries Incidence of Frequent Ingestion of Small Amounts of Sugars and Stannous EDTA in Chewing Gum
Glass, R.L
256
Fermentation of L-Sorbose by Microorganisms of the Human Dental Plaque
Lohmann, D.; Gehring, F.; Karle, E.J
263
Erratum
272
No. 4
Original Paper
A Study on Accumulation and Release of Loosely Bound Fluoride on Enamel
Joost Larsen, M.; Lambrou, D.; Fejerskov, O.; Tachos, B 273

An Electron Microscope Study of Modifications to Defect Regions in Dental Enamel and
Synthetic Apatites
Featherstone, J.D.B.; Nelson, D.G.A.; McLean, J.D 278

Contents
Caries-Preventive Effects of Polycarboxylate Cement Containing Na^+PC\%F Sealed on
Occlusal Surfaces in Newly Erupted Permanent Molars
Sobue, S.; Okamoto, M.; Moriwaki, Y 289

Effect of Using Different Strontium Salts on Dental Caries in the Rat
Curzon, M.E.J.; Spector, P.C 296

Cariogenicity of Invert Sugar in Long-Term Rat Experiments
Birkhed, D.; Topitsoglou, V.; Edwardsson, S.; Frostell, G 302

Caries Prevalence in Norwegian Recruits 5-7 Years after Discontinuation of Supervised
Fluoride Toothbrushing Programmes
Haugejorden, O.; Riss, J 308

Pit, Fissure and Smooth Surface Caries of First and Second Permanent Molars in Urban
Nigerians
Akpata, E.S 318

Distribution of Caries in Different Tooth Surfaces in 7-Year-Old Children
Bimstein, E.; Eidelman, E.; Klein, H.; Chosack, A 324

A Comparison of the Sensitivity of Caries Diagnostic Criteria
Howat, A.P 331

Short Communication
Topical Effects of a Quaternary Ammonium Compound on Caries Incidence and Bacterial
Agglomerate
Firestone, A.R.; Schmid, R.; Mühlemann, H.R 338

No. 5
Original Paper
The Effect of Fluoride in Saliva on Remineralization of Dental Enamel in Humans
Lambrou, D.; Joost Larsen, M.; Fejerskov, O.; Tachos, B 341

The Histopathology of Enamel Caries in Fluorosed Deciduous Teeth
Kidd, E.A.M.; Thylstrup, A.; Fejerskov, O 346

Phosphate Diffusion in Whole Bovine Enamel at pH 7. II. Temperature, Time and
Concentration Dependency
Rooij, J.F. de; Arends, J 353

Diffusion of Monofluorophosphate in Whole Bovine Enamel at pH 7
Rooij, J.F. de; Arends, J.; Kolar, Z 363

Apatitic Fluoride Increase in Enamel from a Topical Treatment Involving Intermediate CaHP < \(\frac{1}{4}\)
2H2O Formation, an in vivo Study
Chow, L.C.; Guo, M.K.; Hsieh, C.C.; Hong, Y.C 369

Effect of Acetic, Lactic and other Organic Acids on the Formation of Artificial Carious Lesions
Featherstone, J.D.B.; Rodgers, B.E 377
Influence of Anatomical Site on Fluoride Levels in Rat Molars
Weatherell, J.A.; Robinson, C; Best, J.S  386
A Chemical and Histological Study of Artificial Caries in Human Dental Enamel in vitro
Ingram, G.S.; Silverstone, L.M  393
Fluoride in Gingival Crevicular Fluid and a New Method for Evaporative Water Loss Correction
Whitford, G.M.; Pashley, D.H.; Pearson, D.E  399
Total and Ionic Fluoride in Milk
Duff, E.J  406
A Survey of the Flora of Dental Plaque in Caries-Free People in New Zealand
Gallagher, I.H.C.; Fussell, S.J.; Hancock, E.M  409
VI Contents
Dental Caries and Streptococcus mutatis Prevalence in Cancer Patients with Irradiation-Induced Xerostomia: 1-13 Years after Radiotherapy
Keene, H.J.; Daly, T.; Brown, L.R.; Dreizen, S.; Drane, J.B.; Horton, I.M.; Handler, S.F.; Perkins, D.H  416
Microbial Studies on Plaque from Carious and Caries-Free Proximal Tooth Surfaces in a Population with High Caries Experience
Mikkelsen, L.; Børglum Jensen, S.; Jakobsen, J  428
Characterization of Dextran Glucosidase (1,6-α-D-Glucan Glucohydrolase) of Streptococcus mitis
Under, L.; Sund, M.-L  436
Secular Changes in Caries Prevalence in Two Massachusetts Towns
Glass, R.L  445
Short Communication
The Production of Artificial Caries-Like Lesions in Shark Enameloid in vitro
Clement, J.G.; Langdon, D.J.; Thistleton, A  451
No. 6
Original Paper
Fluoride Deposition in Enamel from Application of Sodium, Potassium or Ammonium Fluoride
Gron, P.; Caslavska, V  459
Effect of NaF, TiF4 and APF Solutions on Root Surfaces in vitro, with Special Reference to Uptake of F
Hals, E.; Tveit, A.B.; Tøtdal, B.; Isrenn, R  468
Solubility Behavior of CO3 Apatites in Relation to Crystallinity
Okazaki, M.; Moriwaki, Y.; Aoba, T; Doi, Y.; Takahashi, J.  477
Combined Effect of Iodine and Sodium Fluoride on Dental Caries in Rats and on Viability of Streptococcus mutatis in vitro
Caufield, P.W  484
Glucose Incorporation by Human Dental Plaque Bacteria
Roberts, K.R.; Linder, L.; Sund, M.-L  492
Kinetics of Hydroxyapatite Dissolution during Incubation with Sucrose and Streptococcus mutatis
and Its Application to Cariogenetic Testing
Reynolds, E.C.; Riley, P.F.  501
Short Communications
Reversal of Fissure Caries in the Albino Rat by Sweetening Agents