Pharmacology, Therapeutics, & Toxicology/Neuroscience 875

1945

Removal of Tooth Stain by a Tartar Control Whitening Dentifrice. R.W. GERLACH,
J.J. SCOTT, J.A. RHODE, A.P. WHITE, AND D.I. WHITE (The Procter &
Gamble Co., Cincinnati, Ohio, USA).

Tobacco use, coffee, tea, or chewing, use of cholesterol and other practices have been reported to increase
oral hygiene requirements. No studies have been conducted to investigate the use of tartar control
removal of tooth color by whitening dentifrices. To this purpose, 229 healthy adult volunteers were
enrolled in the study, and all were randomly assigned to receive a tartar control whitening
dentifrice or a control dentifrice, both containing fluoride and sodium fluoride. The study
concluded that while the experimental dentifrice was effective in removing tooth stain, it was not
significantly different from the control dentifrice. The results showed that the experimental
dentifrice was effective in removing tooth stain, but the control dentifrice was not significantly
different.

1946

Removal of Long-Standing Tooth Stain by a Tartar Control Whitening Dentifrice. D.P.
(The Procter & Gamble Co., Cincinnati, OH, USA).

Removal of long-standing tooth stain without exposing hard tissue abrasion may represent one of the
most serious challenges in dentistry. To overcome this challenge, a study was conducted to evaluate
the effectiveness of an experimental tartar control-based whitening dentifrice (Crystal
Effect Whitening) compared to a marketed tartar control dentifrice. A total of 408 subjects were
enrolled in the study, and the results showed that the experimental dentifrice was effective in
removing tooth stain, but the control dentifrice was not significantly different.

1949

Thioacetyle Levels in Mung Beans: Estimation Approaches by Diffuse Reflectance
Spectroscopy and Infrared Spectroscopy. J.A. DAROY, A.C. CHRISTY, R.I. HAO,
and H. ISAI (School of Dental and Department of Chemistry, University of
Washington, Seattle, WA, USA).

Pigment rapidly accumulates on tooth surfaces after plaque formation and may acquire cosmetically
unacceptable levels of stain. A 3-month clinical trial was conducted to evaluate the prevention of
plaque formation on an experimental tartar control-based whitening dentifrice, compared to the
regular control dentifrice. The results showed that the experimental dentifrice was effective in
preventing plaque formation, but the control dentifrice was not significantly different.

1950

The Importance of a Verified Reference Material for Testing Dentifrice Functionality.
B.R. SCHNEIDER, L. SARAI, C. CHRISTY, J. MENDELEF, J. QUEBAND, J.F.
VITTONE, and J.W. WHITE (The Procter & Gamble Co., Cincinnati, OH, USA).

For more than a quarter of a century, the ADA Radiopaque Dentifrice Method (Hofstra, JDR 1970) has been used to
determine the effectiveness of dentifrices. The Abrasivity Reference Material was used with the method, a
specific batch of calcium pyrophosphate prepared by Merck Company, St. Louis, Missouri. This is the
critical step in the method, which measures the abrasivity of dentifrices. The study concluded that
the abrasivity of dentifrices can be determined using the Abrasivity Reference Material.

1951

Development of Post-Emergence-Serve Herbicides After Experimental (G. ADELA, P.
DIONI, J. ANDREUS, and J. STEGERS. (Center for Environment and Plant
Protection, Allong University, Royal Dental College, University of
Aarhus, Denmark).

Post-in-bite retention has been suggested to replace the state of post-emergence-serve herbicides (PEH).
This study was designed to investigate the effects of various chewing gum formulations on the
development of post-emergent herbicides. Twelve healthy men (25-41 years old) without symptoms of EOG
and tobacco use/non-tobacco use participated in the study. Nine trials of 3 minutes repeated grinding from
tobacco, corn, or coffee and from two different chewing gums were used. The electronic microscope
(bioassay) activity of the right maxillary muscle during the lateral incisive was kept above 100% of the
control test with the use of visual feedback. The volume of visual feedback was increased up to 160
mm, and the force of visual feedback was increased from 3 to 5 times the maximum muscle
contraction. The subjects returned to the lab the three following days when PVT and MVC
measurements were taken. The results showed that the subjects were able to maintain the same
level of performance after the second measurement.

1952

Effect of Increased hardness on jaw movements and muscle activities during chewing of
food models. M.A. PETRONF, L. LASSAINTZ and A. WODA (Gepta Dentals

Food texture is known to influence several parameters of the masticatory process such as forces,
occupational activities, and jaw function. However, results obtained to date have been limited by the
lack of adequate reference to the mechanical food properties. This experiment was carried out to
identify what masticatory parameters may be used to determine the variations in chewing behavior/handled
by food texture. Electronic microspectroscopy of masticatory muscle (masseter and temporalis) and jaw
movements were performed in 15 young men with intact dentition. The results showed that
masticatory muscle forces, muscle activities, and jaw movements were significantly different when
chewing different food models.

1953

Sugars of dental significance: a review. F. JONES and M. JONES (Am J. Physiol.
1953:175:501-505)

Sugars such as xylose and trehalose are effective as non-cariogenic substitutes when used in place of
glucose or sucrose. Chewing gums containing sugars have been shown to affect acid production by
dental plaque. However, the exact mechanism of sugar action is not well understood. This study,
which is part of a larger project, investigated the effects of sugar on acid production and concluded
that sugars had no significant effect on acid production.