T. Muzycko, S. Shore and Jo Loboda

- 47 -THE EFFECT OF STRUCTURAL DIFFERENCES OF AMINE OXIDES ON THE FOAMING PROPERTIES OF SIMPLE SHAMPOO FORMULATIONS

R. N. Goodell

The foaming properties of a simple two component shampoo formula-tion are examined with respect to varying amine oxide structures. No solubilizers, pH effects have been examined. In the general formulae:

R-C=N R-R'-N сн-ĊH₂ -CH2---OH

R varies from Co-Cls saturated and unsaturated. R' may be absent, hydroxy propyl ether, or a branched alkyl group. X may be methyl or (C_2H_4-O) NH The performance of the Cls Cls straight chain amine oxide may be enhanced by preparing the corresponding imidazoline oxides or by in-creasing the ethoxylation on the tertiary nitrogen of the amine oxide. 48

ALCOHOL ETHER SULFATES IN SHAMPOOS

Henry Watanabe and W. L. Groves

Henry Watanabe and W. L. Groves Henry Watanabe and W. L. Groves Mono., di. and triethanolamine sulfates of several different molecular weight alcohol ether sulfates were formulated into shampoos. The ethylene oxide content of the alcohol ethoxylates varied from about 20 to 60%, although 40% was usual. The shampoo formulation was 20% active ether sulfate and 5% foam stabilizer. Lauric diethanol-amide, amine oxides and betaines were used as foam stabilizers. The shampoos were tested for quality and quantity of foam, viscosity and cloud point. Although no "hair effects" tests were run, a limited home use test was made. Alcohol ether sulfate shampoos are equal or superior to several popular commercial products on the basis of a lab foam test. They are comparable in foam to alcohol sulfates in similar formulations. Cloud points of these shampoos were generally good. Amine oxide foam stabilizers reduced the cloud point more than the amide or betaine. Viscosities of the shampoos were readily controllable. Although the choice of alkanolamine, alcohol molecular weight and degree of ethoxylation had some effect on these properties, none were highly critical; this allows considerable leeway in their selection. The home use tests assured us that these shampoos were not obviously deficient in the desired "hair effect" properties. The literature records that alcohol ether sulfates are preferred to alcohol sulfates for low skin and eye irritation. By varying the free oil (unsulfated ethoxylate) content and making

account ether sunates are preferred to account sunates for low skin and eye irritation. By varying the free oil (unsulfated ethoxylate) content and making the proper choice of ether sulfate and foam stabilizer, bright and clear liquid shampoos with viscosities from about 10 centipoise to over 50,000 centipoise were made The latter are essentially gels. Paste shampoos were also made from these ether sulfates.

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A NEW QUATERNARY AMMONIUM COMPOUND HAIR CONDITIONING AGENT

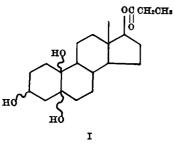
R. R. Egan and B. J. Hoffman

R. R. Egan and B. J. Hoffman Stearyl dimethyl benzyl ammonium chloride has long been the only quaternary ammonium compound used in hair rinses. The dialkyl dimethyl ammonium chlorides, because of their poor dispersibility in water at low temperature, could not be used, even though they are more highly substantive to the hair surface. Adogen 432-CG is a dialkyl dimethyl ammonium chloride which readily forms dispersions in cold water. Creme rinses prepared from this material give long-lasting hair conditioning with good wet comb through and manageability properties. An outstanding characteristic is the lack of a "greasy feel" as given by steryl dimethyl benzyl ammonium chloride.

- 50 -MASS SPECTRA OF POLYHYDROXY ESTRANES

S. G. Levine, C. Cordes, G. E. Van Lear and K. L. Rinehart, Jr.

S. G. Levine, C. Cordes, G. E. Van Lear and K. L. Rinehart, Jr. Although the mass spectral fragmentation behavior of monohydroxy steroids has been reported in detail in the chemical literature, similar studies of polyhydroxy steroids have not appeared, presumably because of thermal decomposition during indirect sample introduction. How-ever, direct inlet mass spectrometry allows one to investigate the fragmentation behavior of these important compounds while decreasing the chance of thermal decomposition. We have obtained the mass spectra of a number of stereoisomers of the 17-propionate ester of estrane-3,5,10,17-tetrol (I), of their 3-acetates, and of related 5,10-epoxy estranes. In the discussion, the fragmentation behavior of the various stereoisomers of the tetrols and their acetates are compared, as well as salient features in the spectra of the epoxide derivatives.



(Continued on page 366A)

Society of Cosmetic Chemists' Annual Seminar

The Society of Cosmetic Chemists holds its annual seminar at the Ambassador Hotel, 1300 N. State Parkway, Chicago, Ill., Sept. 21-22, 1967. Hyman Henkin of Curtis Industries, Inc., Seminar Program Committee Chairman, has announced the theme of the program, Color in Cosmetics.

To be considered at this meeting are the topics, "Physical and Chemical Aspects of Color," "Hair Color, Formulation and Evaluation," "Colored Products—General—Formula-tion and Evaluation," "Medical, Legal, Safety Aspects of Color."

• Industry Items

The San Francisco Bay area sales office of EMERY IN-DUSTRIES, INC., has been moved to 360 Pine St., San Francisco, Calif. 14104. The office, formerly located in Oakland, Calif., serves customers of the company's Fatty Acid and Organic Chemicals Divisions.

New address of the Society for Analytical Chemistry, The Analyst, Analytical Abstracts and Analytical Methods Committee will be: 9/10 Saville Row, London, W.1.

The BENDIX CORPORATION will consolidate its expanding activities in the fields of sonic cleaning, vacuum technology and scientific instruments at its Scientific Instruments Division in Cincinnati. The move will immediately transfer the Vacuum Division formerly in Rochester, N. Y., and the Instruments and Life Support Division in Davenport, Iowa.

