Classified Advertising

DEVELOPMENT CHEMISTS OR CHEMICAL ENGINEERS. Expansion creates need for creative, self-starting chemists and chemical engineers. Our never ending search for new industrial and edible products creates excellent opportunity for personal and professional growth.

B.S. or M.S. with 2–7 years experience in edible oil, fatty acid, or chemical specialty field. Assignments in Research and Development Laboratories will involve product and process development and technical service. Will include liaison with manufacturing and marketing.

If you want to associate with a dynamic, aggressive, diversified company, send your résumé and salary requirements to: Director of Personnel, Drew Chemical Corporation, 416 Division Street, Boonton, New Jersey, 07005.

CHEMIST WANTED . . .

. . . with chemical degree and 3–5 years of formulating, testing, and evaluation of soaps, detergents, cleaners, cosmetics. Midwest location. Salary commensurate with experience and education. Benefits include hospitalization, medical-surgical, life insurance, retirement plan. Submit resume and salary requirements to Box 454, American Oil Chemists' Society, 35 E. Wacker Drive, Chicago, Ill. 60601.

OPERATING FOREMAN FOR DETERGENT PLANT

Excellent opportunity to grow with reputable company; expanding detergent plant to manufacture a variety of dry and liquid detergents and health and beauty aid items. Experience in sulfonation, crutching, drying required with some packaging desirable. Small college town in Rochester, N.Y., area. Please send resume to

Personnel Department
The Great A&P Tea Company, Inc.
420 Lexington Avenue
New York, N.Y. 10017

Replies will be held in strictest confidence.

An equal opportunity employer

Lipid Research Fellowships Offered by St. Andrews Group

Vacancies exist for postgraduate students and postdoctoral fellows in the lipid research group led by Frank Gunstone in St. Andrews University (St. Andrews, Scotland). One of these vacancies arises from the return of R. G. Powell to the Northern Regional Laboratories (Peoria) after a one-year visit to St. Andrews. Other workers from the laboratory who have undertaken lipid research in the United States include L. J. Morris (Hormel Institute), R. J. Hamilton, (Baylor Medical Center, Houston), and W. W. Christie (Hormel Institute). Current work is concerned with acids of novel structure, glyceride studies, and the synthesis, properties, and reactions of polyethenoid acids.

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ble alkyl benzene sulfonate with 9 to 15 C atoms in the alkyl side chain and, as a detergency improving agent, 2-hydroxy-1-amino alkanes of the formula R—CHOH—CH_2NH_2, where R is an alkyl radical having from 4 to 18 C atoms. The detergency improving agent is present at a level of 0.3 to about 3.3% (by wt.) based on the amount of water soluble alkylbenzene sulfonate present.

QUATERNARY AMMONIUM-TERTIARY AMINE OXIDE COMPOSITIONS. J. C. Findlan *et al.* (Millmaster Onyx Corp.). *U.S. 3,296,145.* A germicidal agent consists essentially of (1) at least one tertiary amine oxide of the formula: R—N(→O)—R′R″ where R is an alkyl or alkenyl with 8 to 20 C atoms and R′ and R″ are lower alkyl or hydroxyalkyl groups, and (2) at least one germicidal quaternary ammonium compound having at least one long chain alkyl group of 8 to 22 C atoms attached to the quaternary nitrogen and having a phenol coefficient of at least 100 with respect to *Staphylococcus aureus* and *Salmonella typhosa* at 20C. The amine oxide and quaternary ammonium compound are present in the relative proportions of from 50:1 to 5:1 parts by weight. A method of simultaneously cleaning and sterilizing human tissue by application of the above described composition is also claimed.

CLEANER FOR FOOD RESIDUES. E. M. Gatza (Dow Chemical Co.). *U.S. 3,296,147.* A cleaning composition is claimed consisting of water, ammonia (NH_3 content from 0.05 to 10% by wt., based on the water), an alkali metal alkaline compound in an amount from 0.1 to 15% by wt., based on the water, and an aliphatic halo-hydrocarbon solvent with a molecular weight up to 150, the halogen being either chlorine or bromine and the solvent being present in an amount of 2 to 95% by volume, based on the water. The ammonia, alkaline compound, solvent and water all contribute to the cleaning properties of the resulting mixture.

BLEACHING, STERILIZING, DISINFECTING AND DETERGING COMPOSITIONS. M. M. Crutchfield and R. R. Irani (Monsanto Co.). *U.S. 3,297,578.* An improved bleaching and sterilizing composition consists essentially of a stable mixture of a chlorine-releasing agent and a sequestering agent selected from the group of compounds having the formula:

$$(HO_2)-P(O)-\overset{X\ \ Y}{\diagdown\ \diagup}C-(O)P-(OH)_2$$

where X is either hydrogen or a lower alkyl group and Y is either hydrogen, hydroxyl or a lower alkyl group with from 1 to 4 C atoms. Alkali metal salts, ammonium salts and amine salts of this sequestering agent can also be used. The chlorine-releasing agent and the sequestering agent are present in a ratio of 50:1 to 5,000:1 on a per cent available chlorine to weight of sequestering agent basis.

PROCESS FOR PREPARING A DETERGENT COMPOSITION CONTAINING SODIUM ALKANESULFONATE AND SOAP. J. K. Weil, A. J. Stirton, F. D. Smith and R. G. Bistline (U.S. Dep't. Agr.). *U.S. 3,297,579.* A process is described for the preparation of a detergent composition containing as essential active ingredients a sodium alkanesulfonate and a soap, with a ratio of alkanesulfonate to soap of from 2.4:1 to 2.8:1. The disodium salt of an α-sulfocarboxylic acid having the general formula $RCH_2XH(SO_3Na)COONa$, where R is a straight chain alkyl radical with 11, 13 or 15 C atoms, is mixed with sodium hydroxide in a ratio of from 2:1 to 2.5:1. The mixture is stirred and heated to fusion under a nitrogen atmosphere until the reaction is substantially complete, then cooled to below 100C and the excess alkali neutralized with an aqueous mineral acid such as sulfuric, hydrochloric or phosphoric acid. The neutralized reaction mixture is dried to give a dry detergent composition containing a sodium alkanesulfonate and sodium soap of the general formulas $RCH_2CH_2SO_3Na$ and RCOONa, respectively.

ALKYLBENZENE SULFONATE COLOR AND ODOR INHIBITION. J. B. Wilkes (Chevron Res. Co.). *U.S. 3,297,748.* An improvement is claimed in the process for producing a branched-chain monoalkylbenzene sulfonate detergent at a temperature in the range of 50 to 150F by sulfonating with oleum a branched-chain monoalkylbenzene hydrocarbon having from 9 to 18 C atoms in its alkyl chain. The improvement consists in conducting the sulfonation reaction in the presence of from 0.5 to 6.0% by weight, based on the weight of the alkylbenzene, of acetic acid and of a lower alkylbenzene represented by the formula: $C_6H_5-CR_1R_2H$ where R_1 and R_2 are methyl, ethyl or propyl groups. The branched-chain monoalkylbenzene sulfonates thus produced have improved color and odor characteristics.