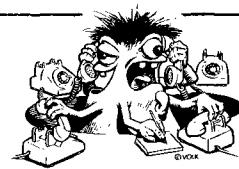


industry. In the chemical industry, emulsifying agents are used in polymerization processes. Third, the use of surfactants in the foodstuffs industry was dealt with, with particular emphasis on emulsification and improving solubility of hydrophobic substances. Alkylbenzene sulphonate is still

the number one attraction among surfactants because of its availability, its properties and its price. The portion of nonionics is steadily increasing due to the great variability of the molecular structure. Cationics and ampholytes are used as special products on a limited scale. ●

# SD&C Industry News



The Food and Drug Administration has found nitrosamines in some cosmetic products and is considering what action to take in view of studies that link nitrosamines to animal cancer.

In the Federal Register of April 10, the FDA said the potential hazard could be substantially reduced by reformulation to avoid use of nitrosating agents in products containing alkanolamines. Meanwhile, the agency asked for comments, scientific data or other information regarding nitrosamine contamination in cosmetics, specifically seeking toxicological data on *N*-nitrosodiethanolamine (NDELA), its penetration through human skin, and chemistry.

Carcinogenicity of NDELA has been established in two animal species, the FDA said, and other studies have indicated it penetrates the skin of live monkeys and "penetrates excised human skin from an aqueous vehicle." An analysis of 29 suspect cosmetics detected NDELA in 27 of the 29, at levels up to 48 ppm, the FDA said. A second study of 191 selected cosmetics showed 114 were free of NDELA.

"The most highly contaminated cosmetic products usually contained as ingredients both an alkanolamine, generally triethanolamine, and a nitrosating agent," the FDA said. Lower levels of contamination are more likely when the nitrosating agent is not an intentional ingredient, but a contaminant of a regular ingredient.

The FDA is continuing to study the identity, source and formation of nitrosamines, including NDELA, in cosmetics, as well as the potential risk to public health and the extent of human exposure to nitrosamines through cosmetics.

Nitrosamine-contaminated cosmetics could be considered adulterated and subject to regulatory action, the FDA said, but said it first wanted to see if voluntary industry action would be sufficient to eliminate the problem. ●

## Cosmetic, toiletry market reviewed

Cosmetic and toiletry raw materials sales in the United States are expected to rise approximately 16% between 1978 and 1982, according to a market study by Charles H. Kline & Co.

The report forecasts 1982 sales at \$810 million on a volume of 1.6 million pounds, compared to \$695 million in 1978 sales on a volume of 1.3 billion pounds.

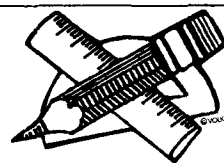
Kline said that more than 100 different products, classified into nine products groups, are purchased by more than 900 manufacturers of cosmetics and toiletries. Sixty per cent of the raw materials sold fall within three product groups—fragrances, surfactants, and organic commodities. Of the 100 raw material suppliers, the thirteen largest companies (with annual sales of \$15 million or more) account for 43% of total industry sales. In terms of physical volume, sales are expected to rise by 4.7% through 1982, Kline said, with surfactants increasing at a 6.6% annual rate.

The 570-page report is available from Kline & Co., 330 Passaic Ave., Fairfield, NJ.

TABLE I  
Estimated U.S. Consumption of Cosmetic and Toiletry  
Raw Materials by Product Type, 1978

Product type	\$ Million	% Of total
Fragrance compounds	\$170	24%
Surfactants	160	23
Organic commodities	90	13
Organic specialties	65	9
Inorganic chemicals	60	9
Fatty chemicals	55	8
Propellants	50	7
Biocides	25	4
Petroleum products	20	3
Total	\$695	100%

# SD&C Abstracts



EFFECT OF A SKIN CREAM CONTAINING THE SODIUM SALT OF PYRROLIDONE CARBOXYLIC ACID ON DRY AND FLAKY SKIN. J.D. Middleton and M.E. Roberts. *J. Soc. Cosmet. Chem.* 29(4), 201-5 (1978). Humectants added to skin creams can increase the moisture retention of isolated corneum and reduce the incidence of dry and flaky skin in vivo. Results are given of an investigation into the efficacy of a humectant, the sodium salt of pyrrolidone carboxylic acid (NaPCA), which occurs naturally in the corneum. A product containing 5% of NaPCA increased the water-holding capacity of isolated animal corneum.

PRECIPITATION OF INSOLUBLE SALTS ON FABRICS LAUNDERED IN

HARD WATER IN THE PRESENCE OF DIFFERENT ALKALIS AND BUILDERS. S.V. Vaeck, *Tenside Deterg.* 15(6), 286-90 (1978). Cotton and polyester-cotton fabrics were laundered 20 times in hard water at 85 C in the presence of an anionic surfactant and different concentrations of alkalis and sequestering agents. When normal alkalis and pyrophosphate were used, high levels of insoluble salt deposits were found. Sequestrants reduced the level of insoluble salt deposits to negligible values already at low concentrations. Neutral electrolytes also reduced the level of salt deposits. Tripolyphosphate caused increased levels of deposits at low concentrations and negligible values above 2 g/l. An aluminosilicate (Sasil) showed a similar behavior but the deposits level did not decrease below 1%. Distinct differences in the greying behavior were also observed. ●