

**Good News for Kids  
Who Hate Baths**

**W**HETHER SOAPS and shampoos damage the eyes of children could become an area of controversy.

Researchers at the Medical College of Georgia in Augusta are testing the long-term effects on the eyes of sodium lauryl sulfate, or SLS, an ingredient of many soaps and shampoos, until now, has been considered safe since no one has seen any obvious damage to human or animal eyes. "Due to the widespread use of such detergents where exposure to the eye may occur, any immediately dangerous situations should have been readily observable," Georgia ophthalmology professor told a meeting last month of the non-profit Research to Prevent Blindness organization.

But new, test-tube and animal experiments hint at potential problems. The experiments found that SLS is rapidly absorbed by eyes, particularly the eyes of young, growing animals. It is retained there in the eye for several days and causes some mysterious changes in certain proteins. And it delays the healing of wounds in the surface of the cornea.

"Our findings lead us to call for more judicious use of detergents such as SLS," by both manufacturers and consumers.

..... says, "This is particularly true when possible accidental exposure to SLS could occur in infants, where growth is occurring, and in any instance where a healing process occurs."

(d) *Extraction of non-lipid material from the stratum corneum* In 1952 Blank showed that the plasticity of stratum corneum was due to the presence of water, without which it would become dry and brittle. The work of Spier and Pascher (1957) identified a number of water-soluble and strongly hygroscopic substances in the stratum corneum (free amino acids, lactic, urocanic and pyrrolidone carboxylic acids, urea, ammonia and sugars) that were shown to be responsible for the binding of water in the stratum corneum (Blank and Shappirio, 1955; Spier and Schwartz, 1962). Jacobi (1959) collectively described these components as the "natural moisturizer factor". Middleton (1968) proposed that the mechanism of water binding involved these hygroscopic substances that were held within the stratum corneum cells by semi-permeable lipoprotein membranes, and that treatment of the skin with lipid solvents dissolved the lipids of the semi-permeable membranes, thus allowing the hygroscopic substances to be leached out and lost. Moreover, Middleton (1969) suggested that certain detergents (e.g. sodium lauryl sulphate) could dissolve these lipids and allow the intracellular hygroscopic substances to escape, with resultant loss of water-binding ability. Indeed, detergents such as sodium lauroyl isethionate, which removed less lipids from the corneum, also had markedly less effect upon water binding capacity than sodium lauryl sulphate.

Smeenk and Polano (1965) and Smeenk (1969) showed that when human forearm skin was washed with various synthetic detergent solutions in a "washing simulator" (Vermeer *et al.*, 1963), free amino acids, soluble and insoluble proteins (i.e. horny cells) were all present in the wash liquors, in greater amounts than with just water washes.

NITROSATING AGENTS

- 2-bromo-2-tropropane- 1,3-diol
- Cocoyl sarcosine
- Diethanolamine (DEA) plus any chemical listed
- Imidazolidinyl urea
- Formaldehyde
- Hydrolyzed animal protein
- Lauryl sarcosine
- Monethanolamine (MEA)
- Monethanolamine (MEA) plus any chemical
- Quatemium-7, 15, 31, 60, etc.
- Sodium lauryl (or laureth) sulfate
- Sodium methyl cocoyl taurate
- Triethanolamine (TEA) plus any chemical listed

NITROSAMINES - Shampooing the hair with a product contaminated with this substance can lead to its absorption into the body at levels much higher than eating nitrite-contaminated foods. Avoid these chemicals.

- \* CRYSTAL CLEAR
- \* FREE FROM NITROSAMINE  
(Organic Chemical components  
which cause cancer)
- \* BEST QUALITY
- \* REASONABLE PRICE

**ace** Silicone Products last ten times longer than normal latex products and are made from 100% pure medical grade liquid silicone rubber, exactly the same material used for making artificial h&valves.