NEW CONTAMINANT FOUND IN MANY SHAMPOOS

As occurred in the early 1980's with nitrosamines, another reactant chemical contaminant seems to be showing up in cosmetics, this time in shampoos and bubble baths. Addressing the Dermal Clinical Evaluation Society at a September meeting, John Bailey, director of the FDA's Division of Colors & Cosmetics, reported the discovery of "excessively high" levels of 1,4 dioxane, a substance found to cause liver cancer in animal studies done by the National Cancer Institute in the 1970's. He indicated that the contaminant appears to occur in any product that uses non-ionic ethoxylated surfactants in emulsion products, possibly including creams and lotions. Furthermore, the higher the degree of ethoxylation, the more likely the occurrence of 1,4 dioxanes. Bailey's associate director Dr. Stanley Milstein indicated that FDA would investigate the risk factors especially for leave-on products, the motivation being that wash-out products like shampoos and bubble bath products pose a lower risk. One complication: discovery of many. children's products containing 1,4 dioxane, which may increase the risk in cases where parents permit prolonged bathing in bubble baths by small children. Bailey noted that low irritation shampoos for children use high levels of ethylene oxide, and thus are of special concern, though "steam stripping" can help.

CUTANEOUS REACTIONS TO PROPYLENE GLYCOL

The potential for irritant reactions and sensitization to propylene glycol has been recognized since 1952, when Warshaw and Hermann[23] noted reactions in patients in whom propylene glycol was used as a solvent for patch test allergens. Since then, authors have reported numerous cases of contact dermatitis from propylene glycol in a wide variety of topical preparations.

Substances that have been associated with patch test proved propylene glycol reactions are listed in Table I. Each preparation contains a unique concentration of propylene glycol, ranging from approximately 2% to 60%. Investigators concluded that allergic sensitization to propylene glycol had occurred for each of the substances listed with the exception of fluocinonide cream; the authors judged this reaction to be a primary irritant response.[25]

Investigators have performed a number of patch test studies designed to determine the incidence and nature of propylene glycol skin reactions. These studies are summarized in Table II.

A commonly encountered problem in patch testing, particularly with propylene glycol, is reliably differentiating an irritant from an allergic response, especially if the reaction is relatively weak.' In a majority of the studies listed, the subject group comprised patients with eczema; in such patients, the results of patch test with propylene glycol 10% to 20% may even be more difficult to interpret." Several authors were thus unable to conclude whether propylene glycol reactions in their subjects represented irritation or true allergic sensitization.

The words from coconut oil on a label sounds friendly enough, but cocoamide DEA is a possible allergen if used in high concentrations, but is no often used at these concentrations.

Another coconut oil derivative is sodium lauryl sulfate (SLS). A degreaser once common in shampoos, toothpastes, lotions and creams, SLS, in high concentrations, is an irritant and can dry and damage hair and skin.

For a manufacturer, cost is a deciding factor. propylene glycol is a sticky, water-attracting liquid derived from petroleum and a common ingredient used as a humectant in cosmetics. Being a synthetic petroleum product, it can cause allergic reactions (though not usually in minute quantities), but it is also cheaper than vegetable glycerin - the natural, syrupy alcohol utilized as a lubricating base for cosmetics.

"The ideal cosmetic should have only ingredients we can eat"

4. F. Anthony Simion and Pamela S. Witt (Andrew Jergens/Kao) explored **"The Initial Effects of Surfactants on the Skin" -** pointing out that stinging, burning and dryness can occur even after only a single wash of the skin with certain surfactants. Although 12 percent of all consumers report such adverse effects, their usual response is simply to switch brands of dish detergents, liquid soaps, etc. when their skin begins to "tighten" or feel rough and dry. **Anionic** surfactants - typified by SLS

Toxicity - A serious problem with these chemicals is that they may be contaminated with NDELA (N-nitrosodiethanolamine), one of the nitrosamines and a potent carcinogen, according to the 1978 FDA report. 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 contaminate foods. Avoid these chemicals. See NITROSAMINES.

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