

effective topical therapy, these wounds would be converted to full-thickness loss and become the site of invasive bacterial infection. With the suppression of bacterial proliferation, the epithelial elements remain, provide a means of rapid coverage of the burn wound, and the adjacent connective tissue elements form an effective barrier to the invasive burn wound infection. The main problem in the use of topical therapy is the acidosis which may occur upon its use. The inhibition of the carbonic anhydrase buffering mechanism by the sulfamylon and the heavy acid load which is absorbed results in the pulmonary buffering mechanism being the only effective means of maintaining a normally functional pH. A rapid respiratory rate is characteristic of all patients undergoing such therapy, but it is the change in the character of the respiration which heralds the onset of an uncompensated acidosis, resulting from impairment of the pulmonary ventilating mechanism, usually the result of bronchopneumonia or congestion.

-- J. Am. Med. Assn. References & Reviews

- 972 Is There a Malignant Freckle? R.N. Ollstein, et al. *Cancer* 19, 767-775 (June, 1966).

The malignant freckle diagnosis is best suited to the clinical pattern of an indolent facial pigmented lesion of the elderly. The histopathology of such tumors is variable and not diagnostic. The use of the histopathologic diagnosis of malignant freckle is not advised, especially in extrafacial lesions where its unjustifiable implied good prognosis is misleading. These conclusions are based on a review of 23 cases of malignant freckle diagnosed pathologically. Of the 18 extrafacial lesions studied 17 proved on second examination to be invasive malignant melanoma. The five facial lesions demonstrated variable pathology.

-- J. Am. Med. Assn. References & Reviews

#### CHEMICAL HAZARDS

- 973 Spectral-Luminescent Determination of 3,4-Benzpyrene in Highly Refined Industrial Paraffins. L.M. Shabad and A. Ya. Khesina. *Ind. Lab. (USSR) (English Trans. of Zavodskaya Laboratoriya)* 31, 1682-1683 (Nov. 1965).

The authors studied 60 domestic and two imported specimens of paraffins intended for use in the food industry, e.g., paraffined cups for melted butter, sour cream, wrappers for confectionery, bread, rolls, and buns. All of the paraffins studied contained the carcinogenic substance 3,4-benzpyrene.

-- Public Health Eng. Absts.

- 974 Skin Temperature Recording with Phosphors. Toxicity Studies on Animals. P.H. Derse and L. L. Alt. *Can. Med. Assn. J.* 95, 357-360 (Aug. 20, 1966).

In a previous communication in this journal (R.N. Lawson and L. L. Alt, *Can. Med. Assn. J.* 92, 255 (1965)), a method was described for converting invisible thermal patterns of the human skin into a detailed visible picture. At that time, the question of possible toxicity of the thermographic phosphor was raised. Toxicity studies conducted on laboratory animals indicate that the probability of toxic side reactions resulting from the use of zinc-cadmium sulfide phosphor spray is very low.

-- Authors' abst.

- 975 Cerebro-Ocular Effects of Carbon Dioxide Poisoning. A. Freedman and D. Sevel. *Arch. Ophthalmol.* 76, 59-65 (July, 1966).

Carbon dioxide from subterranean sources may collect in wells when the barometric pressure falls abruptly. In sufficient concentration it may cause a characteristically sudden loss of consciousness and death. The neurological and ocular changes in two men who survived asphyxiation in a well are described. The main persistent features were headache, photophobia, and limitation of accommodation and eye movements—especially convergence. There were also abnormalities of dark adaptation and of visual fields. The clinical features indicated diffuse, focal cerebral damage. Although anoxia could not be entirely excluded in the etiology, carbon dioxide may have a specific histo-toxic action on nerve tissue.

-- J. Am. Med. Assn. References & Reviews

- 976 Studies on the Measurement of Fluoride in Air and Plant Tissues by the Willard-Winter and Semiautomated Methods. J.S. Jacobson, et al. *J. Air Poll. Control Assn.* 16, 367-371 (July, 1966).

Determinations of fluorine (F) in plant tissues by the Willard-Winter and semiautomated methods have been studied for the presence of determinate and indeterminate errors by multiple linear regression analysis. The results have provided a better understanding of the magnitude of differences between tissue samples required for statistical significance and have suggested that the errors involved are much greater both in number and magnitude than usually assumed. The