454 Diffusion Method of Determination of Urinary Fluoride: Recent Developments. G.H. Farrah. Am. Ind. Hyg. Assn. J. 25, 55-58 (Jan.-Feb. 1964).

The determination of urinary fluoride, as an indication of fluoride exposure, has been greatly simplified by the microdiffusion-colorimetric technique. However, since certain difficulties have been reported in the use of the method, this discussion attempts to assess the relative value of the technique; to clarify several points in the previously published description of it; and to present changes that have been found to be of value. -- Author's abst.

455 Relation of Atmospheric Contaminants and Ozone to Lightfastness. V.S. Salvin. Am. Dyestuff Reptr. 53, 33-41 (Jan. 1964).

The presence in the air of atmospheric contaminants introduces a new cause of chemical change which act simultaneously with light exposure or in the absence of light. The effect of atmospheric contaminants, oxides of nitrogen, sulfur dioxide, and ozone, in causing dye fading, is shown for various dyes on cotton, rayon, nylon, acetate, polyester, acrylics, and wool. In the determination of fastness of many dyes to sunlight, the variable of reaction with atmospheric contaminants is a factor. The fading can occur out of contact with direct sunlight. The fading of dyes with ozone takes place in rural areas such as used for sunlight testing stations. The fading of dyes in urban areas containing oxides of nitrogen, sulfur dioxide, and variable amounts of ozone is also established. The phenomena of ozone fading as an oxidative reaction is discussed, and analogies to mechanism of photochemical action on dyes suggested. -- APCA Absts.

456 Hazards to Health: Salt Poisoning. M.E. Calvin, R. Knepper, and W.O. Robertson. New Engl. J. Med. 270, 625-626 (March 19, 1964).

Confined to their crib and apparently given a box of table salt for entertainment, a set of fourteen-month-old twins consumed an unknown quantity of sodium chloride. Thirty-six hours later— in the absence of either vomiting or diarrhea—they were admitted to the hospital with hypernatremic dehydration. Only after admission, when serum sodium concentrations were determined (179 and 182 milliequiv. per liter) did these historical facts come to light. With parenteral fluid (water and electrolytes) administration recovery was reasonably prompt and seems to have been complete. -- Authors' summary

457 Realistic Air Sampling of Beryllium Production Facilities. H.M. Donaldson, R.A. Hiser, and C.W. Schwenzfeier. Am. Ind. Hyg. Assn. J. 25, 69-76 (Jan.-Feb. 1964).

Monitoring of beryllium processing facilities, using both the HASL (Atomic Energy Commission, New York Operations Office, Health and Safety Laboratory) and the Aerotec II Cyclone which fractionate dust closely to the upper respiratory retention parameters of Brown and co-authors, shows that the respirable portion of air-borne beryllium dust may vary from a few per cent to over 90% depending on environment. In general, the higher total air-borne exposures show a smaller percentage of respirable dust. Based on the Kettering study on the fabrication of beryllium, it is obvious that the dust produced in lathing, milling, drilling, and other related machine shop operations is essentially non-respirable, which indicates that alteration to beryllium parts can be made in any uncontrolled machine shop and the respirable air levels generated will remain below the target level of 2.0 micrograms beryllium per cubic meter. In general, these data point out the fact that the apparently insurmountable engineering feat of controlling large beryllium production facilities to target level or below can be accomplished using good local exhaust ventilation and hooding techniques. Not only can a plant be controlled to target levels by this method, but this is being done in Ohio beryllium processing and fabrication facilities. There are 13 references. -- Authors' conclusion

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