IN RE: ABRAMS November 1992

663 Repetitive Poisoning in Children. R. Sobel and J.A. Margolis. Pediatrics 35, 641 (April, 1965).

The families of 20 poison repeaters, 19 single ingestors, and 13 controls were studi psychiatrically. Social class, religious affiliation, income, geographical setting, and size of family do not seem to be correlated with repeated episodes of poisoning in childhood. Acc proneness, pica, environmental hazard, and lack of parental supervision also are unrelated. Ingestion of poisons seems to be the result of purposeful behavior correlated, in the repeater with other behavioral problems and disturbed family relationships.

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

664 A Sensitive Method for the Determination of Carboxyhaemoglobin in a Finger Prick Sample of Blood. B.T. Commins and P.J. Lawther. Brit. J. Ind. Med. 22, 139-143 (April, 1965).

About 0.01 ml. of blood taken from a finger prick is dissolved in 10 ml. of 0.04% ammonia solution. The solution is divided into two halves, and oxygen is bubbled through one half to convert any carboxyhemoglobin into oxyhemoglobin. The spectra of the two halves are then compared in a spectrophotometer, and the difference between them is used to estimate the carboxyhemoglobin content of the blood either graphically or by calculation from a simple formula. Calibration is simple and need only be done once. A sample of blood can be analyzed in about 20 minutes, which includes the time to collect the sample. The method is sensitive enough to be used for the analysis of solutions of blood containing less than 1% carboxyhaemoglobin. -- Authors' abst.

665 Semi-Automated Analysis of Fluoride in Biological Materials. L.H. Weinstein, et al. J. Air Poll. Control Assn. 15, 222-225 (May, 1965).

A semi-automated method for determination of fluorine in biological materials has been developed incorporating the Technicon Auto Analyzer. One half gram of dried, ground plant material is ashed, alkali-fused, diluted with water, and the suspension is pumped along with sulfuric acid, at controlled rates, into the hot revolving glass helix of a digester unit. As the acid-digest mixture passes through the heated coil, volatile fluoride and water vapor are evolved. The volatile fluoride and water vapor are pulled from the helix under reduced pressure through a tube which projects into the helix. The tube, in turn, is connected to a water-jacketed condenser and then to an impinger where the sample is continuously mixed. An aliquot of the impinger liquid is being constantly withdrawn. This samp is then air-segmented and mixed with a reagent containing alizarin complexone, pH4 acetate buffer, lanthanum nitrate, acetone, and water. The sample-reagent combination passes through 4 full-length mixing coils where color development takes place. Upon reacting with fluoride, the wine-red alizarin complexone-La(III) reagent forms a lilac blue fluoride complex The solution is pumped from the mixing coils through the tubular flow cell of the colorimeter. The absorbence of the solution is measured at 624 millimicrons, and the signal is transmitted to a recorder where the results are plotted on absorbency paper. The absorbence at the apex of the peak is proportional to the amount of fluoride in the sample between the range of 2.5-80 micrograms°F. Samples are analyzed at a rate of 12 per hour. Results compare favorably with those obtained by Willard-Winter distillation. Recent studies indicate that the fluorine content of plant tissues can be estimated without prior ashing and fusion. There are 18 references. -- Authors' abst.

666 Question of Fluoridation of Cooking Salt. E. Ziegler. Schweiz. med. Wochschr. 95, 453 (April 2, 1965).

Fluoridated cooking salt is currently available in Switzerland, but it alone does not provide optimum protection against dental caries. For low fluoride areas of Switzerland, where fluoridation of the public water supply is impractical, the author recommends that the use of fluoridated salt be combined with that of fluoridated milk or with the use of fluoride tablets. Fluoride prophylaxis should begin prenatally and should be continued until physical development is completed. The success depends on regular application. The physician must act as an educator of both parents and children. -- J. Am. Med. Assn. References & Reviews

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