after landing showed a decrease of 87-90% (in mice) and 71-90% (in dogs) from the control lev (0.12-0.2 microgram/ml.). On the 10th day after landing, the blood serotonin concentration the animals had returned to normal. Investigation of the blood of dogs at late periods (80-24(after their return from space showed normal blood serotonin values. In mice and guinea pigs posed to the action of vibration at 35 and 70 cycles/sec. for 15 minutes, with an acceleration 10xg. and an amplitude of 0.4 mm. a fall of the blood serotonin concentration was observed d ing the first 48 hours, followed by its return to normal. Vibration may be one of the factors sponsible for the lowering of the blood serotonin level of animals undertaking cosmic flight. -- Authors' conclusic

494 Uptake of Radioactive Fission Products by Field Crops. Report 1: Accumulation of Radioacti Fission Products by Grain and Oil-Bearing Crops. G.V. Il'ina and S.G. Rydkii. Federation Proc. 25, Part II (Translation Supplement) T123-T127 (Jan.-Feb. 1966).

That uptake of radioactive fission products by plants from the soil begins at an early age is ir cated by the high activity of the seedlings. The plant accumulates radioactive fission product (strontium-90) during the growing period, and accumulation of these products increases with The various plant organs differ in their ability to take-up radioactive fission products: the le are the most active in this respect, the seed the least. Different crops differ widely in their ability to accumulate radioactive fission products. In the authors' experiments the highest co tent of radioactive substances (strontium-90) per unit dry matter was seen in buckwheat, must and sunflowers. The removal of radioactive fission products with the harvest of the crops stu was low. In the sunflower, which in this respect exceeded the other plants, removal was 0.0 of the amount added to the soil. -- Authors' conclusio

ENVIRONMENTAL MEASUREMENTS

495 A More Rational Basis for Air Sampling Programs. S.A. Roach. Am. Ind. Hyg. Assn.J. 27, 1-12 (Jan.-Feb. 1966).

There are real difficulties in designing sampling procedures that assure compliance with the present hygienic standards for air contaminants. A reasoned and consistent system of sampli is developed, based on the assurance that a critical body burden is not exceeded. It is shown that the duration of the sampling should be proportional to the biological half-time of the subst A large safety margin is obtained by making the duration one-tenth of the half-time. The sam results are then summarized in the formula, Average + Range/$(n-1)^{1/2}$. When the resulting figure is less than the American Conference of Governmental Industrial Hygienists (ACGIH) th hold limit value, a favorable report can be given. There are 21 references. -- Author's abst.

496 Charcoal Sampling Tubes for Organic Vapor Analysis by Gas Chromatography. C.L. Fraust E.R. Hermann. Am. Ind. Hyg. Assn.J. 27, 68-74 (Jan.-Feb. 1966).

Variation in efficiency of recovery of organic vapors collected on activated charcoal and desorl into carbon disulfide, was studied with respect to certain parameters of the process. Chemica used were methylethyl ketone, toluene, trichloroethylene, butyl acetate, 2-methylcyclohexanol and styrene. Analyses were performed with a gas chromatograph. The effects of charcoal m size, sampling rate, volume collected, and vapor concentration were considered. Mesh sizes carbon granules studied were 10/20, 20/30, 30/40, and 40/50. Also, a special vapor adsorpti charcoal, 60/80 mesh was used. Effects of sampling rate were determined over a 100 ml./mi to 1,000 ml./min. range. From 0.5 to 1.5 liters of sample were collected for experiments de ing with volume collected. In studying the effect of varying concentration, a range of one Thre hold Limit Value (TLV) to 5TLV was employed. Nine references are given. -- Authors' abst.

497 The Determination of Chlorinated Hydrocarbons in the Atmosphere by Activation Analysis. D.J. Morgan and G. Duxbury. Ann. Occ. Hyg. (London) 8, 253-256 (July, 1965).

The air sample containing about 10mg. of chlorinated hydrocarbon is drawn through a small ch coal pack by means of a battery operated air sampler. The charcoal is then placed in a neut flux and the Cl-38 formed is determined by gammaspectrometry. The results of an operational investigation are described. -- APCA Abs

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