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give but a rough idea of the quantity of dust present. In the Medical Research Council's Report on "Chronic Pulmonary Disease in South Wales Coalminers: II—Environmental Studies" [this *Bulletin*, 1943, v. 18, 884] it was suggested that standards of maximum permissible dustiness should be based on the mass concentration of dust not exceeding 5 microns in size—since particles larger than 5 microns are probably of little significance in the causation of pneumoconiosis. Concentrations in terms of the weight of dust of a restricted range of particle size cannot be determined directly by the usual gravimetric methods; and in the Medical Research Council's report it was shown that, with the thermal precipitator as the sampling instrument, a close estimate of the mass concentration of dust not exceeding 5 microns in size could be obtained by counting only the particles not less than 1 micron in size.

The present report by the Coal Dust Research Committee of the Monmouthshire and South Wales Coal Owners' Association makes no direct reference to the Medical Research Council report, but refers instead to "the findings of Medical Authorities," which indicate that it is the particles of 5 microns and smaller size that are of pathological significance. Any method put forward for the measurement of the health hazard should, it is said, be capable of giving a measure of the amount of free and total silica, and also the amount of dust below 10 or 5 microns in size.

A method is put forward for the routine estimation of concentrations of dust not exceeding 5 microns in size. First, a gravimetric sample is obtained by the Soxhlet thimble method, in which the dust contained in a measured volume of air is entrapped by a paper thimble. The weight of dust so caught is ascertained and then the mass concentration of the total air-borne dust is calculated. The dust is removed from the paper thimble, mixed, and a known weight of it then taken for a sedimentation test. The sedimentometer consists of a glass cell through which passes a flat horizontal beam of light which impinges on a photoelectric cell. Light transmission values are measured: (*a*) when the cell contains clean alcohol; (*b*) when a weighed quantity (about 20 mgm) of the dust sample has been added to the alcohol, and the particles are still in turbulent motion after stirring; and (*c*) after the lapse of the calculated time which will allow all particles but those smaller than 5 microns to settle below the level at which the light beam traverses the cell.

From the photometric readings the proportion (by weight) of dust below 5 microns is estimated, allowance being made for the fineness o of the whole dust (as indicated by the surface" of the dust). Hence, since concentration of the whole dust ascertained by direct gravimetric met mass concentration of the dust below in size can be estimated.

In the report it is admitted tha criticisms may be levelled at the recommended, and since only a few have been so evaluated, no exact stan the probable error of the method is g is said that the probable error will 50 per cent., an error which, it is said, small in comparison with those to whi methods at present used in Great Br liable. The procedure gives no init about the constituents of the dust.

T. B

WEDLER, H. W. Asbestose und Lung [Asbestosis and Pulmonary Car *Deut. med. Wocn.* 1943, Aug. 6, v. 31/32, 575–6.

The author has collected the p autopsy records on asbestosis from countries and finds that there have insrances of malignant disease of the lu pleura in 92 post-mortem examinat per cent.). This is in excess of the pr of lung carcinomata in autopsies g (2–6 per cent.). Carcinoma as a com of asbestosis occurred most frequently between 35 and 41 and was generally in of the lung most affected with as Development of the lesion was sl corresponded with the length and i of the exposure (12–42 years). The often a long interval between the cess exposure and the development of the which, in the author's view, must regarded as an occupational cancer.

S. Roodhouse Gi

Ross, P. Cadmium Poisoning. *Brit.* 1944, Feb. 19, 252–3.

Cadmium and its salts are being wide in modern industry. Finely divided c is inflammable and possibly explosive its fumes are toxic. Risk occurs in smel ores, making cadmium alloys, cadmium w electroplating and metal spraying. Th of cadmium is a powerful lung irritant delayed action resembling that of ph An analysis is presented of 23 cases of po from cadmium fumes which were create a lighted cigarette was dropped on c