

mirror plane of symmetry. The three selenium atoms and the cyano groups form an unbranched and non-planar chain, with a Se-Se bond length of 2.33 Å and a Se-Se-Se bond angle of 101°. The values, 94° and 95°, respectively, were found for the SeSeSe/SeSeC dihedral angle and the Se-Se-C bond angle.

The crystals are isomorphous with those of selenium dithiocyanate^{3,4}, Se(SCN)₂.

Details of the structure of selenium diselenocyanate will be published later.

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A Note on the Occurrence of Dimethyl Sulphone in *Cladonia deformis* Hoffm.

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In the course of an investigation on the presence of triterpenoids in lichens a sample of *Cladonia deformis* Hoffm., collected in a peat-bog, through which the railway runs, some 100 miles north of Trondheim, was investigated. The material was extracted with ether. The neutral fraction left after acidic substances had been removed by alkali was subjected to chromatography on alumina. The fraction eluted with ether-methanol (49:1) contained a substance that sublimed on the water-bath in a vacuum. It was sublimed twice and then melted at 98–105° (15 mg). Its IR-spectrum contained bands which could be due to the presence of the sulphone grouping. The simplest sulphone,

dimethyl sulphone, has m.p. 109°, and, indeed, its IR-spectrum showed almost complete identity with that of the isolated substance. A mixture of the two compounds melted at 105–108°; the melting points of the two substances and the mixture were taken at the same time. Recrystallisation of the isolated sulphone from methanol-ether raised the m.p. to 107–108°, no depression on admixture with the authentic dimethyl sulphone.

During an investigation of sulphate turpentine (unpublished results with E. Hafnor) we isolated dimethyl sulphone, which we regard as arisen by aerial oxidation of dimethyl sulphide. This prompted us to consider the possibility of the presence of dimethyl sulphone, presumably originated in a similar way, in the large amount (3–4 litres) of solvent used. We think it unlikely that the sulphone should have been present as an impurity in the petroleum b.r. 40/70° and the methanol used during the chromatography, and have checked that it was not present in the benzene or the ether by filtering 12 litres of each solvent through 200 g of alumina with subsequent elution of any adsorbed substance with methanol *etc.*, as for the isolated substance. No crystalline substance could be detected. Similarly, we have also checked that no dimethyl sulphide was present in the benzene. None was detected.

Dimethyl sulphone has previously been isolated from cattle blood¹, from the adrenal gland² and from the horse-tail, *Equisetum palustre*³, and other *Equisetum* species⁴.

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