

### Determination of Atebrin in Urine by the Pulfrich Photometer.

THE Zeiss Pulfrich Photometer has been employed for the estimation of atebrin in urine. The absorption curve of a 0.02 per cent. solution of atebrin in N/10 HCl is determined by a series of measurements of transmission, employing all spectral filters in succession. The absorption has been found to be maximum with S/43. This filter has been used for the measurement of the extinction co-efficient. The concentration of the solution was found proportional to the extinction coefficient and the Lambert-Beer absorption law is valid, obviating the necessity for the calibration curves. The conversion factor for obtaining the concentration of atebrin in mgms. per 100 c.c. from the observed extinction co-efficient is 5.49.

An accurately weighed amount of atebrin was added to 200 c.c. urine. The urine was extracted for atebrin by the method of Tropp and Weise,<sup>1</sup> the final acid extract, thus obtained, was made upto 100 cc. and the extinction coefficient was determined in the Photometer, using a cell of stratum thickness of 1 mm. The concentration of atebrin was obtained by multiplying the extinction co-efficient by the factor 5.49.

The accuracy may be judged by the following results obtained in our experiments :

Atebrin added	Atebrin found	Percentage error
29.3 mg./100 c.c.	28.7 mg./100 c.c.	2.05
12.2 mg./100 c.c.	11.9 mg./100 c.c.	2.54

This is a much quicker method than the colorimetric method usually employed for such determinations. This method further obviates the necessity for preparing standard solutions for every determination.

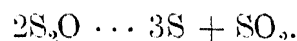
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January 13, 1938.

<sup>1</sup> Tropp and Weise, *Arch. Exp. Path. u. Pharmak.*, 1933, 170, 339.

### Disulphur Oxide.

At the recent session of the Indian Science Congress, Calcutta, I pointed out that disulphur oxide (S<sub>2</sub>O) appears to be the primary product of the hydrolysis of sulphur chloride. Since then further work has been done in this laboratory to prove the existence of disulphur oxide in the yellow solution obtained when sulphur monoxide is passed into dry carbon tetrachloride kept at -12° C. I now have conclusive experimental evidence to show that disulphur oxide does exist. The oxide in carbon tetrachloride solution, reacts with dilute caustic soda producing the sulphide and the sulphite of sodium in equimolecular proportions. It decomposes fairly rapidly into sulphur and sulphurdioxide.



The oxide (in carbon tetrachloride solution) is more stable in presence of dry hydrogen chloride.

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February 14, 1938.

### The Colour of the Blue Quartz of the Charnockites of South India and of the Opalescent Quartz-Gneiss of Mysore.

HOLLAND<sup>1</sup> investigated the greyish blue charnockite quartz of South India and observed the presence of acicular inclusions which he considered to be rutile. He reported that the colour of the quartz was probably due to those inclusions but he does not appear to have either isolated the inclusions or carried out a chemical investigation of the quartz specimens.

Specimens of the charnockite quartz with varying intensity of blue colour as well as of blue quartz from the opalescent quartz-gneiss of Kadur District (Mysore) were examined in the course of this work, both microscopically and chemically. The colour of these quartzes which is of a yellowish tone by transmitted light and blue by reflected light was found to be greatly affected by heating the charnockite quartz losing its colour completely even at 300°.

Thin sections of these quartzes show under the microscope a large number of inclusions which can be classified under two heads,