Spectra of Superoxide Ion Solutions: A Correction

By W. SLOUGH

(Organic Chemistry Division, National Chemical Laboratory, now with Basic Physics Division, National Physical Laboratory, Teddington, Middlesex)

In an earlier communication,¹ ultraviolet and electron spin resonance absorption spectra were reported for pyridine and dimethylformamide solutions containing the ionic species O₂⁻, prepared and identified polarographically. Further investigations of these solutions have shown no detectable e.s.r. signal at 300°k under comparable instrumental conditions, and the signals originally observed have now been traced principally to the detection at high gain of a small contamination of the particular cavity used. Inability to detect the signal at 300°k confirms observations of Maricle and Hodgson² who further find a strong

resonance absorption at 77° k for O_2 in dimethylformamide. This has now also been observed for the currently prepared solutions at 77° k. It appears likely that the inability to observe a signal at 300° k is due to excessive line broadening.

A printing error also occured in the earlier communication and the ultraviolet absorption recorded in pyridine solution should have been described as a band of high intensity with λ_{max} below 3400 Å (above 3.75 eV) and a further weaker band with $\lambda_{max} = 4425$ Å (2.80 eV).

(Received, July 9th, 1965; Com. 434.)

¹ W. Slough, Chem. Comm., 1965, 184.

² D. L. Maricle and W. G. Hodgson, private communication.