NOTE.

The Editor desires to point out that the pages of the Journal are open for the inclusion of short notes dealing with analytical practice and kindred matters. Such notes are submitted to the Publication Committee in the usual manner.

ZEISS BUTYRO-REFRACTOMETER—SETTING OF SCALE.

DURING the war it was impossible to obtain a standard liquid for setting the scale, but now a standard liquid paraffin of refractive index 1.474 at 15° C. is procurable. As 15° C. is not a convenient temperature for standardisation, readings were taken at other temperatures with the standard paraffin, the refractive index of which was kindly confirmed by Professor G. T. Morgan at the Birmingham University.

In the table below the figures under "A" were obtained with the liquid paraffin, the scale being set at 72.7 at 15° C., which is equivalent to refractive index 1.474; those under "B" with the same scale setting, and with the standard fluid obtained from Messrs. Zeiss about eight years ago. Fresh fluid was used for each reading, as continued heating may cause alteration in the reading.

The figures under "C" for 15°–30° C. are taken from the pamphlet supplied by that firm, whilst the other figures are calculated on the assumption that the alteration of values is in the same straight line.

C	A.	B.	C.
15°	72.7	78.2	77.3
20°	69.5	75.2	74.3
25°	66.5	72.1	71.2
30°	63.3	68.9	68.1
35°	60.5	65.8	65.1
40°	57.7	62.8	62.1
45°	55.0	60.0	59.1

The values under "B" and "C" should be identical, but there was a difference of nearly a unit. Therefore, a refraction obtained with an oil would be nearly a unit lower if the Zeiss fluid had been used for setting the scale than if the paraffin had been used. Whether these differences are due to the Zeiss liquid having deteriorated or to an original error in its composition, we are unable to say.

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