

NOTES.

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.

THE COMPOSITION OF LOCUST BEAN SEEDS.

Smetham (*J. Roy. Lancs. Agr. Soc.*, 1909) gives three analyses of locust beans, and, from the composition of these samples, it is to be presumed that the whole bean is included; there is, however, on the market a product of locust beans, the analyses of which differ materially from those recorded by Smetham, as will be seen from the following percentage figures:

	A.	B.	C.
Water	13.2	12.3	12.4
Oil	1.8	0.8	1.4
Proteins	14.6	7.1	23.0
Carbohydrates	58.6	75.0	45.2
Fibre	9.0	3.3	13.4
Mineral matter	2.8	1.5	4.6
	100.0	100.0	100.0
Food units	100	95	106

A is the whole kernel; B is the split kernel, from which the husk has been removed; and C is the "refuse" left after the removal of B. There is no question that these are anything but the genuine product of the locust bean, and are sold as such for feeding cattle.

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NOTE ON COLOURING OF THE MICROSCOPE FIELD.

It frequently happens in the examination of crystals—*e.g.*, sugar in foodstuffs—mounted in the ordinary colourless media (cedar-wood oil) that a clear definition is not obtained. If, however, the microscope field be coloured with a suitable colouring matter which does not stain the crystals, a much sharper contrast between the colourless crystal and the surrounding field is obtained. As a result the shape and size of the crystal can be more clearly seen.

In practice it is found that the deep red oil obtained by an oil extraction of alkanet root gives the best results, and the method is particularly applicable to the measurement of the size of sugar crystals in products where other bodies than sugar are present.

The method of application is exactly the same as with other mounting media, the cover-glass being pressed well down without crushing the crystals.

The oil is readily obtained by extracting (in the cold) 100 grms. of finely ground dried alkanet root with about 200 c.c. of cotton-seed or cedar-wood oil for two days, with occasional stirring, and then filtering the extract through two filter papers on a Büchner filter. A further extraction of the ground root with another 100 c.c. of oil, and the addition of the filtrate from this to the first filtrate, gives a red-coloured oil of suitable intensity of colour. Other oil-soluble dyes may be used in place of the above, but alkanet is found very satisfactory. Also, cotton-seed oil is preferable to cedar-wood oil, as in the case of the latter the colour rapidly fades.

The method should be applicable to the examination of any colourless crystals insoluble in the oil.

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