Table 1. CONCENTRATION OF VARIOUS CONSTITUENTS OF THE SOLUBLE MATERIAL PRESENT AT DIFFERENT LEVELS OF THE GASTRO-INTESTINAL TRACT OF RATS UNDER NORMAL FEEDING CONDITIONS

Segment	S	I_1	I_2	I_3	I_4
Potassium (m.equiv./l.)	135 (± 9·3)	51·5 (± 6·6)	29·0 (± 3·0)	18·5 (± 3·5)	18·6 (± 1·9)
Sodium (m.equiv./l.)	136·6 (± 9·9)	109·4 (± 14)	85·1 (± 18)	80·1 (± 8·7)	68·3 (± 10·0)
Total nitrogen (gm./l.)	6·6 (± 1·0)	9·1 (± 3·1)	6·3 (± 1·3)	4·77 (± 0·45)	3·85 (± 0·26)
Non-protein nitrogen (gm./l.)	4·16 (± 1·3)	6·56 (± 3·1)	5·8 (± 1·5)	4·02 (± 0·6)	3·44 (± 0·28)
Free reducing sugar (as gm. glucose/l.)	68·4 (± 5·8)	10·9 (± 3·6)	21·2 (± 3·8)	21·5 (± 2·9)	20·8 (± 4·1)
Total reducing sugar (as gm. glucose/l.)	93·4 (± 15·4)*	See footnote†	29·3 (± 5·6)*	33·6 (± 4·7)*	35·1 (± 6·2)*

Figures in brackets show the standard deviation for five observations except where indicated by *, when only four observations were made.
† Three observations only. In these, the increase in reducing power on hydrolysis was 1·61 (± 0·29) gm./l.

passage of food through the upper part of the small intestine. The slight difference between the free and total reducing sugar in this segment suggested that monosaccharides constituted the major carbohydrate fraction.

The free reducing sugar was remarkably constant between segments I_2, I_3 and I_4, where it was present at a concentration of about 2 per cent. This constancy was unexpected since it is generally believed that all digestible carbohydrate is absorbed before the chyme leaves the small intestine, and some decrease in reducing power in the last segment might therefore have been expected. The results are of interest in view of Fisher's[1] finding that absorption of water only proceeds from the isolated small intestine of the rat when glucose is present in the lumen.

It is emphasized that these are preliminary results with a small number of animals (5) and that certain improvements of technique are considered to be necessary, for example, a different method of killing instead of the ether anæsthesia and bleeding used here; nevertheless the results are sufficiently consistent to suggest that this more physiological approach to the study of gastro-intestinal function may be of value.

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HÆMATOLOGY

Stability of Freeze-dried Anti-hæmophilic Globulin

THE stability of anti-hæmophilic globulin in solution has been the subject of many investigations. Hitherto, no systematic work on the factors affecting the activity of dried material has been reported.

In order to obtain comparable results in the present investigation, the period necessary for the loss of 50 per cent of the activity of anti-hæmophilic globulin[1], subjected to the necessary conditions of each experiment, was estimated. Bovine, porcine and human anti-hæmophilic globulins were utilized; no appreciable difference was observed in their behaviour.

Type of container: Anti-hæmophilic globulin stored at room temperature in stoppered M.R.C. bottles or universal containers lost half the activity in two months. Storage in darkness had no significant effect. On the other hand, sealed ampoules preserved the same activity for four months.

Effect of temperature: Sealed ampoules were used in this test. Deterioration was rapid at 37° C.; the standard loss occurred after 5–8 days. At 4° C. the same loss was observed after storage for six months.

Storage under vacuum over phosphorus pentoxide: This had practically the same effect as that produced by storage in sealed ampoules.

Humidity: When samples of anti-hæmophilic globulin in loosely stoppered universal bottles were kept in a humid atmosphere, two weeks were sufficient to lower the activity to 50 per cent.

Time of packing: The potencies indicated on commercial ampoules were invariably found to be higher than my estimates. This led to inquiries which showed that in certain cases this was most probably due to a time-lag between the completion of the drying process (when the activity was determined) and packing. When this delay was minimized, not only did our figures coincide but also the preservation of the activity was prolonged; the subsequent loss of activity of samples treated in this way was almost halved.

It would now appear that in order to obtain and preserve the maximal activity of anti-hæmophilic globulin, delay should be avoided in drying and sealing the material in evacuated or nitrogen-filled ampoules, which should be stored at 4° C.

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New *Rh* Phenotype, *Dcce^{i}e^{i}f*, found in a Chibcha Indian Tribe

IN the course of serological work on various Chibcha-Indian tribes of Colombia it was found that the blood of 6 out of 113 Ica Indians, inhabitants of the Sierra Nevada of Santa Marta, reacted with anti-*D* and anti-*c* sera but failed to react with anti-*C*, anti-*E*, and anti-*e* sera. Further laboratory work carried out at the Caracas Blood Bank as well as in the Blood Group Research Unit of the Lister Institute of London and at the Mount Sinai Hospital in New York has demonstrated that the six samples previously mentioned reacted with anti-*f* and with some anti-*e* sera as well.

Considering these results, we may call the new phenotype *Dcce^{i}e^{i}f* and the chromosome *Dce^{i}f*(R_i), using the *i* as indicative of the tribal denomination of the Ica among whom the phenotype was found for the first time. Genetic studies of a family carrying this chromosome, together with the serological evidence for the differentiation of this phenotype from other *Rh* gene complexes like *Dc-* (ref. 1), will be published elsewhere (Layrisse, M., Layrisse, Z., and Wilbert, J.).