

deltaic category, without any intent to mislead, fore-sets exposed for only a few feet vertically and overlain by current-bedded deposits, in some exposures reaching a considerable thickness, such as are illustrated in Pirsson and Schuchert's "Textbook of Geology," Part I, Fig. 95. 1929 Edition. It is true, however, that current-bedding predominates in a majority of the exposures. The writer has roughly estimated at 25 per cent. the proportion of exposures showing undoubted deltaic structure, whereas Professor Johnson would make the figure much lower.

As far as the lake- or stream-origin of a considerable part of the material composing the terraces in the Connecticut and Quinnipiac valleys is concerned, the presence of varved clays and silts in quantity beneath the sands in the lower terraces seems clearly to indicate lacustrine deposition. In at least two excellent exposures the clays grade upward through

varved silts into sands, which in turn exhibit delicate current-bedding. A detailed and specific study of the relation of clays to sands throughout the valley might bring to light important additional data.

The facts indicated by Professor Johnson involve significant reinterpretations in the conclusions reached earlier by the writer, but they do not appear to the writer to preclude the belief that the lower terraces like those at higher elevations were formed while remnants of the last ice sheet still lay in the valley. The discrimination of topographic features whose relief is scarcely perceptible or imperceptible to the eye is admittedly a difficult matter and it is to be hoped that further study may establish more clearly the details of the late-glacial history of the Connecticut Valley.

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## SCIENTIFIC APPARATUS AND LABORATORY METHODS

### A MODIFICATION OF THE OSBORNE-MENDEL SALT MIXTURE

NUTRITION workers who have used the Osborne-Mendel salt mixture<sup>1</sup> in the preparation of experimental diets for rats will agree that this is a bothersome mixture to prepare. Not only must great care be exercised in the addition of the strong acids to the carbonate mixture, but a slow evaporation process is necessary. The removal of the hard mass of dehydrated salts and subsequent grinding present further difficulties.

The authors have developed a salt mixture which, in so far as the metallic elements and mineral acids are concerned, is of the same composition as that of Osborne and Mendel. The mixture is prepared from readily available salts, and requires no evaporation or dehydration. Its content of water of crystallization is slightly higher than that of the Osborne-Mendel mixture. The latter, when prepared according to the original directions (in the proportions required for 10 kilograms of diet), yields about 435 gm. of dried mixture, whereas the equivalent weight of F. R. L. mixture here described is 480.5 gm. Hence in experimental diets prescribing 4.0 per cent. of the Osborne-Mendel salt mixture, 4.4 (or 4.5) per cent. of the F. R. L. salt mixture may be substituted.

Protracted feeding experiments in which the two salt mixtures were fed to divided litters of albino rats, both consecutively and in parallel, showed no differences in growth response.

The composition of the F. R. L. salt mixture is as follows:

<sup>1</sup> Osborne and Mendel, *J. Biol. Chem.*, 15, 311, 1913; 37, 557, 1919.

Ca Citrate . 4 H <sub>2</sub> O .....	309.67	
Ca (H <sub>2</sub> PO <sub>4</sub> ) <sub>2</sub> · H <sub>2</sub> O .....	113.25	
K <sub>2</sub> HPO <sub>4</sub> .....	219.72	
KCl .....	125.29	
NaCl .....	77.41	
CaCO <sub>3</sub> .....	68.90	
MgCO <sub>3</sub> .....	33.43	
MgSO <sub>4</sub> (anhydrous) .....	38.50	
Fe Citrate 1½ H <sub>2</sub> O .....	94.18	} 13.80
NaF .....	3.68	
MnSO <sub>4</sub> .....	1.17	
K <sub>2</sub> Al <sub>2</sub> (SO <sub>4</sub> ) <sub>4</sub> · 24 H <sub>2</sub> O .....	0.67	
KI .....	0.30	
	100.00	
		1,000.00

The weighed quantities of salts are thoroughly mixed (a McClellan batch mixer is recommended), and then finely ground in a steel mill.

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### A STAIN FOR FIBRIN, GRAM POSITIVE BACTERIA AND BASAL BODIES IN TISSUES

THIS stain is a modification of the Weigert and Gram-Weigert methods for fibrin and gram positive bacteria, respectively.

Tissues are fixed in Zenker's solution (with 5 per cent. acetic acid) or Zenker-formalin (90 cc Zenker's plus 10 cc of 10 per cent. formalin); they are mounted in paraffin and sectioned at 5 μ. After a very light hematoxylin stain they are thoroughly washed in tap