

### Effect of Light on the Reducing Substance (Vitamin C ?) in Milk

It has been reported in a previous letter<sup>1</sup> that milk which originally gives a positive vitamin C titration when the method of Birch, Harris and Ray<sup>2</sup> is applied fails to reduce the indophenol reagent after a short exposure to light (direct sunlight being excluded).

We have found at present that the property to reduce the reagent may be restored to about 90 per cent of the original value after short exposure to light (not more than 1 hour under our experimental conditions) by treating the milk with hydrogen sulphide and removing the latter from the trichloroacetic acid filtrate in a way similar to that used by Tillmans, Hirsch and Dick<sup>3</sup> and Johnson<sup>4</sup> for the regeneration of reversibly oxidised lemon juice.

Longer exposures to light entail greater irreversible losses. Thus, after six hours, the hydrogen sulphide treatment restores only little more than half of the original value.

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<sup>1</sup> Mattick and Kon, *NATURE*, **132**, 446, Sept. 16, 1933.

<sup>2</sup> Birch, Harris and Ray, *Chem. Ind.*, **62**, 159; 1933. *Biochem. J.*, **27**, 59; 1933.

<sup>3</sup> Tillmans, Hirsch and Dick, *Z. Unters. Lebensmitt.*, **63**, 267; 1932.

<sup>4</sup> Johnson, *Biochem. J.*, **27**, 1287; 1933.

### The Ridge in the Indian Ocean between Chagos Is. and Socotra

IN *NATURE* of July 7, p. 29, Dr. Hans Pettersson proposes that the submarine ridge running across the north-east Indian Ocean should be named after the late Prof. Johannes Schmidt. It should be pointed out, however, that the ridge in question has been baptised by Schmidt himself *Carlsbergryggen* (Carlsberg Ridge), the name taken from the Carlsberg Foundation, which fund made it possible for Prof. Schmidt to carry out the circumnavigation with the *Dana* (*vide* "Dana's Togt omkring Jorden 1928-1930", Copenhagen 1932, p. 255, fig. 198 B).

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THE main reason why the name of "Johannes Schmidt Ridge" is preferable to that of "Carlsberg Ridge" appears to me to be that the former name conforms better with the traditions of oceanographical science than the latter. Ridges or depressions of the ocean floor have so far, where a geographical name already existing has not been used, almost exclusively been named, either after the ship from which they were discovered, or after some famous seafarer or investigator. There are, it is true, instances where geographical discoveries have been named after individuals or institutions in recognition of financial support. But in the present case, dealing as we are with one of the main features of the earth's crust, the name of its discoverer appears most appropriate, a name which Dr. Schmidt's modesty would, needless to say, have precluded him from putting forward himself.

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### Lipolysis as a Source of Mitogenetic Radiation

AMONG the fermentative systems studied mitogenetically, the processes of glyceride hydrolysis, an important and widespread reaction in organisms, have hitherto not been examined. I have therefore examined lipolysis as a source of radiation. The methods of investigation are fully described in Prof. Gurwitsch's recently published monograph<sup>1</sup>.

The following systems have been investigated: (1) tributyrin and monobutyryn from serum or pancreatic lipase; (2) triolein and lipase (pancreatic); (3) castor oil and ricinase (from *Ricinus* beans).

The spectral analysis has been carried out of the splitting of monobutyryn by pancreatic lipase. The diagram of the spectrum reproduced (Fig. 1) is based on more than two hundred experiments. The spaces, that is, the absence of radiation, correspond to differences between the induced reaction and the control and on an average do not exceed 3 per cent. The induction effects, where the average values have exceeded 15 per cent and in the majority of cases 20 per cent, correspond to the black bands of the diagram. Comparing Fig. 1 with the spectra of fermentative processes hitherto studied and published, we find that the spectrum of lipolysis (broken up into strips of 10 Å.) has no components coincident to spectra already known.



Fig. 1.

We have also succeeded in showing that tributyrin, triolein and castor oil emit secondary radiation when irradiated by the monobutyryn system.

In a short series of experiments, we have made an attempt at applying our results to the analysis of biological processes, blood being taken as the subject. In five cases out of six we have discovered the lines corresponding to the lipolytic spectrum.

Full details of our investigations will be published elsewhere.

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<sup>1</sup> "L'Analyse mitogénétique spectrale". Paris: Hermann et Cie, 1934.

### Vibrations of the Ice-Cap of Polar Seas

IN the course of the Polar expedition on the S.S. *Cheluskin* in the Chukchi Sea, 1933-34, I noted a very interesting phenomenon, concerning which I have been unable to find any descriptions in the literature available to me.

The solid ice-cap of the sea, which represents, as it were, an immense elastic plate on a liquid foundation, is in a state of perpetual vibration. Though I had no special seismic apparatus at my disposal, I was nevertheless able, by means of very primitive hand-made instruments, to detect and roughly to measure these vibrations. They proved for the most part to be caused by the wind, and the direction of the greatest amplitudes tallied with the direction of the prevailing wind. A few cases of considerable