

Chemical Contents of Scallops
(*Pecten jacobaeus*)

by

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The present paper deals with the study of the chemical contents of the scallop, carried out from November 1952 to October 1953. Samples were taken for analysis about every fortnight.

In each case the length and the width of the shell were measured. The length was taken as the maximum distance from umbo to the opposite border of the shell. The width was taken as the maximum distance perpendicular to the length. Each specimen was firstly weighed "in toto" and the weight of the fresh meat was calculated as the difference between total weight and the shell weight.

In each sample the content of water, fat, proteins and ashes were studied, both for the body as a whole and separately for the adductory muscle, hepatopancreas, male and female glands and mantle. Each valuation was made dublicately.

The width of the shell is related to the length according to the following equation:

$$W = 1'216.L - 0'023$$

where W stands for shell and L for shell length.

The weight of the shell is related to the length according to the following equation

$$w = 0'4596.L^{2'3697}$$

where w stands for shell weight and L as before.

The relation between fat and proteins, for the body as a whole, is shown in curve 1 of figure 1. It will be noticed that there is a maximum value placed in the first half of February and a minimum value is placed in middle June. The value given for the second half of June is probably anomalous, corresponding to a sample that owing to its origin or to some other cause cannot be compared with the other samples.

The relation between water content and proteins, for the body as a whole too, is shown in curve 2 fig.1; it is almost constant throughout the whole period under study, which means that the proteins are always accompanied by the same amount of water.

The percentage values of protein content, as referred to total dry weight, are shown in curve 3, fig.1. It will be noticed that there is a maximum value placed in the second fortnight of April and a minimum value placed in the second fortnight of November.

The percentage values of fat content, as referred to fresh weight, are shown in curve 4, fig.1; there is a maximum value placed in the first fortnight of June, and afterwards, in the second fortnight of the same month there is the sudden, probably abnormal, increase quoted above.

If the percentage values of fat for the different body parts are compared, it is noticed that the fat percentage value is higher in the hepatopancreas than anywhere else, following by decreasing order the values for the female and male gland, adductory muscle and mantle.

The percentage value of protein content shows its maximum value in the male gland, followed by the adductory muscle, the female gland, the hepatopancreas and the mantle.

The ash values vary very little throughout the year. The percentage ash value is higher for the body as a whole than for the adductory muscle. The water content is higher in the mantle than in the body as a whole.

- Bibliografía: PRIOL E. 1930. La Coquille Saint-Jaques (*Pecten maximus*) Revue des Trav. de l'Office des Pêches Marit. Tome III, Fasc 2, 143-173.
I. RIBAS y D. VASQUEZ Gesto-Estudio de la mineralización de la sustancia orgánica en el método de Kjeldahl-Información de Química Analítica Vol. VII, 2.

