

**CN analyses of fish meal with the vario MACRO cube**

The protein content of fish meal is a quality criterion. Therefore, the analysis of this parameter asks for highest accuracy and precision of the data. The vario MACRO cube CN is a macro analyzer designed for the fast and accurate determination of N/protein in plant material, food and feed as an environmentally friendly alternative to the classical Kjeldahl method.

*Task*

Instrument	Sample
<b>Basis:</b> vario MACRO cube	<b>Quantity:</b> 100 - 200 mg
<b>Mode:</b> CN	<b>Consistency:</b> powder
<b>Periphery:</b> manual pressing tool	<b>Preparation:</b> not necessary

*Specification*

Three different fish meal samples have been analysed using the vario MACRO cube in CN mode. The samples were weighed into tin foil cups and analysed five times. The average CN content and its absolute standard deviation are given below.

*Procedure*

A protein factor of 6.25 is used.

sample	C [%]	N [%]	Protein [%]
fish meal-1	43.9 ± 0.03	9.97 ± 0.016	62.3 ± 0.10
fish meal-2	42.4 ± 0.17	11.4 ± 0.064	71.4 ± 0.40
fish meal-3	39.6 ± 0.15	10.0 ± 0.049	62.6 ± 0.31

*Results*

The CN content of all fish meal samples could be analysed with a very high precision.

The results show that the vario MACRO cube is very suitable for applications in the fish meal industry.