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Analytical study of the determination of flavonoids in Black Sea algae

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Abstract This paper reports the results of flavonoids determination expressed in rutin from marine algae. For this purpose, rutin and rutin - $AlCl_3$ complexes were spectrophotometrically studied in three domains of ligand concentrations: ligand C_{rut}=1.34-6.7mg/L, 4-20mg/L and 2-32mg/L.
The precision, accuracy, specificity, and the quantification limit of the method were verified. The calibration curve traced for the concentrations domain 2-32mg/L rutin - $AlCl_3$ was used to determine the flavonoid content expressed in rutin of Black Sea algae.
The flavonoid content of the samples expressed in mg rutin/100g dry alga differs significantly: *Ulva lactuca*: 0.65mg/100g, *Cystoseira barbata* L: 2.35mg/100g, *Cladophora vagabunda L:* 6.14mg/100g, and *Enteromorpha intestilalis*: almost 23mg/100g dry alga.
The results of this study join other determinations applied to the same samples for the characterization of the active principles in marine algae, in order to use them for therapeutic purposes.

Keywords: rutin, marine algae, complexation, flavonoids

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