TITLE: Determination of the ideal season to collect of two seaweeds to find the best physical and chemical characteristics in northern Rio Grande do Norte

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INTRODUCTION: Seaweeds have been used for centuries not only as food but also because of their bioactive compounds. The nutrient compositions of seaweeds are different depending on species, habitats, environmental conditions and drying processes.

KEYWORDS: seaweed, physical and chemical characteristics, time of drying

OBJECTIVES: The aim of this work is to determinate of the ideal season to collect and the best time of drying of two seaweeds, *Gracilaria domingensis* and *Botrycladia Occidentalis*, to find the greatest physical and chemical characteristics.

MATERIAL AND METHODS: Seaweeds were collected from the Rio do Fogo bay in northern Rio Grande do Norte on spring, autumn and winter. Protein, ash, lipid and moisture contents of seaweeds were determined as recommended by the Institute AOAC (2011). The mean values of each biochemical component were subjected to one-way ANOVA.

DISCUSSION AND RESULTS: The time of drying for *Gracilaria domingensis* was 300 minutes, at this time we found moisture of 0.52 %. The level of lipid (4.33 % - 1.98 %), protein (15.18 % - 6.99 %) and ash (28.32 % - 18.94%) had a reduction on autumn. The only level that increase on this season was the level of carbohydrate (51.65 % - 71.56 %). For *Botrycladia Occidentalis* the time was 420 minutes, we found moisture of 1.94 %. The level of lipid (5.11 % - 2.67 %), protein (13.99 % - 11.67 %) and ash (55.19 % - 47.64 %) had a reduction on autumn. The only level that increase was the level of carbohydrate (23.77 % - 52.36 %). We observed that the concentration of biological compounds varies with species and seasons.

CONCLUSION: The development of new drugs using these algae could be a possibility, especially with the protein and lipid level on both species during winter and spring. On the other hand the highest carbohydrate contents obtained on autumn can be used for fermentative production of bioethanol.

REFERENCES: