

## Impact of Salinity, Ammonium and Cytokinin on Biomass and Agar Content of Red Alga *Gracilaria corticata*

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### Abstract

Effect of salinity, ammonium and cytokinin on biomass and the content of agar in *Gracilaria corticata* algae were evaluated in a period of 42 days under laboratory condition. The alga *G. corticata* was sampled from coasts of Bostaneh port in Hormozgan province in June 2009. The algae were raised in aquariums 40.30.60 cm with 20 liter capacity, by suspension method in 3 replicates under light intensity of 3300 lux and 25°C temperature condition. The algae were cultured under salinities 25, 35 and 45 PPT, ammonium concentrations (0.00, 0.001 and 0.002 gram per liter) and cytokinin (0.01, 0.001 and 0.0001 mol). The algae were harvested once a week and weighted. At 6 weeks of experiments, the algae were collected, dried and weighed. The highest biomass of *G. corticata* was at 25 PSU (4.58 grams), 0.01 mol cytokinin (14.88 gr) and 0.002 mol ammonium (26.34 gr). Maximum level of agar was observed in ammonium concentration of 0.002 equal to 32.56 percent. The results of this work showed that *G. corticata* is one of the commercial algae in the world and this alga needs to be cultured near estuaries with high amount of ammonium.

Keywords: *Gracilaria corticata*, Cytokinin, Salinity, Ammonium, Agar.

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