

## Optimization of extracting agar of Persian Gulf's *Gracilaria corticata* algae

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### Abstract

Agar extraction for *Gracilaria corticata* by investigating the effects of various extraction variables such as soaking time, soaking temperature, seaweed to water ratio, extraction temperatures and extraction time and also Alkali treatment method. The results showed that agar yield was significantly affected by all the tested variables. The agar yield was maximized when extraction process was carried out with 1 h soaking time at 40° C with seaweed to water ratio of 1:100 and extracted for 1.5 h at 90° C. the result of alkali treatment showed that alkali treatments at 5% is the best concentration and 80 °C is the best alkali temperature for agar extracting. Also some of chemical and physical properties of agar such as gel strength and sulfate content were determinate. The result showed negative correlation between gel strength and sulfate content of Agar.

Keywords: *Gracilaria corticata* algae, agar extraction, gel strength, Persian Gulf

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