



Removal of inorganic arsenic species in seaweed *Gracilaria fisheri* by using typical edible eluents

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The removal of bound inorganic arsenic species, i.e. As(III), As(V) and inorganic As(total) from seaweed *G. fisheri* using typical edible eluents by batch method was studied. The method is based on the desorption mechanism of inorganic arsenic species using different types of edible eluents, namely, acetic acid (HOAc), citric acid (CTA), sodium bicarbonate (NaHCO₃), ethylenediaminetetraacetic acid (EDTA), and chitosan (CTS). Desorption process was performed by shaking mixtures of 1 g seaweed in 75 mL eluent at 100 rpm for 2 h at room temperature. The concentrations of eluents were controlled at 0.1 M except for 0.2% (w/v) of CTS. From the study, results show that EDTA solution was the most effective eluent to remove the contaminated As(III), As(V) and inorganic As(total) from seaweed *G. fisheri* with the removal efficiency up to 100, 89.43 and 83.93% respectively.

Keywords: Inorganic arsenic species; edible eluent; Seaweed *G.fisheri*