

**Keywords:** *Chlorella* (*Chlorella*); *Bacillus* (*Bacillus subtilis*); *A. niger*; *C. ophioglossi*; *P. chrysosporium*

## Introduction

*C. ophioglossi* [1-4], *B. subtilis* [5-7], *C. niger* [8-11], *A. niger* [12], *A. niger* [13-16], 100% [17-19], [18,20-22], [23,24].

*F. oxysporum* [25-30]. *I. obliquus* [31-33]. *H. ruber* [34-40].

*H. ruber* [41]. *C. ophioglossi*

*C. ophioglossi* [42-44].

## Materials and Methods

### Study domain and sample collection

*B. subtilis* [45]. *O. sp.* [46]. 2012 [47]. 2013. *D. sp.* (DO) [48]. *A. niger* [49]. *C. ophioglossi* [50]. *E114* (113.56', 54.63'~) *N23* (22.33' 43.79'~) (H: 4.4, 5.9 ).

### Treatment methods of the polluted water and detection parameters of the water quality

10 [51]. 8 [52]. (DO), ( ), (COD), (NH<sub>3</sub>-N), (N), (P), DO

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(HACH, HD3000 A). O<sub>2</sub> concentration was measured by COD, H<sub>2</sub>O<sub>2</sub> and H<sub>2</sub>S. The water was incubated at 30 °C in the dark for 24 h. The optical density (OD) was measured at 600 nm.

### Active materials–bacteria–chlorella composited one another

The active materials were composed of one another (Table 1). The composites were AB, BC, AC, ABC, and B. The concentration of the composites was 10 mg/L. The water was incubated at 30 °C in the dark for 24 h. The optical density (OD) was measured at 600 nm. The removal rate (RR) of polluted matter was calculated as follows: RR = (C<sub>0</sub> - C<sub>t</sub>) / C<sub>0</sub> × 100%. C<sub>0</sub> is the initial concentration of the polluted matter, and C<sub>t</sub> is the concentration of the polluted matter at time t. The removal rate (RR) of polluted matter was calculated as follows: RR = (C<sub>0</sub> - C<sub>t</sub>) / C<sub>0</sub> × 100%. C<sub>0</sub> is the initial concentration of the polluted matter, and C<sub>t</sub> is the concentration of the polluted matter at time t.

## Results

### Active materials–bacteria-chlorella purified the polluted coastal waters

The active materials purified the polluted coastal waters (Figure 1-3). The removal rate (RR) of polluted matter was calculated as follows: RR = (C<sub>0</sub> - C<sub>t</sub>) / C<sub>0</sub> × 100%. C<sub>0</sub> is the initial concentration of the polluted matter, and C<sub>t</sub> is the concentration of the polluted matter at time t. The removal rate (RR) of polluted matter was calculated as follows: RR = (C<sub>0</sub> - C<sub>t</sub>) / C<sub>0</sub> × 100%. C<sub>0</sub> is the initial concentration of the polluted matter, and C<sub>t</sub> is the concentration of the polluted matter at time t.

### Removal rate (RR) of polluted matter

groups	1	2	3	4	5
composites	AB	BC	AC	ABC	Negative control
Concentration (ppm)	10	10	10	10	Untreated water

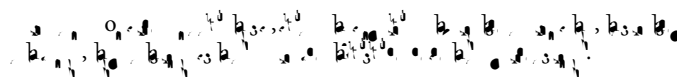
**Table 1:** Active agents-bacteria-chlorella two combined and three combined treated the coastal polluted water respectively.

The removal rate (RR) of polluted matter was calculated as follows: RR = (C<sub>0</sub> - C<sub>t</sub>) / C<sub>0</sub> × 100%. C<sub>0</sub> is the initial concentration of the polluted matter, and C<sub>t</sub> is the concentration of the polluted matter at time t. The removal rate (RR) of polluted matter was calculated as follows: RR = (C<sub>0</sub> - C<sub>t</sub>) / C<sub>0</sub> × 100%. C<sub>0</sub> is the initial concentration of the polluted matter, and C<sub>t</sub> is the concentration of the polluted matter at time t.

### Effects of treating the polluted water with active materials-bacteria- chlorella composited one another

The effects of treating the polluted water with active materials-bacteria- chlorella composited one another were as follows: RR = (C<sub>0</sub> - C<sub>t</sub>) / C<sub>0</sub> × 100%. C<sub>0</sub> is the initial concentration of the polluted matter, and C<sub>t</sub> is the concentration of the polluted matter at time t. The removal rate (RR) of polluted matter was calculated as follows: RR = (C<sub>0</sub> - C<sub>t</sub>) / C<sub>0</sub> × 100%. C<sub>0</sub> is the initial concentration of the polluted matter, and C<sub>t</sub> is the concentration of the polluted matter at time t.

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94.12%, AC, 77.73%, 86.03%, (HMF) ABC, 98.21%, AB, 94.64%.

## Discussion

### Coastal pollution control is a complex problem

P 46 10

### Secondary pollution is the most worrying problem

H

### In the future, biological treatment to wastewater is the goal

E

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