

Bioethanol production from the acid hydrolysate of the carrageenophyte *Kappaphycus alvarezii* (cottonii)

Publons ID	20523309
Wos ID	WOS:000306219900025
Doi	10.1007/s10811-011-9705-0
Title	Bioethanol production from the acid hydrolysate of the carrageenophyte <i>Kappaphycus alvarezii</i> (cottonii)
First Author	
Last Author	
Authors	Meinita, MDN; Kang, JY; Jeong, GT; Koo, HM; Park, SM; Hong, YK;
Publish Date	AUG 2012
Journal Name	JOURNAL OF APPLIED PHYCOLOGY
Citation	102
Abstract	Seaweed resources can be used as raw materials to produce bioethanol, a renewable biofuel, to overcome fossil fuel depletion and environmental problems. Red seaweeds possess high amount of bioethanol-producible carbohydrates. Among 55 species tested, the carrageenophyte <i>Kappaphycus alvarezii</i> (also known as cottonii) was selected as the best resource for bioethanol production. This species is one of the most abundant and easily cultured red seaweeds. The main components of carrageenan are d-galactose-4-sulfate and 3,6-anhydro-d-galactose-2-sulfate, which are potentially fermentable d-typed carbohydrates. The seaweed powder was hydrolyzed with 0.2 M sulfuric acid and fermented with brewer's yeast. The ethanol yield from the <i>K. alvarezii</i> hydrolysate was 0.21 g g(-1)-galactose, which corresponded to a 41% theoretical yield. It revealed a relative ethanol production of 66% comparing to that of pure galactose.
Publish Type	Journal
Publish Year	2012
Page Begin	857
Page End	862
Issn	0921-8971
Eissn	1573-5176
Url	https://www.webofscience.com/wos/woscc/full-record/WOS:000306219900025
Author	Prof. Dr MARIA DYAH NUR MEINITA, S.Pi