PANNELISTS ACCEPTANCE AND NUTRITIVE VALUE IN JUICE OF RED SEAWEEDS *Halimenia Durvilae*

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- **INTRODUCTION**

Macroalgae have been reported to have more then 2400 natural poducts of profitable significance in pharmaceutical, biomedical and nutraceutical industries.

They have been utilized as ingredients in human and animal food preparations owning to their outstanding source of bioactive compounds which consist of sulfated polysaccharides, polyphenols, diterpenes, protein, essential fatty acids, dietary fiber vitamins and minerals ((Chinnadurai et al., 2013, Özkan and Bilek, 2014, Chandihi *et al.*, 2007).

Although seaweeds possess extensive applications in food and pharmaceutical industries, many types of seaweeds in Indonesian area are still unexplored. *H.durvilae* is a red algae mostly grows in tropical region.

In South East Asean, *H. durvilae* is cultivated used by human as food, it is usually served raw as salad. Hence, the present study was proposed to handling and process to make juice. *H.durvilae* which grows plentifully in North Sulawesi.

Metodology

- **Sampel**
- Red seaweed *Halimenia durvilae was collected* From North Sulawesi Coastal Area of Indonesia. The sample was thoroughly was with seawater and fresh water to remove epiphytes and dirt particles. The sample delivery to laboratory and were stored at -20°C.
- Pineaple was pealed and washed with salt water then rinsed with fresh water

I. The treatment of the research consisted of:

- *A. Consentration of seaweed and pineapple a1= 70:30 and a2= 60:40)*
- *B. Consentration of sugar*

  b1 = 55%; b2 = 60% and b3 = 65%.

II. The analysis of panelists acceptance were odour, taste, and colour and the

Analysis of nutritive value were protein, fat, dietary fiber and ash.

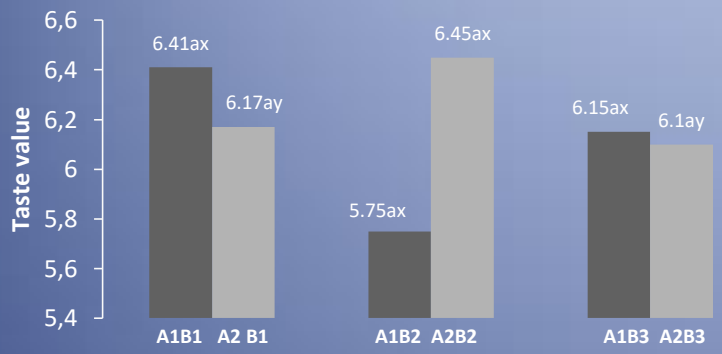
Formulation of seaweed (*H.durvilae*) Juice

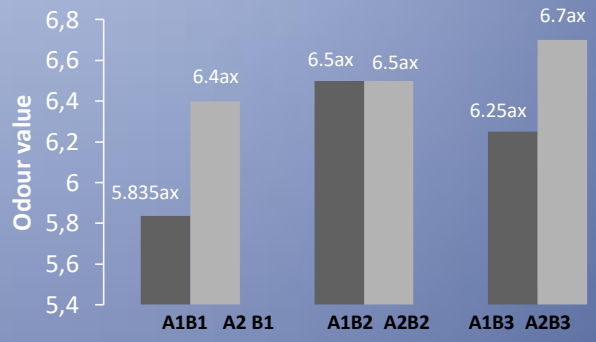
No	Treatment	Seaweed and pineaple	Sugar (%)
1.	A1B1	70 : 30	55
2.	A1B2	70 : 30	60
3.	A1B3	70 : 30	65
4.	A2B1	60 : 40	55
5.	A2B2	60 : 40	60
6.	A2B3	60 : 40	65

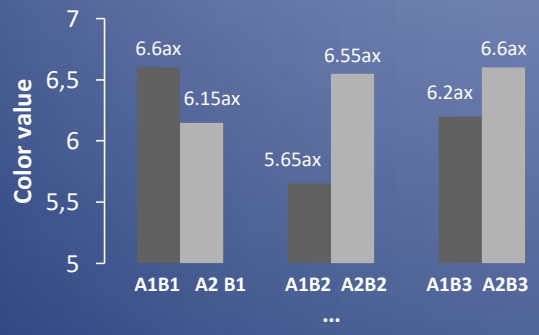
Prosedure of research

- 1. seaweed and peaple blend separately.
- 2. Seaweed, pinaple and sugar mixed and then boiled for 15 minute, after that poured with lemon extract and boiled again. The juice was stored in room temperature for future analizis.

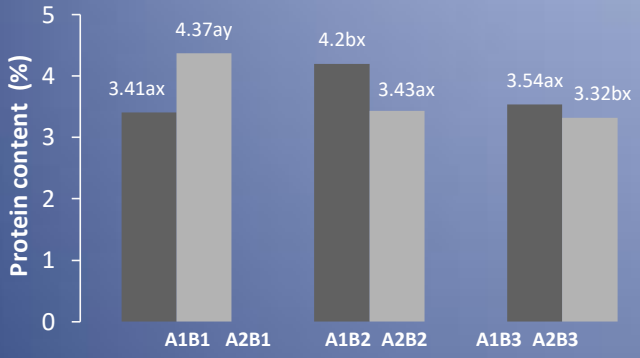
Sensoric value

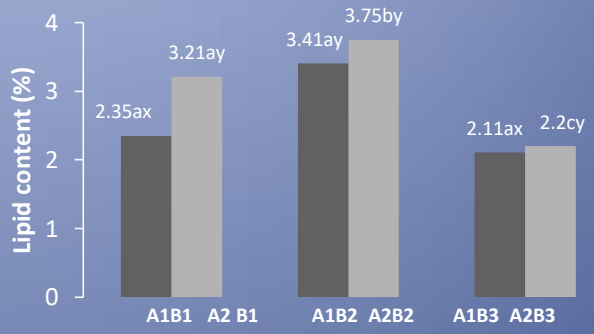


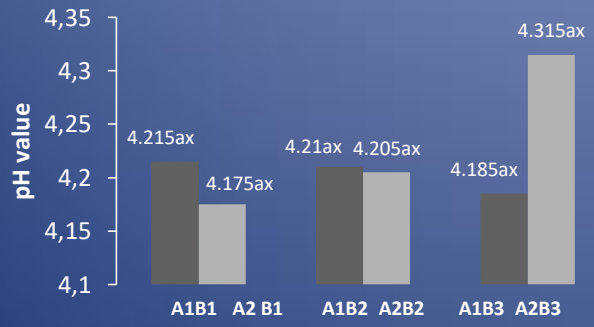


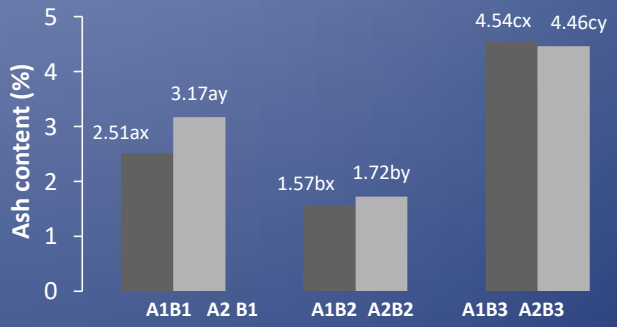


Nutritive value









- The sensoric test show that the treatment aproximately accepted by panelist with the value 5.76 – 6.7
- The nutritive value aproximately are protein 3.32-4.37, Fat 1,105-3.75, mineral 2.56-75%.
- Pineaple and lemon cause the taste and odour of seaweed in juice is significan. Pinaple have strong taste component, was identified as metil-3-metiltiopropionat and etil-3-methiltioropionat. This component can netralize the sweet taste. (Morton and Macleod 1982).

- Lemon content volatile compound that solute in water. Lemon have odour: sharp, harsh and pungent, sweet fresh, terpen parfume. And taste: sharp, astringen, green, slight fragrance, fresh after taste segar and cool. The major componen of limone are d-limonene, α-pipene, β-pipene, dipentene, β bisabolene, terpinolene, etral, linalool, geraniol, terpineol, borneol, terpinene-4-ol (Heath and Pharm, 1977).

The red seaweeds are a diverse eukaryotic lineage, characterized by accessory photosynthetic pigments phycoerythrin, phycocyanin and allophycocyanins arranged in phycobilisomes.

Seaweed juice of H. durvilae is function as source of mineral and PUFA. The main mineral content of seaweed are iodine and calcium. The fat content of this jiuce are 2.00-3.75%. kalsium (Fitton, 2005).

- Red seaweed and brown seaweed contain high amount of fatty acid with 20 carbon such as eikosapentanoic acid and arachidonad acid (Burtin, 2005). These fatty acid have function to prevent inflamatory and artery schelerosis diseases.

Conclution

- **Formulation of juice which was processed from H. durvilae mixed with peaneple and lemon juice showed high sensoric test, there for it can be produced as fresh drink as a source dietary fiber, mineral and PUFA.**