

offlour *K. alvarezii*. According to Maharani (2009) in Larissa (2017) flour *K. alvarezii* can increase fiber levels in food. The shrimp nugget fiber content of 20% treatment was 1.20%. One serving of shrimp nuggets if weighing 100 g, can help provide fiber intake of 1200 mg / 100g, while according to Rahmah et. al (2017) calcium in adulthood is 25000 mg to 30000 mg / day, so as to meet the calcium requirement the shrimp nuggets with the addition offlour *K. alvarezii* as much as 2083.33 mg to 2.500 mg per day

Water Content

Based on observations shrimp nugget water content with 0% treatment (control) has a water content of 35.50% while the addition of flour treatment *K. alvarezii* 20% has a water content of 34, 90%, this shows that the water content of shrimp nuggets with 0% treatment (control) is greater than 20% shrimp nugget treatment. The decrease in water content in nuggets shrimp caused by the addition offlour *K. alvarezii* has water binding properties (Listiyani 2014) Based on the National Standardization Agency (01-775-2013) the maximum water content in fish nuggets is 60%. Based on these data the water content of the shrimp nuggets produced still meets the water level requirements of the nugget, so that it can be said that the shrimp nugget with the addition offlour *K. alvarezii* by 20% still meets the quality requirements nugget based on the BSN.

3.4 The Decision-Making Using the Bayes Method

Based on the calculation results of the appearance, aroma, texture and flavor of the *nugget*, the highest number of criteria weight was obtained at the flavor parameter of 0,56 means that the taste parameter is the most important assessment or as the main consideration according to panelists in choosing shrimp *nugget*. The second most important parameter is the texture then appearance and aroma in a row with criteria weight values of 0.19, 0.16 and 0.10. has the highest criteria weight value, so if the taste of shrimp nuggets is not liked by panelists then the product will not be accepted or will be rejected by the panelists although other assessments are good. Method Bayes is one of the techniques that can be used to analyze the best decision-making of a number of alternatives with the aim of producing optimal results. Optimal decision making will be achieved when considering various criteria (Marimin 2004). The results of calculations in determining the best treatment using the Bayes method by considering the criteria for appearance, aroma, texture and taste of shrimp nuggets are presented in Table 6.

Table 6. Value of Criteria for Shrimp Nugget

Criteria	Weight Criteria
Appearance	0.16
Aroma	0.10
Texture	0.19
Taste	0.56

According to the calculation to criteria of appearance, aroma, texture, and taste of shrimp nugget, the results shows that taste is the most important parameter to be assessed according to panelists by the value of 0.58. Taste is the main consideration according to panelists to choose shrimp nugget by addition of *K. alvarezii*, so shrimp nugget was not likeable by the panelists then the products will not be accepted or will be rejected by panelists although the other assessment is well scored. The calculation results will determine the best treatment with considering the criteria of appearance, aroma, texture, and taste of shrimp nugget shown in table 7

Table 7. Decision Matrix of Shrimp Nugget with Bayes Method

The Addition of <i>K. alvarezii</i> (%)	Criteria				Alternatif Value	Priority Value
	Appearance	Aroma	Texture	Taste		
0%	7	7	7	7	7,00	0,19
15%	7	7	7,7	8	7,56	0,21
20%	7	7	7	9	8,12	0,22
25%	7	7	7	7	7,00	0,19
30%	7	7	7	7	7,00	0,19
Value Criteria Weight	0,16	0,10	0,19	0,56	36,86	1,00

According to calculation using Bayes Method, the result shows that treatment C is the most preferred product by panelists with alternative score in the amount of 8.12 and priority value of 0.22 which is the highest value amongst other treatment. Even so, shrimp nugget with the addition of 30 % *K. alvarezii* is still acceptable and likeable by panelists.

CONCLUSION

Based on the research results of adding flour *K. alvarezii* to increasing levels of fiber shrimp nugget based on preference level, all treatments adding flour *K. alvarezii* to shrimp nuggets were favored by panelists, but the treatment of adding *K. alvarezii* by 20% of shrimp weight was preferred than any other treatment on shrimp nuggets. The shrimp nuggets 20%

have the elasticity with a value of 5 or very chewy. The fiber content is 1.2% while the water content is 34.9%, then there are organoleptic characteristics with a median appearance of 7.8 (preferred), aroma 7.7 (preferred), texture 7.9 (preferred) and taste 8.3 (preferred).

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