

Daniel Tua Purba. J1A117029. "The Effect of Concentration of Areca Seed Extract (*Areca Catechu* L.) on Physicochemical and Sensory Properties of Pineapple Juice (*Ananas Comosus* L. Merr) as a Functional Beverages. Supervisor: Addion Nizori, S.Tp., M.Sc, Ph.D and Dian Wulansari S.TP., M.Si

ABSTRACT

Functional Beverages is processed beverages containing one or more beverages components which, based on scientific studies, have certain physiological functions beyond their basic functions, proven to be harmless and beneficial to health. Areca plant are one of the oldest known natural ingredients as functional food sources. The tannins contained in areca seeds could cause chelate taste and volatile compounds that can cause unpleasant aromas, so their application in product must be controlled. Pineapple is a local fruit that can grow well in Indonesia and in general, the taste of pineapple is liked by the public.

This study used a completely randomized design (CRD) consisting of 4 levels of treatment, namely the concentration of areca seed extract 0%, 1%, 2%, and 3% (v/v). Each treatment was repeated 5 times, so there were 20 experimental units. The results showed that the concentration of areca seed extract had a significant effect on the total soluble solids, the degree of warmth L^* and a^* , antioxidant activity, total tannin, vitamin C levels, and had no significant effect on the acidity (pH), and had a characteristic taste of pineapple chelate until the taste of pineapple is slightly chelate, the color is brown to very brown, it has a pineapple aroma to a strong pineapple aroma, with a weak aftertaste to a slightly strong after taste.

The best treatment in formulation pineapple juice with areca seed extract was the concentration of 2% areca seed extract containing 80,02% antioxidant activity, vitamin C 104,68 mg/100 g, total tannin 99,62 mg TAE/mL, total value dissolved solids 20,980brix, color degree value $L^*29,48$, $a^*7,06$, $b^*20,80$, acidity value (pH) 3,37, has a slightly brown color, has a pineapple aroma (methyl ester and ethyl ester compounds) , pineapple taste and acrid, and has no aftertaste.

Keywords: Functional beverages, areca seed extract, pineapple juice.