

## Intisari

### Pengaruh Penambahan Kayu Manis sebagai *Masking Agent* dalam Minuman Kakao *Arthrospira platensis*

Minuman kakao yang difortifikasi *Arthrospira platensis* memiliki tingkat penerimaan konsumen yang rendah akibat munculnya rasa pahit dan aroma amis. Metode *masking taste* menggunakan kayu manis dapat digunakan untuk mereduksi rasa dan aroma yang tidak disukai konsumen. Penelitian ini bertujuan untuk mengetahui pengaruh penambahan kayu manis sebagai *masking agent* terhadap karakteristik minuman kakao *Arthrospira platensis* serta membandingkan dengan membandingkan dengan minuman kakao komersial. Rancangan yang digunakan adalah Rancangan Acak Lengkap (RAL) satu faktor dengan 4 level penambahan kayu manis 0,15; 0,3; 0,45; dan 0,6 g dengan rasio perbandingan *Arthrospira* dengan kayu manis 1: 0,1; 1: 0,2; 1: 0,3; 1: 0,4 dan minuman kakao *Arthrospira platensis* tanpa penambahan kayu manis sebagai sampel kontrol. Pengujian dimulai uji pendahuluan yaitu survei persepsi konsumen terhadap minuman kakao komersial dan penentuan merk gula stevia yang digunakan. Pengujian sampel perlakuan meliputi tingkat kesukaan (hedonik), kelarutan, *quantitative descriptive analysis* (QDA) dan *temporal dominance sensation* (TDS). Analisis data menggunakan uji *One Way Anova* 95% dan uji *Duncan's Multiple Range* (parametrik) serta uji *Kruskal Wallis* dan *Mann Whitney* (nonparametrik). Hasil penelitian menunjukkan rasa adalah faktor paling penting untuk menentukan konsumen membeli produk minuman kakao, sedangkan Chocelatos, Delfi, dan Cadbury adalah merk minuman kakao yang paling disukai konsumen. Hasil uji hedonik menunjukkan rasio perbandingan *Arthrospira platensis* dan kayu manis 1: 0,3 tidak mempengaruhi kenampakan, aroma, rasa, dan keseluruhan minuman kakao dengan rerata tingkat penerimaan konsumen antara 3,5-4 (agak suka). Uji TDS pada sampel komersial menunjukkan didominasi rasa dan *aftertaste* manis gula dan gurih susu selama periode pengecapan. Uji TDS pada minuman kakao *Arthrospira platensis*-kayu manis 1: 0,3 pahit *Arthrospira platensis* mampu ditutupi kayu manis pada awal dan akhir periode pengecapan. Dengan demikian, kayu manis dapat dijadikan *masking agent* untuk mereduksi rasa dan *aftertaste* pahit *Arthrospira platensis*, namun belum dapat menutupi pahit *Arthrospira platensis* secara sempurna

Kata Kunci: fortifikasi *Arthrospira platensis*, kayu manis, minuman kakao, *masking agent*, *Temporal Dominance Sensation*

### Abstract

#### The Effect of Additon Cinnamon as an Masking Agent in *Arthrospira platensis* Cocoa Drink

The *Arthrospira platensis* fortified cacao drink has a low level of consumer acceptance due to the of bitter taste and fishy odor. To overcome this limitation, cinnamon as masking agent was used to reduce bitter taste and fishy odor. This study aims to find out the effect of cinnamon addition as a masking agent on the characteristic of *Arthrospira platensis* fortified cocoa drink and to compare the formula with commercial cocoa drinks. Completely Randomized Design (RAL) was used with 4 levels of cinnamon addition which are 0,15; 0,3; 0,45; and 0,6 g with ratio *Arthrospira platensis* and cinnamon 1: 0,1; 1: 0,2; 1: 0,3; 1: 0,4 while without cinnamon addition used as control. The preliminary test on consumer perceptions on commercial cocoa drink by survey and laboratory test to determine of the stevia sugar brand were conducted prior the main research. Test on treatment samples includes hedonic test, solubility, quantitative descriptive analysis (QDA) and Temporal Dominance Sensation (TDS). Data from main research were analysed with One Way Anova 95% and Duncan's Multiple Range (parametric) and Kruskal Wallis and Mann Whitney (nonparametric). The preliminary test result showed that taste is the most important factor for consumers to buy cocoa drink products while Chocolatos, Delfi, and Cadbury were the most preferred commercial cocoa drinks. The result on hedonic test showed ratio of *Arthrospira platensis* and cinnamon 1: 0,3 not affects appearance, aroma, taste, and overall of the *Arthrospira platensis* cocoa drink with average level of consumer acceptance 3,5–4 (rather like). The result of TDS test on commercial cocoa drink sample indicated the taste and aftertaste of commercial cocoa drinks were dominated by sweet sugar and savory milk. In the cocoa drink *Arthrospira platensis*-cinnamon 1: 0,3 cinnamon was able to masked the bitter taste of *Arthrospira platensis* at the beginning and end of tasting period. Thus, cinnamon in this study can be used as a masking agent to reduce the bitter taste and *aftertaste* of *Arthrospira platensis* although has not completely masking the bitterness of *Arthrospira platensis*

Keyword: *Arthrospira platensis* fortification, cinnamon, cocoa drink, masking agent, Temporal Dominance Sensation