

PENGARUH VARIASI PENAMBAHAN SARI WORTEL (*Daucus carota L.*)  
TERHADAP SIFAT FISIK, SIFAT ORGANOLEPTIK DAN KADAR  
VITAMIN A PADA YOGHURT SUSU SAPI SEBAGAI ALTERNATIF  
SUMBER VITAMIN A

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### ABSTRAK

**Latar Belakang:** Wortel (*Daucus carota L.*) memiliki peranan penting bagi kesehatan tubuh, karena kandungan gizi wortel terutama beta karoten merupakan sumber provitamin A. Senyawa beta karoten dalam tubuh diubah menjadi vitamin A yang berperan dalam menjaga pertahanan dan kekebalan tubuh, menjaga kesehatan kulit, paru-paru, organ usus, dan membantu pertumbuhan sel-sel baru. Masyarakat pada umumnya lebih mengenal yoghurt dengan penambahan rasa buah, oleh karena itu dalam penelitian ini peneliti akan memanfaatkan sayur yaitu wortel yang ditambahkan pada yoghurt sebagai alternatif sumber vitamin A.

**Tujuan:** Mengetahui pengaruh penambahan sari wortel pada yoghurt susu sapi dengan variasi penambahan sari wortel meliputi sifat fisik, sifat organoleptik, dan kadar vitamin A.

**Metode:** Jenis penelitian ini adalah penelitian eksperimental semu dengan desain penelitian Rancangan Acak Sederhana (RAS) menggunakan 4 perlakuan dengan penambahan sari wortel yaitu A (0 ml), B (10 ml), C (12,5 ml), dan D (15 ml). Masing-masing perlakuan dilakukan 2 kali ulangan. Analisis data uji organoleptik menggunakan uji statistik *One Way Anova* dengan tingkat signifikansi 5%. Kadar vitamin A diuji dengan metode Spektrofotometri UV-VIS.

**Hasil:** Hasil sifat fisik yoghurt menunjukkan semakin banyak penambahan sari wortel maka warna yoghurt semakin orange pekat dan rasa yoghurt semakin asam. Tidak ada pengaruh variasi penambahan sari wortel terhadap tingkat kesukaan warna ( $p=0,873$ ), aroma ( $p=0,885$ ), rasa ( $p=0,563$ ), dan konsistensi ( $p=0,091$ ) yoghurt sari wortel dengan *probabilitas*  $<0,05$  berdasarkan analisis *One Way Anova*. Kadar vitamin A yang paling tinggi adalah pada penambahan sari wortel sebanyak 15 ml yaitu sebesar 3158,382  $\mu\text{g}/100\text{ g}$  atau 526,397 RE.

**Kesimpulan:** Yoghurt sari wortel yang disukai panelis serta dapat dikembangkan secara sifat fisik, sifat organoleptik, dan kadar vitamin A yaitu yoghurt perlakuan dengan penambahan sari wortel sebanyak 10 ml.

**Kata kunci:** yoghurt, susu sapi, wortel, variasi volume, sifat fisik, sifat organoleptik, dan kadar vitamin A.

*EFFECT OF VARIATIONS IN THE ADDITION OF CARROT JUICE ADDITION  
(Daucus carota L.) AGAINST ORGANOLEPTIC PROPERTIES AND  
NUTRITIONAL VALUE IN COW'S MILK YOGURT AS AN ALTERNATIVE  
SOURCE OF VITAMIN A*

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**ABSTRACT**

**Background:** Carrots (*Daucus carota L.*) have an important role for the health of the body, because the nutritional content of carrots, especially beta carotene is a source of provitamin A. Beta carotene compounds in the body are converted into vitamin A that plays a role in maintaining defense and immunity, maintaining healthy skin, lungs, intestinal organs, and helping the growth of new cells. People in general are more familiar with yogurt with the addition of fruit flavor, therefore in this study researchers will use vegetables that are carrots added to yogurt as an alternative source of vitamin A.

**Objective:** To determine the effects by adding carrot juice to cow's milk yogurt with variations in carrot juice addition includes physical properties, organoleptic properties, and vitamin A levels.

**Method:** This type of research was a quasi-experimental research design with a Simple Randomized Design (RAS) research design using 4 treatments with the addition of carrot juice, namely A (0 ml), B (10 ml), C (12.5 ml), and D (15 ml). Each treatment was carried out 2 times. Analysis of organoleptic test data using the One Way Anova statistical test with a significant rate of 5%. Vitamin A levels were tested by the UV-VIS Spectrophotometry method.

**Result:** The results of the physical properties of yoghurt showed that the more carrot juice was added, the color of the yogurt was more intense orange and the taste of yoghurt was more acidic. There was no effect of variations in carrot juice addition on the level of color favorability ( $p=0.873$ ), aroma ( $p=0.885$ ), taste ( $p=0.563$ ), and consistency ( $p=0.091$ ) of carrot juice yogurt with a probability of  $<0.05$  based on One Way Anova analysis. The highest level of vitamin A was in the addition of carrot juice as much as 15 ml, which was 3158,382  $\mu\text{g} / 100 \text{ g}$  or 526,397 RE.

**Conclusion:** Carrot juice yogurt was favored by the panelists and could be developed in terms of physical properties, organoleptic properties, and vitamin A levels, namely yogurt treatment with the addition of carrot juice as much as 10 ml.

**Keywords:** yogurt, cow's milk, carrots, volume variation, physical properties, organoleptic properties, and vitamin A levels.