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# A survey on the consumer knowledge of organic cosmetics at Can Tho City in 2022-2023

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## ABSTRACT

*Background: The organic cosmetics market in Vietnam has been developing for a long time. However, to have a more objective view of the organic cosmetics market, a comprehensive understanding of the market for organic cosmetics is necessary to provide development directions that are genuinely correct, unfortunately there isn't much research to support it. Therefore, studying the knowledge of organic cosmetic consumers will aid in the advancement of both intellectual and economic domains. Objectives: The purpose of study is to assess knowledge about organic cosmetics of consumers in Can Tho City. Materials and methods: The present study used a cross-sectional descriptive method, based on using a cross-sectional descriptive design, interviewing 559 organic cosmetics consumers in Can Tho City using a set of interview questions to assess consumers' knowledge of organic cosmetics. Results: The majority of consumers aged 18 to 25 (72.1%) are interested in and use organic cosmetic products more than other ages. Women consumers was found with higher proportion (70.7%) than men consumer (29.3%). Most consumers have average or higher knowledge with a proportion of (61.4%). The study also found that medical staff have better knowledge about organic cosmetics than other groups. Conclusions: The results of the study have shown that the majority of people have good knowledge, but there are many who are not. However, whether or not this knowledge status is connected to the intention to purchase organic cosmetics requires further research.*

**Keywords:** organic cosmetics, knowledge, consumers, Can Tho

## 1. INTRODUCTION

Nowadays, health issues are becoming one of the top concerns of consumers when buying products, especially when it comes to cosmetics. In particular, the demand for herbal cosmetics is increasing rapidly because they have less side effects, are friendly, safe to use, etc. To satisfy all of those requirements, organic cosmetics stand out among their competitors. There are various certifications and requirements for organic cosmetics depending on the nation. USDA regulates the term "organic" as it applies to agricultural products through its National Organic Program (NOP) regulation, 7 CFR Part 205. If a cosmetic, body care product, or personal care product contains or is made up of agricultural ingredients, and can meet the USDA/NOP organic production, handling, processing and labeling standards, it may be eligible to be certified under

the NOP regulations.

Understanding consumer perspectives on environmentally friendly products is important. Research on this topic is often carried out in developed countries. Consumer concerns about the environment are expected to increase as consumer behavior increasingly moves towards environmentally friendly goods and services as well as consumers shift their purchasing behavior towards organic product [1]. Consumers' understanding of environmentally friendly products is starting to influence the purchasing decision-making process [2-4]. In addition to the product, packaging that is eco-friendly or reusable, ozone-free, organic, and pesticide-free helps consumers choose products that can improve their overall health [5]. Evidently, a strategy needs to take advantage of a lot of different things in order

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to be logical and successful.

In Viet Nam, the rapid growth in sales of organic cosmetics, has caused research on organic cosmetics in the current context to be of interest. According to research [11] the easier it is to consume organic cosmetics, the higher the perceived green value of the product; therefore, marketers should concentrate on enhancing this product's value to increase customers' intention to repurchase. This study mentioned that that while customer satisfaction has a big influence on consumers' attitudes and intentions to buy organic cosmetics, purchasing attitude also has a big impact on those intentions. employ. Another study [15] revealed how few people are aware of organic cosmetics, roughly 28.57% of respondents (or 60 persons) do not know about organic cosmetics or have never purchased them. Stemming from the above fact, this study was conducted with 02 objectives: (1) Research consumer knowledge for organic cosmetics in Can Tho City in 2022-2023. (2) Research on factors related to consumer knowledge of organic cosmetics in Can Tho City in 2022-2023.

## 2. MATERIALS AND METHODS

### 2.1. Study subjects

Residents of the city of Can Tho have utilized organic cosmetics.

Time for sampling and data collection: December 2022 - February 2023

Research location: The research was carried out in 09 districts of Can Tho City (Ninh Kieu, Cai Rang, Phong Dien, Binh Thuy, O Mon, Thoi Lai, Thot Not, Vinh Thanh, Co Do).

- **Inclusion criteria:** Can Tho people who have learned about or have used organic cosmetics, agree to participate in the survey.
- **Exclusion criteria:** Respondent's incapacity to complete the survey. People who are unable to listen to, speak, read, or write Vietnamese. Those who refuse to provide complete personal information. People who decline to take part in the survey.

### 2.2. Methods

- **Research design:** The cross-sectional research method is used in this study. And conducting customer interviews with the use of prepared,

printed, or online questionnaires.

- **Sampling method:** This study employed the convenience sampling approach, a type of non-probability sampling.

- **Sample size:**

$$n = \frac{Z^2_{(1-\alpha/2)} \cdot p \cdot (1-p)}{d^2}$$

With:

n: is the sample size

$Z_{(1-\alpha/2)}$ : is the statistic corresponding to level of confidence

$\alpha$ : is the statistical significance level. Choice of  $\alpha=0.05$  results in  $Z = 1.96$  at 95% confidence.

d: is the precision (corresponding to effect size)

p: is the expected prevalence. According to Yam Libum (2022) [6], choice of  $p = 0,5$ . A sample size of at least 385 respondents was required. Actually, a total of 600 responses were received from 09 districts in Can Tho City. After eliminating incomplete and unusable surveys, the remaining 559 samples were used for further analysis.

- **Research content:** Analyze consumer demographic characteristics such as gender (male, female); ages (under 18 years old, 18-35 years old, 36-50 years old and from 51 to above); educational level (under high school, high school, intermediate/college, university and higher); occupation (pupil-students, workers, healthcare workers, office staff, farmer, homemakers, civil servant and others); place of residence (rural, urban); Price of purchased organic cosmetics (less than 4.23 USD, from 4.23 to 8.46 USD, from 8.46 to 21.14 USD, from 21.14 to 42.3 USD and more than 42.3 USD); marital status (single, married) to determine which elements have a significant influence on consumers' awareness of organic cosmetics.

Assessing consumer knowledge for organic cosmetics: participants are asked general information questions about organic cosmetics such as definition, origin, general ingredients, organic cosmetic certification, distinguishing organic cosmetics from other cosmetics, and so on. Each correct answer is worth one point, which is divided into three levels:

- + Not good general knowledge: under 50% of the overall score
- + Medium general knowledge: from 50% to 70% of the overall score

- + Good general knowledge: greater than 70% of the overall score
- **Processing methods and data analysis:** Data were collected, encoded, and inputted used Excel 2010 and used SPSS 25.0 for analysis. Frequencies and proportions were calculated to describe the demographic-social characteristics, consumers' general knowledge. Chi-square tests

were used to calculate significance levels for categorical data. The odds ratio OR (Odds ratio) at 95% confidence interval (CI) calculated the association level.

### 3. RESULTS

#### 3.1. General information about consumers buying organic cosmetics

**Table 1.** General information consumers buying organic cosmetics

Characteristic		Frequency (n=559)	Rate (%)
Gender	Male	164	29.3
	Female	395	70.7
Age	Under 18	29	5.2
	From 18 to 35	403	72.1
	From 36 to 50	121	21.6
	From 51 to above	6	1.1
Educational background	Under high school	41	7.3
	High school	80	14.3
	College	121	21.6
	<b>University and higher</b>	<b>317</b>	<b>56.7</b>
Occupation	<b>Pupil - Student</b>	<b>228</b>	<b>40.8</b>
	Worker	45	8.1
	Healthcare worker	73	13.1
	Office staff	92	16.5
	Farmer	6	1.1
	Homemaker	31	5.5
	Civil servant	26	4.7
	Other	58	10.4
Area	Rural areas	157	28.1
	Urban areas	402	71.9
Price of purchased organic cosmetics	Under 4.23 USD	102	18.2
	From 4.23 USD to under 8.46 USD	215	38.5
	From 8.46 USD to under 21.14 USD	159	28.4
	From 21.14 USD to under 42.3 USD	59	10.6
	Above 42.3 USD	24	4.3
Marital status	Single	392	29.9
	Married	167	70.1

Comment: Women have a higher rate of purchasing organic cosmetics than men (accounting for 70.7%), consumers aged 18-35 have the highest purchase

rate (accounting for 72.1%). The majority of consumers have university degrees (accounting for 56.7%) and are often students (accounting for 40.8%).

#### 3.2. General knowledge of consumers about organic cosmetics

**Table 2.** Consumer knowledge about organic cosmetics

Question	Frequency (n)	Correct rate (%)
1.Organic cosmetics are cosmetics originating from nature.	423	75.7
2.Organic cosmetics containing at least 95% organic substances (except salt and water) have been certified.	332	50.9

Question	Frequency (n)	Correct rate (%)
3. Organic substances in organic cosmetics only come from plants.	233	41.7
4. Organic cosmetics may contain preservatives (in very small amounts) if a suitable natural replacement cannot be found.	330	59.0
5. In organic cosmetics, there are some heavy metal residues such as chromium, lead, nickel, etc.	306	54.7
6. Organic cosmetics are safe for pregnant women and children.	324	58.0
7. Homemade natural cosmetics are also organic cosmetics.	240	42.9
8. Organic cosmetics are not only limited to makeup but also other products such as toothpaste, shampoo, perfume, etc.	364	65.1
9. Because of its high effectiveness and safety, organic cosmetics can be chosen as a substitute for other cosmetics.	345	61.7
10. The shelf life after opening the box of organic cosmetics is usually shorter than conventional cosmetics because it only contains a small amount of allowed preservatives.	364	65.1

Comment: Most consumers correctly answered the question "Organic cosmetics are natural cosmetics" accounting for the highest rate of 75.7%. The question "Organic substances in organic cosmetics only come from plants" has the highest number of users answering incorrectly (58.3%).

**3.3. Consumers' general knowledge about organic cosmetics**

**Table 3.** Consumers' general knowledge scores about organic cosmetics

Knowledge	Frequency (n)	Rate (%)
Good	129	23.1
Medium	343	61.4
Not good	87	15.6

Comment: The majority of consumers have average or higher knowledge (61.4%). There are 129 people with good knowledge (23.1%) which is lower than the number of people with average knowledge (61.4%). The number of consumers with poor knowledge has the lowest rate of 15.6%.

**3.4. Evaluate influence of demographic characteristics on knowledge of organic cosmetics consumers in Can Tho City in 2022-2023**

**Table 4.** Total general knowledge score according to characteristics of research subjects

Characteristic	Interquartile range (IQR)	Average rank	P
<b>1. Consumer characteristics</b>			
<b>Gender</b>	Male	6.00(0)	0.057
	Female	6.00(0)	
<b>Age</b>	Under 18	7.00(0)	0.139
	From 18 to 35	6.00(0)	
	From 36 to 50	6.00(0)	
	From 51 to above	8.50(0)	
<b>Educational background</b>	Under high school	6.00(0)	0.497
	High school	6.00(0)	
	College	6.00(0)	
	University and higher	6.00(0)	
<b>Occupation</b>	Pupil - Student	6.00(0)	
	Worker	5.00(0)	
	Healthcare worker	7.00(0)	

Characteristic		Interquartile range (IQR)	Average rank	P
<b>1. Consumer characteristics</b>				
<b>Occupation</b>	Office staff	5.00(0)	255.73	0.003
	Farmer	6.50(0)	300.08	
	Homemaker	4.00(0)	202.82	
	Civil servant	5.00(0)	234.25	
	Other	7.00(0)	287.41	
<b>Price of purchased organic cosmetics</b>	Under 4.23 USD	6.00(0)	291.28	0.002
	From 4.23 USD to under 8.46 USD	7.00(0)	323.46	
	From 8.46 USD to under 21.14 USD	5.00(0)	236.73	
	From 21.14 USD to under 42.3 USD	5.00(0)	232.53	
<b>Marital status</b>	Single	6.00(0)	286.45	0.182
	Married	5.00(0)	264.85	
<b>Residence</b>	Rural areas	6.00(0)	281.50	0.001
	Urban areas	6.00(0)	276.17	

Comment: The characteristics of occupation, price range of organic cosmetic products purchased, commonly used organic cosmetic products of residence all have  $P < 0.05$  indicating that there are special differences in these characteristics and these characteristics affect general knowledge. From table 4, healthcare worker group (320.04), price range of organic cosmetic products purchased from 4.23 USD to under 8.46 USD (323.46) and rural areas (281.50).

#### 4. DISCUSSION

##### 4.1. The study sample's demographic characteristics

In terms of gender, the proportion of men (29.3%) is fewer than one-third of the survey participants, which is consistent with research conducted in Ho Chi Minh City [7], Vung Tau [8] and Malaysia [9], which found that 53.5% of women participating in the survey intended to buy organic cosmetics, while 46.5% of men did. The discrepancy in purchase rates between men and women is explained by the fact that female customers use organic cosmetics on a long-term and repetitive basis due to their beauty and self-care demands. The majority of people aged 18 to 35 years old account for the highest proportion (72.1%), which is consistent with research by Nguyen Thi Quynh Nga and et al. (2020) who found that the groups aged 18 to 24 years old and 25 to 40 years old account for the highest rates of 55% and 35.5% respectively [7]. Two years later, study by Pham

Nhat Vi (2022) revealed that the majority of customers were between the ages of 25 and 40, with 134 consumers accounting for 53.6% and 51 consumers accounting for 20.4% [8]. Specifically, research by Mohd Amli Abdullah and et al (2014) showed that the average age of consumers is 30.2 years old, of which the 18 to 27 years old group accounts for 51.5% [9]. Age has a significant impact on purchase habits and the selection of frequently used items. Furthermore, this age group is a large labor force in society, they have income in addition to changes in bodily physiology, so the level of interest will overwhelm other groups. Therefore, from 18 to 35 years old are potential buyers of green products, specifically organic cosmetics [10]. Consumers in the survey had a university degree or higher (accounting for 56.7%); unlike research by Phuong Ngoc Duy Nguyen and et al. (2019), more than 70% of customers using organic cosmetics had a university degree [11]. Students have the highest rate of using organic cosmetics in the survey group, with 40.8%. At a rate that is also quite consistent with the research of Phuong Ngoc Duy Nguyen et al. (2019), most of the customers participating in the survey were university students (43%) [11]. Furthermore, organic cosmetics consumers are mostly single, accounting for 70.1%, higher than 62% of organic cosmetics buyers in the study [11]. Highly educated persons who are well-versed in personal care goods, have disposable

means and are single will be interested in beauty products and prepared to pay a premium for environmentally friendly options according to Smith and Paladino (2010) [12].

#### 4.2. Anthropometric factors affect consumers' knowledge about organic cosmetics

According to research, the majority of Can Tho people (more than 80%) are knowledgeable about organic cosmetics, people have good knowledge and intend to buy organic cosmetics. According to Kambiz Heidarzadeh Hanzae and et al. (2011), consumer product knowledge has a significant influence on consumer buy intention, product information search and improves the likelihood of purchasing a specific product [13]. Therefore, the decision process of consumers to buy organic cosmetics is directly affected by product knowledge. According to research by Desai (2014), while a brand has not yet released a new product, customers are still waiting. This is the reason why users often research related information before buying cosmetic products [10]. Healthcare workers have better knowledge about organic cosmetics than other industry groups ( $p=0.003$ ). This proves that healthcare worker is highly specialized, have knowledge related to public and personal health care, and have knowledge about organic cosmetics so they know how to choose the right product line for their need and are more likely to use it [14]. Furthermore, the price customers pay for organic

cosmetics ranges from over 42.3 USD to less than 4.23 USD and is stratified differently for each person owing to varying usage demands, income levels and other variables. Additionally, urban areas had users with higher knowledge than rural areas ( $p = 0.001$ ), but the difference was not significant [15].

#### 5. CONCLUSION

The study evaluates the current state of knowledge and identifies some factors related to consumer knowledge of organic cosmetics in Can Tho City. The results show that the majority of people have quite good knowledge, but there are still many people who do not clearly understand organic cosmetics. In addition, highly specialized people, especially medical staff, often understand organic cosmetics better than other groups. However, whether this knowledge is related to the intention to purchase organic cosmetics requires further research. From there, more specific and specialized measures can be proposed to contribute to improving the knowledge and intention to buy organic cosmetics of Can Tho people.

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## Khảo sát kiến thức của người tiêu dùng về mỹ phẩm hữu cơ tại Thành phố Cần Thơ năm 2022-2023

Lý Đăng Khoa, Mạc Thiên Phú,  
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### TÓM TẮT

**Đặt vấn đề:** Thị trường mỹ phẩm hữu cơ tại Việt Nam đã phát triển từ rất lâu. Tuy nhiên để có một cái nhìn khách quan hơn về thị trường mỹ phẩm hữu cơ, chúng ta cần hiểu rõ để có những hướng phát triển thực sự chính xác khi chưa có nhiều nghiên cứu đáp ứng. Chính vì thế nghiên cứu kiến thức của người tiêu dùng mỹ phẩm hữu cơ sẽ hỗ trợ rất lớn với những bước tiến trong lĩnh vực kinh tế và học thuật. **Mục tiêu nghiên cứu:** Đánh giá kiến thức về mỹ phẩm hữu cơ của người tiêu dùng tại Thành phố Cần Thơ. **Đối tượng và phương pháp nghiên cứu:** Sử dụng thiết kế mô tả cắt ngang, phỏng vấn 559 người tiêu dùng mỹ phẩm hữu cơ tại Thành Phố Cần Thơ bằng bộ câu hỏi phỏng vấn nhằm đánh giá kiến thức về mỹ phẩm hữu cơ của người tiêu dùng dựa trên các đặc điểm của đối tượng nghiên cứu. **Kết quả:** Đa số người tiêu dùng từ 18 đến 35 tuổi quan tâm và sử dụng các sản phẩm mỹ phẩm hữu cơ nhiều hơn so với các độ tuổi khác chiếm tỷ lệ 72.1%. Nữ giới chiếm tỷ lệ (70.7%) cao hơn so với nam giới (29.3%). Đa phần người tiêu dùng có kiến thức từ trung bình trở lên (61.4%). Nghiên cứu nhận thấy nhân viên y tế có kiến thức về mỹ phẩm hữu cơ tốt hơn các nhóm ngành còn lại. **Kết luận:** Kết quả cho thấy đa số người dân có kiến thức khá tốt song vẫn còn nhiều người dân chưa hiểu biết rõ về mỹ phẩm

*organic. Tuy nhiên, thực trạng kiến thức này có liên quan đến ý định mua mỹ phẩm organic hay không thì cần phải được nghiên cứu tiếp.*

**Từ khóa:** *mỹ phẩm hữu cơ, kiến thức, người tiêu dùng, Cần Thơ*

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