

Atis (Annona Squamosa) Tea

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Abstract - The main purpose of this study was to determine the acceptability of Atis (*Annona squamosa*) Tea in different quantities per serving in terms of color, odor and taste. This study was conducted at the Food Technology Shop of Bohol Island State University, Main Campus during the year 2011. The study utilized experimental research in preparing the different quantities of Atis (*Annona squamosa*) Tea as well as in evaluating its acceptability level. Random sampling was used to determine the participants of the study which includes the laboratory and academic instructors of the university. There were 32 participants who evaluated the product through sensory evaluation. The product undergone sensory evaluation using the questionnaire patterned after the Hedonic Scale to identify and rate their sensory preferences as a way of evaluating its acceptability level. The participants checked the appropriate point of scale which best described their preference on the product. The data were gathered, computed and interpreted employing the average weighted mean. In the light of the findings of the study, The 6-gram per serving of Atis (*Annona squamosa*) Tea suits the preference of the respondents in terms of its color, taste and odor where its degree of acceptability is rated with like very much. It was recommended that Atis (*Annona squamosa*) Tea will be promoted as pure tea for economical reason. The school should promote the production of Atis tea as an Income Generating Project (IGP). Packaging of the tea should be done for

commercialization of the product. Follow-up researches may be conducted to enhance the product and finally, the Food technology instructors should encourage the students to create and innovate in producing food products.

Keywords - atis, *Annona squamosa*, tea, food technology

INTRODUCTION

The Philippines, Pearl of the Orient Seas, is very rich in natural resources. One of these natural resources is the therapeutic plants that abundantly grow throughout the country. For a long time, Philippine herbal medicines have been relatively unknown and have been regarded by the medical community as anecdotal at best. While the Chinese has continued to develop and promote its technology and knowledge on medicinal herbs, slowly but surely, Philippine herbal medicine is now being recognized as an alternative treatment for variety of ailments.

In recent years, pharmaceutical companies, medical researchers, organizations, and governmental health agencies have taken a serious look at folkloric herbal medicines often used by Filipinos in rural areas. Studies and researches by the academe, the pharmaceutical industry and government now confirm the effectiveness of many plants in the treatment of diseases. Most of these plants have other health benefits in addition to their curative value.

One of these therapeutic plants is the Atis, (scientific name: *Annona squamosa* L.), a small fruit-bearing tree which is cultivated, throughout the Philippines and is occasionally spontaneous. Aside from being known because of its sweet and nutritious fruit, all parts of this tree have medicinal value.

Because of the health benefits that can be derived from this plant, many researchers were able to make different products out of it. For this reason the researchers were prompted to make a tea using Atis leaves as a regular health drink since Filipinos becomingly concerned about their physical condition. The researchers also conducted a survey on the acceptability of their output product.

MATERIALS AND METHODS

In the production of the Atis (*Annona squamosa*) Tea in different quantities per serving, the researchers followed a procedure utilizing the following tools, equipment and materials.

Tools, Equipment and Materials

50 pcs. Medium Atis leaves
 1 unit measuring cup
 1 unit sifter
 3 glasses
 1 unit oven
 1 unit blender
 1 unit weighing scale
 1 meter fabric gauge
 1 roll string



Materials and Cost:

Below is the list of materials and its cost:

List of Materials	Unit and Quantity	Price
Atis Leaves	50 pieces	
Fabric Gauge	1 meter	P 40.00
String	1 roll	P 30.00
TOTAL		P 70.00

Procedures

a. Thoroughly wash the Atis leaves.



b. Toast the leaves within 10 minutes at 150°F.



c. Grind the toasted leaves and transfer it to a container.



d. Sift the grinded leaves.



e. Measure the fine grinded leaves into 4 grams, 6 grams and 8 grams and packed it in a tea bag.



Tasting Phase

The researchers prepared the packed Atis (*Annona squamosa*) Tea for sensory evaluation. They invited the respondents in the Food Technology Shop for the tasting of the products for them to evaluate its acceptability in terms of color, taste and odor.

After the respondents tasted the three treatments observing the 3 minutes interval in between, they rated the questionnaire on the degree of acceptability of Atis (*Annona squamosa*) Tea.

Table 1. Acceptability level of the different quantities of atis tea in terms of its color N=32

Treatments	Weighted Mean	Description
T ₀ (4-gram serving of Atis Tea)	2.66	Like
T ₁ (6-gram serving of Atis Tea)	3.34	Like Very Much
T ₂ (8-gram serving of Atis Tea)	2.88	Like
AWM	2.96	Like

Table 1 depicts the acceptability level of the different quantities of Atis tea per serving in terms of its color. The color of the different quantities of Atis tea is described to be acceptable since its average weighted mean is 2.96 which are described like. Furthermore, the 6-gram per serving of Atis tea is the right amount of tea which produced the desired color since it has the highest rating of 3.34 which the respondents like very much. This is maybe because the 4-gram per serving has a lighter color while the 8-gram per serving has a darker color while the 6-gram per serving of Atis tea has the color which is not so light or so dark.

Table 2. Acceptability level of the different quantities of atis tea in terms of its taste N=32

Treatments	Weighted Mean	Description
T ₀ (4-gram serving of Atis Tea)	2.31	Like
T ₁ (6-gram serving of Atis Tea)	3.06	Like Very Much
T ₂ (8-gram serving of Atis Tea)	2.44	Like
AWM	2.60	Like

Table 2 depicts the acceptability of Atis tea in different quantities per serving in terms of its taste. It was found out that the Atis tea passed the desired taste of the respondents. The acceptability level of the three treatments varies from the quantity of tea per serving. Among of these treatments, the 6-gram per serving of Atis tea has the right amount of tea which the respondents like most since its weighted mean is 3.06 which is described as like very much. This is because the 4-gram per serving has the same taste just like plain water and the 8-gram per serving has a strong taste when taken. In addition, the average weighted mean of all the treatments is 2.60 which is described as like. This means that Atis tea is acceptable in terms of its taste.

Table 3. Acceptability level of atis tea in different quantities in terms of odor
n=32

Treatments	Weighted Mean	Description
T ₀ (4-gram serving of Atis Tea)	2.59	Like
T ₁ (6-gram serving of Atis Tea)	3.03	Like Very Much
T ₂ (8-gram serving of Atis Tea)	2.41	Like
AWM	2.68	Like

Table 3 reveals the acceptability of the different quantities of Atis tea in terms of its odor. The average weighted mean of the three treatments is 2.68 which means that the respondents like the tea. It was also found out that 6-gram per serving of Atis tea has the highest rating of 3.03 which is described as like very much. This means that the respondents preferred this quantity of tea per serving from the other treatments. This is because the 4-gram per serving has only a slight odor and the 8-gram per serving has a strong odor which is irritating to the nose. However, in general, the Atis tea is acceptable in terms of its odor.

Table 4. General acceptability of atis tea in different quantities per serving n=32

Treatments	Color	Taste	Odor	General Average Weighted Mean	Description
T ₀ (4-gram serving of Atis Tea)	2.66	2.31	2.59	2.52	Like
T ₁ (6-gram serving of Atis Tea)	3.34	3.06	3.03	3.14	Like Very Much
T ₂ (8-gram serving of Atis Tea)	2.88	2.44	2.41	2.58	Like

Table 4 reflects the acceptability of Atis tea in general. This shows that the 6 grams of Atis tea is the right amount of tea that produces the right color, taste and odor which can satisfy ones craving for a tea since the average weighted mean for this treatment in terms of its acceptability on its color, taste and odor is 3.14 which is described as like very much. On the other hand, all the treatments met the respondents' preference for a tea since the rest of the treatments were also liked by the respondents.

Table 5. Difference on the acceptability of atis tea in different quantities per serving in terms of color N=32

Treatments	Weighted Mean	Difference
T ₀ (4-gram serving of Atis Tea) & T ₁ (6-gram serving of Atis Tea)	2.66 3.34	0.68
T ₀ (4-gram serving of Atis Tea) & T ₂ (8-gram serving of Atis Tea)	2.66 2.88	0.22
T ₁ (6-gram serving of Atis Tea) & T ₂ (8-gram serving of Atis Tea)	3.34 2.88	0.46

Table 5 depicts the difference on the acceptability of Atis Tea in different quantities per serving in terms of color. This shows that in the 4-gram and 6-gram per serving the difference is 0.68; in the 4-gram and 8-gram per serving the difference is 0.22 and in the 6-gram and

8-gram per serving the difference is 0.46. Based from these data, the researchers can say that the amount of Atis per serving greatly affect on the color it produced.

Table 6. Difference on the acceptability of atis tea in different quantities per serving in terms of taste N=32

Treatments	Weighted Mean	Difference
T ₀ (4-gram serving of Atis Tea) & T ₁ (6-gram serving of Atis Tea)	2.31 3.06	0.75
T ₀ (4-gram serving of Atis Tea) & T ₂ (8-gram serving of Atis Tea)	3.06 2.44	0.62
T ₁ (6-gram serving of Atis Tea) & T ₂ (8-gram serving of Atis Tea)	3.06 2.44	0.62

Table 6 reveals the difference on the acceptability of Atis Tea in different quantities per serving in terms of taste. This shows that in the 4-gram and 6-gram per serving the difference is 0.75; in the 4-gram and 8-gram per serving the difference is 0.62 and in the 6-gram and 8-gram per serving the difference is 0.62. Based from these data, the researchers can say that the amount of Atis per serving greatly affect on the taste of the product.

Table 7. Difference on the acceptability of atis tea in different quantities per serving in terms of odor N=32

Treatments	Weighted Mean	Difference
T ₀ (4-gram serving of Atis Tea) & T ₁ (6-gram serving of Atis Tea)	2.59 3.03	0.44
T ₀ (4-gram serving of Atis Tea) & T ₂ (8-gram serving of Atis Tea)	2.59 2.41	0.18
T ₁ (6-gram serving of Atis Tea) & T ₂ (8-gram serving of Atis Tea)	3.03 2.41	0.62

Table 7 shows the difference on the acceptability of Atis Tea in different quantities per serving in terms of odor. This shows that in the 4-gram and 6-gram per serving the difference is 0.44; in the 4-gram and 8-gram per serving the difference is 0.18 and in the 6-gram and 8-gram per serving the difference is 0.62. For these reasons, the researchers could say that odor produce by the products was greatly affected by the quantity of Atis per serving.

RESULTS AND DISCUSSION

1. Degree of Acceptability of Atis (*Annona squamosa*) Tea in Different quantities Per Serving in terms of:

a. Color

The color of the different quantities of Atis tea is described to be acceptable since its average weighted mean is 2.96 which are described like. Furthermore, the 6-gram per serving of Atis tea is the right amount of tea which produced the desired color since it has the highest rating of 3.34 which the respondents like very much.

b. Taste

It was found out that among the three treatments, the 6-gram per serving of Atis tea met the desired taste since it was rated like very much by the respondents with an average weighted mean of 3.06. In general, all the treatments were acceptable in terms of its taste since the average weighted mean for all the treatments is 2.60 described as like.

c. Odor

The odor of the three treatments is acceptable since it was rated 2.68 described as like. However, the preferred amount of tea the respondents like most was the 6-gram per serving since its average weighted mean is 3.03 which is described as like very much.

2. General Acceptability of the Different Quantities of Atis Tea per Serving

In general, all the treatments were accepted by the respondents in terms of its color, taste and odor since the average weighted mean of the three was described like. On the other hand, the most acceptable amount of tea that produces the right color, taste and odor was the 6-grams per serving since it was rated as like very much.

3. Difference on the Color, Odor, and Taste of the Different Quantities of Atis Tea per Serving

a. Color

The color of the different treatments has a difference on each other. Hence the null hypothesis is rejected.

b. Taste

The taste of the different treatments was affected by the amount of tea per serving. This was manifested in the 4-gram and 6-gram per serving having a difference of 0.75; the 4-gram and 8-gram per serving has a difference of 0.62 and in the 6-gram and 8-gram per serving has a difference of 0.62. This means that there is a significant difference on the taste of the three treatments. Hence, the null hypothesis is rejected.

c. Odor

The different quantity of Atis Tea affects their odor produced. It was found out that there was a difference among the odor of the different treatments. This means that there is a significant difference on the odor of the three treatments, thus the null hypothesis is rejected.

CONCLUSIONS

The 6-gram per serving of Atis (*Annona squamosa*) Tea suits the preference of the respondents in terms of its color, taste and odor where its degree of acceptability is rated with like very much.

In addition the three treatments have a significant difference in terms of its color, taste and odor in which the quantity of Atis tea influences these aspects.

RECOMMENDATIONS

1. The researchers will promote Atis tea as a pure tea for economical reason.
2. The school should promote the Atis tea production as an Income Generating Project (IGP).
3. Packaging of the tea should be done for commercialization.
4. A follow-up research related to the study may be done to enhance the tea.
5. Food technology instructors should encourage the students to apply creativity and innovations in producing food products.

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