

CENTER FOR NATURAL SCIENCE RESEARCH AND DEVELOPMENT ABSTRACTS

Sensory Characterization of Barquillos Enriched with Powdered Horseradish (*Moringa oleifera*) Leaves

Matilde Leonidas- Tijtgat

Abstract

This experimental study aimed to determine the level of acceptability of barquillos enriched with powdered horseradish (*Moringa oleifera*) leaves in different proportions (0 gram, 25 grams, 50 grams and 75 grams powdered horseradish leaves) in terms of appearance, aroma, taste, texture, and general acceptability. Three replications were made for each treatment and were evaluated by 60 purposely selected evaluators. The barquillos enriched with powdered horseradish leaves in different proportions was evaluated using a Sensory Evaluation Score Sheet based on a Five-Point Hedonic Scale.

Arithmetic mean and One-Way Analysis of Variance were used to determine if there are significant differences in appearance, aroma, taste, texture, and general acceptability of barquillos enriched with powdered horseradish leaves in different proportions. The hypothesis was tested at 0.01 level of significance. Result showed that barquillos having 50 grams of powdered horseradish leaves was the most acceptable in terms of appearance, and barquillos having 0 grams was the most acceptable in terms of aroma, taste, texture, and general acceptability. No significant difference existed between barquillos with or without powdered horseradish leaves as to appearance. Significant difference was found out between plain barquillos and barquillos with powdered horseradish leaves as to aroma, taste, texture. Barquillos having 50 grams of powdered horseradish leaves was the most acceptable. It was recommended that barquillos be produced and served as a snack.

TARO (*Colocasia esculenta*) FLOUR IN MAKING CRUST OF EMPANADITAS

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Abstract

This experimental study aimed to determine the acceptability of the crust of empanaditas using taro flour in proportion with commercial wheat flour as to appearance, texture, aroma, flavor and general acceptability. Three replications were made for each treatment and were evaluated by 60 purposely selected panels of evaluators composed of students, teachers and homemakers. The empanaditas made of taro crust in proportion with commercial wheat flour were evaluated using Five-Point Hedonic Scale Sensory Evaluation Sheet.

Responses were gathered and analyzed using Arithmetic mean and ANOVA set at 0.01% level of significance to determine if there were significant differences in appearance, texture, aroma, flavor and general acceptability. Result showed that empanaditas crust with 75% and 25% taro flour mixture were rated as "liked moderately" while empanaditas crust with 25% taro flour mixture was "liked much" by the respondents in terms of appearance because it is comparable to that of 100% commercial wheat flour. Significant differences were revealed between paired samples of 100% commercial wheat flour and empanaditas crust with 75% and 50% taro flour mixture in the level of acceptability in different proportion of the crust of empanaditas as to appearance, texture, aroma, flavor and general acceptability. This implies that the more taro flour added to the mixture of empanaditas crust the less acceptable to the respondents. The proximate cost per piece of the 75% all-purpose flour – 25% taro flour proportion

which is the most acceptable empanaditas was Php. 1.40. It is recommended that results of the study be disseminated to the public through lecture demonstration, livelihood training and food exhibits. It is also to be prepared by H.E. Teachers and lunch counter teachers as snack items for school children and students.

Relationship of Total Body Weight to Sexual Maturity of the Mud Clam *Anodontia edentula*

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Abstract

The relationship of total body weight to sexual maturity of *Anodontia edentula* was studied. There was a significant difference in the mean total body weight in different gonad stages. The mean total body weight was highest when gonads are ripe and lowest when gonads are spent. The mean total body weight of ripe clams was 68.67 ± 14.26 g. The mean total body weight of developing clams was 54.53 ± 12.26 g. The mean total body weight of spent clams was 49.74 ± 6.32 g. Weighing clams without biopsy can predict whether the individual clam is ripe, developing, or spent. For induced spawning in hatchery culture, it is recommended to use clams with total body weight of 65-70 g.

Keywords: *Anodontia edentula*, gonadosomatic index, spawning, sexual maturity, gonad

SWEET POTATO (*IPOMOEA BATATAS*) CUPCAKES ENRICHED WITH TURMERIC (*CURCUMA LONGA*) POWDER

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This experimental study aimed to determine the sensory characteristics of sweet potato cupcakes enriched with 5, 10 and 15 grams of turmeric powder in terms of its outside characteristics such as shape, color, volume and crust and its inside characteristics such as color, grain, texture, taste and aroma. The level of acceptability as to appearance, taste, texture, aroma and general acceptability was also evaluated. The sensory characteristics were evaluated by selected panel of evaluators using a sensory evaluation score sheet based on the Six - Point Hedonic Scale.

Frequency count and percentage were used as statistical tools to determine the sensory characteristics of sweet potato cupcakes. On the other hand, Arithmetic mean was used to determine the level of acceptability of sweet potato cupcakes and One-Way Analysis of Variance was used to determine if there were significant differences in the appearance, taste, texture, aroma and general acceptability of sweet potato cupcakes enriched with turmeric powder. The hypothesis was tested at 0.01 level of significance.

Findings revealed that the outside characteristics of sweet potato cupcakes enriched with 5 grams turmeric powder has a moderately rounded top, yellow-orange in color, moderately light in weight in proportion to size and has a moderately shiny surface while the inside characteristics were yellow-orange in color, has a moderately uniform, thin-walled cells with no larger air spaces,

moderately moist, moderately tender, moderately distinct sweet potato taste and has a very distinct sweet potato aroma. On the other hand, sweet potato cupcakes enriched with 10 grams and 15 grams turmeric powder had a perfectly rounded top, yellow-orange in color, moderately light in weight in proportion to size and have a moderately shiny surface while the inside characteristics were yellow in color, moderately uniform, thin-walled cells with no larger air spaces, moderately moist, moderately tender, moderately distinct sweet potato taste and have a moderately distinct sweet potato aroma. Moreover, product D (sweet potato cupcakes with 0 grams turmeric powder) had a perfectly rounded top, light brown in color, moderately light in weight in proportion to size and has a moderately shiny surface while the inside characteristics were light brown in color, moderately uniform, thin-walled cells with no larger air spaces, moderately moist, moderately tender, moderately distinct sweet potato taste and has a very distinct sweet potato aroma.

Sweet potato cupcake with 5 grams turmeric powder was the most acceptable, since it was very much liked by the group of evaluators as to its general acceptability and was very comparable to all sensory characteristics.

Significant differences existed in the level of acceptability of sweet potato cupcakes enriched with turmeric powder in terms of taste, aroma and general acceptability.

No significant differences existed in the level of acceptability of sweet potato cupcakes enriched with turmeric powder in terms of appearance and texture as evaluated by pupils, high school students and housewives.

FISH ROLL

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This experimental study aimed to determine the sensory characteristics and acceptability of the fish roll products using cream dory, *bansa*, *bulaw* and *guma-a*. There were 30 panelists who evaluated the final recipe of the fish roll. Result showed that *guma-a* fish roll was the most acceptable. It was characterized as light brown color, well-shaped and attractive, slightly distinct fish odor, no breakage when folded in half, weak springiness, moderately distinct fish taste, and slightly pleasing blend of ingredients. Further tests on nutritional value and shelf-life were recommended.