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To standardisation develop the product using swamp cabbage their organolaptic evaluation

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Abstract

The buds are used as a poultice in order to treat skin diseases such as athletes foot, ringworm etc. It is also used to promote vomiting in case of poisoning. The mixture of Swamp cabbage juice and water is used as a cold compress to cure fever. The juice extracted from boiled Swamp cabbage is used to treat constipation. It is also used as a treatment for infestation of intestinal worm. Swamp cabbage is used in Indian Ayurveda Medicine as a treatment for liver problems and jaundice. The leaves are helpful in treating diabetes in the pregnant women. It is used as a sedative to enhance sleep and relaxation. Developed product of ajwain leaves were Appe, soup, pancake, dosa, biscuit by using score card method (9-points hedonic scale). The result of ajwain leaves product for Appe, soup, pancake, dosa, biscuit (T1), (T2), (T3) were the best in all treatment in case of sensory attribute were 9, 9, 9 & 9 respectively. Developing products were accepted by panel member.

Keywords: Swamp cabbage, water spinach, river spinach, kangkong ipomoea aquatic

Introduction

Swamp cabbage (*Ipomoea aquatica*) is an edible flowering plant in the family Convolvulaceae native to Asia, Africa and southwestern Pacific 5 Islands. Swamp cabbage is known under various common names, including Water Spinach, River Spinach, Kangkong, Water convolvulus, Water Morning Glory, Chinese Watercress, Chinese spinach and Chinese convolvulus. It is a semiaquatic, herbaceous plant with milky sap which grows up to 3 m long. Swamp cabbage survives in tropical and subtropical regions. The leaves are alternate, simple, arrow head shaped-lanceolate, and very variable in size from about 5-15 cm (2-6 inches) long and 2-8 cm (0.8-3 inches) broad. The flowers are trumpet shaped, white and 3-5 cm (1-2 inches) in diameter maturing into oval or spherical, woody fruit 1 cm (1/2 inches) wide containing 1 to 4 grayish seeds. Swamp cabbage is an old-time Florida cracker favorite vegetable obtained from the heart of the cabbage palm (*S. palmetto*), which is the official state tree of Florida. The plant is known by such other names as palmetto palm, sabal palm, and swamp cabbage tree. *Ipomoea Aquatica* is a semiaquatic, tropical plant grown as a vegetable for its tender shoots and leaves. It is found throughout the tropical and subtropical regions of the world, although it is not known where it originated. Swamp cabbage (*Ipomoea aquatica*) is an edible flowering plant in the family Convolvulaceae native to Asia, Africa and southwestern Pacific 5 Islands. Swamp cabbage is known under various common names, including Water Spinach, River Spinach, Kangkong, Water convolvulus, Water Morning Glory, Chinese Watercress, Chinese spinach and Chinese convolvulus. The cream with Vitamin C reduces the duration of skin redness. The diet rich in antioxidants helps to maintain the healthy skin and also prevents from skin cancer. The digestive system must be able to absorb the nutrients from the food in order to function effectively. The nutrients are absorb on the bloodstream and cells which assists in reduction of inflammation and disease growth. Vitamin C with iron raises the absorption of iron in children as well as adults. Vitamin C prevents the damage made by harmful molecules known as free radicals, pollutants and toxic chemicals. The buildup of free radicals in the body leads to various health ailments such as heart disease, cancer and arthritis. Free radicals are formed during the process of breaking down of food or when exposed to tobacco, smoke and radiation. Widnyana I.K *et al.*, (2018) [2] The research was conducted to determine the effect of seed soaking with suspense of *P. alcaligenes* isolate KtSl, TrN2, and TmAl to the growth of swamp cabbage.

The research has been initially developed on tomatoes. In this research, Randomized Block Design was chosen as its model while the data analysis was performed by using SPSS v.17 for Windows. Three types of treatment were administered towards *P. alcaligenes*, namely isolating, soaking, and growing the medium. Nadri M.H. *et al.*, (2020) [1] *Ipomea aquatica*, locally known as water spinach, is one of the most common vegetable consumed by Malaysian. *I. aquatica* exhibited several biological activities including free radical scavenging, anti-microbial and anti-proliferative. The present study aims to enhance current knowledge on biological properties of *I. aquatica* particularly on anti-inflammatory activity. Three enzymes that involve in inflammatory pathway were selected in this study including lipoxxygenase, hyaluronidase and xanthine oxidase. *I. aquatica* was extracted in methanol and tested for lipoxxygenase, hyaluronidase and xanthine oxidase at different concentrations using direct enzyme inhibition assay.

Material and Method

The experimental "To standardization and develop the product using swamp cabbage and their organoleptic evaluation." Work will be carried out in the research laboratory of faculty of Home Science Sultanpur. The different material use in experiment and the techniques employed.

Method

- Collection of ingredients.
- Preparation and development of products.
- Sensory evaluation.
- Calculating Nutritive value.
- Statistical analysis.

Collection of ingredients

The required material will be purchased from local market of

Sultanpur.

Development of swamp cabbage product

The best acceptable petals were used for product development as follows.

Result and Discussion

The data were collected on different aspects per plan were tabulated and analysed statistically. The results from the analysis presented and discussed chapter in the following sequence.

Calculation of nutritive value of Swamp Cabbage.

Organoleptic evaluation of Swamp Cabbage based project.

Calculation of nutritive value of Swamp Cabbage.

Calculation of nutritive value of Swamp Cabbage (100gm).

Nutrition	Total
Energy	30 kcal
Protein	2.7 g
Calcium	60 mg
Iron	2.5 mg
Vitamin A	2.9 mg
Vitamin C	45 mg

The nutritive value of rose petal was calculated with help of nutritive value of Indian food given by ICMR. table shows that the total energy, protein, calcium, iron, vit A, vita C. Value of most acceptable rose petals was 30 kcal, 2.7 g, 60 mg, 2.5 mg, 2.9 mg, 45 mg respectively.

Organoleptic evaluation of Swamp Cabbage based products

- Flavour and taste
- Body and texture
- Colour and appearance
- Overall acceptability

Table 1: Organoleptic evaluation of swamp cabbage appe

Product	Flavour & Taste	Body & Texture	Colour & Appearance	Overall acceptability
T0 (Controlled)	7.2	8.2	7.1	8.7
T1 (Experimental)	7.9	7.9	8.2	7.8
T2 (Experimental)	8.2	8.1	7.8	7.1
T3 (Experimental)	7.2	8.5	9	8.3

Table 1 shows that the experimental (T3) obtained maximum & 7.2, 8.5, 9 and 8.3 for flavour and taste, body and texture, colour and appearance and overall acceptability and (T2) 8.2, 8.1, 7.8 and 7.1 for flavour and taste, body and texture, colour and appearance and overall acceptability but while controlled

(T0) 7.2, 8.2, 7.1 and 8.7 obtained for flavour and taste, body and texture, colour and appearance and overall acceptability respectively. This indicate that the experimental sample (T3) swamp cabbage appe was found to be fallen under category of "Like Very Much to Be Extremely".



Fig 1: Organoleptic evaluation of swamp cabbage appe

Conclusion

The present investigation entitled “To standardisation develop the product using swamp cabbage their organoleptic evaluation.” The experimental (T3) obtained maximum & 7.2, 8.5, 9 and 8.3 for flavour and taste, body and texture, colour and appearance and overall acceptability and (T2) 8.2, 8.1, 7.8 and 7.1 for flavour and taste, body and texture, colour and appearance and overall acceptability but while controlled (T0) 7.2, 8.2, 7.1 and 8.7 obtained for flavour and taste, body and texture, colour and appearance and overall acceptability respectively. This indicate that the experimental sample (T3) swamp cabbage appe was found to be fallen under category of “Like Very Much to Be Extremely”.

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