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ANALYSIS OF THE CASHEW FRUIT, CHAPATTI CACTUS FRUIT AS A MEDICINAL VALUE USING HSV MODEL

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Abstract

Image processing has proven a suitable tool for study and analysis across a range of applications and disciplines. The current research uses image processing techniques to analyze medicinal fruits like cashew and chapatti cactus fruits. Any imbalance between the components of the human body results in illness, and the treatment involves reestablishing the equilibrium using natural medicines like herbs and minerals. The findings were extremely useful.

Key Words: ***Image Processing, Cashew fruit, Chapatti cactus fruit, medicinal.***

1. Introduction

Image processing is the art of taking an image and converting it into computer form so that it can be manipulated, added to, or extracted from it. This is a form of signal distribution where the input is an image. It can be a video frame or a photo and the output can be either another image or related properties. A typical image processing system treats the image as his two-dimensional signal and processes it using standard signal processing techniques. It is one of the fastest growing technologies today and is used in many business areas. Image processing is also a major research area in engineering and computer science fields.

Fruits are important in India

Fruits in addition vegetables are a great source of macro- and micronutrients. Macronutrients are various carbohydrates then fiber, while micronutrients are minerals. Unlikely in phytonutrients, vitamin C, folic acid, carotenoids, iron, calcium, and other minerals found in fruits and vegetables.

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2. Related Work

Discussed [1] emphasizes that plant disease detection is a very important factor in avoiding serious outbreaks. An important area of research is the automated detection of plant diseases. Fungi, bacteria and viruses are the main causes of most plant diseases. Fungi are inrecognized primarily by their morphology, with an emphasis on the reproductive organs. An assessment of the prevalence of plant leaf diseases is made last.

The review piece [2] on Leaf colour as a guide when determining the nutrient status and overall health of plants. The authors suggest a brand-new, low-cost, portable, and simple method for decisive the levels of foliar nitrogen and chlorophyll in crops founded on the colour of the leaves.

Discussed in [3] in a review piece on agricultural diseases. Nitrogen was one of the plentiful inorganic which shows significant part in yield of crops. The "Nitrate app" software is the subject of this article. The process for determining the nitrogen concentration of fruits has been revolutionized by software.

Research on plant in [4]. One of the most significant commodities grown today is chilli peppers. Color, saturation, and lightness color, saturation, and intensity, and color, saturation, and value are transformed from the original images into perceptual spaces.

3. Problem Specification

The primary goals of current study are to use image processing methodologies to conduct a thorough analysis of the same Indian medicinal fruits, specifically the Cashew and Chapatti cactus fruits. The tests are carried out after various samples are collected.

4. Methodology

The subsequent procedures are carried out, the programs was created in Matlab 7.50 , in order to conduct a thorough study of the fruits.

5. Experiments and Result

Matlab is used in the studies to analysis the medicinal fruits. Two medicinal fruits, the cashew and chapatti cactus fruits are taken into consideration in order to investigate the colour characteristics and histogram. The outcomes are shown in Tables 1 and 2.

Family:Cactaceae

English : Cactus Fruit
Tamil : Cappattukkalli
Malayalam : Kasu Manga
Telugu : Nagajemudu
Kannada : Dabbagalli
Hindi : Chappal-sendh

A Sample of Casctus fruit

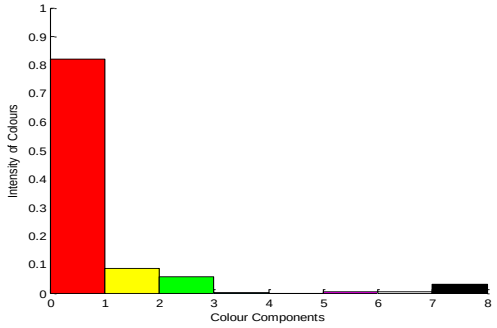

Figure 1 .Histogram of Castus fruit

Total Pixels 22272

Name of the colour	Percentage of colour
Black	2.95
White	0.35
Red	82.03
Yellow	8.61
Green	5.57
Cyan	0.12
Blue	0.00
Magenta	0.38

Table 1: Results of the HSV-Model

Even if there is any tumor in the body, a white stone called quats is slapped with rice inside its lobe and both are equally slapped and it becomes stained to stick on the tumors. The lump will dissolve in a day or two.

If you eat Nagatali fruit, all the defects related to larynx, gall bladder, rectum will be removed. Whooping cough, expectoration of blood.

The high quality fiber present in chapatti saffron fruit removes unwanted fats from the body and reduces obesity.

Family:Anacardiaceae

English : Cashew Fruit
Tamil : Mundiri Pazham
Malayalam : Kasu Manga
Telugu : Jeedi Pandu
Kannada : Geru Hannu
Hindi : Kaju Phal

A Sample of Cashew fruit

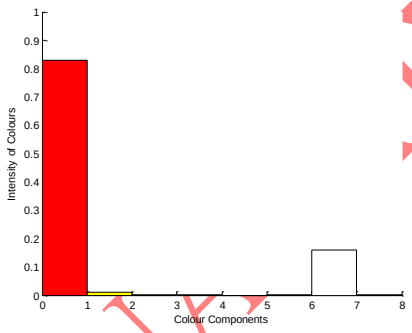

Figure 2 .Histogram of Cashew fruit

Total Pixels 36573

Name of the colour	Percentage of colour
Black	0.10
White	15.84
Red	82.98
Yellow	0.95
Green	0.03

Cyan	0.10
Blue	0.00
Magenta	0.01

Table 2: Results of the HSV-Model

Cashews are rich in protein, beta-carotene, the antioxidant tannin, and fiber.

Cashews boost our body's immune system and improve the health of bleeding gums, teeth problems and nails.

Cashew nuts contain fiber vitamins, minerals and help prevent diseases and cancer. It is high in heart-healthy monounsaturated fatty acids like oleic and palmitic acids.

A fruit with five times more vitamin C than an orange. This cashew fruit is more available in summer. What other nutrients are there in this cashew fruit besides vitamin C, Vitamin B1, B2, B3, fiber, iron, calcium, potassium, phosphorus, and excess water, bears tone in, and contains rare nutrients.

6. Conclusion

Fruits are rich in fibre and low in fat. As a result, issues like heart disease, weight, indigestion, and constipation won't affect us. India is the world's top producer of medicinal herbs and its healthcare system has great promise. Therefore, it is imperative to standardize production processes, medications, and herbal preparations. Tables 1 and 2 show the presentation of colours and their attributes. Through histograms, the findings amply demonstrate the variations in various fruits, and the conclusion is reached.

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References

1. Sanjay B. Dhaygude, and Nitin P.Kumbhar, on “Agricultural plant Leaf Disease Detection Using Image Processing” International Journal of Advanced Research in Electrical, Electronics and Instrumentation Engineering Vol. 2, Issue 1, January 2013 ISSN: 2278 – 8875

2. Mahdi M. Ali, Ahmed & Al-Ani, Derek Eamus and Daniel K.Y. Tan on “A New Image Processing Based Technique to Determine Chlorophyll in Fruits”, American-Eurasian J. Agric. & Environ. Sci., 12 (10): 1323-1328, 2012 ISSN 1818-6769.
3. Vasudev B. Sunagar, Pradeep A.Kattimani, Vimala A. Padasali,Neetha and V. Hiremath “Estimation of Nitrogen Content In fruits Using Image Processing” Proceedings of International Conference on Advances in Engineering & Technology, 20th April-2014, Goa, India, ISBN: 978-93-84209-06-3.
4. J. L. González-Pérez1 , M. C. Espino-Gudiño, J. Gudiño-Bazaldúa, J. L. Rojas-Rentería, V. Rodríguez-Hernández and V.M. Castaño “Color image segmentation using perceptual spaces through applets for determining and preventing diseases in chili peppers” African Journal of Biotechnology Vol. 12(7), pp. 679-688, 13 February, 2013.