



HISTOGRAM OF NEEM FLOWER AND TANNER'S CASSIA FLOWER USED AS A MEDICINAL VALUE USING IMAGE PROCESSING TECHNIQUES

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Abstract:

Image processing has proved to be an effective tool for analysis in various fields and applications. The present study deals with the analysis of Neem flower, Tanner's Cassia flower, by using the techniques of Image Processing. Flowers play an important role directly or indirectly in our daily life since there are several floral medicines in the Unani medicine system that are useful for treating different types of disease. Some important flowers are used as single drugs and in compound formulations that contribute to the popularization of different important medicinal use of flowers.

Key Words: Image Processing, Neem flower, Tanner's Cassiaflower medicinal.

1. INTRODUCTION

Image processing is frequently viewed as arbitrarily manipulating an image to achieve an aesthetic standard or to support a preferred reality. However, image processing is more accurately defined as a means of translation between the human visual system and digital imaging devices. The human visual system does not perceive the world in the same manner as digital detectors, with display devices imposing additional noise as well as bandwidth restrictions.

Image processing is often seen as manipulating an image arbitrarily to achieve an esthetic standard or a preferred reality. However, image processing is defined more precisely as a means of translation between the visual system of humans and digital imaging devices. The world is not perceived by the human visual system in the same way as digital detectors through display devices that impose additional noise as well as bandwidth restrictions.

Importance of Flowers

For a considerable length of time, specialists have recognized the treatment properties of a few blooms. Blossoms and plants offer absolutely normal restorative properties, frequently without the unpleasant reactions of current tablets and medications besides, being less expensive and therefore more affordable than medicines sold by pharmaceutical organizations.

The best places to acquire dried blooms or their basic oils are a home grown wellbeing store. Be watchful while getting ready tonics and different blends since a few blooms can be exceptionally powerful. Pregnant or nursing moms specifically ought to get counsel from their specialists before utilizing any fundamental oils. To take in more about utilizing restorative blooms for home cures, view the absolute most powerful ones beneath.

Fresh flowers are not only full of life but also hold curative prowess. In Ayurveda, many flowers have their healing properties in day to day life.

Yellow or orange colour flowers are sources of vitamin C and beta-carotene, a life and death vitamin in maintaining the vigor of your eyes, wearing only a smile and excused system. Anthocyanins are antioxidants that are breath of life to have successful effects against getting on, arise and cardiovascular disease.

Red flowers are rich in vitamin C, beta-carotene and anthocyanins. They also suppress lycopene, which is breath of life to have a protective doom against unassailable cancers, especially prostate cancer.

Green flowers are steeped in vitamin C, vitamin E and lutein. Lutein is consequential to rivet the eyes on health and is breath of life - to make a long story short the spin of the roulette wheel of cataracts and wane the meta stases of macular degeneration.

Importance of Neem Flowers in India

Neem flower considered an antiseptic for your system to clean up. Impurities of the skin are also known to be cured when it is applied on the skin. There are many South Indian dishes containing Neem flower.

Neem flowers are used in a variety of ways, including in aromatherapy, cosmetics, medicines and cooking. Even though Neem is a fashionable source of alternative medical remedies, there is not sufficient verified medical evidence to support the efficacy of Neem as any kind of health remedy.

Importance of Tanner's Cassia Flowers in India

Herbs fashioned a critical a part of medicinal remedy and treatment in the historic civilization. Their use, which evolved in the Vedic times, continues into the current era. A number of these herbs and plants are found in abundance in a few continents. India has always been a tropical place where in the summer months temperatures rise considerably. For this reason, in historical times, herbs that cooled the frame were particularly appreciated and in demand. One such flower is the Cassia flower.

2. RELATED WORK

The review article [1] discussed on several flower drugs in Unani system of medicine which are useful for treating different types of disease conditions/ailments, a review has been made focusing on the therapeutic uses, brief description, major chemical constituents and dosages of some important flowers used in Unani System of Medicine as single drugs and in compound formulations contributing to the popularization of various important medicinal uses of these flowers.

The review article [2] investigated on Bach Original Flower Essence (BFE) Rescue Remedy, a modality used since 1930 but not yet thoroughly investigated scientifically, was evaluated for the reduction of acute situational stress. Statistical analyses indicated that only the high-state anxiety treatment subgroup demonstrated a statistically significant difference between pretest and post test scores. The results suggest that BFE Rescue Remedy may be effective in reducing high levels of situational anxiety.

In a review article [3] research has been conducted on the integration of flower essences therapy and intuition into a holistic life coaching practice. The objective for the current qualitative case study was to examine the clients' experiences, beliefs and perceptions regarding the integration of flower essences and intuition in a holistic life coaching context. Clients who elected to participate in the study kept a weekly reflection journal regarding their insights and any key spiritual experiences.

In a review article [4] Dahlia was used even in economical purpose in landscaping, in floristry as a cut flower, for the pharmaceutical industry, cosmetic, food and as raw material for the extraction of dyes. Both the tuberous roots and the flowers of this ornamental and medicinal plant are used for therapeutic purposes.

In a review article [5] a study on Human mind is a complex network of neurons working through the electromagnetic impulses and radiations.

3. PROBLEM SPECIFICATION

The main objectives of the present study is to make a detailed analysis of flowers like Neem flower and Tanner's Cassia flower by using the techniques of image processing. Different samples are taken and the experiments are conducted.

4. METHODOLOGY

In order to make a detailed analysis of the Neem flower and Tanner's Cassiaflower and the codes are written in Matlab 7.50 Version.

5. EXPERIMENTS AND RESULT

The experiments to analyze the medicinal properties of flowers are conducted by using Matlab (Version 7.5). The results are presented in Table 1, Table2, Figure 1, Figure 2, Graph1, Graph2.



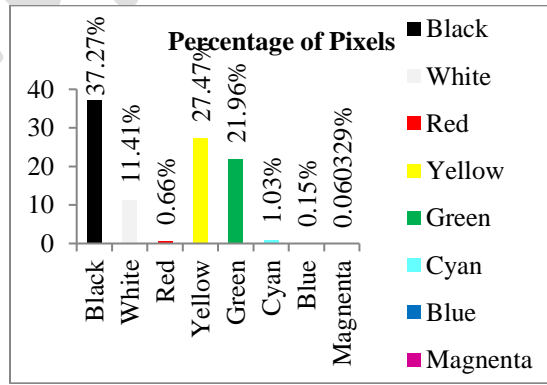
Figure 1 Sample Neem Flower

Common Name :Neem
 Botanical Name :AzadirachtaIndica
 Name of the family :Meliaceae(Neem family)
 Name of the Plant in Tamil : Veppai
 Name of the Plant in Kannada : Turakabevu
 Name of the Plant in Telugu : Vepa
 Name of the Plant in Hindi : Neem

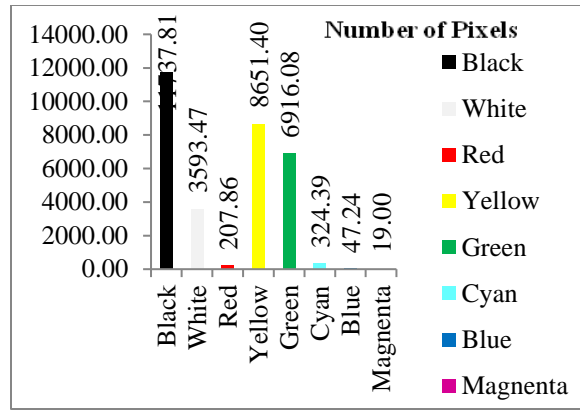
Total Number of Pixels: 31494

Name of the Colours	Number of Pixels	Percentage of Pixels
Black	11737.81	37.27%
White	3593.47	11.41%
Red	207.86	0.66%
Yellow	8651.40	27.47%
Green	6916.08	21.96%
Cyan	324.39	1.03%
Blue	47.24	0.15%
Magenta	19.00	0.060329%

Table 1: Results of the Neem Flower



Graph 1. Histogram of Neem Flower with Percentage of Pixels



Graph 2. Histogram of Neem Flower with Number of Pixels

In the above graph 1 it is clear that the Neem flower contains 37.27% of black pigments and it is also contains 27.47% of yellow pigments hence it is found to contain vitamin C . Therefore Neem flowers are beneficial for all these diseases found in human which are due to deficiency of vitamin C. It also contains 21.96% of green pigments which are due to folate, carotenoids and form vitamin A, stimulate detoxifying enzymes and pathways for chemoprevention.



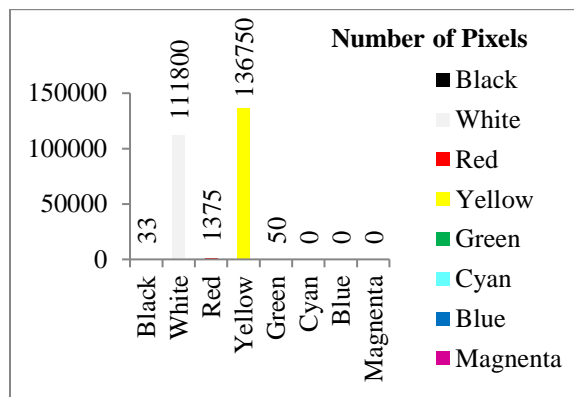
Figure 2 Sample Tanner's Cassia Flower

Common Name :Tanner's Cassia
 Botanical Name :Sennaauriculata
 Name of the family :Caesalpiniaceae(Gulmohar family)
 Name of the Plant in Tamil : Tanner's Cassia
 Name of the Plant in Kannada : Tangedi
 Name of the Plant in Telugu : Tagedu
 Name of the Plant in Hindi : Tarwar

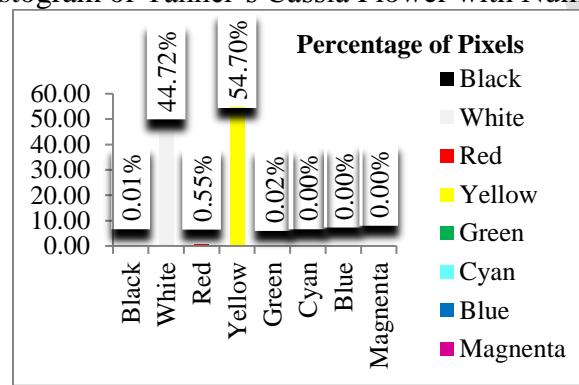
Total Number of Pixels : 250000

Name of the Colours	Number of Pixels	Percentage of Pixels
Black	33	0.01%
White	111800	44.72%
Red	1375	0.55%
Yellow	136750	54.70%
Green	50	0.02%
Cyan	0	0.00%
Blue	0	0.00%
Magnenta	0	0.00%

Table 2: Results of the Tanner's Cassia Flower



Graph 3. Histogram of Tanner's Cassia Flower with Number of Pixels



Graph 4. Histogram of Tanner's Cassia Flower with Number of Pixels

In above graph4 44.72% of white pigments which support immune system to fight off infection ,contain antoxanthins to help lower cholesterol and blood pressure, as well as also contains 54.30% of yellow pigments which are helpful to boost antioxidant intake promote anti-inflammation, and keep eyes and skin healthy these flowers are provides electrolytes and anti-inflammatory compounds to reduce post exercise some muscles, and less contains 0.55% of red pigments due to micronutrients ,lycopene, anthocyanin elagic acid.

6. CONCLUSION

For the past few decades a good percentage of world's population is using Indian and herbal medicines, because they are side effects free and very economical. India is the largest producer of medicinal herbs and has a wonderful potential of medical system. Therefore, the standardization of herbs, medicines and manufacturing techniques are absolutely necessary. The display of colors and their characteristics are presented in Table 1 and Table 2.The results clearly indicate the variations in different flowers through histograms and finally it is concluded. That through Image processing techniques it is possible to explore the hidden scientific potentiates & characteristics in medicinal flowers where naked eye is not possible.

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