

DEVELOPMENT OF HERBAL EYE PAD BY USING *ALOE BARBADENSIS MILLER* FOR COOLING PROPERTY.

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1.ABSTRACT

Ambient light can impact sleep structure and timing. We explored how wearing an eye-pad to block light during late sleep impacts on memory and alertness, changes that could profit everyday tasks like studying or driving. Some eye croakers recommend eye pad as a way of resolving symptoms of dry eyes. There are several types of eye masks available from stores as well as home remedies that may give analogous benefits. A person should consult their croaker if dry eye symptoms persist or worsen over time. People with dry eyes may profit from using an eye pad. Certain eye pad may help ease dry eye symptoms by perfecting hydration, adding product, or reducing inflammation. Applying a cooling sense of eye pad to the eyes it helps to reduce eye dark circles, it'll increase blood rotation and it'll increase moisturizer also. So that then used cooling sense of eye pad in that Madagascar Periwinkle (*Nithya Kalyani*), *Aloe barbadensis miller* (*Aloe vera*), *Ricinus Communis* (castor oil) these are the particulars are used for cooling sense. kapok, (*Ceiba pentandra*), also called Java cotton, ceiba, or Java kapok, seed- hair fibre attained from the fruit of the kapok tree or the kapok tree itself. The kapok is a gigantic tree of the tropical timber cover and emergent subcaste. Kapok is substantially set up in Africa and Asia, where it's cultivated for its fibre, or fluff. Kapok is also used of stuffing for coverlet, pillows, upholstery, mattresses, as sequestration material, and it's substantially used for spongy cotton for surgery. *Aloe vera* to skin hydration and the appearance of dark circles, you can apply *aloe vera* gel to your skin daily and leave it on overnight. *Aloe vera* has moisturizing parcels and works extremely well as a home remedy for dry and bothered eyes. *Aloe vera* may contain parcels that can help reduce eye inflammation and blankness. It'll reduce dark circles. It helps to reduce heat in our body. The study also noted that *aloe vera*, at low attention, didn't appear to have a negative effect on eye cells. former studies that involved exploration on creatures support this finding. Thus, the study regarding eye pad kapok fiber, *aloe vera* powder, castor oil *nithya kalyani* flower powder and marikolunthu for fragrance shows substantial increase in usage of eye pad

Keywords *Cooling sense of eye pad, sleeping eye pad, Aloe barbadensis miller, Madagascar Periwinkle, Ceiba Pentandra.*

2.INTRODUCTION

Eye masks may help a person fall asleep and stay asleep by blocking light. People can choose from a range of options, and they may wish to try a multitudinous different options to see which works swish for them. In addition to sleep masks, a person can ameliorate their sleep by making some introductory life changes, similar as removing electronic bias from the bedroom, avoiding caffeine latterly in the evening, and using knockout curtains. In their introductory form, sleep masks help block light that can help sleep or reduce its quality. Some models might offer limited fresh benefits. Light plays an important part in sleep. A person's body naturally responds to light situations during the day and evening. Sleep masks that cover the eyes help keep the light out when a person is falling asleep and help it from waking them before they're ready to get up for the day.

3.METHODS:

3.1. Process of *Aloe barbadensis miller* (*aloe vera*) powder

- The *Aloe Barbadensis Miller* (*aloe vera*) leaf should be clipped from the plant first. Wash the leaf completely.
- The bottom of the *Aloe barbadensis miller* (*aloe vera*), which contains latex or "aloin," should then be cut off and kept aside in a bowl at 45 to 90 degrees for 30 minutes to properly drain the Aloin.

- After 30 minutes, repeat the washing process and tear the aloe vera leaf into pieces. Then, to properly clean the gel, trim the sharp edges and let those pieces soak in water for another half-hour.
- You will notice a shift in the water's appearance after 30 minutes; it will turn a light yellowish colour.
- After that, completely drain the water and clean the Aloe barbadensis miller.

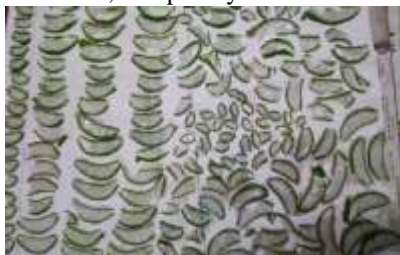


Fig:3.1.1 Aloe barbadensis miller gel pieces. **Fig:3.1.2** Aloe barbadensis miller powder.

- Put the chunks of Aloe barbadensis miller (aloe vera) gel on paper or a fine fabric, such as cotton cloth.
- Afterwards, let them allow it to dry in the shade of the sun.
- Store it at room temperature, preferably 38 degrees.
- Then, continue to inspect and move them to the appropriate sun shadow locations.
- The Aloe barbadensis miller (aloe vera) gel needs two to three days to completely dry.
- We can also try a dry approach that uses a microwave.
- Using this approach (microwave) will cause the aloe vera powder to lose all of its potency and beneficial vitamins, so it is not advisable to use it on the body.
- With the dried Aloe barbadensis miller (aloe vera) pieces, you can manufacture a powder.
- Although it takes a lot of patience, this method is the greatest for preserving all the vitamins in their natural state.
- Next remove the powder and strain it through a strainer to obtain aloe vera powder with a fine consistency.
- Put the powdered Aloe barbadensis miller (Aloe vera) into a box-shaped container.
- This Aloe barbadensis miller (aloe vera) powder can be kept in a cool location.
- Finally, we can utilize this Aloe barbadensis miller (aloe vera) powder for a period of six months starting on the date of manufacture.

3.2 MADAGASCAR PERIWINKLE (NITHYA KALYANI FLOWER)

Process of Madagascar Periwinkle (Nithya Kalyani) powder

- The Madagascar Periwinkle, also known as Nithya Kalyani, should first be plucked fresh off the plant, and then allowed to dry in the shade of the sun.
- Keep the blooms from this Nithya Kalyani (Madagascar Periwinkle) on the cotton fabric to dry.



Fig.3.2.1 Fresh *Madagascar Periwinkle* flowers

Fig.3.2.2 *Madagascar Periwinkle*

- Maintain it at room temperature.
- To ensure full drying, move the flower petals.
- The Madagascar Periwinkle (Nithya Kalyani) takes two to three days to dry. After dry, ground the dried flowers to make a coarse powder.



Fig.3.2.3 *Madagascar Periwinkle powder*

- Use a mortar and pestle to ground dried pieces of Nithya Kalyani (Madagascar Periwinkle).
- This technique retains all the vitamins the best.
- A strainer is used to sift this coarse powder into a fine Madagascar periwinkle (Nithya Kalyani)

3.3 *RICINUS COMMUNIS (castor oil) and its uses*



Fig.3.3.1: *Ricinus Communis (Castor Oil)*

Ricinus Communis (Castor Oil) non-volatile adipose oil attained from the seeds of the castor bean, *Ricinus communis*, of the spurge family (Euphorbiaceae). It's used in the product of synthetic resins, plastics, fibres, varnishes, and colourful chemicals including drying canvases and plasticizers. *Ricinus Communis* (Castor oil) is thick, has a clear and colourless to amber or greenish appearance, a faint characteristic odour, and a mellow but slightly acrid taste, with a generally sickening shadow. *Ricinus Communis* (Castor oil) is attained from castor sap either by pressing or by solvent birth. Both sap and oil painting are produced basically by India and Brazil and consumed primarily in the United States, largely in assiduity. In addition to the uses mentioned preliminarily, castor oil painting and its derivations are used in cosmetics, hair canvases, fungistatic(fungus-growth- inhibiting) composites, embalming fluid, publishing inks, cleaner, lubricants, greases and hydraulic fluids, dyeing aids, and cloth finishing accoutrements .

- This will have a thicker consistency when compared to other oils and is primarily utilised for food products.
- The eyes can also benefit from this *Ricinus Communis* (castor) oil.
- The heat from our bodies will be reduced.
- *Ricinus Communis* (Castor oil) is mostly used by persons with hot bodies to cool down their skin, hair, and body.
- We can get rid of the black circles under our eyes by applying *Ricinus Communis* (Castor) oil.
- The inflammation in the eyes is lessened.
- *Ricinus Communis* will help to cool our body and eyes (Castor oil).

3.4 COMPOSITE OF EXTRACT

3.4.1 *Process of Madagascar Periwinkle powder extraction*

- Firstly, we want to take some amount of Madagascar Periwinkle (Nithya Kalyani) powder, which is already done. Here, I have taken Madagascar Periwinkle (Nithya Kalyani) extraction.
- After that, we wish to pack it with the powdered Nithya Kalyani (Madagascar Periwinkle) in the filter paper.
- Boil 60 ml of water for a full minute.
- After that, add the powder pack to 60 ml of hot water and shut the container with the lid.

Fig.3.4.1.1 *Madagascar Periwinkle*Fig.3.4.1.2 *Madagascar Periwinkle*

- After completing this step, place the container of heated water inside the hot pack to retain the heat for a prolonged period of time.
- After 45 minutes, remove the container and heat the water again. Next, put the previously boiled water into the hot pack, add the powder pack, and close the hot pack to retain the heat for a long time.
- But you should always check the water to see if it's hot; if not, repeat the process. Keep doing this until the water turns brown in colour.
- To preserve this water, I added an ethanol chemical.
- I consumed roughly 50ml of ethanol.
- As a result, it won't harm our body or eyes.

Fig.3.4.1.3 *Madagascar Periwinkle (Nithya Kalyani)*

3.5 FINISHING OF *CEIBA PENTANDRA* (KAPOK FABRIC)

3.5.1. Fragrance filling on the fabric

- I made the fabric from *Ceiba Pentandra* (kapok Fiber), and I finished it with marjoram (marikolunthu) fragrance to give the eye pad a pleasant scent.
- Dip and dry procedure is employed for the *Ceiba Pentandra* prior to this treatment.
- By employing a dip-and-dry extraction technique, Madagascar periwinkle (Nithya Kalyani) is packed with *Ceiba Pentandra* (kapok Fiber).
- To begin, we want to dip the fabric into the extraction for two minutes, remove it outdoors, and then squeeze it. After this, we want to repeat the process three times before allowing the cloth to air dry.
- The entire drying process goes on for more than 30 minutes.
- Thereafter, the fabric will need to be ironed.

Fig.3.5.1.1 *Ceiba Pentandra* (kapok fabric)

Treatment for *Ceiba Pentandra* (kapok fiber)

- To treat the fiber, consume 5g of *Ceiba Pentandra* (kapok fiber) first.
- The *Ceiba Pentandra* (kapok fiber) can be treated by adding 2g of sodium hydroxide (NaOH).
- Put this in the stow for boiling for at least two hours.
- After that, let it dry overnight.
- Take the dried kapok fiber and blend it in a blender after the absorbency test.
- The fiber is then divided, and the fabric is created..



Fig.3.5.1.1 Treatment for *Ceiba Pentandra* Fig.3.5.1.2 Treatment for *Ceiba Pentandra*

- Put this in the stow for boiling for at least two hours.
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4. RESULT AND DISCUSSION

4.1. ANTIMICROBIAL TEST

PREPARATION OF THE BACTERIAL INOCULUM

Stock cultures were maintained at 4° C on slopes of nutrient agar and potato dextrose agar. Active culture for experiments were prepared by transferring a loop full of cells from stock cultures to test tubes of 50ml nutrient broth bacterial cultures were incubated with agitation for 24hours and at 37°c on shaking incubator and fungal cultures were incubated at 27°c for 3-5 days. Each suspension of test organism was subsequently stroke out on nutrient agar media and potato dextrose agar. Bacterial cultures then incubated at 37°c for 24 hours and fungal incubated at 27°c for 3-5 days. A single colony was transferred to nutrient agar media slants were incubated at 37°c for 24 hours and potato dextrose slant were incubated at 27°c for 3-5 days. These stock cultures were kept at 4°c. For use in experiments, a loop of each test organism was transferred into 50ml nutrient broth and incubated separately at 37°c for 18-20 hours for bacterial culture.

4.2. Well Diffusion method

The antibacterial activity and antifungal activity of crude extract extracts was determined by Well Diffusion method (Bauer *et al.*, 1996). MHA plates were prepared by pouring 20ml of molten media into sterile petriplates. The tested cell suspension was spread on mullerhintonagar plate and potato dextrose agar. well, were put into the agar medium using sterile forceps. Plant extract was poured on to wells. Then plates were incubated at 37°c for about 48 hours and control was also maintained. Zone of inhibition was measured from the clear zone in mm.

Organisms	<i>Cadida albicas</i>
Vinca rosea+Aloe vera+ castor oil	0.8 cm
Standard Fugues- Fluconazole	1.0 cm

Table.4.2: Anti-microbial Test.



Fig.4.2 Anti-microbial Test.

Report: The result finds Vinca rosea +Aloe vera+ castor oil treated cloth having Zone of inhibition against the *Candida albicans*. The results show herbal treated fabric shows Anti-microbial activity.

4.3. TEST FOR ABSORBENCY

- Take 1g of *Ceiba Pentandra* (kapok fiber) and add 20ml of water to test absorbency.
- After this we want to leave it this *Ceiba Pentandra* (kapok fiber) to dry for an hour
- We should take at least four samples like this for test the absorbency.

5. SUMMARY AND CONCLUSION

Thus, the eye pad has been developed. It was made by *Ceiba Pentandra* (Kapok fiber). It is mainly used by *aloe barbadensis miller* (aloe vera). This eye pad is bio-degradable and also it is an eco-friendly eye pad. This product is mainly used for eye irritation, heat body persons, dry eyes, stressed peoples. There is no chemicals were used in this eye pad product in the extraction process. Hence, this product will not affect our eyes and it helps to reduce heat in our body and it gives cooling sense to the eyes.

6. ANNEXURE:



Fig.6.1 End product



Fig.6.2 End product

7. BIPLOGRAPHY:

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