

EXTENDED ABSTRACT

CLASSIC CHARCOAL SOAP (CC SOAP)

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APPLICATION OF ACTIVATED CHARCOAL FROM COCONUT SHELL WASTE FOR THE MANUFACTURE OF SKIN LIGHTING SOAP

ABSTRACT

Coconut shell can be used as a raw material for making activated charcoal, which can be used as an active ingredient in skin care. Skin darkening on the hands and feet is usually caused by several factors including dirt, drugs, environmental factors: air pollution, chemicals, infections, inflammation, and sunlight. Activated charcoal has become popular in the cosmetic industry and is found in a variety of products, including facial cleansers and soaps. Activated charcoal is carbon, like coal, but produced from naturally carbon-rich materials such as bamboo, coconut, or wood that has been heated and turned into powder. This process creates micropores in the carbon, increasing its surface area and adsorptive properties. The purpose of this innovation was to determine the application of activated charcoal in the manufacture of skin lightening soap. This classic charcoal soap consists of coconut shell powder, aloe vera, pure coconut oil and rose essential oil. According to the classic charcoal soap disclosed by the invention, build-up of dirt in pores and excessive oil can be thoroughly cleaned. The classic charcoal soap can moisturize the skin, sterilize and diminish inflammation, also effectively promote blood circulation and metabolism as well as remove fatigue. The classic charcoal soap has the effects of whitening, lubricating and tightening the skin after being used for a long time as it can activate the cell and remove aging cuticle, keeping the skin tender and smooth. This soap has the effects of deodorization, sterilization and disinfection, as well as certain prevention and treatment effects on skin diseases. Most of the commercial soaps and detergents contain chemicals that can be harmful to the skin. Using a natural charcoal soap can be a good alternative for a smooth skin.

1.0 INTRODUCTION

Charcoal soap is any soap that uses activated charcoal as an ingredient. Charcoal is typically ground into a powder and mixed with cleansing agents, which in turn creates a product that cleanses and absorbs impurities. Activated charcoal has become a popular trend in beauty products. Activated charcoal is charcoal that's been treated to become highly porous and absorbent. The "activation" occurs when oxygen is introduced to charcoal at high temperatures to alter its internal structure and increase its surface area. Charcoal has a negative molecular charge which allows it to bind with positively charged liquids and gasses. This fact combined with the large porous surface area created by activating it makes it especially effective at absorbing large amounts of toxins. Charcoal is a fine black powder that is made by burning wood, coconut shells, peat and olive pits in low oxygen environment which develops into pores with a high surface area up to an approximate of more than three thousand square metre per gram. These pores trap or absorb chemicals which enables it to draw bacteria and impurities from the skin, improve acne, treat insect bites, minimize skin pores and treat skin conditions. Skin is a very sensitive and protective layer of the human body which is exposed to environmental pollution as well as harmful UV rays making skincare an essential part of our lives. The facial skin is thinner and more fragile as compared to the rest of the body therefore necessitating even more care and regard from us. The cosmetic use of activated charcoal is therefore intended specifically for facial application either in the form of a cream, lotion, facemask, face wash or peel off mask. An appropriate facial cleanser not only has the ability to deterge our skin from potentially harmful bacteria and toxic pollutants but also boost our confidence as a consequence. The gritty texture of activated charcoal soap can also help physically slough away dead skin. When dead skin is left to linger on the surface of your skin, your skin may appear dull or flaky and is more prone to clogged pores and breakouts. Having a layer of dead skin on the surface can also make it more difficult for your skincare products to penetrate into the deeper levels of your skin, which in turn makes those products less effective. Activated charcoal's exfoliating properties helps resolve these issues, helping to clear your complexion over time.

2.0 AIM AND OBJECTIVES

The aim of this innovation work is to study the quality of soap produced from charcoal. The objectives of this innovation are:

- To produce handmade soap of high quality and less time consuming that can be used for both bathing and handwash.
- To produce soap at a cheaper rate from waste and less expensive products.
- To produce a smoother and shiny textured soap for moisturizing,whitening skin naturally, as well as removing unnecessary oils and dirt.
- To produce a soap with low ph that can be used by people with sensitive skin.

THE INVENTION



CLASSIC CHARCOAL SOAP

3.0 METHODOLOGY

INGREDIENTS NEEDED TO MAKE THE CLASSIC CHARCOAL SOAP



COCONUT SHELL



CHARCOAL POWDER



ALOE VERA GEL



ROSE ESSENTIAL OIL



PURE COCONUT OIL



GLYCERIN

PROCEDURE TO MAKE THE SOAP

1. Burn the coconut shell until it fully turns black. Cool the burnt coconut shell.
After that, use mortar and pestle to smash the shells into fine powder.
2. Prepare the solution using 2 spoons of activated charcoal powder. Add one spoon of aloe vera gel.
3. Add 1 spoon of pure coconut oil and rose essential oil into the solution.
4. For the soap base, melt glycerine using the double boiling method.
5. Add the solution into the melted soap base prepared.
6. Mix all the ingredients well. Pour the mixture into a soap mold.
7. Leave it to cool down for 30 minutes. Then, the soap is ready.

4.0 TECHNOLOGICAL INNOVATION

The main component in the Classic Charcoal Soap is charcoal. Charcoal can help remove unnecessary oils and dirt from the skin, leaving you with a smooth, oil-free complexion. Furthermore, it eliminates unwanted oil from the body as well as the face. Charcoal soap provides a clean, flawless complexion due to its ability to remove dead skin cells. It cleans the skin by absorbing oil and dirt from the innermost layers of the skin. As a result, the pores are cleared of impurities that can lead to blackheads. After using it, you should notice your skin getting smoother and see visible improvement of your pores.

In addition to absorbing excess oil and blemish-causing toxins, charcoal soap is tremendously effective in treating acne. Unlike typical acne treatments, charcoal soap leaves the skin with a beautiful glow and reduces redness. Over time, dirt and grime can build up inside your pores. Charcoal soap acts as an extremely effective catalyst for removing dirt.

Furthermore, the ingredients in this soap tighten your skin and help prevent wrinkles and fine lines from forming early. Its ability to reduce inflammation and tighten the skin rapidly is great for all skin types. Charcoal soap has a gritty texture, which is why it may provide the right amount of exfoliation. With its antimicrobial properties, it helps prevent skin infections while removing dead skin cells and dirt from the skin. Even individuals with sensitive skin can use it as a washing soap.

Charcoal soap can be used to soothe skin conditions such as eczema or psoriasis. The skin feels clean without using harmful chemicals, as it can detoxify and remove toxins, excess oil, and bacteria. However, before using it, always consult a medical professional. Charcoal soap generally does not have any side effects and is considered safe.

The content of this Classic Charcoal soap includes pure coconut oil. The coconut oil provides nourishment to the skin, which will help you get beautiful and glowing skin. Coconut oil is an excellent moisturizer for both the skin and the hair. The properties of the coconut oil also help remove dead skin cells and dirt away from the body, thus preventing or reducing acne. It also helps firm up your skin to make you look younger as the soap is rich in antioxidants. Don't bother looking for soaps with lots of chemicals. You can have one made of pure natural ingredients.

Moreover, our Classic Charcoal Soap contains aloe vera. Aloe vera contains the hormone called "Gibberellins", which acts as a growth hormone for skin cells. This helps your skin to heal quickly with less scars or skin marks. Your skin also looks fresher and younger, due to the faster skin cell renewal from our soaps. Aloe vera is a natural moisturizer as it contains natural electrolytes similar to coconut water. However, when moisturizing it does not leave an oily feel to your skin. That's why our soaps can be used as a perfect facial cleanser prior to using BB cream or make-up. One of the most used benefits of aloe vera is its cooling sensation. Aloe vera is a natural antiseptic, which soothes any kind of inflammation or irritation of the skin. That way it can be applied perfectly in our soaps to soothe and cleanse irritated facial skin parts.

Furthermore, the Classic Charcoal Soap consists of rose essential oil. Its cooling and soothing properties are excellent for relieving stress in both adults and children. Rose essential oil has been used throughout history such as for aromatherapy as a healing tonic and mood-elevating supplement. Rose oil is also beneficial for those who have sensitive skin, as it is generally safe for all skin types. The essential oils move deep into your skin and the air in your lungs, regenerating skin while comforting the mind. It slowly relaxes your muscles, relieves spasms, and reduces inflammation. Rose essential oil has been proven to help heal wounds when used topically, but the effects it has inside your body are even more amazing. Inhaling rose essential oil helps create a protective barrier in your body, inhibiting water loss from your skin and lowering the concentration of stress hormones in your body.

5.0 APPLICABILITY IN REAL LIFE

Our innovation soap consists of glycerine. Glycerine is a natural humectant, when using a glycerine soap the glycerine is transferred to your skin and will continue to attract moisture towards it. This is why soap with glycerine in is the best soap for moisturised skin. Glycerine is very gentle on skin because it has a neutral pH of 7. Meaning it has the same pH as water. Soaps that contain glycerine have lower pH's and are generally milder and gentler on skin. Glycerine soap can be great for use on the face as the skin in this area is thinner and needs a gentle soap. When skin is dry and cracked, glycerine can help to repair the skin by drawing moisture towards it, allowing it to heal faster. This is why glycerine soap is the best soap for dry skin and other conditions such as eczema and psoriasis. Glycerine has been classed as a safe ingredient in the use of cosmetics and food. There are zero restrictions from the EU cosmetics regulations on the use of glycerine as it is one of the safest ingredients you can use in products for the skin. Glycerine soap is the best soap for dry skin you can use. This is because of its ability to attract moisture from the surrounding environment towards your skin.

6.0 CONCLUSION

The Classic Charcoal soap can be prepared easily with natural, pure ingredients. Our innovation has been proven beneficial and we have tried using the soap ourselves. Based on our observation, dirt from our hands were eliminated. Apart from that, there has been no side effects recorded from any of the trials. Therefore, this product is an overall success.

The health benefits that come with the soap are indeed positive. Ingredients such as pure coconut oil and glycerine hydrate the skin by retaining moisture. This prevents skin dryness from occurring and therefore reduce the appearance of ageing. Besides that, rose essential oil provides a calming effect that reduces stress by relaxing the muscles the body. Lastly, the activated charcoal produced from burnt coconut shells is a good exfoliant to get rid of impurities, dirt and excess oils from the surface of the skin.

Not only is the Classic Charcoal Soap good for the skin, it also positively impacts the environment. This is because of the ingredients that are used to make it. These natural materials do not harm the waterways unlike commercial soaps that contain phosphorus. Additionally, the soap making process is environmentally-friendly and cost-effective.

Homemade soaps have a strong impact on the skin, in terms of making it soft, smooth and supple. On the contrary, chemical soaps are full of damaging substances that can harm the skin as well as health. The multiple benefits of the Classic Charcoal Soap make it the right choice for better skincare and optimal health outcomes. From the scent to the therapeutic value and the aromatic benefits to medicinal properties, this soap heals, soothes and rejuvenates the skin.

As a conclusion, our Classic Charcoal Soap is a smart, creative innovation that is prepared using everyday materials and effectively gets cleanses the skin.

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