

## A Review on Cosmetic Values of Plant Blueberry

Manasi Nilesh kulkarni, Sneha jotiram Zambare, Shubhanji ananta Gangthade

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### ABSTRACT:

The term "Blueberry" refers to a broad category of perennial blooming plants that bear blue or purple berries they are include in the section cyanococcus. North America is the native home of commercial blueberries, both cultivated (highbush) and wild (lowbush). In the 1930s, highbush varieties were brought to Europe. In this review results from recent studies on this blueberry are discussed in order to determine their cosmetic value. Blueberry contain broad variety of phytochemical associated with both therapeutic and cosmetic uses. Blueberry extract can also be used topically. There is various formulation which are included in this review. So, Blueberries have numerous benefits in cosmetics.

### I. INTRODUCTION:

A class of health and beauty goods known as "cosmetics" is used to alter or enhance a person's look, as well as to care for the face and body. In addition to being used to enhance a person's look, cosmetics are also used to take care of the skin and body and add fragrance. Nowadays due to pollution, depletion of ozone harmful sunrays may harm to our skin. So cosmetic products such as sunscreen is playing significant role. Even while makeup is typically used for skin and body care, there are many other kinds of makeup that have important and distinct uses. are various benefits of blueberries in cosmetic production. Blueberry containing important phytochemicals which acts as antioxidant,

anti-aging, vitamin C and K. It will prevent damaging and promoting radiant skin. It also helps to promote silky soft hairs, prevent moisture loss and elasticity and volume. [1]

The fruit blueberries were originally found in North America. Worldwide consumption has surged, primarily as a result of its reputation for enhancing longevity and health. The industry for cosmetics is currently concentrated on formulas that contain ingredients that have antioxidants activity. The polyphenolic content of blueberries has already been connected to their biological characteristics. This study set out to create and assess cosmetic formulation with freeze-dried. The ripe fruit blueberries were originally found in North America and Brazil. Cosmetic formulation prepared mainly from Brazilian freeze dried blueberry extract. [2]

Blueberries (Vaccinium sect. Cyanococcus) are the member of the Ericaceae family & genus Vaccinium originally native to North America. They are widely distributed across the temperate subtropical regions of northern Hemisphere. [3]

Blueberry is widely distributed & widespread group of perennial flowering plants with blue or purple berries. They are classified in the section cyanococcus. [4]

The bioactive chemical constituent present in blueberry are various kinds of anthocyanins or phenolic aglycone, conjugated with, also chlorogenic acid, flavonoids,  $\alpha$ -linolenic acid, resveratrol and vitamins. [5]



Fig.1: Blueberry



Fig. 2: Blueberry

#### PLANT PROFILE:

|                               |                                                                                                     |
|-------------------------------|-----------------------------------------------------------------------------------------------------|
| <b>Plant Name:</b>            | Blueberry                                                                                           |
| <b>Synonym:</b>               | Bilberry, Vacciniumcorymbosum, Vacciniumangustifolium, great Bilberry, wild blueberry               |
| <b>Chemical Constituents:</b> | Antioxidant, Vitamin C and K, Folic acid, polyphenol Flavonoids, Anthocynin, Tannin, Ascorbic acid. |
| <b>Biological Source:</b>     | Blueberries come from plants in the genus Vaccinium, which belongs to Ericaceous family [1]         |

#### Condition required for the growth of blueberry plants:

1. Soil: It should be well drained & acidic having PH 4-5 range.
2. Habitat: It requires shade or semi – shade for forest blueberries white for cultivated blueberries it requires full sun.
3. Space requirement: Flat root about 60-200 cm / 23,6-7, 8-7 in space.
4. Caring: Plant in fall or spring fertilize a little in spring, water regularly & prune in tall water.
5. Winter hardiness: up to about -16 c / 60.8 F but sensitive to late frosts in spring.

#### Collection :

Coffee grounds are beneficial for fertilizing blueberries. It keepsphmaintaned.

- Blueberries diseases and pests : More acidic ph causes diseases ad pests . Fungal disease, Godronia shoot dieback ,frost moth , spider mites are the different diseases which occurs during development of blueberry plant

- Collection : European blueberries can be harvested between August and september
- A berry comb used to pick the blueberries individually.
- Ripe deep coloured blueberries are collected.
- **Allied species:**Substitution by cheaper fruits , synthetic chemicals,replaced with cultivated berries, cranberry whortleberry, cowberry etc.[6]

#### MORPHOLOGY:

They ate in the bush form having 5 cm to 20 cm for bush. Leaves ate arranged alternatively on the stem having narrow & oval shaped. Flowers ate approximately 8-16. Flowers ate four-five lobed white, whitish - yellow or whitish pink in color. fruit is a true berry consist of 100 or more ovules. ovules become beans seed after pollination & fertilization. They appear blue-black or dark purple after ripen fruits [4]



Fig. 3: Blueberry Plant



Fig. 4: Blueberry Plant

#### COSMETIC VALUE:

|                                            |                                                                                                                                                                                                                                                                                                               |
|--------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Improving skin barrier:</b>             | Application of blueberry extract can increase protein which prevents UV damaging and maintenance of skin barrier                                                                                                                                                                                              |
| <b>Prevents Wrinkle formation:</b>         | Blueberry extract can reduce the wrinkle on the skin.                                                                                                                                                                                                                                                         |
| <b>Reduce skin Inflammation:</b>           | Blueberry extract can reduce the puffiness as well as inflammation from the skin.                                                                                                                                                                                                                             |
| <b>Fades Blemishes:</b>                    | Components present in Blueberry can helps to fade way the blemishes and dark spots.                                                                                                                                                                                                                           |
| <b>Reducing Dark circles:</b>              | The paste of Blueberry can reduce the appearance of Dark circles. [7]                                                                                                                                                                                                                                         |
| <b>Reduce Acne &amp; Healing Property:</b> | Antioxidants and vitamins A and C found in blueberries have been utilized to treat acne, rejuvenate the skin, and expedite healing.                                                                                                                                                                           |
| <b>Boost Collagen:</b>                     | Blueberry extract can boost collagen and offer a revitalizing mist. The antioxidant and collagen-boosting qualities of blueberry extract powder can help maintain and rejuvenate skin.                                                                                                                        |
| <b>Lotion :</b>                            | Blueberries containing water , vitamin A and C which provides hydration and moisture                                                                                                                                                                                                                          |
| <b>Mist and Toners:</b>                    | Toners and mists with blueberry extract can support skin rejuvenation and balance. Lotion, spray mists, from blueberries. [8,9]                                                                                                                                                                               |
| <b>Moisturizing:</b>                       | Blueberry moisturizing and hydrating face mask described in claim 1 is composed of the following weight percentage raw materials: hyaluronic acid 4-6%, hydroxyethyl cellulose 0.2-0.4% trehalose 1.3-2.8%, blueberry extract 0.15-0.3%, preservative 0.02-0.15%, and deionized water for the remainder. [10] |

#### OTHER USES:

- Wound healing :** Blueberries used for healing of cuts, small burn and other imperfection because it contains vitamin C and K .[11]
- Cardiovascular benefits :**Blueberry contains good amount of anthocyanin which on intake decreases the risk of hypertension
- CVD and obesity and weight maintenance:** [12]Due to obesity the risk of hypertension increases by the consumption of blueberry the cvs problem can be reduced.
- Vision :** Blueberry can be effective for the treatment of eye problem and vision issue.[12]

#### FORMULATION:

| Sr.no | Use | Ingredients | Efficacy | Topical/Clinically Tested | Photo | Reference |
|-------|-----|-------------|----------|---------------------------|-------|-----------|
|       |     |             |          |                           |       |           |

|   |                |                                                         |                                                                |     |                                                                                      |                                                                                      |
|---|----------------|---------------------------------------------------------|----------------------------------------------------------------|-----|--------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| 1 | Lip Scrub      | Butter, Sucrose, Blueberry, Wax, Squalane, Polyglycyl-3 | Soften lips, Exfoliate, Hydrates, Smoothen                     | Yes |    | <a href="https://www.discoverpilgrim.com">https://www.discoverpilgrim.com</a> [13]   |
| 2 | Face Wash      | Blueberry, Aqua, Sodium Laurel Sulphate, Glycerin       | cleanser                                                       | Yes |    | <a href="https://skinsecretbluesindia.com">https://skinsecretbluesindia.com</a> [14] |
| 3 | Face Mask      | Liquorice root, Chamomile Flower, Rosemary leaf         | Brightening the face, Smoothen                                 | Yes |   | <a href="https://www.keyaseth.com">https://www.keyaseth.com</a> [15]                 |
| 4 | Face Serum     | Niacinamide, Hyaluronic acid, Vitamin.E                 | Skin Immunity, Anti-pigmentation                               | Yes |  | <a href="https://soulboundindia.com">https://soulboundindia.com</a> [16]             |
| 5 | Body Wash      | Vitamin.E, Blueberry Extract, Coffee oil, Aqua          | Reduce inflammation, Improves skin barrier treatment UV damage | Yes |  | <a href="https://www.mcefine.com">https://www.mcefine.com</a> [17]                   |
| 6 | Face sunscreen | Blueberry extracts, niacinamide, ceramides,             | Repairs maintains skin health hydrates the skin                | Yes |  | <a href="https://www.consciouschemist.com">https://www.consciouschemist.com</a> [18] |

|   |                     |                                                         |                                         |     |                                                                                   |                                                                                         |
|---|---------------------|---------------------------------------------------------|-----------------------------------------|-----|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 7 | Oil clear face wash | Blueberry salicylic acid Glycerin, Titanium dioxide.    | Clear skin                              | Yes |  | <a href="https://himalayawellness.in[19]">https://himalayawellness.in[19]</a>           |
| 8 | Face cleanser       | Niacinamide, cocoa extract, oat milk, blueberry extract | Brightening, reducing skin              | Yes |  | <a href="https://www.consciouschemist.com[20]">https://www.consciouschemist.com[20]</a> |
| 9 | Liquid extract      | Propylene glycol, Aqua, Fruit extract                   | 2-5 % In cosmetic Formulation (Essence) | Yes |  | <a href="https://www.theartconnect.in [21]">https://www.theartconnect.in [21]</a>       |

## II. CONCLUSION:

The plant of fruit having multiple numbers of a uses in the cosmetics is Blueberries. Blueberry have immense therapeutic as well as cosmetic values. These are most widely used drug in various preparations & has been the key factor of skincare which is native from North America. The blueberries have numerous benefits such as it shows antioxidants activity and works against free radical damage. It also encourages the wound healing process. It also protects the skin from UV damage and changes in weather patterns as well as reduces the acne breakout by treating the open pores. It also useful in the improvement of skin tones & brighter, soft and skin antiaging, rejuvenating. It boosts the collagen production by cell turnover which gives younger looking skin. There are wide range of formulation such as moisturizing creams, lotions, face washes, vitamin A & C creams, toners, mists, lip scrub, face mask, lip balms etc.

There huge range of marketed products of blueberries & can be so effective in the such treatments.

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