



# MORINGA NOURISHING HERBAL LOTION

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## ABSTRACT:

The increasing demand for natural skincare products has led to the development of a herbal antioxidant lotion incorporating *Moringa oleifera* (moringa) leaf extracts. The native tree *Moringa oleifera* Lam. (Marantaceae) is widely used as an antioxidant, anti-inflammatory, detoxifying and nutrient. Apart from its therapeutic qualities, it has a potential function in cleansing and hydrating the skin. Body lotion is a cosmetic product used to keep hands and body moisturised. Numerous free radical inhibitor compounds and a number of additional naturally occurring metabolites with high antioxidant activity can be found in moringa leaves (*Moringa Oleifera* Lam). different formulations of the lotion were developed using different concentrations of the extracts and evaluated for key physicochemical parameters, including pH, viscosity, spread ability, and texture. The optimized formulation exhibited a pH range of 5.8–6.5, smooth texture, and ideal viscosity for easy application. Stability testing over 30 days under various temperature conditions. In study's findings and product testing, moringa leaves extract is essential for boosting skin elasticity, decreasing dryness, and improving skin texture

**Keywords:** Moringa leaves extract, Antioxidant activity, Nourishment, Body lotion.

## INTRODUCTION:

*Moringa oleifera* can be utilised as a natural antioxidant because it includes calcium, potassium, protein, vitamin C, and beta-carotene. Furthermore, further research has demonstrated the presence of carotenoids, flavonoids, and phenolic chemicals in moringa leaves.<sup>[1]</sup> Moringa leaves have a variety of qualities based on the active compounds they contain, including anti-inflammatory, natural food preservatives, antioxidants, and antimicrobials (Jayaw) Moringa have various species like *Moringa longituba*, *Moringa drouhardii*, *Moringa Ovalifolia* etc.<sup>[2]</sup> Moringa belongs to family Moringaceae. *Moringa Oleifera* is one of the magical plants considered in India due to its high medicinal properties. *Moringa oleifera* also commonly known as 'Drumstick' and horse radish tree, Benoil tree, miracle tree and mother's best friend.<sup>[3]</sup> *Moringa oleifera* (moringa) are two medicinal plants well known for their health-promoting properties.<sup>[4]</sup> These compounds help protect the skin from damage, reduce inflammation, and support skin healing. Moringa leaves, on the other hand, are packed with nutrients and bioactive compounds such as ascorbic acid, polyphenols, chlorogenic acid, and minerals.<sup>[5]</sup>

However, there is still a lot of difference in potential of *Moringa Oleifera* by understanding their phytochemicals and variation in extraction due to solvents, Moringa leaf extract can be administered topically to prevent and treat oxidative and anti-aging stress illnesses, according to a prior study (Atif et al., 2013).<sup>[6]</sup> According to a study by Sugihartini et al. (2016), skin smoothness could be enhanced by a 3% extract concentration in cream.<sup>[7]</sup> The SPF rating will rise as the extract concentration in the cream increases.<sup>[8]</sup> The manufacture of lotion and gel with a 3% extract concentration will be the main focus of this investigation.<sup>[9]</sup> The SPF value and the preparation's physical characteristics will be used to evaluate the dosing form.<sup>[10]</sup>



**Figure 1: Moringa leaves**

### Objectives:

- To deeply moisturize, nourish, and protect the skin using its rich antioxidants.
- It aims to soothe, repair, improve skin elasticity, and provide anti-inflammatory benefits for skin.
- To cure wounds, pain, ulcers, liver disease, heart disease, cancer, and inflammation.
- To help protect cells from damage.
- To providing rich antioxidants (Vitamins A, C, E).

### Potential benefits of Moringa Body lotion:

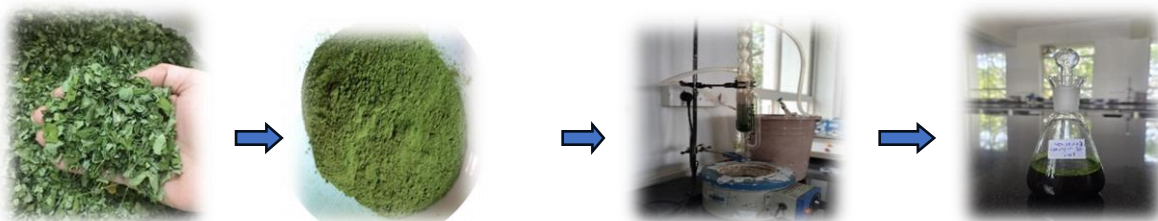
- It also Provide vitamin C, which is known to support the skin's natural defence.
- Deep Hydration
- Anti-inflammatory Action
- Brightening effect
- Antibacterial and wound healing
- Sun protection
- Helps in repairing dry skin and making it soft

### Material and methods:

Collection of Materials: Moringa leaves, Aloe-vera gel, Honey, Glycerine, Rose water, Vitamin E Capsules and Almond Oils is collected from SMBT Campus and the local area of Ghoti & Nashik and Methyl Paraben and was collected from Pharmaceutics lab (SMBT IODP, Nashik)

### Extraction of Moringa leaves:

- Fresh Moringa leaves are collected and dried for 1-2 weeks in room temperature
- The dried leaves put into a mixer grinder and to make coarse powder.
- Weighing the 25gm of Moringa leaves powder put and placing in soxhlet apparatus for extraction with containing 200 ml of ethanol; allow standing for 3 days for 6 hours daily.
- After the extraction, Filtering the material with the help of by using filter paper to obtain particle-free extract.



**Figure 2: Extraction of Moringa leaves**

### Method of Preparation Herbal Lotion:

- Taken glycerine, aloe vera gel, honey, Vitamin E capsule, almond oil in a beaker with continuous trituration.
- Then add methyl paraben in above solution with Stirring.
- Add finally Moringa leaves extract.
- Mix it properly to make viscous herbal lotion.
- Transfer into the container.

Table 1: Formulation Table

Sr. No.	Name of Ingredients	F 1	F2	F3	F4	F5
1.	Moringa leaves extract	4ml	3ml	4ml	3ml	4ml
2.	Aloe vera gel	8 gm	8gm	7gm	7 gm	8 gm
3.	Honey	3 gm	3 gm	4gm	4 gm	3gm
4.	Almond oil	1 drop	1 drop	1drop	1drop	1drop
5.	Glycerine	1 ml	2ml	3ml	2ml	3ml
6.	Vitamin-E Cap	1 cap	1 cap	1cap	1cap	1cap
7.	Methyl paraben	0.1 gm	0.1 gm	0.1 gm	0.1 gm	0.1 gm
8.	Rose water	1 drop	1 drop	1 drop	1 drop	1 drop



Figure 3: Formulation of Herbal Moringa Lotion

**Evaluation Parameter:**

- Appearance:** The lotion's appearance was examined visually.
- Colour:** The colour of the cream was visible.
- Odour:** Sniffing was used to assess the lotion's aroma.
- PH:** The produced herbal lotion's PH was measured using a digital PH meter and a PH paper.
- Spread ability:** A sample was placed between two slides and crushed to a uniform thickness using a particular weight for a predefined period of time in order to assess the lotion's spread ability.
- Irritancy test:** The lotion was applied to a specific area of the dorsal surface of the left hand.
- Test of Removal:** The applied area was washed with water to test how easy it was to remove the cream.
- Stability Test:** The formulation was put in the middle of the petri dish, and the plates were then incubated for 72 hours at 37°C to examine the all-microbial growth.
- Viscosity:** The viscosity of lotion was determined by using Brookfield viscometer (LV Viscometer) spindle No. 64 at 20 RMP for 3 min. The Values Obtained for sample is noted.



Figure 4: pH Test



Figure 5: Viscosity Test



Figure 6: Spread-ability Test

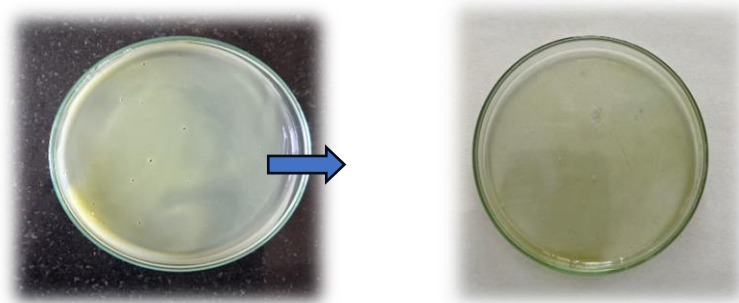


Figure 7: Stability Test

Table 2: Evaluation Table

Parameters	Formulations				
	F 1	F2	F3	F4	F5
Colour	Greenish	Dark Green	Greenish	Green	Dark green
Odour	Pleasant	Pleasant	Pleasant	Pleasant	Pleasant
Texture	Smooth	Smooth	Smooth	Smooth	Smooth
pH	6.8	5.8	5.6	6.1	5.9
Stability test	Stable	Stable	Stable	Stable	Stable
Spread-ability	Easily spreadable	Easily spreadable	Easily spreadable	Easily spreadable	Easily spreadable
Washability	Easily washable	Easily washable	Easily washable	Easily washable	Easily washable
Viscosity	3007 cP	3207 cP	3005cP	4005 cP	3407 cP
Irritancy	Non-irritable & non allergic on the skin	Non-irritable & non allergic on the skin	Non-irritable & non allergic on the skin	Non-irritable & non allergic on the skin	Non-irritable & non allergic on the skin

### Result and Discussion:

The herbal body lotion prepared with Moringa Oleifera leaves extract showed notable advantages. According to the study's findings and product testing, moringa leaves extract is essential for boosting skin elasticity, decreasing dryness, and improving skin texture. The colour of the herbal preparation was greenish. The pH, viscosity, stability and irritancy was determined between 5 to 6 and the lotion did not reduce any skin discomfort when applied to the skin

so overall, the lotion shows that the Moringa extract-based herbal body lotion is a safe, natural, and skin-friendly for skin and mucous membrane.

**Conclusion:**

In present study, Herbal Moringa lotion formulation was developed and evaluated using organoleptic characteristics (colour, odour, and appearance) as well as physiological parameters like pH, Spread-ability, ease of removal, and irritancy test. Herbal extracts are the subject of the current investigation. The creation of a herbal body lotion with Moringa Leaves extract demonstrates how beneficial natural ingredients are for skincare. Moringa is a great option for a body lotion formulation because of its well-known antioxidant, moisturising, and anti-aging qualities. This lotion provides deep hydration, nourishment, and skin protection as a safe, chemical-free substitute for traditional skincare products.

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