

Project Profile

# ROSE WATER MANUFACTURING



## 1. INTRODUCTION

Ladakh's unpolluted high-altitude ecosystem, with its unique combination of cold desert climate, intense sunlight, and mineral-rich soil, offers an ideal environment for the growth of aromatic and medicinal plants. Among its most prized floral resources is the **wild Himalayan rose (*Rosa webbiana*)** — a resilient species native to the region's valleys and foothills. Known for its **intense natural fragrance, high essential oil content, and therapeutic properties**, the wild rose represents an untapped economic and ecological asset of Ladakh.

This project proposes the establishment of a **Pure Rose Water Production Unit** in Ladakh, utilizing locally harvested wild roses through **steam distillation technology** to produce **100% natural, chemical-free rose water**. The initiative aligns with the **Aroma Mission** of the Council of Scientific and Industrial Research (CSIR) and the **One District One Product (ODOP)** initiative of the Government of India, promoting value addition and sustainable utilization of Ladakh's floral biodiversity.

### Market Potential and Relevance

Globally, rose water is in high demand in **cosmetics, skincare, wellness, and gourmet food industries**, valued for its natural toning, anti-inflammatory, and aromatic qualities. With increasing consumer preference for **organic, cruelty-free, and sustainable beauty products**, Ladakh's pure, high-altitude roses offer a powerful natural differentiation from synthetic or lowland-sourced alternatives. The product can be positioned as a **premium Himalayan rose distillate**, emphasizing purity, sustainability, and origin authenticity.

Within India, the cosmetic and aromatherapy sectors are growing rapidly, with the **natural skincare market projected to exceed ₹10,000 crore by 2027**. In this context, rose water serves as both a **standalone product** and a **key input** for other enterprises — including herbal cosmetics, essential oil blends, perfumes, and wellness products. Establishing this unit will therefore also create synergies with other local agro-based and herbal enterprises in Ladakh.

### Sustainability and Local Empowerment

The project is designed with a **sustainability-first approach**:

- **Raw Material Sourcing:** Wild roses will be harvested responsibly from natural habitats, supplemented by community-led rose cultivation under horticultural guidance to ensure ecological balance.
- **Women and Youth Engagement:** Collection, sorting, and processing activities will prioritize the inclusion of **women's self-help groups (SHGs)** and local youth, providing skill-based livelihood opportunities.
- **Eco-Friendly Production:** The production process will employ **steam distillation**, which avoids the use of synthetic solvents or chemicals, resulting in a pure, edible-grade rose water that retains the plant's natural essence and therapeutic compounds.

### Economic and Cultural Impact

The **Pure Rose Water Production Unit** will serve as both a **commercial venture and a cultural enterprise**—reviving traditional Himalayan floral heritage while creating modern economic value. It will:

- Reduce dependency on imported or synthetic rose products;
- Create **employment in rural and semi-urban areas** of Ladakh;
- Strengthen the local **brand identity of “Made in Ladakh”** in wellness and organic product markets;
- Support eco-tourism by integrating product demonstration and experiential workshops for visitors;
- Lay the foundation for **downstream industries** such as essential oil extraction, herbal cosmetics, and natural fragrances.

### Strategic Vision

By establishing this unit, Ladakh can position itself as a **new frontier for natural fragrance and botanical industries**, complementing its growing reputation for sustainable, high-value mountain products such as apricot oil, seabuckthorn, and herbal teas. Over time, the enterprise could expand into producing **rose essential oils, infused beauty tonics, facial mists, and culinary rose extracts**, catering to both domestic and export markets.

Ultimately, the project represents a **fusion of ecology, culture, and entrepreneurship**, transforming Ladakh’s wild roses into a symbol of natural purity and sustainable innovation — while empowering its communities through eco-conscious enterprise.

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## 2. PRODUCT & ITS APPLICATION

- **Product:** 100% pure, organic rose water (food-grade and cosmetic-grade).
  - **Applications:**
    - **Cosmetics:** Toner, face mists, and natural skincare.
    - **Food & Beverage:** Flavouring agent in desserts, beverages, and traditional medicines.
    - **Wellness:** Aromatherapy, religious rituals, and herbal remedies.
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## 3. DESIRED QUALIFICATION FOR PROMOTER

- Background in food processing, herbal products, or cosmetics.

- Knowledge of steam distillation techniques and organic certification processes.
  - Experience in marketing natural products via e-commerce or FMCG channels.
  - Understanding of Ladakh's ecosystem and sustainable harvesting practices.
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#### 4. INDUSTRY LOOKOUT AND TRENDS

- **Global Market:** Rose water market to grow at 5.2% CAGR (2023–2030), driven by demand for clean-label products.
  - **Trends:**
    - Surge in Ayurvedic and halal-certified personal care products.
    - Government push for aromatic plant cultivation under the **National Aroma Mission**.
  - **Challenges:** Seasonal availability of wild roses, competition from synthetic alternatives.
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#### 5. MARKET POTENTIAL & MARKETING ISSUES

- **Potential:**
    - Domestic demand from Ayurvedic brands (₹1,200+ crore industry).
    - Export opportunities to Middle East, Europe, and the U.S. for organic rose water.
  - **Issues:**
    - High logistics costs from Ladakh's remote location.
    - Certification hurdles (organic, FSSAI, ISO).
    - Branding against established players like Gulabri and Heritage Products.
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### 6. RAW MATERIAL REQUIREMENTS

- **Primary:** Wild rose petals (sustainably harvested).
  - **Secondary:** Purified water, food-grade preservatives (optional), eco-friendly glass bottles.
  - **Sustainability:** Partner with local communities for ethical wild rose collection.
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### 7. MANUFACTURING PROCESS

1. **Harvesting:** Manual collection of wild rose petals at dawn (peak fragrance).
  2. **Cleaning:** Remove impurities and debris.
  3. **Distillation:** Steam distillation in copper/SS vessels to extract rose water.
  4. **Filtration:** Remove residual particles.
  5. **Bottling:** Sterilized glass bottles with airtight seals.
  6. **Labelling:** Organic certification and branding.
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### 8. MANPOWER REQUIREMENT

- **Skilled:** 2–3 technicians (distillation experts, QA/QC).
  - **Semi-Skilled:** 5–6 workers for harvesting, cleaning, and bottling.
  - **Administrative:** 1 manager, 1 sales/marketing executive.
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### 9. IMPLEMENTATION SCHEDULE

- **Phase 1 (0–4 Months):** Feasibility study, approvals, community partnerships.
  - **Phase 2 (4–8 Months):** Setup distillation unit, procurement of machinery.
  - **Phase 3 (8–12 Months):** Trial production, certification, and market launch.
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## 10. COST OF PROJECT

- **Total:** ₹35–40 lakhs.
    - Machinery & Equipment: ₹15 lakh.
    - Raw Material & Packaging: ₹10 lakh.
    - Certification & Marketing: ₹5 lakh.
    - Contingency: ₹5 lakh.
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## 11. MEANS OF FINANCE

- **Promoter Equity:** 30% (₹10.5–12 lakh).
  - **Subsidies:** 30% via **PM Formalization of Micro Food Processing Enterprises (PMFME)**.
  - **Bank Loan:** 40% (₹14–16 lakh).
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## 12. LIST OF MACHINERY REQUIRED

- Steam distillation unit, filtration system, bottling machine, sterilizers, labelling machine, storage tanks.
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## 13. PROFITABILITY CALCULATIONS

- **Annual Production:** 10,000 litres (@₹400/liter = ₹40 lakh revenue).
  - **Operating Cost:** ₹25 lakh (harvesting, labour, logistics).
  - **Net Profit:** ₹15 lakh/year (37.5% margin).
  - **ROI:** 20–25% post-tax.
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## 14. BREAKEVEN ANALYSIS

- **Fixed Costs:** ₹12 lakh/year (salaries, rent).
  - **Variable Costs:** ₹130/litre.
  - **BEP:** 8,000 litres /year (₹32 lakh revenue).
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## 15. STATUTORY/GOVERNMENT APPROVALS

- FSSAI license for food-grade products.
  - Organic certification (India Organic/APEDA).
  - GST registration, Udyam MSME certificate.
  - Forest permits for wild rose harvesting (Ladakh UT).
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## 16. BACKWARD & FORWARD INTEGRATIONS

- **Backward:** Train local women in sustainable rose harvesting (linked to **Ladakh Aroma Mission**).
  - **Forward:** Launch private-label skincare range or collaborate with luxury wellness brands.
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## 17. TRAINING CENTERS & COURSES

- **Local:**
  - **KVK Leh** (sustainable harvesting techniques).
  - **NABARD** workshops on food processing.
- **National:**
  - **Fragrance & Flavour Development Centre (FFDC)**, Kannauj.
  - **CIPET** (packaging technology).
- **Online:** Coursera courses on organic certification and export compliance.

## 18. MACHINERY SUPPLIERS

Here are some reliable Indian manufacturers/suppliers of distillation and extraction machinery:

- HM Herbals (Ranchi) — Offers stainless-steel rose water distillation units, e.g., “Rose Water Making Machine” and “Rose Water Distillation Unit”.  
[TradeIndia+2TradeIndia+2](#)
- Swaraj Herbal Plants Pvt. Ltd. (Barabanki, UP) — Manufacturer of field distillation units / steam distillation setups usable for aromatic plant extraction. [Swaraj Herbals Plants Pvt. Ltd.+1](#)
- Ylem Energy (Delhi) — Offers steam distillation units with capacities 100-1000 L, suitable for rose petals. [ylemmachines.com+1](#)
- LITCO India (Kolkata) — Manufacturer of rose water manufacturing plants (distillation / boiling vessels + condenser + storage) for industrial scale.  
[litcoindia.com](#)

Here’s a brief summary of each:

- Mini Rose Water Distillation Unit (HM Herbals): A compact pilot-scale unit suitable for initial small batches.
- HM Herbals 100 L Stainless Steel Distillation Unit: Larger capacity unit (~100 L), good for scaling up.
- Electric Rose Water Mini Distillation Unit: Entry electric model suitable for low-volume production or R&D.
- HM Herbals 10 L Electric Mini Distillation Unit: Very small capacity, good for training, prototyping, or pilot phase.
- 100 LPH Rose/Mutra Distillation Unit: High throughput unit (100 litres per hour) suitable for full scale production.
- Steam Distilled Rose Water (Product example): Example of the finished rose water product—this shows market potential of output.
- Premium Rose Water (Consumer product): Example consumer product, helps visualise packaging/branding possibilities.
- Organic Rosewater (Consumer product): Organic variant, emphasising premium/health market segment.

### Notes & Tips for Ladakh Context

- Choose machinery made of **food-grade stainless steel (SS 304/316)** because you’ll be producing consumable and possibly cosmetic-grade rose water. For example: HM Herbals units specify SS304. [TradeIndia+1](#)
- Since Ladakh is remote and power supply / transport may be constrained, consider units that are **modular, energy efficient**, and can operate with alternate fuels (gas/wood) if needed. For instance, some units can be bottom-fired or wood/coal fired. [TradeIndia+1](#)
- Logistics: Ensure spare parts and support availability, especially for equipment like boilers, condensers, pumps in high-altitude terrain.
- Capacity scaling: Start with a pilot unit (eg 10–20 L) then scale to 100–200 L or more as the project grows.



- Packaging & storage equipment should also be considered (filling machines, storage tanks, bottling lines) though the core is the distillation unit.

**Conclusion:** Ladakh's wild roses offer a unique opportunity to produce premium, organic rose water with high market demand. By integrating sustainable practices, community partnerships, and strategic branding, this project can position Ladakh as a hub for natural aromatic products while boosting local livelihoods.