

Technology Profile: Jal TARA Kit

Executive Summary: Jal TARA Kit

The Jal TARA Kit is an innovative, cost-effective, and portable water testing solution developed by Development Alternatives in 1990, with support from DST SEED in 2000. Designed to assess drinking water quality, this colorimetric testing kit provides an accessible and user-friendly means for detecting contaminants, even by unskilled individuals. It serves as a vital tool in combating water-borne diseases and improving public health, particularly in rural, urban, and peri-urban areas.

Key features of the Jal TARA Kit include affordability, portability, and ease of use, enabling on-site water testing. Validated in both laboratory and field conditions, the technology aligns with Sustainable Development Goals (SDGs) such as SDG-6 (Clean Water and Sanitation) and SDG-3 (Good Health and Well-being). Registered on platforms like India Mart, the kit is accessible to a diverse range of customers, including NGOs, private organizations, educational institutions, and government bodies under initiatives like the Jal Jeevan Mission.

The Jal TARA Kit has demonstrated significant commercial success, with a consistent growth rate of 5-15%. It generates direct and indirect employment opportunities, especially for marginalized communities and women, while supporting rural development and health improvement. Environmentally, the technology promotes sustainable water management, minimizes waste, and indirectly contributes to reducing greenhouse gas emissions by enabling targeted water purification.

With established market presence in multiple states and recognized under government subsidy programs, the Jal TARA Kit is positioned for scalable impact. Future plans include geographical expansion, strategic partnerships with NGOs and corporates, product diversification, digital integration for automated analysis, and enhanced marketing efforts. By addressing critical water quality issues, the Jal TARA Kit stands as a transformative solution for ensuring safe and sustainable access to drinking water.

Overview of the Technology

The Jal TARA Kit is a portable, cost-effective, and user-friendly water testing solution developed by Development Alternatives (DA) in 1990 and supported by the DST SEED initiative in 2000. This innovative colorimetric kit is designed to assess water quality by detecting contamination in drinking water. It is particularly beneficial for rural, urban, and peri-urban populations, allowing for on-the-spot testing by unskilled workers. The JalTARA Kit contributes to reducing water-borne diseases and aligns with the United Nations Sustainable Development Goals (SDGs).

Specifications of the Technology

- **Purpose:** Detection of contaminants in drinking water to ensure safety.
- **Type:** Portable colorimetric testing kit.

- **Key Features:**
 - Cost-effective and accessible.
 - Easy to use by unskilled individuals.
 - Portable and convenient for field testing.
- **Applications:** Drinking water quality testing in rural, urban, and peri-urban areas.
- **Development Year:** 1990.
- **Manufacturing Support:** TARA Life Sustainability Solutions (TLSS).
- **Performance:** Validated and tested in both laboratory and field conditions.
- **Market Availability:** Registered on India Mart for accessibility.

Core Competencies of the Technology

1. **Innovative Design:**
 - The JalTARA Kit employs colorimetric technology to detect water contaminants accurately.
 - It is portable and requires minimal technical training, making it ideal for remote areas.
2. **Cost-Effectiveness:**
 - Affordable for NGOs, educational institutions, private organizations, and government initiatives such as the Jal Jeevan Mission (JJM).
3. **Ease of Use:**
 - Simple operational protocol allows unskilled individuals to perform water quality tests at the source.
4. **Sustainability:**
 - Aligned with SDG-6 (Clean Water and Sanitation) and SDG-3 (Good Health and Well-being).

Techno-Commercial Impact

- **Growth Rate:** Between 5-15%.
- **Employment Generation:**
 - Direct and indirect employment opportunities for marginalized communities.
 - Focused on rural employment and empowerment of women.
- **Profitability:** EBITA above 5%.
- **Competition and Market Linkage**

- **Competitors:** Aqua Sol and other similar water testing kits.
- **Market Reach:** Established in more than one state with a network of distributors.
- **Government Support:** Recognized under various subsidy programs, with potential bank loan support for customers.
- **Social and Environmental Impact**
 1. **Social Benefits:**
 - Addresses critical water quality issues that contribute to water-borne diseases.
 - Benefits rural and vulnerable communities, including women and children.
 - Provides mitigation solutions based on test results to ensure safe drinking water.
 2. **Environmental Benefits:**
 - Promotes sustainable use of water resources.
 - Contributes to controlling GHG emissions indirectly by enabling targeted water purification efforts.
 - Minimizes waste generation during operation.

The Jal TARA Kit is a pioneering innovation in water quality testing, delivering affordable, accessible, and sustainable solutions to ensure safe drinking water for all, while contributing to health, empowerment, and environmental sustainability.