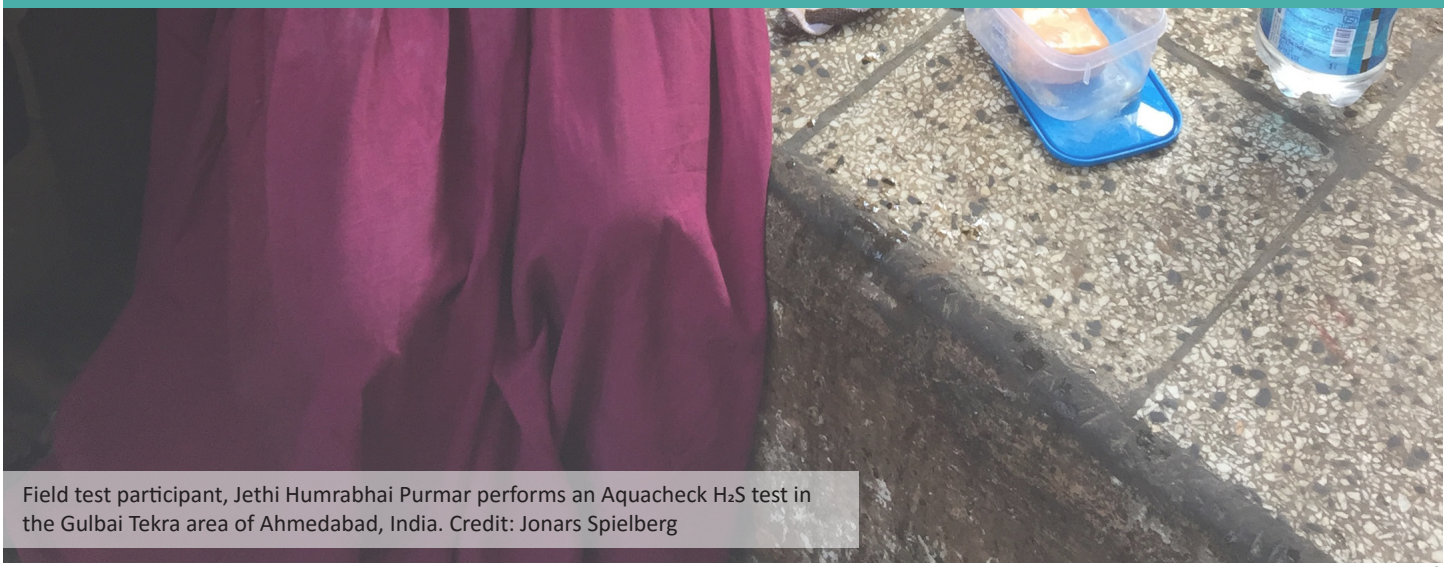
Comprehensive Initiative on Technology Evaluation

Findings and Methodology At a Glance

Water Test Kits in Ahmedabad, India



Field test participant, Jethi Humrabhai Purmar performs an Aquacheck H_2S test in the Gulbai Tekra area of Ahmedabad, India. Credit: Jonars Spielberg

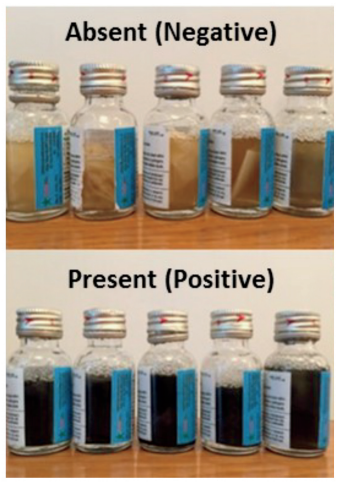
Findings at a Glance

Single Parameter Water Test Kits

The technical performance of the two water test kits was nearly identical: **94% accurate**

Participants who saw a demo of recommended use were **68% more likely to use it correctly** than those who were just read the instructions

The **cost of the test was acceptable** to low-income survey participants, but these **tests are not available** in retail outlets



Comparative Ratings Chart

	Technical Score	Ease of Use Score	Availability Score	Affordability Score	Demand Score	**Total Score**
Weightings	*20%*	*20%*	*20%*	*20%*	*20%*	*100%*
OrLAB/Bactovial	●	◑	○	●	◕	◑
Jal-TARA/Aquacheck	●	◔	○	●	◑	◑

Key: ● *Excellent* ◕ *Very Good* ◑ *Good* ◔ *Fair* ○ *Poor*

Multi-Parameter Water Test Kits

For low-income consumers, **reagent-type kits ranked higher** than incubator-type kits due to the high cost differential.

On average, **potential buyers valued ease of use & affordability** the most, and availability and demand generation least.

Comparative Ratings Chart

Brand & Model	Technical Score	Ease of Use Score	Availability Score	Affordability Score	Demand Score	Environmental & Health Score	**Overall Score**
Incubation Type Test Kits							
Hach	◑	◕	●	◔	○	◕	64
Wagtech	●	◑	◕	◔	○	◕	59
Sandberg	◑	◔	◑	○	○	◕	49
DelAgua	◕	○	●	○	◑	◕	49
ELE	◕	○	◔	○	○	◕	28
Reagent Type Test Kits							
PSI	◑	◕	◕	●	◕	●	81
Jal-TARA	◑	◕	◕	◕	◑	●	80
CPCB	◕	◑	○	●	◕	●	73
Labsol	◑	◑	●	◕	◔	●	73

Key: ● *Excellent* ◕ *Very Good* ◑ *Good* ◔ *Fair* ○ *Poor*

Methodology at a Glance

The water test kit evaluation included three key components...

	1. Product Evaluation	2. Outreach & Partnership	3. Methodology Development
Single Parameter Test Kits	Lab testing in Ahmedabad, India Survey of 234 low-income users Ahmedabad, India Observation of users performing test in the field	Collaborated with local university students and NGOs Capacity building in rural northern Gujarat State Provision of water quality test results to all study participants	Proposed new standardized framework for CITE evaluations Proposed six new primary criteria, adaptable to all CITE evaluations
Multi Parameter Test Kits	Developed 17 indicators to calculate scores for six criteria based on literature and expert interviews Compiled a list of 56 kits from 25 different manufacturers	Interviewed NGOs working on water test kits	Developed procedures for conducting scoping study Developed Decision Support System Created product database template

And a new streamlined approach to product evaluation:

Technical Performance:
How well does the product perform its function in the lab and in real world settings?

Availability:
Is the product available in local markets? Is the supply chain dependable?

Ease of Use:
How easy or difficult is the product to use by an untrained user in a non-lab setting?

Affordability:
Is the full cost within the ability and willingness to pay for low-income users?

Demand Generation:
How high is the demand, and can the supply chain actors increase demand?

Health & Environment:
Does the product have a negative impact on the environment or the health of its users?

Data sources include: lab testing, field testing, observation, interviews, and surveys.