

AQUINTAQA

# Executive Summary

Version 1.0

January 2026

Pre-NDA Public Summary

## 1. Project Overview

AQUINTAQA is developing a desalination platform based on a volumetric gas-sorbent process.

The technology is designed for controlled extraction of dissolved salts from saline water through a cyclic physico-chemical mechanism involving gas activation and selective sorption media.

The objective of the platform is to provide an alternative to conventional membrane-based desalination systems with potential advantages in modularity, operating stability, and feed-water adaptability.

## 2. Technology Concept

The process architecture includes:

- Gas phase activation module
- Sorption media interaction chamber
- Regeneration loop
- Controlled separation stage

The system operates in volumetric mode rather than through surface membrane filtration.

Core operating principles have been validated in laboratory and prototype environments.

### **3. Development Status**

The project has progressed through staged experimental validation.

#### **Current status (public scope):**

- Core principle experimentally confirmed
- Repeatable directional salt removal demonstrated
- Prototype subsystems assembled and tested
- Controlled sample conditions verified

#### **Extended validation (NDA scope):**

- Integrated pilot configuration
- Multi-feed testing
- Continuous operation cycles (>800 hours cumulative)
- Independent laboratory analysis (before/after metrics)

Detailed validation data is available under NDA in the secure Data Room.

### **4. Validation Framework**

Testing has been conducted under controlled laboratory conditions and pilot environments.

Measured parameters include:

- Conductivity reduction
- Salinity concentration change
- Process repeatability
- Stability across feed variations

Independent third-party laboratory assessments have been completed for selected test cycles.

Documentation is available upon request under confidentiality agreement.

## **5. Engineering Status**

The system architecture has been defined at prototype level.

Next technical phase includes:

- Industrial engineering design
- Process optimization
- Modular scaling assessment
- System integration refinement

No commercial-scale deployment has yet been executed.

## **6. Regulatory and Compliance Orientation**

The platform is being developed with reference to international potable water standards, including:

- WHO guidelines
- EU drinking water directives
- US EPA standards

Formal certification processes have not yet commenced.

## **7. Organizational Structure**

The project is supported by an international team of engineers and researchers with backgrounds in:

- Chemical engineering
- Process design
- Fluid systems
- Applied physics

Operational and advisory roles are defined but not publicly detailed at this stage.

## **8. Intellectual Property**

The technological framework and process design are subject to internal documentation and structured IP strategy.

Specific filings and protection mechanisms are disclosed under NDA.

## **9. Scope of This Document**

This Executive Summary provides a high-level technical overview.

It does not include:

- Financial projections
- Capital structure
- Business model scenarios
- Partnership structures
- Commercial terms

These matters are discussed individually with prospective counterparties under confidentiality agreements.

## **10. Contact**

For institutional inquiries:

[Official contact email]

[Registered entity details]

Access to extended technical documentation is available upon execution of an NDA.