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H2HUBB Official Test Report

Evaluation Introduction

Our report summarizes our analysis of the EvolvedH2O Hydrogen Water Bottle offered by the company EvolvedH2O. H2HUBB classifies this device as a high-pressure (psi) H₂ water portable system. The device features a PEM/SPE membrane to ensure H₂ gas production regardless of source water conductivity (TDS). Its session time-frame or cycle time-frames are 5 minutes and 10 minutes. We evaluated the system's dissolved hydrogen performance at 5 and 10 minutes. The unit contains a 3.7 V +1650 mAh battery, as stated by the battery specs. Our investigation was to analyze whether the product would meet our H₂ product performance standards, which must be achieved to be approved and recommended by H2HUBB. To learn more about our H₂ performance standards for hydrogen water bottles, visit [H2HUBB](https://www.H2HUBB.com).

H2 Products

- Company: EvolvedH2O
- Product Name: EvolvedH2O Hydrogen Water Bottle
- Type: High-Concentration H₂ Water Device
 - PEM/SPE
 - Portable hydrogen water generator
 - High-PSI bottle
- Model: ABS-FQ-07A
- URL Link: <https://evolvedh2o.com/>

Method and Procedure

- Distilled water: 6.0 pH (verifies that unit can function with low water conductivity)
- ΔpH (delta pH): Did not increase
- Water Temperature: 65~70°F/ 18~21°C
- Bottle Vol Size: 0.270 L or 270 mL
- Cycle Time Frame:
 - 5-minutes
 - 10-minutes
- Contamination Tests:
 - Chlorine generation (Cl₂)
 - Ozone Generation (O₃)
- Test Location: 277 meters (909 ft elevation)
- Test Methodology:
 - Titration: H₂Blue® Test Reagent
- All Dissolved H₂ Concentration Tests Converted to SATP (water temp and pressure)
- Claimed Dissolved H₂ mg/L: 4.0-6.0 mg/L (post 5~10 minutes)

Test Results

To measure the dissolved hydrogen gas concentration of the bottle, we filled it with distilled water up to the base of the threads. The lid was then securely fastened, and the bottle was activated using either the 5-minute or 10-minute hydrogen generation setting. All measurements were conducted using the H₂Blue testing method. Multiple tests were performed to ensure accuracy, and the results were averaged to determine the bottle's performance. While our primary emphasis is on the average dissolved hydrogen concentration, peak concentration values are also included to provide a comprehensive analysis of the bottle's capabilities.

H₂ Concentration at SATP:

- 5-mins avg mg/L (ppm): \cong 4.0 mg/L (ppm); SD: 0.16
- 10-mins avg mg/L (ppm): \cong 6.0 mg/L (ppm); SD: 0.10

Peak H₂ Concentration at SATP:

- 5-mins peak mg/L (ppm): \cong 4.35 mg/L (ppm)
- 10-mins peak mg/L (ppm): \cong 6.20 mg/L (ppm)

Avg H₂ mg Produced in Designated Vol:

- 5-mins: \cong 1.08 mg (\cong 13.11 mL Dissolved)
- 10-mins: \cong 1.62 mg (\cong 19.67 mL Dissolved)
- **Claimed H₂ mg/L (ppm) confirmed:** Yes

H₂HUBB Hydrogen Concentration Assessment

- According to our testing, the EvolvedH₂O Hydrogen Water Bottle exhibits a dissolved molecular hydrogen concentration of 4.0 - 6.0 mg/L (ppm) throughout its cycle durations of 5 and 10 minutes, with a peak H₂ concentration of 6.20 mg/L (ppm). Based on current scientific literature in human studies, the dissolved hydrogen concentration on the 5-10 minute settings is deemed sufficient to induce therapeutic effects. The bottle surpasses our H₂HUBB standards for both **H₂ Concentration and Daily Dose of H₂**, and we recommend users utilize the 10-minute cycle time for consuming hydrogen water from the device.

Contamination Test:

- Chlorine (Cl₂): No detectable levels
- Ozone (O₃): No detectable levels

Internal Performance

Manufacturer's Rated Electrical Values: (as stated on the power supply)

- **Type of device/electrolytic cell**
 - Pure H₂: PEM/SPE membrane
- **Applied volts:**
 - 3.7 volts
- **Total Amps:**
 - 1650 mAh (1.65 amps)
- **Total watts:**
 - 6.10Wh (watts)
- **Electrolysis volts:**
 - 2.54 volts
- **Electrolysis amps:**
 - 1.063 amps
- **Total watts:**
 - 1.70 watts

H₂ Production vs. Dissolved Hydrogen:

- **Theoretical Max H₂ production:**
 - 8.09 mL/min or 0.67 mg/min
- **Theoretical Max Dissolved H₂ Level**
 - 5-mins: \cong 12.34 mg/L (ppm)
 - 10-mins: \cong 24.68 mg/L (ppm)
- **Measured Dissolved H₂ reading:**
 - 5-mins: \cong 4.0 mg/L (ppm)
 - 10-mins: \cong 6.0 mg/L (ppm)
- **Percentage of Max H₂ Dissolved (as measured):**
 - 5-mins: \cong 32.42% dissolved
 - 10-mins: \cong 24.31% dissolved
- **Percentage of Max H₂ Undissolved (loss):**
 - 5-mins: \cong 67.58% undissolved
 - 10-mins: \cong 75.69% undissolved

Product Assessment

Functionality:

- Power on/off button
 - Located on the H₂ generator.
 - Press the power button to initiate electrolysis for hydrogen gas production and initiate a 5-minute session, then shuts off.
 - Press the power button twice to initiate a 10-minute session time then shuts off.
- USB-C charging port
 - Located on the backside of the device.
- Anode reservoir off-gas port
 - Pin-hole located on the bottom of the bottle.

Reliability:

- New: Yes
 - Initial test results and evaluation are currently on the report. (see Overall Opinion)

Cost:

- EvolvedH₂O Hydrogen Water Bottle: \$215.00 AUD
- H₂ Hubb discount: TBA
- H₂ Hubb recommendation cost: TBA

Overall Opinion

The EvolvedH₂O Hydrogen Water Bottle is a well-constructed portable hydrogen water generator. Our evaluation determined that, during a 10-minute operation cycle, the device produced approximately 6.0 mg/L (ppm) of dissolved H₂ in 270 mL of water, resulting in a total dissolved hydrogen content of 1.62 mg H₂ (equivalent to 19.67 mL of H₂ gas at SATP). This molecular hydrogen dose significantly surpasses the performance of substandard hydrogen water bottles, which typically produce only 0.1–0.3 mg per cycle, and falls well within the expected range for high-quality portable hydrogen water generators. Furthermore, the milligram dosage of H₂ per cycle surpasses H₂HUBB's daily hydrogen ingestion standard of 0.8 mg, meaning that a single bottle session at 10 minutes delivers a therapeutically relevant dose. Based on these findings, the EvolvedH₂O Hydrogen Water Bottle ranks among the highest-performing hydrogen water generators we have tested and currently recommend.

Dissolved hydrogen concentration (mg/L (ppm)) is a critical performance metric, as research suggests that 1-3 mg of H₂ or more per day appears to be therapeutic for humans. Furthermore, the **IHSA** standard for this type of product is a minimum of 0.5 mg/serving or 0.5 mg/L. H₂HUBB's performance standard for hydrogen water devices is slightly higher than IHSA, as we require the device to provide a concentration of 0.8 mg/L (ppm) and 0.8 mg/day consistently. The EvolvedH₂O Hydrogen Water Bottle offered by EvolvedH₂O surpassed H₂HUBB standards for both **H₂ Concentration and Daily Dose of H₂**. Based on current research data, we believe the device's mg/L (ppm) performance provides adequate levels of hydrogen gas to induce therapeutic effects in humans. **According to our test results, the product ranks as a Level 4 hydrogen water device.** You can view the meaning of this rankings [here](#). We are pleased with the device's dissolved hydrogen concentration.

Since the EvolvedH₂O Hydrogen Water Bottle achieved a peak H₂ concentration of 6.20 mg/L (ppm) during its 10-minute cycle, it is classified as a Level 4 H₂ water device in the H₂HUBB ranking system. Our performance classification is based on the highest dissolved hydrogen concentration recorded during testing, which reflects the maximum capacity of the device and the highest possible H₂ dose a user could receive under optimal conditions. However, this does not mean that every individual will consistently achieve this exact concentration, as real-world performance can vary due to user conditions, product variability, and environmental factors.

To provide a realistic expectation for consumers, we also report the average H₂ concentration achieved across multiple tests, which represents what users are more likely to experience during regular use. While our performance levels are determined by peak H₂ concentrations, the H₂HUBB test average offers a more practical measure of typical device performance. Therefore, while the EvolvedH₂O Hydrogen Water Bottle is capable of producing hydrogen concentrations exceeding 6.0 mg/L (ppm), users should not expect to consistently reach this peak value with every use. Additionally, not every bottle will reach the exact same peak H₂ concentration, although performance should remain within a similar range.

Despite all EvolvedH₂O bottles coming from the same manufacturer and assembly line, individual units may exhibit slight performance differences due to variations in H₂ electrolytic cell performance (voltage, amperage, resistance), lid seal integrity, and pressure release valve efficiency. These minor discrepancies can lead to small variations in hydrogen concentration results across different units. Consumers should understand that these findings are the result of credible, independent testing conducted by a recognized authority in the industry.

Replicating these exact test results at home, even using the same titration reagents, is unlikely, as H₂HUBB follows a standardized methodology designed for accurate and repeatable testing. Our refined oxidimetry testing protocol, developed over a decade, ensures precise measurements using H₂HUBB-approved reagents. Understanding that peak concentrations occur under optimal conditions, H₂HUBB provides consumers with a well-rounded analysis of product performance, reporting both peak and average H₂ concentrations to help them make informed purchasing decisions.

Overall, the hydrogen water bottle is aesthetically appealing, engineered with high-quality materials, and effectively dissolves a therapeutic concentration of hydrogen gas into its 270 mL capacity. The validity of the manufacturer's claims regarding the bottle's hydrogen gas performance is not in question and the device's performance aligns closely with the product's marketing materials. We have no safety concerns with the system, as it appears to have implemented sufficient safety measures and effectively prevents the production of chlorine and ozone in the drinking water. We are generally pleased with the performance of the device. The EvolvedH₂O Hydrogen Water device performed above our minimum performance standards and, in the opinion of H₂HUBB, the system appears to be safe and suitable for in-home H₂ Water Therapy.

We desire to move forward with recommending the product to the public.

H₂ Hubb LLC disclaimer: All tests conducted and test results produced by H₂ Hubb LLC have been done according to industry-accepted practices and standards. Nevertheless, these results may not necessarily reflect test results performed by manufacturers, suppliers or third-party labs. Our test results are independent of all other parties, and testing by other parties may produce different results. We understand that many variables are involved in testing, some of which are extremely difficult to control. These reports are not meant or intended for any other purpose but to uphold H₂ Hubb LLC's business practices and to validate the reasons for our recommendations.



Approved By: Tywon Hubbard

A handwritten signature in black ink that reads "Tywon Hubbard".

CEO, H₂HUBB LLC

