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H₂ HUBB Official Test Report

Product:

Name: H₂ Respire 1000

Company: Q-Life (Micro Research Institution Inc)

Type: 1000 mL/min H₂/O₂ Inhalation Device

- Pure H₂ Inhalation (99.99/4N)
 - PEM/SPE
 - O₂ port supplied as well.
- Hydrogen-rich water
 - Dissolution via specialized diffusion stone.

Model: H2R-1000

Serial Number: H2R1K230049

Tester: Tywon Hubbard (TH)

Testing start date: 9/5/2023

Completion date: 9/14/2023

PERFORMANCE:

H₂ Flow Rate Confirmation Test: H₂ Respire 1000

- **METHODOLOGY:**
- Distilled Water (used for testing): 6.0 pH
- Water Temperature: 65~70F/ 18.3~21.1C
- Reservoir Vol Size: 2.6 L/2600 mL
- H₂ output: 666 mL/min or 54.91 mg/min (@ SATP)
- Test Elevation: 277 meters (909 ft)
- H₂ Flow Test: mL/min, normal timing for breathing session
- Test Methodology: Gas Displacement
- All Tests Converted to SATP

H₂ Dissolved Concentration Confirmation Test: Specialized Diffusion Stone

- **METHODOLOGY:**
- Distilled Water (used for testing): 6.0 pH
- Water Temperature: 65~70F/ 18.3~21C
- Water Vol Size: 0.5L or 500 mL (16.9 oz)
- pH: The unit did not increase the pH of the water
- Dissolution Session Time Frame: 10-minutes (600 seconds)
- H₂ Concentration Test: Dissolved H₂ in mg/L
- Test Elevation: 277 meters (909 ft)
- Test Methodology: Titration: H₂Blue Test Reagent
- All Tests Converted to SATP where applicable (water temp and pressure)
- Claimed H₂ mg/L: 1.50 mg/L @25C

H₂ Flow Rate Test Results at SATP:

- **Device H₂ mL/min (mg/min) avg:** = 660.39 mL/min (± 0.3%): converts: 54.41 mg/min
- **Device O₂ mL/min (mg/min) avg:** = 330.19 mL/min (± 0.3%)
- **Device Total H₂/O₂ mL/min (mg/min) avg:** = 990.58 mL/min (± 0.3%)
- **Claimed Mfg's H₂ mL/min (mg/min) confirmed:** Yes
 - H₂HUBB's test results closely align with Q-Life's stated hydrogen production, accounting for a minimal margin of error. Our findings corroborate Qlife's device claims, factoring in potential human error.

- Despite not precisely reaching 666 mL/min of H₂, the H₂ Inhalation device successfully generated a high hydrogen flow rate, surpassing [H₂HUBB's minimum flow rate standard for hydrogen generators.](#)

H₂ mg/L (ppm) Concentration Test at SATP:

- **10-mins avg mg/L (ppm):** ≈ 1.55 mg/L (ppm)
 - **Avg H₂ mg Dissolved in Designated Vol:**
 - **After 600 seconds:** 0.77 mg
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PRODUCT ASSESSMENT:

Functionality:

- **Power button**
 - Merely a display button.
 - **Operation interface**
 - *Start/Pause:* Initiates electrolysis for hydrogen gas inhalation.
 - *Timer:* Allow the user to select time frame for the H₂ inhalation session
 - Selectable Session time-frames: 30 mins, 60 mins, 90 mins, 2hr, 3hr, 4hr, 5hr, 6hr, 7hr, 8hr
 - *Dim mode:* Dims the display for low light settings.
 - **H₂ outlet port**
 - Two outlet ports
 - Connection port for H₂ gas inhalation.
 - **O₂ outlet port**
 - Connection port to add O₂ gas to H₂ gas for oxyhydrogen inhalation.
 - One outlet port
 - **Distilled water reservoir (2600 mL)**
 - Requires distilled water only.
 - **Reservoir filter cartridge**
 - Filters reservoir water to improve gas purity and should be replaced every 3-6 months.
 - **Device notification**
 - **Low water**
 - Indicates the reservoir needs more water.
 - **Overfilled**
 - Indicates the reservoir has too much water.
 - **Filter**
 - Notifies the user that the reservoir filter needs to be changed.
 - **Overpressure (gas blockage)**
 - Notifies the user that there is a gas blockage.
 - **Overheat**
 - Notifies the user that the hydrogen cell is too hot. (check the user manual to resolve)
 - **Unbalance**
 - Notifies the user if the device is tilted
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PRODUCT SAFETY:

Safety Components:

- The system has 6 key safety mechanisms for improving the safety of the device.
 - Low water shortage protection
 - Prevent cell from excessive heat
 - Gas blockage protection
 - Prevents build-up of internal pressure or pressurized hydrogen gas.
 - Device tilt protection
 - May prevent damages or leaks
 - High-temp cell sensor
 - Prevents the cell from overheating.
 - Internal Fans
 - May also aid in preventing overheating and prevents hydrogen gas build-up in case of leaks.
 - Heat Vents
 - Prevents excessive heat in the system

- The system theoretically should only be combustible at the tip of the nasal cannula as the system produces >99% pure hydrogen gas.

As with all inhalation devices that produce pure hydrogen gas, care should be taken to avoid exposing the cannula tip to any source of ignition (such as an open flame or a spark) which could result in the combustion of the gas.

Cost:

- Q-Life (H₂ Respire 1000™): \$3,105.00 USD
 - H₂ Hubb discount: 10%
 - H₂ Hubb recommendation cost: \$2794.50 USD
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**Summary Report Only.
Not Full Test Report.**

Other testing and technical sections are not included out of respect and professional courtesy of the RPC

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Approved by: Tywon Hubbard

A handwritten signature in black ink, appearing to read 'Tywon Hubbard', with a stylized flourish at the end.