



Laboratory Report

H2 Analytics
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Report # H2AR-250425-1

Introduction

This report summarizes the analysis of a hydrogen-RO water machine distributed by Miami Alkaline Water, Inc., Coral Gables, FL, USA. The product is a 10-stage under-counter filtration system that includes a countertop-mounted faucet. It uses reverse osmosis filtration and a specialized cartridge to produce filtered hydrogen water. The product was received on 4/22/25 in a factory-new box.

Test requested: dissolved hydrogen concentration on the day of installation and after a 24-hour break-in period

Methods

Dissolved hydrogen concentration (H₂)

Test water: Henderson, NV municipal tap, temperature: 25.0°C ± 1.5°; ec: 968 us/cm; pH: 7.12

Laboratory elevation: 864 meters (0.91 atm); all measurements adjusted to SATP

Test Equipment: SRI 8610C gas chromatograph, Torrance, CA, USA

Column: Hayesep-D 6M packed column temp: 60°; Detector: Tungsten-Rhenium TCD

Carrier gas: N₂, 20 PSI, 20 mL/min;

Calibration: Performed on the day of testing using third-party calibration gas; PQL: 50 µg/L; LOD: 50 µg/L

Centrifuge: H2 Analytics, 2400 RPM

Test Method: Static headspace analysis (GC-HS)

Testing on the day of installation: The machine was installed according to the manufacturer's instructions and connected to a municipal tap water source. The water was turned on, and the pressure tank was allowed to fill. The faucet was then opened, and the tank was flushed and allowed to refill. Before testing, the GC was permitted to warm up for two hours and then calibrated. For each test, the faucet was opened, and the water was allowed to flow for 10 seconds before a 1-liter beaker was filled. A 2000 µL sample was immediately drawn using a gas-tight syringe. The sample was then injected into the headspace vial and placed on a centrifuge for three minutes to permit the dissolved H₂ to equilibrate with the headspace. After equilibration, a 1000 µL sample of the headspace was taken using a gas-tight syringe and injected into the gas chromatograph for analysis. Three tests were conducted, the results recorded, and the mean and standard deviation were reported. Based on the dissolved H₂ concentration and the water volume, the dose of H₂ delivered when drinking one liter was calculated and reported in milligrams as "H₂ Dose". Attachments 1 & 2 show sample chromatograms.

Note: Wait time between each test sample was approximately 15 minutes

Testing after 24-hour break-in period: The test procedure above was repeated after 24 hours to allow the Magnesium cartridge to become fully wetted.

Results

Day of Installation:	Mean H ₂ : 1.00 mg/L (ppm);	SD - 0.04;	H ₂ Dose: 1.00 mg
After 24-hour break-in:	Mean H ₂ : 1.72 mg/L (ppm);	SD - 0.13;	H ₂ Dose: 1.72 mg



Approved By:

Randy Sharpe, Director of Testing

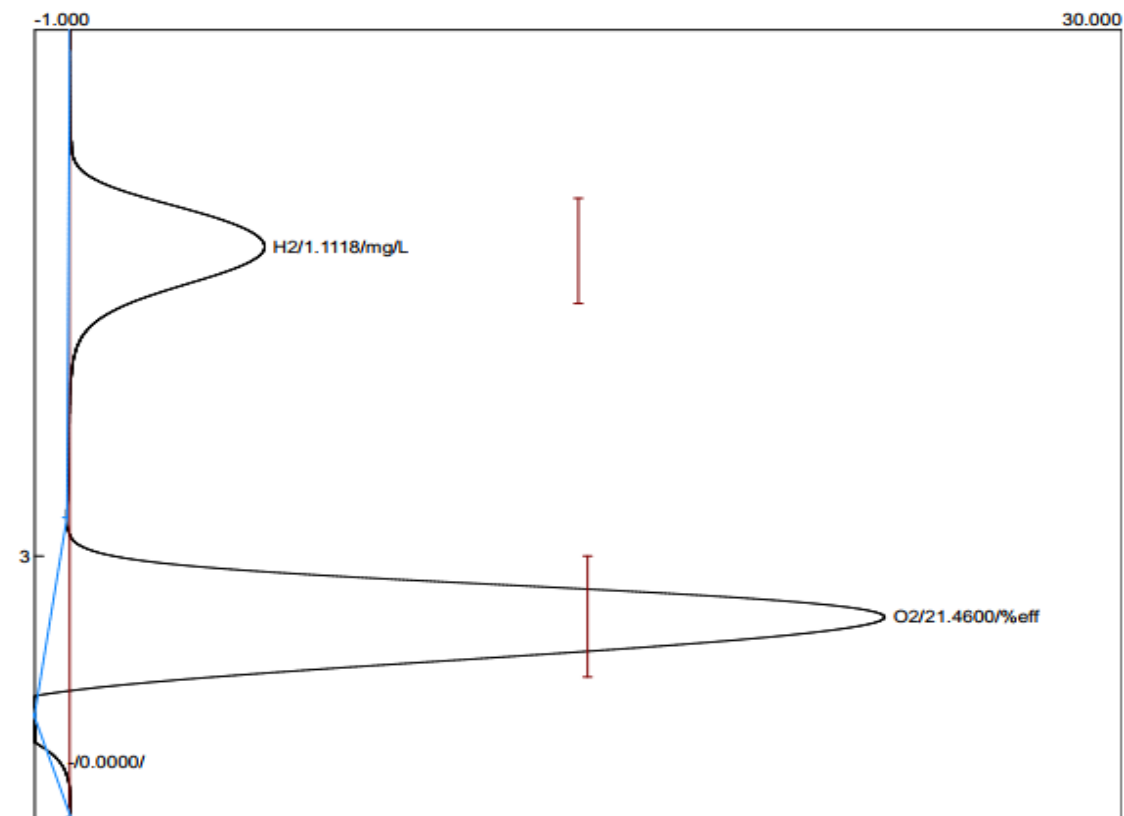
Report Date: 4/25/2025



Lab name: H2 Analytics
Client: MiamiAlkaline
Client ID: H2A-1066
Collected: 4-23-25
Holding time: 300
Method: Static HS Analysis (GCHS)
Lab ID: HNV

Hydrogen Water Testing & Certification

Lab ID: TCD CH1 60C
Description: TCD CH1 60C
Column: Haysep-D 6 meters 60C
Carrier: N2 @ 20psi (20 mL/min)
Components: MiamiAlk.cpt
Integration: Peak sens=90.0 Base sens=90.0 Min area= 0.10 Standard= 1.000 Sample= 1.000 Tangents=off
Data file: MiamiAlk06..CHR ()
Sample: H2RO
Operator: rs
Comments: DH2 Test Run
QC batch: H2-75-10SA



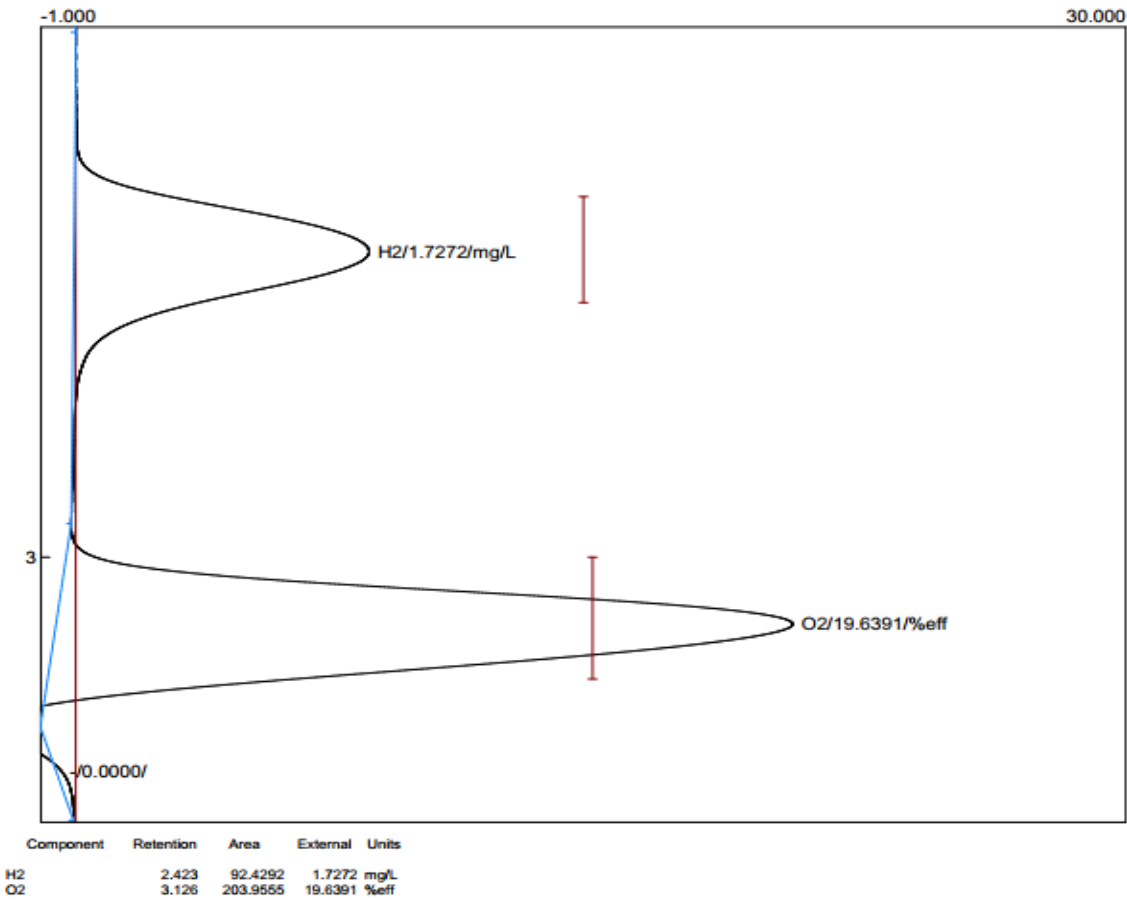
Component	Retention	Area	External	Units
H2	2.413	59.4986	1.1118	mg/L
O2	3.116	222.8660	21.4600	%eff

Sample Chromatogram (Day of Installation)

Lab name: H2 Analytics
Client: MiamiAlkaline
Client ID: H2A-1066
Collected: 4-24-25
Holding time: 300
Method: Static HS Analysis (GCHS)
Lab ID: HNV
Description: TCD CH1 60C
Column: Hayesep-D 6 meters 60C
Carrier: N2 @ 20psi (20 mL/min)
Components: MiamiAlk.cpt
Integration: Peak sens=90.0 Base sens=90.0 Min area= 0.10 Standard= 1.000 Sample= 1.000 Tangents=off
Data file: MiamiAlk06.02.CHR ()
Sample: H2RO (24hr)
Operator: rs
Comments: DH2 Test Run
QC batch: H2-75-10SA



Hydrogen Water Testing & Certification



Sample Chromatogram (After 24-Hour Break-in)