



📍 Overland Park KS
✉ Tywon@H2HUBB.com
🌐 www.H2HUBB.com

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H2HUBB Official Test Report

Evaluation Introduction

Our report summarizes our analysis of several brands of hydrogen test reagents available on the market, comparing them to the H2Blue hydrogen test reagent. H2Blue is a reputable brand that has been verified for accuracy against Gas Chromatography (GC), the gold standard for measuring hydrogen gas dissolved in water. In contrast, the majority of other brands have not undergone this level of verification. Both H2Blue and the other brands we evaluated use a testing method called titration to determine dissolved hydrogen concentration accurately. These test reagents are either ethanol-based or water-based and contain colloidal platinum and methylene blue, where platinum acts as the catalyst and methylene blue as the oxidant or reactant. To learn more about these reagents and their functionality, visit [H2Sciences Inc.](#)

H2 Products

Company: H2 Sciences Inc.
Brand Name: H2Blue
URL Link: <https://amz.run/9FLa>

Company: Plafnio
Brand Name: H2 Accu
URL Link: <https://amz.run/9COC>

Company: MOSM
Brand Name: Molecular Hydrogen Test Kit
URL Link: <https://amz.run/9FLX>

Company: Level Up Way Store
Brand Name: Level Up Hydrogen Test Reagent
URL Link: <https://amz.run/9FLc>

Method and Procedure

- Distilled water (6.0 pH, eliminates variables, TDS, Conductivity, etc)
- Water Temperature: 25C
- Saturated H₂ Water: 1.57 mg/L
 - Obtained via continuous bubbling of 100% H₂.
 - Water Vol Size: 0.5 L or 500 mL
- Test Methodology: Titration:
 - H₂Blue Test Reagent
 - H₂ Accu
 - MHTK
 - Level Up
- Test Location: 277 meters (909 ft elevation)
- All Dissolved H₂ Concentration Tests Converted to SATP (water temp and pressure)
- Claimed: All reagents measure the dissolved H₂ accurately per instruction in the manual

Confirmation Test Results

We tested each hydrogen gas reagent against our known standard of 1.57 mg/L (ppm) of dissolved H₂ in distilled water. Following the instructions in each product's user manual, we aimed to verify the accuracy of the reagent's test beakers regarding the water sample volume (in mL) and the reagent's measurement of dissolved H₂ at 1.57 mg/L (ppm).

H₂ Accu:

Test Graduated Beaker H₂ Water Volume: 7.5 mL instead of 6 mL

Control: Saturated H₂ Water (1.57 mg/L or ppm)

H₂Blue: 1.55 mg/L (ppm) (6 mL)

H₂Accu-H₂Blue Beaker: 1.45 mg/L (ppm) (6 mL)

H₂Accu-Provided Beaker: 2.10 mg/L (ppm) (7.5 mL)

Correction Factor: Multiply by 0.75 for accurate readings.

Molecular Hydrogen Test Kit:

Test Graduated Beaker H₂ Water Volume: 9 mL instead of 6 mL

Control: Saturated H₂ Water (1.57 mg/L or ppm)

-H₂Blue: 1.55 mg/L (ppm) (6 mL)

-MH Test Kit-H₂Blue Beaker: 2.20 mg/L (ppm) (6 mL)

MH Test Kit-Provided Beaker: 3.30 mg/L (ppm) (9 mL)

Correction Factor Using H₂Blue Beaker: Multiply by 0.714 for accurate readings.

Correction Factor Using MH Test Kit: Multiply by 0.476 for accurate readings.

Level Up Hydrogen Test Reagent:

Test Graduated Beaker H₂ Water Volume: 11.5 mL instead of 10 mL

Control: Saturated H₂ Water (1.57 mg/L or ppm)

H₂Blue: 1.55 mg/L (ppm) (6 mL)

Level Up-H₂Blue Beaker: 2.70 mg/L (ppm) (6 mL)

Level Up-Provided Beaker: 5.0 mg/L (ppm) (11.5 mL)

Correction Factor Using H₂Blue Beaker: Multiply by 0.582 for accurate readings.

Correction Factor Using Level Up Beaker: Multiply by 0.314 for accurate readings.

Overall Opinion

According to our evaluation, the brand test reagents H2 Accu, Molecular Hydrogen Test Kit, and Level Up Hydrogen Test Reagent were unable to accurately measure the dissolved hydrogen concentration in our H2 water sample. We cross-compared these reagents with the hydrogen test reagent H2Blue, which is an H2HUBB-approved test reagent for hydrogen water. H2HUBB approved this reagent for several reasons, such as the rigorous testing against GC to verify its accuracy, its presence on the market for nearly a decade, and our own use of H2Blue for almost the same amount of time. We have compared our test results with GC test results, showing that our results with H2Blue can be within 5% accuracy of GC results, accounting for human error. Due to these reasons, H2Blue is approved by H2HUBB as a hydrogen gas test reagent for its accuracy and reliability.

Given the increased awareness of hydrogen water in the mainstream media, there have been many new brands of hydrogen test reagents entering the market. This has been accompanied by an increase in consumers testing for dissolved hydrogen gas in their water from purchased H2 water products. Unfortunately, it appears that the tested dissolved hydrogen reagents are calibrated to show higher dissolved hydrogen concentrations than what is actually present in the water. This can be significantly problematic, giving consumers a false sense of confidence that the hydrogen water consumed from their H2 water device is therapeutic and will provide health effects. This can also lead to H2 companies engaging in false advertising of their hydrogen water product, showcasing outrageous dissolved hydrogen gas claims.

The test reagents' measurements were 30-70% higher than the actual H2 concentration in the sample water. Furthermore, none of their provided graduated beakers accurately reflected the specified water volume needed to perform a proper dissolved hydrogen test. Since titration involves a precise amount of reagents in a precise volume of water (sample) for accurate reading, the graduated beaker should be accurate in measuring the mL of the water sample. This was not true for any of the test agents investigated. Nearly all of them stated to fill the graduated beaker with 6 mL of hydrogen water, but upon examination, the marking on the beaker that stated 6 mL was actually 1.5-3 mL more water than 6 mL. This can skew the results depending on how the test reagent is calibrated. Therefore, we provided correction factors for all these reagents to help H2 consumers who used these reagents to accurately measure the dissolved hydrogen concentration of their water.

Based on our test results, H2HUBB advises not to use these hydrogen test reagents or others like them unless they have been verified by a credible and trusted third party, such as H2HUBB or H2 Analytics. It is clear that apart from laboratory GC test results or H2Blue used with a skilled user, it can be challenging to know how much hydrogen gas is dissolved into the water. Therefore, it is important that consumers rely on third-party authorities in this space and verify if they have tested the hydrogen water product in question or of interest. If a consumer seeks to test their hydrogen water at home to determine the dissolved hydrogen gas concentration, they should use H2Blue and watch the videos on our website to properly use H2Blue ([VIDEO 1](#), [VIDEO 2](#)). After watching the videos, they should conduct several tests to see the dissolved hydrogen gas range of the product and at what concentration does the product consistently produce and dissolve the hydrogen gas in the water (e.g. 1.0-1.6 mg/L (ppm)). This will give the consumer an idea of the dissolved hydrogen concentration of the water. Lastly, it is important to acknowledge that H2Blue is somewhat of an art and that the test results from the product will become more accurate as the consumer continues to refine their skills at using H2Blue. Furthermore, most consumers will not obtain the same results as H2HUBB with H2Blue due to a lack of experience with the product.

Approved By: **Tywon Hubbard**



CEO, H2HUBB LLC

