

HYDRION · PRODUCT TEST REPORTS

# Clean water is the foundation of better skin and hair.

At Hydrion, we believe that beauty starts with clean water. This report brings together third-party lab studies conducted over the past two years to validate the impact of the Hydrion Filtered Showerhead on skin hydration, hair health, and water quality.

From statistically significant improvements in dryness and redness, to measurable reductions in chlorine and frizz, these findings reflect what our community has felt all along: clean water makes a visible difference. Every test included in this report was run independently by certified labs across diverse European geographies, use cases, and demographics.

While the Hydrion Filtered Showerhead is not a cure-all for every skin or hair concern, the results in this report highlight its value as a foundational step. It won't eliminate every frizz, blemish, or chlorine molecule — but it can dramatically reduce daily exposure to harsh contaminants, and help restore a healthier baseline. Think of Hydrion not as a panacea, but as a powerful "step zero" in taking care of your unique skin and hair.

# Report Summary

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## SKIN HYDRATION & HEALTH

BERLIN, DE · 2025

### KEY CONCLUSIONS

- ▶ Over 4 weeks of use with Hydrion there was statistically significant improvement to the skin barrier, dryness, and redness.
- ▶ Within 2 weeks, the majority of users responded favorably to 90% of questions around their experience with skin health, appearance, and likelihood to recommend Hydrion to friends & family. By week 4, they responded favorably to 100% of the questions.

## CHLORINE REDUCTION

MUNICH, DE · 2024

### KEY CONCLUSIONS

- ▶ The Hydrion Filtered Showerhead consistently filtered out over 66% of free chlorine through 10,000 gallons of challenge water.
- ▶ Hydrion exceeded NSF/ANSI Standard 177, which requires five consecutive readings greater than 50%.

## HAIR SHEDDING

MANCHESTER, UK · 2023

### KEY CONCLUSIONS

- ▶ 81% of participants using the Hydrion Filtered Showerhead experienced a reduction in hair shedding. On average Hydrion cut the amount of shedding nearly by half.
- ▶ 59% of participants saw their hair shedding decrease by more than one-third.
- ▶ 60% of participants felt that their hair was more manageable and appeared longer.

## HAIR COLOR & RETENTION

MANCHESTER, UK · 2023

### KEY CONCLUSIONS

- ▶ Using the Hydrion Shower Head Filter leads to less color fading caused by hair washing than not using a filter.
- ▶ Using the Hydrion Shower Head Filter improves color retention while washing hair compared to not using the filter.

## HAIR POROSITY

MANCHESTER, UK · 2023

### KEY CONCLUSIONS

- ▶ Washing hair with the Hydrion Filtered Shower Head had a statistically significant reduction in hair porosity increase, compared to washing with unfiltered water.

## HAIR FRIZZINESS

MANCHESTER, UK · 2023

### KEY CONCLUSIONS

- ▶ Hair washed with Hydrion had a 12.3% lower increase in hair area compared to hair washed with unfiltered water.
- ▶ Frizz experienced by hair tresses washed with Hydrion was 60% of that experienced by hair tresses washed with unfiltered water.
- ▶ Results also suggested that Hydrion may improve curl retention.

*All testing with Hydrion has been conducted by third party labs.*

# Skin hydration & health

<b>FACILITY</b>	Validated Claim Support
<b>LOCATION</b>	Berlin, Germany
<b>TEST DATE</b>	May 2025
<b>DURATION</b>	4 Weeks
<b>PARTICIPANTS</b>	32

## OBJECTIVE

To determine if regular use of the Hydrion Filtered Showerhead would improve several skin-related characteristics: hydration, barrier function, pH levels, and the appearance of redness, dryness, texture, complexion, and overall skin health.

## PROCEDURE

A 4-week study was done with 32 participants (ages 23–69; various backgrounds; mostly female), who were evaluated at baseline, 2 weeks, and 4 weeks after regular use of Hydrion. Objective measurements were taken using a corneometer, vapometer, and pH meter; skin characteristics were graded through expert grading, questionnaires, and clinical photography.

## RESULTS

Over 4 weeks of use with Hydrion there was statistically significant improvement to the skin barrier, dryness, and redness.

Within 2 weeks, the majority of users responded favorably to 90% of questions around their experience with skin health, appearance, and likelihood to recommend Hydrion to friends & family. By week 4, they responded favorably to 100% of the questions.

*"Hydrated skin is healthy skin. When skin is properly hydrated, it maintains a stronger barrier, looks more radiant, and is less prone to irritation."*

In this study, participants using the Hydrion Filtered Showerhead experienced meaningful improvements in skin hydration and skin barrier function. Objective tools measured this progress, while participants reported less dryness, improved complexion, and even reductions in acne and eczema over four weeks of use. By week four, 100% of users reported favorable improvements in overall skin health and appearance — reinforcing the connection between clean water and healthier skin.



■ 2 weeks with Hydrion    ■ 4 weeks with Hydrion



# Chlorine Reduction

FACILITY Kymera Labs Europe  
LOCATION Munich, Germany  
TEST DATE October 2024

## OBJECTIVE

To determine the effectiveness of the Hydrion Filtered Showerhead at filtering out free chlorine in contaminated water, over the entire effective lifetime of the filter.

## PROCEDURE

Chlorinated challenge water was created and sent through 2 different Hydrion Filtered Showerheads to simulate the functional lifetime of the filter (10,000 gallons). The challenge water had an influent Free Chlorine concentration of  $2.00 \pm 0.20$  mg/l. This water was heated to 41°C and pressurized to 80 psi, and run through 2 different test heads, switching water flow between the heads every 15 minutes. Samples were taken and tested every 10% of the total test amount, throughout the entire test.

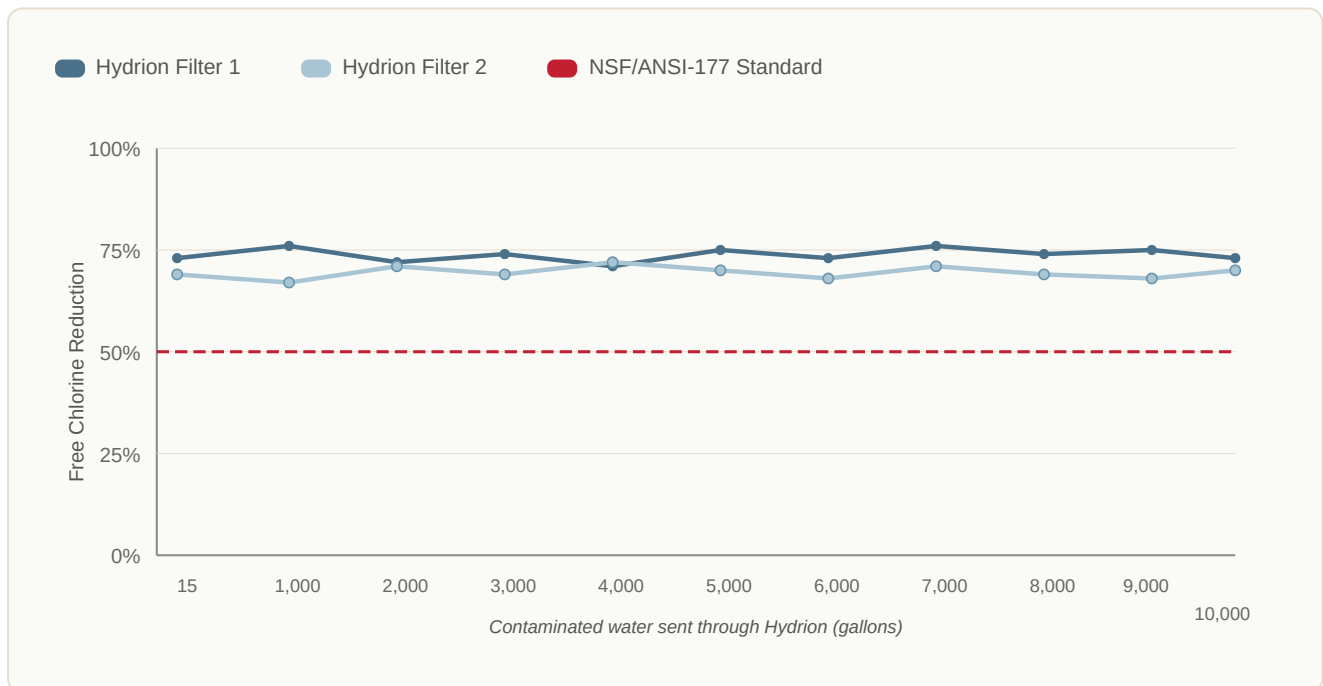
## RESULTS

The Hydrion Filtered Showerhead consistently filtered out over 66% of free chlorine through 10,000 gallons of challenge water.

Hydrion exceeded NSF/ANSI Standard 177, which requires five consecutive readings greater than 50%.

*"Chlorine is used to disinfect water — but it's also damaging to skin and hair. Hydrion well exceeded the NSF/ANSI Standard 177, even after 10,000 gallons of usage."*

Chlorine is a chemical found in most water systems, used to disinfect the water. Unfortunately, chlorine is also damaging to skin and hair. NSF/ANSI Standard 177 specifies the amount of free chlorine that should be filtered by a showerhead installed in the home. In testing, the Hydrion Filtered Showerhead was found to well exceed the NSF/ANSI Standard 177 (50% chlorine reduction over 5 consecutive readings), reducing free chlorine in water by 66%, even after 10,000 gallons of usage.



# Hair Shedding

FACILITY	Lemma Labs UK
LOCATION	Manchester, United Kingdom
TEST DATE	October 2023
DURATION	12 Weeks
PARTICIPANTS	27

## OBJECTIVE

To determine if regular use of the Hydrion Filtered Showerhead would reduce hair shedding. Secondary objectives were to determine whether users perceived their hair as longer, and to determine any reduction to hair maintenance.

## PROCEDURE

A 12-week study was done with 27 participants, living in multiple major European cities. Hair samples were collected before and after using the Hydrion Filtered Showerhead. Participants continued using Hydrion for 2 weeks after the study, and were surveyed on hair length & hair management.

## RESULTS

81% of participants using the Hydrion Filtered Showerhead experienced a reduction in hair shedding. On average Hydrion cut the amount of shedding nearly by half.

59% of participants saw their hair shedding decrease by more than one-third.

60% of participants felt that their hair was more manageable and appeared longer.

*"Water contamination causes abrasive texture, mineral deposits, and decreased thickness in hair shafts — and with it, shedding."*

Hair shedding is a common concern for both men and women, with very few preventative products available. In a study with 27 participants, the Hydrion Filtered Showerhead was shown to provide significant reduction in hair shedding. Participants also found their hair to be more manageable, and to appear longer.

81%

of participants experienced a reduction in hair shedding

59%

saw hair shedding decrease by more than one-third

60%

felt their hair was more manageable and appeared longer

# Hair Color & Retention

FACILITY                      Lemma Labs UK  
LOCATION                     Manchester, United Kingdom  
TEST DATE                   July 2023

## OBJECTIVE

To determine if washing hair using the Hydrion Shower Head Filter will lead to less color molecule loss than washing hair without the filter.

## PROCEDURE

A set of human hair tresses were treated with a permanent blue hair dye (loss of blue is the primary cause of undesirable color loss). One sample was washed using the Hydrion Shower Head Filter; another sample was washed without the filter. Washing was done with an accelerated washing method that mimics end user behavior. Sample color was qualified after washing, using the CIELAB color space to quantify the amount to which hair color shifted.

## RESULTS

Using the Hydrion Shower Head Filter leads to less color fading caused by hair washing than not using a filter.

Using the Hydrion Shower Head Filter improves color retention while washing hair compared to not using the filter.

*"Hair with color treatment loses color over time through regular washing with unfiltered water."*

This study was set up to determine if washing hair using the Hydrion Shower Head Filter will lead to less color molecule loss than washing hair without the filter. The Hydrion Filtered Showerhead was shown to improve color retention, and reduce the amount of color fading, compared to washing hair with unfiltered water.

WASHED WITH HYDRION

COLOR RETENTION

**Higher**

More blue pigment preserved

WASHED WITHOUT FILTER

COLOR RETENTION

**Lower**

Greater shift in CIELAB values

# Hair Porosity

## OBJECTIVE

To determine the extent of hair damage protection as a result of extended use of the Hydrion Filtered Showerhead.

## PROCEDURE

2 sets of hair were washed and blow-dried (on low heat) 30 times in a laboratory setting, using a municipal water source. One set was washed with the Hydrion Filtered Showerhead. A third control set was washed once in distilled water. A total of 90 strands were selected at random & measured under a microscope at 400x magnification, to determine strand width, and advancing contact angle.

## RESULTS

Washing hair with the Hydrion Filtered Shower Head had a statistically significant reduction in hair porosity increase, compared to washing with unfiltered water.

*"Damage to the hair's protective surface layer makes hair more porous — leading to frizz, dullness, and interior weakening."*

Damage to the hair's surface protective layer is a common effect of regular washing with unfiltered water. More porous hair also repels water less efficiently, which can lead to weakening of the hair's interior. The Hydrion Filtered Showerhead was shown to protect the hair's surface layer from further damage caused by unfiltered water.

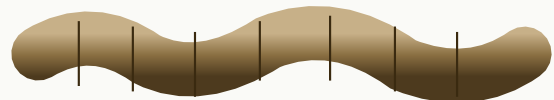
WASHED WITH HYDRION



**Lower porosity increase**

Statistically significant protection

WASHED WITHOUT FILTER



**Higher porosity**

Surface layer damaged over time

# Hair Frizziness

## OBJECTIVE

To determine the extent of hair frizz protection as a result of extended use of the Hydrion Filtered Showerhead.

## PROCEDURE

5 single-origin hair bundles were washed and blow-dried (on low heat) 30 times in a laboratory setting, using unfiltered water. One set was washed with no filter; the other was washed with the Hydrion Filtered Showerhead. Samples were exposed to a humid environment (73°F at 80%RH) for 620 minutes. For each sample, percent change in area was calculated using video of the samples during humidity exposure, and using before & after photographs.

## RESULTS

Hair washed with Hydrion had a 12.3% lower increase in hair area compared to hair washed with unfiltered water.

Frizz experienced by hair tresses washed with Hydrion was 60% of that experienced by hair tresses washed with unfiltered water.

Results also suggested that Hydrion may improve curl retention.

*"As humidity rises, hair absorbs water from the air — swelling, losing shape, and turning frizzy."*

As environmental humidity increases, hair absorbs water molecules from the air. Increased water in the hair can change the shape of strands and increase volume, resulting in a frizzy look. Washing hair with the Hydrion Filtered Showerhead was shown to lead to less frizz in the presence of humidity compared to using unfiltered water.

12.3%

lower increase in hair area compared to unfiltered water

60%

of the frizz experienced versus unfiltered water



may also improve curl retention over time

*Clean water, every shower.*



CHROME



BRUSHED NICKEL



MATTE BLACK

Hydrion filtered showerheads are independently tested across European labs in Germany and the United Kingdom. Every finding in this report has been reviewed by a third-party facility.