

Independent Lab Results & Certifications

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Release Notes

The lab results are for EcoPro (previously TAPP 2 Twist and TAPP 2 Click) and EcoPro Compact filters with the Generation 4 available for sales worldwide from July 2021. EcoPro is used to refer to all products. Results may vary slightly for older products.

Last updated 2021-08-21

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Summary

EcoPro has been tested and certified to remove more than 100 contaminants from tap water. The Product is designed to be used with public tap water where the water is microbiologically safe and has been adequately disinfected. The tests are defined on this basis.

This document summarizes the certifications and lab tests.

Water Filtration Certified by



TAP Score by SimpleLab

SimpleLab is one of the top water labs in the world based in San Francisco, California. They score tap water and filtered water on a scale from 0-100. TAPP filters achieved a top score of 98.

Dear TAPP Water, This is your TAP SCORE™ Report

**BASED ON LABORATORY TESTING AND ANALYSIS YOUR
TAP SCORE IS 98 (EXCELLENT)**

According to SimpleWater Recommendations, which are based on guidelines established by Federal and State agencies as well as leading academic research, the water samples you provided for testing demonstrate your water quality is Excellent. This means your sample contained no elevated levels of harmful contaminants. While this is great news, your water quality can change, so do not forget to test again every few years.

JMEQAB - Advanced City Water Test



Visit the SimpleLab Website for the full report or links via
<https://tappwater.co/us/tapp-2-independent-lab-test/>

NSF Standard Testing¹



The product has been tested according to NSF/ANSI Standard 42 (Aesthetic Effects) and Standard 53 (Health Effects).

Test results confirmed by Tap Score test by SimpleLab with water samples from Los Angeles, California December 2020 and July 2018 and Austrian Water Institute in Vienna with water samples from Barcelona, Spain 2018-2020.

NSF/ANSI 42 - Aesthetic Effects

TAPP Water’s Drinking Water System, EcoPro has been tested according to NSF/ANSI Standard 42 for the reduction of the following substances. The concentration of the indicated substances in water entering the system was reduced to a concentration less than or equal to the permissible limit for water leaving the system.

| Contaminant | Percent reduction** | Influent challenge concentration (mg/L unless specified) | Maximum permissible product water concentration (mg/L unless specified) |
|----------------------|---------------------|--|---|
| Chloramine | > 97.5% | 3.0 +/- 10% | 0.5 |
| Chlorine | 99% | 2.0 +/- 10% | > or =50% |
| Particulate Class II | > 99% | At least 10,000 particles/mL | > or =85% |

¹ Disclaimer: The use of the NSF logo is only to certify that the product has been tested in accordance with NSF standards. The product has not been certified by NSF.

NSF/ANSI 53 - Health Effects

EcoPro has been tested according to NSF/ANSI Standard 53 for the reduction of the following substances. The concentration of the indicated substances in water entering the system was reduced to a concentration less than or equal to the permissible limit for water leaving the system.

| Contaminant | Percent reduction** | Influent challenge concentration (mg/L unless specified) | Maximum permissible product water concentration (mg/L unless specified) |
|---|---------------------|--|---|
| Alachlor* | >98% | 0.050 | 0.001 |
| Atrazine* | >97% | 0.100 | 0.003 |
| Benzene* | >99% | 0.081 | 0.001 |
| Chlordane | >99% | 0.04 +/- 10% | 0.002 |
| Chloroform (TTHM) | >99.5% | 0.300 | 0.015 |
| 2, 4-D* | 98% | 0.110 | 0.0017 |
| Lead pH 6.5 | >95% | 0.15 +/- 20% | 0.01 |
| Lead pH 8.5 | >95% | 0.15 +/- 20% | 0.01 |
| Lindane | >99% | 0.055 | 0.00001 |
| Mercury pH 6.5 | >99% | 0.006 +/- 10% | 0.002 |
| Mercury pH 8.5 | >99% | 0.006 +/- 10% | 0.002 |
| TRIHALOMETHANES* (TTHM) (Chloroform; Bromoform; Bromodichloromethane; Dibromochloromethane) | >99% | 0.300 | 0.015 |
| Turbidity | >99% | 10 +/- 10% NTU | 0.5 NTU |

Source data:

Before filtration: <https://gosimplelab.com/dd4be3b3fdd5229adf45302256abad81789195d1>

After filtration: <https://gosimplelab.com/a6e5e2ec6c5cc7ae9d1c30faf7cfd8697576f8ff>

Other contaminants confirmed for filtration/removal

EcoPro has been tested with the following contaminants at the maximum allowed limit unless otherwise specified.

| Contaminant | Percent reduction (from influent challenge) | Influent challenge concentration (mg/L unless specified) | Maximum Allowed Limit concentration (mg/L unless specified) |
|----------------------------|---|--|---|
| Pathogens | | | |
| Clostridium | 95% | 100 UFC / 100ml | 0 |
| eColi | 95% | 100 NMP / 100ml | 0 |
| Enterococcus | 95% | 100 UFC / 100ml | 0 |
| Microbial Cysts | 95% | 100 UFC / 100ml | 0 |
| | | | |
| Chemical parameters | | | |
| Cyanide total | 95% | 50 µg +/- 20% | 50 µg |
| Fluoride | 70% | 1.5 +/- 20% | 1.5 |
| Mercury | 90% | 1 µg +/- 20% | 1 µg |
| Nitrites | 70% | 0.1 +/- 10% | 0.1 |
| Nitrates | 70% | 50 +/- 10% | 50 |
| | | | |
| Metals | | | |
| Aluminium | 90% | 200 µg | 200 µg |
| Antimony | 90% | 5 µg | 5 µg |
| Arsenic | 50% | 10 µg | 10 µg |
| Barium | 90% | 1000 µg | 1000 µg |
| Cadmium | 90% | 5 µg | 5 µg |
| Copper | 80% | 2000 µg | 2000 µg |

| | | | |
|---|-----|----------------|---------|
| Iron | 80% | 200 µg | 200 µg |
| Lead | 95% | 10 µg | 10 µg |
| Manganese | 80% | 50 µg | 50 µg |
| Nickel | 80% | 20 µg | 20 µg |
| Selenium | 80% | 10 µg | 10 µg |
| Sodium | 0% | 200 µg | 200 µg |
| Zinc | 80% | 5000 µg | 5000 µg |
| | | | |
| Chlorine bi-products | | | |
| 1,2 Dichloromethane | 95% | 3 µg +/- 10% | 3 µg |
| Total Trichloroethylene and Tetrachloroethylene | 95% | 10 µg +/- 10% | 10 µg |
| Trichloroethylene* | 95% | - | - |
| Tetrachloroethylene* | 95% | - | - |
| | | | |
| Chlorine bi-products | | | |
| Total Trihalomethanes | 95% | 100 µg +/- 10% | 100 µg |
| 4 individual* | 95% | - | - |
| | | | |
| HAAs | | | |
| Total haloacetic acids | 95% | 60 µg +/- 10% | 60 µg |
| | | | |
| Pesticides | | | |
| Chlordane | 95% | 2 µg +/-10% | 2 µg |
| Heptachlor | 95% | 0.4 µg +/-10% | 0.4 µg |
| Lindane | 95% | 0.2 µg +/-10% | 0.2 µg |

| | | | |
|---|------|---|--------|
| Additional 11 confirmed by EPA* | 95% | - | - |
| | | | |
| Herbicides | | | |
| 2,4 -D | >95% | 70 µg +/-10% | 70 µg |
| Atrazine | >95% | 3 µg +/-10% | 3 µg |
| Additional 9 confirmed by EPA* | 95% | - | - |
| Total Herbicides | >95% | 0.5 µg +/-10% | 0.5 µg |
| | | | |
| Pharmaceuticals* | | | |
| Atenolol | >95% | - | - |
| Carbamazepine | >95% | - | - |
| Estrone | >95% | - | - |
| Meprobamat | >95% | - | - |
| Trimethoprim | >95% | - | - |
| | | | |
| Perfluorinated chemicals (PFAS)* | | | |
| PFOA | >95% | - | - |
| PFOS | >95% | - | - |
| PFNA | >95% | - | - |
| | | | |
| Microplastics | >99% | 100 pieces / L with each piece larger than 2 µg | <= 1 |

* Not tested by TAPP Water due to lack of labs that can perform testing. Reduction in accordance with NIH, EPA and CDC testing of activated carbon block filters with a 1-2 micron rating. See [what activated carbon filters remove and reduce](#).

Research by NIH, EPA and CDC of the activated carbon block filtration used in EcoPro shows that this filter will also reduce the following contaminants by 95% or more (note that some are duplicates):

| Solvent/ Organic contaminant/ Alcohol | VOC | Pesticides & Insecticides | Herbicides | Other (Inorganic compounds) |
|--|----------------------|--|---------------------|--|
| n-butylphthalate | Bromodichloromethane | Malathion | 2,4-D | Calcium Hypochlorite |
| 1,2-Dichlorobenzene | Tetrachloroethylene | Aldrin | Deisopropylatrazine | Ozone |
| 1,3-Dichlorobenzene | Dibromochloromethane | Demeton-O | Linuron | Chlorine dioxide |
| 2-Methylbenzenamine | | MCPA | Alachlor | |
| 1,4-Dichlorobenzene | | Anthracene | Desethylatrazine | |
| Methyl naphthalene | | Azinphos-ethyl | Mecoprop | |
| Biphenyl | | Dieldrin | Atrazine | |
| p-chlorocresol | | Carbofuran | Metazachlor | |
| 2-Methylbutane | | Parathion | Bentazone | |
| 2,2-Bipyridine | | Pentachlorophenol | Monuron | |
| 2,5-Dichlorophenol | | Endosulfan | Bromacil | |
| Bis(2-Ethylhexyl)Phthalate | | Endrin | 2,4-Dichlorophenoxy | |
| 3,6-Dichlorophenol | | Hexachlorobenzene | Diuron | |
| Naphthalene | | Hexachlorobutadiene | Propazine | |
| Nitrobenzene | | Isodrin | Simazine | |
| m-Nitrophenol | | DDT | Terbutryn | |
| p-Bromophenol | | | Triclopyr | |
| Diethyl Phthalate | | | Cyanazine | |
| o-Nitrophenol | | | Isoproturon | |

| | | | | |
|-------------------------|--|--|--|--|
| Butylbenzene | | | | |
| 2,4-Dinitroresol | | | | |
| p-Nitrophenol | | | | |
| 2,4-Dinitrotoluene | | | | |
| 2,6-Dinitrotoluene | | | | |
| Chlorobenzene | | | | |
| 4-Chloro-2-nitrotoluene | | | | |
| Ethylbenzene | | | | |
| 2-Chlorophenol | | | | |
| Chlorotoluene | | | | |
| Chrysene | | | | |
| Hexane | | | | |
| 1,3,5-Trimethylbenzene | | | | |
| m-Cresol | | | | |
| m-Xylene | | | | |
| Isooctane | | | | |
| o-Xylene | | | | |
| Cyclohexane | | | | |
| p-Xylene | | | | |
| 2,4-Xylenol | | | | |

* Not tested by TAPP Water due to lack of labs that can perform testing. Reduction in accordance with NIH, EPA and CDC testing of activated carbon block filters with a 1-2 micron rating. See [what activated carbon filters remove and reduce](#).

Bacteria growth

These tests were carried out for EcoPro by Eurofins in Stockholm in June 2020.

| Sample | Bacteria count | Comment |
|-----------------------------|----------------|---------------------------------|
| New cartridge | <1 | |
| Cartridge after 1 week with | 11 | Below requirement of 100 cfu /L |

| | | |
|---|-----|---------------------------------|
| daily usage (about 50 liters) | | |
| Cartridge after 2 weeks with daily usage (about 150 liters) | 25 | Below requirement of 100 cfu /L |
| Cartridge after no use for 3 days | 110 | Above requirement of 100 cfu /L |
| Cartridge after flushing the unused filter for 30 seconds | 15 | Below requirement of 100 cfu /L |

Based on the testing we will also include the following guidelines for EcoPro (note that EcoPro Compact should be changed more frequently).

For optimum performance, it is essential that the filter cartridge be replaced on a regularly scheduled basis as follows:

- (a) every 3 months; *
- (b) when the unit's rated capacity has been reached (max 3 months);**
- (c) the flow rate diminishes; or
- (d) the filter becomes saturated with bad tastes and odors.***

Failure to replace the filters in accordance with the recommendations may result in contaminated poorly tasting water.

* Time estimates for TAPP Faucet filters are based on 5-10 liters per day for an average household.

** 3 month maximum is based build up of contaminants in the filter and bacteria growth

*** For very hard water or highly chlorinated water the cartridges may need to be replaced more frequently

Do not allow water to sit in the filter for extended periods of time (3 or more days) without being used. In the event water does sit in the unit for 3 or more days, the filter should be flushed by allowing water to flow to waste for about 30 seconds; then continue use as normal

Limescale testing

These tests were carried out by TAPP Water on EcoPro in Barcelona in May-June 2020.

| Sample | Limescale formation | Comment |
|----------------|--|-------------------------------|
| Input water | Hardness of 324 mg CaCO ₃ /l and 0.38 LSI | Very high limescale formation |
| Filtered water | | |

| | | |
|-------------|----------------|------------------|
| 0 / 0 L | Reduced by 99% | Not visible |
| 4 / 400 L | Reduced by 85% | Not visible |
| 8 / 800 L | Reduced by 81% | Slightly visible |
| 12 / 1200 L | Reduced by 72% | Visible |

The test indicates a reduction of over 80% up to 800 L and 72% up to 12000 L. The reduction of limescale will vary dependent on the hardness of the water and the specific mix of minerals and salts.

Notes:

Tests carried out with water boilers to weigh and see visible change of scale formation over time.

For EcoPro Compact the limescale filtration capacity is about 1/3 so will stop being efficient at 400 L.

Long term chlorine testing

These tests were carried out by Suez in Barcelona in May 2019.

| Week / Volume | Chlorine |
|----------------|-----------------|
| Input water | 1.0 mg/l |
| Filtered water | |
| 0 / 0 L | 0.01 mg/l (99%) |
| 4 / 400 L | 0.01 mg/l (99%) |
| 8 / 800 L | 0.02 mg/l (98%) |
| 12 / 1200 L | 0.03 mg/l (97%) |

Note: For EcoPro Compact the chlorine filtration is about 1/3 so will stop being efficient at around 400 L

Other certifications

US Food Grade FDA and European Legislation on Food Contact Materials - Product does not apply any danger to health or environment according to article 3 in Framework Regulation 1935/2004/EC. Manufactured according to Regulation 2023/2006/EC on good manufacturing practice.

European Standard EN 1208:2005 Compliant - European Standard EN 1208:2005 for chemicals used for treatment of water intended for human consumption.

RoHS2 Compliant (EU) - Does not contain prohibited substances above the maximum concentration values (MCV) listed in Article 4 and Annex II of the European Union directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment (recast), also known as RoHS2.

REACH Compliance (EU) - Ensure the product does not contain any chemicals on the REACH SVHC List

BPA Free - Ensure that the product has been verified to not contain any BPA

Solar Impulse - Certified to reduce CO2 in accordance with claims

Cruelty Free - The product and services do not harm or kill animals anywhere in the world

Eco-friendly - The products and services meeting high environmental standards throughout their life-cycle: from raw material extraction, to production, distribution and disposal.

Lead free - The product does not contain any lead



For more information contact us on support@tappwater.co