

# ENGINEERING WATER IS OUR ELEMENT

## ELYSATOR Engineering AG

Technical applications demand high standards of water quality. Using special environmentally responsible processes, we remove gases, minerals and pollutants from water until it is suitable for the required application. engineering water® is our element.



**ELYSATOR**   
engineering water



# SIMPLE, SAFE, ENVIRONMENTALLY RESPONSIBLE AND FIT FOR PURPOSE.

Water filters from ELYSATOR® are produced in Switzerland and are used to treat water for technical purposes. Our application field includes heating and cooling systems, together with engine circuits on ships and in power plants. The cleaning market is also becoming increasingly important. Our filters ensure the sustainable and efficient operation of every system.

At ELYSATOR Engineering AG, we are market leaders in our field. We have a comprehensive product portfolio and are well prepared for the future with numerous ideas for innovations.

At our headquarters in Bilten, in the Swiss Canton of Glarus, a dedicated ELYSATOR® and TECHAQUA® team researches, develops, advises on, optimises and produces new and existing devices. The aim is not only to keep abreast of the times, but also to set new standards in the field of treated water for technical purposes.  
**Simple, safe and environmentally friendly.**



# ABOUT US

## HISTORY

Heinrich Rickenbach, born in Zurich in 1931, completed an apprenticeship to become a metalworker and mechanic. Straight after his training, he founded his first company in 1950 for the design and maintenance of water systems for technical purposes. With engineering support from his brother, he soon realised that electrochemistry would play a major role in the future of water engineering. Electrochemistry promised to be more economical and ecologically sound than traditional water chemistry in many situations. But initial progress was slow. Respect for the environment had not yet been recognised as important, and it took years of research and development before the two brothers could implement what were to some extent visionary ideas. The big breakthrough came in 1971 with the ELYSATOR® type 7 for heating systems. The company took its name from this first device – ELYSATOR®.

In the 1990s, as the first underfloor heating systems began to show their age and sludge deposits reduced their heating output, the firm launched a flushing system with performance characteristics that are still unrivalled today. In the meantime, ELYSATOR Engineering AG has established itself as the market leader in Switzerland and supplies around 20 countries worldwide.

**ELYSATOR**   
engineering water

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 **GUARD**  
ELYSATOR Eng. AG™

 **DESAL**  
ELYSATOR Eng. AG™

  
**Sanol**  
by ELYSATOR™

 **ELYSATOR**  
by ELYSATOR™

 **PUROTAP**  
by ELYSATOR™

  
**SorbOx**  
by ELYSATOR™



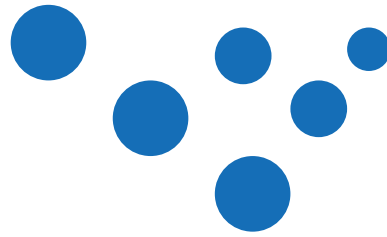
# TIME FOR SOMETHING NEW INNOVATIVE IDEAS FOR WATER

Recent years have brought many changes to heating and cooling systems. One consequence of this is that the demands placed on system water have once again risen sharply. Not only are low conductivity and a regulated pH value required, but the elimination of impurities of any kind is also more important than ever. That's why, at ELYSATOR Engineering AG, we are taking the next step: H<sub>2</sub>O GUARD®.



GUARD 60





# H<sub>2</sub>O GUARD

ELYSATOR Eng. AG™

## A new dimension of system protection

It's not just in fashion or the automotive industry that a shake-up is needed now and then. We, too, have also further developed our products and now proudly present them under the new name H<sub>2</sub>O GUARD®. Many hours of research, countless tests and more than 50 years of experience mean that we can improve water quality even further with our H<sub>2</sub>O GUARD® products.



Contamination of any kind impairs system efficiency. Twice the protection through mechanical and magnetic filtration.



When you connect new heat generators to an old system, there is a risk of damage. With H<sub>2</sub>O GUARD®, you are reliably protected.



Various monitoring tools enable the H<sub>2</sub>O GUARD® generation to perform a safety check from anywhere.

EFFICIENCY

**H<sub>2</sub>O** **GUARD**  
ELYSATOR Eng. AG™





## H<sub>2</sub>O GUARD® 60v

Permanently protects any cooling or heating system.

H<sub>2</sub>O GUARD® 60v guarantees special fourfold protection. Its automatic pH regulation, permanent degassing, magnetic flow filter and 300 µm suspended solids filter ensure that all disruptive factors are eliminated. It is also modularly expandable and can be used at full volume flow. It can even be connected to a building management system.



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## H<sub>2</sub>O GUARD® lift

If the pH value in your circuit is too low and needs to be raised as quickly as possible, H<sub>2</sub>O GUARD® lift can help. The special magnesium balls quickly raise the pH value to the required range, reducing oxygen at the same time. The system works quickly, without chemicals, and is environmentally friendly.



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## H<sub>2</sub>O GUARD® DM-22

H<sub>2</sub>O GUARD® DM-22 is a device that sets new standards. It measures the volume flow, conductivity and temperature of system water using magnetic induction. The device not only displays the measured values but also transmits them to an app and/or to a building management system.



# SYSTEM WATER TREATMENT REDEFINED

The new requirements for system water also place higher demands on its treatment. They are optimally implemented with H<sub>2</sub>O DESAL® products. And the focus is always on environmental compatibility and ecology.







# H<sub>2</sub>O DESAL

ELYSATOR Eng. AG™

## The new standard in mobile heating water treatment

The best alternative to mixed bed resin is reverse osmosis. It guarantees the most straightforward handling combined with the most favourable process for demineralised water. And it is all pH neutral.

H<sub>2</sub>O DESAL® master achieves all this in the best possible way. Its unique membrane enables a high yield without pressure amplification or electricity. Minerals and salts in water circuits for technical purposes lead to corrosion and deposits. H<sub>2</sub>O DESAL® master filters these substances out of the water, guaranteeing long and trouble-free operation in compliance with the applicable guidelines.



Special large-area membrane for high yield at low pressure. Up to 50,000 l capacity.



Various safety and monitoring modules make H<sub>2</sub>O DESAL® master simple and safe to use.



Throughput, total litres and conductivity can be checked at a glance.

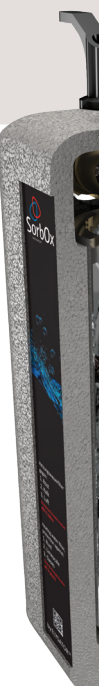
# THE ALL-ROUNDER FOR EFFICIENT AND ECOLOGICALLY SOUND HEATING SYSTEMS

This groundbreaking all-round protection for heating systems reliably removes limescale, rust and gases from heating water – for an ecologically sound, economical and dependable heating system.

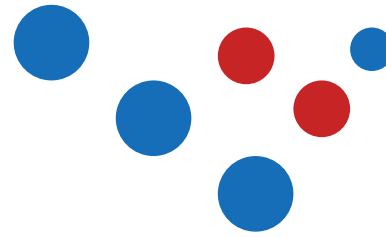
A guarantee for low operating costs and more energy efficiency. For systems with up to 30 kW output.

SorbOx® – four functions in a single device:

- **Demineralisation** of the heating water prevents limescale deposits.
- **Micro gas bubble separator** removes oxygen and gases from the circulating water.
- **Anode protection** raises the pH value of system water to the required range.
- **Magnetic flow filter** for the circulating water filters out sludge and rust particles.



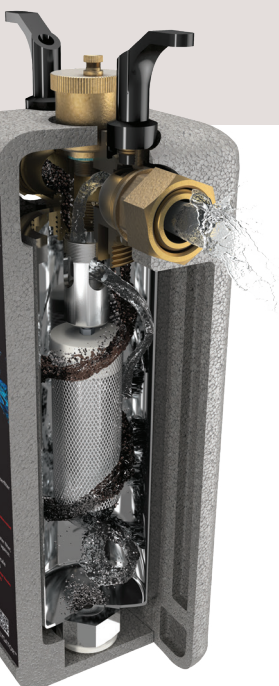




## Effective all-round protection for heating water

Today's heating systems are very compact with a high heating output. However, they are more sensitive to rust, limescale and sludge, which reduces their heating efficiency. Air can get into a system through couplings, air vents and thread adaptors. SorbOx® significantly reduces the corrosion factors.

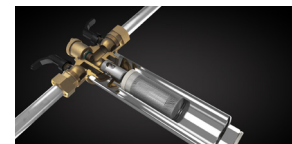
Low operating temperatures, especially with heat pumps and high salt content, increase the demands on heating water treatment. Inadequate water quality can result in a 10-20 % drop in efficiency after less than a year.



**No rust**  
SorbOx® filters out rust and sludge particles.



**No limescale**  
The SorbOx® cartridge removes unwanted salts from the water.



**No gases**  
The micro gas bubble separator and the sacrificial anode remove corrosive and acidic gases.

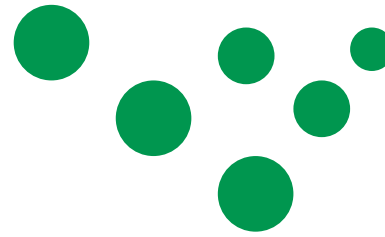
# FOR THE SAKE OF THE ENVIRONMENT GENTLE HEATING SYSTEM CLEANING

The Sanol® H-15 green heating system cleaner has been tried and trusted for decades as a dispersant for heating and cooling systems. Heating system installers recommend reliable, inexpensive and straightforward heating system flushing with Sanol®.

The cost effective alternative to internal pipe rehabilitation or even the installation of a new heating system.







## Deep cleaning

Rust damage is a widespread problem in heating and cooling systems, leading to sludge deposits formed by rust particles, malfunctions and material damage.

Sludge deposits can lead to serious malfunctions in heating systems. With the Sanol® H-15 green system cleaner, specialists can clean systems quickly and thoroughly. It is an unrivalled tool made possible by the latest specialist technology. Sanol® H-15 green is non-caustic and non-toxic. It forms a stable, soluble complex with metal oxides, which can then be easily rinsed out.



### Biodegradable

The heating system cleaner is 98 % biodegradable in 21 days according to OECD 302B.



### Non-toxic

There is no danger to human health or the environment. Eye and skin irritations are no longer a risk.



### Renewable resources

Sanol® H-15 green is made from 90 % renewable resources.



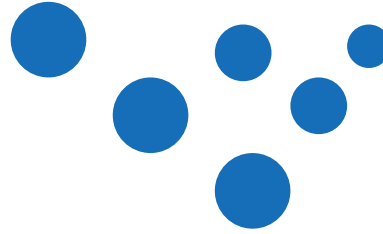
FRIENDLY

# RELIABLE SOLUTIONS THROUGH GAS EXTRACTION AND OXYGEN BINDING

For more than 50 years, our ELYSATOR devices have proved their worth in preventing damage caused by corrosion in heating and cooling systems. Malfunctions or, worse, complete breakdowns are the result of rust and sludge. The problem is caused by water quality that is inferior to the technical requirements. ELYSATOR® reliably solves this problem by extracting corrosive gases from the water and binding the oxygen using a sacrificial anode made from a special alloy. The system's improved functionality is scientifically proven and measurable. Installation and maintenance are simple, inexpensive and suitable for all heating and cooling systems.







# ELYSATOR

by ELYSATOR™

## The power pack

Large or small, old or new, we offer a suitable ELYSATOR® for every system. All our devices feature impressive simplicity and functionality. They improve the quality of the circulating water and keep it stable without the need for a power supply. The many functions of an ELYSATOR can replace up to four separate devices. Simple, safe, environmentally responsible.



**Corrosion**  
Corrosion is significantly reduced by raising the pH value and lowering the oxygen content.



**Oxygen reduction**  
The water's oxygen content can be reduced by means of a sacrificial anode made from a special alloy.



**Sludge formation**  
Magnetite is stopped in the ELYSATOR® and can be easily removed from the system.



PROTECTION

 **ELYSATOR**  
by ELYSATOR™



## ELYSATOR® trio 10.1, 15.1 and 25.1

For heating systems in houses and apartment buildings with a water content of up to 5000 litres.

The ELYSATOR® trio .1 is a corrosion protection device that combines four functions in one:

- Degassing through a micro gas bubble separator
- Anode protection with a sacrificial anode
- Magnetic flow filter through a high performance magnet
- Replaceable dirt filter

All this provides even better protection of the valuable metal components in the heating system against rust and sludge and helps to prevent faults.



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## ELYSATOR® type 50c - 100c

For heating systems with a water content of 5 m<sup>3</sup> - 35 m<sup>3</sup>.

ELYSATOR® is the well-proven corrosion protection device for medium-sized systems. It simultaneously binds the oxygen and other gases, removes them from the heating water and separates out residues such as sludge and magnetite. This protects the valuable metal components in the heating system and prevents malfunctions. The anode current (water activity) is permanently displayed.



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## ELYSATOR® type 260c - 800c

For heating systems with a water content of 35 m<sup>3</sup> - 220 m<sup>3</sup>.

The largest series of ELYSATOR devices. So that even very large heating and cooling systems can be optimally protected against corrosion. Just like the small ELYSATOR devices, it binds oxygen and other gases, removes them from the heating water and separates out sludge and magnetite. The anodes are easily accessible, to make maintenance as straightforward as possible.



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## ELYSATOR® air-vent INOX

Automatic float-type air vent made of stainless steel.

For use under difficult conditions, such as high temperature and pressure, or with aggressive media. A float without working parts increases operational reliability. Leak protection is provided by hygroscopic seals.



# THE PROVEN FULL DESALINATION SYSTEM, STANDARDS AND DIRECTIVES UNDER CONTROL

Water demineralised with PUROTAP® products contains barely any unwanted substances, so there is no risk of deposits forming in the boiler or heat exchanger. Another advantage of a PUROTAP® device is that it removes all neutral salts such as chloride, sulphate and nitrate, which can cause corrosion under certain conditions.

Preferred applications:

- Fill and top-up water for heating and cooling systems
- Cleaning water for solar panels, windows, high pressure cleaners, etc.
- Water equivalent to distillate for irons, dehumidifiers, aquariums, etc.







# PUROTAP

by ELYSATOR™

The quality and composition of the ion exchange resin used for full desalination can have a major impact on whether or not a heating system is liable to suffer from limescale and corrosion right from the start.

When filling the heating system, only the electrical conductivity is checked, which means that it is not apparent whether correct full desalination has taken place, or only partial desalination with the formation of carbon dioxide.

For this reason, ELYSATOR Engineering AG oversees the production and mixing of its resin with the utmost care. Only the best quality reaches the market.



### Industrial plant

We also have the optimal solution for the filling and maintenance of large systems.



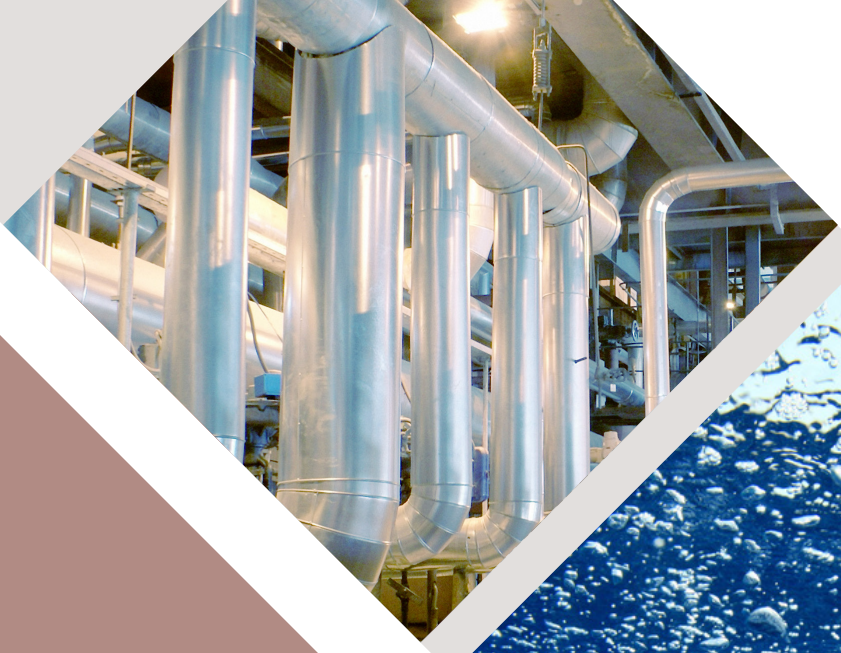
### Family home

From the heating system in the basement to the solar panels on the roof, cleaning with PUROTAP® achieves the best results everywhere.



### Old or new building

Whether the building is old or new, our products can be integrated into any heating system.



FILLING

 **PUROTAP**  
by ELYSATOR™





## PUROTAP® disposable cartridges

For filling heating systems with a water content of less than 1000 litres.

The cartridge uses a very simple method to filter limescale and corrosive substances out of the fill water and provides perfect heating water with low salt content in accordance with SWKI BT 102-01 / VDI 2035.

The proven PUROTAP® highpower resin is supplemented by PUROTAP® nexion resin. With a defined excess of anion resin for pH regulation, it provides the perfect water for new-generation installations such as heat pump systems and large storage tanks.



## PUROTAP® leader

For system filling and subsequent circuit desalination.

The demineralisation device with the patented replaceable cartridge system for higher performance and ease of handling. The unique measuring computer allows the limit value for electrical conductivity to be preset. The digital display on PUROTAP® leader shows the current throughput and electrical conductivity of the fill water, together with the total flow rate.



## PUROTAP® replaceable cartridges

**PUROTAP® L60 highpower**

For conventional gas and oil heating systems and systems already in operation.

**PUROTAP® L50 nexion**

For heat pump systems, systems with large storage tanks for technical purposes, ice stores and systems incorporating latest-generation micro units, such as fuel cells and Stirling engines.



## PUROTAP® easy II

For system filling by installers and subsequent circuit desalination. For small and medium-sized systems.

The robust and handy device for the production of demineralised water. Tried and tested for years and popular with installers of small to medium-sized systems.





### PUROTAP® profi 25.1/50.1

So that no compromises have to be made in demineralisation, even for medium to large systems.

The professional product for larger systems. It can be used for filling or circulation demineralisation. Easy to use thanks to a simple traffic light system.



### PUROTAP® mixed bed resin

ELYSATOR Engineering AG attaches great importance to the quality of its mixed bed resin. Each delivery of highpower and nexion resin is carefully examined. It is only sold if our high standards are met in full. This ensures extremely reliable system water treatment. Quality the way you want it!



### PUROTAP® expert

For ecologically sound system filling of larger systems and district heating systems by an installer. And for the treatment of water for cleaning windows, walls and automobiles.

Mobile osmosis system for fast, ecologically sound and affordable tap water demineralisation. The metering and control devices are built in. The device can be operated with or without electricity. With PUROTAP® expert, 20 litres per minute can be demineralised without chemical additives.



### PUROTAP® aqua mobil

Mobile trailer for filling large systems with demineralised water using reverse osmosis.

PUROTAP® aqua mobil is the perfect solution for filling larger systems and applications of any kind with demineralised water. It eliminates the need for truck transportation, and the required amount of water is quickly available at the right time and place.









TOPPING UP

 **PUROTAP**  
by ELYSATOR™





## PUROTAP® micro

**An absolute must for every house.**

With PUROTAP® micro, anyone can top up their heating system with demineralised water.

Demineralisation cartridge with wall mounting bracket and tube. It is easy to recognise the condition of the cartridge by the colour of the mixed bed resin. Blue = OK, beige = exhausted.



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## PUROTAP® mini

**An essential for every apartment building and small commercial property!**

Demineralises 50-1000 litres of top-up water a year.

Wall mounted unit with built-in combined meter. It requires no power connection and is equipped with a replaceable PUROTAP® 1000 highpower disposable cartridge and a 4 m tube.



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## PUROTAP® compenso 2

**For demineralising top-up water in family homes with automatic top-up.**

This wall mounted unit is suitable for permanent connection and has a built-in combined meter. It can also be integrated into a home automation system.

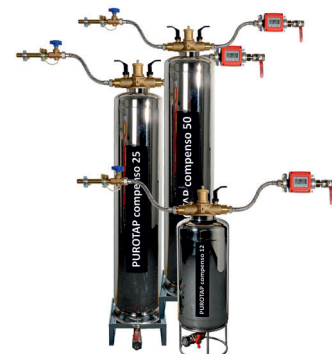


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## PUROTAP® compenso 12/25/50

**For demineralising top-up water in larger buildings with automatic top-up.**

All models are suitable for permanent connection and have a built-in combined meter, allowing them to be connected to a building management system.





# MEASURING & MONITORING

 **PUROTAP**  
by ELYSATOR™





## PUROTAP® i-control-21s

For monitoring inline corrosion and conductivity.

PUROTAP® i-control-21 keeps you continuously informed about the electrical conductivity of the system water for early detection of possible corrosion and harmful deposits.

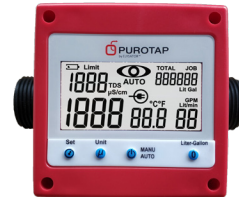
- Constant conductivity testing at one-second intervals
- LED display with easy-to-understand icons
- In line with applicable standards
- Integration into building management system possible



## PUROTAP® LFM-20

The combined meter for cartridges.

PUROTAP® LFM-20 constantly monitors conductivity. Throughput and temperature are also measured. If the preset conductivity is exceeded, this information can be passed on to a building management system.



## PUROTAP® AP-18

Minerals and salts in water circuits for technical purposes cause corrosion and deposits. Acid destroys materials made from metal. Analysing the heating water on a regular basis is the first step towards ensuring that the heating system operates faultlessly.

For measuring/determining:

- pH value
- Conductivity
- Total hardness
- Magnetite



## PUROTAP® EC-18

PUROTAP® EC-18 is a handheld conductivity meter.

## PUROTAP® PH-18

PUROTAP® PH-18 is a handheld meter for measuring the pH value. The device has 3-point calibration.

Both devices have automatic temperature compensation (ATC). The LCD screen simultaneously shows the temperature-compensated reading and the temperature of the liquid.



## PUROTAP® measuring drops

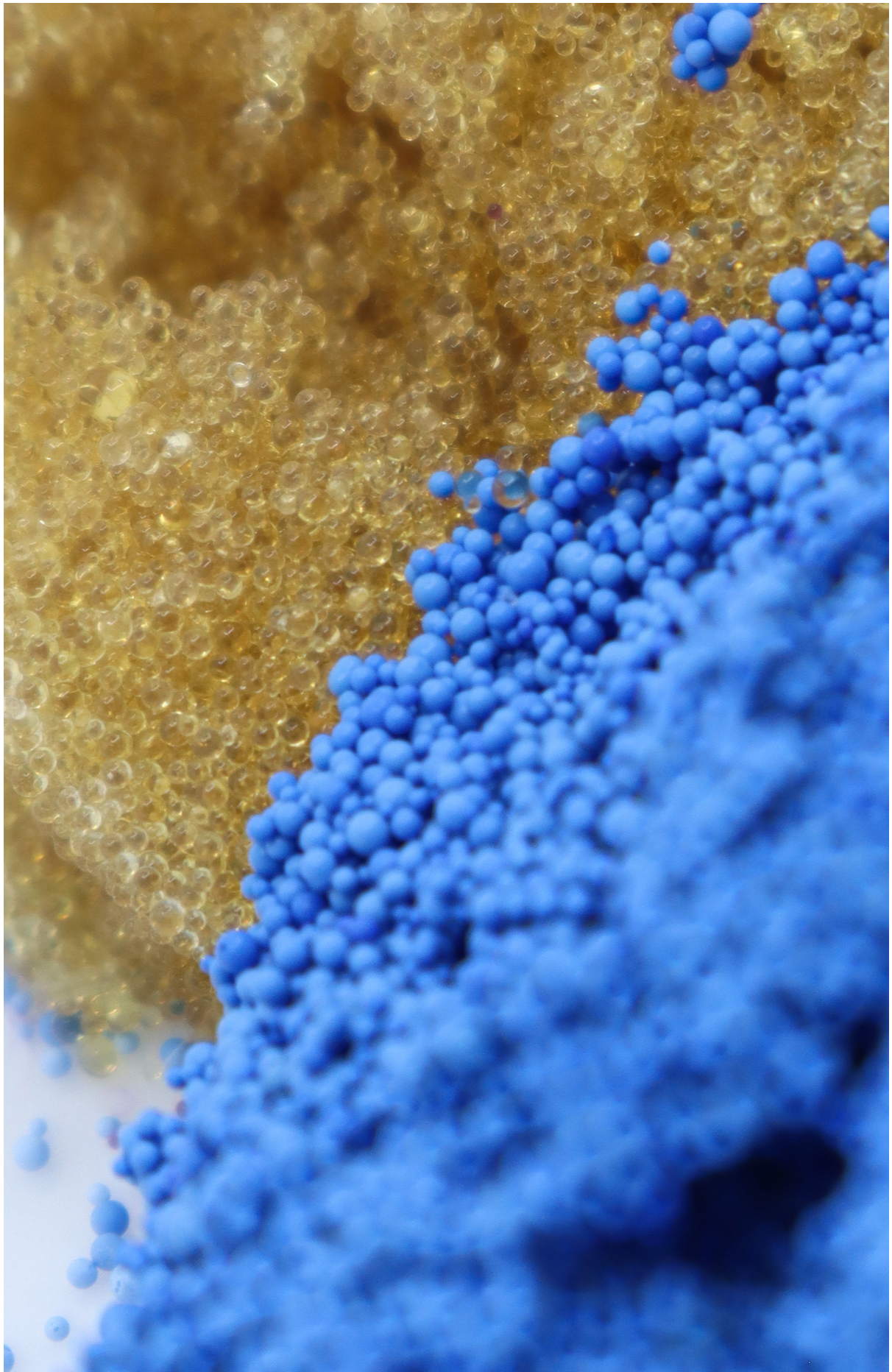
Simple and direct determination of water hardness by titration (drop addition), available in °fH or °dH (depending on the kit selected).



## PUROTAP® PHpro-21

PUROTAP® PHpro-21 is a high quality handheld meter with measured value memory. The device has 3-point calibration and automatic temperature compensation (ATC). The large LCD screen simultaneously shows the temperature-compensated pH reading and the temperature of the liquid.









# ACCESSORIES

 **PUROTAP**  
by ELYSATOR™





## PUROTAP® trolley

Transport aid for PUROTAP® leader.

The PUROTAP® trolley can be fitted below PUROTAP® leader as a mobile base. This makes it easy to cover large distances, and even steps, with no unnecessary heavy lifting.



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## PUROTAP® connector

Connector for connecting to a PUROTAP® cartridge.

For attachment to any PUROTAP® cartridge to protect the cartridge thread.



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## PUROTAP® wireless plug

With the wireless plug, PUROTAP® leader can switch electrical devices such as pumps or valves on and off.





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