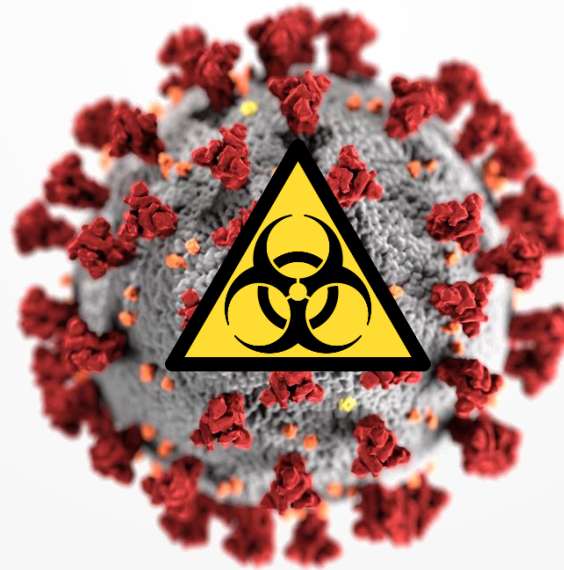


# QUERY<sup>®</sup>WATER

Antibacterial air protection!



# QUERY® WATER

Modified type QW20C

## SUITABLE AS RNR VIRUS AND BACTERIA DETECTOR

The device minimizes the effects of the pandemic of Coronavir (SARS-COV-2 RNR) on our daily lives. Along with restrictions in education, health care, social services and in general where people congregate. The units reduce the spread of bacteria and viruses in their environment thanks to a large exchange of air, filtered through a specially made antibacterial filter HEPA H14.

The tested QWC technology has proven the capture and elimination of viruses. The virus was not detected in the generated water and therefore the device meets the requirements as a biosensor for the detection of viruses during the constant production of clean drinking water. The device is very easy to disinfect and can be used from the point of view of long-term use both in the event of a pandemic crisis and then in normal use as an atmospheric water generator.

We recommend operation in all types of buildings with increased movement of people, especially in entrances and inside waiting rooms, where people who are not affected by the disease are directly endangered. They can be more easily infected in these places. This unit can filter up to 300m3 of air per hour and can produce up to 20 liters of clean drinking water.

This is an upgrade of the QW20 unit to the antibacterial modification QW20C for capturing and eliminating viruses from the air. It is also suitable for use as a biosensor.



# QUERY® WATER

QW20C in medical facility, total located - 39pcs



# QUERY<sup>®</sup>WATER

Modified type QW20C



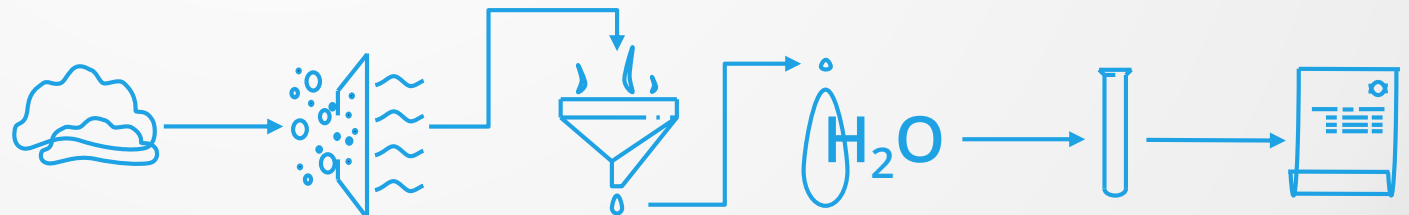
## PRINCIPLE OF TESTING

Air filtration is used for sampling and their subsequent testing for the presence of bacterial and viral particles. The unit thus serves as a perfect biosensor to determine procedures for their effective removal and minimization by transmission from the air. Due to the need to test water samples with a concentration of bacteria and viruses from the surrounding air, the device is used to liquefy air humidity.

The level of air contamination should follow at least the requirements of Decree No. 6/2003 Coll., Where it is mentioned how many KTJ micromycetes and how many bacteria can be in a specific amount of air. For this determination, it is necessary to collect samples from the device and send them for evaluation, or evaluate on the spot. Sampling can take place on several levels, both continuously and randomly. Determining the correct placement of biosensors is then essential according to the most risky locations selected for rapid detection of viruses. The degree of sampling frequency is then individual at each location according to the degree of air contamination around the biosensor.

Principle of evaluation, when stages 2 and 3 are intended for sampling:

1. Air intake - 2. Air filtration - 3. Water condensation - 3. Sampling - 6. Testing and output



# QUERY® WATER

Modified type QW20C



## UNIT IMPROVEMENTS – ANTIVIRAL AND ANTIBACTERIAL

The improved units are able to detect and neutralize the COVID-19 virus. The main reason is the implementation of special air filters, germicidal lamps and other antiviral and antibacterial components. The new QW20C units have the following enhancements:

- **Germicidal UV-C lamp** for air disinfection (300m<sup>3</sup> / h).
- **The HEPA H14 air filter** has > 99,995% particle retention for better cleaning of circulating air.
- **CO2 meter** to trigger an alarm when CO2 ppm values are limits that can endanger human health. The higher the CO2 value, the higher the probability of aerosol infection.

Ppm levels:

- 400 - 799 Low risk of spreading viruses
- 800 - 1499 Medium risk of spreading viruses
- 1500 - 1999 High risk of spreading viruses
- > 2000 Immediate need to leave the room

**Functional technical coating** is a technology with photocatalytic efficiency, which the units are equipped with, has high bactericidal and virucidal efficiency.

# QUERY® WATER

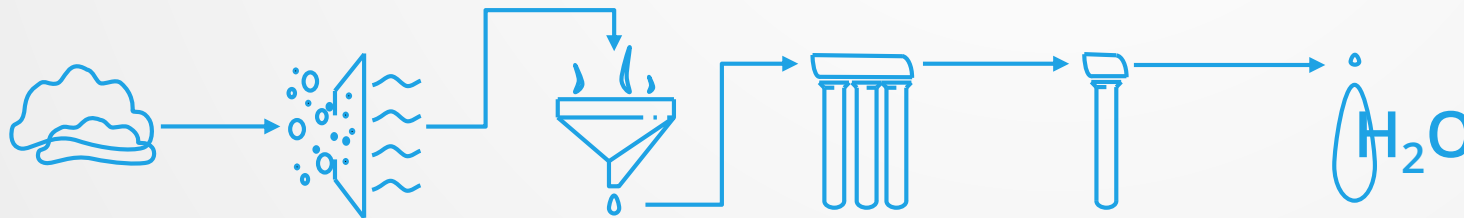
Modified type QW20C

## PRINCIPLE OF WATER PRODUCTION

The technology for the production of clean drinking water uses the characteristics of an absorption cooler, where air humidity condenses on the exchanger. The condensed water is then filtered and subsequently mineralized by a seven-stage treatment. The water is then treated with UV filtration, which removes 99.9% of organic bacteria. Furthermore, the patented filtration treatment of drinking water adjusts the taste to be even tastier and fresher, thus providing clean and safe water that can be drunk immediately. For industrial units over 100L, the produced water can then be either cooled or heated by additional treatment. Small 20L Units are equipped from the factory with water temperature adjustment (cold + 6 ° C, warm + 82 ° C). The water in the tank of the unit is always fresh and ready for immediate use, thanks to the "Always clean" automatic cycling mode, it ensures that the water is filtered through the treatment every 3 hours. The water is maximally pure, the purity of the water is indicated by the indicator of the amount of DTS.

The principle can be summarized in several points:

1. Air intake - 2. Air filtration - 3. Condensation - 4. Filtration and treatment - 5. Mineralization - 6. Pure drinking water



# QUERY® WATER

Modified type QW20C



## WHAT IS TDS?

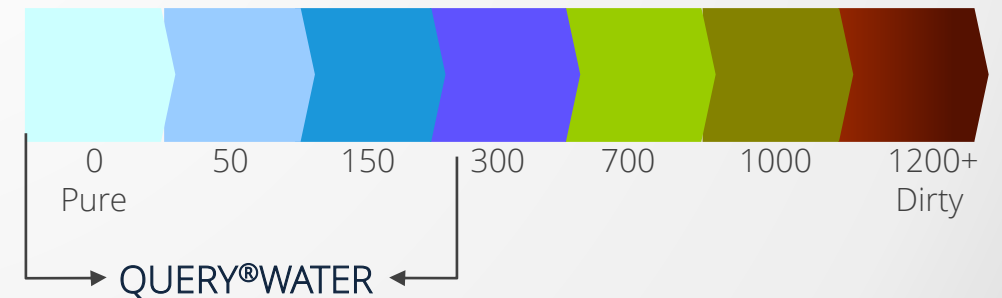
The Total Dissolved Solids (TDS) indicator is used to determine water quality. It is used as an indication of the aesthetic properties of drinking water and as a comprehensive indicator of the presence of a wide range of chemical contaminants. The main components are usually cations of calcium, magnesium, sodium or potassium and anions of carbonates, bicarbonates, chlorides, sulphates and especially in groundwater nitrates. TDS is expressed in units of mg per unit volume of water (liter) or also expressed as parts per million (ppm). Typical natural mineral water and tap water can be up to 200 mg/l.

## So is a higher level of TDS good or bad?

Most bottled mineral waters contain higher TDS (e.g. Evian 300 mg/l, San Pellegrino 850 mg/l). According to the **World Health Organization "WHO"** and most other institutions that regulate water quality, values up to 500 mg / l are considered completely safe and 2,000 mg / l. safe for temporary consumption if no other water is available. The **WHO** has conducted a study on TDS levels in water (mg / l):

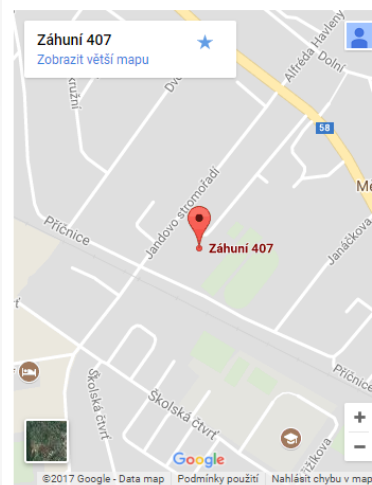
- Less than 300: Excellent
- 300 - 600: Good
- 600 - 900: Satisfactory
- 900 - 1200: Impossible
- Over 1200: Unacceptable

## TDS level

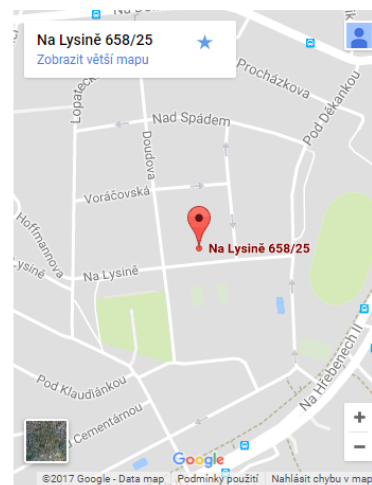


Source: WHO, safewater

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