

QUANTUM DISINFECTION™ AUSTRALIA



No chemicals. No power. No pathogens

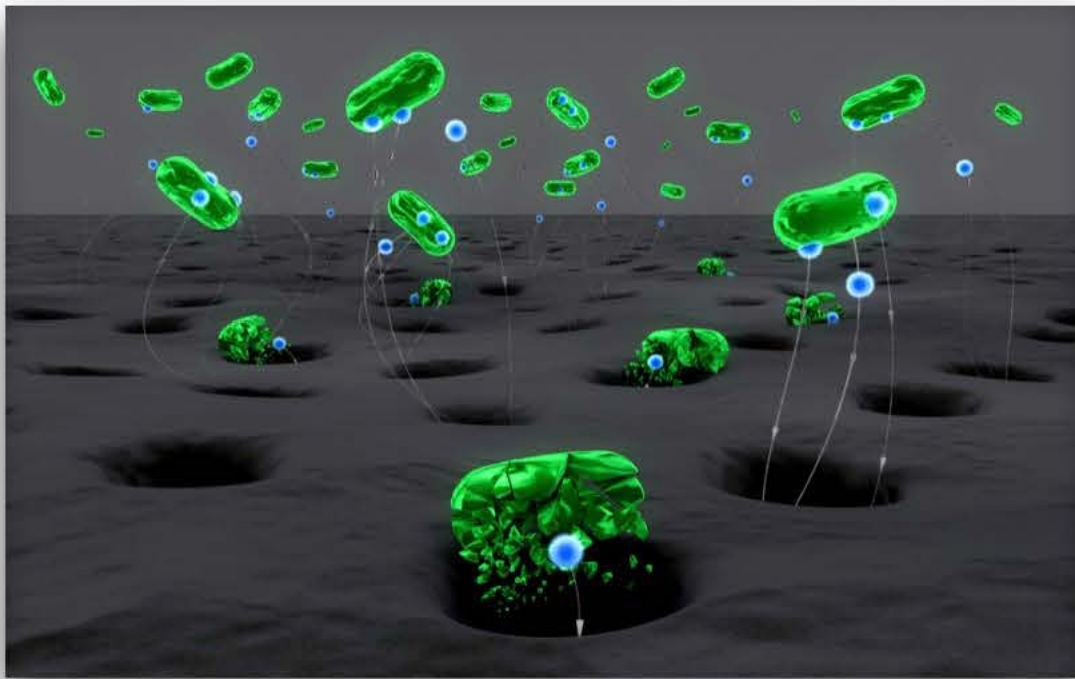


What it does?

Quantum Disinfection™ is a new generation of nano-composite materials with activated surfaces that kills pathogens like bacteria (*E. coli*, *Staphylococcus*, *Legionella*, etc.), viruses (MS2) and protozoa (Cryptosporidium) from water, with **no power, no chemicals and no maintenance**.

How does it work?

Quantum Disinfection™ is a revolutionary technology (7 Patents: WO2013007289A1; US2014120148A1; EP2729001B1; CN103997890B; CN103997890A; CN106830232A; US9650265B2 and US2016257583A1) that uses the quantum mechanic principles of electron movement and doping, in order to create powerful catalysts with highly activated surfaces applied, since 2011, for water and air disinfection.



Away from the classical disinfection methods (chlorine, alcohol, bromide, ozone or UV), Quantum Disinfection™ uses a discharged surface (positive quantum field) that attracts electrons. Water or air, simply has to pass over the Quantum Disinfection™ ceramics and the microorganisms (negatively charged) are **instantly killed**.

How efficient it is?

Several institutions and certified laboratories, including the Environmental Protection Agency (EPA - USA), Institute for Environmental Health and Related Product Safety, Chinese Center for Disease Control and Prevention (IEHRPS - CCDCP - China), Pasteur Institute of Lille (France), Eurofins (USA), QFT Laboratory, LLC (USA), Guangdong Detection Center of Microbiology (GDCM - China) and others, tested the Quantum Disinfection™ ceramics in the last years.

The best results show a **99.9999% elimination for bacteria (*E. coli*)** and **> 99.9999 for viruses (MS2)**.

Does it have any certifications?

Quantum Disinfection™ is:

- A NSF Certified Component to **NSF/ANSI 42** for material requirements only (Certificate #: C0292640-01);
- Tested by IAPMO to **NSF/ANSI 61** (Certificate #: 23033);
- Certified **MOH - China** (Certificate #: 2015KF2513).

What is it?



a **ceramic**:
alumina based,
environmental
friendly, solid media,
odorless and
insoluble



a **new phenomenon**:
attracts electrons from
microorganisms
(bacteria and viruses)
causing their entire
structure to collapse



a **catalyst**:
disinfects the water
and air with its
activated surfaces, no
power, no chemicals,
no maintenance



it **kills instantly the microorganisms**:
there is no contact
time required

How it looks like?



Chemical composition	Al_2O_3 - TiO_2 - AgCl
Physical State	solid
Shape	sphere
Solubility in Water	insoluble
Color	white with blue
Odor	odorless
Particle Size (mm)	2
Apparent density (g/cm ³)	0.75

How much it can be produced?

At the present moment, the production capacity of the Quantum Disinfection™ ceramics is **800 kg per month**. Claire's space and the manufacturing method in cells, allow a ramp up of the actual production to **8 metric tones per month** in less than 90 days.

How to apply it?

Quantum Disinfection™ has to be applied in packed beds inside vessels, cartridges, filters or any type of device with an inlet and an outlet. Disinfecting with no chemicals and no leaching, no by-passes are allowed: all microorganism from the water or air has to get into a direct contact with the activated surfaces of the Quantum Disinfection™ ceramics.



Since 2017, Claire launched on the market 6 products that contain the Quantum Disinfection™ ceramics (see Claire's Product Catalog). As of today, more than 10,000 units are serving the domestic sector and improve the drinking water quality in USA, India, Pakistan, China and other parts of the world.

Several customers integrate the Quantum Disinfection™ ceramics in their own systems, in products like refillable cartridges, refrigerator filters, gravity fit water purifiers, pitcher filters, water dispensers, filters for recreative vehicles, etc.



Where to apply it?

Regardless of the market sectors, the Quantum Disinfection™ ceramics, or the products that contain them, work best if apply as close as possible to the **Point-Of-Use**. The Quantum Disinfection™ ceramics need to be always the last stage of the water purification/treatment.



Residential	Point-Of-Entry Under-the-Sink Refrigerator Filter Counter-Top (gravity fits) Water Tanks (gravity fits)
Recreational - RV - Boat	Under-the-Sink
Commercial - Office - Hotel - Restaurant	Under-the-Sink Water-Dispensers Fountain-Drinks Ice-making-Machines
Public - Hospital - Airport - Plain - Train	Under-the-Sink
Government - Military - Embassy	Power-Free System Under-the-Sink Counter-Top (gravity fits) Straw
Agriculture - Greenhouse - Poultry	Point-of-Use

Frequent Asked Questions - Quantum Disinfection™ (QD)



How does QD work?

QD is a catalyst with activated surfaces. The microorganisms (bacteria, viruses, protozoa, micro-algae, yeast, etc.) that get into a direct contact with the ceramic surfaces, instantly lose their electrons to the positive active filed causing their entire structure to collapse.

Is QD a filter?

No. It is a disinfection media. Besides, just like UV, QD needs primary filtration (at least 5 micron) to work properly, otherwise the activated sites can be clogged.

Does QD media leach?

No. QD does not leach anything in the water, no ions, no chemicals. All the bactericidal action happens due to the strong catalytic field at the surface of the QD ceramics.

Is QD certified?

Yes. QD media has:

- NSF 42 (Certificate #: C0292640-01)
- NSF 61 (Certificate #: 23033)
- MOH - China (Certificate #: 2015KF2513)

How QD is applied?

QD can only be applied in packed bed inside devices, systems, cartridges, units, etc. with an inlet and an outlet that can ensure the contact of the microorganisms with the activated QD ceramics. No by-passes.

Has QD been tested by 3rd party labs?

Yes. Quantum Disinfection™ technology has been rigorously tested and posted excellent results by:

- Environmental Protection Agency, USA
- HomeLand Security (against Anthrax virus), USA
- Eurofins, USA
- Pasteur Institute of Lille (now Eurofins), France
- NC State University, USA
- Proteus, France
- Guangdong Detection Center of Microbiology, China
- Institute of Environmental Health and Related Product Safety, Chinese Center of Disease Control and Prevention, China
- Avazyme, USA
- Ackuritlabs, USA
- Microbac, USA
- QFT Laboratory, USA
- IAMPO (NSF P231 protocol), USA and India

All of these reports are available upon request.



Is QD working in gravity fits?

Yes.

Does QD require any pressure?

No.

Does QD require any electricity?

No. QD is not an electrical device.

How long does QD media last?

QD media is a catalyst that, in theory, do not expire and the positive filed at the ceramic surfaces remains permanently the same.

In reality, suspended solids or other particles can get into the vessels and clog the activated surfaces leading to slowly losses of the germicide activity. We noticed that after a certain amount of water or air that passed through, the germicide activity of the QD ceramics can drop, after one year of use, form 99.99% to 99.98% or lower.



Contact Details

PERTH

62 Frederick Rd, Hamilton Hill

WA 6163, Australia

(+61) 0402 838 880

will@watercomponents.au

