



Polypropylene Sediment Cartridges

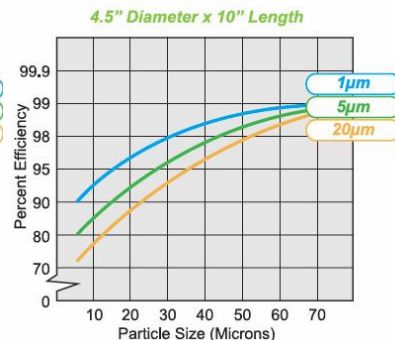
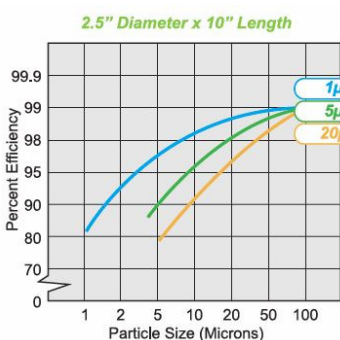
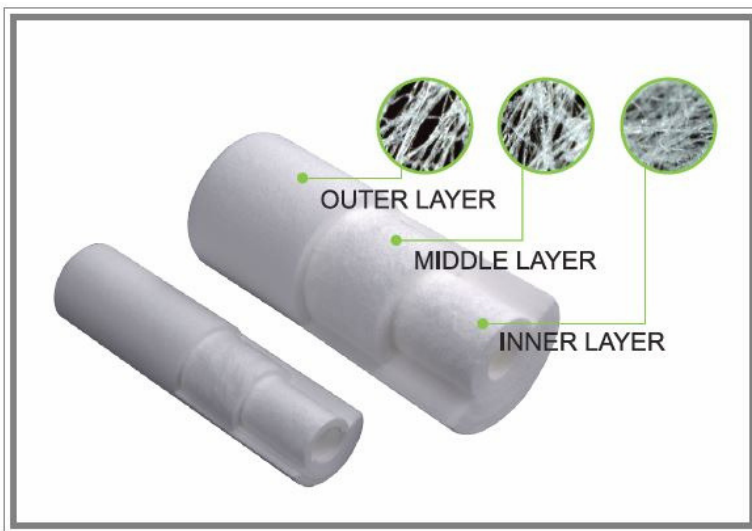
Sediment filters are used as a primary filter to help to remove dirt, rust and sediment deposits, from water to help prevent or slow down the blockage of the secondary carbon filter.

Sediment filters range from less than 1 micron to about 70 microns but the most typically used are 5, 10, 20, 25, 30, 50. They would typically be used in a sequence with the biggest "pore" size or micron size being the first one the water goes through and the smallest the last.

AWC recommends sediment filter made from Polypropylene which is resistant to the growth of bacteria. They typically come in four sizes which are 9", 10" and 20" tall and 2.5" and 4.5" radius. They are typically referred to as either Slim Line or Big Blue.

Features & Benefits

- Three-layers structure cartridge, high contaminant holding capacity, long filter service life.
- 100%PP for compatibility with a wide range of process fluids.
- Micro-Denier melt-blown fiber, high removal ratings.
- Formed by thermal bond without use of any binders and adhesives
- Certificated by NSF42 and FDA CFR Title 21.



Model No.	FPP-LL-WX-ZZZ
Micron Rating	1,3,5,10,25,50,75,100 Micron
Material of Construction	100% melt-blown micron-denier PP fibre
Length	9", 10", 20", 30", 40" (251mm, 254mm, 508mm, 762mm, 1016mm)
Inner Diameter	28mm
Outer Diameter	2.5", 4.5" (63mm, 110mm)



Activated Carbon Block Filter Cartridges

Activated carbon filters are particularly effective at removing pollutants which create unpleasant taste, colour, and odour in water. These fast-acting filters can eliminate or reduce the levels of chlorine by-products, pesticides, herbicides, and other organic and industrial chemicals.

There are two forms of carbon in general use: granular and block. A Granular Carbon filter contains Carbon granules of carbon about the size of coarse sand while carbon block consists of finely powdered carbon compressed into a solid mass. Typically carbon filters are 5 micron but can be different.

To get the best use from any carbon filter, it should be kept free of sediment and heavy organic impurities if these are present in your water. Typically an inexpensive sediment filter used as a "pre filter" would be installed prior to the carbon unit to extend the life of the more expensive carbon cartridge.

Be aware that there are many cheap carbon filters on the market that originate from Asian countries where the carbon has been sourced from coal rather than coconut which give off dangerous carcinogens.

AWC only uses quality carbon sourced from activated coconut shell that has been washed numerous times.

Features & Benefits

- Quality assured carbon block cartridges
- No carbon fines and superior contaminant capacity.
- Enhanced dirt holding capacity for extended cartridge life.
- Reduces chlorine, bad taste and odour.
- Formed by thermal bond without use of any binders and adhesives
- Certificated by NSF42 and FDA CFR Title 21.



Filtration Process

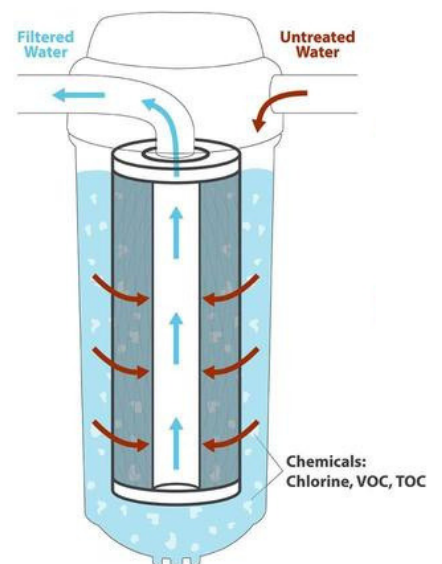


Carbon Block Filter Absorption

Key Specs include a 5 µm micron rating & removal of Chlorine, organochemicals, unnatural tastes and odours found in TAP water.

Structure of the Carbon Block Filter

The Carbon Filters are made of fine **COCONUT SHELL** carbon that offers a much finer filtration of suspended particles, chemicals, & dirt.





Aragon Filter Cartridge

Made in Europe

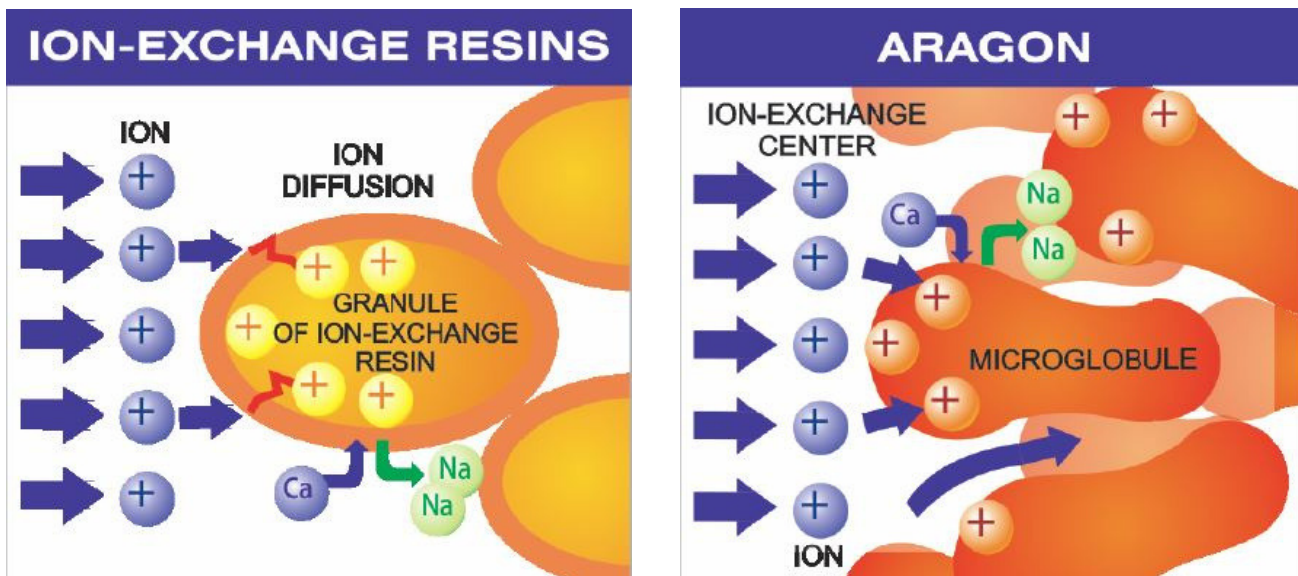
This world leading cartridge is based on the innovative, patented Aragon Media. It has been extensively tested by Certified Laboratories in Europe, to effectively remove chemicals, pesticides, bacteria and heavy metals as well as sediment down to >2 microns.

This high quality extruded carbon block cartridge is equally effective at purifying both **hot** and **cold** water.

Manufacture

Developed in Eastern Europe, these new SGS-polymers (space globular structure) material for water purification combines 3 methods of filtration: mechanical, sorption and ion-exchange, making this filter the best to date at removing the widest range of chemicals & heavy metals

Long polymer chains are formed in the production process, providing a porous yet mechanically strong structure. These polymer chains are coated and enable a highly effective ion exchange process.



This method of SGS-polymer filtration is up to 20 times more effective than common methods of ion-exchange.

The Aragon filter is especially effective when using tank or bore water to protect the user from organisms such as Protozoa, Giardia & Chryptosporidium. Like wise, the Aragon compound filters water high in heavy metals often found in bore water and some tank water.

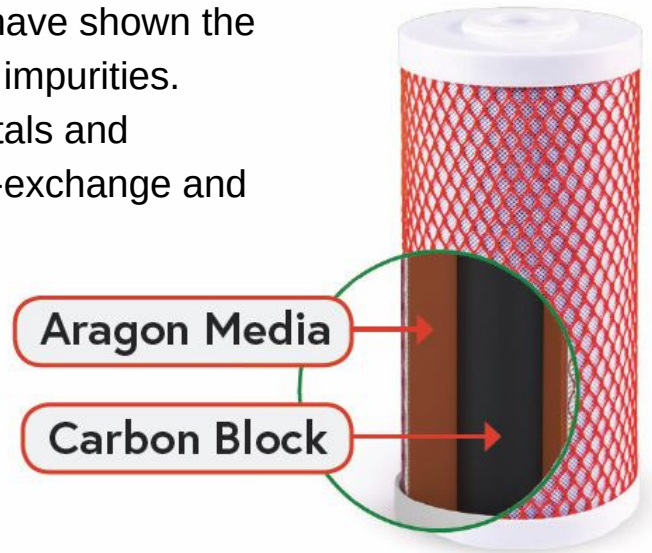
Filtration Process

Mechanical impurities are filtered out through the surface layers with extremely high accuracy. SGS-polymers have shown the best results in the complex removal of harmful impurities.

Elements and compounds including heavy metals and radioactive materials are removed through ion-exchange and sorption mechanisms.

The Aragon solid block material is a bacteriostatic polymer made from additives of silver and granules of ion-exchange resins.

Hardness salts, dissolved and colloidal iron, heavy metals and their compounds are removed through the resin and polymer ion-exchange properties. The Aragon filters capacity also provides removal of active chlorine, chlorine containing compounds and organic compounds.



Specifications

Max Flow Rate:

10" Big Blue..... 25 litres p/m

20" Big Blue..... 50 litres p/m

Water Temperature..... +4°C to +75°C

Filter Life:

10" Big Blue..... 30,000 litres

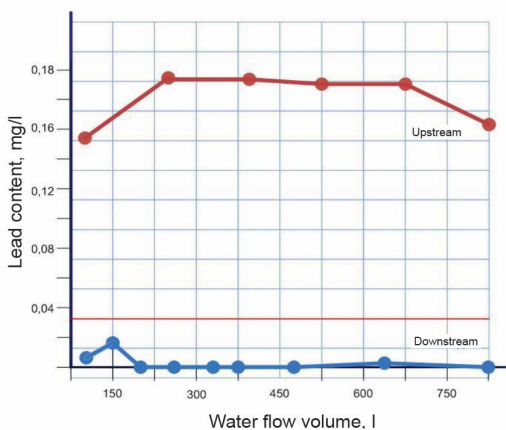
20" Big Blue..... 60,000 litres

Filtration Efficiency

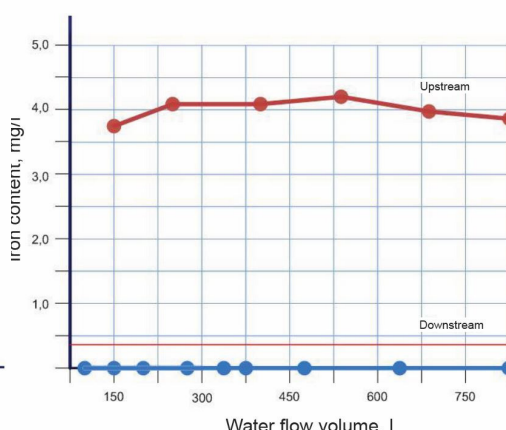
Particles >2 microns.....	100%
Lead, zinc, cadmium, cesium.....	95%
Chlorine.....	100%
Chloramines.....	>90% +
Pesticides.....	92%
Iron.....	90%
Aluminium.....	97%
Turbidity.....	99%
Oil Products.....	90%

Heavy Metal Removal

Example: Lead Removal Efficiency

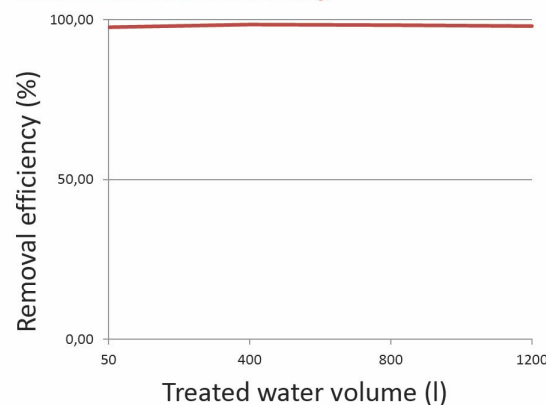


Example: Iron Removal Efficiency



Pesticides Removal

Simazin Removal Efficiency



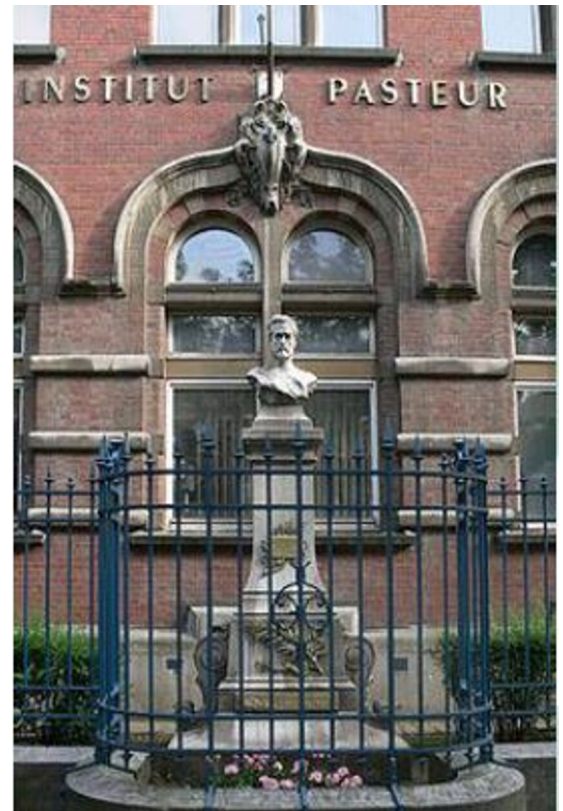


Institut Pasteur de Lille

France

The institute took its name from the famous French microbiologist Louis Pasteur, the founder and the first director. Louis Pasteur was buried in Notre-Dame de Paris cathedral for his prominent services to France, but later reburied in the territory of the Institute (Lille).

Important discoveries have been made In Pasteur Institute. That contributed to successful control of such virulent diseases as diphtheria, tetanus, tuberculosis, poliomyelitis, influenza, yellow fever and plague. In 1983 the human immunodeficiency virus was discovered in the institute. Since 1908 ten scientists of the institute have received Noble Prizes for Medical Science and Physiology.



How the Tests Were Conducted?



Photo: the modules and the housing presented to the Institut Pasteur de Lille

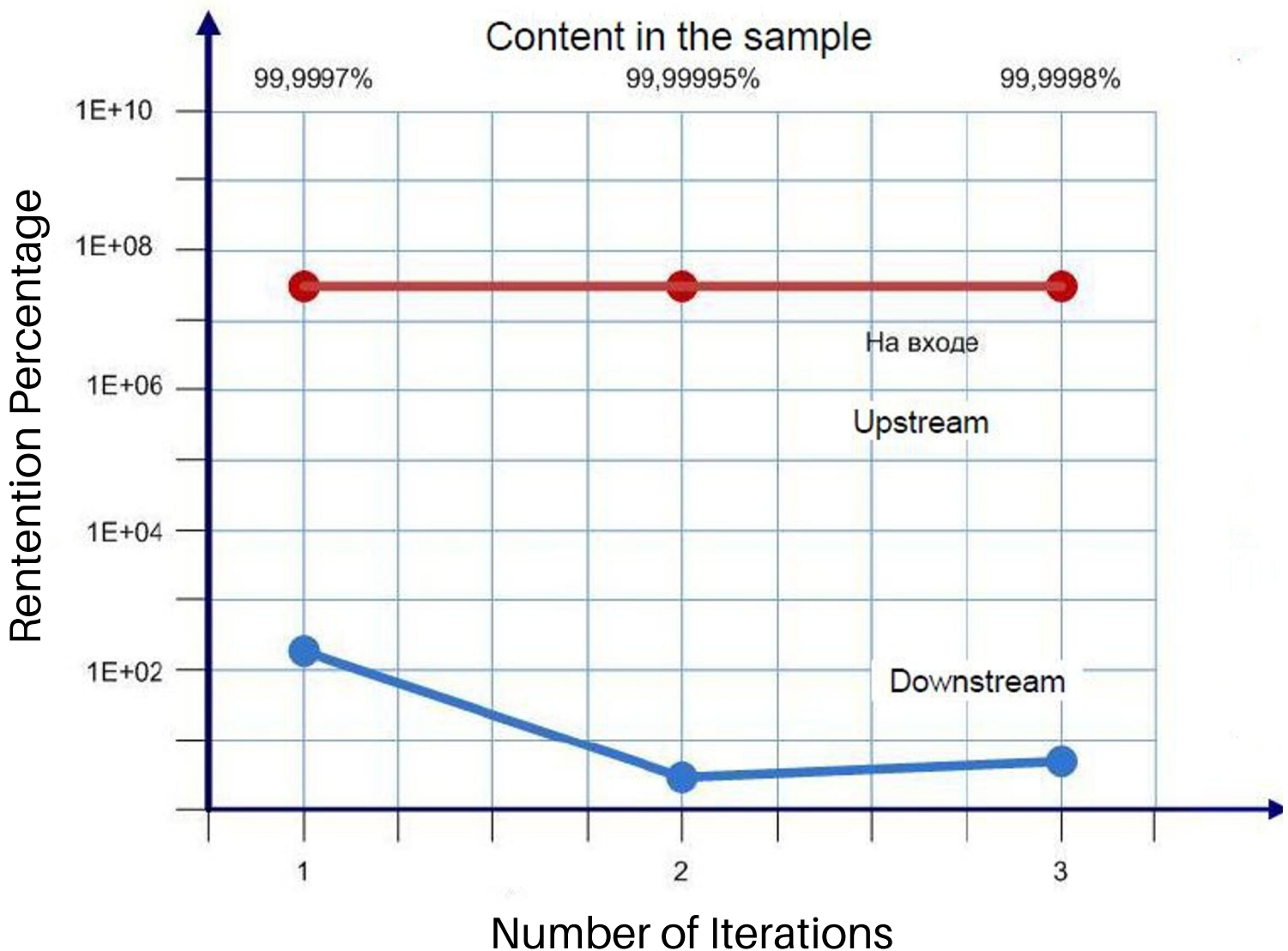
The filtering modules made of ARAGON were taken randomly from the batch. They were placed into a standard series-produced plastic housing. A peristaltic pump was used to circulate water through the modules. Each module was tested once. The tests were conducted with the use of artificially contaminated ultrapure water. Pollution-free water passed through the module prior to the experiment then contaminants were added and the treated water was collected after being filtered.



Removal of Salmonella

Salmonella is a mouse typhus agent. Nonspore-forming rod-shaped bacteria.

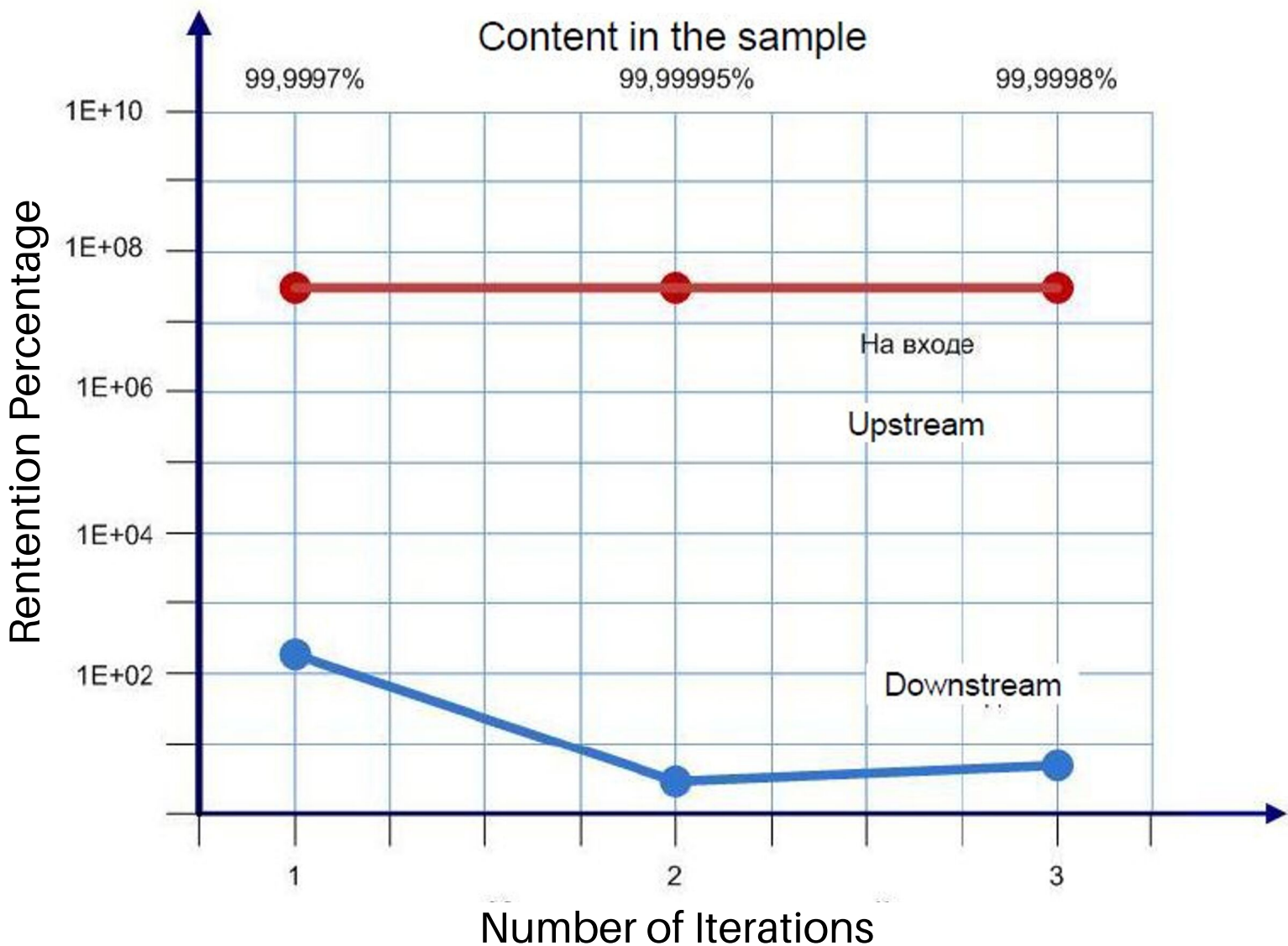
Length: 1-7 μm ; width: around 0.3-0.7 μm . The salmonellas are gram-negative mobile facultative-anaerobic bacilli.



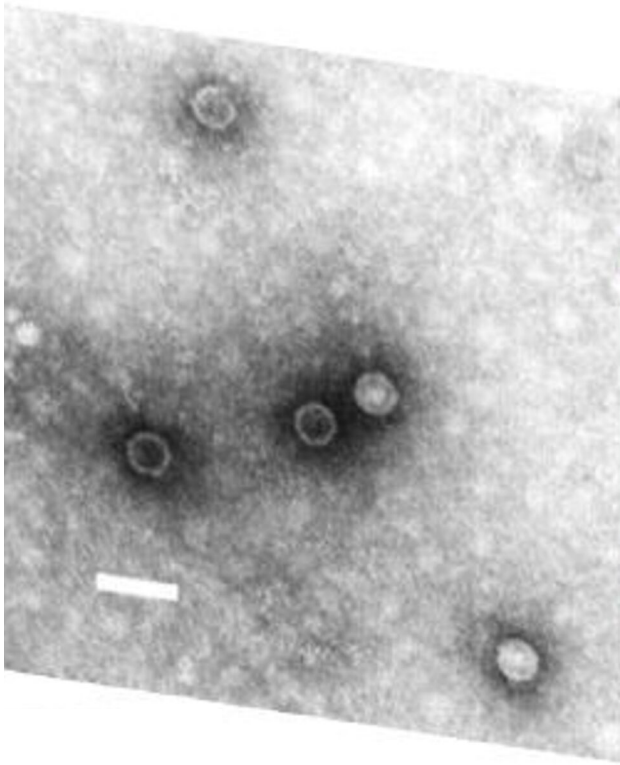
Removal of Legionella



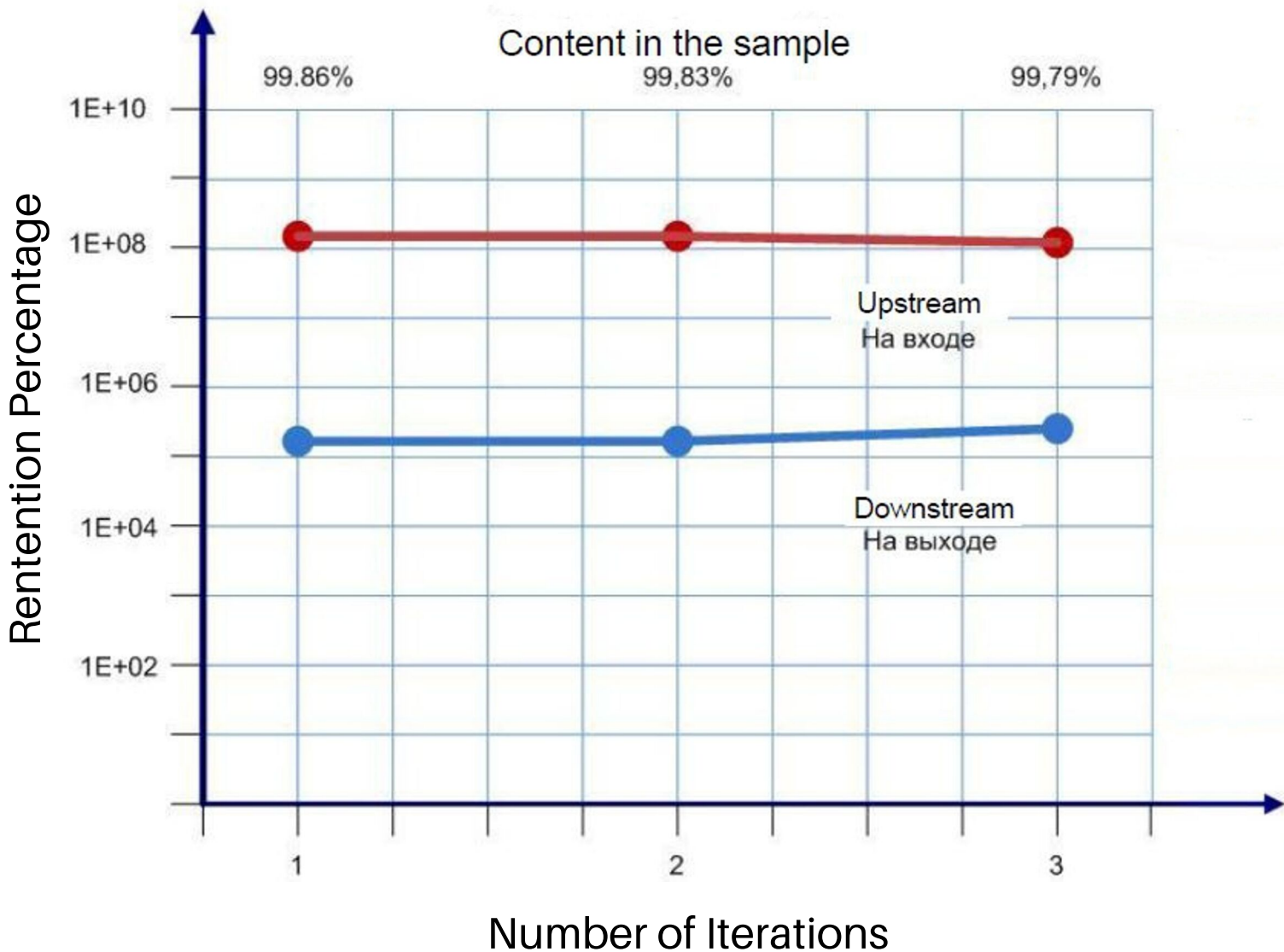
Legionella pneumophila are pathogenic gram-negative bacteria. Diameter: 0.2 to 0.7 μm , length: 2 to 20 μm . The inhabitation places of legionella are fresh water bodies and soil and also water supply and air conditioning systems in buildings, heating water converter plants and shower facilities, fountains, etc.



Removal of Poliovirus



Poliovirus (Poliovirus Strain Sabin type I) belongs to the family Picornaviridae, enterovirus (enteric virus) group. Virus size: 27-30 μm . Production and titration were on the BGMK cells (African green monkey's kidney).

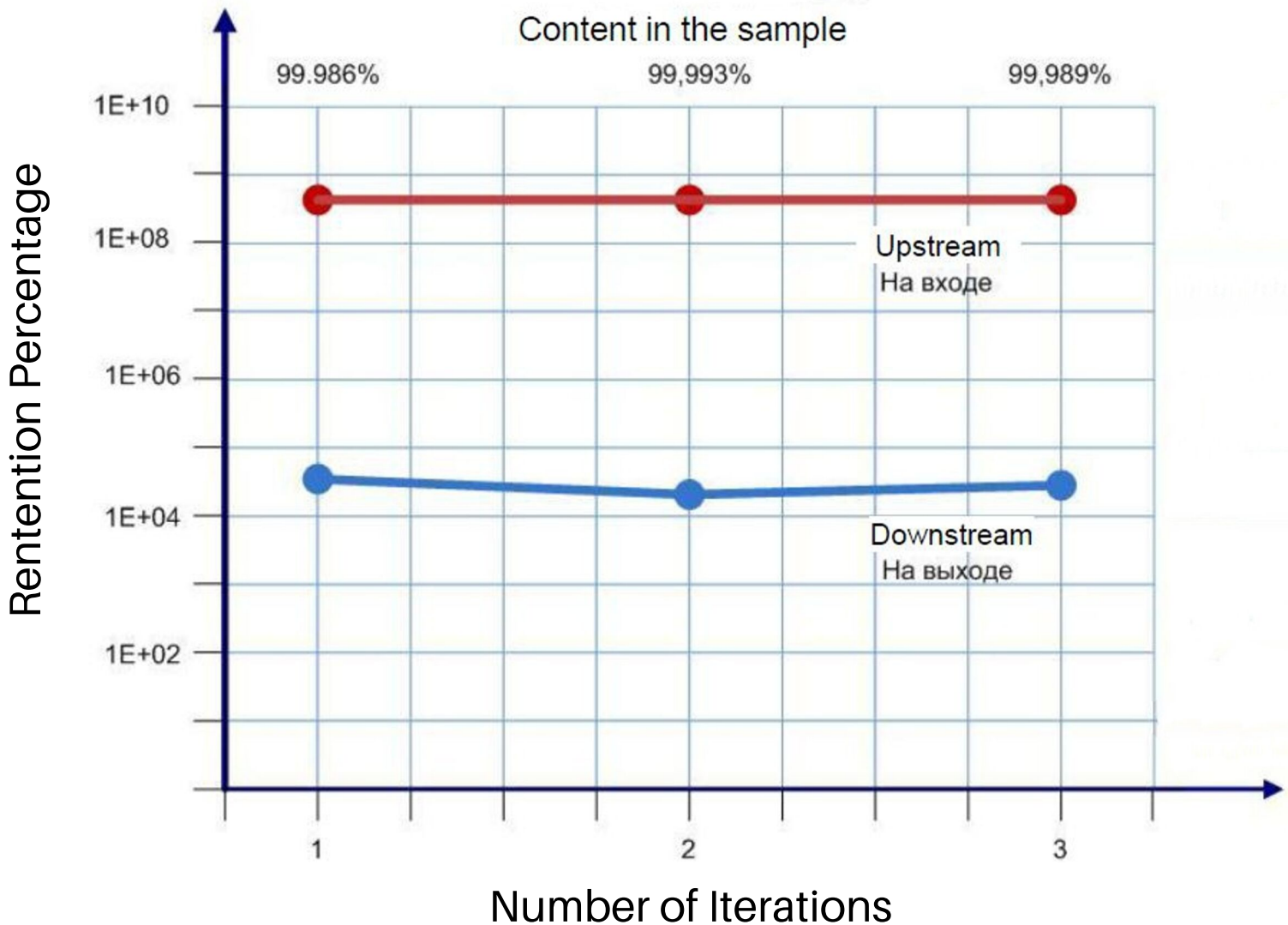


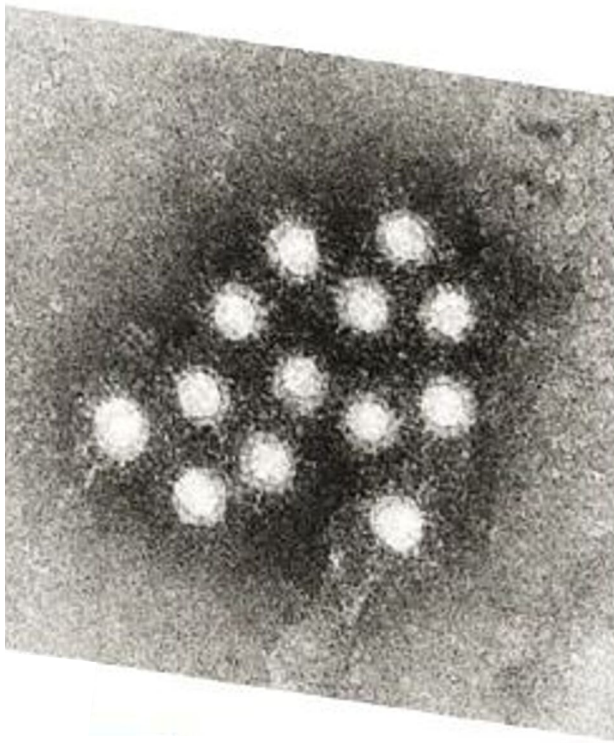
Removal of Rotavirus



Rotavirus is an enveloped virus with two-strand fragmented RNA belonging to the family Reoviridae, rotavirus infection agent.

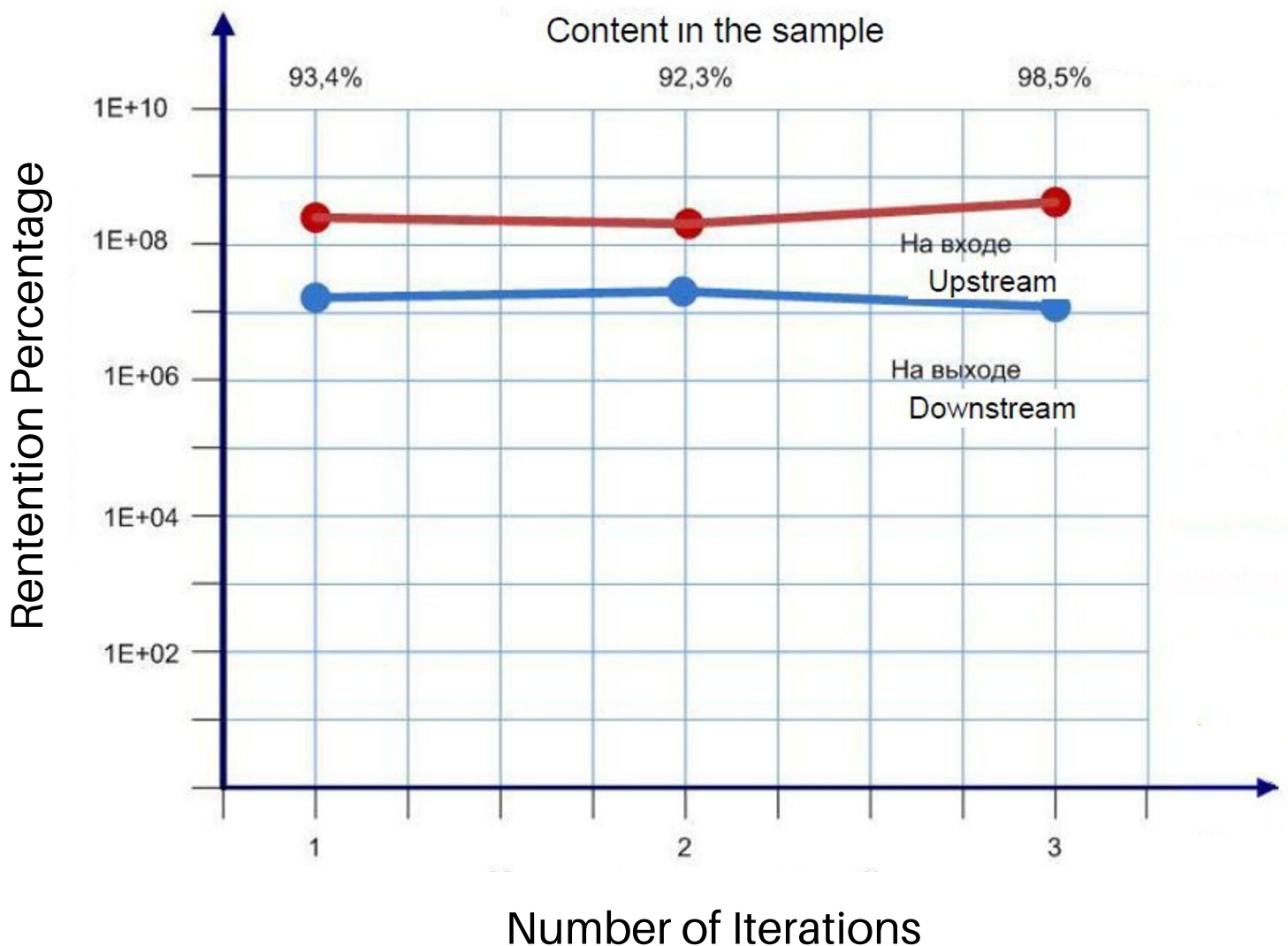
Virus size: 76.5 μm in diameter. Production and titration were on the primates MA104 cells.



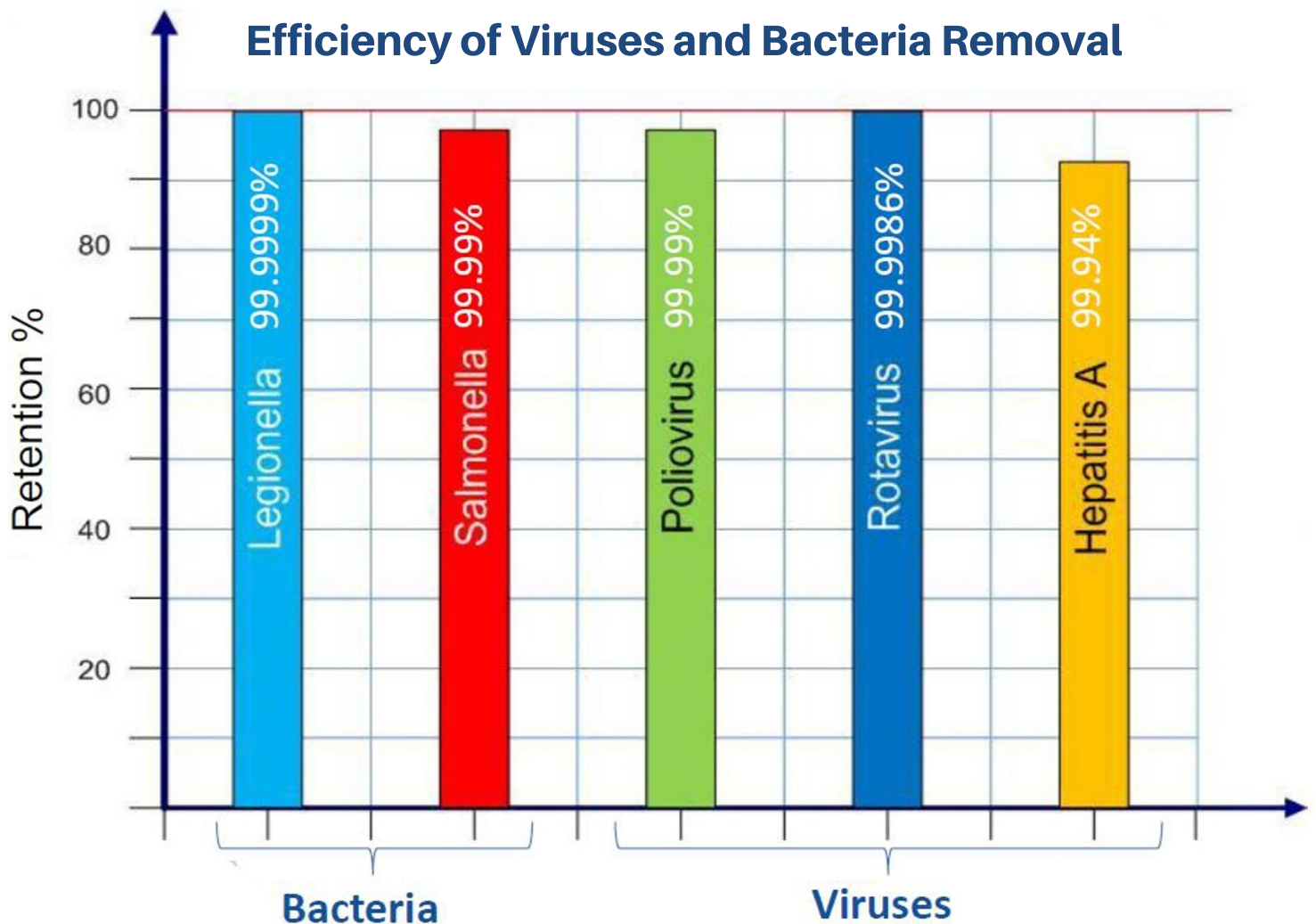


Removal of Hepatitis A

Hepatitis A (formerly known as infectious hepatitis) belongs to Picornaviridae family of viruses. It has no envelope and contains (+) singlestranded RNA packaged into protein capsid. Size: 27 μm in diameter.



Efficiency of Viruses and Bacteria Removal



Conclusion

Aragon BIO represents the most up-to-date technology for water treatment and viruses, bacteria and cists removal. That makes it possible to get completely safe and health-promoting water without boiling.

Aragon BIO can be used as well as the main element in water treatment and decontamination systems and as one of the pre-treatment stages, e.g. as a part of the membranes protection against bio contamination.

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Aragon BIO is comparable to polymeric UF/MF membranes (that are for domestic use) in efficiency. But it has greater productivity and significantly lower pressure drop.

Aragon BIO provides higher efficiency of filtration and kinetic absorption as compared to standard nonwoven fabrics including granular activated carbon.

Aragon BIO is absolutely environmentally-friendly. It can be used for potable water treatment and decontamination according to GOST R 51871-02, 51232-98.

Domestic Use

- Potable water filtration both at home and outdoors
- Water supply of house
- Water purification in emergency zones, (radioactive pollution conditions)
- Water treatment in mainlines

Commercial Use

- Treatment and purification systems for discharges
- Hot water supply (boilers)
- Pre-filtration in the membrane filtering systems
- Pre-filters for mainlines