

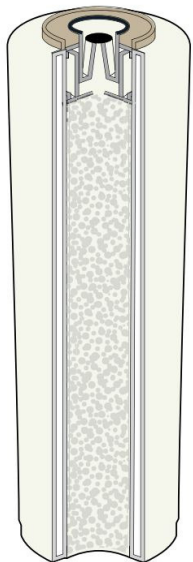


Fluoride Removal Filter Cartridge

AWC supplies a USA made fluoride cartridge filter made from activated alumina. Activated alumina (AA) is the only filter material specifically designed to remove fluoride and arsenic from water. It is a ceramic compound made of aluminium oxide with a very high surface-"area-to-weight" ratio, giving it a very high capacity for fluoride adsorption. AA filters can reduce fluoride concentrations to below 0.1 ppm, in other words 97% of the normal fluoridated water level.

Features & Benefits

- Up to 97% Fluoride removal
- Activated Alumina can be blended with other absorbents such as carbon, clay minerals, molecular bonding agents and elastomeric polymer.
- Mechanically strong and highly resistant to abrasion, breakage and deterioration during usage thereby insuring a long life service.
- Activated Alumina is relatively inert, non-toxic, non-corrosive and not prone to oxidation
- Good performance, even at low concentration ranges



Fits standard 10" Canisters



Activated Alumina

How does Activated Alumina work?

Activated alumina adsorbs, not absorbs & this is an important difference. For example, a sponge will absorb water, but the water molecules do not actually bond with those of the sponge. Therefore, the water can simply leak out or evaporate after a while. On the other hand, activated alumina adsorbs. When a chemical is drawn into the pores of an activated alumina sphere, it actually bonds with the solid material. Once in, it won't come out without considerable heating.

Specifications

Capacity	12 months/2000 litres
Flow Rate	3 litres per minute
Micron Rating	1 micron nominal

Up to **97%** Fluoride Removal



Aragon Filter Cartridge

Made in Europe

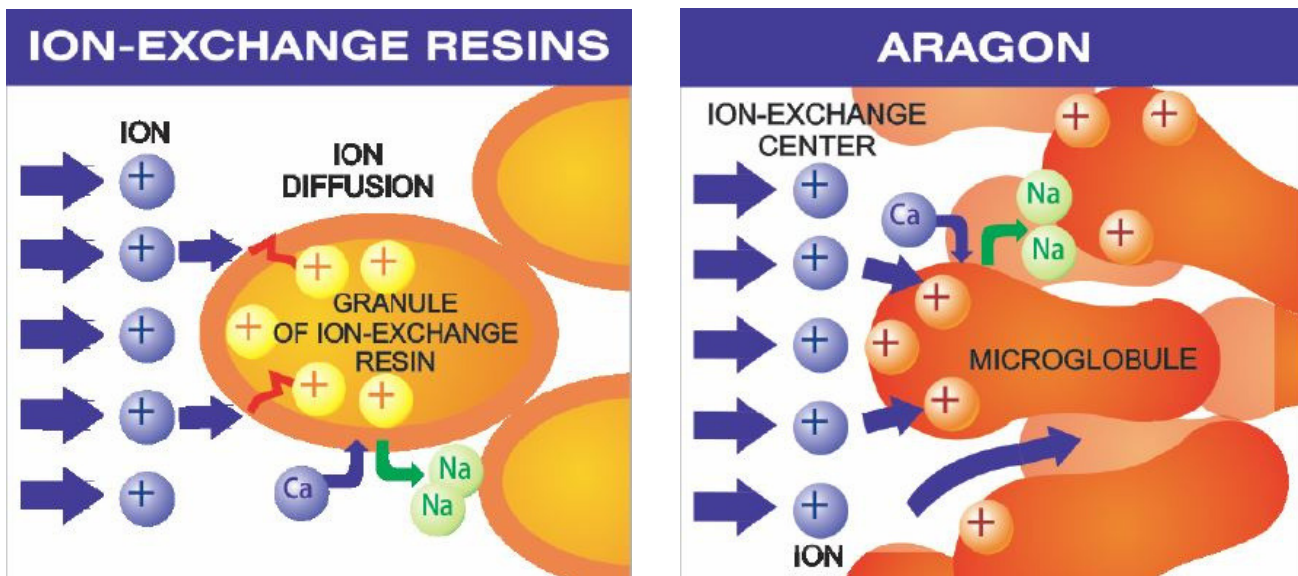
This world leading cartridge is based on the innovative, patented Aragon Media. It has been extensively tested by Certified Laboratories in Europe, to effectively remove chemicals, pesticides, bacteria and heavy metals as well as sediment down to >2 microns.

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.

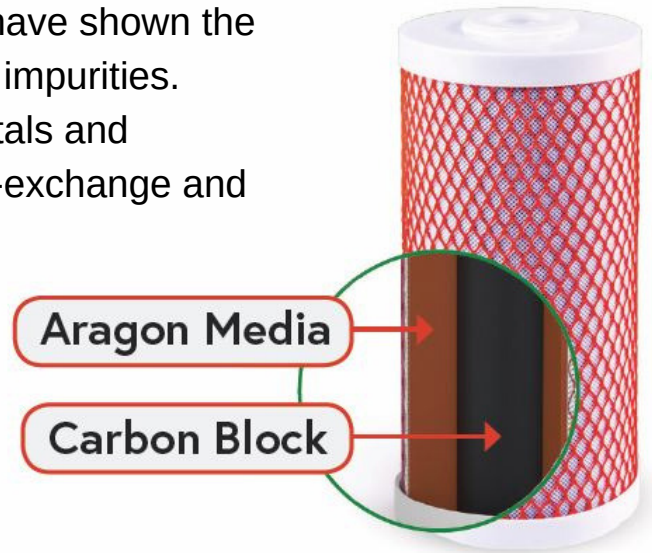
Filtration Process

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

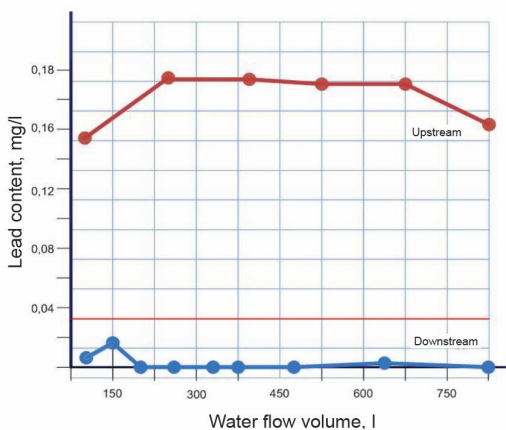
20" Big Blue..... 60,000 litres

Filtration Efficiency

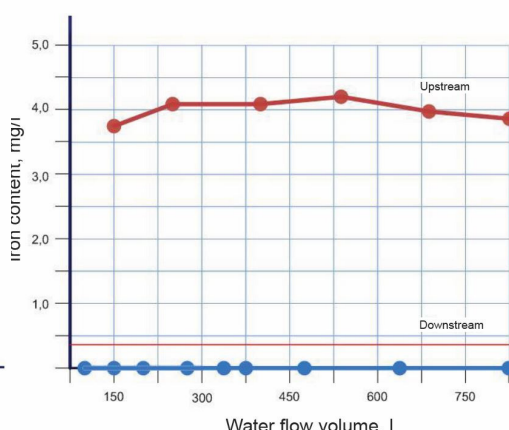
Particles >2 microns.....	100%
Lead, zinc, cadmium, cesium.....	95%
Chlorine.....	100%
Chloramines.....	>90% +
Pesticides.....	92%
Iron.....	90%
Aluminium.....	97%
Turbidity.....	99%
Oil Products.....	90%

Heavy Metal Removal

Example: Lead Removal Efficiency

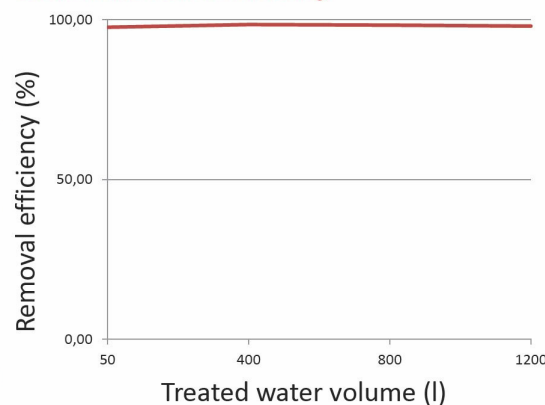


Example: Iron Removal Efficiency



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

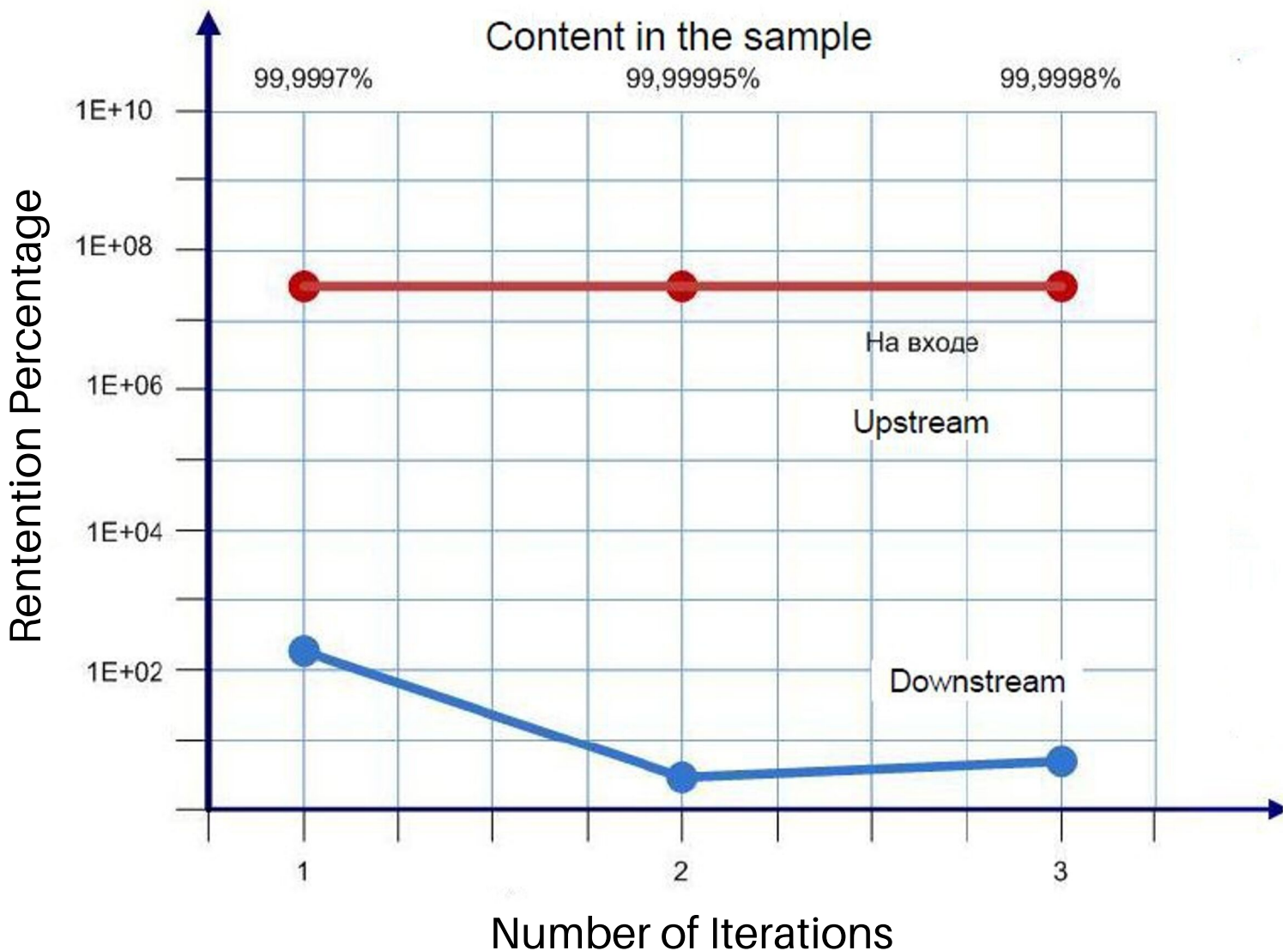
The filtering modules made of ARAGON were taken randomly from the batch. They were placed into a standard series-produced plastic housing. A peristaltic pump was used to circulate water through the modules. Each module was tested once. The tests were conducted with the use of artificially contaminated 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.

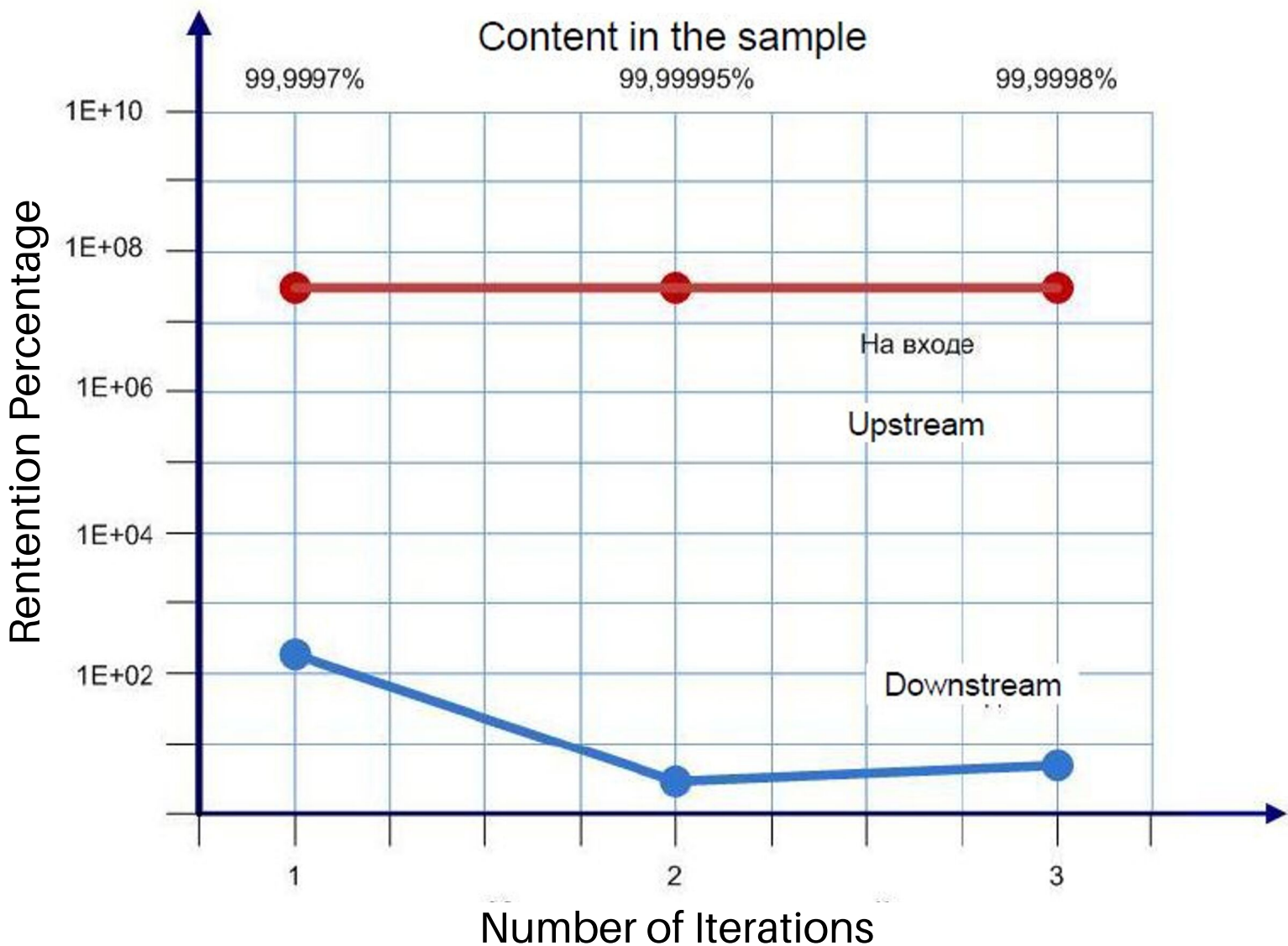
Length: 1-7 μm ; width: around 0.3-0.7 μm . The salmonellas are gram-negative mobile facultative-anaerobic bacilli.



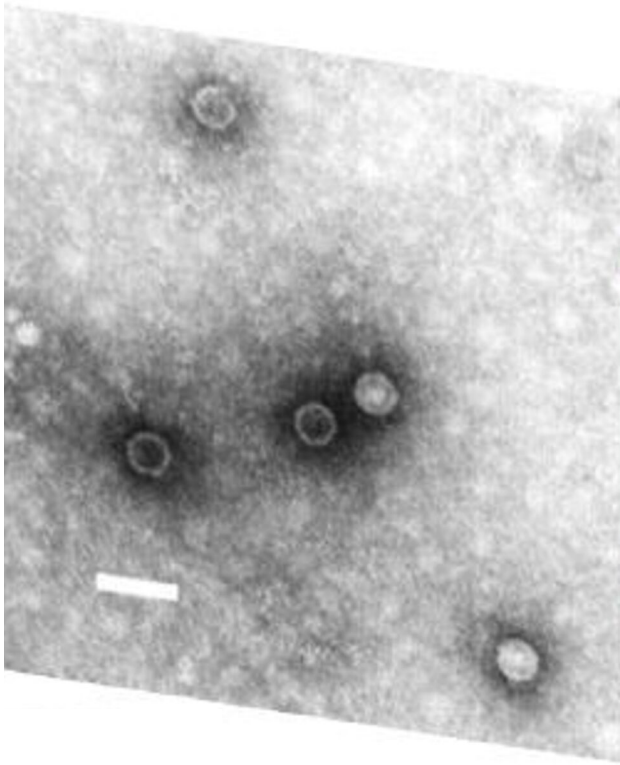
Removal of Legionella



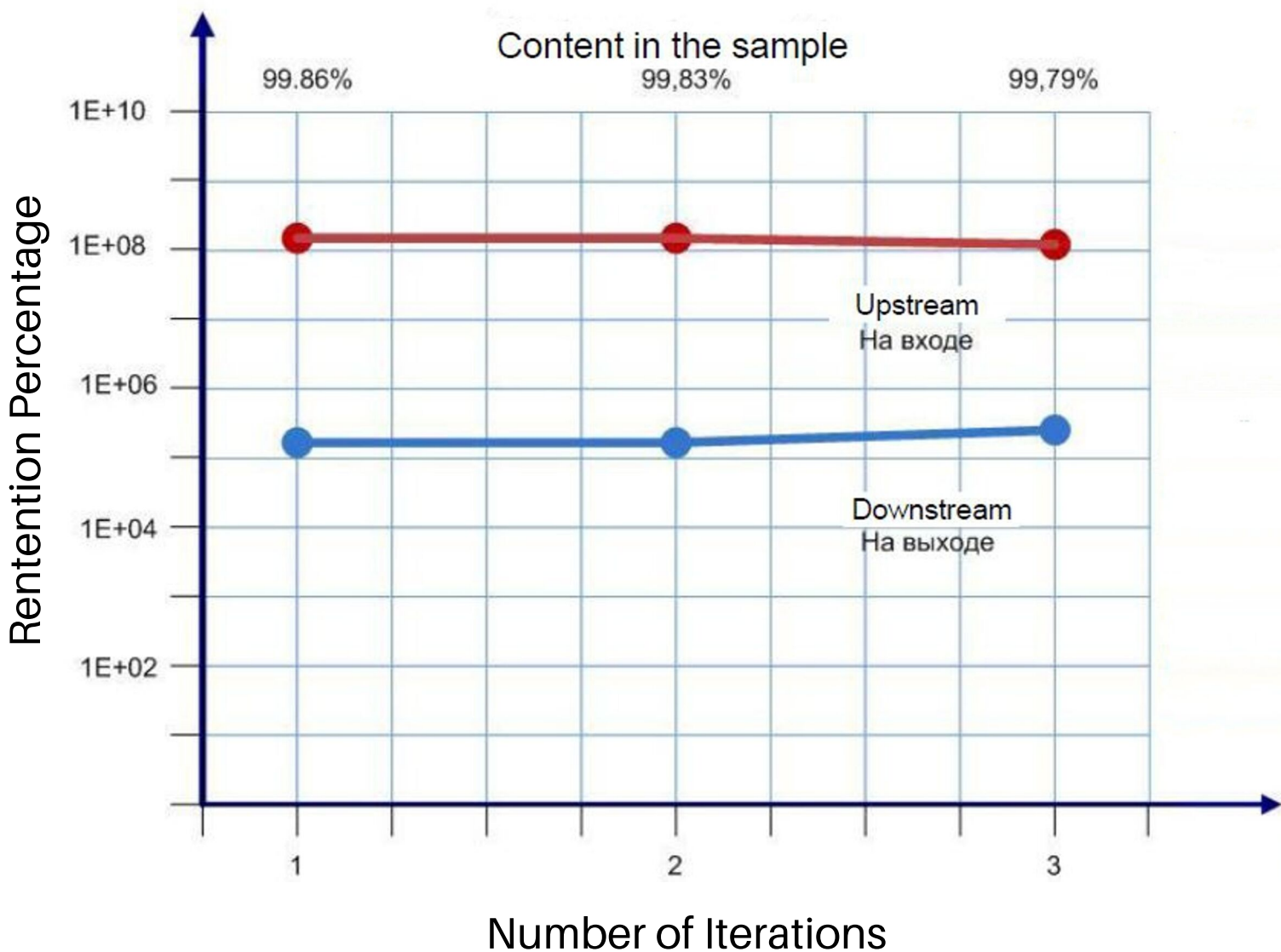
Legionella pneumophila are pathogenic gram-negative bacteria. Diameter: 0.2 to 0.7 μm , length: 2 to 20 μm . The inhabitation places of legionella are fresh water bodies and soil and also water supply and air conditioning systems in buildings, heating water converter plants and shower facilities, fountains,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

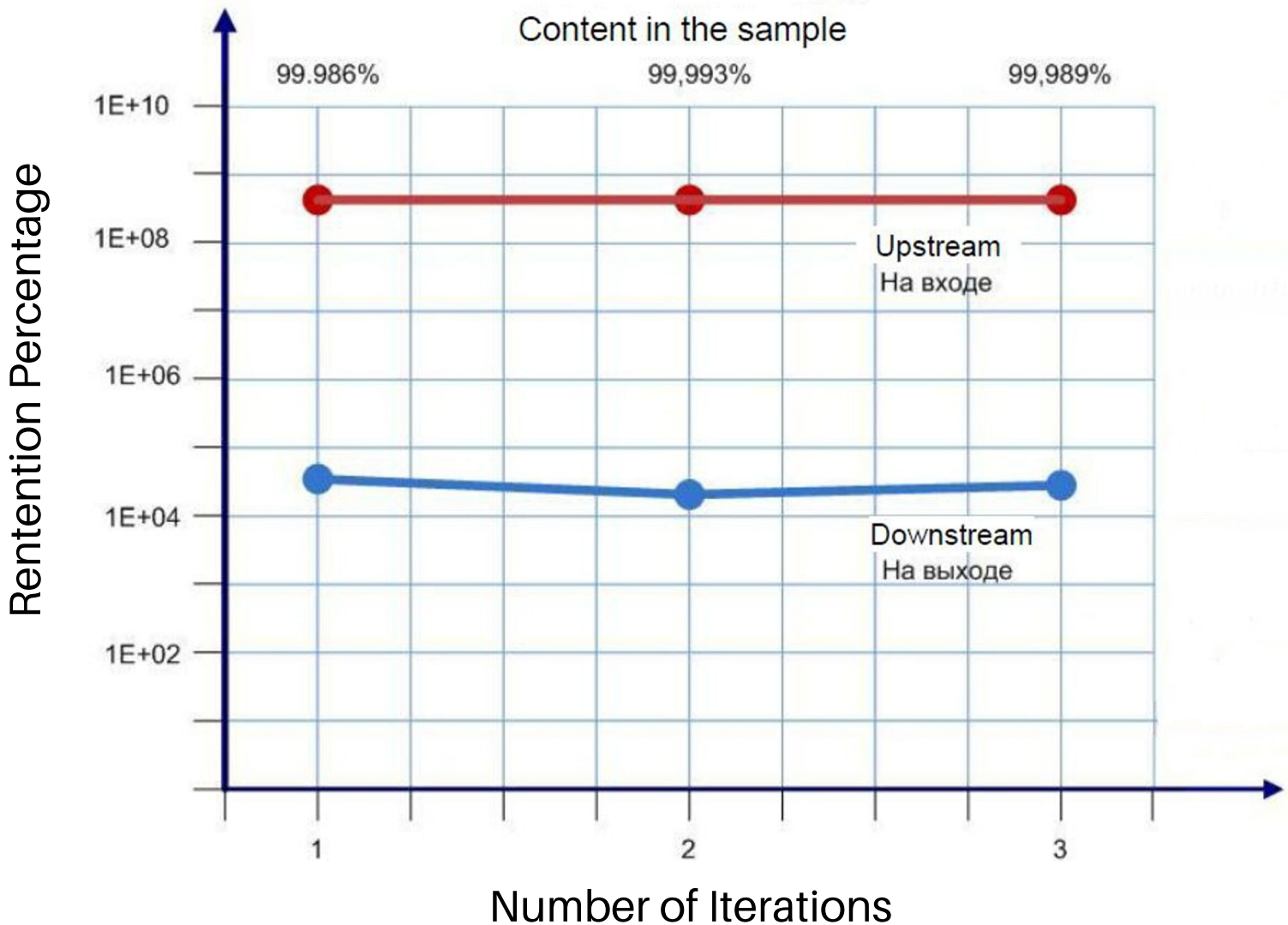


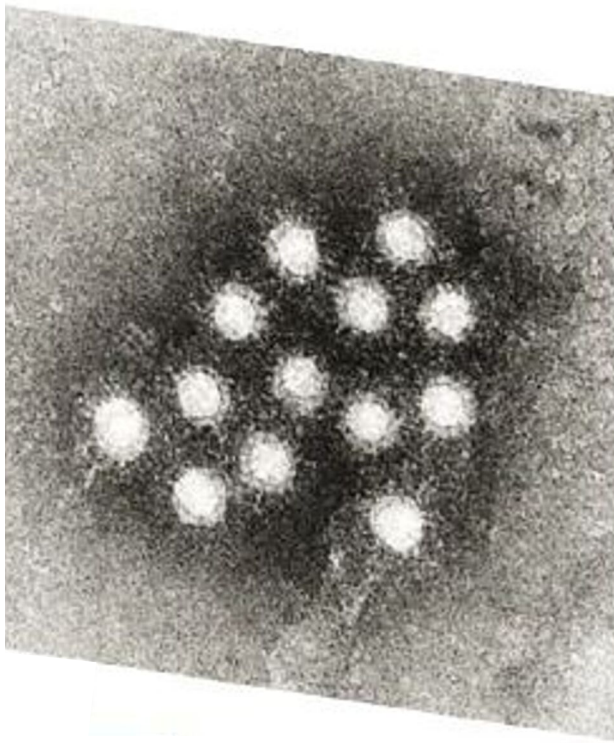
Removal of Rotavirus



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

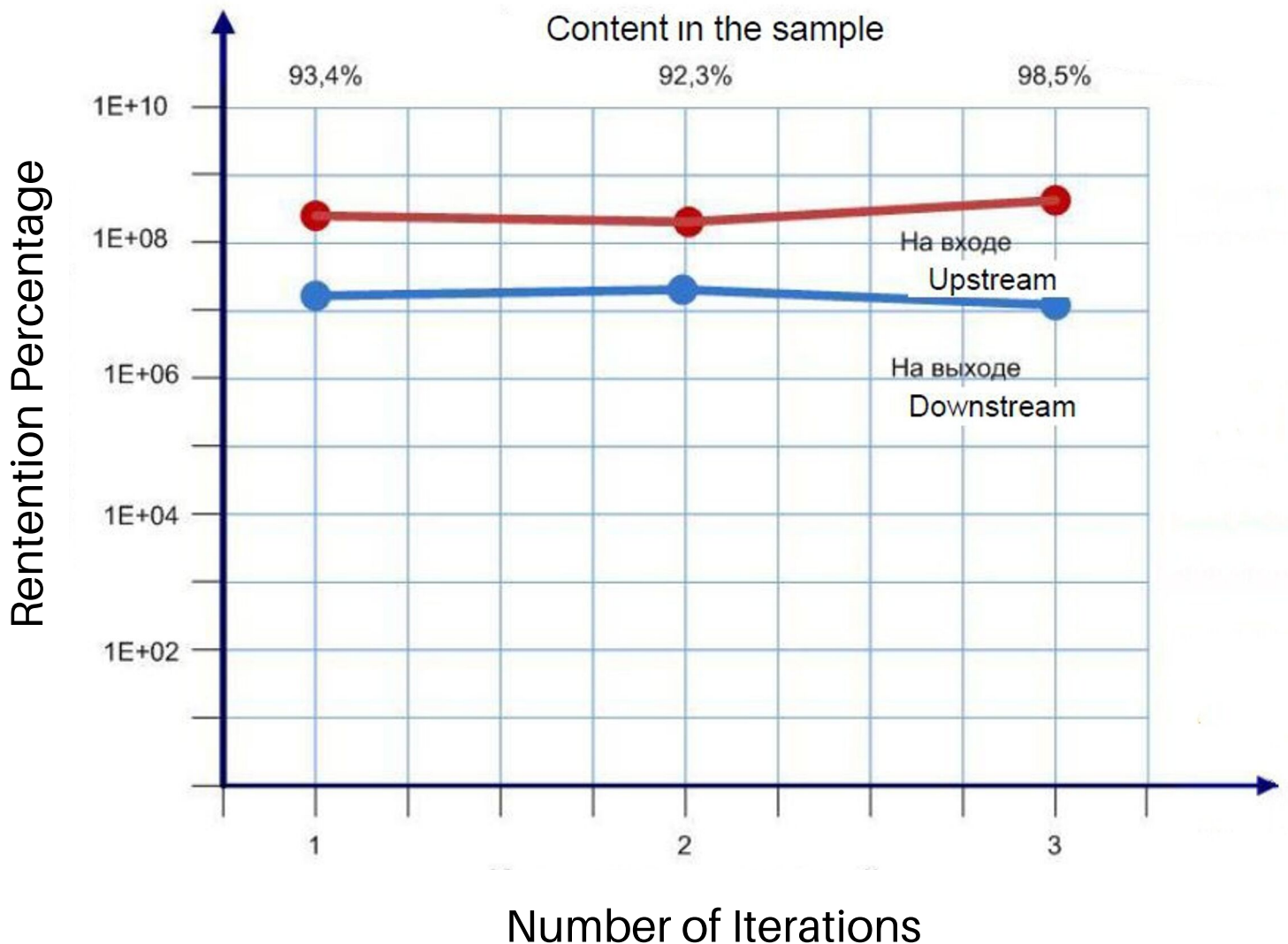
Virus size: 76.5 μm in diameter. Production and titration were on the primates MA104 cells.



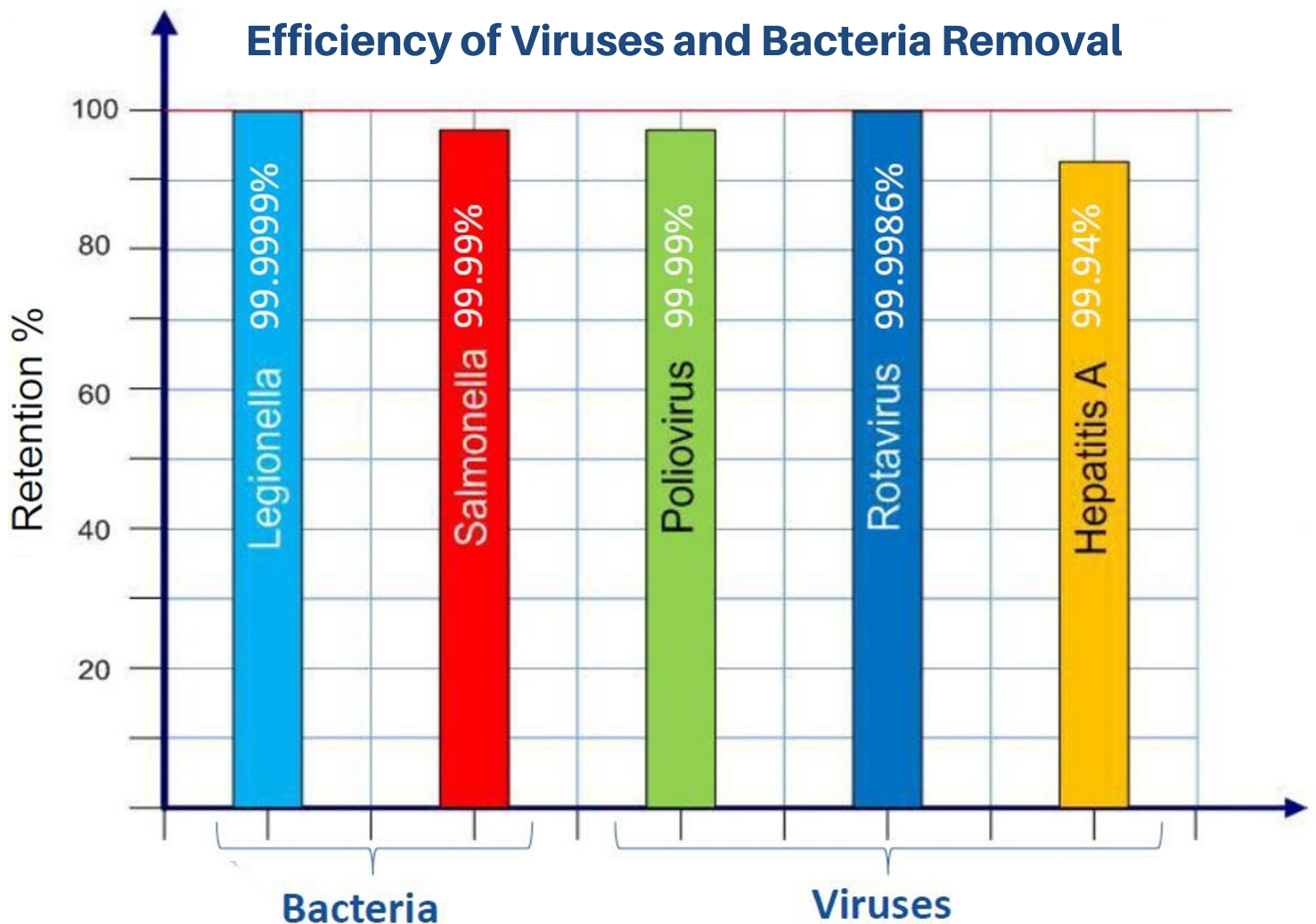


Removal of Hepatitis A

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