

LH210N

More than a lead adsorbent

■ Combined lead adsorbent and silver ion capture technology – LH210N

Silver-based antimicrobial agents such as silver activated carbon and silver zeolite mixed into the activated carbon layer are common methods of combating microbial contamination in water purifiers. Unfortunately, depending on the frequency of use and source water quality, elution of excess silver ions has been observed and remains a recurrent problem in our industry.

Our silver ion elution control agent is a zeolite-based technology that enables the adsorption of these excess silver ions that are eluted from the silver antimicrobial impregnated activated carbon layer of antimicrobial technology used in water purifiers. Our technology, along with its inherent lead adsorbing function, captures these excess silver ions, effectively pinning the volume down to below 100 ppb, keeping to the WHO water quality standard.

In this special report, we introduce our results from tests conducted to evaluate the sustainability of the silver ion elution control technology under conditions imitating actual water flow volumes found in water purifiers.

■ Features

- **Mineral Selectivity**

Our technology selectively removes silver ions from water containing high concentrations of minerals such as Na, K, Ca and Mg.

- **Standardized Particle Size**

Uniform particle size suitable for carbon block filters (no fine particles below 10 μ m).

- **Certified Technology**

LH210N is certified as a filter agent under the NSF/ANSI-42 drinking water treatment unit.

- **Lead Ion Removal**

Our control technology removes not only silver ions, but also unwanted lead ions contained in water. (*LH210N is used in carbon block filter applications as a lead adsorbent.)

- **Sustainability**

Continued adsorption of excess silver ions with no performance deterioration, even after extended and repeated use.

- **Adaptive Performance**

Our technology reliably adsorbs silver ions regardless of water quality, be it tap water or pure mineral water.

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■ Specifications

Product Name	Particle Size		Removal Capacity	
	D50 (μm)	<10μm (%)	Ag (mg/g)	Pb (mg/g)
LH210N-30Z	25~35	<5	≒ 300	≒ 500
LH210N-40Z	35~45	<5	≒ 300	≒ 500

■ Silver Elution Test

[Test Method]

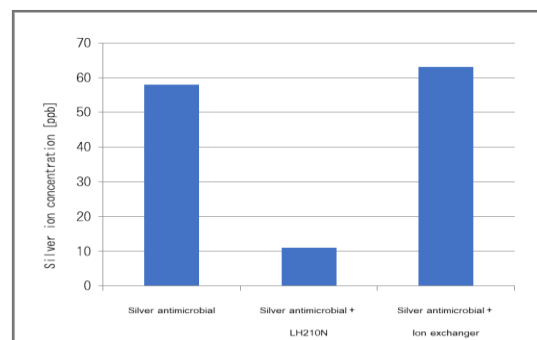
Silver-based Antimicrobial Agent:

'Silver-based antimicrobial agent' 3.0g

Control Agent: LH210N 10.0g

Test Water: Tap water (300 ml)

Contact Time: 24 hours



■ Sustainability Test

[Test Method]

Silver-based Antimicrobial Agent:

Silver activated carbon 10g (Company A)

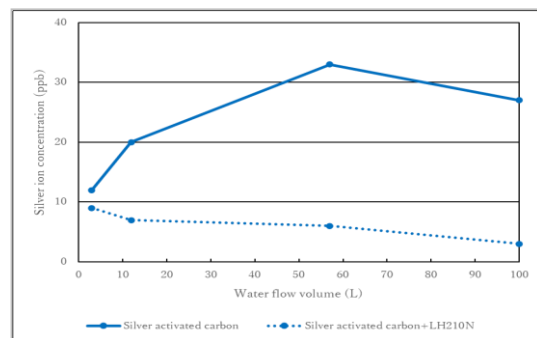
Control Agent: LH210N 1.0g

Test Water: Tap water (100 ml)

Contact Time: 24 hours

Test Conditions: Water replaced every 24 hours.

Silver concentration measured after 1st and 5th change.



■ Water Flow Test

[Test Method]

Silver-based Antimicrobial Agent:

Silver activated carbon 5g (Company B)

Control Agent: LH210N 0.5g

Test Water: Tap water (300 ml/min)

Test Conditions: Water passthrough established for specified time and stopped overnight. Silver concentration of initial water passthrough measured the following morning.

