

 <b>한국소비자원</b> Korea Consumer Agency	<h1>Press Release</h1> <p>"An agency for the citizens in interest of consumers"</p>	 <a href="#">Facebook @kcanews</a>  <a href="#">Instagram @kca.go.kr</a>	
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## Home Water Purifiers require Regular Hygiene Control

- Low awareness on hygiene control of intake (cork), Etc. -

Due to the recent discovery of caterpillars in tap water in Incheon, reliability on tap water is dropping. Meanwhile, preference on water purifiers is on the rise, and consumers are becoming more interested in water quality of purifiers.

To this end, Korea Consumer Agency (KCA, President Lee Hee-sook) conducted a research on the current hygiene conditions of home water purifiers. It was found that many households lacked in controlling hygiene for their purifiers.

※ Research subject: Home water purifiers used at 40 households residing in apartments  
 Researched items: General bacteria, total coliforms, fungus, pH

### **Total coliforms detected from a water purifier at 1 household among 40 apartment residences**

Purified water was sampled inside the sterilized bottle to test water quality under the same drinking environment at home. According to results, a purified water from 1 household which uses direct-dispensing and self-maintained purifier was detected with total coliforms (Criteria: Undetected). In addition, an average 257CFU<sup>\*\*</sup>/ml of general bacteria<sup>\*</sup> was detected.

\* While there are no standards on general bacteria from water purifiers according to laws in force, the 「Rule on Water Quality Criteria and Inspection of Drinking Water」 stipulates that drinking tap water contain 100CFU/ml of general bacteria. Also, only criteria on total coliforms and turbidity is applied to water purifiers installed at multi-use facilities and stipulated in the 「Drinking Water Management Act」.

\*\* Colony Forming Unit (CFU) : Number of cell colonies formed, which can propagate by its own

While fungus (mold) was detected at 0-4CFU/ml level, it was considered safe when compared to that of wheat, maize starch, honey and others (less than 100CFU/g) in accordance with the 「Korean Pharmacopoeia」. In addition, pH (6.7-7.8) was within the acceptance criteria\*(5.8-8.5) for potable tap water.

\* Appendix 1 of the 「Rule on Water Quality Criteria and Inspection of Drinking Water」

### **Total coliforms undetected and general bacteria fell below 50% after sterilizing intake (cork) of water purifier**

When the purified water was sampled after sterilizing the intake (cork) of the water purifier with 83% ethanol, total coliforms found before sterilization were undetected.

In particular, the household where total coliforms was detected never maintained the intake (cork) for four years, and was dirty with black foreign matter found from the cork. However, it was found that hygiene control is possible by sterilizing the intake (cork), as total coliforms was not detected after sterilization.

Furthermore, general bacteria fell by 50.8% to average 126CFU/ml after sterilizing the intake. While general bacteria rarely causes disease directly inside the body, there are possibilities that some may exist as opportunistic pathogen\* and could lead to opportunistic infection. Therefore, filter, tank, direct dispensing pipe, intake (cork) and others require hygienic control.

\* An organism which shows no pathogenicity under normal conditions, but reveal pathogenicity in certain environmental conditions such as immune response disorders, Etc.

Fungus was detected at a safe level (0-3CFU/ml) after sterilizing the intake, and pH was also within the acceptance criteria (6.7-7.9).

### **Necessity for maintaining intake (cork) not recognized in most households**

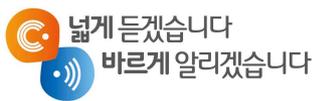
Among a total of 40 researched households, only 3 (or 7.5%) recognized the need for maintaining the intake (cork) and took care. Still, most households did not manage hygiene individually, and designated to rental companies which provide cleaning services.

However, given that consumers are mainly responsible for managing hygiene of their home water purifiers, regular hygiene maintenance on the intake (cork) and its surrounding parts are required, regardless of cleaning service provided by the rental company.

Based on the recent findings, KCA recommended 13 water purifier sellers/ rental companies\* to ▲ include sterilization of intake (cork) in their rental care service for regular maintenance, and ▲ provide instructions to consumers on raising the awareness on the importance of sanitary control on intake (cork). These companies accepted the recommendation, and are planning to take active measures for improvement.

\* Total 13 manufacturers including LG Electronics, SK Magic, Kyowon, Bodyfriend, Wonbong, Winix, Chungho, Coway, Cuckoo Homsys, Amway Korea, Hyundai Rental Care, Picogram

Furthermore, KCA urged consumers to take special care in hygienic control of water purifiers by referring to the attached 「Guide to Selecting Home Water Purifiers and Hygienic Maintenance」 .



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