

Method for Producing Nanobubble Water (Permanganate Ion Water)

- Applicable to bactericides and deodorants.
- Long-term stable storage possible !
- It can be also used for research !

Overview

- By combining nanobubbles and manganese ion, we succeeded in producing [a sterilization and deodorant based on strong oxidizing power](#).
- Ozone water has a sterilization and deodorization effect, but the effect disappears within a few hours. The inventor succeeded in producing [a new type of ozone nanobubble](#) by combining ozone-containing microbubbles with manganese. This water has [the same effect as ordinary ozone water](#), but [it has very low cytotoxicity](#). Therefore, it can be used directly for living organisms.
- In addition, by [adjusting the pH and changing the raw materials](#) of the above nanobubbles in the manufacturing process, we succeeded in [greatly reducing the generation of precipitates](#).
- It has also been confirmed that the nanobubble water containing permanganate ions produced by the invention has long-term stability, bactericidal effect, and no oral or cellular toxicity, high throughput manufacturing process. It is expected to be widely applied to deodorants and disinfectants.

IP Data

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Features · Outstandings

Characteristics of The Present Invention

Amount of precipitate during manufacturing	Very small (Compared with the conventional method.)
Precipitate generation time during manufacturing	Short-term (Compared with the conventional method.)
Remaining term of permanganate ion	Half-life: 3 months or more (Condition : stored at 40°C.)
Amount of OH radical	90% or more (After 3 mos. Condition : stored in a cool dark place.)
Bactericidal effect	Observed (On <i>Salmonella enteritidis</i> .)
Oral toxicity	No (Oral toxicity examined in chicks.)
Cytotoxicity	No (Cytotoxicity in chicken embryo fibroblasts.)

=>If you are interested in, please feel free to contact us.

Product Application

- Deodorant, Bactericide, Sterilization

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