

Keeps a high concentration of carbon dioxide dissolved in bathwater for longer.

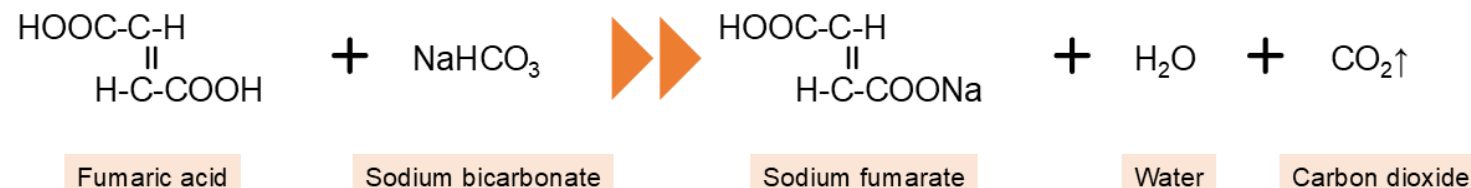
High-concentration Carbon Dioxide Bath Additive



A technology that uses a tablet to efficiently generate carbon dioxide in bathwater and maintain it at a high concentration. The amount and rate of carbon dioxide generation and the bubble size are precisely controlled through a combination of tablet shape/structure and formulation design. In addition, by adjusting the bathwater pH, it keeps the dissolved carbon dioxide concentration high, enhancing the warming effects of bathing and helping promote fatigue recovery.

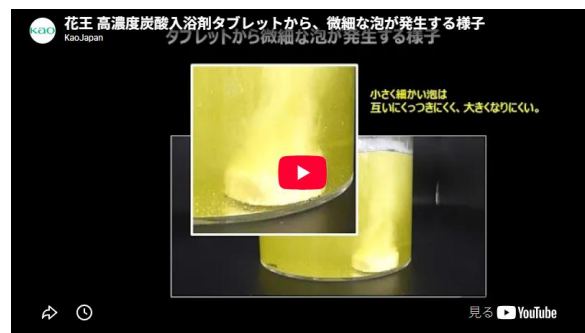
<Unique Points>

The source of carbon dioxide is sodium bicarbonate and soda ash in the tablet. The carbon dioxide generation rate is intentionally slowed to allow sufficient time for the carbon dioxide to dissolve into the bathwater. To achieve this, fumaric acid, which reacts more gently with sodium bicarbonate, is used as an ingredient.



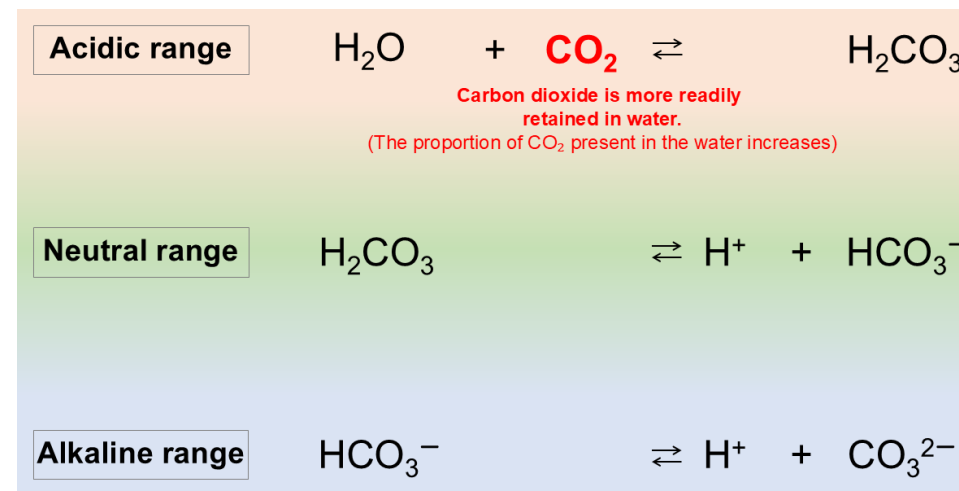
Bubble size is also important. Fine bubbles are less likely to coalesce into larger ones and less likely to rise to the surface, so they remain in the water longer and help dissolve carbon dioxide into the bathwater. To keep bubbles small, the formulation is designed using additives that control the reaction rate, and this design is realized in a tablet form.

Fine Bubbles Generated from a High-Concentration Carbon Dioxide Bath Additive



https://www.youtube.com/watch?v=Ma0zqqG_uCg

By controlling the bathwater pH to a lower level to stabilize the dissolved carbon dioxide state, it maintains a high concentration of carbon dioxide dissolved in the bathwater.



High-concentration Carbon Dioxide Bath Additive

<Key Benefits>

- Enables anyone to easily recreate a bathing environment that enhances the warming effects and supports fatigue recovery.
- Provides an easy, sustainable option for everyday self-care and “warming” routines.
- By controlling the carbon dioxide generation rate through formulation technology, it enables more personalized warming bath care and bath-time experiences.

<Concerned Research Areas>

- Product Development Research: Human Health Care <https://www.kao.com/global/en/innovation/research-development/product-development/chemicals/>
- Fundamental Research:
 - Production Technology <https://www.kao.com/global/en/innovation/research-development/fundamental/material-science/>
 - Biological Science <https://www.kao.com/global/en/innovation/research-development/fundamental/biological-science/>