Using Carminatives to Wipe Out Gas Bubbles Disease

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Gas bubble disease, a disease that causes pop eyes or even deaths in fish has aroused much concern these days. This disease which is caused by supersaturation of different kinds of dissolved gases in water can cause great harm. Furthermore, the exceeded amount of dissolved oxygen (DO) was known to fasten the rusting of iron water pipes. (Sarina, 2004) Supersaturation of gases is normally found in places with high water current, for instance, the downstream of Three Gorges Dam and Kentucky River. Microwave and ultrasonic are commonly used for degassing nowadays. However, these methods demand large amount of electricity, and thus generate greenhouse gases and worsen global warming. Using Chinese traditional carminatives such as ginger, orange skin, activated carbon, etc. would be more environmental-friendly, as they are carbon-neutral and some of these carminatives could be recycled. Results were as follows. 1. Ginger skin showed immediate carminative effect in the Bride Bridge Fall by forcing out 95.5% DO on Day2 without growth of bacteria. 2. Used porcelain (with activated carbon) had a slow (effective on Day3) but lasting carminative effect for two weeks by forcing out 80% of DO without growth of bacteria. 3. Using ginger in degassing CO2 in supersaturated water (sparkling water) 4. Ginger could force out 25.6% of DO in water fallen from a height of 2.5m in 5 minutes. From our results, ginger could quickly degas and would not cause bacterial growth in a short period of time. We deem ginger as an immediate and short-term method to degas supersaturated water. Porcelain coated with activated charcoal could be used as a long-term method in degassing supersaturated water and hence curb gas bubble disease.

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