Use of electrolyzed water ice for preserving freshness of pacific saury (Cololabis saira). J Food Prot. 2006 Sep;69(9):2199-204.

ABSTRACT
The effects of electrolyzed water ice (EW-ice), compared with traditional tap water ice (TW-ice), on the microbiological, chemical, and sensory quality of Pacific saury (Cololabis saira) stored for a period of up to 30 days at 4 degrees C were evaluated. EW-ice with active chlorine at a concentration of 34 mg/kg was prepared from weak acidic electrolyzed water, whose pH, oxidation-reduction potential, and chlorine content were 5, 866 mV, and 47 mg/liter, respectively. Microbiological analysis showed that EW-ice, compared with TW-ice, markedly inhibited the growth of both aerobic and psychrotrophic bacteria in saury flesh during refrigerated storage, primarily because of the action of active chlorine. Chemical analysis revealed that EW-ice retarded the formation of volatile basic nitrogen and thiobarbituric acid-reactive substances and reduced the accumulation of alkaline compounds in the fish flesh in comparison with TW-ice. Sensory analysis confirmed that the freshness of saury was better preserved in EW-ice than in TW-ice and showed that the saury stored in EW-ice had a shelf life that was about 4 to 5 days longer than the fish stored in TW-ice.