

Effect of minor components in artificial seawater on the taste of bivalves.

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#### Summary

It is known that the osmotic effector such as amino acids, betaines and trimethylamine oxide are changed by the changes of the concentration of seawater. So, the taste of bivalves acclimated to the different concentration of seawater was easily changed, as I have already reported last year. However, the effect of minor components in seawater on the taste of bivalves was not elucidated so far.

Seawater used were as follows. A: natural seawater (1048 mOM/kg). B(1051), C(1056) and D(986) were prepared by adding 0.1 M KCl, 0.1 M CaCl<sub>2</sub> and 0.05 M Na<sub>2</sub>SO<sub>4</sub> to 800 mOM artificial seawater. F(1026), G(1046) and H(998) were prepared by adding 0.05 M KCl, 0.05 M CaCl<sub>2</sub> and 0.025 M Na<sub>2</sub>SO<sub>4</sub> to E(900 mOM) artificial seawater.

Short-necked clam purchased from Tsukiji Central Wholesale Market were reared for 5 hours and 1 day in these 8 kinds of seawaters. Soups and trichloroacetic acid extracts were prepared from these shells.

The taste of soup: A was evaluated good. B and C were better than A and F, and A and G, respectively. D and H were both not good.

The most prominent amino acid was taurine and occupied 39 to 56 % of the total free amino acids. Glutamine was detected fairly large amount in all samples reared for 5 hours was decreased remarkably after 1 day. The sum of sweet amino acids (Thr, Ser, Gly, Ala) was also rich in each sample. Glu was detected about 100 mg/100 of each samples. Among the nucleotides, ATP, ADP, AMP and IMP were the principal components.