The effect of different salinity on the life cycle of *Aurelia aurita*

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In this research the behavior of a Scyphozoa, *Aurelia aurita*, were carried out in salinity of 10‰, 20‰, 30‰, 40‰ in the laboratory. The behavior of *A. aurita* and their metabolic activity in various salinity were observed. With the change in time, the amount of NH_4-N, PO_4-P, dissolved oxygen, and pH were found out. Also the effect of colony formation of polyp in different salinity were observed. For the above experiment artificially made sea water (known in this test as "Sea Life") was used.

In 40‰ salinity and 20‰ the out put of NH_4-N and PO_4-P of medusa was less compared to 30‰ similar to natural environment. In 40‰ salinity the consumption of dissolved oxygen of medusa increased where as in other experiments it decreased. Also pH level reduced in 20‰ and increased in 40‰. By looking at the movement of medusa pulsation, in both 20‰ and 40‰ the activity get reduced compared to the normal 30‰ situation. With this result, it may be that the NH_4-N and PO_4-P cycle gets reduced with change in salinity.

In case of 10‰ there was no increase of polyp, however in case of 20‰, there was an increase of polyp. In 30‰ there was an increase of colony area of polyps. With 40‰ there was neither change in polyp number nor the increase in area. There was change in the mode of asexual reproduction of polyps. When the colony kept in 40‰ were removed and kept in natural sea water, the polyps formation increased by two times. The change in salinity is one of factors that may be affecting the polyp formation and also the life cycle of *A. aurita*.