

# EVALUATION OF SOME SHELLS FOR USE AS NUCLEI FOR ROUND PEARL CULTURE

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## Abstract

Thermal expansion, thermal conductivity and hardness of shells of species of giant clam (*Tridacna squamosa*), pearl oyster (*Pinctada maxima*) and freshwater mussel (Family: Unionidae) were measured to assess differences in physical properties relevant to the performance of nuclei or beads made from these shells for the production of round or spherical pearls. All shells measured were strongly anisotropic. The giant clam shell is sufficiently close to the already successful (but expensive) freshwater mussel shell to warrant testing as an alternative source of pearl nuclei.

*Keywords:* giant clam (*Tridacna squamosa*), pearl oyster (*Pinctada maxima*), freshwater mussel (Unionidae), thermal expansion, thermal conductivity, shell hardness