

Figure 1: The viability of in vitro *Perkinsus marinus* cultures following combinations of osmotic and thermal shocks induced by varying the culture medium (Medium = DME/Ham's Medium, FSW = filtered sea water, dH₂O = deionized H₂O) or the temperature and treatment duration. Holding the cultures at 40, 50, and 60 °C for an hour consistently killed all *Perkinsus marinus* cells [13].

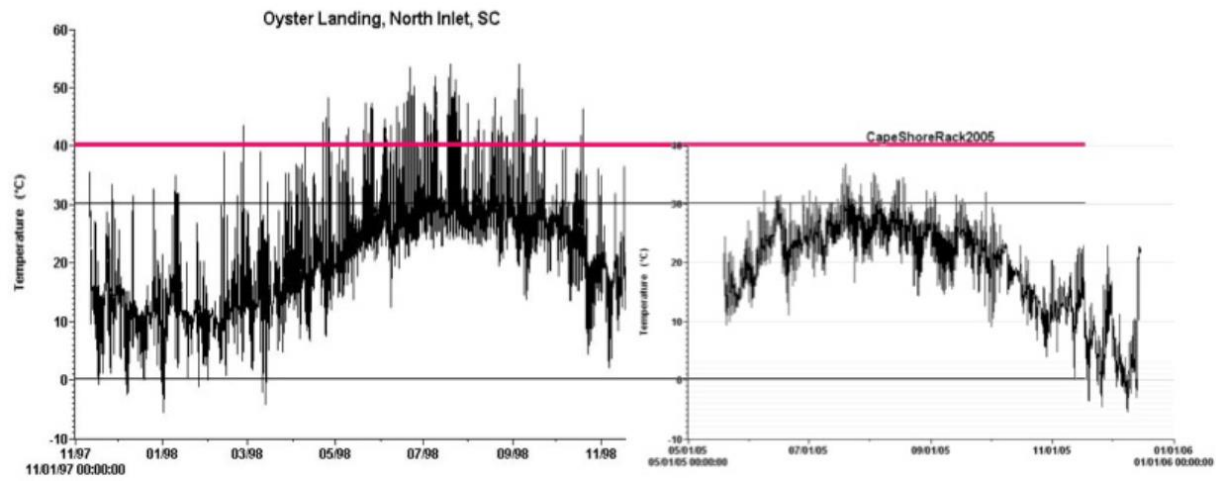


Figure 2: (left panel) intertidal temperatures on a South Carolina oyster reef showing temperatures to routinely exceed 40°C, but not at an aquaculture site in New Jersey (right panel).

Covering Impact on Oyster Temperature

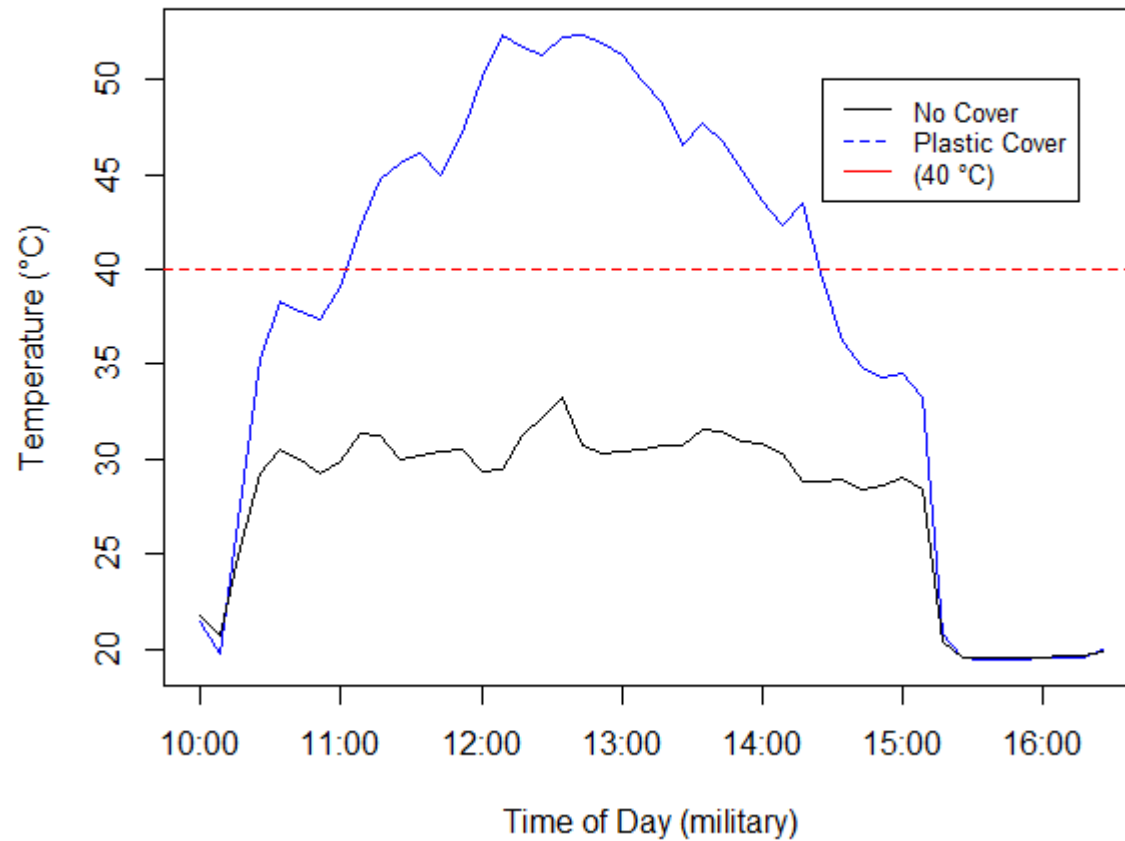


Figure 3: Thermal spike achieved by covering oyster bags in plastic on a moderately warm (high of 81 °F day) and sunny day, with the thermal threshold for *Perkinsus marinus* elimination after one hour of in vitro exposure indicated in red.

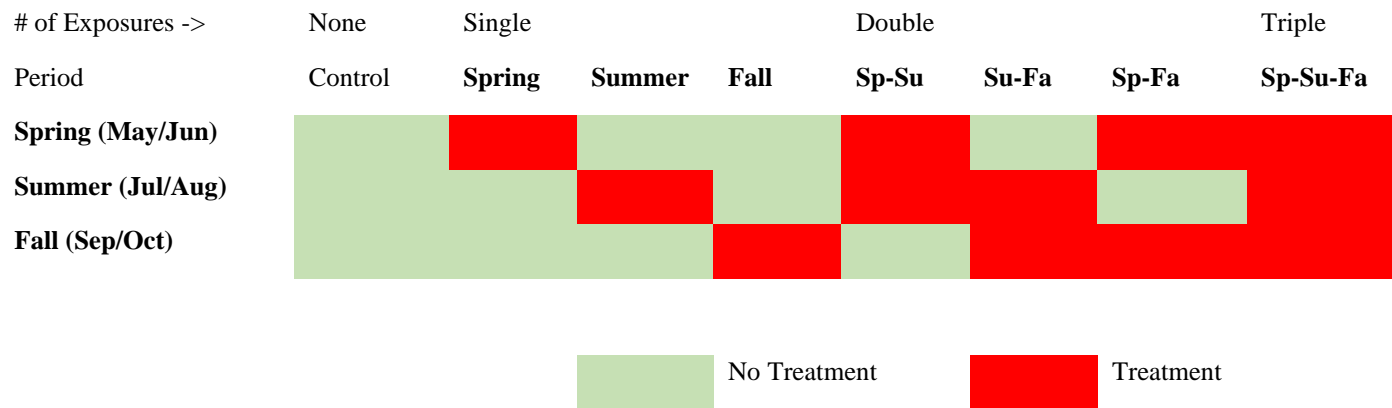


Figure 4: Gantt chart representation of 8 different treatments that test both frequency and seasonality of thermal shock treatments to control Dermo disease and monitor subsequent impacts on the bacterial microbiome and biofouling. “Sp” = spring, “Su” = summer, “Fa” = fall.

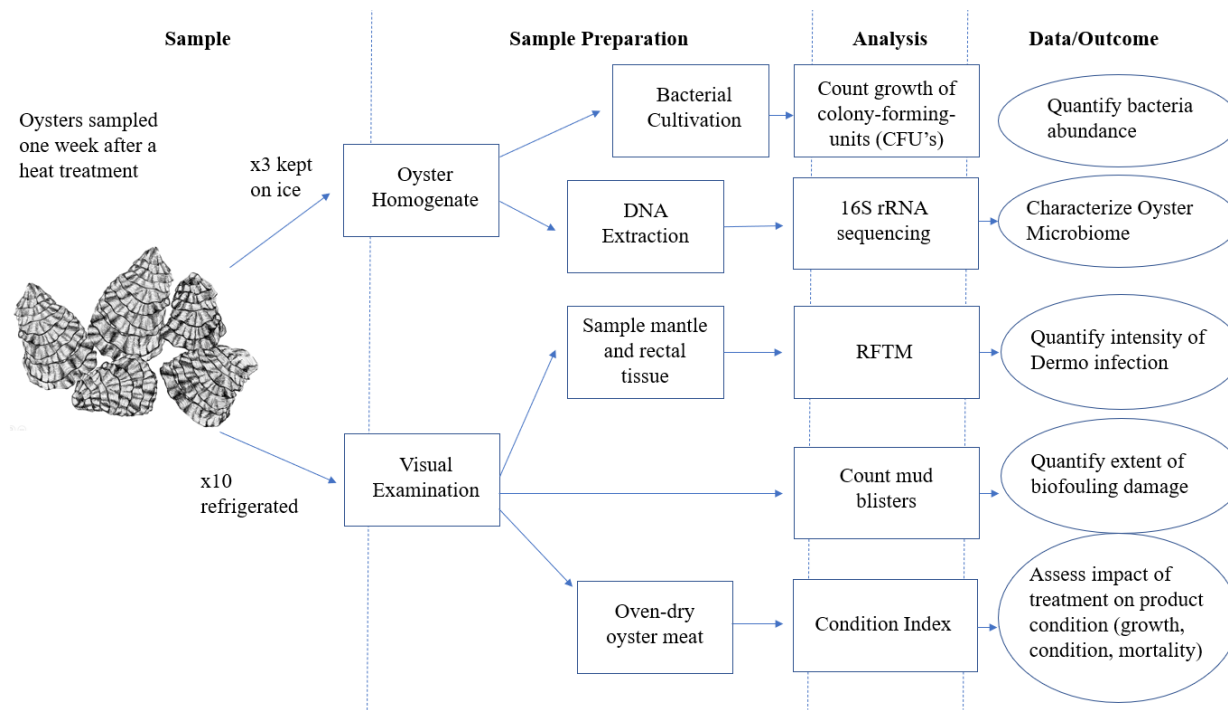


Figure 5: Flow chart of sample analysis of oysters collected from the experiment described in figure 4 to determine bacteria quantity and composition, as well as Dermo infection intensity of oyster subjected to thermal shock.