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Determining the Viability of Preserved Cell Suspensions Frozen Over Time with Varied Glycerol Concentrations

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Poster Presentation P25

**DETERMINING THE VIABILITY OF PRESERVED CELL
SUSPENSIONS FROZEN OVER TIME WITH VARIED
GLYCEROL CONCENTRATIONS**

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Cell Viability measures how long cells will stay alive after being cultured, that is, how long they are viable in a given experimental condition. In this project, cells were subjected to a -70° C freezer and different concentrations of glycerol as a cryoprotectant. Two organisms were tested in this experiment: *Schizochytrium* spp. and *E. coli*. Vial lots of each organism were made and placed in a -70°C freezer. After allotted times, vials with concentrations of 10% glycerol, 15% glycerol, and 20% glycerol added to the broth were tested by aerobic plate counts to see the viability of the cells. The *Schizochytrium* spp. vials were tested by a Cellometer® cell counter as well. The preliminary results seem to show that this experiment is a good and useful model for studying viability in these strains. Ultimately, this experiment will be run for two years in order to determine viability over time.