Experiments were conducted to study the protective effect of magnesium ions on ethanol toxicity to the yeast *Saccharomyces cerevisiae*. The viability levels of yeast in varying levels of Mg^{2+} and ethanol were estimeated using a Haemocytometer. The control experiments conducted in glucose medium without ethanol, showed that the yeast cells maintained higher level of viability with of increasing levels of magnesium. When the ethanol concentration in the medium increased up to 4 % v/v, yeast were able to maintain their viability. Further increase of ethanol to 8% v/v showed drastic reduction of cell viability (5 mil/ mL) in control experiments but the Mg^{2+} treated cells showed higher viability.

In the presence of 8% v/v ethanol, 150 and 70 ppm MG2+ levels demonstrated the highest growth stimulatory effects (20 mil/ mL and 61.4 mil/ mL respectively). In the presence of 10% v/v ethanol, 270 ppm Mg^{2+} showed growth stimulatory effects during the initial stages but 20 ppm was more effective later. Although a further increase of ethanol to 12% v/v resulted complete loss of cell viability in Mg^{2+} unsupplemented media, the Mg^{2} supplemented cells were able to maintain viability at lower levels.

The growth inducing Mg^{2+} concentrations in the 12% v/v ethanol were 70 ppm at the initial stage and 20 ppm during the latter stage. When cells were exposed to 16% v/v

ethanol, all Mg^{2+} levels failed tp protect cells from ethanol, except 20 ppm Mg^{2+} . Increasing ethanol concentrations to 17% v/v resulted in complete viability loss in all treatments. None of the Mg^{2+} levels could prevent cell death at this ethanol level.