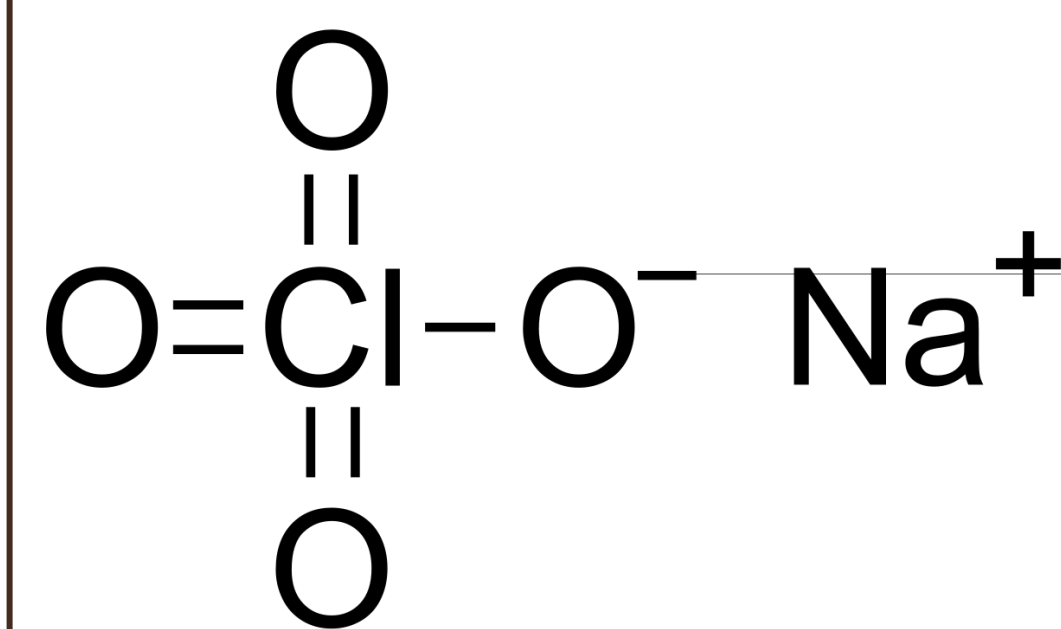


Effects of Perchlorate on Lipid Accumulation in Daphnia Magna

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INTRODUCTION

- Why Perchlorate?
 - Unregulated pollutant
 - Perchlorate has been found to act as an obesogen in fish (Gardell et al., 2017)
 - Obesogens disrupts an organism's lipid metabolism and lead to obesity
- Why *Daphnia magna*?
 - Visible Internal Structures
 - Short period of reproduction (3-4 days)



OBJECTIVE

- To test whether perchlorate has obesogenic effects in juvenile *Daphnia magna*.

METHODS AND MATERIALS

- *Perchlorate treatments:* The 1g/L perchlorate was diluted into 100mg/L and 10mg/L solutions in ADaM by serial dilution.
- Nile Red staining
- Fluorescence Microscopy
- Microplate Assay

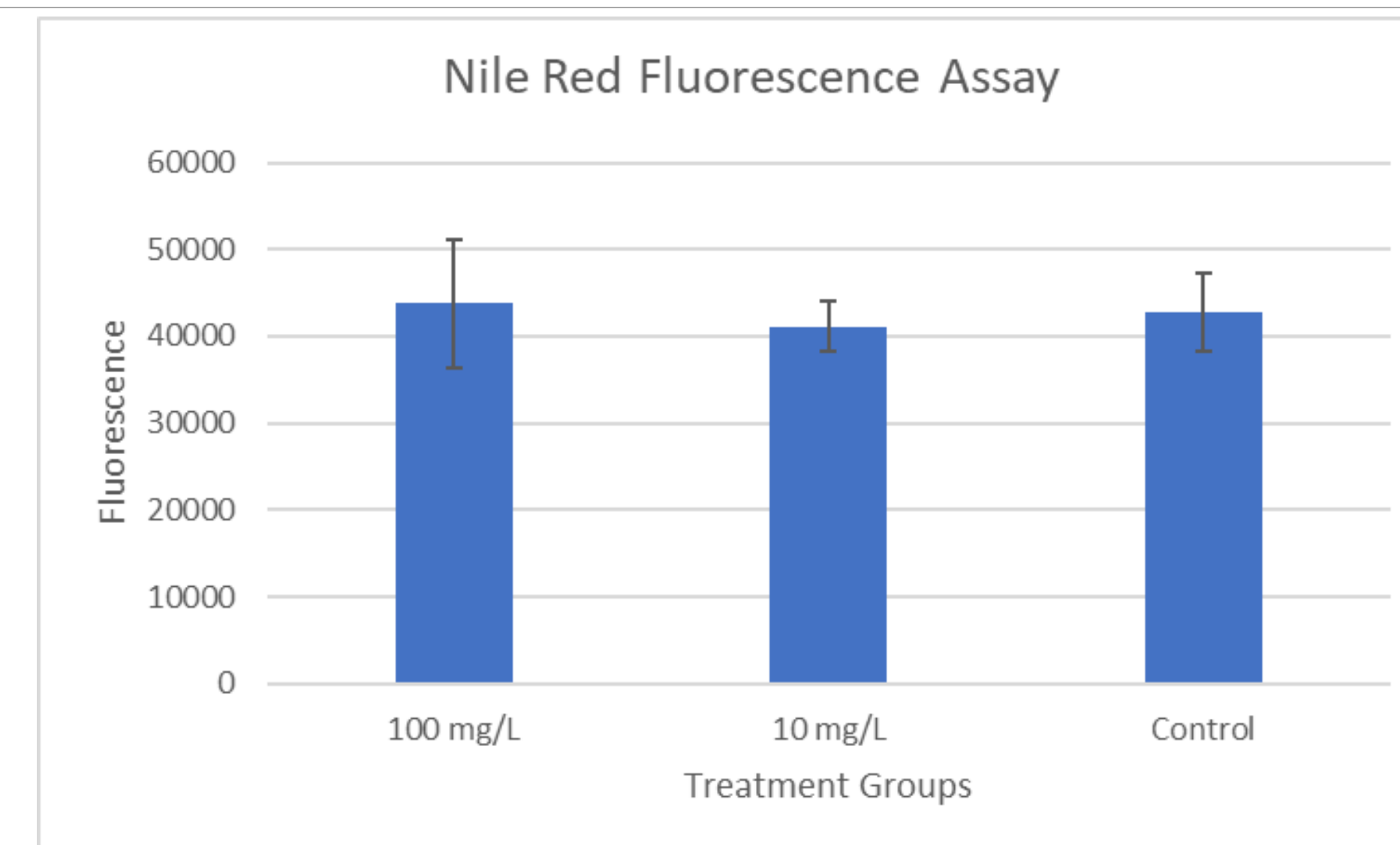
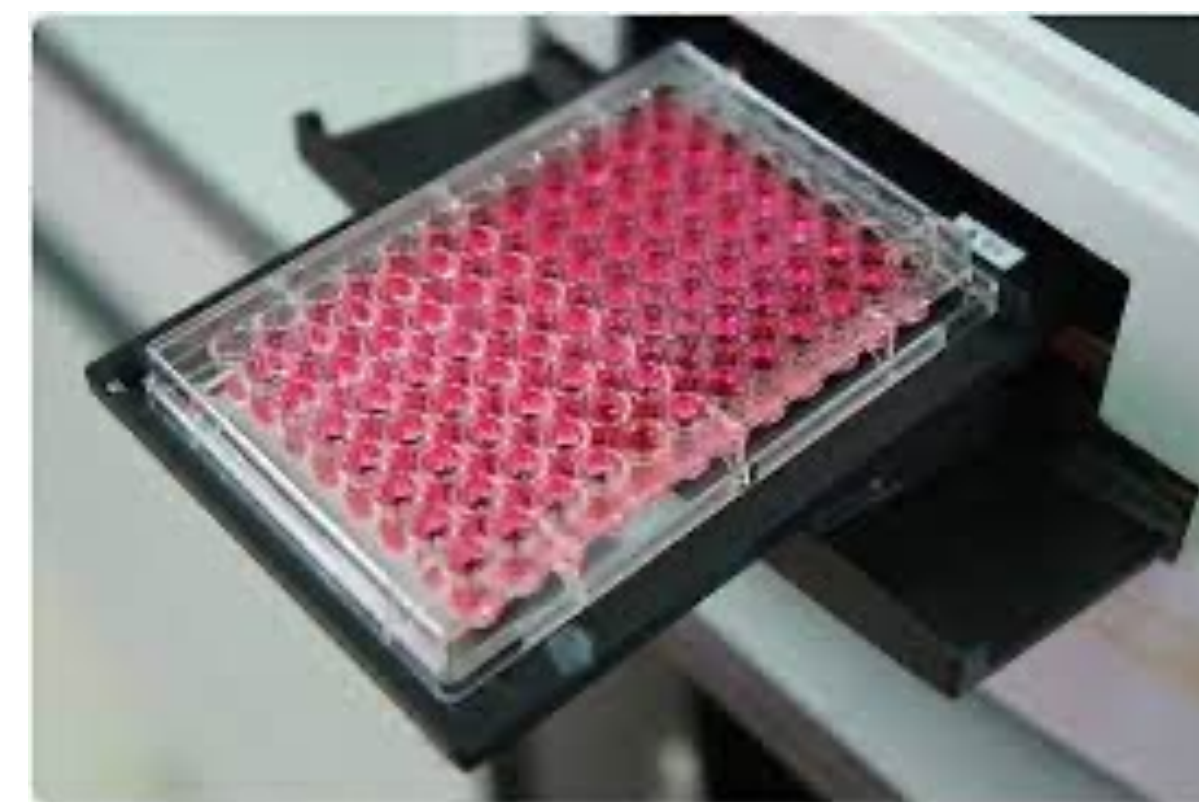
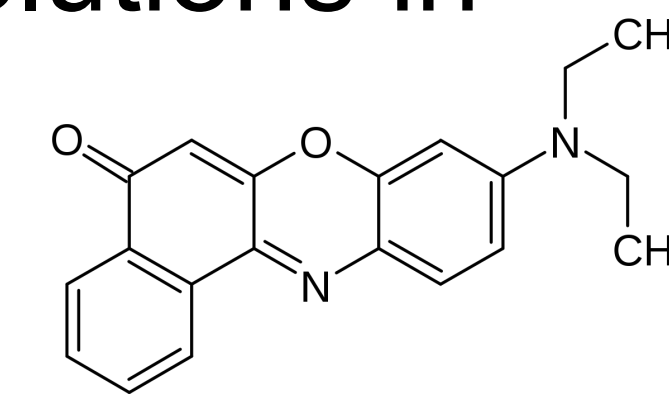


Figure 2. Microplate reader analysis of amount of fluorescence in each treatment group.

RESULTS

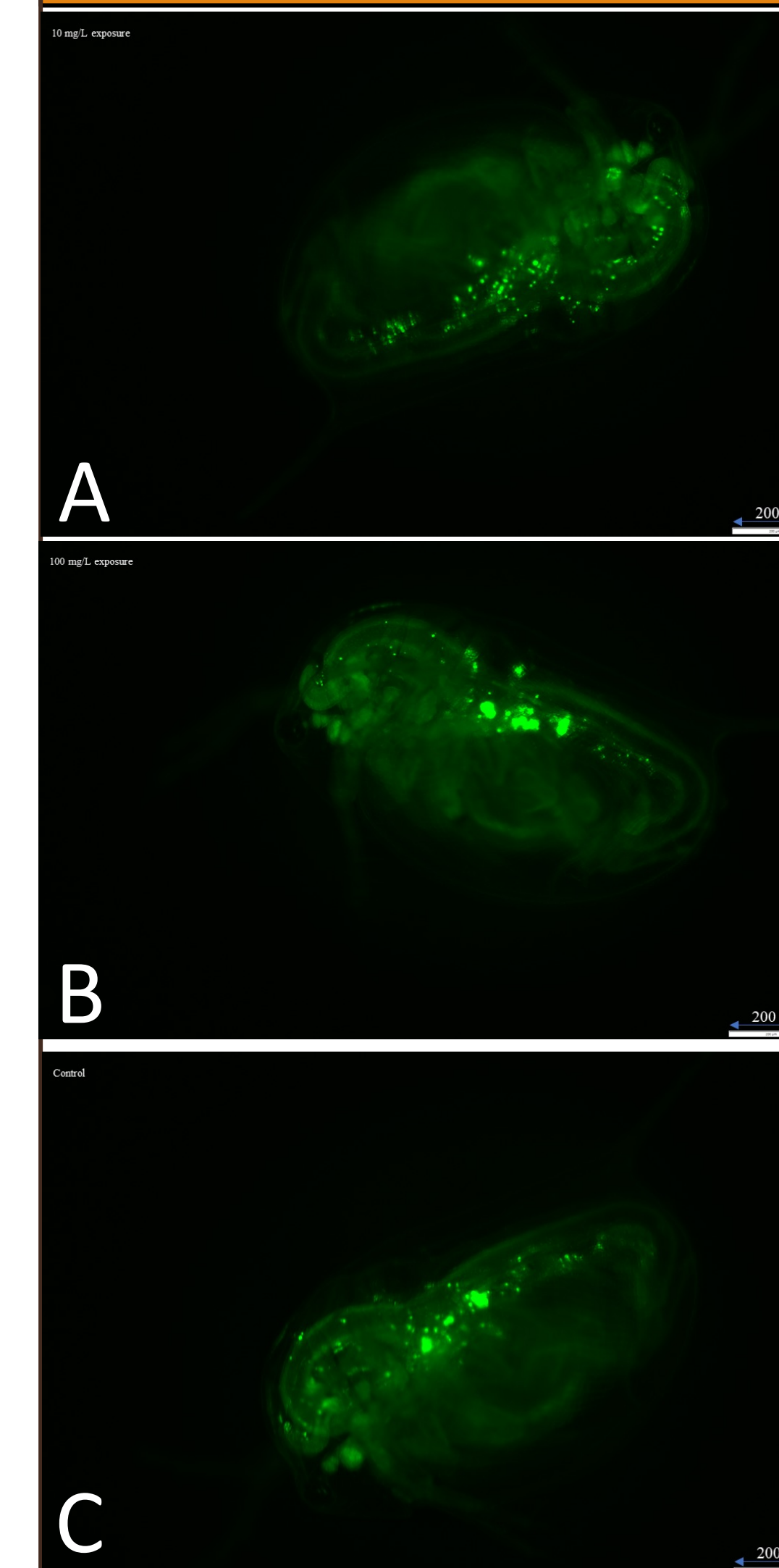


Figure 1. Fluorescent images of daphnia exposed to perchlorate at A) 10mg/L, B) 100 mg/L, and C) a control group.

DISCUSSION

- Exposure to perchlorate does not significantly impact lipid accumulation
- Future Work
 - Exploring the effects on perchlorate on adult daphnia



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