INVESTIGATING AN ANALYTICAL METHOD FOR QUANTIFYING TETRAHYDROZOLINE FOUND IN EYE DROPS USING CAPILLARY ELECTROPHORESIS. **Malika Sharma**, Thompson Rivers University. Kingsley Donkor, Thompson Rivers University, Department of Chemistry, 805 TRU Way, Kamloops, BC V2C 0C8, Canada. (malikasharma741@gmail.com)

The objective of this study is to develop and optimize an analytical method using capillary electrophoresis (CE) to isolate and determine tetrahydrozoline in commercially available eye drops. Eye drops are saline solutions with medications in them to treat various eye diseases. They are used as artificial tears to treat dry eyes or simple irritation such as itching or redness. One of the main components of eye drops is tetrahydrozoline, a decongestant used to relieve redness in the eyes caused by minor eye irritations (ex: smog, swimming, dust, smoke). Unfortunately, recently the oral consumption of eye drops has risen causing poisoning due to the tetrahydrozoline in the eye drops. Factors such as concentration, pH, and type of background electrolyte will be investigated to determine the optimum conditions for the CE analysis. Furthermore, the CE method will be validated to evaluate its precision, accuracy, and limits of detection and quantification. The findings of this study will provide insight into the successful detection of tetrahydrozoline from commercially available eye drops to identify which brands of eye drops are potentially unsafe. It will also provide the eye drop industry with a better means to ensure that their products contain the correct amount of tetrahydrozoline.