An article by Ocansey et al (2019) reported that contact lenses are gaining popularity in developed and developing countries as an alternative to spectacles for the correction of refractive errors (Ocansey, Ovensori, Abu, Morny, & Adjei-Boye, 2019). However, a significant number of contact lens wearers discontinue their contact lenses temporarily or permanently each year, due to ocular discomforts. A study by Heiting (2019) in the Tear Film and Ocular Surface Society stated that, the causes of contact lens discomfort are either related to the lens or the contact lens solutions.

Contact lens care solutions are composed of several important components, including viscosity increasing agents, preservatives, pH, tonicity, and surface tension. The combination and concentration of these agents will have a significant impact on the physical properties of the solution and this could potentially influence patient comfort. The physical properties of a solution that will be considered in this study are; surface tension, pH, viscosity, and osmolarity.

Contact lens care solutions differ in certain physical properties and by design, most care solutions fall within acceptable limits of ocular physiological tolerance. When properties of these solutions do not fall within the acceptable limits, clinically, this could result in burning, stinging, and epithelial cell damage. Minor shift in the values may have the potential to influence patient comfort naturally and/or at the end of the day.

To date, very little has been published directly investigating the physical properties of lens care solutions and this warrants further investigation. The purpose of the present study is to investigate the physical properties of commercially available contact lens care solutions in Ghana.