

Abstract

This is an experiment to measure the index of refraction of several different solutions of water and sugar. The goal is to figure out the relationship between the concentration of sugar in a solution and its angle of refraction. Using predetermined ratios of water to sugar, the angle of refraction and the index of refraction of the solutions were measured. Then, the data was plotted on a line graph. From the information presented in the graph, it is possible to determine the approximate concentration of sugar in other liquids by measuring their refraction indexes. Implemented as a small portable device, this method can help people avoid over consuming sugar. Potentially, this can be a new way for diabetes patients to measure blood sugar level