

Sunscreen

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Experiment Overview

This experiment introduces students to how sunscreens and sunglasses work. It also introduces the use of a UV spectrometer and the Beer – Lambert Law.

Learning Experience

This is a new experiment which is designed to engage students in their chemical studies and to enable them to investigate a topic of general and scientific interest. It is submitted to test whether it reaches the goal of being engaging for a first year science student who does not necessarily view themselves as a likely chemistry major.

Aims and Objectives

The aim of the experiment is to investigate how sunscreens and sunglasses work and how a UV spectrometer gives information that can be useful beyond a classroom setting.

Level of Experiment

First year undergraduate.

Keyword Descriptions of the Experiment

Domain

sunscreen, spectroscopy

Specific Descriptors

sunscreen, Beer-Lambert, ultraviolet spectroscopy

Course Context and Prerequisite Knowledge and Skills

Designed to work as a standalone experiment.

Time Required to Complete

Prior to Lab: A 10 minute online pre-lab quiz is used to ensure student preparation

In Laboratory: 2 ? 2? hours

After Laboratory: none

Experiment History

Developed in 2011.