

# Ground-level Ozone Lab

## Introduction

In this lab, you will use an EPA Federal Equivalent Method to measure ground-level ozone concentration outside the Natural Science Building at WCU. You will use a Thermo Scientific Ozone Analyzer for this purpose, but must calibrate the analyzer first. This means we will map the arbitrary intensity values from the sensor to an exact ozone concentration (ppb) using an ozone standard.

You will use a Thermo Scientific Primary Ozone Standard to produce ozone and calibrate the analyzer. This assumes the primary standard produces an accurate concentration of ozone.

## Calibrating the Instruments

1. Using the setup provided, deliver varying concentration of ozone at 0, 50, 70, 120, and 225 ppb. (Use the Run and Enter keys on the front of the primary standard.)
2. Allow the instrument to stabilize for at least 4 minutes between each reading.
3. Record the intensity values on the attached data sheet.