

# CTSN-100 Colorimeter and Turbidity Sensor

## Overview

The CTSN-100 Colorimeter and Turbidity Sensor performs two functions in 1 unit. First the user can select between 3 different wavelengths to determine the concentration of the sample. Second, the user can switch to the infrared wavelength to determine the turbidity of the sample.

## Specifications:

<i>Specifications</i>	
Blue Peak Wavelength	460nm
Green Peak Wavelength	520nm
Red Peak Wavelength	640nm
Infrared Peak Wavelength	880nm

## Operating Instructions:

### Initial Setup:

1. Plug the IX-ELVIS board into the NI ELVIS platform.
2. Plug the power supply into the back of the NI ELVIS and turn on the switch next to the power supply input.
3. Locate the switch on the top right hand side of the IX-ELVIS board and switch on.
4. Connect the NI ELVIS platform to the computer via a USB cable.
5. Plug the CTSN-100 into one of the mini din channels on the IX-ELVIS board.
6. Open the recording software and ensure the correct channel is selected. Set the range to +/-5V.

### Colorimeter:

1. Follow the Initial Setup procedure above.
2. Prepare a clean, dry cuvette with the solution to be analyzed. Place in the CTSN-100 and close the cover.
3. Press record. Use the red, green, and blue settings to analyze the concentration of the sample.
4. When the experiment is complete empty the cuvette, rinse and leave to dry.



## Turbidity

1. Follow the Initial Setup up procedure above.
2. Prepare a clean cuvette with the 100NTU standard. Label the cuvette. Press record.
3. Prepare a different cuvette with the 400NTU standard. Label the cuvette. Press record.
4. Do a two point calibration.
5. Prepare a clean, dry cuvette with the solution to be tested.
6. Record and determine the turbidity of the sample.
7. After the experiment is complete put the standard samples back into the vials. Ensure the standards are going into the correct vials.
8. Rinse out all cuvettes and leave to dry.

\*Note: The signal may be inverted when using the myDAQ setup.

## Accessories

- 10 Cuvettes
- 10 Cuvette Caps
- 1 Vial of 100 NTU
- 1 Vial of 400 NTU

## Intended Usage

Iworx Systems Inc., instruments, components, and accessories are designed for educational- and research-oriented life science applications and investigations. Iworx Systems Inc., does not condone the use of its instruments for clinical medical applications. Instruments, components, and accessories provided by Iworx Systems Inc., are not intended for the diagnosis, cure, mitigation, treatment, or prevention of disease.

