

# The i-LAB<sup>®</sup> TA Academic Package

## Package Summary

The i-LAB TA Academic Package was developed to provide Chemistry Educators with an innovative Chemistry Teaching Tool that enhances the student's learning of Chemistry.

## Key Features

- **Scans & Captures Full Visible Spectrum**  
Enables simple and elaborate lab experiments and novel research
- **Portable Hand Held Instrument**  
Weighs 7.4 Ounces  
Operates on 3 'AA' Batteries
- **Innovative Research & Teaching Tool**  
Flexible scanning and measurement capability
- **Cost Effective Spectrometer**  
Allows more instruments to be utilized at lab workstations

## Academic Applications

- General Chemistry
- Quantitative Analysis
- Analytical Chemistry
- Instrumental Analysis
- Laboratory Research
- Field Research
- Environmental Sciences
- Inorganic Chemistry
- Physical Chemistry
- BioChemistry



## The i-LAB TA Hand Held microSpectrometer

is a versatile and powerful instrument that allows educators and students to capture and record spectral measurements in their classroom, lab, and field environments. The i-LAB utilizes microSpectral Sensors' patented, integrated sensing system technology. This technology has miniaturized the core optical system used by spectrometers thus enabling i-LAB users to bring the instrument to the sample. The i-LAB system features a powerful PC software program named i-LAB Spectrum that allows users to extract data from up to 500 samples measured with the i-LAB. Educator specific measurement methods can be readily created and transferred with the software to the i-LAB. The system also has a "Live Scan" feature that enables users to capture data from a sample and import it directly into the i-LAB Software. For ease of conducting measurements, the i-LAB features reusable/disposable Samplettes.



*“Bringing the Instrument to the Sample!”*

  
microSpectral Sensors  
division of micrOptix

284 Main Street, L Section, Suite 400  
Wilton, ME 04294-3044  
T. 207.645.3600 • F. 207.645.3633  
[sales@microspectralsensors.com](mailto:sales@microspectralsensors.com)  
[www.microspectralsensors.com](http://www.microspectralsensors.com)

# i-LAB TA *“Bringing the Instrument to the Sample!”*

## Technology Overview

The i-LAB features our patented, integrated sensing system comprised of a high efficiency, linearized photodiode array detector and high stability, high output, low power LED light sources.

## Academic Experiments included with the i-LAB TA

- Introduction to Spectroscopy
- Le Chatelier’s Principle
- Determination of an Equilibrium Constant
- Beer’s Law Experiment
- Reduction of Methylene Blue by Ascorbic Acid
- Quantitative Analysis of Aspirin

## i-LAB®TA Specifications & Features

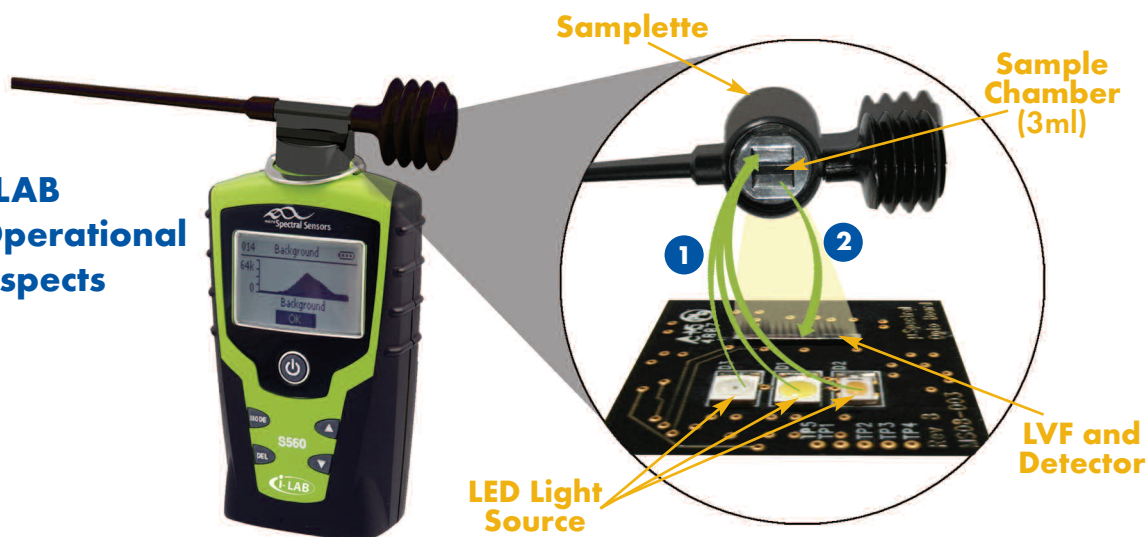
*Manufacturing Specifications and Features Subject to Change*

<b>Wavelength Range</b>	400 - 700 nm
<b>Bandwidth</b>	4 - 7 nm (1% of center wavelength)
<b>Light Source</b>	Spectrally Balanced LEDs
<b>Display</b>	Backlit LCD, 2" x 2"
<b>Detector</b>	Linearized Photo Diode Array
<b>Communications</b>	mini-USB
<b>Dimensions</b>	2.75"(w) x 5"(h) x 1.75"(d)
<b>Weight</b>	7.4 Ounces
<b>Power</b>	Approx. 1 Watt using 3 AA Batteries
<b>Data Logging</b>	Up to 500 Spectra
<b>Method Storage</b>	Up to 100 Methods
<b>Approvals</b>	CE
<b>i-LAB TA Price</b>	\$1295 - V997 Instructor Model* \$ 995 - V996 Student Model**

\*Includes i-LAB, six preloaded chemistry experiments, Spectrum Software (standard version), instructor and student documentation, and 100 samplettes

\*\*Includes i-LAB and six preloaded chemistry experiments

## i-LAB Operational Aspects

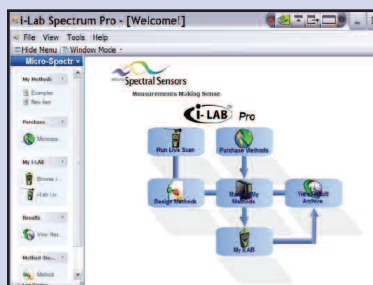


1 LED light source directs light into the sample chamber.

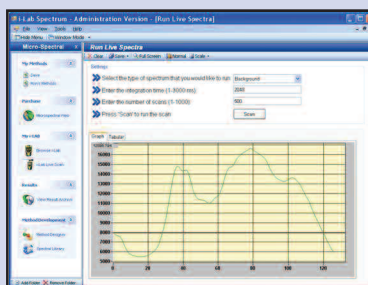
2 Light is passed through the sample and reflected off the sample chamber mirror and directed to the detector.

## i-LAB Spectrum Software

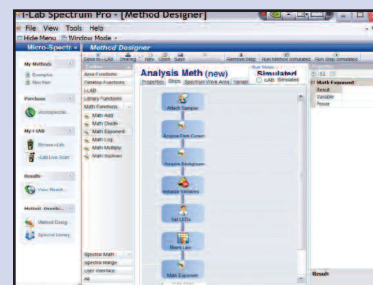
Simplifies Experiment Data Management, and Analysis.



Data Acquisition & Management



Advanced Data Analysis Tools



Custom Method Development