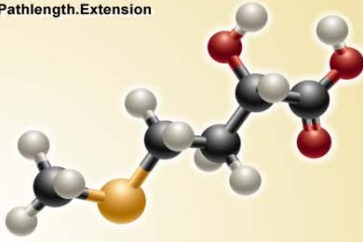


Solo VPE

Variable.Pathlength.Extension



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Slope
spectroscopy

$$m = \frac{A}{l} = \epsilon c$$

$$A = \epsilon c l$$

$$y = m x + b$$



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C TECHNOLOGIES, INC.
BRIDGEWATER, NEW JERSEY

An Overview of Slope Spectroscopy & the SoloVPE

No Dilution

The SoloVPE System is the technological innovation behind the Slope Spectroscopy® technique. Unlike traditional UV-Vis methods that rely on a single Absolute Absorbance value, Slope Spectroscopy methods use Section Data (Absorbance vs. Pathlength) to determine a slope value for quantitation of sample concentration using the **Slope Spectroscopy Equation** ($m = \epsilon c$) which is derived from the *Beer-Lambert Law*. The variable pathlength technology in the SoloVPE allows even highly concentrated samples to be measured usually without dilution and baseline correction. The internationally patented SoloVPE is being deployed throughout global organizations allowing them to realize increased accuracy while saving time and money.

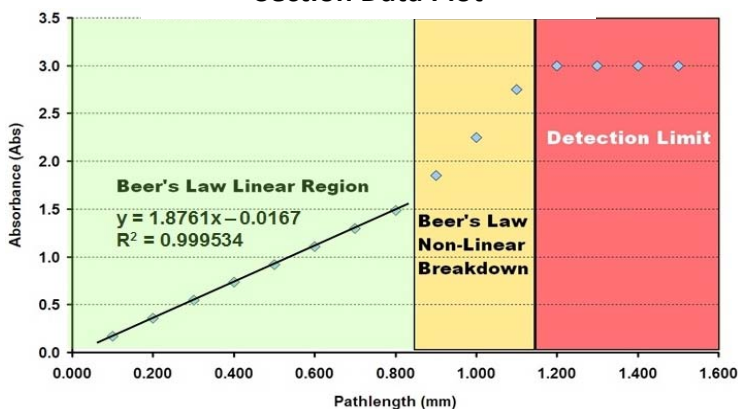
No Background Correction

Traditional UV-Vis based concentration measurements rely on a single absolute absorbance value, which requires background correction. Slope Spectroscopy methods generally do not require background correction if the background media is non-absorbing. Faster results translate into saved time and money.

Quality Confirmed: Correlation Confidence

Rather than relying on a single absorbance value, the multiple data point Slope Spectroscopy result provides inherent verification that the data is behaving linearly and thus compliant with the Beer-Lambert Law. The R^2 value of the linear regression provides immediate confirmation of the linearity of the Section data, giving the user reason to be confident in the result. Multiple data point results and regression quality confirmation are just two of the many benefits of Slope Spectroscopy over traditional methods.

Section Data Plot



Features and Benefits

- No dilutions
- No baseline correction / No buffer
- Auto-ranging for Beer's Law compliance
- Common platform UV
- Accuracy / Repeatability : $\pm 2\%$
- Rapid results in < 1 min
- Antibody concentration range:
0.05 mg/ml to 300 mg/ml
- Minimum volume: $< 10 \mu\text{l}$
(Concentration Dependent)
- Pathlength range: 0.005 mm - 15 mm
(Smallest Resolution: 0.005 mm (5 μm))
- Wavelength range: 190nm – 1100nm
- 21 CFR Part 11 security features
- Data output options for LIMS and eNotebook integration