Analytical Instrumentation

Secant Medical's intelligent design approach starts with raw material analysis to ensure that we select the most appropriate material to achieve your product requirements. We ensure quality and consistency within our raw material supply chain, and provide data to support regulatory submissions for all components we manufacture. Our analytical capabilities allow us to evaluate combinations of materials such as coatings, partially absorbable materials, and controlled-release materials.

When assessing candidate materials for device development, we use state-of-the-art instruments that can effectively analyze the polymer interface, mechanism of degradation, and polymer performance characteristics.

- **Scanning electron microscope:** Non-optical scanning technique for high resolution, high magnification of samples. Can accommodate the need for elemental analysis using energy dispersive spectroscopy (EDS).
- **Infrared spectrometer (FTIR)**: Provides vibrational analysis of chemical structure, also known as the finger print instrument.
- **Infrared microscope**: Microscopic infrared imaging technique capable of analyzing spatial distribution of functional group chemistry on surfaces.
- **Melt flow rheometer**: Measures high molecular weight polymer viscosity.
- **Differential scanning calorimeter**: Thermal morphological analysis capable of evaluating multiple polymeric changes as a result of thermal exposure.
- **Durometer**: Measures surface hardness.
- **Thermogravimetric analyzer (TGA)**: Thermal materials analysis for weight loss under variable heat exposure.
- **Ultraviolet visible spectrophotometer**: Spectrometry for analyzing interaction of physical light with color absorbing materials and infrared absorbing materials.
- **Light microscope**: Analyzes materials using an optical microscopic technique.

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700 W. Park Ave. • Perkasie, PA 18944 • t 877.774.2835 • f 215.257.8875 • www.secantmedical.com