



• **SENTERRA II** Application of Raman Microscopy in Pharma

Strictest requirements have to be met in the development, production and quality control of pharmaceuticals. Following Good Practice (GxP) requirements demands for highest precision and accuracy when it comes to analysis. In short, time is of the essence and efficiency is the key to a productive workflow in QA as well as QC. Luckily, the SENTERRA II provides you with that.

- Compact and straightforward instrument design paired with an incredibly intuitive software
- Analyze solid dosage forms, granules, tablets and formulations effortlessly
- Visualize the distribution and uniformity of APIs and excipients via Raman imaging
- Fully automated instrument test procedures according to USP 1120, Ph.Eur. 2.2.48, ASTM E1840 and E2529-06
- Full compliance to GMP, cGMP, GLP and 21 CFR part 11

Maximum User Convenience

The SENTERRA II has an unrivalled accessibility for inexperienced users in Raman microscopy and eases the user into a self-explanatory workflow. Infallible automation is coupled with well-refined software to give you control of all hardware parameters at the click of a mouse.

Full Support of your Validation Needs

Bruker is at your side when it comes to validation and offers many support options based on your individual needs. The SENTERRA II incorporates certified appropriate software protocols to ensure fully automated instrument test routines and the system timely warns you when it is outside specified parameters. Additionally, we provide installation and qualification of instruments as well as annual certification by Bruker's factory trained and certified service engineers.

Powerful Instrument

The SENTERRA II exhibits research grade spectroscopic performance with up to 100 spectra per second, high spectral resolution, the full spectral range and confocal as well as high throughput Raman microscopy capabilities. Fast switching multi laser excitations and minimized fluorescence by an optional 1064 nm excitation, round out its qualities.



Ensure Product Quality

Production flaws or foreign contaminants are analyzed quick and reliably by Raman microscopy, even behind glass or encapsulated in packaging.

Guard Yourself

Whether infringement by ruthless competitors or to assess their already established products. Raman microscopy gives you the right tools to protect your business.

Enhance your Production

Evaluate changes in morphology on the spot and elucidate error-prone steps during processing by thoroughly characterizing your intermediates with Raman microscopy.

Speed up Development

The flawless workflow and efficient automation helps to save time and trouble. The SENTERRA II concentrates your resources and energy where it matters most.



WORKING WITH THE SENTERRA II MEANS TO:

- SEIZE ITS ADVANTAGES
- BE EFFICIENT
- FOCUS ON THE TASKS AT HAND

Absolute Data Security, Integrity and Traceability

- A "Protected Data Pool" safeguards electronic records against deletion or loss
- The "Global Audit Trail" is comprehensive and offers filtering for smart audit trail review
- Our "User and Signature Management" guarantees consistent separation of user responsibilities. Signatures can be double checked and password complexity individually configured
- Compliance to FDA's Data Integrity guidelines and cGxP requirements e.g. 21 CFR Part 11

Technologies used are protected by one or more of the following patents:
US 61411095; DE 7102746

www.bruker.com/optics ● **Bruker Optics Inc.**

Billerica, MA · USA
Phone +1 (978) 439-9899
Fax +1 (978) 663-9177
info.bopt.us@bruker.com

Bruker Optik GmbH

Ettlingen · Germany
Phone +49 (7243) 504-2000
Fax +49 (7243) 504-2050
info.bopt.de@bruker.com

Bruker Shanghai Ltd.

Shanghai · China
Phone +86 21 51720-800
Fax +86 21 51720-899
info.bopt.cn@bruker.com

Bruker Optics is ISO 9001 and ISO 13485 certified.

Laser class 1 product.