

Spectroscopy

Mission

The main mission of the **Spectroscopy Laboratory** is to support our customers applying our expertise to elucidate the structures of new chemical entities (from small molecules to polymers), identify impurities or defects (on finished products or goods) and provide detailed structural information for products development (R&D) and Quality Control analyses (QC).

Elucidation of molecular structures is necessary to identify or confirm the structural identity of a chemical compound during chemical research (R&I) or product development (ADL or CTD).

Unknown substances or impurities can be difficult to identify. Chemical structural elucidation of impurities is necessary to support plant issues (contamination), CTDs requests (reverse-engineering or failure analysis), new chemical entity registrations (REACH).

Expert evaluation of polymers by specialist techniques is essential in order to ensure product integrity and for quality control demands.

We provide polymer analysis to evaluate monomer types and distribution (block or random), chain branching, sequencing, polymorphism, molecular weight (MW), end groups, structure and co-monomer ratios, additives determination and residual surfactant quantification.

Our customers belong to several functions in Materials BU, as well as in the main growth platforms (like Hydrogen and Battery), and are:

- R&I (Research and Innovation)
- ADL (Application Development Lab)
- CTD (Customer Technical Development)
- Pilot and Production Plants
- HSE and RAPS

Techniques

- **(NMR) Nuclear Magnetic Resonance Spectroscopy in Solution**
- **(SS-NMR) Solid State Nuclear Magnetic Resonance Spectroscopy**
- **UV-Vis-NIR and Fluorescence Spectroscopy**
- **Vibrational Spectroscopy (IR and Raman)**

Labware Catalogue

[NEW SPECTROSCOPY LABWARE CATALOGUE.pdf](#)

Team

	Name	Role	location
	Merlo, Silvia	Scientist - NMR Expert Structural Characterization and CTD Focal Point	B102-29
	CATTANEO, Alice	Scientist - SS-NMR Expert Material Characterization Focal Point	B102-35

	MERLINI, Luca	Scientist QC and Production Support Focal Point	B102-27
	SCOTTI, Marco	Technician	B102-27
	TERREZZA, Dennis	Temporary Lab Technician	B102-29
	CARRARA, ELENA	ITS Stage	

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