

We offer professional analytical services of organic compounds, supporting research, quality control, product development, and identification of unknown substances. We provide both raw measurement files and complete data analysis with ready-to-use results, depending on your needs.

NMR SPECTROSCOPY

Our core analytical technique is NMR spectroscopy, one of the most powerful methods for the structural analysis of organic compounds. NMR allows us to determine molecular structure, confirm product identity, assess purity, and identify characteristic functional groups and molecular environments. It is particularly useful for verifying synthesis results, comparing samples, and supporting the characterization of both simple and complex organic molecules.

- ^1H NMR – proton NMR, a basic structural analysis method for organic compounds.
- ^{13}C NMR – carbon NMR, used to analyze the environment of carbon atoms in a molecule.
- ^{19}F NMR – analysis of fluorine-containing compounds.
- ^{31}P NMR – analysis of organophosphorus compounds and phosphates.
- DEPT NMR – a technique useful for distinguishing CH, CH₂ and CH₃ groups in ^{13}C analysis.
- COSY NMR – a two-dimensional analysis showing couplings between protons.
- HSQC NMR – a 2D technique showing correlations between protons and directly bonded carbon atoms.
- HMBC NMR – a 2D technique showing long-range proton-carbon correlations, useful for determining the molecular skeleton.

FTIR SPECTROSCOPY

FTIR spectroscopy is a fast and reliable technique used to identify functional groups and characteristic chemical bonds in organic compounds. It measures how a sample absorbs infrared radiation, producing a spectrum that provides information about its chemical structure. FTIR is a valuable complementary method to NMR and/or LC-MS, helping to build a broader analytical profile of the tested compound.

LC-MS

LC-MS analysis – combines liquid chromatography with mass spectrometry, enabling the separation, detection, and mass-based identification of compounds, including impurities and by-products.

REFRACTIVE INDEX DETERMINATION

Refractometric analysis – used to determine the refractive index of liquid samples, supporting identity confirmation and quality control.

MELTING POINT DETERMINATION

a simple and reliable method for assessing the identity and purity of solid organic compounds.

TLC analysis

thin-layer chromatography used for quick comparison of samples, reaction monitoring, and preliminary purity assessment.s.



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