



innovations from nature



# acib Service Offer

## <sup>13</sup>C-Labeled Metabolite Extract

*We offer a <sup>13</sup>C-labeled metabolite extract (<sup>13</sup>CME) suitable for unbiased qualitative and quantitative analysis of intracellular metabolites using mass spectrometry-based analytics.*

### Background

Analysis of **intracellular metabolites** (metabolomics) represents an **essential tool** used in **human** and **biosciences** to study cellular properties and identify health-associated **biomarkers** or process-relevant **metabolic bottlenecks**. Typically mass spectrometry-based techniques are applied and hundreds of compounds can be addressed in one sample run. However metabolite-specific ion suppression and losses throughout the complex procedure of sample preparation as well as strong matrix effects reduce significantly the quality and therefore reliability of acquired mass-spec data, precluding quantitative statements and even qualitative conclusions to be drawn from measured metabolite profiles. To cope with these obstacles and to enable **unbiased** qualitative and even quantitative metabolite **analysis** an **internal** compound-specific **standardization** is **indispensable**.

### acib-Technology

acib together with TU Graz has **comprehensive expertise** in the preparation of a <sup>13</sup>CME displaying **low matrix** effects and whose addressable **compounds** are highly **enriched** in **labeled** carbon and available at amounts **suitable** for internal standardization. Applicability of <sup>13</sup>CME is not limited to a certain cell type and may be subjected to samples generated from bacteria, yeasts, fungi and cell lines. Its high metabolite coverage permits accurate analysis of metabolites from **central carbon metabolism**, **amino acids**, **energy** and **redox metabolites** and others. The quality of <sup>13</sup>CME preps is routinely verified.

### acib-Offer

We offer to prepare on demand **ready-to-use preps** of quality-verified <sup>13</sup>CME suitable for compound-specific internal standardization of samples subjected to mass spectrometry-based analysis.

Furthermore, in case the desired compound or biomarker is not present in the <sup>13</sup>CME standard prep we offer support in the development of **customized solutions**.

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