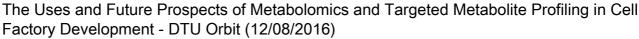
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The Uses and Future Prospects of Metabolomics and Targeted Metabolite Profiling in Cell Factory Development
The development of cell factories for the production of chemicals has traditionally relied on measurements of product
metabolite titers to assess the performance of genetically manipulated strains. With the development of improved
metabolomics and targeted metabolite profiling methods, these broader measurements of the cellular metabolic state are
now becoming part of the toolbox used to characterize cell factories. In this review we briefly summarize the benefits and
challenges of global metabolomics and targeted metabolite profiling methods and discuss the application of these
methods in both pathway discovery and cell factory engineering. We focus particularly on exploring the potential of global
metabolomics to complement more traditional targeted methods. We conclude the review by discussing emerging trends
in metabolomics and how these developments can aid the engineering of better cell factories in the future.

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