

## Metabolomics in the Wine and Beer Industry

Metabolomics provides a comprehensive snapshot of the chemical processes that are occurring at any given moment. Different varieties of grapes, grains, hops, and strains of yeast produce many different styles of wine and beers. These variations result from the complex interactions between the source ingredients, the reactions involved in fermentation, growing environments, and production processes. Not only can metabolomics provide information about these complex interactions, it can be a valuable tool for enhancing consumer desired traits, improving batch variability and optimizing production.

With our technologies, analysis of low concentration chemicals can easily be performed for a wide range of chemical classes including alcohols, organic acids, carbohydrates and sugars, amino acids, nucleotides, polyphenols, vitamins, and additives. Nutritional values can be determined including calorific values, total carbohydrates, total amino acids, and %ABV.

## About Us

The Metabolomic Innovations Centre (TMIC) is Canada's only national metabolomics platform, and the largest of its kind. We support a wide range of state-of-the-art metabolomics technologies, databases and bioinformatics tools. TMIC provides a single-source destination for access to leading metabolomics experts and extensive technological capabilities for service, collaboration, and technology development. For more information visit our website at [www.metabolomicscentre.ca](http://www.metabolomicscentre.ca)



## WINE AND BEER ANALYSIS

Recently, metabolomics has been extensively applied in food and beverage sciences and production to address challenges in the following areas:

- Quality control
- Safety
- Authentication
- Valorization
- Process improvement

In addition, metabolomics provides important insights into microbiology, processing, and nutrition.

