

RESEARCH PROJECT

 Institute
Life Technologies

Innovative microwave-assisted hydrolysis of ellagitannins and quantification as ellagic acid equivalents

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Description The health-promoting effects of ellagic acid and its intestinal degradation products are well-known. In plants, ellagic acid mainly appears in the form of its precursors, the so-called ellagitannins. Therefore, determination of total ellagic acid content has been accomplished by cleaving ellagitannins with high temperatures and strong acids. Microwave-assisted extraction (MAE) has been shown to be a very effective and quick extraction technique. The aim of the present study was to establish an MAE-based method for a rapid hydrolysis of ellagitannins and to compare this method with a conventional acid hydrolysis. For this purpose, strawberries (*Fragaria x ananassa*), which have been identified as a major source of ellagitannins in human diet, were used as a model. The newly developed MAE method was quicker, less chemical-consuming and more effective in hydrolysing ellagitannins.

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