

## Flavour Profiling of Foods and Beverages

Teagasc has significantly enhanced its flavour chemistry capability in terms of expertise and equipment. The expertise and instrumentation available are used in research but also as a resource to carry out services for industry. The service based on such capabilities can be used to work with companies to improve processes, as an aid in new product development, product mapping, stability testing, shelflife analysis or to identify taints and off-flavours.

### Background

Approximately 75% of the perception of the flavour is related to odour and 25% to taste. The odour of a product is due to the balance of volatile odour active compounds that are present. Over the last few years, Teagasc has developed a strong capability in the identification of odour active compounds in foods and beverages through the use of sophisticated extraction techniques and advanced chromatographic methodologies. Such resources can be used to identify both positive and negative compounds associated with specific sensory attributes. Flavour chemistry can also be used in tandem with descriptive sensory analysis to identify the compounds directly responsible for sensory perception. Multivariate statistical analysis is used to interpret complex volatile data sets in order to distinguish discriminating differences in the volatile components within samples/products.

### Capabilities on Offer

- Optimisation of product quality.
- Identification of odour active compounds.
- Product mapping.
- Process modification – impact on flavour.
- Product comparison/matching.
- Stability/storage evaluation.
- Predictive modelling.
- Taints/off-odours.

### Equipment

- Extraction.
- Solid Phase Micro-Extraction.
- Purge & Trap.
- Model Mouths.
- Steam Distillation.
- ITEX.
- Gas Chromatography.
- Triple Quadrupole Mass Spectrometry.



### Of Interest to

Food, beverage and packaging companies.

### Nature of Service

Service contracts are agreed with clients and all work is carried out on a confidential basis. A schedule of fees is available for the different services provided. Flavour profiling can also be incorporated into a larger contract or collaborative research project.

### How to Proceed

#### For further information contact:

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