OzScientific

Knowledge-driven Solutions for Dairy & Food Industries

Food Analysis Explained

HPLC

High Pressure Liquid Chromatography

High Pressure Liquid Chromatography (HPLC) is a powerful tool to determine the components in a food. It can be applied to many different types of nutrients: proteins, carbohydrates, phytochemicals, vitamins and other bioactives. HPLC is used for "profiling", for example to make sure a food has the right balance of active constituents. It is especially powerful when you want to know how much of an active ingredient is in your product or how pure it is (quantitative analysis).

Compositional profile

- Phytochemical profiles of spices and vegetable products
- Pigments and antioxidants
- Whole and skim milk proteins, A1 and A2 protein in milk
- Whey proteins, denaturation of whey proteins, GMP
- Colostrum
- Peptides and proteolysis (protein breakdown products)

Quantitative analysis

- High value, low abundance proteins: lactoferrin, GMP
- Whey proteins
- Plant proteins
- Phytochemicals and bioactives
- Customisation and method development

How we work

- Commercial
- Confidential
- Agreed project scope
- Client oriented
- Understand timelines

Our facilities

- Pilot plant for small scale concept products
- Product development lab
- Food analysis lab
- Meeting room
- Cold rooms and incubators

Our clients

- Dairy companies
- Artisan food manufacturers and start ups
- Beverage companies with novel product or technology ideas
- Nutraceutical manufacturers
- Manufacturers of baked goods and breads
- Processors of proteins from dairy and plants

Contact Us

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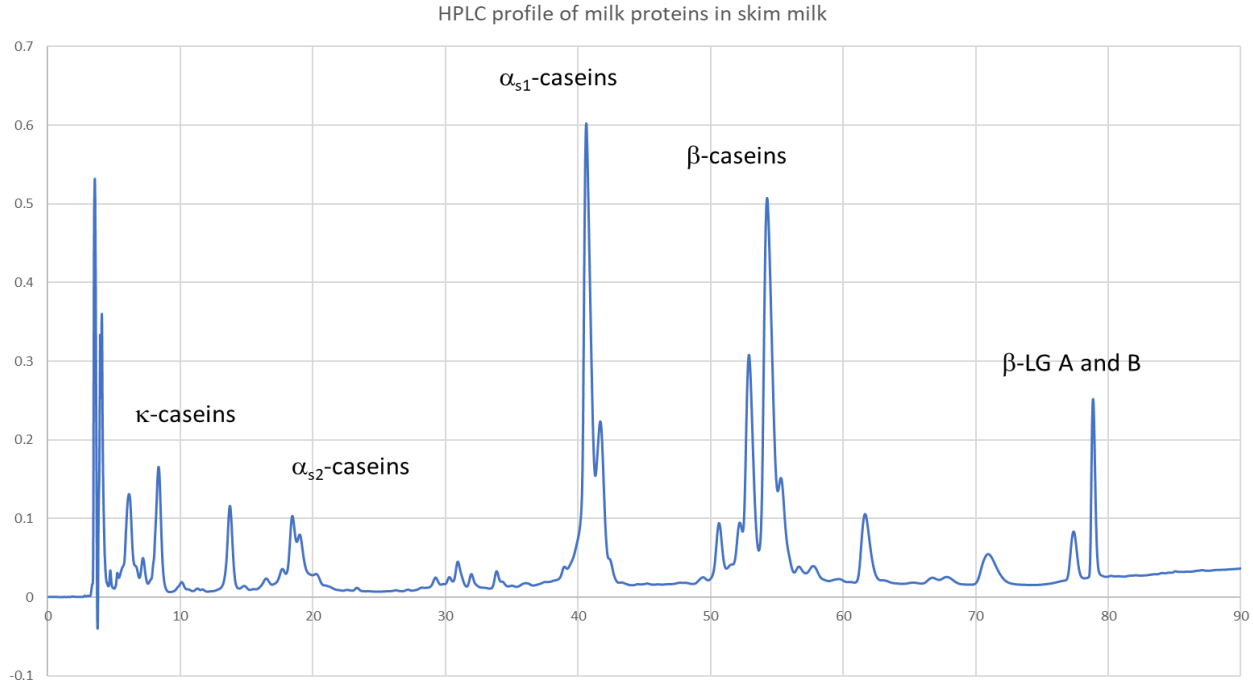
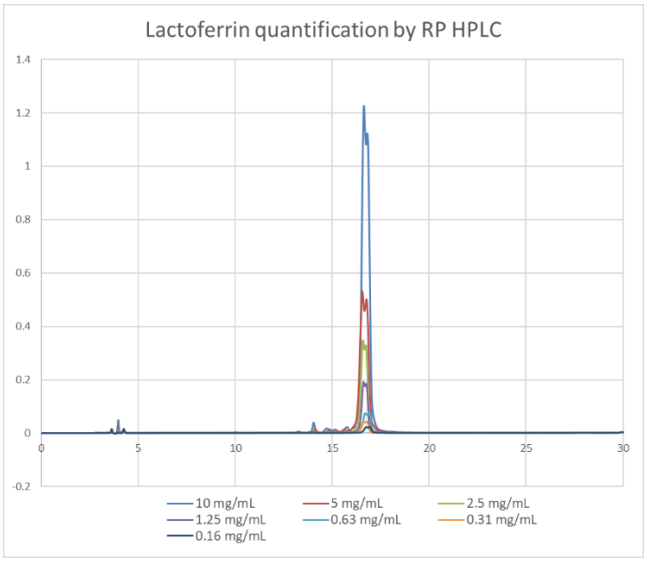
HPLC Profiling – Example: Proteins in milk



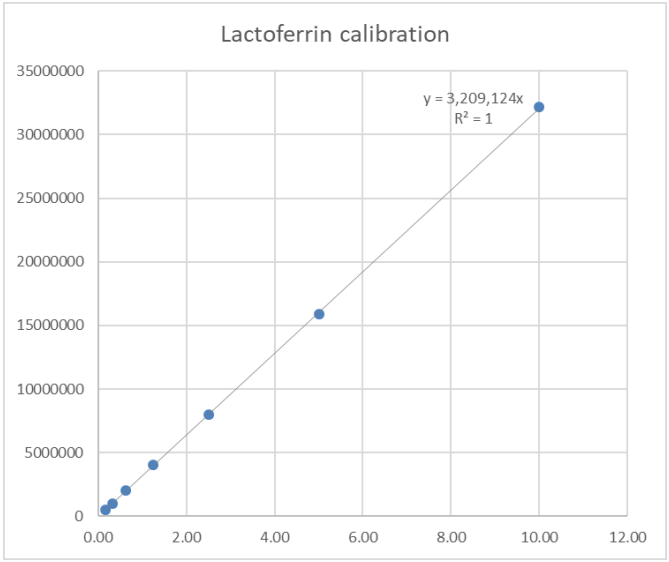
Natural foods have a characteristic profile of proteins or phytochemicals. And in manufactured foods, the right balance of ingredients is important. These patterns can be used to determine the authenticity of a product or the degree of processing.

Compositional profiling is a powerful tool to guide new product development and for example determine the degree of denaturation occurring as a result of processing. HPLC methods are comparatively inexpensive to set up, and results are easy to interpret.

Quantitative analysis – Example Lactoferrin



Lactoferrin is a minor protein in milk with many health benefits. It has antimicrobial properties, boosts the immune system and can be used to treat iron deficiency. Lactoferrin supplements are a growing export market for Australian dairy manufacturers.



For most processors, HPLC is the method of choice for determining the purity of lactoferrin powders. OzScientific provides a reliable, high quality and customer focussed service. In addition, we set up customized methods for individual clients.

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Experts in Food Innovation and Food Technology