

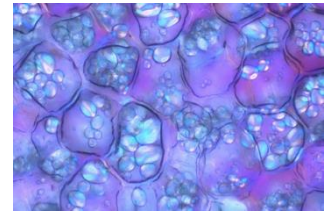
The evolution of defining fibre, legislation and impact on calories

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What has affected the definition of dietary fibre?

- Analytical methods
- Physiological effects
- Food Regulations at national level



How have the fibre definitions and methods evolved?

Methods have evolved as fibre definition changed

Southgate method
(1969)

- *McCance and Widdowson*

Englyst *et al.* method
(1992)

- NSP only
- Recognised by MAFF
- Recommended for labelling
- Gas liquid chromatography

AOAC method 991.43
(1999)

- JFSSG
- Resistant starch & lignin
- Enzymatic-Gravimetric method

AOAC 997.08
(2000)

- FSA
- Fructans
- Used in combination with AOAC 991.43
- Enzymatic-Gravimetric method



Recent evolution of definition

- Codex Alimentarius Commission (2009)
- EU (Regulation (EU) No. 1169/2011)
- EU Regulation and Codex includes:
 1. Edible carbohydrate
 2. Carbohydrate polymers
 3. Synthetic carbohydrate polymers
- 2008 SACN – draft position statement – threw a spanner in the works, just before the EU definition
- Any extracted or synthesised fibres, e.g. oligosaccharides are not included in the fibre definition
- EU 2012 – methods for measuring oligosaccharides recognised in the Commission’s guidance on methods of analysis for nutrition labelling

Why so many definitions?

Challenges

- DF are not a single chemical entity
neither a group of related
compounds
- Different DF may have one or
more physiological health benefits
- Controversy on cause of benefits
Food matrix vs isolated form

Numerous definitions have been
proposed in order to address some
of these issues

Consequences

- International harmonisation of:
 - ✓ Food labelling
 - ✓ Food composition databases
- Interventional and
epidemiological research on DF
outcomes
- Dietary guidelines

Regulatory implications

- Need to understand what is in your product before you decide which combination of methods to use
- The methods offer a tool kit for the different fibre components
- UK, EU countries and US use AOAC methods

Impact on calories

- All components measured as fibre are 2kcal/g – this will depend on the definition of fibre
- All other carbohydrates 4kcal/g (except polyols)

Thank you

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