



Dietary Fibre for a Healthy Diet

HERBACEL CLASSIC
HERBACEL CLASSIC PLUS
HERBACEL AQ PLUS
HERBAPEKT LV
HERBAPEKT APE



Before the industrial revolution the main function of food was to serve as man's primary source of energy. It was at this time that the term "dietary fibre" was coined, to denote the indigestible plant material that does not contribute to the supply of nutrients and is therefore regarded as superfluous.

As eating habits change to favour foods that contain little or no dietary fibre and as people get less and less exercise, dietary fibres are more important than ever. Nowadays, these plant components, which would have been scorned in the past, would probably be referred to as "slimming agents" or "active agents", as both epidemiological and scientific studies have confirmed that dietary fibres contribute significantly to our health. Today it is known that dietary fibre is required to maintain a functioning digestive system, it can help to control cholesterol and glucose in the blood and help to control body weight. Hence, if taken regularly in line with the recommendations of doctors and dieticians, dietary fibres can reduce the risk factors for diseases such as colon cancer or coronary heart disease.

The importance of dietary fibres is underlined by the fact that they are included in the nutritional labelling of food.

BENEFITS OF DIETARY FIBRES

- Regulation of appetite
- Calorie reduction in foods
- Improved digestive health
- Blood cholesterol attenuation
- Influence on rheological properties (viscosity, food texture)
- Colouring or flavour enhancement

Dietary Fibres:

SUCCESS FACTORS IN THE AREA OF WELLNESS

Most health organisations recommend a daily intake of dietary fibres of between 30 and 40 grams. Although it has been scientifically demonstrated that there is a correlation between the occurrence of certain diseases and a low dietary fibre intake, the average dietary fibre consumption is still only 15 - 20 grams a day.

The fact that foods rich in dietary fibres had more of a negative image in the past was almost certainly due to the fact that they did not please the senses. But nowadays, the food industry can choose from a wealth of dietary fibres produced from a variety of different sources to fulfil the manifold needs of consumers and manufacturers alike.

By selecting the most appropriate fibre or customised blend of fibres, it is now possible to develop fibre-enhanced or fibre-rich products that are really tasty. And the “right” choice of fibre can offer technological and economical benefits, too.

WHAT MAKES A SUCCESSFUL PRODUCT

CONSUMER:

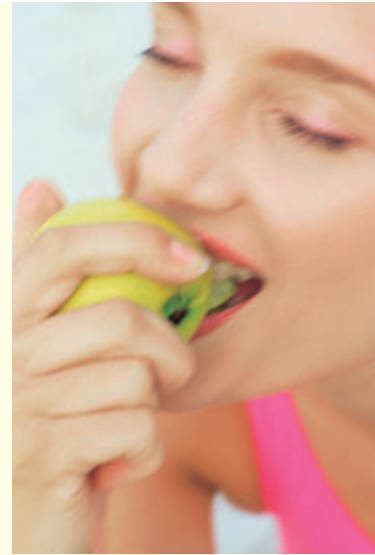
A product must be tasty, healthy, easily digestible and quick and easy to prepare.

MANUFACTURER:

All ingredients should be easy to handle, the quality should be consistent and they should be able to guarantee a stable manufacturing process. Furthermore, promotion of the physiological benefits should enhance sales or increase the market volume.

HERBAFOOD:

We supply a wide range of dietary fibres, we know their nutritional benefits and have the know-how to apply this knowledge to your products to assist you right through from formula development up to labelling.



What are Dietary Fibres?

Dietary fibres, unlike fat, proteins or carbohydrates, are defined according to their physiological characteristics: they consist of material of plant origin that is completely resistant to the digestive enzymes in the stomach and small intestine. Hence, dietary fibres are not absorbed in the small intestine and do not act as a primary source of energy. However, the conditions present in the large intestine can lead to a complete or partial breakdown of certain dietary fibres by fermentation. As a result, some catabolites such as butyrate can be utilised by the body after all.

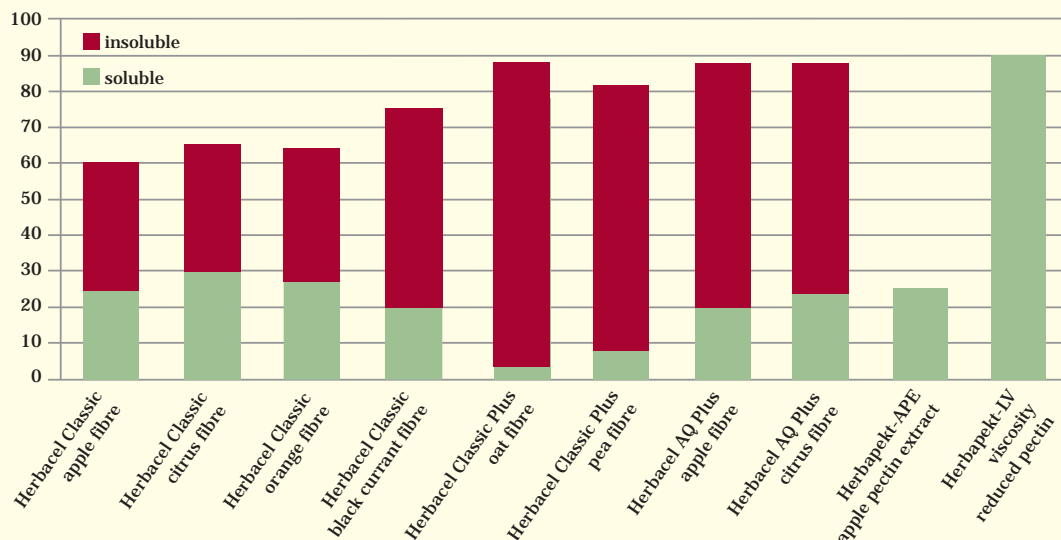
Chemically speaking, most dietary fibres, such as cellulose, hemicellulose, pectin and beta glucan, belong to the carbohydrate complex. They are particularly prevalent in

the cell walls of plants, which determine the integrity and the rigidity of plant tissue. Most of our daily dietary fibre intake comes from cereals, fruit and vegetables.

Three factors, the kind of plant, the specific plant tissue as well as the manufacturing process used, strongly influence the physical and chemical properties of dietary fibre products: water and ion binding, solubility and swelling. These properties then determine the nutritional and technological aspects of our dietary fibres.

herbafood knows how to utilise fibre-rich material, originating for example from juice production, as a high quality raw material. We are happy to advise you on the dietary fibre or fibre blend that is ideally suited to your needs.

DIETARY FIBRES PORTIONS OF HERBAFOOD-PRODUCTS IN %



Herbacel

Classic Fibres

HERBACEL CLASSIC dietary fibres are made from the fibre-rich fruit components that remain after juice extraction. The carefully selected cell wall material is mechanically purified and ground to the desired particle size. *herbafood* offers a wide range of fruit fibres in different particle sizes – from fine powder to coarse granules. The Classic fibres are characterised by the typical flavour of the source fruit. This is due to the high amounts of secondary plant substances as well as the remaining plant sugars. The proportion of soluble fibres, of which pectin is the main component, is about one third, thus providing a balanced spectrum of soluble and insoluble dietary fibres.

- balanced ratio of soluble and insoluble dietary fibre
- available in various particle sizes – from fine powder to coarse granules
- real fruit flavour
- natural colouring
- high content of secondary plant substances
- medium water binding and swelling



Herbacle Classic Plus Fibres

HERBACLE CLASSIC PLUS dietary fibres are made of cell wall material that is particularly fibre-rich, such as pea hulls of carefully selected varieties. Thanks to their extremely high fibre content, they are practically neutral in taste and texture. Due to their key role in supporting the cell walls' outer tissues, they contain a particularly high proportion of cellulose and insoluble hemicellulose. As a result, they are ideal for adding fibre to products that are generally low in fibre, such as parenteral nutrition and fibre drinks. Here the neutral properties are of particular importance for acceptance on the market.

- very high dietary fibre content
- fine powders with neutral taste
- creamy white in colour
- beneficial for colon peristaltic problems due to the high content of insoluble fibres
- suitable as inert, low-calorie filler ingredient
- low water binding and swelling



Herbaccel AQ Plus Fibres

HERBACEL AQ PLUS dietary fibres are made from fruit components that are rich in fibre. Non-fibrous compounds like plant sugars are carefully removed using several purification steps in which the natural cell wall structure is kept practically intact. This leads to products that are neutral in taste and texture with high nutritional value. These highly swelling fruit fibres are very effective in keeping hunger pangs at bay and are beneficial in improving the gut motility and the bowel function.

- very high dietary fibre content
- fine powders with neutral taste
- excellent cold swelling properties
- regulation of appetite
- beneficial for colon health
- very high water binding capacity



Herbapekt APE

Apple Pectin Extract

HERBAPEKT APE is made by drum drying liquid pectin extract from apples. The resultant products have a dietary fibre content of about 25 %. Hence, apple pectin extracts possess the characteristic gel forming and viscosity-enhancing properties of high esterified pectin. More important are the physiological benefits of pectin: it binds bile salts, which helps to keep the blood cholesterol level in balance.

Apple pectin extracts also contain fruit sugars, mainly fructose and glucose, as well as fruit acids and the characteristic polyphenolics of apples. This is what produces the pleasant fruity apple taste.

Therefore, Herbapekt is well suited for food supplements, as a single ingredient or in combination with others.

- high pectin content
- light-brown flakes with typical fruity apple taste
- high ratio of polyphenolic substances
- high ratio of fruit sugars
- gel-forming and viscosity-enhancing properties
- beneficial effect on blood cholesterol attenuation



Herbapekt LV

Low Viscosity Pectins



HERBAPEKT LV is made from apple or citrus pectins by reducing their viscous properties. The dietary fibre content is about 90 %, mainly in the form of soluble, low molecular pectin.

LV pectins are ideal for enriching beverages or for nutritional supplements, as the physiologically effective dosage is no longer subject to the limitations of the high viscous pectins. Additionally, the improved cold solubility of the agglomerated LV-pectins is ideal for instant products.



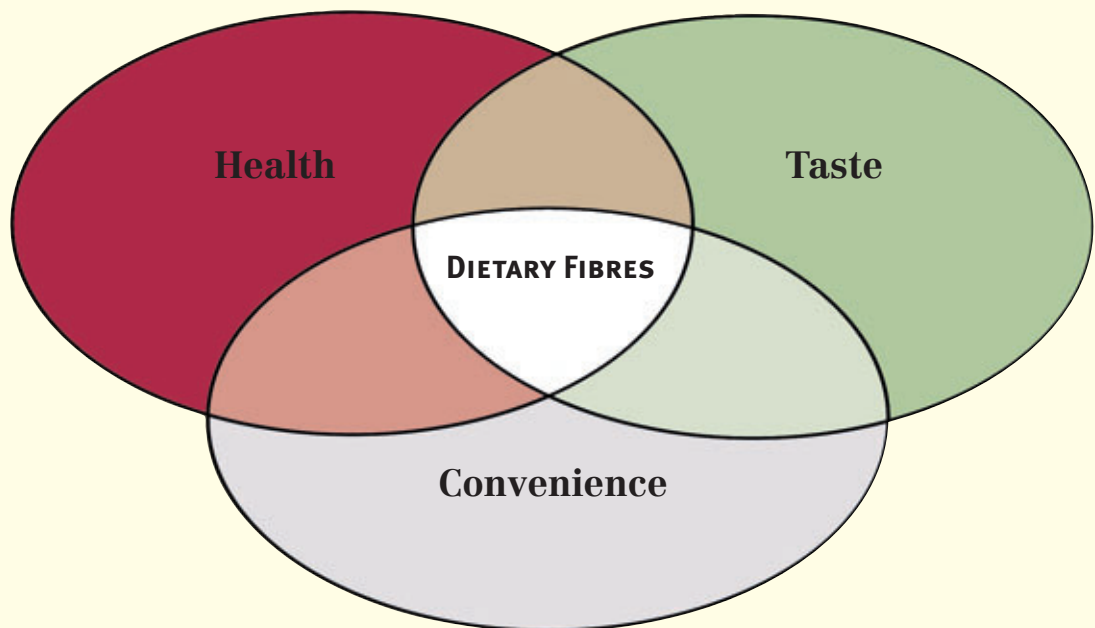
- very high pectin content
- neutral taste – fine powders or agglomerates
- low viscosity in beverages
- beneficial effect on blood cholesterol attenuation
- good solubility, making it ideal for instant products

Dietary Fibres are Valuable Ingredients

There are many examples to show that the use of dietary fibres as a value-adding component has a potential for generating exceptional growth. Consumers rightly regard dietary fibres just as highly as vitamins and minerals.

And usually high-swelling and viscosity-enhancing dietary fibres are the basic components of low-calorie and low-fat foods. Accordingly, they can play an important part in the marketing of your products. In the interests of vitality, health and well-being.

SUCCESS FACTORS IN THE FOOD MARKET



*We help you
find the right
dietary fibres
or fibre blends
for your needs*

APPLICATION:	RECOMMENDED PRODUCTS:	PURPOSE AND ADDITIONAL BENEFITS OF DIETARY FIBRES:
fibre drinks	Herbapekt LV Herbacel AQ Plus citrus fibre Herbacel Classic Plus oat fibre Herbacel Classic black currant fibre	regulation of cholesterol level regulation of appetite stimulation of bowel function enrichment with bioflavonoids
acidified milk drinks	Herbacel AQ Plus citrus fibre	calorie reduction, viscosity increase
cream/curd cheese milk desserts	Herbacel AQ Plus citrus fibre	fat and calorie reduction, texture
sausages	Herbacel AQ Plus citrus fibre	fat reduction, juiciness, texture
fillings	Herbacel AQ Plus citrus fibre Herbapekt APE	calorie reduction, starch substitute, texture viscosity, flavour enhancement
dressings, sauces	Herbacel AQ Plus citrus fibre	fat and calorie reduction, starch substitute, texture
spreads	Herbacel AQ Plus citrus fibre Herbapekt APE	calorie reduction, fat substitute, creaminess viscosity, flavour enhancement
sponge cakes, muffins	Herbacel AQ Plus citrus fibre Herbacel Classic citrus fibre	fat reduction, fresh-keeping colour and aroma
gluten-free baked products	Herbacel AQ Plus apple fibre Herbapekt APE	texture, dough improvement fresh-keeping, dough improvement
bread	Herbapekt APE Herbacel Classic Plus pea fibre Herbacel Classic apple fibre	fresh-keeping, flavour enhancement calorie reduction aroma and colour enhancement
pasta	Herbacel Classic Plus oat fibre Herbacel Classic Plus pea fibre	calorie reduction
breakfast cereals	Herbacel Classic apple fibre Herbacel Classic black currant fibre Herbacel Classic mandarin fibre	calorie reduction, colour and aroma enhancement
fruit and muesli bars	Herbacel Classic fruit fibres Herbapekt APE	low-calorie ingredient, texture, typical fruit flavour, aroma binding, flavour enhancement
slimming products	Herbacel AQ Plus citrus fibre Herbapekt LV Herbapekt APE	lasting appetite regulation stimulation of bowel function fruity taste
dressings	Herbacel AQ Plus citrus fibre	calorie reduction, texture, fat substitute



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