

Guide to select and develop your product

Before starting, you should have in mind which type of customer you want to serve, market size etc., and have an idea about investments and sales.

1. Select your type of bread

Based on the needs of your clients you can select one of the following bread types:

Product concept	Recipe base	Characteristics
WhiteBread + (WB+)	White flour + special wheat fraction	Bread looks and tastes like white bread with a nutritional value at least similar to wholemeal bread.
WhiteBread ++ (WB++)	White flour + special wheat fraction, double amount	Bread that looks and tastes like wholemeal bread but with a higher nutritional value (at least +30% for fibre).
WholeGrain + (WG+)	Wholemeal flour + special wheat fraction	Bread that looks and tastes like wholemeal bread but with a higher nutritional value (at least +30% for fibre).

2. Select your wheat fraction

Discuss with the local HealthBread partner which wheat fraction is most suitable for you. This is based on logistics, amounts, cost price, nutritional value, customer bread quality needs, etc.

3. Develop your recipe (in parallel with No.4)

You should develop your own recipe based on your normal recipe, process and equipment. You may consider addition of bread improvers for higher bread quality but within your own limits (e.g. label-friendly, organic etc.). Keep in mind which nutrition or health story you want to tell. You have to perform some baking trials and do improvements in between. If additional help is needed, contact your local HealthBread partner.

4. Determine the level of nutrients in your product (in parallel with No.3)

Do the nutrients reach the "Source of" or "High" level (see the story of...nutrition)?

- First calculation: basis: a) recipe, b) composition of all ingredients c) moisture loss by baking.
Note: by baking total dietary fibre levels may increase (~0.5%), levels of B vitamins may decrease.
- Analysis: by a certified laboratory.

Determine possible nutrient and health claims (see the story of...nutrition/health) and select the ones you want to use, considering:

- 'Nutrients of concern' in your country? and: which claims look attractive for your clients?
- Total dietary fibre intake is too low in all EU countries: authorities recommend a higher intake of fibre of natural sources (e.g. from whole grains, fruits and vegetables) instead of isolated purified fibre. The intake of fibre from whole grain and bran is highly recommended in recent guidelines. Iron and folate (vitamin B9) intake is too low, especially for pregnant women but also for other population groups.
- Magnesium, Zinc, Vitamins B1 and B2 are also mentioned as 'too low intake' for some groups.

Your local HealthBread partner can assist in calculation/analysis.

5. Sales

Your product is ready for the market. You can use the stories in this manual for marketing purposes. Combine the stories and make it your own story.



Do you want to start?

Bakers Manual

Contact your local HealthBread partner!

Austria, Germany: Kampffmeyer Food Innovation GmbH ccc@kampffmeyer.de

Italy: Open Fields Srl.
info@openfields.it

Netherlands: Nederlands Bakkerij Centrum
info@nbc.nl

For more information:

www.healthbread.eu

Publications, posters and leaflets

<http://www.healthbread.eu/press-corner/>

Overview of all (non-)authorized health claims (English)

<http://ec.europa.eu/nuhclaims>

Overview of all authorized Article 13 health claims (all EU languages): search for "EUR Lex-32012R0432"

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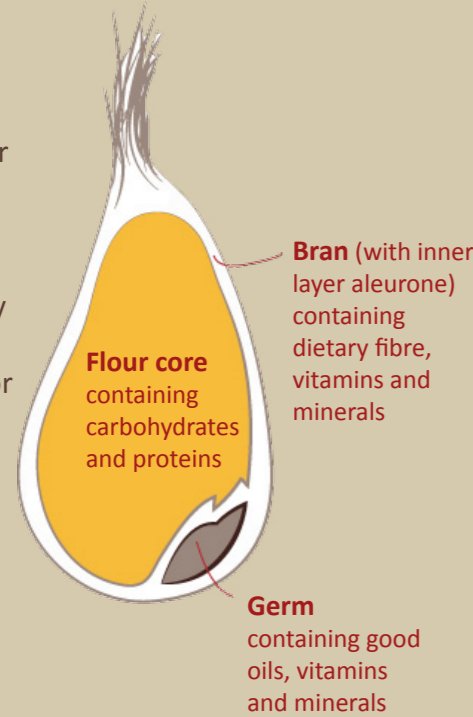
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The real story of ... the grain kernel



The wheat kernel is small but contains a lot of nutritious and healthy compounds. The inner flour core delivers you energy. The outer part of the kernel (bran) and the germ contain most of the healthy compounds. Eating (bread) products with germ, bran or aleurone (the richest layer of the bran) contributes to real health benefits.



Tell your clients this story!

How to produce good tasting healthy breads from the best of grains for your customer?

In the EU-funded FP7 project “HealthBread” good tasting healthy breads were developed by a collaborating team consisting of people from science, industry (ingredient suppliers) and bakers. Subsequently the bakers scaled the concepts up to production and consumers tested the products: the combination of good tasting bread with real added nutritional value was

achieved. All ingredients used were naturally obtained from the wheat kernel. This manual will guide you in selecting material, producing your unique kinds of bread or baked products and how to tell the right story of grain and health. With this science based story you have the tools in your hand for the marketing of your product.



The real story of ... nutrition

Communications about the nutritional value of your product or the ingredients are called ‘Nutrition claims’. Information about nutritional value of your product is regulated by EU Regulation (EC) No 1924/2006. Communication of the nutritional value is only possible if you can prove with quantitative data that the nutrient is above a certain level in the product you sell.

The following rules have to be taken into account:

- **Source of fibre** can be stated for products with at least 3g dietary fibre/100g product.
- **High in fibre:** dietary fibre levels of at least 6g/100g product are required. Note: dietary fibre levels in white bread are around 3g/100g; levels in wholemeal bread are well above 6g/100.
- **Contains (x %) more fibre** than a similar product can be stated when the product is at least a source of fibre and contains at least 30% more fibre than a similar product.
- **Source of a mineral or a vitamin** can be stated when 100g of the product contains at least 15% of the Daily Reference Intake (DRI) of this mineral or vitamin – see the table below.
- **High in mineral or vitamin** can be stated for levels of at least 30% of the DRI/ 100g product. Note: always specific minerals or vitamins should be mentioned.
- **Contains (30%) more** statements are not allowed for vitamins and minerals. Note: for anti-oxidants no health claims have been approved. Their presence can be mentioned but emphasizing health benefits of anti-oxidants is not allowed.

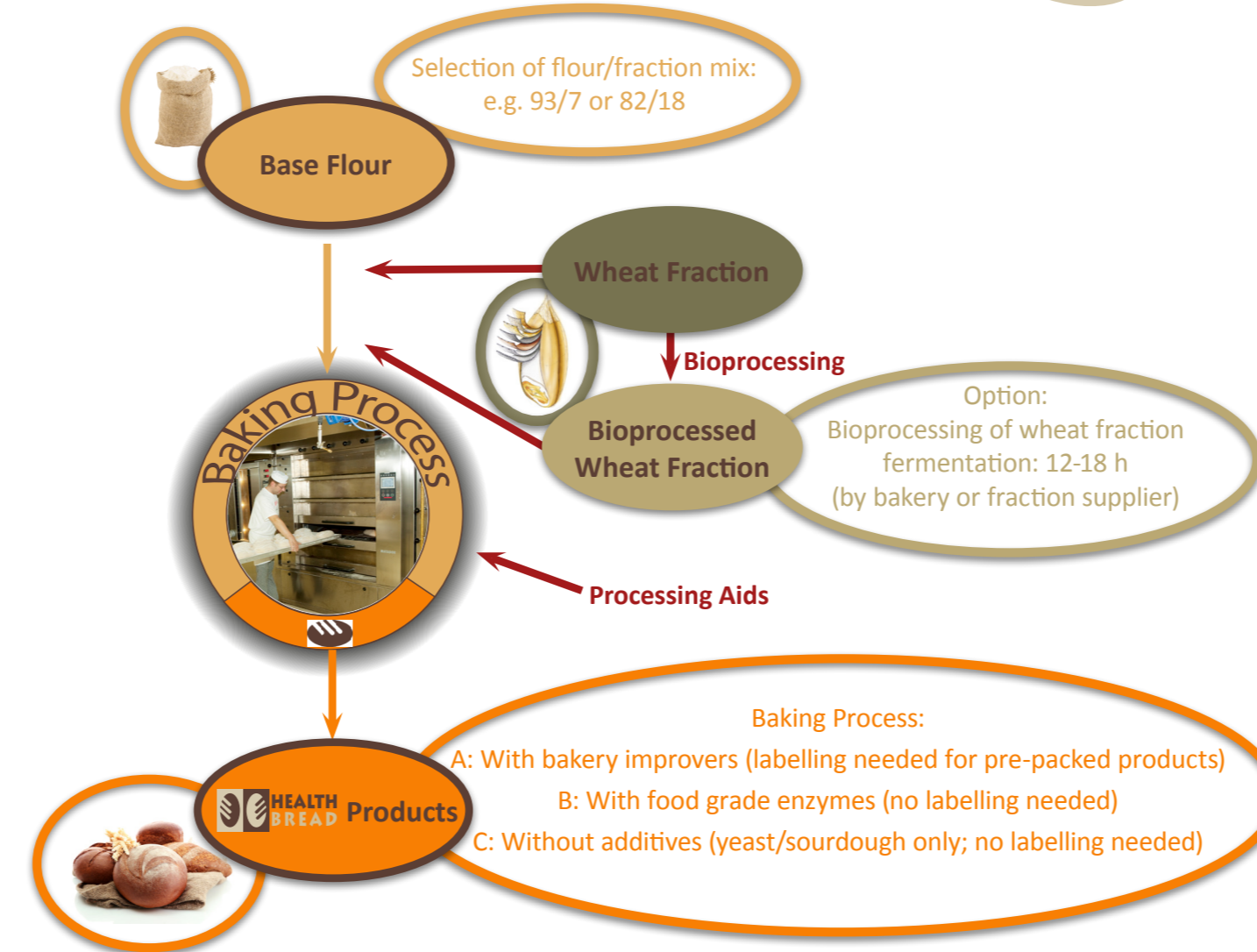


HealthBread products are made from base flour to which a wheat fraction is added. This base flour can be the base flour you already use (white or whole grain flour from your current supplier).

By applying advanced milling technologies HealthBread partners produced specific wheat fractions with high levels of fibre and micronutrients and a mild taste. Some of these fractions may be stabilized by a heat treatment and/or fermented in a (bio-)processing step. Fermentation - by the supplier or in your bakery – can contribute to a good taste and to additional health benefits. Processing aids and bread improver mixes can be added dependent on your choice. HealthBread partners can assist in selecting a convenient recipe.

In HealthBread the following powdery fractions of the wheat kernel were used successfully in bread or other baked products:

1. Soft wheat aleurone (= bran layer with the highest levels of micronutrients and anti-oxidants).
2. Durum wheat aleurone.
3. Durum wheat aleurone, stabilized.
4. Whole grain concentrate, stabilized.
5. Whole grain concentrate fermented, stabilized.



The combination of good taste and high levels of “healthy” compounds was obtained by:

- Milling processes delivering high levels of aleurone and lower levels of the outer bran layers (Fractions 1 – 3).
- Concentrating all outer layers of wheat varieties with light colour and mild taste (Fraction 4 and 5).

The real story of... health

Statements about the effects on health from a product (or from the nutrients it contains) are called ‘health claims’. EU (Regulation (EC) No 1924/2006) allows only claims authorised by EFSA, based on *convincing* scientific evidence. Official national dietary guidelines are usually based on *probable* scientific evidence. Regarding bread, dietary guidelines recommend consumption of wholemeal bread and dietary fibre from grains, but health claims are only permitted for specific health benefits of specific grain fibres, vitamins and minerals.

When a health claim for a material is made, the amount per 100g product has to be mentioned. In each country and language specific arrangements are in place for the permitted wording of the claim and the required additional information. Your local HealthBread partner can assist you.

Many claims for vitamins / minerals are not appealing (e.g. “Zinc contributes to normal DNA synthesis”). Some may be more attractive (e.g. “Iron contributes to a reduction of tiredness and fatigue”).

For HealthBread products the following health claims can be considered:

Material	Health claim	Conditions of use
Wheat bran fibre	Increased faecal bulk	Product should be “high fibre” (at least 6%).
Wheat bran fibre	Accelerated intestinal transit	Product should be “high fibre” (at least 6%). Daily intake ≥ 10g of this fibre required.
Vitamins, minerals Specific claims for each substance	Wide range of claims See http://ec.europa.eu/nuhclaims	Product should be at least a ‘source of’ the specific mineral or vitamin. Most likely candidates: Iron, magnesium, zinc, folate.

The real story of... availability of minerals

Although your ingredients contain the desired amount of minerals, it is possible that these minerals are bound by a compound present in the outer layers of the kernel: phytate. For that reason Iron, Zinc and in minor extend Magnesium will not be completely available for uptake in the human body. Phytate can be broken down by fermentation - by phytase enzymes naturally present in flour. Long fermentation processes of wheat fractions and dough (long proofing times) will help the breakdown of phytate*. In the stabilized fractions the enzyme is not active anymore and addition of phytase enzyme will be required for breaking down phytate*. When you

want to communicate increased uptake of minerals in the body you should ascertain that the level of phytate in your product has decreased with 50% or more compared to a non-fermented product. Most consumers will not understand this complex story. But food and health professionals (e.g. dietary specialists) will understand the availability of minerals and for them it is good to be prepared.

Tell them your story!

* Phytase enzyme can also be added to the dough; only advised on industrial scale and not for all countries due to national regulations.

Daily Reference Intake (DRI) levels of some minerals and vitamins (Regulation (EU) No 1169/2011)

	Iron	Magnesium	Zinc	Vitamin B1 Thiamine	Vitamin B2 Riboflavin	Vitamin B3 Niacin	Vitamin B6 Pyridoxine	Vitamin B9 Folate	Iodine
DRI mg/100g	14	375	10	1,1	1,4	16	1,4	0,2	0,15