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SCIENTIFIC OPINION

Scientific Opinion on the substantiation of health claims related to non-characterised micro-organisms (ID 2936, 2937, 2938, 2941, 2944, 2965, 2968, 2969, 3035, 3047, 3056, 3059, further assessment) pursuant to Article 13(1) of Regulation (EC) No 1924/2006

EFSA Panel on Dietetic Products, Nutrition and Allergies (NDA)

European Food Safety Authority (EFSA), Parma, Italy

ABSTRACT

Following a request from the European Commission, the Panel on Dietetic Products, Nutrition and Allergies (NDA) was asked to provide a scientific opinion on health claims pursuant to Article 13 of Regulation (EC) No 1924/2006 in the framework of further assessment. This opinion addresses the scientific substantiation of health claims related to microorganisms for which the Panel considered in previous opinions that the data provided were not sufficient to characterise the microorganisms in question. The criteria used by the Panel for the characterisation of food constituents that are bacteria and combinations thereof, which are the subject of health claims, are: species identification by DNA-DNA hybridisation or 16S rRNA gene sequence analysis and/or sequence analysis of other relevant genetic markers; strain identification by DNA macrorestriction followed by pulsed-field gel electrophoresis, randomly amplified polymorphic DNA analysis, or other internationally accepted genetic typing molecular methods. Only when these two criteria are fulfilled is the bacterium considered to be sufficiently characterised. In the case of combinations of several bacteria, the Panel considers that if one microorganism used in the combination is not sufficiently characterised, the combination proposed is not sufficiently characterised. The Panel considers that the food constituents which are the subject of this opinion are not sufficiently characterised. On the basis of the data presented, the Panel concludes that a cause and effect relationship cannot be established between the consumption of the food constituents which are the subject of this opinion and the claimed effects. © European Food Safety Authority, 2012

KEY WORDS

Microorganism, non-characterised, health claims.

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SUMMARY

Following a request from the European Commission, the Panel on Dietetic Products, Nutrition and Allergies (NDA) was asked to provide a scientific opinion on a list of health claims pursuant to Article 13 of Regulation (EC) No 1924/2006. The Commission has agreed with EU Member States that a certain number of Article 13 health claims would be eligible for further assessment by EFSA in order to be able to take a final decision on whether or not to include these claims in the list of permitted health claims. This opinion addresses the scientific substantiation of health claims related to microorganisms for which the Panel considers that the data provided are not sufficient to characterise the microorganisms in question. The scientific substantiation is based on the information provided by the competent Authority of Italy for further assessment of this claim.

The criteria used by the Panel for the characterisation of food constituents that are bacteria and combinations thereof, which are the subject of health claims, are:

- Species identification by DNA-DNA hybridisation or 16S rRNA gene sequence analysis and/or sequence analysis of other relevant genetic markers.
- Strain identification by DNA macrorestriction followed by pulsed-field gel electrophoresis (PFGE), randomly amplified polymorphic DNA analysis (RAPD), or other internationally accepted genetic typing molecular methods.

Only when these two criteria are fulfilled is the bacterium considered to be sufficiently characterised. In the case of combinations of several bacteria, the Panel considers that if one microorganism used in the combination is not sufficiently characterised, the combination proposed is not sufficiently characterised.

The foods/food constituents that are the subject of this opinion are:

- Bifidobacterium breve BR03 related to the following claimed effect: “intestinal mobility” (ID 2936).
- Bifidobacterium longum BL03 related to the following claimed effect: “intestinal mobility” (ID 2937).
- A combination of Bifidobacterium breve BR03 and Lactobacillus plantarum LP01 related to the following claimed effect: “reducing gastrointestinal discomfort associated with increased transit time” (ID 2938).
- A combination of Bifidobacterium animalis subsp. lactis BS01, Lactobacillus rhamnosus LR04, Lactobacillus plantarum LP02 and short-chain fructo-oligosaccharides related to the following claimed effect: “defence against upper respiratory tract infections” (ID 2941).
- A combination of Lactobacillus acidophilus LA02 and Lactobacillus plantarum LP01 related to the following claimed effect: “relief of abdominal discomfort and pain” (ID 2944).
- Lactobacillus plantarum LP01 related to the following claimed effect: “intestinal mobility” (ID 2965).
- Lactobacillus rhamnosus LR04 related to the following claimed effect: “balancing intestinal flora, improves skin, scalp and hair health” (ID 2968) and “reduce the daily number of bowel movements” (ID 2969).
- Bifidobacterium adolescentis BA02 related to the following claimed effect: “intestinal motility” (ID 3035).
- A combination of *Bifidobacterium animalis* subsp. *lactis* BS01, *Lactobacillus rhamnosus* LR04, *Lactobacillus rhamnosus* LR05, *Lactobacillus plantarum* LP01, *Lactobacillus plantarum* LP02 and short-chain fructo-oligosaccharides or galacto-oligosaccharides related to the following claimed effect: “defence against upper respiratory tract infections” (ID 3047).

- *Bifidobacterium longum* W11 related to the following claimed effect: “relief of abdominal discomfort and bloating” (ID 3056).

- A combination of *Bifidobacterium animalis* subsp. *lactis* BS01, *Lactobacillus rhamnosus* LR04, *Lactobacillus plantarum* LP02, lactoferrin and short-chain fructo-oligosaccharides related to the following claimed effect: “defence against upper respiratory tract infections”.

The Panel considers that the food constituents which are the subject of this opinion are not sufficiently characterised.

On the basis of the data presented, the Panel concludes that a cause and effect relationship cannot be established between the consumption of the food constituents which are the subject of this opinion and the proposed claimed effects.
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INTRODUCTION

The Commission has agreed with EU Member States that a certain number of Article 13 health claims would be eligible for further assessment by EFSA in order to be able to take a final decision on whether or not to include these claims in the list of permitted health claims. These claims include already assessed claims related to micro-organisms which the Panel considered to be not sufficiently characterised and claims for which the NDA Panel concluded that there was insufficient evidence to establish a cause and effect relationship between the consumption of the food and the claimed effect.

Following an opinion of the NDA Panel on a health claim pursuant to Article 13 of Regulation (EC) No 1924/2006 in which the Panel concluded that the data available were not sufficient to characterise Bifidobacterium breve BR 03 (DSM 16604) (ID 2936), Bifidobacterium breve BL 03 (DSM 16603) (ID 2937), a combination of Bifidobacterium breve BR 03 (DSM 16604) and Lactobacillus plantarum LP 01 (LMG P-21021) (ID 2938), a combination of Bifidobacterium lactis BS 01 (LMG P-21384), Lactobacillus rhamnosus LR 04 (DSM 16605) and Lactobacillus plantarum LP 02 (LMG P-21020) (ID 2941), a combination of Lactobacillus acidophilus LA 02 (LMG P-21381) and Lactobacillus plantarum LP 01 (LMG P-21021) (ID 2944), Lactobacillus plantarum LP 01 (LMG P-21021) (ID 2965), Lactobacillus rhamnosus (ID 2968), Lactobacillus rhamnosus LR 04 (DSM 16605) (ID 2969), Bifidobacterium adolescentis BA 02 (DSM 17103) (ID 3035), a combination of Lactobacillus plantarum LP 01 (LMG P-21021), Lactobacillus plantarum LP 02 (LMG P-21020), Lactobacillus rhamnosus LR 04 (DSM 16605), Lactobacillus rhamnosus LR 05 (DSM 19739) and Bifidobacterium lactis BS 01 (LMG P-21384) (ID 3047), Bifidobacterium longum W11 (LMG P-21586) (ID 3056), and a combination of Bifidobacterium lactis BS 01 (LMG P-21384), Lactobacillus rhamnosus LR 04 (DSM 16605) and Lactobacillus plantarum LP 02 (LMG P-21020) (ID 3059) (EFSA Panel on Dietetic Products Nutrition and Allergies (NDA), 2010), EFSA received additional information from the competent Authority of Italy for further assessment of this claim. The information provided in the framework of further assessment for the health claims which are the subject of this opinion is tabulated in Appendix C.

ASSESSMENT

The approach used in the evaluation of Article 13(1) health claims is explained in the general guidance for stakeholders on the evaluation of Article 13.1, 13.5 and 14 health claims.

In assessing each specific food/health relationship that forms the basis of a health claim the NDA Panel considers the extent to which:

1. the food/constituent is defined and characterised;

2. the claimed effect is defined and is a beneficial physiological effect (“beneficial to human health”);

3. a cause and effect relationship is established between the consumption of the food/constituent and the claimed effect (for the target group under the proposed conditions of use).

Substantiation of the claim is dependent on a favourable outcome of the assessment of 1, 2 and 3 above. Thus, a cause and effect relationship is considered not to be established if the outcome of any one of these assessments is unfavourable.

For a claim, each relationship between a food/constituent and a claimed effect is assessed separately, and individual assessments are combined, as appropriate, to form coherent opinions.

1. **Characterisation of the food/constituent**

The criteria used by the Panel for the characterisation of food constituents that are bacteria and combinations thereof, which are the subject of health claims, are specified in previous opinions (EFSA Panel on Dietetic Products Nutrition and Allergies (NDA), 2009, 2010, 2011) and are:

- Species identification by DNA-DNA hybridisation or 16S rRNA gene sequence analysis and/or sequence analysis of other relevant genetic markers.
- Strain identification by DNA macrorestriction followed by pulsed-field gel electrophoresis (PFGE), randomly amplified polymorphic DNA analysis (RAPD), or other internationally accepted genetic typing molecular methods.

Only when these two criteria are fulfilled is the bacterium considered to be sufficiently characterised. In the case of combinations of several bacteria, the Panel considers that if one microorganism used in the combination is not sufficiently characterised, the combination proposed is not sufficiently characterised.

1.1. **Bifidobacterium breve BR03 (ID 2936)**

The food constituent that is the subject of the health claim is *Bifidobacterium breve* BR03 related to the following claimed effect: “intestinal mobility”.

For *B. breve* BR03, a culture collection number from the German Collection of Microorganisms and Cell Cultures (DSMZ), DSM 16604, was provided. The DSMZ is an internationally recognised culture collection which has the status of an International Depositary Authority under the Budapest Treaty. In the DSMZ, cultures can be deposited in a restricted-access collection as patent deposits. Data on the identification and characterisation of *B. breve* BR03 at species and strain level, by using both phenotypic (enzymatic activity pattern, carbohydrate fermentation profile, PAGE, antibiotic resistance profiles) and genotypic (species-specific PCR, ERIC-PCR, PFGE) methods, were provided in the application for further assessment and in the accompanying references (Del Piano et al., 2010). The Panel notes that the use of species-specific PCR as unique molecular technique is insufficient to ensure the correct assignation of the species identity.

The Panel considers that the food constituent, *B. breve* BR03, which is the subject of the claim, is not sufficiently characterised.

The Panel concludes that a cause and effect relationship cannot be established between the consumption of *B. breve* BR03 and the claimed effect considered in this section.

1.2. **Bifidobacterium longum BL03 (ID 2937)**

The food constituent that is the subject of the health claim is *Bifidobacterium longum* BL03 related to the following claimed effect: “intestinal mobility”.

For *B. longum* BL03, a culture collection number from the DSMZ, DSM 16603, was provided. Data on the identification and characterisation of *B. longum* BL03 at species and strain level, by using both phenotypic (enzymatic activity pattern, carbohydrate fermentation profile, PAGE, antibiotic resistance profiles) and genotypic (species-specific PCR, PFGE) methods, were provided in the application for
further assessment. The Panel notes that the use of species-specific PCR as unique molecular technique is insufficient to ensure the correct assignation of the species identity.

The Panel considers that the food constituent, *B. longum* BL03, which is the subject of the claim, is not sufficiently characterised.

The Panel concludes that a cause and effect relationship cannot be established between the consumption of *B. longum* BL03 and the claimed effect considered in this section.

1.3. A combination of *Bifidobacterium breve* BR03 and *Lactobacillus plantarum* LP01 (ID 2938)

The food constituent that is the subject of the health claim is a combination of *Bifidobacterium breve* BR03 and *Lactobacillus plantarum* LP01 related to the following claimed effect: “reducing gastrointestinal discomfort associated with increased transit time”.

For *B. breve* BR03, a culture collection number from the DSMZ, DSM 16604, was provided. Data on the identification and characterisation of *B. breve* BR03 at species and strain level, by using both phenotypic (enzymatic activity pattern, carbohydrate fermentation profile, PAGE, antibiotic resistance profiles) and genotypic (ERIC-PCR, species-specific PCR, PFGE) methods, were provided in the application for further assessment and in the accompanying references (Del Piano et al., 2010). The Panel notes that the use of species-specific PCR as unique molecular technique is insufficient to ensure the correct assignation of the species identity, and considers that the strain *B. breve* BR03 is not sufficiently characterised.

For *L. plantarum* LP01, a culture collection number from the Belgian Co-ordinated Collections of Microorganisms (BCCM/LMG), LMG P-21021, was provided. The BCCM/LMG is an internationally recognised culture collection which has the status of an International Depositary Authority under the Budapest Treaty. In the LMG, cultures can be deposited in a restricted-access collection for safe deposit or for patent purposes. Data on the identification and characterisation of *L. plantarum* LP01 at species and strain level, by using both phenotypic (enzymatic activity pattern, carbohydrate fermentation profile, PAGE, antibiotic resistance profiles) and genotypic (species-specific PCR, PFGE) methods, were provided in the application for further assessment and in the accompanying references (Del Piano et al., 2010). The Panel notes that the use of species-specific PCR as unique molecular technique is insufficient to ensure the correct assignation of the species identity, and considers that the strain *L. plantarum* LP01 is not sufficiently characterised.

The Panel considers that the food constituent, a combination of *B. breve* BR03 and *L. plantarum* LP01, which is the subject of the health claim, is not sufficiently characterised.

The Panel concludes that a cause and effect relationship cannot be established between the consumption of a combination of *B. breve* BR03 and *L. plantarum* LP01 and the claimed effect considered in this section.

1.4. A combination of *Bifidobacterium animalis* subsp. *lactis* BS01, *Lactobacillus rhamnosus* LR04, *Lactobacillus plantarum* LP02 and short-chain fructo-oligosaccharides (ID 2941)

The food constituent that is the subject of the health claim is a combination of *Bifidobacterium lactis* BS01, *Lactobacillus rhamnosus* LR04, *Lactobacillus plantarum* LP02 and short-chain fructo-oligosaccharides related to the following claimed effect: “defence against upper respiratory tract infections”.

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For *B. lactis* BS01, hereafter *B. animalis* subsp. *lactis* BS01, since the species *B. lactis* has been reclassified as *B. animalis* subsp. *lactis* (Masco et al., 2004), a culture collection number from the BCCM/LMG, LMG P-21384, was provided. Data on the identification and characterisation of *B. lactis* BS01 at species and strain level, by using both phenotypic (enzymatic activity pattern, carbohydrate fermentation profile, PAGE, antibiotic resistance profiles) and genotypic (species-specific PCR, Rep-PCR, MLST, and genome sequencing [publicly available at genbank, Project ID 59607]) methods, were provided in the application for further assessment and in the accompanying references (Del Piano et al., 2010). The Panel considers that the strain *B. animalis* subsp. *lactis* BS01 is sufficiently characterised.

For *L. rhamnosus* LR04 a culture collection number from the DSMZ, DSM 16605, was provided. Data on the identification and characterisation of *L. rhamnosus* LR04 at species and strain level, by using both phenotypic (carbohydrate fermentation pattern, enzymatic activity pattern, PAGE, antibiotic resistance profile) and genotypic (species-specific PCR, PFGE) methods, were provided in the application for further assessment. The Panel notes that the use of species-specific PCR as unique molecular technique is insufficient to ensure the correct assignation of the species identity, and considers that the strain *L. rhamnosus* LR04 is not sufficiently characterised.

For *L. plantarum* LP02 a culture collection number from the BCCM/LMG, LMG P-21020, was provided. Data on the identification and characterisation of *L. plantarum* LP02 at species and strain level, by using both phenotypic (carbohydrate fermentation pattern, enzymatic activity pattern, PAGE, antibiotic resistance profile) and genotypic (species-specific PCR, PFGE) methods, were provided in the application for further assessment and in the accompanying references (Del Piano et al., 2010). The Panel notes that the use of species-specific PCR as unique molecular technique is insufficient to ensure the correct assignation of the species identity, and considers that the strain *L. plantarum* LP02 is not sufficiently characterised.

From the references provided, the Panel assumes that the fructo-oligosaccharides (FOS) are obtained from sucrose. They are prepared by enzymatic elongation of sucrose, and consist of a mixture of kestose (glucose-fructose-fructose, GF2), nystose (GF3) and fructosylnystose (GF4), with an average degree of polymerisation (DPav) of 3.6, and are sometimes referred to as short-chain fructo-oligosaccharides. FOS from sucrose differ from natural fructans by degree of polymerisation (DP) (only 10 % of native chicory inulin have a DP between 2 and 5) (Roberfroid, 2007), and differ from oligofructoses prepared by inulin hydrolysis (DP from 2 to 7, DPav 4) by the presence of a glucose moiety.

The Panel considers that the food constituent, a combination of *B. animalis* subsp. *lactis* BS01, *L. rhamnosus* LR04, *L. plantarum* LP02 and short-chain fructo-oligosaccharides, which is the subject of the health claim, is not sufficiently characterised.

The Panel concludes that a cause and effect relationship cannot be established between the consumption of a combination of *B. animalis* subsp. *lactis* BS01, *L. rhamnosus* LR04, *L. plantarum* LP02 and short-chain fructo-oligosaccharides and the claimed effect considered in this section.

### 1.5. A combination of *Lactobacillus acidophilus* LA02 and *Lactobacillus plantarum* LP01 (ID 2944)

The food constituent that is the subject of the health claim is a combination of *Lactobacillus acidophilus* LA02 and *Lactobacillus plantarum* LP01 related to the following claimed effect: “relief of abdominal discomfort and pain”.

For *L. acidophilus* LA02 a culture collection number from the DSMZ, DSM 21717, was provided. Data on the identification and characterisation of *L. acidophilus* LA02 at species and strain level, by
using both phenotypic (enzymatic activity pattern, carbohydrate fermentation profile, PAGE, antibiotic resistance profiles) and genotypic (species-specific PCR, PFGE) methods, were provided in the application for further assessment. The Panel notes that the use of species-specific PCR as unique molecular technique is insufficient to ensure the correct assignation of the species identity, and considers that the strain \textit{L. acidophilus} LA02 is not sufficiently characterised.

For \textit{L. plantarum} LP01 a culture collection number from the BCCM/LMG, LMG P-21021, was provided. Data on the identification and characterisation of \textit{L. plantarum} LP01 at species and strain level, by using both phenotypic (enzymatic activity pattern, carbohydrate fermentation profile, PAGE, antibiotic resistance profiles) and genotypic (species-specific PCR, PFGE) methods, were provided in the application for further assessment and in the accompanying references (Del Piano et al., 2010). The Panel notes that the use of species-specific PCR as unique molecular technique is insufficient to ensure the correct assignation of the species identity, and considers that the strain \textit{L. plantarum} LP01 is not sufficiently characterised.

The Panel considers that the food constituent, a combination of \textit{L. acidophilus} LA02 and \textit{L. plantarum} LP01, which is the subject of the health claim, is not sufficiently characterised.

The Panel concludes that a cause and effect relationship cannot be established between the consumption of a combination of \textit{L. acidophilus} LA02 and \textit{L. plantarum} LP01 and the claimed effect considered in this section.

1.6. \textit{Lactobacillus plantarum} LP01 (ID 2965)

The food constituent that is the subject of the health claim is \textit{Lactobacillus plantarum} LP01 related to the following claimed effect: “intestinal mobility”.

A culture collection number from the BCCM/LMG, LMG P-21021, was provided. Data on the identification and characterisation of \textit{L. plantarum} LP01 at species and strain level, by using both phenotypic (enzymatic activity pattern, carbohydrate fermentation profile, PAGE, antibiotic resistance profiles) and genotypic (species-specific PCR, PFGE) methods, were provided in the application for further assessment and in the accompanying references (Del Piano et al., 2010). The Panel notes that the use of species-specific PCR as unique molecular technique is insufficient to ensure the correct assignation of the species identity.

The Panel considers that the food constituent, \textit{L. plantarum} LP01, which is the subject of the health claim, is not sufficiently characterised.

The Panel concludes that a cause and effect relationship cannot be established between the consumption of \textit{L. plantarum} LP01 and the claimed effect considered in this section.

1.7. \textit{Lactobacillus rhamnosus} LR04 (ID 2968, 2969)

The food constituent that is the subject of the health claims is \textit{Lactobacillus rhamnosus} LR04 related to the following claimed effect: “balancing intestinal flora, improves skin, scalp and hair health” (ID 2968) and “reduce the daily number of bowel movements” (ID 2969).

A culture collection number from the DSMZ, DSM 16605, was provided. Data on the identification and characterisation of \textit{L. rhamnosus} LR04 at species and strain level, by using both phenotypic (carbohydrate fermentation pattern, enzymatic activity pattern, PAGE, antibiotic resistance profile) and genotypic (species-specific PCR, PFGE) methods, were provided in the application for further assessment and in the accompanying annexes. The Panel notes that the use of species-specific PCR as unique molecular technique is insufficient to ensure the correct assignation of the species identity.
The Panel considers that the food constituent, *L. rhamnosus* LR04, which is the subject of the health claims, is not sufficiently characterised.

The Panel concludes that a cause and effect relationship cannot be established between the consumption of *L. rhamnosus* LR04 and the claimed effects considered in this section.

### 1.8. *Bifidobacterium adolescentis* BA02 (ID 3035)

The food constituent that is the subject of the health claim is *Bifidobacterium adolescentis* BA02 related to the following claimed effect: “intestinal motility”.

A culture collection number from the DSMZ, DSM 17103, was provided. Data on the identification and characterisation of *B. adolescentis* BA02 at species and strain level, by using both phenotypic (carbohydrate fermentation pattern, enzymatic activity pattern, PAGE, antibiotic resistance profile) and genotypic (species-specific PCR, PFGE) methods, were provided in the application for further assessment and in the accompanying annexes. The Panel notes that the use of species-specific PCR as unique molecular technique is insufficient to ensure the correct assignation of the species identity.

The Panel considers that the food constituent, *B. adolescentis* BA02, which is the subject of the health claim, is not sufficiently characterised.

The Panel concludes that a cause and effect relationship cannot be established between the consumption of *B. adolescentis* BA02 and the claimed effect considered in this section.

### 1.9. A combination of *Bifidobacterium animalis* subsp. *lactis* BS01, *Lactobacillus rhamnosus* LR04, *Lactobacillus rhamnosus* LR05, *Lactobacillus plantarum* LP01 and *Lactobacillus plantarum* LP02 and short-chain fructo-oligosaccharides or galacto-oligosaccharides (ID 3047)

The food constituent that is the subject of the health claim is a combination of *Bifidobacterium lactis* BS01, *Lactobacillus rhamnosus* LR04, *Lactobacillus rhamnosus* LR05, *Lactobacillus plantarum* LP01, *Lactobacillus plantarum* LP02 and short-chain fructo-oligosaccharides or galacto-oligosaccharides related to the following claimed effect: “defence against upper respiratory tract infections”.

For *B. lactis* BS01, hereafter *B. animalis* subsp. *lactis* BS01, since the species *B. lactis* has been reclassified as *B. animalis* subsp. *lactis* (Masco et al., 2004), a culture collection number from the BCCM/LMG, LMG P-21384, was provided. Data on the identification and characterisation of *B. animalis* subsp. *lactis* BS01 at species and strain level, by using both phenotypic (enzymatic activity pattern, carbohydrate fermentation profile, PAGE, antibiotic resistance profiles) and genotypic (species-specific PCR, Rep-PCR, MLST and genome sequencing [publicly available at genbank, Project ID 59607]) methods, were provided in the application for further assessment and in the accompanying references (Del Piano et al., 2010). The Panel considers that the strain *Bifidobacterium animalis* subsp. *lactis* BS01 is sufficiently characterised.

For *L. rhamnosus* LR04 a culture collection number from the DSMZ, DSM 16605, was provided. Data on the identification and characterisation of *L. rhamnosus* LR04 at species and strain level, by using both phenotypic (carbohydrate fermentation pattern, enzymatic activity pattern, PAGE, antibiotic resistance profile) and genotypic (species-specific PCR, PFGE) methods, were provided in the application for further assessment. The Panel notes that the use of species-specific PCR as unique molecular technique is insufficient to ensure the correct assignation of the species identity, and considers that the strain *L. rhamnosus* LR04 is not sufficiently characterised.
For *L. rhamnosus* LR05 a culture collection number from the DSMZ, DSM 19739, was provided. Data on the identification and characterisation of *L. rhamnosus* LR05 at species and strain level, by using both phenotypic (carbohydrate fermentation pattern, enzymatic activity profile, PAGE, antibiotic resistance profile) and genotypic (species-specific PCR, PFGE) methods, were provided in the application for further assessment. The Panel notes that the use of species-specific PCR as unique molecular technique is insufficient to ensure the correct assignation of the species identity, and considers that the strain *L. rhamnosus* LR05 is not sufficiently characterised.

For *L. plantarum* LP01 a culture collection number from the BCCM/LMG, LMG P-21021, was provided. Data on the identification and characterisation of *L. plantarum* LP01 at species and strain level, by using both phenotypic (enzymatic activity pattern, carbohydrate fermentation profile, PAGE, antibiotic resistance profiles) and genotypic (species-specific PCR, PFGE) methods, were provided in the application for further assessment and in the accompanying references (Del Piano et al., 2010). The Panel notes that the use of species-specific PCR as unique molecular technique is insufficient to ensure the correct assignation of the species identity, and considers that the strain *L. plantarum* LP01 is not sufficiently characterised.

For *L. plantarum* LP02 a culture collection number from the BCCM/LMG, LMG P-21020, was provided. Data on the identification and characterisation of *L. plantarum* LP02 at species and strain level, by using both phenotypic (carbohydrate fermentation pattern, enzymatic activity pattern, PAGE, antibiotic resistance profile) and genotypic (species-specific PCR, PFGE) methods, were provided in the application for further assessment and in the accompanying references (Del Piano et al., 2010). The Panel notes that the use of species-specific PCR as unique molecular technique is insufficient to ensure the correct assignation of the species identity, and considers that the strain *L. plantarum* LP02 is not sufficiently characterised.

From the references provided, the Panel assumes that the fructo-oligosaccharides (FOS) are obtained from sucrose. They are prepared by enzymatic elongation of sucrose, and consist of a mixture of kestose (glucose-fructose-fructose, GF2), nystose (GF3) and fructosylnystose (GF4), with an average degree of polymerisation (DPav) of 3.6, and are sometimes referred to as short-chain fructo-oligosaccharides. FOS from sucrose differ from natural fructans by degree of polymerisation (DP) (only 10 % of native chicory inulin have a DP between 2 and 5) (Roberfroid, 2007), and differ from oligofructoses prepared by inulin hydrolysis (DP from 2 to 7, DPav 4) by the presence of a glucose moiety.

Galacto-oligosaccharides (GOS) are formed by enzymatic treatment of lactose with β-galactosidases with transgalactosylation activities to produce several oligomers of different chain lengths. In the reaction 4'- or 6'-galactosyl-lactose, longer oligosaccharides, transgalactosylated disaccharides and non-reducing oligosaccharides are formed. The microbial source of β-galactosidase affects the utilisation of the substrate by gut bacteria (Depeint et al., 2008). The Panel notes that there are different GOS with different chain lengths.

The Panel considers that the food constituent, a combination of *B. animalis* subsp. *lactis* BS01, *L. rhamnosus* LR04, *L. rhamnosus* LR05, *L. plantarum* LP01, *L. plantarum* LP02, and short-chain fructo-oligosaccharides or galacto-oligosaccharides, which is the subject of the health claim, is not sufficiently characterised.

The Panel concludes that a cause and effect relationship cannot be established between the consumption of a combination of *B. animalis* subsp. *lactis* BS01, *L. rhamnosus* LR04, *L. rhamnosus* LR05, *L. plantarum* LP01, *L. plantarum* LP02 and short-chain fructo-oligosaccharides or galacto-oligosaccharides and the claimed effect considered in this section.
1.10. Bifidobacterium longum W11 (ID 3056)

The food constituent that is the subject of the health claim is *Bifidobacterium longum* W11 related to the following claimed effect: “relief of abdominal discomfort and bloating”.

A culture collection number from the BCCM/LMG, LMG P-21586, was provided. Data on the identification and characterisation of *B. longum* W11 at species and strain level, by using both phenotypic (enzymatic activity pattern, carbohydrate fermentation profile, PAGE, antibiotic resistance profile) and genotypic (species-specific PCR, PFGE) methods, were provided in the application for further assessment and in the accompanying references (Morelli, 2003; No authors listed, 2011). The Panel notes that the use of species-specific PCR as unique molecular technique is insufficient to ensure the correct assignment of the species identity.

The Panel considers that the food constituent, *B. longum* W11, which is the subject of the health claim, is not sufficiently characterised.

The Panel concludes that a cause and effect relationship cannot be established between the consumption of *B. longum* W11 and the claimed effect considered in this section.

1.11. A combination of *Bifidobacterium animalis* subsp. *lactis* BS01, *Lactobacillus rhamnosus* LR04, *Lactobacillus plantarum* LP02, lactoferrin and short-chain fructo-oligosaccharides (ID 3059)

The food constituent that is the subject of the health claim is a combination of *Bifidobacterium lactis* BS01, *Lactobacillus rhamnosus* LR04, *Lactobacillus plantarum* LP02, lactoferrin and short-chain fructo-oligosaccharides related to the following claimed effect: “defence against upper respiratory tract infections”.

For *B. lactis* BS01, hereafter *B. animalis* subsp. *lactis* BS01, since the species *B. lactis* has been reclassified as *B. animalis* subsp. *lactis* (Mascio et al., 2004), a culture collection number from the BCCM/LMG, LMG P-21384, was provided. Data on the identification and characterisation of *B. lactis* BS01 at species and strain level, by using both phenotypic (enzymatic activity pattern, carbohydrate fermentation profile, PAGE, antibiotic resistance profiles) and genotypic (species-specific PCR, Rep-PCR, MLST and genome sequencing [publicly available at genbank, Project ID 59607]) methods, were provided in the application for further assessment and in the accompanying references (Del Piano et al., 2010). The Panel considers that the strain *B. animalis* subsp. *lactis* BS01 is sufficiently characterised.

For *L. rhamnosus* LR04 a culture collection number from the DSMZ, DSM 16605, was provided. Data on the identification and characterisation of *L. rhamnosus* LR04 at species and strain level, by using both phenotypic (carbohydrate fermentation pattern, enzymatic activity pattern, PAGE, antibiotic resistance profile) and genotypic (species-specific PCR, PFGE) methods, were provided in the application for further assessment. The Panel notes that the use of species-specific PCR as unique molecular technique is insufficient to ensure the correct assignment of the species identity, and considers that the strain *L. rhamnosus* LR04 is not sufficiently characterised.

For *L. plantarum* LP02 a culture collection number from the BCCM/LMG, LMG P-21020, was provided. Data on the identification and characterisation of *L. plantarum* LP02 at species and strain level, by using both phenotypic (carbohydrate fermentation pattern, enzymatic activity pattern, PAGE, antibiotic resistance profile) and genotypic (species-specific PCR, PFGE) methods, were provided in the application for further assessment and in the accompanying references (Del Piano et al., 2010). The Panel notes that the use of species-specific PCR as unique molecular technique is insufficient to ensure the correct assignment of the species identity, and considers that the strain *L. plantarum* LP02 is not sufficiently characterised.
Lactoferrin is a globular glycoprotein with a molecular mass of approximately 77 kDa which occurs naturally in cow’s milk. The tertiary structure of this glycoprotein has two iron-binding sites, which enables it to bind two Fe$^{3+}$ ions per molecule of protein.

From the references provided, the Panel assumes that the fructo-oligosaccharides (FOS) are obtained from sucrose. They are prepared by enzymatic elongation of sucrose, and consist of a mixture of kestose (glucose-fructose-fructose, GF2), nystose (GF3) and fructosylnystose (GF4), with an average degree of polymerisation (DPav) of 3.6, and are sometimes referred to as short-chain fructo-oligosaccharides. FOS from sucrose differ from natural fructans by degree of polymerisation (DP) (only 10 % of native chicory inulin have a DP between 2 and 5) (Roberfroid, 2007), and differ from oligofructoses prepared by inulin hydrolysis (DP from 2 to 7, DPav 4) by the presence of a glucose moiety.

The Panel considers that the food constituent, a combination of *B. animalis* subsp. *lactis* BS01, *L. rhamnosus* LR04, *L. plantarum* LP02, lactoferrin and short-chain fructo-oligosaccharides, which is the subject of the health claim, is not sufficiently characterised.

The Panel concludes that a cause and effect relationship cannot be established between the consumption of *B. animalis* subsp. *lactis* BS01, *L. rhamnosus* LR04, *L. plantarum* LP02, lactoferrin and short-chain fructo-oligosaccharides and the claimed effect considered in this section.

**CONCLUSIONS**

On the basis of the data presented, the Panel concludes that:

- The following food constituents are not sufficiently characterised:
  - *Bifidobacterium breve* BR03 related to the following claimed effect: “intestinal mobility” (ID 2936).
  - *Bifidobacterium longum* BL03 related to the following claimed effect: “intestinal mobility” (ID 2937).
  - A combination of *Bifidobacterium breve* BR03 and *Lactobacillus plantarum* LP01 related to the following claimed effect: “reducing gastrointestinal discomfort associated with increased transit time” (ID 2938).
  - A combination of *Bifidobacterium animalis* subsp. *lactis* BS01, *Lactobacillus rhamnosus* LR04, *Lactobacillus plantarum* LP02, and short-chain fructo-oligosaccharides related to the following claimed effect: “defence against upper respiratory tract infections” (ID 2941).
  - A combination of *Lactobacillus acidophilus* LA02 and *Lactobacillus plantarum* LP01 related to the following claimed effect: “relief of abdominal discomfort and pain” (ID 2944).
  - *Lactobacillus plantarum* LP01 related to the following claimed effect: “intestinal mobility” (ID 2965).
  - *Lactobacillus rhamnosus* LR04 related to the following claimed effect: “balancing intestinal flora, improves skin, scalp and hair health” (ID 2968) and “reduce the daily number of bowel movements” (ID 2969).
  - *Bifidobacterium adolescentis* BA02 (ID 3035) related to the following claimed effect: “intestinal motility”.
  - A combination of *Bifidobacterium animalis* subsp. *lactis* BS01, *Lactobacillus rhamnosus* LR04, *Lactobacillus rhamnosus* LR05, *Lactobacillus plantarum* LP01, *Lactobacillus...
Health claims related to non-characterised microorganisms (further assessment)

*plantarum* LP02 and short-chain fructo-oligosaccharides or galacto-oligosaccharides related to the following claimed effect: “defence against upper respiratory tract infections” (ID 3047).

- *Bifidobacterium longum* W11 related to the following claimed effect: “relief of abdominal discomfort and bloating” (ID 3056).

- A combination of *Bifidobacterium animalis* subsp. *lactis* BS01, *Lactobacillus rhamnosus* LR04, *Lactobacillus plantarum* LP02, lactoferrin and short-chain fructo-oligosaccharides related to the following claimed effect: “defence against upper respiratory tract infections” (ID 3059).

- A cause and effect relationship cannot be established between the consumption of the food constituents, which are the subject of this opinion, and the proposed claimed effects.

**DOCUMENTATION PROVIDED TO EFSA**


**REFERENCES**


Morelli L (Università Cattolica del Sacro Cuore, Facoltà di Agraria), 2003. Analisi microbiologiche e genetiche che determinino la presenza del ceppo di *Bifidobacterium longum* contenuto nel prodotto *Zir Fos* in campioni fecali.
APPENDICES

APPENDIX A

BACKGROUND AND TERMS OF REFERENCE AS PROVIDED BY THE EUROPEAN COMMISSION

The Regulation 1924/2006 on nutrition and health claims made on foods6 (hereinafter "the Regulation") entered into force on 19th January 2007.

Article 13 of the Regulation foresees that the Commission shall adopt a Community list of permitted health claims other than those referring to the reduction of disease risk and to children's development and health. This Community list shall be adopted through the Regulatory Committee procedure and following consultation of the European Food Safety Authority (EFSA).

Health claims are defined as "any claim that states, suggests or implies that a relationship exists between a food category, a food or one of its constituents and health".

In accordance with Article 13 (1) health claims other than those referring to the reduction of disease risk and to children's development and health are health claims describing or referring to:

a) the role of a nutrient or other substance in growth, development and the functions of the body; or
b) psychological and behavioural functions; or
c) without prejudice to Directive 96/8/EC, slimming or weight-control or a reduction in the sense of hunger or an increase in the sense of satiety or to the reduction of the available energy from the diet.

To be included in the Community list of permitted health claims, the claims shall be:

(i) based on generally accepted scientific evidence; and
(ii) well understood by the average consumer.

Member States provided the Commission with lists of claims as referred to in Article 13 (1) by 31 January 2008 accompanied by the conditions applying to them and by references to the relevant scientific justification. These lists have been consolidated into the list which forms the basis for the EFSA consultation in accordance with Article 13 (3).

ISSUES THAT NEED TO BE CONSIDERED

IMPORTANCE AND PERTINENCE OF THE FOOD7

Foods are commonly involved in many different functions8 of the body, and for one single food many health claims may therefore be scientifically true. Therefore, the relative importance of food e.g. nutrients in relation to other nutrients for the expressed beneficial effect should be considered: for functions affected by a large number of dietary factors it should be considered whether a reference to a single food is scientifically pertinent.

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6 OJ L12, 18/01/2007
7 The term 'food' when used in this Terms of Reference refers to a food constituent, the food or the food category.
8 The term 'function' when used in this Terms of Reference refers to health claims in Article 13(1)(a), (b) and (c).
It should also be considered if the information on the characteristics of the food contains aspects pertinent to the beneficial effect.

**SUBSTANTIATION OF CLAIMS BY GENERALLY ACCEPTABLE SCIENTIFIC EVIDENCE**

Scientific substantiation is the main aspect to be taken into account to authorise health claims. Claims should be scientifically substantiated by taking into account the totality of the available scientific data, and by weighing the evidence, and shall demonstrate the extent to which:

(a) the claimed effect of the food is beneficial for human health,

(b) a cause and effect relationship is established between consumption of the food and the claimed effect in humans (such as: the strength, consistency, specificity, dose-response, and biological plausibility of the relationship),

(c) the quantity of the food and pattern of consumption required to obtain the claimed effect could reasonably be achieved as part of a balanced diet,

(d) the specific study group(s) in which the evidence was obtained is representative of the target population for which the claim is intended.

EFSA has mentioned in its scientific and technical guidance for the preparation and presentation of the application for authorisation of health claims consistent criteria for the potential sources of scientific data. Such sources may not be available for all health claims. Nevertheless it will be relevant and important that EFSA comments on the availability and quality of such data in order to allow the regulator to judge and make a risk management decision about the acceptability of health claims included in the submitted list.

The scientific evidence about the role of a food on a nutritional or physiological function is not enough to justify the claim. The beneficial effect of the dietary intake has also to be demonstrated. Moreover, the beneficial effect should be significant i.e. satisfactorily demonstrate to beneficially affect identified functions in the body in a way which is relevant to health. Although an appreciation of the beneficial effect in relation to the nutritional status of the European population may be of interest, the presence or absence of the actual need for a nutrient or other substance with nutritional or physiological effect for that population should not, however, condition such considerations.

Different types of effects can be claimed. Claims referring to the maintenance of a function may be distinct from claims referring to the improvement of a function. EFSA may wish to comment whether such different claims comply with the criteria laid down in the Regulation.

**WORDING OF HEALTH CLAIMS**

Scientific substantiation of health claims is the main aspect on which EFSA's opinion is requested. However, the wording of health claims should also be commented by EFSA in its opinion.

There is potentially a plethora of expressions that may be used to convey the relationship between the food and the function. This may be due to commercial practices, consumer perception and linguistic or cultural differences across the EU. Nevertheless, the wording used to make health claims should be truthful, clear, reliable and useful to the consumer in choosing a healthy diet.

In addition to fulfilling the general principles and conditions of the Regulation laid down in Article 3 and 5, Article 13(1)(a) stipulates that health claims shall describe or refer to "the role of a nutrient or other substance in growth, development and the functions of the body". Therefore, the requirement to
describe or refer to the 'role' of a nutrient or substance in growth, development and the functions of the body should be carefully considered.

The specificity of the wording is very important. Health claims such as "Substance X supports the function of the joints" may not sufficiently do so, whereas a claim such as "Substance X helps maintain the flexibility of the joints" would. In the first example of a claim it is unclear which of the various functions of the joints is described or referred to contrary to the latter example which specifies this by using the word "flexibility".

The clarity of the wording is very important. The guiding principle should be that the description or reference to the role of the nutrient or other substance shall be clear and unambiguous and therefore be specified to the extent possible i.e. descriptive words/ terms which can have multiple meanings should be avoided. To this end, wordings like "strengthens your natural defences" or "contain antioxidants" should be considered as well as "may" or "might" as opposed to words like "contributes", "aids" or "helps".

In addition, for functions affected by a large number of dietary factors it should be considered whether wordings such as "indispensable", "necessary", "essential" and "important" reflects the strength of the scientific evidence.

Similar alternative wordings as mentioned above are used for claims relating to different relationships between the various foods and health. It is not the intention of the regulator to adopt a detailed and rigid list of claims where all possible wordings for the different claims are approved. Therefore, it is not required that EFSA comments on each individual wording for each claim unless the wording is strictly pertinent to a specific claim. It would be appreciated though that EFSA may consider and comment generally on such elements relating to wording to ensure the compliance with the criteria laid down in the Regulation.

In doing so the explanation provided for in recital 16 of the Regulation on the notion of the average consumer should be recalled. In addition, such assessment should take into account the particular perspective and/or knowledge in the target group of the claim, if such is indicated or implied.

**TERMS OF REFERENCE**

**HEALTH CLAIMS OTHER THAN THOSE REFERRING TO THE REDUCTION OF DISEASE RISK AND TO CHILDREN’S DEVELOPMENT AND HEALTH**

EFSA should in particular consider, and provide advice on the following aspects:

- Whether adequate information is provided on the characteristics of the food pertinent to the beneficial effect.

- Whether the beneficial effect of the food on the function is substantiated by generally accepted scientific evidence by taking into account the totality of the available scientific data, and by weighing the evidence. In this context EFSA is invited to comment on the nature and quality of the totality of the evidence provided according to consistent criteria.

- The specific importance of the food for the claimed effect. For functions affected by a large number of dietary factors whether a reference to a single food is scientifically pertinent.

In addition, EFSA should consider the claimed effect on the function, and provide advice on the extent to which:
Health claims related to non-characterised microorganisms (further assessment)

- the claimed effect of the food in the identified function is beneficial.
- a cause and effect relationship has been established between consumption of the food and the claimed effect in humans and whether the magnitude of the effect is related to the quantity consumed.
- where appropriate, the effect on the function is significant in relation to the quantity of the food proposed to be consumed and if this quantity could reasonably be consumed as part of a balanced diet.
- the specific study group(s) in which the evidence was obtained is representative of the target population for which the claim is intended.
- the wordings used to express the claimed effect reflect the scientific evidence and complies with the criteria laid down in the Regulation.

When considering these elements EFSA should also provide advice, when appropriate:

- on the appropriate application of Article 10 (2) (c) and (d) in the Regulation, which provides for additional labelling requirements addressed to persons who should avoid using the food; and/or warnings for products that are likely to present a health risk if consumed to excess.
APPENDIX B

EFSA DISCLAIMER

The present opinion does not constitute, and cannot be construed as, an authorisation to the marketing of the food/food constituent, a positive assessment of its safety, nor a decision on whether the food/food constituent is, or is not, classified as foodstuffs. It should be noted that such an assessment is not foreseen in the framework of Regulation (EC) No 1924/2006.

It should also be highlighted that the scope, the proposed wordings of the claims and the conditions of use as proposed in the Consolidated List may be subject to changes, pending the outcome of the authorisation procedure foreseen in Article 13(3) of Regulation (EC) No 1924/2006.
## APPENDIX C

Table 1. Health claims related to non-characterised microorganisms, including conditions of use, as proposed in the framework of further assessment.

<table>
<thead>
<tr>
<th>ID</th>
<th>Food or Food constituent</th>
<th>Health Relationship</th>
<th>Proposed wording</th>
</tr>
</thead>
<tbody>
<tr>
<td>2936</td>
<td><em>Bifidobacterium breve</em> BR 03</td>
<td>The intake of <em>Bifidobacterium breve</em> BR 03 is able to help restore a physiological intestinal motility by reducing the transit time in healthy adult subjects with mild to moderately decreased peristalsis and altered bowel habits (number of weekly bowel movements less than 7 and evacuation disorders as straining at evacuation, hard faeces or anal itching, burning, or pain during or after defecation). This beneficial effect was particularly evident in the elderly enrolled in the efficacy study.</td>
<td>Contributes to reduce the intestinal transit time, especially in adults or elderly reporting less than one bowel movement per day, and evacuation disorders.</td>
</tr>
</tbody>
</table>

### Conditions of use

The target population is represented by adults, and especially the elderly with an impaired peristalsis and altered bowel habits (number of weekly bowel movements < 7, evacuation disorders as straining at evacuation, hard faeces or anal itching, burning, or pain during or after defecation). A relatively reduced peristalsis is pretty normal in adult population after 50 years of age, and especially in the elderly. However, it is well known that about 12% of world-wide adult individuals suffer from impaired intestinal peristalsis. In other words, even if the frequency of reduced intestinal motility is higher in the elderly, also a relevant percentage of adult population reports a moderately suboptimal intestinal transit (Heaton KW. et al. Defecation frequency and timing, and stool form in the general population: a prospective study. Gut, 1992; 33:818-824). Subjects with a slightly impaired intestinal motility function (i.e. less frequent evacuations, unsatisfactory sensation of complete emptying) could take advantage from the intake of *Bifidobacterium breve* BR 03 for at least 15 days at a concentration of 10 billion viable cells/day. The microorganism *Bifidobacterium breve* BR 03, which is the subject of the present claim, should be consumed for at least 15 days at a concentration of 10 billion viable cells/day in order to achieve the positive health effect. The subjects are normally directed to take the probiotic once a day, preferably early in the morning or late in the evening in order to be on an empty stomach. It is reasonable to assume that this quantity could be consumed as part of a balanced diet, especially if formulated in the form of a food supplement.

There are no specific restrictions of use. The absence of any side effect or complication was noted throughout the course of the studies in subjects taking 5 or 10 billion viable cells/day. It is well known that probiotics, notably the strains belonging to a species with a Qualified Presumption of Safety (QPS), could be consumed in amounts up to 1011-1012 viable cells/day without any health risk. There are many products on the market containing up to 500 billion of viable cells per dose of a probiotic belonging to a QPS species. No health risk has ever been reported so far. The species *Bifidobacterium breve* is included in the QPS list.

The general recommendation is to take probiotics on an empty stomach and to rehydrate the product using about half glass of cold water or other non-carbonated drinks at temperatures not exceeding 37°C. There are no other specific directions for preparation and/or use.
The intake of *Bifidobacterium longum* BL 03 is able to help restore a physiological intestinal motility by reducing the transit time in healthy adult subjects with mild to moderately decreased peristalsis and altered bowel habits (number of weekly bowel movements less than 7 and evacuation disorders as straining at evacuation, hard faeces or anal itching, burning, or pain during or after defecation). This beneficial effect was particularly evident in the elderly enrolled in the efficacy study.

Contributes to reduce the intestinal transit time, especially in adults or elderly reporting less than one bowel movement per day, and evacuation disorders.

**Conditions of use**

The target population is represented by adults, and especially the elderly with an impaired peristalsis and altered bowel habits (number of weekly bowel movements < 7, evacuation disorders as straining at evacuation, hard faeces or anal itching, burning, or pain during or after defecation). A relatively reduced peristalsis is pretty normal in adult population after 50 years of age, and especially in the elderly. However, it is well known that about 12% of world-wide adult individuals suffer from impaired intestinal peristalsis. In other words, even if the frequency of reduced intestinal motility is higher in the elderly, also a relevant percentage of adult population reports a moderately suboptimal intestinal transit (Heaton KW. et al. Defecation frequency and timing, and stool form in the general population: a prospective study. Gut, 1992; 33:818-824).

Subjects with a slightly impaired intestinal motility function (i.e. less frequent bowel movements, unsatisfactory sensation of complete emptying) could take advantage from the intake of *Bifidobacterium longum* BL 03 for at least 15 days at a concentration of 10 billion viable cells/day.

The microorganism *Bifidobacterium longum* BL 03, which is the subject of the present claim, should be consumed for at least 15 days at a concentration of 10 billion viable cells/day in order to achieve the positive health effect. The subjects are normally directed to take the probiotic once a day, preferably early in the morning or late in the evening in order to be on an empty stomach. It is reasonable to assume that this quantity could be consumed as part of a balanced diet, especially if formulated in the form of a food supplement.

There are no specific restrictions of use. The absence of any side effect or complication was noted throughout the course of the study in subjects taking 10 billion viable cells/day. It is well known that probiotics, notably the strains belonging to a species with a Qualified Presumption of Safety (QPS), could be consumed in amounts up to 1011-1012 viable cells/day without any health risk. There are many products on the market containing up to 500 billion of viable cells per dose of a probiotic belonging to a QPS species. No health risk has ever been reported so far. The species *Bifidobacterium longum* is included in the QPS list.

The general recommendation is to take probiotics on an empty stomach and to rehydrate the product using about half glass of cold water or other non-carbonated drinks at temperatures not exceeding 37°C. There are no other specific directions for preparation and/or use.
# Health claims related to non-characterised microorganisms (进一步评估)

<table>
<thead>
<tr>
<th>ID</th>
<th>Food or Food constituent</th>
<th>Health Relationship</th>
<th>Proposed wording</th>
</tr>
</thead>
<tbody>
<tr>
<td>2938</td>
<td>A combination of the two probiotic strains <em>Bifidobacterium breve</em> BR 03 and <em>Lactobacillus plantarum</em> LP 01</td>
<td>The intake of a combination of <em>Bifidobacterium breve</em> BR 03 and <em>Lactobacillus plantarum</em> LP 01 is able to relieve symptoms typically associated with Irritable Bowel Syndrome (IBS), especially abdominal discomfort, and help restore a physiological intestinal motility by reducing the transit time in healthy adult subjects with mild to moderately decreased peristalsis and altered bowel habits (number of weekly bowel movements less than 7 and evacuation disorders as straining at evacuation, hard faeces or anal itching, burning, or pain during or after defecation). This beneficial effect was particularly evident both in adults suffering from IBS enrolled in the first efficacy study (Saggioro A. <em>Journal of Clinical Gastroenterology</em>, 2004) and in adults with slightly to moderately impaired intestinal motility involved in the second study (Del Piano M. et al. <em>Journal of Clinical Gastroenterology</em>, 2010 (b)). It is important to note that most subjects suffering from IBS report also a reduced number of weekly bowel movements.</td>
<td>Reduces intestinal discomfort and abdominal bloating in Irritable Bowel Syndrome and in functional disorders of the gut, also contributing to restore and maintain a physiological intestinal transit.</td>
</tr>
</tbody>
</table>

### Conditions of use

The target population is represented by adults suffering either from Irritable Bowel Syndrome or from mild to moderately reduced intestinal motility, also if associated with abdominal bloating. Some symptoms are common to both conditions taken into account in the two studies. Abdominal bloating, abdominal discomfort and an impaired peristalsis are the best examples.

The combination of *Bifidobacterium breve* BR 03 and *Lactobacillus plantarum* LP 01, which is the subject of the present claim, should be consumed for at least 28 days at a concentration of 2.5 to 5 billion viable cells of each strain/day in order to achieve the positive health effect. The most recent efficacy study, involving the higher number of subjects, demonstrated the efficacy of such combination given at 2.5 billion viable cells of each strain/day. The subjects are normally directed to take the probiotic once a day, preferably early in the morning or late in the evening in order to be on an empty stomach. It is reasonable to assume that this quantity could be consumed as part of a balanced diet, especially if formulated in the form of a food supplement.

There are no specific restrictions of use. The absence of any side effect or complication was noted throughout the course of the studies in subjects taking 2.5 or 5 billion viable cells of each strain/day. It is well known that probiotics, notably the strains belonging to a species with a Qualified Presumption of Safety (QPS), could be consumed in amounts up to 1011-1012 viable cells/day without any health risk. There are many products on the market containing up to 500 billion of viable cells per dose of a probiotic belonging to a QPS species. No health risk has ever been reported so far. The species *Bifidobacterium breve* and *Lactobacillus plantarum* are included in the QPS list.

The general recommendation is to take probiotics on an empty stomach and to rehydrate the product using about half glass of cold water or other non-carbonated drinks at temperatures not exceeding 37°C. There are no other specific directions for preparation and/or use.
### Conditions of use

The target population is represented by normal adults. As a matter of fact, subjects enrolled in the placebo group are fully representative of the general population and the overall incidence of ARI in such group reflected the incidence of ARI in the general population. Subjects were completely healthy at enrolment without any symptom.

Adult subjects could take advantage from the intake of *B. lactis* BS 01, *L. rhamnosus* LR 04 and *L. plantarum* LP 02 for at least 90 days (or, in any case, till the end of the cold season) at a concentration of 10 billion viable cells of each strain/day.

The combination of *B. lactis* BS 01, *L. rhamnosus* LR 04 and *L. plantarum* LP 02, which is the subject of the present claim, should be consumed for at least 90 days (or, in any case, till the end of the cold season) at a concentration of 10 billion viable cells of each strain/day in order to achieve the positive health effect. The subjects are directed to take the probiotic once a day, preferably early in the morning or late in the evening in order to be on an empty stomach. It is reasonable to assume that this quantity could be consumed as part of a balanced diet, especially if formulated in the form of a food supplement.

There are no specific restrictions of use. The absence of any side effect or complication was noted throughout the course of the studies in subjects taking 10 billion viable cells of each strain/day for 90 consecutive days. It is well known that probiotics, notably the strains belonging to a species with a Qualified Presumption of Safety (QPS), could be consumed in amounts up to 10^11-10^12 viable cells/day without any health risk. There are many products on the market containing up to 500 billion of viable cells per dose of a probiotic belonging to a QPS species. No health risk has ever been reported so far. The species *Bifidobacterium lactis*, *Lactobacillus rhamnosus* and *Lactobacillus plantarum* are included in the QPS list.

The general recommendation is to take probiotics on an empty stomach and to rehydrate the product using about half glass of cold water or other non-carbonated drinks at temperatures not exceeding 37°C. There are no other specific directions for preparation and/or use.

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<thead>
<tr>
<th>ID</th>
<th>Food or Food constituent</th>
<th>Health Relationship</th>
<th>Proposed wording</th>
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<tbody>
<tr>
<td>2941</td>
<td>A combination of the three probiotic strains <em>Bifidobacterium lactis</em> BS 01, <em>Lactobacillus rhamnosus</em> LR 04 and <em>Lactobacillus plantarum</em> LP 02. Such combination of strains should be associated with 3 grams of short-chain fructo-oligosaccharides (scFOS), used for their prebiotic properties.</td>
<td>The intake of a combination of <em>Bifidobacterium lactis</em> BS 01, <em>Lactobacillus rhamnosus</em> LR 04 and <em>Lactobacillus plantarum</em> LP 02 is able to reduce the incidence, severity and duration of Acute Respiratory Infections (ARI), especially during the cold season. The efficacy was demonstrated with the three strains in association with 3 grams of the prebiotic fibre short-chain fructo-oligosaccharides (scFOS), specifically selected to enhance the colonization of the gut by the probiotic component.</td>
<td>Contributes to reduce the incidence, duration and severity of symptoms of Acute Respiratory Infections, including flu and influenza-like illnesses, especially during the cold season.</td>
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</table>
Health claims related to non-characterised microorganisms (further assessment)

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<tr>
<th>ID</th>
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<tbody>
<tr>
<td>2944</td>
<td>A combination of the two probiotic strains <em>Lactobacillus acidophilus</em> LA 02 and <em>Lactobacillus plantarum</em> LP 01</td>
<td>The intake of the combination of <em>Lactobacillus acidophilus</em> LA 02 and <em>Lactobacillus plantarum</em> LP 01 is able to relieve symptoms typically associated with Irritable Bowel Syndrome (IBS), especially abdominal discomfort and pain at different locations. This beneficial effect was particularly evident in adults suffering from IBS enrolled in the efficacy study (Saggioro A. Journal of Clinical Gastroenterology, 2004).</td>
<td>Reduces intestinal discomfort and abdominal bloating in Irritable Bowel Syndrome and in functional disorders of the gut.</td>
</tr>
</tbody>
</table>

**Conditions of use**

The target population is represented by adults suffering from Irritable Bowel Syndrome, thus reporting abdominal pain at different locations and related symptoms as flatulence, constipation and bloating.

Subjects reporting IBS symptoms (i.e. abdominal pain or discomfort, generally associated with other conditions as flatulence, constipation and abdominal bloating) could take advantage from the intake of a combination of *Lactobacillus acidophilus* LA 02 and *Lactobacillus plantarum* LP 01 for at least 28 days at a concentration of 5 billion viable cells of each strain/day.

The combination of *Lactobacillus acidophilus* LA 02 and *Lactobacillus plantarum* LP 01, which is the subject of the present claim, should be consumed for at least 28 days at a concentration of 5 billion viable cells of each strain/day in order to achieve the positive health effect. The subjects are normally directed to take the probiotic once a day, preferably early in the morning or late in the evening in order to be on an empty stomach. It is reasonable to assume that this quantity could be consumed as part of a balanced diet, especially if formulated in the form of a food supplement.

There are no specific restrictions of use. The absence of any side effect or complication was noted throughout the course of the study in subjects taking 5 billion viable cells of each strain/day. It is well known that probiotics, notably the strains belonging to a species with a Qualified Presumption of Safety (QPS), could be consumed in amounts up to 1011-1012 viable cells/day without any health risk. There are many products on the market containing up to 500 billion of viable cells per dose of a probiotic belonging to a QPS species. No health risk has ever been reported so far. The species *Lactobacillus acidophilus* and *Lactobacillus plantarum* are included in the QPS list.

The general recommendation is to take probiotics on an empty stomach and to rehydrate the product using about half glass of cold water or other non-carbonated drinks at temperatures not exceeding 37°C. There are no other specific directions for preparation and/or use.
The intake of *Lactobacillus plantarum* LP 01 is able to help restore a physiological intestinal motility by reducing the transit time in healthy adult subjects with mild to moderately decreased peristalsis and altered bowel habits (number of weekly bowel movements less than 7 and evacuation disorders as straining at evacuation, hard faeces or anal itching, burning, or pain during or after defecation). This beneficial effect was particularly evident in the elderly enrolled in the efficacy study.

Contributes to reduce the intestinal transit time, especially in adults or elderly reporting less than one bowel movement per day, and evacuation disorders.

**Conditions of use**

The target population is represented by adults, and especially the elderly with an impaired peristalsis and altered bowel habits (number of weekly bowel movements < 7, evacuation disorders as straining at evacuation, hard faeces or anal itching, burning, or pain during or after defecation). A relatively reduced peristalsis is pretty normal in adult population after 50 years of age, and especially in the elderly. Subjects with a slightly impaired intestinal motility function and altered bowel habits (i.e. less frequent bowel movements, unsatisfactory sensation of complete emptying) could take advantage from the intake of *Lactobacillus plantarum* LP 01 for at least 15 days at a concentration of 10 billion viable cells/day.

The microorganism *Lactobacillus plantarum* LP 01, which is the subject of the present claim, should be consumed for at least 15 days at a concentration of 10 billion viable cells/day in order to achieve the positive health effect. The subjects are normally directed to take the probiotic once a day, preferably early in the morning or late in the evening in order to be on an empty stomach. It is reasonable to assume that this quantity could be consumed as part of a balanced diet, especially if formulated in the form of a food supplement.

There are no specific restrictions of use. The absence of any side effect or complication was noted throughout the course of the studies in subjects taking 5 or 10 billion viable cells/day. It is well known that probiotics, notably the strains belonging to a species with a Qualified Presumption of Safety (QPS), could be consumed in amounts up to 1011-1012 viable cells/day without any health risk. There are many products on the market containing up to 500 billion of viable cells per dose of a probiotic belonging to a QPS species. No health risk has ever been reported so far. The species *Lactobacillus plantarum* is included in the QPS list.

The general recommendation is to take probiotics on an empty stomach and to rehydrate the product using about half glass of cold water or other non-carbonated drinks at temperatures not exceeding 37°C. There are no other specific directions for preparation and/or use.
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<tbody>
<tr>
<td>2968</td>
<td><em>Lactobacillus rhamnosus</em> LR 04</td>
<td><em>Lactobacillus rhamnosus</em> LR 04 (DSM 16605), balancing intestinal flora, improves skin, scalp and hair health reducing scalp scaling. Improves gut absorption and bioavailability of the other components of the food supplements. An increase in stress and modern day living, which makes a consequential demand on the immune system, can disrupt homeostasis in the gut. Similarly, the direct effects of a change in dietary patterns and eating habits can affect overall gut function. Many experimental studies have found that probiotics exert specific effects in the intestinal lumen and on epithelial cells and immune cells with antiallergic potential.</td>
<td><em>Lactobacillus rhamnosus</em> LR 04 (DSM 16605): skin and annexes health: balancing intestinal flora improves skin, scalp and hair health reducing scalp scaling. Improves gut absorption and bioavailability of the other components of the food supplements.</td>
</tr>
</tbody>
</table>

**Conditions of use**

*Lactobacillus rhamnosus* LR 04 (DSM 16605) is used as an ingredient in a dietary supplement. Recommended intake is one tablet per day, which contains at least 10^9 cfu/day, taken preferably with breakfast in the morning.

It is recommended to consumed it as a part of balanced and variety diet and in a healthy lifestyle.

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<tr>
<td>2969</td>
<td><em>Lactobacillus rhamnosus</em> LR 04</td>
<td>The intake of <em>Lactobacillus rhamnosus</em> LR 04 is able to help reduce the daily number of bowel movements as well as improve the consistency of faeces in elderly subjects reporting chronic diarrhea related to Irritable Bowel Syndrome.</td>
<td>Contributes to reduce the number of daily evacuations and improve the consistency of faeces in case of chronic diarrhea related to the following claimed effect: Irritable Bowel Syndrome, especially in the elderly.</td>
</tr>
</tbody>
</table>
Conditions of use

The target population is represented by the adults, and especially the elderly with chronic diarrhea related to the following claimed effect: Irritable Bowel Syndrome.

Adult or elderly subjects with chronic diarrhea (daily number of defecations > 4 and reduced faeces consistency) could take advantage from the intake of *L. rhamnosus* LR 04 for at least 15 days at a concentration of 10 billion viable cells/day.

The strain *Lactobacillus rhamnosus* LR 04, which is the subject of the present claim, should be consumed for at least 15 days at a concentration of 10 billion viable cells/day in order to achieve the positive health effect. The subjects are directed to take the probiotic once a day, preferably early in the morning or late in the evening in order to be on an empty stomach. It is reasonable to assume that this quantity could be consumed as part of a balanced diet, especially if formulated in the form of a food supplement.

There are no specific restrictions of use. The absence of any side effect or complication was noted throughout the course of the study in subjects taking 10 billion viable cells/day for 15 consecutive days. It is well known that probiotics, notably the strains belonging to a species with a Qualified Presumption of Safety (QPS), could be consumed in amounts up to 1011-1012 viable cells/day without any health risk. There are many products on the market containing up to 500 billion of viable cells per dose of a probiotic belonging to a QPS species. No health risk has ever been reported so far. The species *Lactobacillus rhamnosus* is included in the QPS list.

The general recommendation is to take probiotics on an empty stomach and to rehydrate the product using about half glass of cold water or other non-carbonated drinks at temperatures not exceeding 37°C. There are no other specific directions for preparation and/or use.

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<tbody>
<tr>
<td>3035</td>
<td><em>Bifidobacterium adolescentis</em> BA 02</td>
<td>The intake of <em>Bifidobacterium adolescentis</em> BA 02 is able to help restore a physiological intestinal motility by reducing the transit time in healthy adult subjects with mild to moderately decreased peristalsis and altered bowel habits (number of weekly bowel movements less than 7 and evacuation disorders as straining at evacuation, hard faeces or anal itching, burning, or pain during or after defecation). This beneficial effect was particularly evident in the elderly enrolled in the efficacy study.</td>
<td>Contributes to reduce the intestinal transit time, especially in adults or elderly reporting less than one bowel movement per day, and evacuation disorders.</td>
</tr>
</tbody>
</table>
Conditions of use

The target population is represented by adults, and especially the elderly with an impaired peristalsis and altered bowel habits (number of weekly bowel movements < 7, evacuation disorders as straining at evacuation, hard faeces or anal itching, burning, or pain during or after defecation). A relatively reduced peristalsis is pretty normal in adult population after 50 years of age, and especially in the elderly.

Subjects with a slightly impaired intestinal motility function and altered bowel habits (i.e. less frequent bowel movements, unsatisfactory sensation of complete emptying) could take advantage from the intake of *Bifidobacterium adolescentis* BA 02 for at least 15 days at a concentration of 10 billion viable cells/day.

The microorganism *Bifidobacterium adolescentis* BA 02, which is the subject of the present claim, should be consumed for at least 15 days at a concentration of 10 billion viable cells/day in order to achieve the positive health effect. The subjects are normally directed to take the probiotic once a day, preferably early in the morning or late in the evening in order to be on an empty stomach. It is reasonable to assume that this quantity could be consumed as part of a balanced diet, especially if formulated in the form of a food supplement.

There are no specific restrictions of use. The absence of any side effect or complication was noted throughout the course of the study in subjects taking 10 billion viable cells/day. It is well known that probiotics, notably the strains belonging to a species with a Qualified Presumption of Safety (QPS), could be consumed in amounts up to 1011-1012 viable cells/day without any health risk. There are many products on the market containing up to 500 billion of viable cells per dose of a probiotic belonging to a QPS species. No health risk has ever been reported so far. The species *Bifidobacterium adolescentis* is included in the QPS list.

The general recommendation is to take probiotics on an empty stomach and to rehydrate the product using about half glass of cold water or other non-carbonated drinks at temperatures not exceeding 37°C. There are no other specific directions for preparation and/or use.
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<tr>
<td>3047</td>
<td>A combination of the five probiotic strains <em>Bifidobacterium lactis</em> BS 01, <em>Lactobacillus rhamnosus</em> LR 04, <em>Lactobacillus rhamnosus</em> LR 05, <em>Lactobacillus plantarum</em> LP 01 and <em>Lactobacillus plantarum</em> LP 02. Such combination of strains should be associated with 3 or 2.5 grams of either short-chain fructo-oligosaccharides (scFOS) or galacto-oligosaccharides (GOS), respectively. Both fibers are used for their prebiotic properties.</td>
<td>The intake of a combination of <em>Bifidobacterium lactis</em> BS 01, <em>Lactobacillus rhamnosus</em> LR 04, <em>Lactobacillus rhamnosus</em> LR 05, <em>Lactobacillus plantarum</em> LP 01 and <em>Lactobacillus plantarum</em> LP 02 is able to reduce the incidence, severity and duration of Acute Respiratory Infections (ARI), especially during the cold season. The efficacy was demonstrated with the five strains in association with 3 grams of a prebiotic fibre, either short-chain fructo-oligosaccharides (scFOS) or galacto-oligosaccharides (GOS), specifically selected to enhance the colonization of the gut by the probiotic component.</td>
<td>Contributes to reduce the incidence, duration and severity of symptoms of Acute Respiratory Infections, including flu and influenza-like illnesses, especially during the cold season.</td>
</tr>
</tbody>
</table>
Conditions of use

The target population is represented by normal adults. As a matter of fact, subjects enrolled in the placebo group are fully representative of the general population and the overall incidence of ARI in such group reflected the incidence of ARI in the general population. Subjects were completely healthy at enrolment without any symptom.

Adult subjects could take advantage from the intake of \textit{B. lactis} BS 01, \textit{L. rhamnosus} LR 04, \textit{L. rhamnosus} LR 05, \textit{L. plantarum} LP 01 and \textit{L. plantarum} LP 02 for at least 90 days (or, in any case, till the end of the cold season) at a concentration of 15 total billion viable cells/day.

The combination of \textit{B. lactis} BS 01, \textit{L. rhamnosus} LR 04, \textit{L. rhamnosus} LR 05, \textit{L. plantarum} LP 01 and \textit{L. plantarum} LP 02, which is the subject of the present claim, should be consumed for at least 90 days (or, in any case, till the end of the cold season) at a concentration of 15 total billion viable cells/day in order to achieve the positive health effect. In detail, the daily effective dose is 5 billion viable cells of \textit{B. lactis} BS 01, 2.5 billion viable cells of \textit{L. rhamnosus} LR 04, 2.5 billion viable cells of \textit{L. rhamnosus} LR 05, 2.5 billion viable cells of \textit{L. plantarum} LP 01 and 2.5 billion viable cells of \textit{L. plantarum} LP 02. The subjects are directed to take the probiotics once a day, preferably early in the morning or late in the evening in order to be on an empty stomach. It is reasonable to assume that this quantity could be consumed as part of a balanced diet, especially if formulated in the form of a food supplement.

There are no specific restrictions of use. The absence of any side effect or complication was noted throughout the course of the study in subjects taking 15 total billion viable cells/day for 90 consecutive days. It is well known that probiotics, notably the strains belonging to a species with a Qualified Presumption of Safety (QPS), could be consumed in amounts up to 1011-1012 viable cells/day without any health risk. There are many products on the market containing up to 500 billion of viable cells per dose of a probiotic belonging to a QPS species. No health risk has ever been reported so far. The species \textit{Bifidobacterium lactis}, \textit{Lactobacillus rhamnosus} and \textit{Lactobacillus plantarum} are included in the QPS list.

The general recommendation is to take probiotics on an empty stomach and to rehydrate the product using about half glass of cold water or other non-carbonated drinks at temperatures not exceeding 37°C. There are no other specific directions for preparation and/or use.

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<tbody>
<tr>
<td>3056</td>
<td>\textit{Bifidobacterium longum} W11</td>
<td>The intake of \textit{Bifidobacterium longum} W11 is able to relieve symptoms typically associated with Irritable Bowel Syndrome (IBS), especially abdominal discomfort and bloating, and to restore a physiological intestinal motility in IBS subjects with a slightly to moderately decreased peristalsis (number of weekly evacuations less than 7). This beneficial effect was particularly evident in adults suffering from constipation-predominant IBS enrolled in the first efficacy study (Colecchia A. et al. Minerva Gastroenterol Dietol, 2006) and in the second study (Dughera L. et al. Acta Biomed, 2007). The two studies had therefore the same target population.</td>
<td>Contributes to reducing intestinal discomfort and abdominal bloating in Irritable Bowel Syndrome, especially if constipation-predominant, and to restoring a physiological intestinal transit.</td>
</tr>
</tbody>
</table>
Conditions of use

The target population is represented by adults suffering from Irritable Bowel Syndrome, especially constipation-predominant IBS, or from a moderately reduced intestinal motility and number of weekly evacuations.

Subjects reporting IBS symptoms, especially abdominal pain and bloating in constipation-predominant IBS, or a moderately decreased intestinal motility function could take advantage from the intake of Bifidobacterium longum W11 for at least 36 days at a concentration of 5 billion viable cells/day.

The strain Bifidobacterium longum W11, which is the subject of the present claim, should be consumed for at least 36 days at a concentration of at least 5 billion viable cells/day in order to achieve the positive claimed effect on constipation-predominant IBS. The second study, dealing with constipation-type IBS subjects as well, demonstrated the efficacy of 5 billion viable cells/day when consumed for 3 months. In any case, the first study enrolled the higher number of subjects and demonstrated the efficacy as well, therefore it is possible to assume that 36 days are sufficient to mediate the claimed effect. A prolonged intake of the same symbiotic formulation beyond 36 days is able to maintain the beneficial effect over time. It is interesting to note that in both studies each active dose included also short chain fructo-oligosaccharides (2,500 mg). The daily intake of this prebiotic fiber, specifically used to enhance gut colonization by the probiotic, is 2,500 mg. The subjects are normally directed to take the probiotic once a day, preferably early in the morning (before breakfast) or in the evening (before dinner or just before going to bed) in order to be on an empty stomach. It is reasonable to assume that this quantity could be consumed as part of a balanced diet, especially if formulated in the form of a food supplement.

There are no specific restrictions of use. The absence of any side effect or complication was noted throughout the course of the two studies in subjects taking 5 billion viable cells/day. It is well known that probiotics, notably the strains belonging to a species with a Qualified Presumption of Safety (QPS), could be consumed in amounts up to 10^11-10^12 viable cells/day without any health risk. There are many products on the market containing up to 500 billion of viable cells per dose of a probiotic belonging to a QPS species. No health risk has ever been reported so far. The species Bifidobacterium longum is included in the QPS list.

The general recommendation is to take probiotics on an empty stomach and to rehydrate the product using about half glass of cold water or other non-carbonated drinks at temperatures not exceeding 37°C. There are no other specific directions for preparation and/or use.
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<tbody>
<tr>
<td>3059</td>
<td>The food constituent is a combination of the three probiotic strains <em>Bifidobacterium lactis</em> BS 01, <em>Lactobacillus rhamnosus</em> LR 04 and <em>Lactobacillus plantarum</em> LP 02 with lactoferrin. Such combination of strains should be associated with 3 grams of short-chain fructo-oligosaccharides (scFOS), used for their prebiotic properties.</td>
<td>The intake of a combination of <em>Bifidobacterium lactis</em> BS 01, <em>Lactobacillus rhamnosus</em> LR 04 and <em>Lactobacillus plantarum</em> LP 02 with lactoferrin is able to reduce the incidence, severity of symptoms and duration of Acute Respiratory Infections (ARI), especially during the cold season. The efficacy was demonstrated with the three strains and lactoferrin in association with 3 grams of the prebiotic fibre short-chain fructo-oligosaccharides (scFOS), specifically selected to enhance the colonization of the gut by the probiotic component.</td>
<td>Contributes to reduce the incidence, duration and severity of symptoms of Acute Respiratory Infections, including flu and influenza-like illnesses, especially during the cold season.</td>
</tr>
</tbody>
</table>
Conditions of use

The target population is represented by normal adults. As a matter of fact, subjects enrolled in the placebo group are fully representative of the general population and the overall incidence of ARI in such group reflected the incidence of ARI in the general population. Subjects were completely healthy at enrolment without any symptom.

Adult subjects could take advantage from the intake of *B. lactis* BS 01, *L. rhamnosus* LR 04 and *L. plantarum* LP 02 with lactoferrin for at least 90 days (or, in any case, till the end of the cold season) at a concentration of 10 billion viable cells of each strain/day.

The combination of *B. lactis* BS 01, *L. rhamnosus* LR 04 and *L. plantarum* LP 02 with lactoferrin, which is the subject of the present claim, should be consumed for at least 90 days (or, in any case, till the end of the cold season) at a concentration of 10 billion viable cells of each strain/day in order to achieve the positive health effect. Lactoferrin should be consumed at a rate of 0.3 grams per day.

The subjects are directed to take the probiotic with lactoferrin once a day, preferably early in the morning or late in the evening in order to be on an empty stomach. It is reasonable to assume that this quantity could be consumed as part of a balanced diet, especially if formulated in the form of a food supplement.

There are no specific restrictions of use. The absence of any side effect or complication was noted throughout the course of the study in subjects taking 10 billion viable cells of each strain/day for 90 consecutive days. It is well known that probiotics, notably the strains belonging to a species with a Qualified Presumption of Safety (QPS), could be consumed in amounts up to 1011-1012 viable cells/day without any health risk. There are many products on the market containing up to 500 billion of viable cells per dose of a probiotic belonging to a QPS species. No health risk has ever been reported so far. The species *Bifidobacterium lactis*, *Lactobacillus rhamnosus* and *Lactobacillus plantarum* are included in the QPS list.

The general recommendation is to take probiotics on an empty stomach and to rehydrate the product using about half glass of cold water or other non-carbonated drinks at temperatures not exceeding 37°C. There are no other specific directions for preparation and/or use.
## Glossary and Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tr>
<td>BCCM/LMG</td>
<td>Belgian Co-ordinated Collections of Microorganisms/Laboratorium voor Microbiologie, Universiteit Gent</td>
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<tr>
<td>DNA</td>
<td>Deoxyribonucleic acid</td>
</tr>
<tr>
<td>DP</td>
<td>Degree of polymerisation</td>
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<tr>
<td>DSMZ</td>
<td>Deutsche Sammlung von Mikroorganismen und Zellkulturen, Germany</td>
</tr>
<tr>
<td>ERIC-PCR</td>
<td>Enterobacterial repetitive intergenic consensus PCR</td>
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<tr>
<td>FOS</td>
<td>Fructo-oligosaccharides</td>
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<td>GOS</td>
<td>Galacto-oligosaccharides</td>
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<td>MLST</td>
<td>Multi-locus sequence typing</td>
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<tr>
<td>PAGE</td>
<td>Polyacrylamide gel electrophoresis</td>
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<tr>
<td>PCR</td>
<td>Polymerase chain reaction</td>
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<tr>
<td>PFGE</td>
<td>Pulsed field gel electrophoresis</td>
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<tr>
<td>RAPD</td>
<td>Randomly amplified polymorphic DNA</td>
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<tr>
<td>Rep-PCR</td>
<td>Repetitive extragenomic palindromic – PCR</td>
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<tr>
<td>RNA</td>
<td>Ribonucleic acid</td>
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