

Table S1: Sensory descriptors and their definitions used in the sensory analysis of breakfast mixture.

Descriptors	Definition	Anchors
Odour descriptors		
Apple	Odour characteristic of apple and apple-based products	"none" to "very intense."
Cinnamon	Odour characteristic of cinnamon	"none" to "very intense."
Fermented	Odour characteristic of fermented apple	"none" to "very intense."
Sweet	The basic differentiator does not require characterization	"none" to "very intense."
Other	Odour other than those described above	"none" to "very intense."
Texture attributes		
Thickness	A bulky characteristic of a product as sensed in mouth or by feeling and seeing e.g. During pouring of the product.	"very liquid" to "very thick."
Stickiness	Adhesion to processing equipment, cohesion of powders, sticking to packaging, and sticking to fingers and parts of the mouth	"imperceptible" to "very stick."
Flavour descriptors		
Apple	Flavour characteristic of apple and apple-based products	"none" to "very intense."
Cinnamon	Flavour characteristic of cinnamon	"none" to "very intense."
Fermented	Flavour characteristic of products subjected to fermentation.	"none" to "very intense."
Sweet	The basic differentiator does not require characteristics (flavour characteristic of white sugar)	"none" to "very intense."
Acid	Flavour characteristic of products subjected to acids.	"none" to "very intense."
Bitter	The basic distinguishing feature does not require characteristics (bitter flavour characteristic of grapefruit)	"none" to "very intense."
Other	Enter the intensity and name or associate	"none" to "very intense."
Overall quality	Impression based on all testes	"very low" to "very high."

Table S2. BRC—control sample with oat bran, FLC control sample with oat flakes, BR3 and FL3 puree mixtures with *L. rhamnosus* K3 fermentation, BR4 and FL4 puree mixtures with *L. johnsonii* K4, fermentation, FLCi,FL3i,FL4I,BRCi,BR3i,BR4i are samples after digestion. Organic acids and sugars before and after digestion in the analyzed samples; a. samples with oat flakes; b. samples with bran.

Sample	Citric Acid (mg/mL)	Malic Acid (mg/mL)	Lactic Acid (mg/mL)	Acetic Acid (mg/mL)	Propionic Acid (mg/mL)	Disaccharides (mg/mL)	Glucose (mg/mL)	Fructose (mg/mL)
BR3	0.0 ± 0.0	3.53 ± 0.07	2.3 ± 0.0	4.933 ± 0.057	0.0 ± 0.0	13.167 ± 0.577	2.6 ± 0.0	19.07 ± 0.192
BR3i	0.0 ± 0.0	11.9 ± 0.0	7.033 ± 0.057	11.067 ± 0.057	0.0 ± 0.0	58.0 ± 0.67	19.9 ± 0.47	28.43 ± 0.53
BR4	0.0 ± 0.0	3.733 ± 0.057	2.3 ± 0.0	4.8 ± 0.057	0.0 ± 0.0	14.467 ± 0.167	2.533 ± 0.167	19.567 ± 0.167
BR4i	0 ± 0	12.57 ± 0.19	7.67 ± 0.25	12.87 ± 0.34	11.9 ± 0.25	57.83 ± 0.37	20.13 ± 0.37	28.83 ± 0.37
BRC	0.6 ± 0.0	4.133 ± 0.057	0.0 ± 0.0	1.166 ± 0.057	0.0 ± 0.0	14.033 ± 0.167	2.933 ± 0.057	18.733 ± 0.167
BRCi	0.0 ± 0.0	12.3 ± 0.0	0.0 ± 0.0	3.433 ± 0.057	0.0 ± 0.0	63.633 ± 0.577	19.6 ± 0.47	31.7 ± 0.472
FL3	0.0 ± 0.0	1.767 ± 0.057	6.3 ± 0.0	1.7 ± 0.0	0.0 ± 0.0	16.3 ± 0.167	4.533 ± 0.057	22.4 ± 0.2
FL3i	0.0 ± 0.0	7.1 ± 0.0	29.167 ± 0.167	10.467 ± 0.057	3.233 ± 0.057	45.1 ± 0.577	20.167 ± 0.167	36.833 ± 0.1
FL4	0.0 ± 0.0	1.933 ± 0.057	6.3 ± 0.0	1.467 ± 0.057	0.0 ± 0.0	18.267 ± 0.167	5.367 ± 0.167	25.633 ± 0.167
FL4i	0 ± 0	7.8 ± 0.16	28.3 ± 0.76	10.07 ± 0.53	3.17 ± 0.09	48.6 ± 1.33	19.8 ± 0.41	37.6 ± 0.53
FLC	0.333 ± 0.057	2.733 ± 0.057	0.0 ± 0.0	0.7 ± 0.0	0.0 ± 0.0	18.9 ± 0.167	7.333 ± 0.057	21.833 ± 0.167
FCLi	0.0 ± 0.0	7.9 ± 0.0	0.0 ± 0.0	7.267 ± 0.057	0.0 ± 0.0	48.4 ± 0.833	20.567 ± 0.167	32.0 ± 0.353