

CHEMICAL TESTS - NUTRITIONAL FACTS & FOOD COMPOSITION ANALYSES

Method	Analyses	Sample amount	Quantification limit	Unit of measure	Procedure code
Carbohydrate and Energy	Energy	-	-	kcal/g	LIBR 126
	Carbohydrates	-	-	g/100g	
Determination of Total Nitrogen by Combustion	Total protein	120 grams	0,25	g/100g	LIBR 024
Fat Determination by Rose-Gottlieb Method	Total fat	120 grams	0,08	g/100g	LIBR 029
Fat Determination by Weibull-Stoldt Method	Total fat	120 grams	0,25	g/100g	LIBR 030
Total Dietary Fibres Modified AOAC 985.29	Total dietary fiber	120 grams	0,5	g/100g	AOAC OMA 985.2
Moisture and Dry Matter content by Loss on Drying on Oven	Moisture	original packaging	0,05	g/100g	LIBR 026
	Dry matter/total solids	original packaging	1,05	g/100g	
Determination of Total Ash in Food Products	Total ash	120 grams	0,05	g/100g	LIBR 013
Fatty Acid Composition by Capillary GC-FID	Saturated, monounsaturated, polyunsaturated and trans fatty acid <i>Complete profile according to Technical Data Sheet</i>	200 grams	0,02	g/100g gordura (g/100g fat)	LIBR 027
			0,01 - mandatory total fat analysis	g/100g	
Fatty Acid Composition by Capillary GC-FID (**) (**) only for milk and infant formula	Saturated, monounsaturated, polyunsaturated and trans fatty acid <i>Complete profile according to Technical Data Sheet</i>	200 grams	0,01	g/100g	ISO-16958:2015
Perfil de esterós por CG-FID (Determination of Cholesterol by GC)	Cholesterol	200 grams	0,2	mg/100g	LIBR 034
Determination of Reducing and Non-Reducing Sugars by HPLC	Glucose	120 grams	0,20 - solid samples 0,10 - doughy samples	g/100g	LIBR 053
	Fructose				
	Lactose				
	Maltose				
	Maltotriosis				
	Sacarose				
	Total sugars				
Determination of Reducing and Non-Reducing Sugars by HPAEC	Glucose	120 grams	0,03	g/100g	LIBR 054
	Fructose				
	Lactose				
	Maltose				
	Maltotriosis				
	Sacarose				
	Total sugars				
Nine Nutritional by ICP-OES	Sodium	120 grams	10	mg/100g	OM-AOAC-2011.14
	Calcium		15		
	Copper		0,5		
			0,01 - oil and fats		
	Iron		1		
	Phosphorus		10		
	Magnesium		5		
	Manganese		0,005		
	Potassium		20		
	Zinc		0,5		
Determination of Heavy Metals by ICP-MS	Molybdenium	120 grams	0,015 - food 0,2 - salts	mg/kg	LI-00.848-2
	Selenium		0,003 - food 0,04 - salts	mg/100g	
Determination of Chloride by Potentiometry	Chloride	120 grams	0,015	g/100g	LIBR 039
	Sodium chloride		0,025		
Determination of Bromide and Iodine by ICMS	Iodine, inorganic	100 grams	125	µg/kg	LIBR 128
Determination of liposoluble vitamins A,E and D by HPLC	Vitamin A	120 grams original packaging or protected by light/oxygen	100	µgRE/100g	LIBR 017
	Vitamin E		0,06	mgTE/100g	
	Vitamin D3		1,7	µgD3/100g	
Vitamin K Analysis by HPLC	Vitamin K1	120 grams original packaging or protected by light/oxygen	2,5 - solid samples 12,5 - liquid samples	µg/100g	LIBR 019
Method	Analyses	Sample amount	Quantification limit	Unit of measure	Procedure code
Determination of Vitamin C by Potentiometry	Vitamin C	original packaging	5 - solid samples 2 - liquid samples	mg/100g	LIBR 020
Vitamin B1, B2 and PP by HPLC	Vitamin B1 - thiamine base	120 grams original packaging or protected by light/oxygen	0,15	mg/100g	LIBR 021
	Vitamin B2 - riboflavine		0,02		
	Vitamin PP, B3 or niacin		0,07 - niacin 0,3 - niacinamide		
Determination of Pantothenic Acid by LCMS/MS	Vitamin B5 - pantothenic acid	100 grams	0,2 - solid samples 0,05 - liquid samples)	mg/100g	ISO-20639:2015
Vitamin B6 by HPLC	Vitamin B6 - piridoxine	120 grams original packaging or protected by light/oxygen	0,08 - solid samples 0,03 - liquid samples	mg/100g	LIBR 099
Folic Acid analysis by HPLC	Vitamin B9 - folic acid	100 grams	0,3	µg/100g	LIBR 075
Vitamin B12 by HPLC	Vitamina B12 - cianocobalamin	140 grams original packaging or protected by light/oxygen	0,2	µg/100g	LI-00.649-1

Determination of Biotin by LC- MS/MS	Biotin - Vitamin H	120 grams original packaging or protected by light/oxygen	400 - solid samples 100 - liquid samples	µg/100g	LIBR 076
Choline by Enzymatic Determination	Choline, hidroxyde	120 grams	2,1	mg/100g	LI-00.694-1
Taurine analysis by HPLC	Taurine	120 grams	3 - solid samples 0,5 - liquid samples	mg/100g	LIBR 035
Determination of Inositol by GC	Inositol	120 grams	8	mg/100g	LIBR 033
Determination of Caffeine by HPLC	Caffeine	150 grams	0,0003	g/100g	LIBR 131
CHEMICAL TESTS - PESTICIDES, MYCOTOXINS, VETERINARY DRUGS & OTHER CONTAMINANTS					
Method	Analyses	Sample amount	Quantification limit	Unit of measure	Procedure code
Pesticides Analyses by GC	According to Technical Data Sheet	100 grams	0,01	mg/kg	LIBR 023
Pesticides Analysis by GC-MS/MS	According to Technical Data Sheet	100 grams	0,01	mg/kg	LIBR 106
Determination of Multiresidues of Pesticides by LC-MS/MS	According to Technical Data Sheet	100 grams	0,01	mg/kg	LIBR 088
Determination of Glyphosate, AMPA and Glufosinate by LC- MS/MS	Aminomethylphosphonic acid - AMPA	100 grams	0,01 for each compound	mg/kg	LIBR 130
	Glufosinate				
	Glyphosate				
Ethylene Thiourea and Propylene Thiourea by HPLC	Ethylene thiourea - ETU	100 grams	10 for each compound	µg/kg	LIBR 059
	Propylene thiourea - PTU				
Determination of Aflatoxin M1 by HPLC	Aflatoxin M1	100 grams	0,05 - milk powder 0,005 - liquid milk 0,02 - concentrated and condensed milk	µg/kg	LIBR 004
Determination of Mycotoxins by LC-MS/MS	Aflatoxins B+G - reports results of Aflatoxins B1, B2, G1 and G2	100 grams	For each aflatoxin: 0,05 - cereals 0,5 - peanuts, cocoa 1 - coffee, spices and oil	µg/kg	LIBR 100
	Fumonisin B1+B2 - reports results of Fumonisin B1 and B2		50 for each fumonisin		
	Deoxynivalenol		50		
	T2 and HT2		For each micotoxin: 5 - cereals 25 - peanut and oil		
	Nivalenol		100		
	Ochratoxin A		0,5 - cereals, cocoa and fruits 1 - oils 2,5 - coffee 5 - spices		
Determination of Chloranphenicol by LCMS/MS	Chloramphenicol	100 mL	0,03 - liquid milk 0,3 - milk powder and honey	µg/kg	LIBR 082
			0,03 - liquid milk 0,3 - milk powder and honey		
Gentamicin by Snap Kit	Gentamicin	100 grams or mL	30	µg/kg	LIBR 068
Method	Analyses	Sample amount	Quantification limit	Unit of measure	Procedure code
Determination of Florfenicol by LC-MS/MS	Florfenicol	100 mL	0,5 - liquid milk 1 - milk powder 2 - honey	ug/kg	LIBR 096
Determination of Fluoroquinolones by ELISA method	Fluoroquinolones - family	100 grams or mL	3,13	µg/kg	LIBR 073
Avermectins by LC-MS/MS	Abamectin	100 grams or mL	For each avermectin: 2,5 - liquid milk 9 - cream milk, condensed and pre-condensed milk 25 - solid products	µg/kg	LIBR 025
	Doramectin				
	Eprinomectin				
	Ivermectin				
	Moxidectin				
Determination of Sulfonamides by LC-MS/MS	According to Technical Data Sheet	100 grams or mL	For each compound: 1 - liquid samples 2 - solid samples and honey	µg/kg	LIBR 093
Determination of Heavy Metals by ICP-MS	Aluminium	120 grams	0,1 - food 1,250 - salts	mg/kg	LIBR-005
	Total arsenic		0,01 - food 0,125 - salts		
	Cadmium		0,005 - food 0,06 - salts		
	Lead		0,01 - food 0,125 - salts		
	Cobalt		0,02 - food 0,2 - salts		
	Chromium		0,035 - food 0,4 - salts		
	Tin		0,005 - food 0,06 - salts		
	Mercury		0,05		
Determination of Cyanuric Acid and Melamine by LC-MS/MS	Cyanuric Acid	120 grams	0,05	mg/kg	LIBR 006
	Melamine		0,05		
Determination of Acrylamide by LC-MS/MS	Acrylamide	100 grams	10 - infant cereal 22 - other foods 43 - soluble coffee and blends	µg/kg	LIBR 117
Determination of Sulphite and Sulfur Dioxide by HPLC	Sulfur dioxide and sulfites, as SO ₂	120 grams	10	mg/kg	LIBR 051
Determination of Bromide and	Bromium	100 grams	625	µg/kg	LIBR 128

Iodine by ICPMS	Iodine		125		
Nitrites and Nitrates by Colorimetric after Reduction with Cadmium	Nitrate	200 grams or mL	5	mg/kg	LIBR 008
	Nitrite		0,5 - food 0,2 - milk		
Perchlorate analysis by LC-MS/MS	Perchlorate	100 grams or mL	4 - liquid milk 31 - milk powder	µg/kg	LIBR 042
Determination of Plasticizers in Food by GCMS	According to Technical Data Sheet	200 grams or mL	13	ug/kg	LIBR 090
Ionophores Analysis by LC- MS/MS	Lasalocid	100 grams	2	ug/kg	LIBR 118
	Monensin				
	Narasin				
	Salinomycin				
Determination of Chlorate by LC-MS/MS	Chlorate	50 grams or mL	0,01	mg/kg	LIBR 139
Determination of Tetracycline by LC-MS/MS	Chlortetracycline	50 grams or mL	50	ug/kg	LIBR 132
	Demeclocycline				
	Doxycycline				
	Oxytetracycline				
	Tetracycline				
CHEMICAL TESTS - PACKAGING					
Overall Migration in Packaging Materials	Total migration	1m X 1m	-	mg/dm ²	LIBR 119
Specific Migration of Metals in Packing Materials	Arsenic	1m X 1m	-	ug/kg	LIBR 120
	Cadmium				
	Lead				
	Chromium				
	Tin				
	Mercury				
	Borom				
	Barium				
	Antimonium				
	Silver				
	Copper				
Zinc					
Method	Analyses	Sample amount	Quantification limit	Unit of measure	Procedure code
Determination of Residual Solvent by Headspace coupled to GC-MS	According to Technical Data Sheet	1m X 1m	1,4 mg/m ²	mg/m ²	LIBR 122
Determination of Phthalates by GC-MS	According to Technical Data Sheet	1m X 1m	10 ug/dm ²	ug/dm ²	LIBR 123
CHEMICAL TESTS - AUTHENTICITY					
Casein macro peptides Index by HPLC	Casein macropeptide - c-GMP, CMP	100 grams or mL	15 mg/L - liquid sample 0,005 sweet whey	mg/kg	LIBR 060
Quantitative determination of Fomaldehyde in Milk	Formaldehyde	200 grams or mL	-	Presence/Absence	IN68-MAPA:2006
Colorimetric Analysis of Urea	Urea	100 grams or mL	0,01	g/100g	LIBR 092
MICROBIOLOGICAL TESTS					
Qualitative Determination of Enterobacteriaceae - Presence/Absence	Enterobacteriaceae	25 grams	-	Presence/Absence	ISO 21.528-1:2017
Quantitative Determination of Enterobacteriaceae by Multiple Tubes Technique (MPN)	Enterobacteriaceae	25 grams	0,3	NMP/g	ISO 21.528-1:2017
Quantitative Determination of Enterobacteriaceae by Petrifilm	Enterobacteriaceae	25 grams	10	UFC/g	LI-00.758
Quantitative Determination of Enterobacteriaceae by VRBG	Enterobacteriaceae	25 grams	10	UFC/g	ISO 21.528-2:2017
Qualitative Determination of Total Coliforms - Presence/Absence	Coliforms	25 grams	-	Presence/Absence	ISO 4831:2006.
Quantitative Determination of Total Coliforms by Multiple Tubes Technique (MPN)	Coliforms	25 grams	0,3	NMP/g	ISO 4831:2006
Quantitative Determination of Total Coliforms by VRB	Coliforms	25 grams	10	UFC/g	OM-ISO-4832:2006
Qualitative Determination of E.Coli - Presence/Absence	E. coli	25 grams	-	Presence/Absence	ISO 7251:2005
Quantitative Determination of E.Coli by Multiple Tubes Technique (MPN)	E. coli	25 grams	0,3	NMP/g	ISO 7251:2005
Qualitative Determination of Thermotolerants Coliforms (45°C) - Presence/Absence	Thermotolerants coliforms/faecal	25 grams	-	Presence/Absence	LIBR 009
Quantitative Determination of Thermotolerants Coliforms (45°C) by Multiple Tubes Technique (MPN)	Thermotolerants coliforms/faecal	25 grams	0,3	NMP/g	LIBR 009
Counting of Enterococcus	Enterococcus	25 grams	10	UFC/g	ISO 7899-2:2000
Qualitative Determination of Salmonella spp - Presence/Absence (VIDAS® Salmonella (SLM EASY)	Salmonella spp	200 grams or mL	-	Presence/Absence	AOAC OMA - 2011.03:2011

Qualitative Determination of <i>Listeria monocytogenes</i> - Presence/Absence (VIDAS LMO2)	<i>Listeria monocytogenes</i>	200 grams or mL	-	Presence/Absence	AOAC OMA - 2004.02.2008
Qualitative Determination of <i>Listeria</i> spp - Presence/Absence (VIDAS LPT)	<i>Listeria</i> spp	200 grams or mL	-	Presence/Absence	LI-00.705
Determination of Mesophilic aerobic microorganisms by Petrifilm	Mesophilic aerobic microorganisms	25 grams	10	UFC/g	LI-00.767
Determination of Mesophilic aerobic microorganisms	Mesophilic aerobic microorganisms	25 grams	10	UFC/g	ISO 4833-1:2013
Counting of Spores	According to Technical Data Sheet	25 grams	10	UFC/g	LI-00.718
Qualitative Determination of Moulds and Yeasts in products with Water Activity below than 0,95	Moulds	50 grams	10	UFC/g	ISO 21527-2:2008
	Yeasts				
Method	Analyses	Sample amount	Quantification limit	Unit of measure	Procedure code
Qualitative Determination of Moulds and Yeasts in products with Water Activity higher than 0,95	Moulds	50 grams	10	UFC/g	ISO 21527-2:2008
	Yeasts				
Qualitative Determination of Coagulase positive staphylococci	Coagulase positive staphylococci	25 grams	-	Presence/Absence	ISO 6888-3:2003
Quantitative Determination of Coagulase positive staphylococci	Coagulase positive staphylococci	25 grams	10	UFC/g	ISO 6888-1:1999
Quantitative Determination of <i>Bacillus cereus</i>	<i>Bacillus cereus</i>	25 grams	10	UFC/g	ISO 7932:2004
Quantitative Determination of Spores <i>Bacillus cereus</i>	<i>Bacillus cereus</i>	25 grams	10	UFC/g	ISO 7932:2004
Counting of <i>Clostridium perfringens</i>	<i>Clostridium perfringens</i>	25 grams	10	UFC/g	OM-ISO-7937:2004
Counting of Culturable Microorganisms	Microorganisms, culturable 22°C	25 mL	1	UFC/mL	OM-ISO 6222:1999
	Microorganisms, culturable 36°C				
Comercial Sterility Test	According to Technical Data Sheet	Original packaging	-	Presence/Absence	LI-00.957-1
Counting of Sulfite reducing	Sulfite reducing anaerobic bacteria mesophilic	25 grams	10	UFC/g	ISO-15213:2003
	Sulfite reducing anaerobic bacteria thermophilic				
	Sulfite reducing anaerobic spore mesophilic				
	Sulfite reducing anaerobic spore thermophilic				
	Sulfite reducing clostridia mesophilic				
	Sulfite reducing clostridia spore mesophilic				
MICROSCOPY & GMO TESTS					
GMO Determination by Real-Time PCR	According to Technical Data Sheet	500 grams	-	Presence/Absence	LI-00.385
			0,9	%	LI-00.038
Light filth in dairy products	Macro and microscopy	500 grams	According to Technical Data Sheet	-	AOAC OMA - 960.49.2006
Light filth in wheat flour	Macro and microscopy	500 grams	According to Technical Data Sheet	-	AOAC OMA - 972.32.2005
Light filth in cocoa and chocolates	Macro and microscopy	500 grams	According to Technical Data Sheet	-	AOAC OMA - 965.38.2005
Light filth in coffee and ground coffee	Macro and microscopy	500 grams	According to Technical Data Sheet	-	AOAC OMA 988.16:2005
Light filth in sweet paste and fruit jelly	Macro and microscopy	500 grams	According to Technical Data Sheet	-	AOAC OMA 950.89:2005
Light filth in fruits and vegetables	Macro and microscopy	500 grams	According to Technical Data Sheet	-	LIBR 103
Light filth in infant cereals	Macro and microscopy	500 grams	According to Technical Data Sheet	-	LIBR 104
Light filth in bread and products with high fiber content	Macro and microscopy	500 grams	According to Technical Data Sheet	-	LIBR 108
Light filth in pasta	Macro and microscopy	500 grams	According to Technical Data Sheet	-	LIBR 109
Light filth in barley, oats and dehydrated cereal mix for infant food	Macro and microscopy	500 grams	According to Technical Data Sheet	-	LIBR 112
Light filth in rice or corn based cereals	Macro and microscopy	500 grams	According to Technical Data Sheet	-	LIBR 113
Light filth in spices and condiments	Macro and microscopy	500 grams	According to Technical Data Sheet	-	LIBR 114
Light filth in sugar and sugar based products	Macro and microscopy	500 grams	According to Technical Data Sheet	-	LIBR 125
Light filth in dehydrated fruits	Macro and microscopy	500 grams	According to Technical Data Sheet	-	LIBR 136
Light filth in fruit juice	Macro and microscopy	500 grams	According to Technical Data Sheet	-	LIBR 137
Light filth in Ground Cinnamon	Macro and microscopy	500 grams	According to Technical Data Sheet	-	LIBR 144
Light filth in Tomato Products	Macro and microscopy	500 grams	According to Technical Data Sheet	-	LIBR 143
Light filth in Starch	Macro and microscopy	500 grams	According to Technical Data Sheet	-	LIBR 145
Light filth in Mustard	Macro and microscopy	500 grams	According to Technical Data Sheet	-	LIBR 147
Light filth in Vegetables	Macro and microscopy	500 grams	According to Technical Data Sheet	-	LIBR 148
Light filth in Mushroom	Macro and microscopy	500 grams	According to Technical Data Sheet	-	LIBR 150
Light filth in Nuts	Macro and microscopy	500 grams	According to Technical Data Sheet	-	LIBR 151
Light filth in Tea	Macro and microscopy	500 grams	According to Technical Data Sheet	-	LIBR 152
Light filth in Pepper Sauce	Macro and microscopy	500 grams	According to Technical Data Sheet	-	LIBR 153

Light filth in potato	Macro and microscopy	500 grams	According to Technical Data Sheet	-	<i>LIBR 155</i>
Light filth in Grains and Seeds	Macro and microscopy	500 grams	According to Technical Data Sheet	-	<i>LIBR 155</i>
Light filth in Coconut	Macro and microscopy	500 grams	According to Technical Data Sheet	-	<i>LIBR 157</i>
Light filth in pickles and preserves	Macro and microscopy	500 grams	According to Technical Data Sheet	-	<i>LIBR 158</i>