

**CHEMICAL ANALYSIS**

| Parameter  | Category   | Method   |
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| Determination of Vitamin A   | Cereal based baby food   | In-house high performance liquid chromatography method (HPLC-DAD)              |
| Determination of Pb, Cd, Fe  | Milk based infant formulas   | In-house inductively coupled plasma mass spectrometry method (ICP-MS)          |
| Determination of sugars: Fructose, Glucose, Sucrose, Lactose, Lactulose  | Milk based infant formulas   | In-house high performance liquid chromatography method (HPLC-RID)              |
| Determination of Mg, K, Na, Ca, Mn, Zn, P  | Cereal and milk based Infant Formulas                                    | In-house inductively coupled plasma mass spectrometry method (ICP-MS)          |
| Determination of As  | Cereals and cereal based products  | In-house inductively coupled plasma mass spectrometry method (ICP-MS)          |
| Determination of aflatoxins B1, B2, G1, G2 and Ochratoxin A  | Cereals and cereal based products  | In-house liquid chromatography with tandem mass spectrometry method (LC-MS/MS) |
| Determination of Deoxynivalenol (DON), Zearalenone (ZON), Fumonisin B1 (FB1), Fumonisin B2 (FB2) and T-2, HT-2 toxins. | Cereals and cereal based products  | In-house liquid chromatography with tandem mass spectrometry method (LC-MS/MS) |
| Ash determination  | Cereals and cereal based products  | In-house method based on AOAC 923.03   |
| Moisture determination   | Cereals and cereal based products  | In-house gravimetric method  |
| Nitrogen and protein determination   | Cereals and cereal based products  | In-house Kjeldahl method based on AOAC 935.39                                  |
| Total fat determination  | Cereals and cereal based products  | In-house gravimetric method based on Weibull-Stoldt                            |
| Total dietary fiber determination  | Cereals and cereal based products  | In-house method based on AOAC 985.29   |
| Total fat determination  | Chocolate  | In-house method based on AOAC 963.15   |
| Total fat determination  | Milk powder  | In-house method based on AOAC 932.06   |
| Nitrogen and protein determination   | Milk powder  | In-house Kjeldahl method based on AOAC 935.39                                  |
| Fatty acids determination  | Milk products and infant formula   | In-house gas chromatography method (GC-FID) based on AOAC 2012.13              |
| Determination of sugars (fructose, glucose, sucrose, maltose, lactose)   | Food products  | In-house high performance liquid chromatography method (HPLC-RID)              |
| Moisture determination   | Solid foods with high fat content  | In-house gravimetric method  |
| Benzoic and Sorbic acid determination  | Aqueous foods  | In-house high performance liquid chromatography method (HPLC-DAD)              |
| Overall migration into aqueous food simulant A (10% v/v ethanol)   | Materials and articles intended to come into contact with food           | In-house method by total immersion based on EN 1186-3:2002                     |
| Overall migration into food simulant (95% v/v ethanol)   | Materials and articles intended to come into contact with food           | In-house method by cell based on EN 1186-14:2002                               |
| Specific migration of Bisphenol A into aqueous simulants (A, B, C) and simulant D1 (50% ethanol)                       | Materials and articles intended to come into contact with food           | In-house high performance liquid chromatography method (HPLC-FLD)              |
| pH   | Water for human consumption, surface waters, aqueous solutions and foods | In-house method based on APHA 4500-H+, 23rd edition                            |
| Conductivity   | Water for human consumption, surface waters, aqueous solutions and foods | In-house method, based on APHA-2510, 23rd edition                              |

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| Determination of Cd, Pb, Cu, Al, Co, Se, Sb, Mn, Fe, As, Ni, Zn, Sn, Mo, Hg, Cr   | Water for human consumption<br>drinking water, surface water,<br>bathing water | In-house inductively coupled plasma<br>mass spectrometry method (ICP-MS)                 |
| Determination of acrylamide   | Thermally stressed foods<br>(potatoes and their products,<br>bakery ware)      | In-house liquid chromatography with<br>tandem mass spectrometry method (LC-<br>MS/MS)    |
| Determination of 5 Polycyclic Aromatic Hydrocarbons:<br>(Benzo[a]anthracene, Benzo[b]fluoranthene, Benzo[k]fluoranthene,<br>Benzo[a]pyrene and Chrysene)  | Fats and Oils (except from palm<br>oil)  | In-house high performance liquid<br>chromatography method (HPLC-FLD)                     |
| Determination of 5 Polycyclic Aromatic Hydrocarbons:<br>(Benzo[a]anthracene, Benzo[b]fluoranthene, Benzo[k]fluoranthene,<br>Benzo[a]pyrene and Chrysene)  | Cocoa  | In-house high performance liquid<br>chromatography method (HPLC-FLD)                     |
| Coumarin determination  | Bakery ware  | In-house high performance liquid<br>chromatography method (HPLC-DAD)                     |
| Pesticides residues determination<br><br>(2-phenyl-phenol, Acetochlor, Alachlor, Aldrin, alpha-BHC, alpha-Endosulfan, Amitraz, Atrazine, Benalaxyl, Benfluralin, beta-BHC, Bifenazate, Bitertanol, Bromophos-ethyl, Bromuconazole, Bupirimate, Butralin, Cadusafos, Carboxin, Carfentrazone-ethyl, Chlofentezine, Chlorbenside, Chlorbufam, Chlorfenapyr, Chlorfenson, Chlorfenviphos, Chlorobenzilate, Chlorpropham, Chlorpyrifos, Chlorpyrifos-methyl, Chlorthal-dimethyl, cis-Chlordane, Clomazone, Cyhalofop-butyl, Diallylate, Diazinon, Dichlobenil, Diclofop-methyl, Dicloran, Dicofol-deg-DCPB, Dieldrin, Dimethachlor, Dimethenamid, Dimethomorph, Diniconazole, Dioxathion, Endrin, Ethalfluralin, Ethion, Ethofumesate, Ethoprophos, Etofenprox, Etoxazole, Fenamidone, Fenamiphos, Fenarimol, Fenchlorphos, Fenitrothion, Fenpropathrin, Fenthion, Fipronil, Fludioxonil, Flumioxazin, Flusilazole, gamma-BHC, Heptachlor, Heptachlor-endo-epoxide, Heptachlor-exo-epoxide, Hexachlorobenzene, Iprovalicarb, Mepanipyrim, Mepronil, Metazachlor, Methacrifos, Methoxychlor, Metolachlor, Myclobutanol, Napropamide, o,p-DDE, o,p-DDT, Oxadiazon, Oxadixyl, Oxyfluorfen, Paclobutrazol, Parathion, Parathion-methyl, Penconazole, Pendimethalin, Permethrin-2, Phenothrin-2, Piperonyl-butoxide, Pirimicarb, Pirimiphos-methyl, pp-DDD, p,p-DDE, p,p-DDT, Procymidone, Propachlor, Propamocarb, Propyzamide, Pyrazophos, Pyridaben, Pyridalyl, Pyriproxyfen, Quinalphos, Quintozene, Resmethrin-2, Simazine, Tebufenpyrad, Tecnazene, Tefluthrin, Terbufos, Tetradifon, Thiobencarb, Tolclofos-methyl, trans-Chlordane, Triadimefon, Triallate, Triazophos, Tricyclazole, Trifluralin, Triticonazole, Vinclozolin, Zoxamide-deg)   | Cereals, legumes and their<br>products   | In-house gas chromatography tandem<br>mass spectrometry QuEChERS method<br>(GC-MS/MS)    |
| Pesticides residues determination<br><br>(Acephate, Acetochlor, Alachlor, Ametoctradin, Amitraz, Atrazine, Azinphos-ethyl (Guthion ethyl), Benalaxyl, Bitertanol, Bromuconazole, Butralin, Cadusafos, Carbetamide, Carbofuran, Carboxin, Carfentrazone-ethyl, Chloridazon (Pyrazon), Chloroxuron, Chlorthiamid, Chromafenozide, Clethodim, Clodinafop-Propargyl, Clofentezin, Clomazone, Cyazofamid, Cymoxanil (Curzate), Dazomet, Desmedipham, Dichlorvos, Dimethenamide (SAN 582H), Dimethomorph(E), Diniconazole, Dinoseb, Diuron, Dodemorph, Eptc, Ethirimol, Ethoprop (Ethoprophos), Etoxazole, Fenamidone, Fenamiphos - sulfone, Fenamiphos - sulfoxide, Fenarimol, Fenazaquin, Fenchlorphos-oxon, Fenhexamid, Fenoxaprop-P, Fenthion, Fenthion-oxon, Fenthion-oxon-sulfoxide, Fenthion-sulfone, Fipronil, Florasulam, Flufenoxuron, Fluometuron, Fluopicolid, Flurtamone, Flusilazole, Forchlorfenuron, Imazalil (Enilconazole), Iprovalicarb, Isoxaben, Lenacil, Malathion, Mandipropamid, Mepanipyrim, Mepronil, Metaflumizone, Metamitron, Methabenzthiazuron, Methamidophos, Methiocarb (Mercaptodimethur), Methiocarb sulfone, Methiocarb sulfoxide, Metolachlor, Metribuzin, Mevinphos (Phosdrin), Molinate, Monocrotophos (Azodrin), Monolinuron (Phenylurea), Monuron, Myclobutanol, Napropamide, Novaluron, Oxadixyl, Oxamyl, Oxyacboxin, Paclobutrazol, Penconazole, Pencycuron, Pendimethalin (Penoxalin), Penoxsulam (Penoxalim), Pethoxamid, Phenmedipham, Phosphamidon, Phoxim, Piperonyl butoxide, Pirimicarb, Pirimiphos-methyl, Profenofos, Propachlor, Propamocarb, Propanil, Propaquizafop, Propargite, Propham, Propoxur, Propyzamide (Pronamide), Proquinazid, Prosulfocarb, Pyrazophos, Pyridaben, Quinalphos (Diethquinalphione), Rotenone, Simazine, Spirodiclofen, Tebufenpyrad, Teflubenzuron, Thiabendazole, Thiodicarb, Triadimefon, Triallate, Triazophos, Trichlorfon (DEP), Tricyclazole, Triflumizol, Triticonazole) | Cereals, legumes and their<br>products   | In-house liquid chromatography tandem<br>mass spectrometry QuEChERS method<br>(LC-MS/MS) |

**MICROBIOLOGICAL ANALYSIS**

| Parameter   | Category                                       | Method   |
|---|--|--|
| Detection of <i>Salmonella</i> spp.   | Food Products                                  | VIDAS Easy Salmonella NF VALID Ref. BIO 12/16-09/05                  |
| Detection of <i>Listeria monocytogenes</i>  | Food Products                                  | VIDAS Listeria monocytogenes II (LMO2) NF VALID Ref. BIO 12/11-03/04 |
| Colony count at 30°C  | Food and feed                                  | ISO 4833-1:2013  |
| Enumeration of presumptive <i>Bacillus cereus</i>   | Food and feed                                  | ISO 7932:2004  |
| Enumeration of coagulase -positive <i>staphylococci</i> ( <i>Staphylococcus aureus</i> and other species) | Food and feed                                  | ISO 6888-2:1999/Amd 1:2003   |
| Enumeration of <i>Enterobacteriaceae</i>  | Food and feed                                  | ISO 21528-2:2017   |
| Enumeration of $\beta$ -glucuronidase-positive <i>Escherichia coli</i> at 37°C                            | Food and feed                                  | ChromIDTM Coli Agar (COLI ID-F) NF VALID. BIO 12/19-12/06            |
| Enumeration of coliforms  | Food and feed                                  | ISO 4832:2006  |
| Enumeration of mesophilic lactic acid bacteria  | Food and feed                                  | ISO 15214:1998   |
| Enumeration of sulfite reducing bacteria growing under anaerobic conditions                               | Food and feed                                  | ISO 15213:2003   |
| Enumeration of <i>Clostridium perfringens</i>   | Food and feed                                  | ISO 7937:2004  |
| Enumeration of <i>Listeria monocytogenes</i> and <i>Listeria</i> spp.                                     | Food and feed                                  | ISO 11290-2:2017   |
| Detection of <i>Enterobacteriaceae</i>  | Food and feed                                  | ISO 21528-1:2017   |
| Detection of <i>Salmonella</i> spp.   | Food and feed                                  | Molecular Detection Assay 2 – MDA2SAL96 NF VALID. (3M 01/16 - 11/16) |
| Detection of <i>Listeria monocytogenes</i>  | Food and feed                                  | Molecular Detection Assay 2 – MDA2LMO96 NF VALID. (3M 01/15 - 09/16) |
| Enumeration of <i>Campylobacter</i> spp.  | Meat and meat products                         | ISO 10272-2:2017   |
| Detection of <i>Cronobacter</i> spp.  | Foods in form of liquid or powder              | ISO 22964:2017   |
| Detection of <i>Cronobacter</i> spp. (100g of sample)   | Foods in form of liquid or powder              | ISO 22964:2017   |
| Enumeration of culturable micro-organisms at 22±2°C and 36±2°C  | Potable water, surface and swimming pool water | ISO 6222:1999  |
| Enumeration of <i>Escherichia coli</i> and coliform bacteria  | Potable water, surface and swimming pool water | ISO 9308-1:2014/Amd 1:2016   |
| Detection and enumeration of intestinal enterococci   | Potable water, surface and swimming pool water | ISO 7899-02:2000   |
| Detection and enumeration of <i>Pseudomonas aeruginosa</i>  | Potable water, surface and swimming pool water | ISO 16266:2006   |
| Enumeration of <i>Clostridium perfringens</i>   | Potable water, surface and swimming pool water | ISO 14189:2013   |

**BIOLOGICAL ANALYSIS**

| Parameter  | Category   | Method                        |
|--|--|-------------------------------|
| Qualitative detection CaMV 35S promoter, NOS terminator, plant Endogenous DNA    | Corn and Corn-based products (food, processed flours, feed, raw materials)     | In house real-time PCR method |
| Qualitative detection of CaMV 35S promoter, NOS terminator, plant Endogenous DNA | Soya and Soya-based products (food, processed flours, feed, raw materials)     | In house real-time PCR method |
| Qualitative detection of CaMV 35S promoter, NOS terminator, plant Endogenous DNA | Rice and rice-based products (rice, rice-flour, processed rice products, feed) | In house real-time PCR method |
| Qualitative detection of CaMV 35S promoter, NOS terminator, plant Endogenous DNA | Potato and potato-based products (raw materials, food and feed)                | In house real-time PCR method |
| Qualitative detection of CaMV 35S promoter, NOS terminator, plant Endogenous DNA | Tomato seeds   | In house real-time PCR method |
| Qualitative detection of CaMV 35S promoter, FMV promoter, plant Endogenous DNA   | Sugar beets and products   | In house real-time PCR method |

**IMMUNOCHEMICAL ANALYSIS**

| Parameter   | Category   | Method                |
|---|--|-----------------------|
| Quantitative determination of gluten/gliadin                              | Food products  | In house ELISA method |
| Quantitative determination of allergen peanuts or parts of peanuts        | Confectionary products, milk-based products, cereals, cocoa and chocolate products | In house ELISA method |
| Quantitative determination of allergen hazelnut                           | Chocolate and cocoa-based products, cereals and cereal-based products              | In house ELISA method |
| Quantitative determination of allergen almond                             | Chocolate and cocoa-based products   | In house ELISA method |
| Quantitative determination of allergen Pistachio ( <i>Pistacia vera</i> ) | Chocolate and cocoa-based products   | In house ELISA method |
| Deoxynivalenol (DON) determination  | Flours, cereals and cereal-based products  | In house ELISA method |
| Zearalenone (ZON) determination   | Flours, cereals and cereal-based products  | In house ELISA method |
| Aflatoxin M1 determination  | Milk and milk powder   | In house ELISA method |
| Quantitative determination of allergen egg                                | Flours and bakery ware   | In house ELISA method |
| Detection and quantitative determination of allergen milk proteins        | Food and animal feeding stuffs   | In house ELISA method |
| Detection and quantitative determination of allergen soya proteins        | Flours and processed foods   | In house ELISA method |