TECHNICAL APPENDIX
to the certificate of accreditation (agreement n° 2760)
Norm NF EN ISO/CEI 17025 v2005

The legal entity indicated below:

Name: **SARL LABORATOIRE PHYTOCONTROL** Address: **Parc Scientifique Georges Besse II – 180, rue Philippe Maupas** **30035 NÎMES**

Is accredited by Cofrac –Laboratories Section – for the following laboratory, site and technical unit:

SITE CONCERNED	**NAME: LABORATOIRE PHYTOCONTROL** Address: **Parc Scientifique Georges Besse II – 180, rue Philippe Maupas** **30035 NÎMES**

Unité Technique : PHYTOCONTROL

- Technical unit 1: PHYTOCONTROL

The accreditation is agreed for the following field:

The analysis of mycotoxins and phycotoxins in foodstuffs destined for human or animal consumption (LAB GTA 21/99-1):

FLEXIBLE FIELD

General scope*

Sample	Measured or researched parameter	Method of measurement
Vegetable products Raw materials, products and / or processed	Determination of mycotoxins	**Extraction:** Solvent **Purification :** Immunoaffinity **Analysis:** UFLC/LC-MS^n

*The laboratory has approval for their competence at adapting and setting up all normalised or similar methods within its general scope and at **developing any other method, the validation of which will be ensured.**

Detailed scope: 05/07/2013**

Sample	Measured or researched parameter	Method of measurement	Method reference
Cereals Oleaginous Nuts Dried fruit Legumes Cereal products Derivatives of Oilseeds and nuts Products derived from fruit: compotes, juices Alcoholic beverages Spices Coffee / Cocoa Derivatives coffee / cocoa Food and drink to children Animal Feed	Determination of ochratoxin A	**Extraction:** Solvent **Purification :** Immunoaffinity **Analysis:** UFLC	Internal method MOC3/65
Fresh fruits and their by-products including baby-food fruits-based	Determination of patulin levels	**Extraction:** Solvent/SPE **Analysis:** LC/MS^n	Internal method MOC3/37
Cereals Oleaginous Nuts Dried fruit Legumes Cereal products Derivatives of Oilseeds and nuts Fruit products: Compotes (including infant feeding) Food for children Animal Feed	Determination of aflatoxins (B1, B2, G1, G2)	**Extraction:** Solvent **Purification :** Immunoaffinity **Analysis:** UFLC	Internal method MOC3/71
Cereals Cereal products Fresh Fruit Products derived from fruit Food for children Animal Feed	**Multimycotoxin determination :** Déoxynivalenol (DON) ; Fumonisines (B1+B2, B3); HT2 toxine, T2 toxine, Zéaralenone (ZEA) ; Aflatoxines (B1, B2, G1, G2), Ochratoxine A (OTA)	**Extraction:** **Solvent** **Purification :** **Immunoaffinity** **Analysis:** **UFLC**	Internal method MOC3/7107

**** The exhaustive list of analyses proposed under accreditation is updated by the laboratory.**

Comments:

The laboratory is accredited to carry-out analyses within the field covered by the general scope. It can within this field adapt and set up any normalised or similar method and develop any other method than those allowed by the skills approved at the time of accreditation which will permit them to carry-out these analyses.

It is the responsibility of the laboratory to ensure the validation of all methods proposed and to establish and maintain the skill-sets needed by the personnel to set them up.

The laboratory must record and maintain at the full disposal of the Cofrac the detailed list of analyses, and in particular the methods, proposed in the context of its accreditation.

Date of application:	**5th july 2013**

The appropriateness of the methods used in terms of the skills previously approved will be the subject of evaluations carried out by Cofrac. This assessment will mainly focus on the development, adaptation and validation of the methods.

The analysis of chemical contaminants in animals, in animal products and foodstuffs destined for human or animal consumption: pesticide residues (LAB GTA 26/99-2):

Sample	Measured or researched parameter	Method of measurement	Method reference
Fruit **Vegetables**	Determination of nitrate levels	**Extraction: Hot water** **Analysis:** Separation by ion-exchange chromatography (HPLC/IEC) Detection: conductimetry	Internal method MOC3/02 (Version 03 Adapted from the norm NF EN 12014-2 (June 1997)
Vegetable and plant derived non-fatty products -Rich in water -Rich in starch, proteins -Acidic -Rich in pigments	Determination of the levels of chlormequat, mepiquat	**Extraction**: Solvent **Analysis:** LC/MS^n	Internal method MOC3/21 (Version 02)
Vegetable and plant derived non-fatty products -Rich in water -Rich in starch, proteins -Acidic -Lime -Tea	Determination of the levels of bromides	**Extraction:** Hot water **Purification:** None **Analysis:** Separation by ion-exchange chromatography (HPLC/IEC) Detection: conductimetry	Internal method MOC3/12 (Version 01) Adapted from the norm NF EN 12014-2
Vegetable and plant derived non-fatty products -Rich in water -Rich in starch, proteins -Acidic -Lime -Tea	Determination of the levels of nitrites and chlorides	**Extraction:** Hot water **Analysis:** Separation by ion-exchange chromatography (HPLC/IEC) Detection: conductimetry	Internal method MOC3/22 (Version 01) Adapted from the norm NF EN 12014-2
Vegetable and plant derived non-fatty products	Determination of dithiocarbamates residues	**Extraction:** Acid hydrolysis **Analysis:** Quantification of residual CS2	Internal method MOC3/01 (Version 05) Adapted from the norm

-Rich in water -Rich in starch, proteins -Acidic -Rich in pigments		by GC/MS(HS)	NF EN 12396-2 (May 1999)

FLEXIBLE FIELD

- **Research (identification, quantification, confirmation) of pesticide residues in fatty and non-fatty vegetable- and plant-derived products.**

General scope*

Sample	Measured or researched parameter	Method of measurement
Vegetable and plant derived fatty/non-fatty products (including infant feeding) Animal products	Pesticide residues	**Extraction:** Solid phase **Purification** (if necessary) **:** Solid phase extraction (SPE) Dispersive solid phase extraction (dSPE) **Analysis:** LC/MS^n, GC/MS^n

*The laboratory has approval for their competence at adapting and setting up all normalised or similar methods within its general scope and at **developing any other method, the validation of which will be ensured.**

Detailed scope: 05/07/2013**

Sample	Measured or researched parameter	Method of measurement	Method reference
Vegetable and plant derived non-fatty products -Rich in water -Rich in starch, proteins -Acidic -Rich in pigments	Multi-residue pesticide analysis: **Organophosphates:** Chlorpyrifos-ethyl, isofenphos-methyl, malathion, parathion- methyl, phosalone, pirimiphos-methyl, tolclophos-methyl, Chlorvinphos, Chlorpyriphos-méthyl, Dichlorfenthion, Etoprofos, Fenchlorfos, Fenthion, Fonofos **Organochlorines:** Chlorpropham, imazalil, procymidone, propyzamide, vinchlozolin, myclobutanil, triadimefon, triadimenol, 2-4'DDE, 2-4'DDD, 4-4'DDE, 4-4''DDT, chlorobenzylate, fenarimol, fenhexamide, hcb, hch alpha, hch beta, hch delta, mirex oxadiazon, pentachloroanisole, tebufenpyrad **Pyrethroids:** Bifenthrin, cyhalothrin **Organonitrates/diverse:** Bromopropylate, cyprodinil, diphenylamine, pirimicarb, propyconazole, pyrimethanil, fludioxonil, o-phenylphenol, oxadixyl, Benalaxyl, bitertanol, carfentrazone-éthyl, chorthal-diméthyl, cyproconazole, dichlofop-méthyl, difenoconazole, flusilasole, mepanipyrim, mepronil, penconazole, perthane, proquinazid, pyriproxyfen, tébuconazole **Polychlorobiphenyls (PCB) :** PCB 28, PCB 52, PCB 101, PCB 118, PCB 138, PCB 153, PCB 180.	**Extraction:** Solvent **Purification :** Solid-phase extraction (SPE) **Analysis:** GC/MS^n	Internal method MOC3/25

Sample	Measured or researched parameter	Method of measurement	Method reference
Vegetable and plant derived fatty products -Rich in oil **Products of animal origin** -Milk products -Meat products -Fat -Fishery products -Egg	Multi-residue pesticide analysis: **<u>Organophosphates</u>:** Chlorpyriphos ethyl Malathion Parathion methyl Phosalone Pirimiphos methyl Ethion Isofenphos methyl Pyridafenthion Tolclophos methyl **<u>Organochlorines:</u>** Procymidone Propyzamide Vinclozolin Myclobutanil Carfentrazone ethyl Cyproconazole Diclofop methyl Difenoconazole Fenarimol Penconazole Tebuconazole Tebufenpyrad **<u>Pyrethroids:</u>** Bifenthrin, Cyhalothrin **<u>Organonitrates/diverse:</u>** Bromopropylate Propyconazole Fludioxonil Benalaxyl Cyprodinil Flusilasole Mepronil Pirimicarb Proquinazid Pyriproxifen	**Extraction:** Solvent **Purification :** Dispersive solid-phase extraction (dSPE) **Analysis:** GC/MS^n	Internal method MOC3/26
Vegetable and plant derived non-fatty products -Rich in water -Rich in starch, proteins -Acidic -Rich in pigments	Etephon	**Extraction:** Solvent **Purification :** None **Analysis:** LC/MS^n	Internal method MOC3/27

Sample	Measured or researched parameter	Method of measurement	Method reference
Vegetable and plant derived non-fatty products -Rich in water -Rich in starch, proteins -Acidic -Rich in pigments	Multi-residue pesticide analysis: **Benzimidazoles:** Carbendazime, thiophanate-methyl **Strobilurins:** Azoxystrobin, trifloxystrobin, Fluoxastrobine, picoxystrobine, pyraclostrobine **Ureas:** Isoproturon, linuron, metoxuron, triflusulfuron-methyl, Bensulfuron-méthyl, buturon, cycluron, flufénoxuron, fluométuron, méthabenzthiazuron, monolinuron, monuron, néburon **Triazoles:** Epoxyconazole, fenbuconazole, fetraconazole, Azaconazole, bromuconazole, paclobutrazole, triticonazole, **Triazines :** Cyanazine **Carbamates:** Iprovalicarb, thiodicarb **Pyridilmethyamines:** Acetamipride **Diverse:** Lenacil, metoxyfenoside, phenmedipham, rotenone, tébufénozide, Boscalid, butafenacil, cloquintecet, cyazofamide, desmedipham, desmetryn, diméthanamide, diméthomorphe, fenamidone, fenpyroximate, flurtamone, hexythiazox, indoxacarbe, isoporthiolane, isoxathion, métrafénone, phoxim, picolinafen, propaquizafop, pyraflufen-éthyl, spirodiclofen, spiroxamine, triflumizole, warfarine	**Extraction:** Solvent **Purification :** None **Analysis:** LC/MS^n	Internal method MOC3/35

Sample	Measured or researched parameter	Method of measurement	Method reference
Vegetable and plant derived non-fatty products -Rich in water -Rich in starch, proteins -Acidic	Determination of the levels of Maléic Hydrazide	**Extraction:** Solvent **Analysis:** LC/MS^n	Internal method MOC3/44
Vegetable and plant derived non-fatty products Baby Food	**Multi-residue pesticide analysis:** Terbufos, Fipronil, Fipronil desulfinyl, HCB, Haloxyfop 2ethylhexyl, Haloxyfop methyl, Terbufos sulfone, Heptachlor, Heptachlor epoxide cis, Heptachlor epoxide trans Endrin, Disulfoton, Dieldrin, Aldrin, Demeton S methyl, Nitrofen	**Extraction:** Solvent **Purification :** Solid-phase extraction (SPE) **Analysis:** GC/MS^n	Internal method MOC3/56
Vegetable and plant derived non-fatty products Baby Food	**Multi-residue pesticide analysis**: Haloxyfop (free acid), Terbufos sulfoxide, Ethoprophos, Fensulfothion, Fensulfothion oxon, Fensulfothion oxon sulfone, Fensulfothion sulfone, Disulfoton sulfone, Disulfoton sulfoxide, Cadusafos	**Extraction:** Solvent **Purification :** None **Analysis:** LC/MS^n	Internal method MOC3/57
Roots and tubers	Determination of the levels of Glyphosate	**Extraction:** Solvent **Analysis:** LC/MS^n	Internal method MOC3/80
-Products rich in water -Acidic and rich in water -Alcoholic drinks, fruit juice and vegetable	Determination of the levels of Foséthyl-Aluminium and Phosphorous Acid	**Extraction:** Solvent **Analysis:** LC/MS^n	Internal method MOC3/89

Sample	Measured or researched parameter	Method of measurement	Method reference
-Products rich in water -Acidic and rich in water	**Multi-residue pesticide analysis:** **<u>Phenoxyacetic herbicides</u> :** 2.4.5 T 2.4 D 2.4 DB DNOC MCPA **<u>Phenoxypropionic herbicides</u>** Dichloprop P Diclofop acid Fluazifop (free acid) Haloxyfop P Mecoprop P Quizalofop **<u>Ureas</u>** Amidosulfuron Diflubenzuron Hexaflumuron Teflubenzuron Thifensulfuron methyl Triflumuron **<u>Nitriles</u>** : Bromoxynil Ioxynil Dinitrophenols : dinoseb dinoterb **<u>Pyridines</u>** : Triclopyr Fluroxypyr **<u>Diverse</u>** : Bentazone Dicamba Dithianon MCPB Orizalin	**Extraction:** Solvent **Analysis:** LC/MS^n	Internal method MOC3/90

**** The exhaustive list of analyses proposed under accreditation is updated by the laboratory.**

<u>Comments:</u>

The laboratory is accredited to carry-out analyses within the field covered by the general scope. It can within this field adapt and set up any normalised or similar method and develop any other method than those allowed by the skills approved at the time of accreditation which will permit them to carry-out these analyses.

It is the responsibility of the laboratory to ensure the validation of all methods proposed and to establish and maintain the skill-sets needed by the personnel to set them up.

The laboratory must record and maintain at the full disposal of the Cofrac the detailed list of analyses, and in particular the methods, proposed in the context of its accreditation.

The appropriateness of the methods used in terms of the skills previously approved will be the subject of evaluations carried out by Cofrac. This assessment will mainly focus on the development, adaptation and validation of the methods.

The analysis of chemical contaminants in animals, in animal products and foodstuffs destined for human or animal consumption: Metals (99-3)

FLEXIBLE FIELD

- **Research (identification and quantification) of heavy metals and minerals in food matrices.**

General scope*

Sample	Measured or researched parameter	Method of measurement
Foodstuffs for human and animals (including baby food)	Metals Minerals	**Mineralization:** wet Way (digestion by microwaves in system closed) **Analysis:** Atomic absorption Spectrometry (CV-AAS/ GF-AAS, ICP-MS)

*The laboratory has approval for their competence at adapting and setting up all normalised or similar methods within its general scope and at **developing any other method, the validation of which will be ensured.**

Detailed scope: 05/07/2013**

Sample	Measured or researched parameter	Method of measurement	Method reference
All foodstuffs of animal origin or vegetal origin including baby-food	Determination of the levels of lead, cadmium, arsenic, nickel and copper.	**Mineralization:** wet Way (digestion by microwaves in system closed) **Analysis:** Atomic absorption Spectrometry (GF-AAS)	Internal method MOC3/52 Adapted from the norm NF EN 14084 et NF EN 14332
All foodstuffs of animal origin or vegetal origin including baby-food	Determination of mercury levels	**Mineralization:** wet Way (digestion by microwaves in system closed) **Analysis:** Atomic absorption Spectrometry (CV-AAS)	Internal method MOC3/53 Adapted from the norm NF EN 13806
All foodstuffs of animal origin or vegetal origin including baby-food	Determination of the levels of lead, cadmium, arsenic, nickel and copper, mercury and tin	**Mineralization:** wet Way (digestion by microwaves in system closed) **Analysis:** (ICP-MS)	Internal method MOC3/85

**** The exhaustive list of analyses proposed under accreditation is updated by the laboratory.**

Comments:

The laboratory is accredited to carry-out analyses within the field covered by the general scope. It can within this field adapt and set up any normalised or similar method and develop any other method than those allowed by the skills approved at the time of accreditation which will permit them to carry-out these analyses.

It is the responsibility of the laboratory to ensure the validation of all methods proposed and to establish and maintain the skill-sets needed by the personnel to set them up.

The laboratory must record and maintain at the full disposal of the Cofrac the detailed list of analyses, and in particular the methods, proposed in the context of its accreditation.

The appropriateness of the methods used in terms of the skills previously approved will be the subject of evaluations carried out by Cofrac. This assessment will mainly focus on the development, adaptation and validation of the methods.

Paris, the 4th july 2013

Person in charge of accreditation

Julien SENEZ

TECHNICAL APPENDIX N°2
to the certificate of accreditation (agreement n° 2760)
Norm NF EN ISO/CEI 17025 v2005

The legal entity indicated below:

Name:	**SARL LABORATOIRE PHYTOCONTROL**
Address:	**Parc Scientifique Georges Besse II – 180, rue Philippe Maupas 30035 NÎMES**

Is accredited by Cofrac –Laboratories Section – for the following laboratory, site and technical unit:

SITE CONCERNED	**NAME: LABORATOIRE PHYTOCONTROL – Unit Molecular Biology** Address: **Parc Scientifique Georges Besse II – 180, rue Philippe Maupas 30035 NÎMES**

Unité Technique : PHYTOCONTROL

- Technical unit 2: UNIT MOLECULAR BIOLOGY

The accreditation is agreed for the following field:

- **Foodstuff / Vegetals / Molecular Genetic**
  (Analysis linked to the genetically modified organisms – G.M.O.)

and concerns the following tests:

FLEXIBLE FIELD

G.M.O's Field

General scope*

Sample	Measured or researched parameter	Method of measurement
Corn Raw materials and/or processed	• PCR target of vegetal species • PCR target of a GMO sequence: - Sequence screening	Homogenisation / grinding Extraction Real-time PCR (qualitative and quantitative)
Soy Raw materials and/or processed	• PCR target of vegetal species • PCR target of a GMO sequence: - Sequence screening	Homogenisation / grinding Extraction Real-time PCR (qualitative and quantitative)

* The laboratory has approval for their competence at adapting and setting up all normalised or similar methods within its general scope and at **developing any other method, the validation of which will be ensured.**

Detailed scope **

**** The exhaustive list of analyses proposed under accreditation is updated by the laboratory.**

Subject	Measured or researched parameter	Field of application	Mesure Scope	Method principle	Method reference
Plant specie Corn	PCR target specific of plant specie : ADH	Raw products (Seed, grains, flour ..) and processed Products	qualitative / quantitative	Homogenisation /grinding Extraction Real-time PCR	Validation according to norms NF EN ISO 21569, 24276, 21570 and 21571 on corn MON 810, GA21, NK 603 and MON 863 Internal method MOC31103
Plant specie Corn	PCR target specific to a GMO sequence: Screening P35S	Raw products (Seed, grains, flour ..) and processed Products	qualitative / quantitative	Homogenisation /grinding Extraction Real-time PCR	Validation according to norms NF EN ISO 21569, 24276, 21570 and 21571 on corn MON 810, NK 603 and MON 863 Internal method MOC31103
Plant specie Corn	PCR target specific to a GMO sequence: Screening Tnos	Raw products (Seed, grains, flour ..) and processed Products	qualitative / quantitative	Grinding /Homogenisation Extraction Real-time PCR	Validation according to norms NF EN ISO 21569, 24276, 21570 and 21571 on corn GA21, NK 603 and MON 868 Internal method MOC31103
Plant specie Soy	PCR target specific of plant specie : Lectin	Raw products (Seed, grains, flour ..) and processed Products	qualitative / quantitative	Homogenisation /grinding Extraction Real-time PCR	Validation according to norms NF EN ISO 21569, 24276, 21570 and 21571 on soy RRS, RRS2 Internal method MOC31103
Plant specie Soy	PCR target specific to a GMO sequence: Screening P35S	Raw products (Seed, grains, flour ..) and processed Products	qualitative / quantitative	Homogenisation /grinding Extraction Real-time PCR	Validation according to norms NF EN ISO 21569, 24276, 21570 and 21571 on soy RSS Internal method MOC31103
Plant specie Soy	PCR target specific to a GMO sequence: Screening Tnos	Raw products (Seed, grains, flour ..) and processed Products	qualitative / quantitative	Homogenisation /grinding Extraction Real-time PCR	Validation according to norms NF EN ISO 21569, 24276, 21570 and 21571 on soy RSS Internal method MOC31103

<u>Flexible scope :</u> The laboratory is authorized to perform analysis services using validated, modified or adapted methods from mentioned methods or equivalent methods, or developed according to the same analytical(s) principle (s) described, depending on customer needs or markets. The modification of the list of the analysis methods, the adoption of equivalent methods, the adaptation / modification of the methods or methods development are allowed within the limits of possibilities as defined in this scope of accreditation (flexibility on events).
The laboratory is required to notify the Cofrac of new adopted methods of analysis, modified/adapted or developed for use in transmitting a detailed exhaustive list of used analysis methods, operating under its accreditation, established within the limits of possibilities such as defined in this scope of accreditation.

Paris, the 04th july 2013

Person in charge of accreditation : Julien SENEZ