

Rapporto di prova n°: **20WL74592** del **18/11/2020**

Spett.  
**HECHO EN ITALIA srl**  
Corso Regina Margherita 157  
10122 TORINO TO

**Data accettazione:** 05/11/2020  
**Data di inizio prove:** 05/11/2020  
**Data di fine prove:** 18/11/2020

**Dati del campione forniti dal committente**

**Dati di campionamento forniti dal committente**

**Matrice:** Semi di cacao  
**Descrizione:** TO2003040.02 GRANOS DE CACAO Calidad: A; Cosecha: 2020; Origen: Baracao - Cuba

**Prelievo eseguito da:** committente  
**Data campionamento:** 03/11/2020

Parametro <i>Metodo</i>	Attività	Risultato	Incertezza	U.M.	LOQ	Limiti
* Ocratossina A <i>Lab 002/A036 rev.05 2020</i>	N.A.	<b>0,22</b>	±0,06	µg/Kg	0,2	
Cadmio <i>POD 181 rev.00 del 30.12.2017</i>	N.A.	<b>0,485</b>	±0,049	mg/kg	0,005	0,6
Piombo <i>POD 181 rev.00 del 30.12.2017</i>	N.A.	<b>0,018</b>	±0,004	mg/kg	0,005	
Rame <i>POD 181 rev.00 del 30.12.2017</i>	N.A.	<b>19,938</b>	±1,994	mg/kg	0,025	50
Valore energetico da calcolo <i>Rapporti ISTISAN 1996/34 pag.77 + Rapporti ISTISAN 1996/34 pag.13 + Rapporti ISTISAN 1996/34 pag.39 + Rapporti ISTISAN 1996/34 pag.7 + Rapporti ISTISAN 1996/34 pag.68 + Reg UE 1169/2011</i>		<b>551</b>		kcal/100g		
Valore energetico da calcolo <i>Rapporti ISTISAN 1996/34 pag.77 + Rapporti ISTISAN 1996/34 pag.13 + Rapporti ISTISAN 1996/34 pag.39 + Rapporti ISTISAN 1996/34 pag.7 + Rapporti ISTISAN 1996/34 pag.68 + Reg UE 1169/2011</i>		<b>2267</b>		kJ/100g		
Ceneri <i>Rapporti ISTISAN 1996/34 pag.77</i>		<b>3,77</b>	±0,38	g/100g	0,01	
Sostanze azotate totali <i>Rapporti ISTISAN 1996/34 pag. 13</i>		<b>2,23</b>	±0,22	g/100g	0,04	
Proteine <i>Rapporti ISTISAN 34 pag.13 del 1996</i>		<b>13,94</b>	±1,39	g/100g	0,25	

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Parametro <i>Metodo</i>	Attività	Risultato	Incertezza	U.M.	LOQ	Limiti
Sodio <i>POD 181 rev.00 del 30.12.2017</i>	N.A.	<b>0,0331</b>	±0,0099	g/100g	0,0050	
Sale (da calcolo) <i>POD 181 rev.00 del 30.12.2017</i>		<b>0,0830</b>		g/100g	0,0125	
Carboidrati (da calcolo) di cui: <i>DLgs n°77 16/02/1993 GU n° 69 24/03/1993 +Rapporti Istisan 1996/34 pag. 39+ pag.13 + pag.77 + pag.7</i>		<b>0,38</b>		g/100g	0,1	
* Zuccheri <i>POD 184 rev.00 del 21.12.2017</i>		<b>0,34</b>		g/100g	0,1	
Sostanze grasse totali <i>Rapporti ISTISAN: 1996/34 pag.39</i>		<b>48,87</b>	±2,44	g/100g	0,1	
* Grassi monoinsaturi <i>ISTISAN 1996/34 pag. 47</i>		<b>16,58</b>		g/100g	0,1	
* Grassi polinsaturi <i>ISTISAN 1996/34 pag. 47</i>		<b>1,39</b>		g/100g	0,1	
* Grassi saturi <i>ISTISAN 1996/34 pag. 47</i>		<b>30,90</b>		g/100g	0,1	
Umidità <i>Rapporti ISTISAN 1996/34 pag.7</i>		<b>6,16</b>	±0,09	%	0,01	
Fibra alimentare <i>Rapporti ISTISAN 1996/34 pag.68</i>		<b>26,88</b>	±2,69	g/100g	0,5	

RESIDUI LC/MS/MS e GC/MS/MS

**FITOFARMACI INFERIORI AL LIMITE DI QUANTIFICAZIONE (LOQ)**

<i>Metodo</i> Parametro	Risultato (mg/kg)	<i>Metodo</i> Parametro	Risultato (mg/kg)
<i>UNI EN 15662 : 2018</i>		<i>UNI EN 15662 : 2018</i>	
* Abamectin (sum of Avermectin B1a, Avermectin B1b and delta-8,9-Avermectin B1a as Avermectin B1a)	< 0.01	* Acrinathrin	< 0.01
* Acephate	< 0.01	* Alachlor	< 0.01
* Acequinocyl	< 0.01	* Aldicarb (sum of Aldicarb, its sulfoxide and its sulfone, expressed as Aldicarb)	< 0.01
* Acetamiprid	< 0.01	* Aldicarb-Sulfone	< 0.01
* Acetochlor	< 0.01	* Aldicarb	< 0.01
* Acibenzolar- S- methyl (sum of acibenzolar- S- methyl and acibenzolar acid as acibenzolar- S- methyl)	< 0.01	* Aldicarb-Sulfoxide	< 0.01
* Acibenzolar-Acid	< 0.01	* Aldoxycarb	< 0.01
* Acibenzolar-S-methyl	< 0.01	* Aldrin and Dieldrin (Aldrin and dieldrin combined expressed as dieldrin)	< 0.01
* Acifluorfen	< 0.01	* Aldrin	< 0.01
* Aclonifen	< 0.01	* Dieldrin	< 0.01

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Metodo <b>Parametro</b>	<b>Risultato (mg/kg)</b>	Metodo <b>Parametro</b>	<b>Risultato (mg/kg)</b>
<i>UNI EN 15662 : 2018</i>		<i>UNI EN 15662 : 2018</i>	
* Allethrin	< 0.01	* BAC-C18	< 0.01
* Ametoctradin	< 0.01	* Benzoximate	< 0.01
* Ametryn	< 0.01	* Benzoylprop-ethyl	< 0.01
* Aminocarb	< 0.01	* Benzthiazuron	< 0.01
* Amisulbrom	< 0.01	* Bifenazate	< 0.01
* Amitraz(Amitraz including the metabolites containing the 2,4-Dimethylaniline moiety as amitraz)	< 0.01	* Bifenox	< 0.01
* Amitraz	< 0.01	* Bifenthrin	< 0.01
* 2,4 Dimethylaniline	< 0.01	* Binapacryl	< 0.01
* N-(2,4-DimethylPhenyl)-N'-Formamidine	< 0.01	* Biphenyl	< 0.01
* N-(2,4-DimethylPhenyl)-Formamide	< 0.01	* Bispyribac	< 0.01
* Anilazine	< 0.01	* Bitertanol	< 0.01
* Anthraquinone	< 0.01	* Boscalid	< 0.01
* Atrazine	< 0.01	* Bromacil	< 0.01
* Asulam	< 0.01	* Bromfenvinphos	< 0.01
* Atrazine Desethyl	< 0.01	* Bromocyclen	< 0.01
* Atrazine Desisopropyl	< 0.01	* Bromophos-Ethyl	< 0.01
* Atrazine-Desethyl-Desisopropyl	< 0.01	* Bromophos-Methyl	< 0.01
* Azaconazole	< 0.01	* Bromoxynil and its salts, expressed as Bromoxynil	< 0.01
* Azadirachtin	< 0.01	* Bromoxynil octanoate	< 0.01
* Azamethiphos	< 0.01	* Bromopropylate	< 0.01
* Azimsulfuron	< 0.01	* Bromuconazole (sum of diastereoisomers)	< 0.01
* Azinphos-ethyl	< 0.01	* Bupirimate	< 0.01
* Azinphos-methyl	< 0.01	* Buprofezin	< 0.01
* Azocyclotin and Cyhexatin (sum of Azocyclotin and Cyhexatin expressed as Cyhexatin)	< 0.01	* Butafenacil	< 0.01
* Azocyclotin	< 0.01	* Butocarboxim	< 0.01
* Cyhexatin	< 0.01	* Butoxycarboxim	< 0.01
* Azoxystrobin	< 0.01	* Buturon	< 0.01
* Barban	< 0.01	* Butylate	< 0.01
* Benalaxyl including other mixtures of constituent isomers including Benalaxyl-M (su of isomers)	< 0.01	* Cadusafos	< 0.01
* Bendiocarb	< 0.01	* Captafol	< 0.01
* Benfluralin	< 0.01	* Captan (sum of Captan and THPI, expressed as Captan)	< 0.01
* Bensulfuron-Methyl	< 0.01	* Captan	< 0.01
* Bentazone (sum of Bentazone, its salts and 6-hydroxy and 8-hydroxy bentazone as Bentazone)	< 0.01	* Tetrahydrophthalimide(cis-1,2,3,6)	< 0.01
* Bentazone	< 0.01	* Carbaryl	< 0.01
* 6-Hydroxy Bentazone	< 0.01	* Carbendazim and Benomyl (sum of Benomyl and Carbendazim expressed as Carbendazim)	< 0.01
* 8-Hydroxy Bentazone	< 0.01	* Carbendazim	< 0.01
* Benthialvalicarb-isopropyl	< 0.01	* Benomyl	< 0.01
* Benzalkonium chloride sum (")	< 0.01	* Carbetamide	< 0.01
* BAC-C8	< 0.01	* Carbofuran(sum of Carbofuran,Carbosulfan,Benfuracarb, Furathiocarb and 3-OHCarbofuran as Carbofuran)	< 0.001
* BAC-C10	< 0.01	* Carbofuran	< 0.001
* BAC-C12	< 0.01	* Benfuracarb	< 0.001
* BAC-C14	< 0.01	* Carbosulfan	< 0.001
* BAC-C16	< 0.01	* Furathiocarb	< 0.001
		* 3-Hydroxycarbofuran	< 0.001
		* Carbophenothion	< 0.01

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<i>UNI EN 15662 : 2018</i>		<i>UNI EN 15662 : 2018</i>	
* Carboxin	< 0.01	* Cycloate	< 0.01
* Carfentrazone-Ethyl	< 0.01	* Cycloxydim	< 0.01
* Chinomethionat	< 0.01	* Cycluron	< 0.01
* Chlorantraniliprole	< 0.01	* Cyflufenamid: sum of Cyflufenamid (Z-isomer) and its E-isomer	< 0.01
* Chlorbufam	< 0.01	* Cyfluthrin (cyfluthrin including other mixtures of constituent isomers (sum of isomers))	< 0.01
* Chlordane (sum of cis- and trans-chlordane)	< 0.01	* Cyfluthrin Beta	< 0.01
* Chlorfenapyr	< 0.01	* Cyhalafop	< 0.01
* Chlorfenson	< 0.01	* Cyproconazole	< 0.01
* Chlorfenvinphos	< 0.01	* Cyhalofop-butyl	< 0.01
* Chlorfluazuron	< 0.01	* Cymiazol	< 0.01
* Chloridazon desphenyl	< 0.01	* Cymoxanil	< 0.01
* Chloridazon	< 0.01	* Cypermethrin (Cypermethrin including other mixtures of constituent isomers(sum of isomers))	< 0.01
* Chloridazon(sum of chloridazon and chloridazon-desphenyl,espressed as chloridazon)	< 0.01	* Cypermethrin Alpha	< 0.01
* Chlormephos	< 0.01	* Cyprodinil	< 0.01
* Chlorobenzilate	< 0.01	* Cyprosulfamide	< 0.01
* Chlorbromuron	< 0.01	* Cyromazine	< 0.01
* Chloroneb	< 0.01	* Daminozide	< 0.01
* Chloropropylate	< 0.01	* Dazomet (Methylisothiocyanate resulting from the use of Dazomet and Metam)	< 0.01
* Chlorothalonil	< 0.01	* DDT (sum of p,p'-DDT, o,p'-DDT, p-p'-DDE and p,p'-TDE (DDD) as DDT)	< 0.01
* Chlorotoluron	< 0.01	* 2,4'-DDD	< 0.01
* Chloroxuron	< 0.01	* 2,4'-DDE	< 0.01
* Chlorpropham	< 0.01	* 2,4'-DDT	< 0.01
* Chlorpyrifos-methyl	< 0.01	* 4,4'-DDD	< 0.01
* Chlorpyrifos	< 0.01	* 4,4'-DDE	< 0.01
* Chlorthal-Dimethyl	< 0.01	* 4,4'-DDT	< 0.01
* Chlorthion	< 0.01	* DEET	< 0.01
* Chlorthiophos	< 0.01	* Deltamethrin	< 0.01
* Chlorthiamid	< 0.01	* Desmedipham	< 0.01
* Chlozolinat	< 0.01	* Desmetryn	< 0.01
* Cinosulfuron	< 0.01	* Diafenthuron	< 0.01
* Clethodim (sum of Sethoxydim and Clethodim including degradation products calculated as Sethoxydim)	< 0.01	* Dialifos	< 0.01
* Clethodim	< 0.01	* Di-allate (sum of isomers)	< 0.01
* Sethoxydim	< 0.01	* Diazinon	< 0.01
* Clodinafop and its S-isomers and their salts expressed as Clodinafop	< 0.01	* Dibrom	< 0.01
* Clodinafop-propargyl	< 0.01	* Dicamba	< 0.01
* Clofentezine	< 0.01	* Dichlobenil	< 0.01
* Clomazone	< 0.01	* Dichlofenthion	< 0.01
* Clomeprop	< 0.01	* Dichlofluanid	< 0.01
* Clopyralid	< 0.01	* Dichlorprop (Sum of dichlorprop (including dichlorprop-P), its salts, esters and conjugates)(*****)	< 0.01
* Clothianidin	< 0.01	* Dichlorprop	< 0.01
* Coumaphos	< 0.01	* Dichlorvos	< 0.01
* Cyanazine	< 0.01	* Diclobutrazol	< 0.01
* Cyanofenphos	< 0.01		
* Cyantraniliprole	< 0.01		
* Cyazofamid	< 0.01		

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<i>UNI EN 15662 : 2018</i>		<i>UNI EN 15662 : 2018</i>	
* Diclofop (sum of Diclofop-methyl and Diclofop acid expressed as Diclofop-methyl)	< 0.01	* Endrin	< 0.01
* Diclofop-free acid	< 0.01	* Endrin aldehyde	< 0.01
* Diclofop-methyl	< 0.01	* EPN	< 0.01
* Dicloran	< 0.01	* Epoxiconazole	< 0.01
* Dicofol (sum of p,p' and o,p' isomers)	< 0.01	* EPTC	< 0.01
* Dicrotophos	< 0.01	* Etaconazole	< 0.01
* Didecyldimethylammonium chloride sum ("")	< 0.01	* Ethiofencarb	< 0.01
* DDAC-C8	< 0.01	* Ethiofencarb-sulfone	< 0.01
* DDAC-C10	< 0.01	* Ethiofencarb-sulfoxide	< 0.01
* DDAC-C12	< 0.01	* Ethion	< 0.01
* Diethofencarb	< 0.01	* Ethirimol	< 0.01
* Difenconazole	< 0.01	* Ethofumesate	< 0.01
* Difenoxuron	< 0.01	* Ethoprophos	< 0.01
* Diflubenzuron	< 0.01	* Ethoxyquin	< 0.01
* Diflufenican	< 0.01	* Ethoxysulfuron	< 0.01
* Dimefox	< 0.01	* Etofenprox	< 0.01
* Dimepiperate	< 0.01	* Etoxazole	< 0.01
* Dimethenamid (dimethenamid-p including other mixtures of constituent isomers(sum of isomers))	< 0.01	* Etridiazole	< 0.01
* Dimethoate	< 0.01	* Etrimfos	< 0.01
* Dimethomorph (sum of isomers)	< 0.01	* Famoxadone	< 0.01
* Dimoxystrobin	< 0.01	* Famphur	< 0.01
* Diniconazole (sum of isomers)	< 0.01	* Fenamidone	< 0.01
* Dinitramine	< 0.01	* Fenamiphos (sum of Fenamiphos and its sulfoxide and sulfone expressed as Fenamiphos)	< 0.01
* Dinocap	< 0.01	* Fenamiphos	< 0.01
* Dinoterb	< 0.01	* Fenamihos-Sulfone	< 0.01
* Dioxacarb	< 0.01	* Fenamiphos-Sulfoxide	< 0.01
* Dioxathion (sum of isomers)	< 0.01	* Fenarimol	< 0.01
* Diphenamid	< 0.01	* Fenazaquin	< 0.01
* Diphenylamine	< 0.01	* Fenbuconazole	< 0.01
* Disulfoton (sum of Disulfoton, Disulfoton sulfoxide and Disulfoton sulfone as Disulfoton)	< 0.01	* Fenbutatin-oxide	< 0.01
* Disulfoton	< 0.01	* Fenchlorphos (sum of Fenchlorphos and Fenchlorphos oxon expressed as Fenchlorphos)	< 0.01
* Disulfoton sulfone	< 0.01	* Fenchlorphos	< 0.01
* Disulfoton sulfoxide	< 0.01	* Fenchlorphos-Oxon	< 0.01
* Ditalimfos	< 0.01	* Fenhexamid	< 0.01
* Dithianon	< 0.01	* Fenitrothion	< 0.01
* Diuron	< 0.01	* Fenothiocarb	< 0.01
* Dodine	< 0.01	* Fenoxaprop-P-ethyl	< 0.01
* Edifenphos	< 0.01	* Fenoxaprop-P	< 0.01
* Emamectin benzoate B1a, expressed as Emamectin	< 0.01	* Fenoxycarb	< 0.01
* Endosulfan (sum of alpha- and beta-isomers and Endosulfan-sulphate expressed as Endosulfan)	< 0.01	* Fenpropathrin	< 0.01
* Endosulfan alpha	< 0.01	* Fenpropidin (sum of Fenpropidin and its salts expressed as Fenpropidin)	< 0.01
* Endosulfan beta	< 0.01	* Fenpropimorph	< 0.01
* Endosulfan sulfate	< 0.01	* Fenpyrazamine	< 0.01
		* Fenpyroximate	< 0.01

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<i>UNI EN 15662 : 2018</i>		<i>UNI EN 15662 : 2018</i>	
* Fenson	< 0.01	* Flufenoxuron	< 0.01
* Fensulfothion-oxon-sulfone	< 0.01	* Fluometuron	< 0.01
* Fensulfothion-oxon	< 0.01	* Fluopicolide	< 0.01
* Fensulfothion-sulfone	< 0.01	* Fluopyram	< 0.01
* Fensulfothion	< 0.01	* Flupyradifurone	< 0.01
* Fenthion (Fenthion and its oxigen analogue, theis sulfoxides and sulfone expressed as parent)	< 0.01	* Fluquinconazole	< 0.01
* Fenthion	< 0.01	* Flurochloridone	< 0.01
* Fenthion-Sulfone	< 0.01	* Fluroxyppy (sum of Fluroxyppy, its salts, its esters, and its conjugates expressed as Fluroxyppy)	< 0.01
* Fenthion-Sulfoxide	< 0.01	* Fluroxyppy	< 0.01
* Fenthion-Oxon	< 0.01	* Fluroxyppy-1-Methylheptyl Ester	< 0.01
* Fenthion-Oxon-Sulfone	< 0.01	* Fluoxastrobin	< 0.01
* Fenthion-Oxon-Sulfoxide	< 0.01	* Flusilazole	< 0.01
* Fentin (Fentin including its salts, expressed as Triphenyltin cation)	< 0.01	* Flutolanil	< 0.01
* Fenuron	< 0.01	* Flutriafol	< 0.01
* Fenvalerate (any ratio of constituent isomers(RR, SS, RS & SR) including Esfenvalerate)	< 0.01	* Fluxapyroxad	< 0.01
* Fenvalerate	< 0.01	* Folpet (sum of Folpet and Phtalimide expressed as Folpet)	< 0.01
* Esfenvalerate	< 0.01	* Folpet	< 0.01
* Fipronil (sum Fipronil + sulfone metabolite (MB46136) expressed as Fipronil)	< 0.005	* Phtalimide	< 0.01
* Fipronil	< 0.005	* Fonofos	< 0.01
* Fipronil-Desulfinyl	< 0.01	* Forchlorfenuron	< 0.01
* Fipronil-Sulfide	< 0.01	* Formetanate: Sum of Formetanate and its salts expressed as Formetanate (hydrochloride)	< 0.01
* Fipronil-Sulfone	< 0.005	* Formothion	< 0.01
* Flamprop-Isopropyl	< 0.01	* Fosthiazate	< 0.01
* Flamprop-M-Methyl	< 0.01	* Fuberidazole	< 0.01
* Flamprop	< 0.01	* Furalaxyl	< 0.01
* Flazasulfuron	< 0.01	* Furilazole	< 0.01
* Flonicamid(Sum of Flonicamid, TFNA and TFNG expressed as Flonicamid)	< 0.01	* Giberellic Acid	< 0.01
* Flonicamid	< 0.01	* Halosulfuron-methyl	< 0.01
* TFNA	< 0.01	* Halosulfuron	< 0.01
* TFNG	< 0.01	* Haloxyfop(sum of Haloxyfop, its esters, salts and conjugates expressed as Haloxyfop)	< 0.01
* Fluazifop-P(sum of all the isomers of fluazifop, its esters and its coniugates,express as fluazifop)	< 0.01	* Haloxyfop	< 0.01
* Fluazifop	< 0.01	* Haloxyfop-2-Ethoxyethyl	< 0.01
* Fluazifop-Butyl	< 0.01	* Haloxyfop-Methyl	< 0.01
* Fluazinam	< 0.01	* Hexachlorocyclohexane (HCH) sum of isomes, except the gamma isomer	< 0.01
* Fluazuron	< 0.01	* HCH alpha	< 0.01
* Flubendiamide	< 0.01	* HCH beta	< 0.01
* Flubenzimine	< 0.01	* HCH delta	< 0.01
* Flucycloxuron	< 0.01	* HCH gamma (Lindane)	< 0.01
* Flucythrinate (Flucythrinate including other mixtures of constituent isomers (Sum of isomers))	< 0.01	* Heptachlor (sum of Heptachlor and Heptachlor epoxide expressed as Heptachlor)	< 0.01
* Fludioxonil	< 0.01	* Heptachlor	< 0.01
* Flufenacet	< 0.01	* Heptachlor-Endo-Epoxide	< 0.01
		* Heptachlor-Exo-Epoxide	< 0.01
		* Heptenofos	< 0.01

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<i>UNI EN 15662 : 2018</i>		<i>UNI EN 15662 : 2018</i>	
* Hexachlorobenzene	< 0.01	* MCPA	< 0.01
* Hexaconazole	< 0.01	* MCPA-Methyl Ester	< 0.01
* Hexaflumuron	< 0.01	* MCPA-2-Ethylhexyl Ester	< 0.01
* Hexazinone	< 0.01	* MCPA-Butoxyethyl Ester	< 0.01
* Hexythiazox	< 0.01	* MCPB	< 0.01
* Icaridin	< 0.01	* Mecarbam	< 0.01
* Imazalil	< 0.01	* Mecoprop (sum of mecoprop-p and mecoprop expressed as mecoprop)	< 0.01
* Imazamox (Sum of Imazamox and its salts, expressed as Imazamox)	< 0.01	* Mepanipyrim	< 0.01
* Imazosulfuron	< 0.01	* Mephosfolan	< 0.01
* Imibenconazole	< 0.01	* Mepronil	< 0.01
* Imidacloprid	< 0.01	* Meptyldinocap	< 0.01
* Indoxacarb (Sum of Indoxacarb and its R enantiomer)	< 0.01	* Mesotrione	< 0.01
* Iodofenphos	< 0.01	* Metaflumizone (sum of E- and Z- isomers)	< 0.01
* Ioxynil	< 0.01	* Metalaxyl and Metalaxyl-M (sum of isomers)	< 0.01
* Iprobenfos	< 0.01	* Metamifop	< 0.01
* Iprodione	< 0.01	* Metamitron	< 0.01
* Iprovalicarb	< 0.01	* Metazachlor	< 0.01
* Isazofos	< 0.01	* Metconazole (sum of isomers)	< 0.01
* Isocarbophos	< 0.01	* Methabenzthiazuron	< 0.01
* Isodrin	< 0.01	* Methacrifos	< 0.01
* Isofenphos	< 0.01	* Methamidophos	< 0.01
* Isofenphos-Methyl	< 0.01	* Methidathion	< 0.01
* Isofenphos-Oxon	< 0.01	* Methiocarb (sum of Methiocarb and Methiocarb sulfoxide and sulfone, expressed as Methiocarb)	< 0.01
* Isofetamid	< 0.01	* Methiocarb	< 0.01
* Isoprocarb	< 0.01	* Methiocarb-Sulfone	< 0.01
* Isopropalin	< 0.01	* Methiocarb-Sulfoxide	< 0.01
* Isoprothiolane	< 0.01	* Methomyl	< 0.01
* Isoproturon	< 0.01	* Thiodicarb	< 0.01
* Isopyrazam	< 0.01	* Methomyl-oxyme	< 0.01
* Isoxaben	< 0.01	* Methoxychlor	< 0.01
* Isoxaflutole (Sum of Isoxaflutole and its Diketonitrile-metabolite, as Isoxaflutole)	< 0.01	* Methoxyfenozide	< 0.01
* Isoxaflutole	< 0.01	* Methylidymron	< 0.01
* Isoxaflutole Diketonitrile	< 0.01	* Methyl-N-(3-hydroxyphenyl)-Carbamate	< 0.01
* Isoxathion	< 0.01	* Metobromuron	< 0.01
* Kresoxim-Methyl	< 0.01	* Metolachlor and S-Metolachlor (sum of isomers)	< 0.01
* Lambda-Cyhalothrin	< 0.01	* Metolcarb	< 0.01
* Lenacil	< 0.01	* Metosulam	< 0.01
* Leptophos	< 0.01	* Metoxuron	< 0.01
* Linuron	< 0.01	* Metrafenone	< 0.01
* Lufenuron	< 0.01	* Metribuzin	< 0.01
* Malathion (sum of Malathion and Malaoxon expressed as Malathion)	< 0.01	* Metsulfuron-Methyl	< 0.01
* Malathion	< 0.01	* Mevinphos (sum of E- and Z- isomers)	< 0.01
* Malaoxon	< 0.01	* Milbemectin (sum of Milbemycin A4 and Milbemycin A3, expressed as Milbemectin)	< 0.01
* Mandipropamid	< 0.01	* Milbemycin A3	< 0.01
* MCPA and MCPB (MCPA, MCPB including their salts, esters and conjugate as MCPA)	< 0.01		

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Laboratorio con sistema di gestione della qualità certificato secondo la norma  
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segue Rapporto di prova n°: **20WL74592** del **18/11/2020**

Metodo <b>Parametro</b>	<b>Risultato (mg/kg)</b>	Metodo <b>Parametro</b>	<b>Risultato (mg/kg)</b>
<i>UNI EN 15662 : 2018</i>		<i>UNI EN 15662 : 2018</i>	
* Milbemycin A4	< 0.01	* Permethrin (sum of isomers)	< 0.01
* Mirex	< 0.01	* Perthane	< 0.01
* Molinate	< 0.01	* Phenkapton	< 0.01
* Monocrotophos	< 0.01	* Phenmedipham	< 0.01
* Monolinuron	< 0.01	* Phenothrin (phenothrin including other mixtures of constituent isomers (sum of isomers)) (F)	< 0.01
* Monuron	< 0.01	* Phenthoate	< 0.01
* Myclobutanil	< 0.01	* Phorate (sum of Phorate, its oxygen analogue and their sulfones expressed as Phorate)	< 0.01
* N,N-Dimethyl-Sulphamide	< 0.01	* Phorate	< 0.01
* Napropamide	< 0.01	* Phorate-Oxon	< 0.01
* Naptalam	< 0.01	* Phorate-Sulfone	< 0.01
* Neburon	< 0.01	* Phorate-Sulfoxide	< 0.01
* Nicosulfuron	< 0.01	* Phorate-Oxon-Sulfone	< 0.01
* Nitenpyram	< 0.01	* Phorate-Oxon-Sulfoxide	< 0.01
* Nitrofen	< 0.01	* Phosalone	< 0.01
* Nitrothal-Isopropyl	< 0.01	* Phosmet (Phosmet and Phosmet-oxon expressed as Phosmet)	< 0.01
* Norfluazuron	< 0.01	* Phosmet	< 0.01
* Novaluron	< 0.01	* Phosmet Oxone	< 0.01
* Nuarimol	< 0.01	* Phosphamidon	< 0.01
* Omethoate	< 0.01	* Phoxim	< 0.01
* Orthosulfamuron	< 0.01	* Picloram	< 0.01
* Oxadiargyl	< 0.01	* Picoxystrobin	< 0.01
* Oxadiazon	< 0.01	* Pinoxaden	< 0.01
* Oxadixyl	< 0.01	* Piperonyl butoxide	< 0.01
* Oxamyl	< 0.01	* Piperophos	< 0.01
* Oxamyl-Oxyme	< 0.01	* Pirimicarb	< 0.01
* Oxathiapiprolin	< 0.01	* Pirimicarb-Desmethyl	< 0.01
* Oxycarboxin	< 0.01	* Pirimicarb-Desmethyl-Formamido	< 0.01
* Oxydemeton-methyl (sum of Oxydemeton-methyl and Demeton-S-methylsulfon as Oxydemeton-methyl)	< 0.01	* Pirimiphos-Ethyl	< 0.01
* Oxydemeton-Methyl	< 0.01	* Pirimiphos-Methyl	< 0.01
* Demeton-S-methyl	< 0.01	* Pretilachlor	< 0.01
* Demeton-S-methylsulfone	< 0.01	* Prochloraz(sum of Prochloraz and metabolites containing 2,4,6-Trichlorophenol moiety as Prochloraz)	< 0.01
* Oxyfluorfen	< 0.01	* Prochloraz	< 0.01
* Paclobutrazol	< 0.01	* 2,4,6-Trichlorophenol	< 0.01
* Parathion-methyl (sum of Parathion-methyl and Paraoxon-methyl expressed as Parathion-methyl)	< 0.01	* Procymidone	< 0.01
* Parathion	< 0.01	* Prohexadone-calcium	< 0.01
* Parathion-Methyl	< 0.01	* Profenofos	< 0.01
* Paraoxon-Methyl	< 0.01	* Profluralin	< 0.01
* Paraoxon	< 0.01	* Profoxydim	< 0.01
* Penconazole	< 0.01	* Promecarb	< 0.01
* Pencycuron	< 0.01	* Prometon	< 0.01
* Pendimethalin	< 0.01	* Prometryn	< 0.01
* Penoxsulam	< 0.01	* Propachlor: oxalinic derivate of Propachlor, expressed as Propachlor	< 0.01
* Pentachloroanisole	< 0.01	* Propamocarb (Sum of Propamocarb and its salts, expressed as Propamocarb)	< 0.01
* Pentachlorophenol	< 0.01		
* Penthioapyrad	< 0.01		



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Metodo <b>Parametro</b>	<b>Risultato (mg/kg)</b>	Metodo <b>Parametro</b>	<b>Risultato (mg/kg)</b>
<i>UNI EN 15662 : 2018</i>		<i>UNI EN 15662 : 2018</i>	
* Propanil	< 0.01	* Spiromesifen	< 0.01
* Propaquizafop	< 0.01	* Spirotetramat and its 4 metabolite expressed as spirotetramat (**)	< 0.01
* Propargite	< 0.01	* Spirotetramat	< 0.01
* Propazine	< 0.01	* Spirotetramat BYI08330-enol	< 0.01
* Propetamphos	< 0.01	* Spirotetramat BYI08330-enolglucoside	< 0.01
* Propham	< 0.01	* Spirotetramat BYI08330-Ketohydroxy	< 0.01
* Propiconazole (mixture of isomers)	< 0.01	* Spirotetramat BYI08330-monoxyhydroxy	< 0.01
* Propoxur	< 0.01	* Spiroxamine (sum of isomers)	< 0.01
* Propyzamide	< 0.01	* Sulcotrione	< 0.01
* Proquinazid	< 0.01	* Sulfallate	< 0.01
* Prosulfocarb	< 0.01	* Sulfotep	< 0.01
* Prothioconazole: Prothioconazole-desthio (sum of isomers)	< 0.01	* Sulfoxaflor	< 0.01
* Prothioconazole	< 0.01	* Sulprofos	< 0.01
* Prothioconazole-desthio	< 0.01	* Tau-fluvalinate	< 0.01
* Prothiofos	< 0.01	* Tebuconazole	< 0.01
* Prothoate	< 0.01	* Tebufenozide	< 0.01
* Pymetrozine	< 0.01	* Tebufenpyrad	< 0.01
* Pyraclostrobin	< 0.01	* Tebupirimfos	< 0.01
* Pyraflufen-ethyl	< 0.01	* Tecnazene	< 0.01
* Pyrazophos	< 0.01	* Teflubenzuron	< 0.01
* Pyrethrins	< 0.01	* Tefluthrin	< 0.01
* Pyridaben	< 0.01	* Temephos	< 0.01
* Pyridafol	< 0.01	* Tepraloxymidim	< 0.01
* Pyridalyl	< 0.01	* Terbufos	< 0.01
* Pyridaphenthion	< 0.01	* Terbufos-Sulfon	< 0.01
* Pyridate	< 0.01	* Terbufos-Sulfoxide	< 0.01
* Pirifenox	< 0.01	* Terbutcarb	< 0.01
* Pyrimethanil	< 0.01	* Terbumeton	< 0.01
* Pyriproxyfen	< 0.01	* Terbutylazine-Desethyl	< 0.01
* Quinalphos	< 0.01	* Terbutylazine	< 0.01
* Quinlorac	< 0.01	* Terbutryn	< 0.01
* Quinoxifen	< 0.01	* Tetraclorvinphos	< 0.01
* Quintozene (sum of Quintozene and Pentachloro-aniline expressed as Quintozene)	< 0.01	* Tetraconazole	< 0.01
* Quintozene	< 0.01	* Tetradifon	< 0.01
* Pentachloroaniline	< 0.01	* Tetramethrin	< 0.01
* Quizalofop, including Quizalofop-P	< 0.01	* Tetrasul	< 0.01
* Quizalofop p-Ethyl	< 0.01	* Thiabendazole	< 0.01
* Rimsulfuron	< 0.01	* Thiacloprid	< 0.01
* Rotenone	< 0.01	* Thiametoxam	< 0.01
* S421	< 0.01	* Thidiazuron	< 0.01
* Simazine	< 0.01	* Thiencazobone-Methyl	< 0.01
* Simetryn	< 0.01	* Thiobencarb (4-chlorobenzyl methyl sulfone)	< 0.01
* Spinetoram	< 0.01	* Thiometon	< 0.01
* Spinosad (Spinosad, sum of Spinosyn A and Spinosyn D)	< 0.01	* Thionazin	< 0.01
* Spirodiclofen	< 0.01	* Thiophanate-Methyl	< 0.01
		* Thiram (expressed as Thiram)	< 0.01

segue Rapporto di prova n°: **20WL74592** del **18/11/2020**

Metodo <b>Parametro</b>	<b>Risultato (mg/kg)</b>	Metodo <b>Parametro</b>	<b>Risultato (mg/kg)</b>
<i>UNI EN 15662 : 2018</i>		<i>UNI EN 15662 : 2018</i>	
* Tiocarbazil	< 0.01	* 2-Phenylphenol	< 0.01
* Tolclofos-Methyl	< 0.01	* 2,4-DB (sum of 2,4-DB, its salts, its esters and its conjugates, expressed as 2,4-DB)	< 0.01
* Tolyfluanid (Sum of tolyfluanid and dimethylaminosulfotoluidide expressed as Tolyfluanid)	< 0.01	* 2,4-DB	< 0.01
* Tolyfluanid	< 0.01	* 2,4-DB methyl ester	< 0.01
* Dimethylaminosulfotoluidide	< 0.01	* 2,4,5-T (sum of 2,4,5-T, its salts and esters, expressed as 2,4,5-T)	< 0.01
* Tralkoxidym (sum of the constituent isomers of Tralkoxydim)	< 0.01	* 2,4,5-T	< 0.01
* Tralomethrin	< 0.01	* 2,4,5-T methylester	< 0.01
* Tranfluthrin	< 0.01	* 2,4,5-TP	< 0.01
* Triadimefon	< 0.01	* 2,6-Dichloro-4-Methylphenol	< 0.01
* Triadimenol (any ratio of consistent isomers)	< 0.01	* 2,6-Dimethylaniline	< 0.01
* Tri-Allate	< 0.01	* 3,4-Dichloroaniline	< 0.01
* Triamiphos	< 0.01	* 3,5-Dichloroaniline	< 0.01
* Triasulfuron	< 0.01	* 3-Chloroaniline	< 0.01
* Triazamate	< 0.01	* 4-chlor-3-methylfenol	< 0.01
* Triazophos	< 0.01	* 4,4'-Dibromobenzophenone	< 0.01
* Tribenuron-methyl	< 0.01	* 4-Bromo-2-Chlorophenol	< 0.01
* Trichlorfon	< 0.01	* 4-CPA	< 0.01
* Trichloronat	< 0.01	* 4-Iodophenoxyacetic acid	< 0.01
* Triclopyr	< 0.01	* 4-phenylphenol	< 0.01
* Tricyclazole	< 0.01	* 6-Benzylaminopurine	< 0.01
* Tridemorph	< 0.01		
* Trifloxystrobin	< 0.01		
* Triflumizole: Triflumizole and metabolite FM-6-1 expressed as Triflumizole	< 0.01		
* Triflumizole	< 0.01		
* FM-6-1(N-(4-chloro-2-trifluoromethylphenyl)-n-propoxyacetamide)	< 0.01		
* Triflumuron	< 0.01		
* Trifluralin	< 0.01		
* Triforine	< 0.01		
* Trinexapac-Ethyl	< 0.01		
* Triticonazole	< 0.01		
* Valifenalate	< 0.01		
* Vamidothion	< 0.01		
* Vinclozolin	< 0.01		
* Zoxamide	< 0.01		
* 1-Naphthol	< 0.01		
* 1-Naphthylacetamide and 1-naphthylacetic acid (sum of 1-NAA and 1-NAD and its salts)(****)	< 0.01		
* 1-Naphthylacetic acid	< 0.01		
* 1-Naphthylacetamide	< 0.01		
* 2,4-D (sum of 2,4-D, its salts, its esters and its conjugates, expressed as 2,4-D)	< 0.01		
* 2,4-D	< 0.01		
* 2,4-D methyl ester	< 0.01		
* 2-Naphthoxyacetic acid (BNOA)	< 0.01		
* 2-Nitroaniline	< 0.01		

segue Rapporto di prova n°: **20WL74592** del **18/11/2020**

Limiti: D.M.27/08/2004; Regolamento CEE/UE N. 396/2005; Regolamento CEE/UE N. 1881/2006.

LOQ: limite di quantificazione; U.M.:Unità di misura

>lim: i parametri così contrassegnati non rientrano nei limiti applicati.

(\*): i parametri così contrassegnati non rientrano tra quelli accreditati dal laboratorio

L'incertezza è espressa nelle unità di misura del parametro a cui si riferiscono. Il fattore di copertura è pari a  $k=2$  con un intervallo di probabilità del 95%.

(\*\*\*\*) 1-Naphthylacetamide and 1-naphthylacetic acid (sum of 1-naphthylacetamide and 1-naphthylacetic acid and its salts, expressed as 1-naphthylacetic acid)

(") Benzalkonium chloride (mixture of alkylbenzyltrimethylammonium chlorides with alkyl chain lengths of C8, C10, C12, C14, C16 and C18)

(") Didecyltrimethylammonium chloride (mixture of alkyl-quaternary ammonium salts with alkyl chain lengths of C8, C10 and C12)

(\*\*\*\*) Dichlorprop (Sum of dichlorprop (including dichlorprop-P), its salts, esters and conjugates, expressed as dichlorprop)

Per sale si intende il contenuto equivalente di sale calcolato mediante la formula  $\text{sale}=\text{sodio} \times 2,5$  secondo il RAPPORTI ISTISAN 96/34 PAG 13.

(\*\*) Spirotetramat and its 4 metabolites BY108330-enol, BY108330-ketohydroxy, BY108330-monohydroxy, and BY108330 enol-glucoside, expressed as spirozetramat

Il valore energetico è stato calcolato in riferimento al Regolamento (UE) N. 1169/2011.

i tenori relativi ai parametri nutrizionali con unità di misura g/100g di prodotto indicano un'espressione peso/peso

Note: Per quanto riguarda i residui di prodotti fitosanitari richiesti, il campione è conforme al D.M.27/08/2004 e successive modifiche intervenute ed al Regolamento CEE/UE n°396:2005 e successive modifiche intervenute

Il corrispettivo inerente al presente rapporto di prova sarà fatturato a: BIOLEADER SRL, Corso Emilia, 6/A Torino

Il laboratorio Water & Life Lab S.r.l. è iscritto, con Decreto della Direzione Generale della Sanità numero 893 del 2 febbraio 2011, nel Registro della Regione Lombardia dei laboratori autorizzati ad effettuare analisi nell'ambito delle procedure di autocontrollo delle industrie alimentari al numero progressivo 030016301004.

Il Laboratorio non considera l'arrotondamento del dato e l'incertezza di misura nel confronto con i limiti eventualmente applicati nel Rapporto di prova.

Legenda attività: I= Insetticida, A= Acaricida, F= Fungicida, R= Regolatori di crescita, N= Nematocidi, S= Sinergizzante piretrine, C= Conservanti post raccolta, D= Diserbanti, FU=Fumiganti, L=Limacida, N.A.= non applicabile, M= metabolita.

I risultati analitici relativi ai fitofarmaci non sono stati corretti per il recupero, gli analiti presentano recuperi in linea con quanto previsto dal metodo, ovvero tra 70-120%.

I risultati analitici relativo alle tossine non sono corretti per il recupero. I valori di recupero del metodo sono conformi ai requisiti dettati dal regolamento (CE) n° 401/2006.

Qualora il campionamento non sia eseguito da Water & life lab i risultati riportati nel presente rapporto di prova si riferiscono al campione così come ricevuto.

Il laboratorio declina la responsabilità relativa ai dati del campione forniti dal committente.

I risultati analitici si riferiscono esclusivamente al campione sottoposto a prova.

La riproduzione parziale del presente rapporto di prova non è consentita senza autorizzazione scritta del laboratorio.

Questo rapporto di prova è sottoscritto con firma digitale ai sensi della normativa vigente.

Responsabile di Laboratorio

P.I. Enio Belotti

Direzione Scientifica

dott. Angelo Carlessi

Ordine dei Chimici Provincia di Bergamo  
Iscrizione n°146

Fine del rapporto di prova n° **20WL74592**

**Water & Life Lab srl**

(Groupe Carso) - Società unipersonale

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