



TEST REPORT NO 537205/23/POZ

Client Wielkopolskie Przedsiębiorstwo Przemysłu Ziemniaczanego S.A. Armii Poznań 49 62-030 Luboń		Sample (according to declaration of Client) Sample description: Potato starch LU-1431-1, production September 2023 Batch: Wrzesień 2023
Sample reception date:	09.10.2023	Sample status: no objections Sample received from the Client
Start of analysis	10.10.2023	
End of analysis	22.10.2023	
Test report date	22.10.2023	

Test Method	Unit	Result
* Content of elements ³⁾ PN-EN 15763:2010		
Lead (Pb)	mg/kg	< 0,010 (0,010 ± 0,003)
Arsenic (As)	mg/kg	< 0,010 (0,010 ± 0,002)
Cadmium (Cd)	mg/kg	< 0,0010 (0,0010 ± 0,0002)
Mercury (Hg)	mg/kg	< 0,0010 (0,0010 ± 0,0002)
Moisture PN-EN ISO 1666:2000	%	18,8
pH PN-A-74706:1984 (withdrawn)	-	7,2
Sulphur dioxide (SO ₂) PN-A-74706:1984 (withdrawn)		
Sulphur dioxide (SO ₂)	mg/kg	<10
* Number of coliforms at 37°C PN-ISO 4832:2007	cfu/g	<1,0x10 ¹
* Aerobic colony count at 30°C PN-EN ISO 4833-1:2013-12	cfu/g	<1,0x10 ¹
* Presence of Salmonella spp. in 25 g PN-EN ISO 6579-1:2017-04; PN-EN ISO 6579-1:2017-04/A1:2020-09	in 25 g	Not detected
* Number of yeasts and moulds at 25°C PN-ISO 7954:1999 (withdrawn)		
Number of yeasts	cfu/g	<1,0x10 ¹
Number of moulds	cfu/g	<1,0x10 ¹
Mineral matter insoluble in 10% hydrochloride acid (HCl) PN-A-74702:1978 (withdrawn)	%	<0,01
GMO - triple screening ¹⁾ PB-397 ed. III of 29.12.2021 based on the manufacturer's instructions		
Presence of a specific GMO sequence: 35S promoter	-	not detected



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Presence of a specific GMO sequence: NOS terminator	-	not detected
Presence of a specific GMO sequence: 34S promoter FMV	-	not detected
Ash PN-EN ISO 3593:2000	%	0,23
* Presence of coagulase-positive staphylococci (Staphylococcus aureus and other species) in 0,1 g PN-EN ISO 6888-3:2004; PN-EN ISO 6888-3:2004/AC:2005	in 0,1 g	Not detected
* Number of presumptive Bacillus cereus at 30°C PN-EN ISO 7932:2005; PN-EN ISO 7932:2005/A1:2020-09	cfu/g	<1,0x10 ¹
* # Pesticides - F&V - List M1 (GC) ed. III of 14.09.2020 ^{2) 3) 4)} PN-EN 15662:2018-06 (GC-MS/MS)		
Analysed pesticides	mg/kg	below quantification limit

- 1) Real-time PCR method. Limit of detection: 35 S promoter: 0.01%; NOS terminator: 0.01%; 34S promoter (FMV): 0.01%.
- 2) The F&V-M1 ed. III of 14.09.2020 list includes the determined compounds with limits of quantification.
- 3) The lower limit of the measuring range of the accredited method, which is also the limit of quantification set by the Laboratory.
- 4) The measurement uncertainty is $\pm 50\%$, according to Sante/11312/2021.

Test: Pesticides - F&V - List M1 (GC) ed. III of 14.09.2020 was performed in laboratory with an accreditation number AB 1537

Authorized by:

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Subcontracted test results are authorised by persons authorised by the external provider.

The test report bears the certified electronic seal of J.S. Hamilton Poland Sp. z o.o.

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The results refer only to the samples received. When a measurement uncertainty is given, it is an expanded uncertainty estimated for a coverage factor $k=2$ at 95% confidence level and is not including sampling uncertainty, unless otherwise stated. When the conformity is stated J.S. Hamilton Poland Sp. z o.o. applies the simple acceptance decision rule in accordance with ILAC-G8:09/2019, unless otherwise reported. If the "result" column of the accredited method contains a record: "<" or ">", it means, that it is the test outcome directly related to the lower or upper limit of the measuring range of the accredited method, whereas the given expanded measurement uncertainty relates only to the lower or upper limit of the measuring range of the accredited method respectively. In such a case, the Laboratory presents the opinion and interpretation in the "statement of conformity" column, which is based on the obtained test outcome. This test report may not be copied in part without the prior written permission of J.S. Hamilton Poland Sp. z o.o. The responsibility of J.S. Hamilton Poland Sp. z o.o. is limited solely to the data issued in its original. J.S. Hamilton Poland Sp. z o.o. does not permit the use of the PCA accreditation symbol AB 079 by customers, subcontractors, external service providers and other third parties. For further information please refer to the PCA document - DA-02. The service confirmed by this report is subject to the General Terms and Conditions of Services of J.S. Hamilton Poland Sp. z o.o. published on www.hamilton.com.pl.

* Test method accredited

Test performed by external provider

Pesticides - F&V - List M1 (GC) ed. III of 14.09.2020

No.	Compound	Range [mg/kg]	No.	Compound	Range [mg/kg]	No.	Compound	Range [mg/kg]
1	Prothiophos	0,005-5,0	34	Butachlor	0,005-5,0	67	Chlorthiophos	0,005-5,0
2	2,3,5,6-Tetrachloroaniline	0,005-5,0	35	Butafenacil	0,005-5,0	68	Chlozolinate	0,005-5,0
3	2,4,6-Trichlorophenol	0,005-5,0	36	Butralin	0,005-5,0	69	Cinidon-ethyl	0,005-5,0
4	2-phenylphenol	0,005-5,0	37	Butylate	0,005-5,0	70	Clomazone	0,005-5,0
5	3,4,5-Trimethacarb (Landrin)	0,005-5,0	38	Cadusafos	0,005-5,0	71	Clomeprop	0,005-5,0
6	4-Bromo-2-chlorophenol	0,005-5,0	39	Captan	0,005-5,0	72	Cloquintocet-mexyl	0,005-5,0
7	Aclonifen	0,005-5,0	40	Captan (sum of captan and THPI, expressed as captan)	0,005-5,0	73	Crimidine	0,005-5,0
8	Acrinathrin	0,005-5,0	41	Captan metabolite THPI	0,005-5,0	74	Crufomate	0,005-5,0
9	Alachlor	0,005-5,0	42	Carbaryl	0,005-5,0	75	Cyanofenphos	0,005-5,0
10	Aldrin	0,001-5,0	43	Carbophenothion (-ethyl)	0,005-5,0	76	Cyanophos	0,005-5,0
11	Aldrin and dieldrin combined expressed as dieldrin	0,001-5,0	44	Carbophenothion-methyl	0,005-5,0	77	Cyfluthrin (sum of isomers)	0,005-5,0
12	Allethrin	0,005-5,0	45	Carboxin	0,005-5,0	78	Cyhalofop-butyl	0,005-5,0
13	Ametryn	0,005-5,0	46	Chinomethionate	0,005-5,0	79	Cyhalothrin-gamma	0,005-5,0
14	Amisulbrom	0,005-5,0	47	Chlorbenside	0,005-5,0	80	Cyhalothrin-lambda	0,005-5,0
15	Antraquinone	0,005-5,0	48	Chlorbufam	0,005-5,0	81	Cypermethrin (cypermethrin including other mixtures of constituent isomers (sum of isomers))	0,005-5,0
16	Azaconazole	0,005-5,0	49	Chlordane (sum of cis- and trans-chlordane)	0,005-5,0	82	Cypermethrin (sum of isomers)	0,005-5,0
17	Beflubutamid	0,005-5,0	50	Chlordane, cis	0,005-5,0	83	Cyphenothrin	0,005-5,0
18	Benalaxyl (sum of isomers)	0,005-5,0	51	Chlordane, trans	0,005-5,0	84	Cyprodinil	0,005-5,0
19	Benfluralin	0,005-5,0	52	Chlordecone	0,005-5,0	85	Dazomet	0,005-5,0
20	Benfuresate	0,005-5,0	53	Chlordimeform	0,005-5,0	86	DDD-o,p'	0,005-5,0
21	Benoxacor	0,005-5,0	54	Chlorfenapyr	0,005-5,0	87	DDD-p,p'	0,005-5,0
22	Benzoylprop-ethyl	0,005-5,0	55	Chlorfenprop-methyl	0,005-5,0	88	DDT (sum of op'-DDE, op'-DDD, op'-DDT, pp'-DDE, pp'-DDD and pp'-DDT)	0,005-5,0
23	Bifenox	0,005-5,0	56	Chlorfenson	0,005-5,0	89	DDT (sum of p,p'-DDT, o,p'-DDT, p-p'-DDE and p,p'-TDE (DDD) expressed as DDT)	0,005-5,0
24	Bifenthrin (sum of isomers)	0,005-5,0	57	Chlorfenvinphos	0,005-5,0	90	Deltamethrin	0,005-5,0
25	Biphenyl	0,005-5,0	58	Chlormephos	0,005-5,0	91	Desmetryn	0,005-5,0
26	Bitertanol	0,005-5,0	59	Chlorobenzilate	0,005-5,0	92	Dialifos	0,005-5,0
27	Bromfenvinfos (-ethyl)	0,005-5,0	60	Chloroneb	0,005-5,0	93	Di-allate (sum of isomers)	0,005-5,0
28	Bromocyclen	0,005-5,0	61	Chloropropylate	0,005-5,0	94	Diazinon	0,005-5,0
29	Bromophos (-methyl)	0,005-5,0	62	Chlorpropham	0,005-5,0	95	Dibromobenzophenon-4.4	0,005-5,0
30	Bromophos-ethyl	0,005-5,0	63	Chlorpyrifos (-ethyl)	0,005-5,0	96	Dichlobenil	0,005-5,0
31	Bromopropylate	0,005-5,0	64	Chlorpyrifos-methyl	0,005-5,0	97	Dichlofenthion	0,005-5,0
32	Bupirimate	0,005-5,0	65	Chlorthal-dimethyl	0,005-5,0			
33	Buprofezin	0,005-5,0	66	Chlorthion	0,005-5,0			

No.	Compound	Range [mg/kg]	No.	Compound	Range [mg/kg]	No.	Compound	Range [mg/kg]
98	Dichlormid	0,005-5,0	131	EPN	0,005-5,0	165	Flamprop-isopropyl	0,005-5,0
99	Dichlorobenzophenone-4.4	0,005-5,0	132	Epoxiconazole	0,005-5,0	166	Flamprop-methyl	0,005-5,0
100	Dichlorvos (DDVP)	0,005-5,0	133	EPTC	0,005-5,0	167	Fluchloralin	0,005-5,0
101	Diclobutrazol	0,005-5,0	134	Etaconazole	0,005-5,0	168	Flucythrinate (sum of isomers)	0,005-5,0
102	Dicloran	0,005-5,0	135	Ethalfuralin	0,005-5,0	169	Fludioxonil	0,005-5,0
103	Dicofol (sum of isomers)	0,005-5,0	136	Ethiolate	0,005-5,0	170	Flumetralin	0,005-5,0
104	Dieldrin	0,001-5,0	137	Ethion	0,005-5,0	171	Flumioxazin	0,005-5,0
105	Dimethachlor	0,005-5,0	138	Ethofumesate	0,005-5,0	172	Fluorodifen	0,005-5,0
106	Dimethenamid (sum of isomers)	0,005-5,0	139	Ethoprophos (Ethoprop)	0,005-5,0	173	Fluotrimazole	0,005-5,0
107	Dimethipin	0,005-5,0	140	Ethoxyquin	0,005-5,0	174	Fluquinconazole	0,005-5,0
108	Dimethomorph (sum of isomers)	0,005-5,0	141	Ethychozate	0,005-5,0	175	Flurenol-butyl	0,005-5,0
109	Dimetilan	0,005-5,0	142	Etofenprox	0,005-5,0	176	Flurochloridon	0,005-5,0
110	Dimoxystrobin	0,005-5,0	143	Etridiazole	0,005-5,0	177	Flurprimidol	0,005-5,0
111	Diniconazole (sum of isomers)	0,005-5,0	144	Etrimphos	0,005-5,0	178	Flusilazole	0,005-5,0
112	Dinitramine	0,005-5,0	145	Fenarimol	0,005-5,0	179	Flutolanil	0,005-5,0
113	Dinoseb	0,005-5,0	146	Fenazaquin	0,005-5,0	180	Flutriafol	0,005-5,0
114	Dinoterb	0,005-5,0	147	Fenbuconazole	0,005-5,0	181	Fluvalinate-tau	0,005-5,0
115	Dioxacarb	0,005-5,0	148	Fenchlorphos (Ronnel)	0,005-5,0	182	Folpet	0,005-5,0
116	Dioxathion (sum of isomers)	0,005-5,0	149	Fenchlorphos oxon	0,005-5,0	183	Folpet (sum of folpet and phtalimide, expressed as folpet)	0,005-5,0
117	Diphenamid	0,005-5,0	150	Fenfluthrin	0,005-5,0	184	Fonophos	0,005-5,0
118	Diphenylamine	0,005-5,0	151	Fenhexamid	0,005-5,0	185	Furametpyr	0,005-5,0
119	Disulfoton	0,001-5,0	152	Fenitrothion	0,005-5,0	186	Halfenprox	0,005-5,0
120	Disulfoton sulfone	0,001-5,0	153	Fenpiclonil	0,005-5,0	187	HCH alpha isomer	0,005-5,0
121	Disulfoton sulfoxide	0,001-5,0	154	Fenpropathrin	0,005-5,0	188	HCH beta isomer	0,005-5,0
122	Ditalimfos	0,005-5,0	155	Fenpropidin	0,005-5,0	189	HCH delta isomer	0,005-5,0
123	Dodemorph	0,005-5,0	156	Fenpropimorph	0,005-5,0	190	HCH epsilon isomer	0,005-5,0
124	Edifenphos	0,005-5,0	157	Fenson	0,005-5,0	191	HCH gamma isomer (Lindane)	0,005-5,0
125	Endosulfan (sum of alpha- and beta- isomers and endosulfan-sulphate expresses as endosulfan)	0,005-5,0	158	Fenuron	0,005-5,0	192	Heptachlor	0,0025-5,0
126	Endosulfan alpha isomer	0,005-5,0	159	Fenvalerate (sum of isomers)	0,005-5,0	193	Heptachlor (sum of heptachlor and heptachlor epoxide expressed as heptachlor)	0,0025-5,0
127	Endosulfan beta isomer	0,005-5,0	160	Fipronil	0,001-5,0	194	Heptachlor epoxide, cis	0,001-5,0
128	Endosulfan sulphate	0,005-5,0	161	Fipronil (sum fipronil + sulfone metabolite (MB46136) expressed as fipronil)	0,001-5,0	195	Heptachlor epoxide, trans	0,001-5,0
129	Endrin	0,001-5,0	162	Fipronil sulfide	0,001-5,0	196	Heptachlor epoxide, cis	0,001-5,0
130	Endrin ketone	0,005-5,0	163	Fipronil sulfone	0,001-5,0	197	Heptachlor epoxide, trans	0,001-5,0
			164	Fipronil-desulfinyl	0,001-5,0			

No.	Compound	Range [mg/kg]	No.	Compound	Range [mg/kg]	No.	Compound	Range [mg/kg]
198	Heptenophos	0,005-5,0	232	Molinate	0,005-5,0	266	Phorate sulfone	0,005-5,0
199	Hexachlorobenzene (HCB)	0,001-5,0	233	Monalide	0,005-5,0	267	Phosalone	0,005-5,0
200	Hexaconazole	0,005-5,0	234	Myclobutanil (sum of isomers)	0,005-5,0	268	Phtalimide	0,005-5,0
201	Hexazinone	0,005-5,0	235	Naled	0,005-5,0	269	Picoxystrobin	0,005-5,0
202	Imazalil	0,005-5,0	236	Naphtalene	0,005-5,0	270	Piperonyl butoxide	0,005-5,0
203	Iodofenphos	0,005-5,0	237	Nitralin	0,005-5,0	271	Pirimicarb	0,005-5,0
204	Ioxynil-octanoate	0,005-5,0	238	Nitrapyrin	0,005-5,0	272	Pirimicarb-desmethyl	0,005-5,0
205	Ipconazole	0,005-5,0	239	Nitrofen	0,001-5,0	273	Pirimiphos-ethyl	0,005-5,0
206	Iprobenfos	0,005-5,0	240	Nitrothal-isopropyl	0,005-5,0	274	Pirimiphos-methyl	0,005-5,0
207	Iprodione	0,005-5,0	241	Norflurazon	0,005-5,0	275	Pirimiphos-methyl. N-Desethyl-	0,005-5,0
208	Isazofos	0,005-5,0	242	Nuarimol	0,005-5,0	276	Procymidone	0,005-5,0
209	Isocarbophos	0,005-5,0	243	Octachlordipropylether (S 421)	0,005-5,0	277	Profenophos	0,005-5,0
210	Isodrin	0,005-5,0	244	Ofurace	0,005-5,0	278	Profluralin	0,005-5,0
211	Isofenphos (-ethyl)	0,005-5,0	245	Oxadiazon	0,005-5,0	279	Prometon	0,005-5,0
212	Isopropalin	0,005-5,0	246	Oxadixyl	0,005-5,0	280	Prometryn	0,005-5,0
213	Isoxadifen-ethyl	0,005-5,0	247	Oxycarboxin	0,005-5,0	281	Propachlor	0,005-5,0
214	Kresoxim-methyl	0,005-5,0	248	Oxychlordane (Octachlorepoxyde)	0,005-5,0	282	Propazine	0,005-5,0
215	Lambda-cyhalothrin (includes gamma-cyhalothrin) (sum of R,S and S,R isomers)	0,005-5,0	249	Oxyfluorfen	0,005-5,0	283	Propetamphos	0,005-5,0
216	Lenacil	0,005-5,0	250	Parathion-ethyl	0,005-5,0	284	Propham	0,005-5,0
217	Leptophos	0,005-5,0	251	Pebulate	0,005-5,0	285	Propiconazole (sum of isomers)	0,005-5,0
218	Mecarbam	0,005-5,0	252	Penconazole (sum of isomers)	0,005-5,0	286	Prothioconazole: prothioconazole-desthio (sum of isomers)	0,005-5,0
219	Mepanipyrin	0,005-5,0	253	Pencycuron	0,005-5,0	287	Prothioconazole-desthio	0,005-5,0
220	Mepanipyrin-2-hydroxypropyl	0,005-5,0	254	Pendimethalin	0,005-5,0	288	Pyrazophos	0,005-5,0
221	Mepronil	0,005-5,0	255	Pentachloroaniline	0,005-5,0	289	Pyridaben	0,005-5,0
222	Metazachlor	0,005-5,0	256	Pentachloroanisole	0,005-5,0	290	Pyrifenox (sum of isomers)	0,005-5,0
223	Metconazole (sum of isomers)	0,005-5,0	257	Pentachlorobenzene	0,005-5,0	291	Pyrifluquinazon	0,005-5,0
224	Methacrifos	0,005-5,0	258	Pentanochlor	0,005-5,0	292	Pyrimethanil	0,005-5,0
225	Methidathion	0,005-5,0	259	Permethrin (sum of isomers)	0,005-5,0	293	Pyrimidifen	0,005-5,0
226	Methoprotiryne	0,005-5,0	260	Perthane	0,005-5,0	294	Pyriproxyfen	0,005-5,0
227	Methoxychlor	0,005-5,0	261	Phenkapton	0,005-5,0	295	Quinalphos	0,005-5,0
228	Metolachlor	0,005-5,0	262	Phenothrin (sum of isomers)	0,005-5,0	296	Quinoxifen	0,005-5,0
229	Metribuzin	0,005-5,0	263	Phorate	0,005-5,0	297	Quintozene	0,005-5,0
230	Mevinphos (sum of isomers)	0,005-5,0	264	Phorate oxone	0,005-5,0	298	Resmethrin (sum of isomers)	0,005-5,0
231	Mirex	0,005-5,0	265	Phorate oxone sulfone	0,005-5,0	299	Sebuthylazine	0,005-5,0

No.	Compound	Range [mg/kg]	No.	Compound	Range [mg/kg]
300	Silaneophan (Silafluofen)	0,005-5,0	334	Trifloxystrobin	0,005-5,0
301	Simeconazole	0,005-5,0	335	Trifluralin	0,005-5,0
302	Spiromesifen	0,005-5,0	336	Uniconazole	0,005-5,0
303	Spiroxamine (sum of isomers)	0,005-5,0	337	Vinclozolin	0,005-5,0
304	Sulfallate	0,005-5,0			
305	Sulfentrazone	0,005-5,0			
306	Sulfotep	0,005-5,0			
307	Tebuconazole	0,005-5,0			
308	Tebufenpyrad	0,005-5,0			
309	Tecnazene	0,005-5,0			
310	Tefluthrin	0,005-5,0			
311	Terbacil	0,005-5,0			
312	Terbufos	0,001-5,0			
313	Terbufos sulfone	0,0025-5,0			
314	Terbuthylazine-desethyl	0,005-5,0			
315	Terbutryn	0,005-5,0			
316	Tetrachlorvinphos	0,005-5,0			
317	Tetraconazole	0,005-5,0			
318	Tetradifon	0,005-5,0			
319	Tetraethyl pyrophosphate (TEPP)	0,005-5,0			
320	Tetrasul	0,005-5,0			
321	Thiobencarb	0,005-5,0			
322	Thiometon	0,005-5,0			
323	Thionazin	0,005-5,0			
324	Tolclofos-methyl	0,005-5,0			
325	Transfluthrin	0,005-5,0			
326	Triadimefon	0,005-5,0			
327	Triadimenol	0,005-5,0			
328	Tri-allate	0,005-5,0			
329	Triazamate	0,005-5,0			
330	Triazophos	0,005-5,0			
331	Trichloronate	0,005-5,0			
332	Tricyclazole	0,005-5,0			
333	Trietazine	0,005-5,0			



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THE END OF THE REPORT