

Certificate of Analysis



Sample Name	Turkey Tail	Symbio ID	SYM 20231010-006
Batch	CG22323TT	Registering Laboratory	San Diego
Client	Grove Inc	Contact	Customer Service Team
Address	NA	Address	8310 Miramar Mall San Diego, CA 92121
Telephone	NA	Telephone	(858) 869-1008
Email	NA	Email	questions@symbiolabs.us
Sampler	Client	COA Issue Date	10/20/2023

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Definitions

| <: Less Than | >: Greater Than | RP: Result Pending | MPN: Most Probable Number | CFU: Colony Forming Units | ---: Not Requested | NA: Not Applicable | ND: Not Detected | MDL: Method Detection Limit | LCMRL: Lowest Concentration Minimum Reporting Level | NT: Not Tested | ~: Estimated | TBA: To Be Advised | TNTC: Too numerous to count | P/A: Presence/Absence | P: Present | A: Absent | % w/w: Percent by Weight

Analysis

Analyte	Results	Units
Alpha Glucans	24.804	% w/w
Beta Glucans	19.178	% w/w
Total Glucans	43.982	% w/w

Analysis Location

All analyses were completed by Symbio Laboratories – San Diego.

Analysis Comments

Alpha and Beta Glucan quantified using the NEOGEN K-YBGL Megazyme kit.

Analysis Summary

Water Activity - WA-PREP-001 - Pass - 0.558 aw

Residual Solvents - RS-PREP-001 - Pass

Microbials - MICRO-PREP-001 - Pass

Mycotoxins - PESTMYCO-LC-PREP-001 - Pass

Heavy Metals - HM-PREP-001 - Pass

Foreign Matter - FM-PREP-001 - Pass

Pesticides - PESTMYCO-LC-PREP-001 / PEST-GC-PREP-001 - Pass



Josh Swider
Lab Director, CEO
10/20/2023

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Residual Solvent Analysis

Category 1	LOQ	LOD	Limit	Status	Category 2	LOQ	LOD	Limit	Status	Category 2	LOQ	LOD	Limit	Status			
	µg/g	µg/g	µg/g	µg/g		µg/g	µg/g	µg/g	µg/g		µg/g	µg/g	µg/g	µg/g			
1,2-Dichloro-Ethane	ND	0.264	0.088	1	Pass	Acetone	ND	51.246	0.716	5000	Pass	n-Hexane	ND	0.281	0.027	290	Pass
Benzene	ND	0.052	0.017	1	Pass	Acetonitrile	ND	0.42	0.14	410	Pass	Isopropanol	ND	2.86	0.614	5000	Pass
Chloroform	ND	0.076	0.025	1	Pass	Butane	ND	4.849	0.748	5000	Pass	Methanol	ND	2.602	0.867	3000	Pass
Ethylene Oxide	ND	0.579	0.179	1	Pass	Ethanol	1055.2	7.575	2.525	5000	Pass	Pentane	ND	5.075	1.692	5000	Pass
Methylene-Chloride	ND	0.729	0.08	1	Pass	Ethyl-Acetate	ND	2.288	0.175	5000	Pass	Propane	ND	9.709	3.236	5000	Pass
Trichloroethene	ND	0.145	0.028	1	Pass	Ethyl-Ether	ND	2.869	0.389	5000	Pass	Toluene	ND	0.864	0.067	890	Pass
						Heptane	ND	2.859	0.496	5000	Pass	Xylenes	ND	2.572	0.326	2170	Pass

NR= Not Reported (no analysis was performed), ND= Not Detected (the concentration is less than the Limit of Detection (LOD)). Analytical instrumentation used: HS-GC-MS; samples analyzed according to SOP RS-INST-003.

Heavy Metal Screening

	LOQ	LOD	Limit	Status	
	µg/g	µg/g	µg/g	µg/g	
Arsenic	0.022	0.009	0.003	1.5	Pass
Cadmium	<LOQ	0.002	0.001	0.5	Pass
Lead	0.006	0.004	0.001	0.5	Pass
Mercury	ND	0.014	0.005	3	Pass

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Microbiological Screening

	Limit	Result	Status
	CFU/g	CFU/g	
Aspergillus flavus		NR	NT
Aspergillus fumigatus		NR	NT
Aspergillus niger		NR	NT
Aspergillus terreus		NR	NT
STEC		Not Detected	Pass
Salmonella SPP		Not Detected	Pass

ND=Not Detected. Analytical instrumentation used:qPCR; samples analyzed according to SOP MICRO-INST-001.

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10/13/2023

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Chemical Residue Screening

Category 1	LOQ	LOD	Status	Mycotoxins	LOQ	LOD	Limit	Status		
	µg/g	µg/g	µg/g		µg/kg	µg/kg	µg/kg			
Aldicarb	ND	0.065	0.022	Pass	B1	ND	7.88	2.6	Tested	
Carbofuran	ND	0.030	0.009	Pass	B2	ND	6.18	2.04	Tested	
Chlordane	ND	0.075	0.025	Pass	G1	ND	8.99	2.97	Tested	
Chlorfenapyr	ND	0.075	0.025	Pass	G2	ND	5.72	1.89	Tested	
Chlorpyrifos	ND	0.053	0.018	Pass	Ochratoxin A	ND	11.72	3.87	20	Pass
Coumaphos	ND	0.056	0.018	Pass	Total Aflatoxins	ND		20	Pass	
Daminozide	ND	0.079	0.026	Pass						
Dichlorvos	ND	0.067	0.022	Pass						
Dimethoate	ND	0.036	0.012	Pass						
Ethoprophos	ND	0.053	0.017	Pass						
Etofenprox	ND	0.030	0.008	Pass						
Fenoxycarb	ND	0.043	0.014	Pass						
Fipronil	ND	0.045	0.015	Pass						
Imazalil	ND	0.047	0.016	Pass						
Methiocarb	ND	0.047	0.016	Pass						
Mevinphos	ND	0.042	0.014	Pass						
Paclbutrazol	ND	0.040	0.013	Pass						
Parathion Methyl	ND	0.024	0.008	Pass						
Propoxur	ND	0.047	0.016	Pass						
Spiroxamine	ND	0.032	0.011	Pass						
Thiacloprid	ND	0.042	0.014	Pass						

Category 2	LOQ	LOD	Limit	Status	Category 2	LOQ	LOD	Limit	Status		
	µg/g	µg/g	µg/g	µg/g		µg/g	µg/g	µg/g	µg/g		
Abamectin	ND	0.030	0.010	0.3	Pass	Kresoxim Methyl	ND	0.038	0.012	1	Pass
Acephate	ND	0.050	0.016	5	Pass	Malathion	ND	0.035	0.012	5	Pass
Acequinocyl	ND	0.059	0.019	4	Pass	Metalaxyl	ND	0.031	0.010	15	Pass
Acetamiprid	ND	0.044	0.015	5	Pass	Methomyl	ND	0.048	0.016	0.1	Pass
Azoxystrobin	ND	0.029	0.010	40	Pass	Myclobutanil	ND	0.055	0.018	9	Pass
Bifenazate	ND	0.035	0.012	5	Pass	Naled	ND	0.051	0.017	0.5	Pass
Bifenthrin	ND	0.040	0.013	0.5	Pass	Oxamyl	ND	0.046	0.015	0.3	Pass
Boscalid	ND	0.060	0.020	10	Pass	Pentachloronitrobenzene	ND	0.054	0.018	0.2	Pass
Captan	ND	0.358	0.120	5	Pass	Permethrin	ND	0.030	0.008	20	Pass
Carbaryl	ND	0.049	0.016	0.5	Pass	Phosmet	ND	0.038	0.012	0.2	Pass
Chlorantraniliprole	ND	0.063	0.021	40	Pass	Piperonyl Butoxide	ND	0.030	0.008	8	Pass
Clofentezine	ND	0.039	0.013	0.5	Pass	Prallethrin	ND	0.068	0.023	0.4	Pass
Cyfluthrin	ND	0.056	0.019	1	Pass	Propiconazole	ND	0.059	0.019	20	Pass
Cypermethrin	ND	0.044	0.015	1	Pass	Pyrethrins	ND	0.030	0.004	1	Pass
Diazinon	ND	0.030	0.006	0.2	Pass	Pyridaben	ND	0.035	0.012	3	Pass
Dimethomorph	ND	0.042	0.014	20	Pass	Spinetoram	ND	0.030	0.006	3	Pass
Etoxazole	ND	0.030	0.008	1.5	Pass	Spinosad	ND	0.030	0.004	3	Pass
Fenhexamid	ND	0.039	0.013	10	Pass	Spiromesifen	ND	0.042	0.014	12	Pass
Fenpyroximate	ND	0.030	0.010	2	Pass	Spirotetramat	ND	0.041	0.013	13	Pass
Flonicamid	ND	0.081	0.027	2	Pass	Tebuconazole	ND	0.044	0.014	2	Pass
Fludioxonil	ND	0.046	0.015	30	Pass	Thiamethoxam	ND	0.055	0.018	4.5	Pass
Hexythiazox	ND	0.078	0.026	2	Pass	Trifloxystrobin	ND	0.031	0.010	30	Pass
Imidacloprid	ND	0.071	0.023	3	Pass						

Other Analyte(s):

NR= Not Reported (no analysis was performed), ND= Not Detected (the concentration is less than the Limit of Detection (LOD)). Analytical instrumentation used: LC-MS-MS & GC-MS-MS; samples analyzed according to SOPs PESTMYCO-LC-INST-004 and PEST-GC-INST-003.

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