

# CERTIFICATE OF ANALYSIS



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**Report Issued To:** Dietary Supplement Company  
1234 Main Street  
Los Angeles CA 90000  
United States

**Sample Name:** Botanical Extract  
**Description:** Powdered extract  
**Lot #:** 1234567  
**AL #:** 24025ALK  
**Analysis ID:** 220942  
**Received:** 01/25/24

Determination of Class I, Class II, and Class III Residual Solvent Content by USP <467>

Compound Name	Amount (ppm)	USP <467> Limit (ppm)	Result
<b>Class I Residual Solvents</b>			
Benzene *	<2	<2	Pass
Carbon tetrachloride *	<4	<4	Pass
1,2-Dichloroethane *	<5	<5	Pass
1,1-Dichloroethene *	<8	<8	Pass
1,1,1-Trichloroethane *	<1500	<1500	Pass
<b>Class II Residual Solvents</b>			
Acetonitrile *	<410	<410	Pass
Chlorobenzene *	<360	<360	Pass
Chloroform *	<60	<60	Pass
Cumene *	<70	<70	Pass
Cyclohexane *	<3880	<3880	Pass
1,2-Dichloroethene (Sum of Cis and Trans Isomers) *	<1870	<1870	Pass
1,2-Dimethoxyethane *	<100	<100	Pass
N,N-Dimethylacetamide **	<1090	<1090	Pass
N,N-Dimethylformamide **	<880	<880	Pass
1,4-Dioxane *	<380	<380	Pass
2-Ethoxyethanol **	<160	<160	Pass
Ethylene glycol **	<620	<620	Pass
Formamide **	<220	<220	Pass
Hexane *	<290	<290	Pass
Methanol *	<3000	<3000	Pass
2-Methoxyethanol **	<50	<50	Pass
Methylbutylketone *	<50	<50	Pass
Methylcyclohexane *	<1180	<1180	Pass
Methylene chloride *	<600	<600	Pass
Methylisobutylketone *	<4500	<4500	Pass
N-Methylpyrrolidone **	<530	<530	Pass
Nitromethane *	<50	<50	Pass
Pyridine **	<200	<200	Pass
Sulfolane **	<160	<160	Pass
Tetrahydrofuran *	<720	<720	Pass
Tetralin *	<100	<100	Pass
Toluene *	<890	<890	Pass
Trichloroethylene *	<80	<80	Pass
Xylene (Sum of o-Xylene, m-Xylene, p-Xylene and Ethyl Benzene) *	<2170	<2170	Pass
<b>Class III Residual Solvents</b>			
Acetic acid **	<5000	<5000	Pass
Acetone **	<5000	<5000	Pass
Anisole **	<5000	<5000	Pass
1-Butanol **	<5000	<5000	Pass
2-Butanol **	<5000	<5000	Pass
Butyl acetate **	<5000	<5000	Pass
tert-Butylmethyl ether **	<5000	<5000	Pass
Dimethyl sulfoxide **	<5000	<5000	Pass
Ethanol **	<5000	<5000	Pass
Ethyl acetate **	<5000	<5000	Pass
Ethyl ether *	<5000	<5000	Pass



**Analysis Date :** xx/xx/xx

**Analyzed By:** Chemist

**Authorized By:** Manager

The analytical method used has not been verified or validated for this product by Alkemist Labs. This report applies to the sample investigated and is not necessarily indicative of the quality or condition of apparently identical or similar products. This report is for the exclusive use of the party who requested the report and not for public dissemination or use by third parties, including for promotional purposes, without the prior written permission of Alkemist Labs. This report provides technical results for a specific sample and the report shall not be altered, modified, supplemented or abstracted in any manner. Any violation of these conditions renders the report and its results void. Pass/Fail decision is based on laboratory results as found.

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Compound Name	Amount (ppm)	USP <467> Limit (ppm)	Result
Ethyl formate **	<5000	<5000	Pass
Formic acid **	<5000	<5000	Pass
Heptane *	<5000	<5000	Pass
Isobutyl acetate **	<5000	<5000	Pass
Isopropyl acetate **	<5000	<5000	Pass
Methyl acetate **	<5000	<5000	Pass
3-Methyl-1-butanol **	<5000	<5000	Pass
Methylethylketone **	<5000	<5000	Pass
2-Methyl-1-propanol **	<5000	<5000	Pass
Pentane *	<5000	<5000	Pass
1-Pentanol **	<5000	<5000	Pass
1-Propanol **	<5000	<5000	Pass
2-Propanol **	<5000	<5000	Pass
Propyl acetate **	<5000	<5000	Pass
Triethylamine **	<5000	<5000	Pass

**Chromatographic Conditions (\*):**

Method: ATM-815-0310  
 Chromatographic Instrument: GC  
 Injection Method: Headspace Injection  
 Ionization Method: Electron Ionization  
 Mass Spectrometer: Single Quadrupole

**Chromatographic Conditions (\*\*):**

Method: ATM-815-0310  
 Chromatographic Instrument: GC  
 Injection Method: Liquid Injection  
 Ionization Method: Electron Ionization  
 Mass Spectrometer: Single Quadrupole

**Sample Preparation:**

Transferred 500 mg of sample to a 15 mL centrifuge tube. Added 10.0 mL of extraction solvent and vortexed 30 seconds to mix. Sonicated for 15 minutes at room temperature. Let cool and centrifuged for 10 minutes at 4,000 RPM. Transferred 1 mL of supernatant to a vial for direct injection analysis. Combined 2 mL of supernatant with 2 mL of water in a headspace vial for Class II headspace analysis. Combined 0.5 mL of supernatant, 1.5 mL of extraction solvent, and 2 mL of water in a headspace vial for Class III headspace analysis.

**Report Summary:**

Conclusion: This "Botanical Extract" test sample meets the limits set forth for class I, class II, and class III solvents in USP <467> Residual Solvents.  
 OOS Reference: N/A  
 Notebook Reference: GC007 p. 153

**Analysis Date : xx/xx/xx**
**Analyzed By: Chemist**
**Authorized By: Manager**