



LIFTMODE
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Chicago, IL 60605

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CERTIFICATE OF ANALYSIS

Garlic Extract (*Allium sativum*)

Material Lot #: 181009
Country of Origin: China

Manufacturer Analysis Date: 10/11/2018
Analysis Date: 04/27/2020
Retesting Date: 04/27/2023

Analysis	Claim	Result
Alliin	≥1%	1.87%

Test	Specification	Result
HPLC Assay	≥1%	1.87%
ICP-MS		
Arsenic	≤1.5 ppm	0.071 ppm
Lead	≤0.5 ppm	0.008 ppm
Cadmium	≤0.5 ppm	0.069 ppm
Mercury	≤0.5 ppm	<0.001 ppm
Total Aerobic Count	<1000 cfu/g	Conforms
Yeast & Mold	<100 cfu/g	Conforms
Coliform	<10 cfu/g	Conforms
<i>E.coli</i>	Negative	Conforms
Salmonella	Negative	Conforms

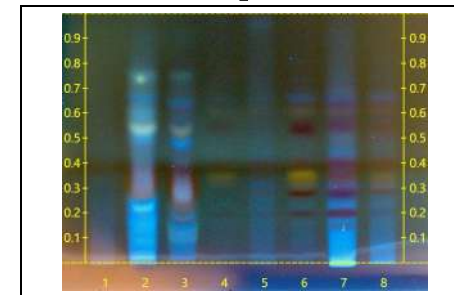
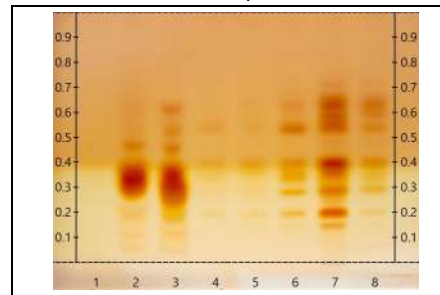
Garlic Extract should be stored at or below room temperature in a tightly sealed durable container.
Garlic Extract should be protected from excess heat, direct sunlight, excess humidity, and moisture.
Garlic Extract has a retesting period of 3 years from the date of analysis when properly stored.

Certificate Issued To:
Synaptent
1442 W Fulton St
Chicago, IL 60607
United States



Work performed at:
Alkemist Labs
12661 Hoover Street
Garden Grove, CA 92841
714-754-HERB (4372)
714-668-9972 (FAX)
Sales@Alkemist.com
www.Alkemist.com

Certificate of Analysis: Garlic PE (181009) High Performance Thin-Layer Chromatography with Photo-Documentation



Company Name: Synaptent
Title: Garlic PE
Plant Part: bulb
Sample Received: 04/29/20
Sample Packaging: Foil Pouch
Form of Botanical: powdered extract
Appearance: Powder [silver foil pouch]
Lot Number: (181009) → Lane 6 (3µl)
Sample: 20120MFL_1
Latin Name: *Allium sativum* L. [Liliaceae]
Reference Sample: Lane 2 (3µl) (AGE17317AHP1), Lane 3 (3µl) (19107LWP) *Allium cepa* (bulb); Lane 7 (3µl) (V14604PB), Lane 8 (3µl) (V17317AHP1) *Allium sativum* (bulb); held at Alkemist Labs, Garden Grove, CA.
Analyst: A. Davis, N. Afendikova, M. Edwards, S. Kabbaj, N. Hoang, K. Tran, J. Lopez, J. Mares 135165
Sample Preparation: 0.3g+3mL Methanol, sonicate/heat at 50°C for 30 min.
Stationary Phase: Silica gel 60, HPTLC plates
Mobile Phase: n-butanol: Water: Acetic acid: Formic Acid [5.8/1.6/1.8/0.4]
Detection: (1) Ninhydrin, 120°C, 5min, vis (Reich, E., 2007)
(2) Ninhydrin, 120°C, 5min, 366nm (Reich, E., 2007)
Reference Standard: Lane 1 (2µl) Alliin [1204/0, XSYN], Methanol (0000206696, VWR)
Reference Source: Plant Drug Analysis, Wagner, H., 1996
IDT-SOP-72-01

Comments & Conclusions: Lane 6 is the test sample Garlic PE (181009). Lanes 2, 3, 7, 8, are the reference samples used for comparison. This test sample, Garlic PE (181009) is consistent with the chromatographic profile of the reference samples of *Allium sativum*, used above. **This test sample Garlic PE (181009) has characteristics of *Allium sativum* bulb.**

NOTE: The above conclusion may be a function of the natural variance found in botanicals &/or the extraction process used to create specific extracts. The growing and drying conditions, age, seasonal variations, geographic location, extraction solvents, etc. all play a role in the phytochemical fingerprint of botanicals as well as their extracts; hence, chromatographic variations are expected.



Digitally signed by Khanh Tran
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Examined, Reviewed & Authorized by: Khanh N Tran, HPTLC, R&D Supervisor, Alkemist Labs

Report Date: 05/28/20



Note: Any unidentified lanes in the above chromatograms are confidential and may represent internal studies or other test samples not related to 181009.
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CERTIFICATE OF ANALYSIS

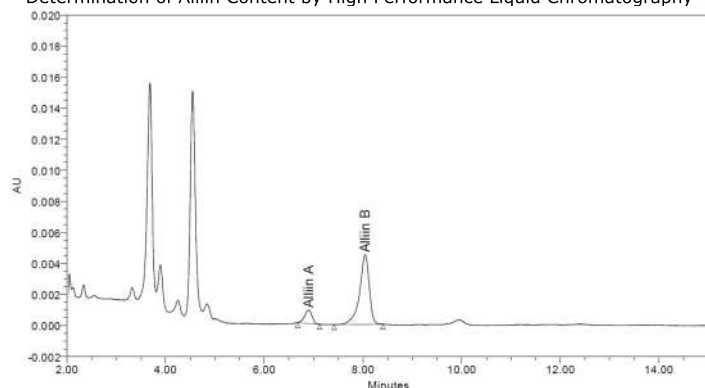


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Report Issued To: Synaptent
1442 W Fulton St
Chicago IL 60607
United States

Sample Name: Garlic PE
Description: Powdered extract; Powder [silver foil pouch]
Lot #: 181009
AL #: 20120MFL_2
Analysis ID: 137417
Received: 04/29/20

Determination of Alliin Content by High Performance Liquid Chromatography



Ret. Time (min)	Compound Name	Prep 1 (%) As Is	Prep 2 (%) As Is	Average (%) As Is	Average (%) Anhydrous	Specification	Result
6.9, 8.0	Alliin	1.855	1.877	1.866	1.992	>1.8%	Pass

Chromatographic Conditions:

Method: USP 42 – Powdered Garlic Extract
Column: AP67 Atlantis dC18 3µ (100 x 3.9 mm)
Temperature: 25°C
Flow Rate: 1 mL/min
Injection Volume: 10 µL
UV Detection: 337 nm
Mobile Phase: Acetonitrile:1,4-dioxane:Tetrahydrofuran:Monobasic Sodium Phosphate 0.045M pH 7.1 (25:2.9:2.2:69.9)
HPLC Instrument: Alliance_3

Sample Preparation:

Transferred 100 mg to a 50 mL volumetric flask and added 30 mL allinase inhibitor solution. Shook until extract was fully dispersed. Diluted to volume with inhibitor solution. Centrifuged 10 minutes and transferred 5 mL of supernatant to 10 mL volumetric flask. Filled to volume with inhibitor solution. Pipetted 100 µL of sample solution into high recovery HPLC vial. Added 0.5 mL of derivatization reagent solution. Let stand for 2 minutes to allow reaction to complete. Injected on HPLC for analysis.

Report Summary:

Conclusion: This "Garlic PE" test sample contains an average of 1.9% alliin on the anhydrous basis.
OOS Reference: N/A
Water Content: 6.30%
Notebook Reference: LC152 p. 55



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Adobe Acrobat version: 2020.009.20067

Analysis Date : 06/15/20 **Analyzed By:** A Pham

Authorized By: Celine Deneuve,
Analytical Chemistry Supervisor

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Certificate of Analysis

Client:
Synaptent LLC
47 W Polk Street, 100-241
Chicago, IL 60654

Sample Collected By: Client

Product Name	Garlic P. E	Product Lot Number	181009
Report Date	04/27/20	Laboratory Number	20040068

Description	Method	Result
Alliin	HPLC	0.4%
Lead	ICP-MS	0.008 ppm
Arsenic	ICP-MS	0.071 ppm
Cadmium	ICP-MS	0.069 ppm
Mercury	ICP-MS	<0.001 ppm
Total Aerobic Count	Biolumix	<1,000 cfu/g
Yeast and Mold	Biolumix	<100 cfu/g
E. Coli	Biolumix	Absent
Coliform	Biolumix	<10 cfu/g
Salmonella	Biolumix	Absent

Collin Thomas
Laboratory Manager

04/27/2020
Date

The result(s) stated in this report is only for the sample submitted. This report may not be reproduced in whole or in part, nor may any reference be made to the work, the result, or the company in any news release, public announcements or advertising without our prior written consent.

812 Meadow Lark Lane, Goodlettsville, TN 37072
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Main Benefits

- Garlic has been used traditionally for thousands of years for both real and superstitious ailments ranging from fungal infections to repelling demons.
- Some evidence suggests consuming fresh garlic or extracts with high Alliin and Allicin content may reduce the frequency of sicknesses like the common cold.
- Alliin and its metabolites may promote cardiovascular health, both through lowering cholesterol and increasing blood flow throughout the body.

Main Cautions

- Garlic Extract has blood-thinning properties and should not be taken with other blood thinners such as Warfarin.
- The primary active components of Garlic Extract, Alliin and its metabolite Allicin contribute to "garlic breath" and should be avoided prior to intimate situations.
- Consult your physician before using Garlic Extract if you are taking any medication.

Usage Tips

- A 1cc measuring scoop is included. One level scoop contains approximately one serving of approximately **500mg Garlic Extract**. As a dietary supplement, take 1-2 servings up to 2 times per day. Start at the lower suggested quantity to assess response.
- There are no known negative side effects attributed to Garlic Extract, but caution is still advised for those taking other drugs or supplements that have **blood-thinning effects**.
- Due to this extract's pungent qualities, the use of capsules is recommended.
- This supplement is not intended to treat, diagnose, prevent, or cure any diseases. Consult your healthcare provider before use if you have a medical condition or if you are taking any prescription medications.
- It is safe to stack Garlic Extract with other supplements as long as the amount consumed does not exceed the suggested serving size.
- The benefits of Garlic Extract are most effective when they are supported by a healthy diet and plenty of exercise.

Garlic Extract

