

Witholytin®

Proprietary Witholytin® is standardized to withanolides from ashwagandha root (*Withania somnifera*). Bioaccessible Witholytin® extract aims to deliver efficacious health benefits.

This clean label extract is supported by sustainable and traceable initiatives as well as clinical studies for its adaptogenic properties.



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ASHWAGANDHA WITH INTEGRITY

Our Witholytin® extract used in clinical trials undergoes the same rigorous manufacturing and testing processes as its market-ready counterpart for validation and compliance.

- Clinical inclusion (diversity in population, hormone biomarkers in both men and women)¹
- Sustainable & traceable initiatives
- Third-party certifications & accreditations
- Validated & Transparent Methodology (HPLC & HPTLC)
- Safety & pK data
- Bioavailable & bioaccessible



"I am proud that Verdure took the initiative to include the impact on hormones and other health attributes in both men and women in their *Withania somnifera* clinical trials. While there is still more work to be done, ensuring clinical inclusion is paramount to robust clinical safety & efficacy efforts."

—Sonya Cropper, Executive Director, Verdure Sciences®

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BIOACCESSIBILITY[†]

Bioaccessibility is the measure of how much of a compound becomes free for absorption into the body, typically occurring within the gastrointestinal (GI) tract (e.g. compound being free to enter the bloodstream).

Our recent pK aimed to develop a validated and highly sensitive and bioanalytical method for quantifying five major withanosides and withanolides (withanoside IV, withanoside V, withanolides A, withaferin A, and 12-deoxy-withastramonolide) of Witholytin® root extract to explore its bioaccessibility in human plasma. These major constituents of Witholytin® were quantified in the plasma for up to 9-hours, but 12-deoxywithastramonolide was quantified for up to 12-hours.³

These results demonstrate how Witholytin® delivers rapid action, achieving fast-acting peak plasma concentrations within 1-2 hours, all while providing long-lasting effects.³



WITHOLYTIN®: ASHWAGANDHA WITH INSIGHTS[†]

- Backed by multiple clinical studies; 200-500mg/day
- Demonstrated safety and efficacy including:
 - Stress¹
 - Fatigue¹
 - Aerobic exercise performance²
 - Sports adaptive health²
 - Cellular/Mitochondrial health⁴
- Clinically shown to exert its effect on multiple mechanisms, including:
 - HPA axis¹
 - GABA and serotonin neurotransmitters¹
 - Inflammatory markers, including C-reactive protein, IL-6, and TNF-alpha²
 - BDNF and SIRT1 signaling⁴

1 - Smith SJ et al. Exploring the efficacy and safety of a novel standardized ashwagandha (*Withania somnifera*) root extract (Witholytin®) in adults experiencing high stress and fatigue in a randomized, double-blind, placebo-controlled trial. *J Psychopharmacol*. Epub 2023 Sep 23. 0(0). doi: 10.1177/02698811231200023

3 - Vaidya, V. G., Gothwad, A., Ganu, G., Girme, A., Modi, S. J., & Hingorani, L. (2024). Clinical safety and tolerability evaluation of *Withania somnifera* (L.) Dunal (Ashwagandha) root extract in healthy human volunteers. *Journal of Ayurveda and Integrative Medicine*, 15(1), 100859. <https://doi.org/10.1016/j.jaim.2023.100859>

2 - Raut A, Tripathi R, Marathe P A, et al. (September 08, 2024) Evaluation of *Withania somnifera* (L.) Dunal (Ashwagandha) on Physical Performance, Biomarkers of Inflammation, and Muscle Status in Healthy Volunteers: A Randomized, Double-Blind, Placebo-Controlled Study. *Cureus* 16(9):e68940. DOI 10.7759/cureus.68940

4 - Fanibunda, S. E., Kukkemane, K., Ghai, U., Kolthur-Seetharam, U., Hingorani, L., Vaidya, A. D. B., & Vaidya, V. A. (2025). *Withania somnifera* Regulates Mitochondrial Biogenesis and Energetics in Rat Cortical Neurons: Role of BDNF and SIRT1. *Molecular neurobiology*, 10.1007/s12035-025-04920-7. Advance online publication. <https://doi.org/10.1007/s12035-025-04920-7>



[†]These statements have not been evaluated by the Food and Drug Administration. These products are not intended to diagnose, treat, cure, or prevent any disease.

Please note that the physiological activity of the ingredient(s) described herein is supported by the referenced clinical trial report(s). Marketers of finished products containing the ingredient(s) described herein are responsible for determining whether claims made for such products are lawful and in compliance with the laws of the country in which they will market the products.

Patent & trademark information: vs-corp.com/ip
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* Additional references: vs-corp.com/research/ashwagandha/
** Not an exhaustive list of references or clinical trials