Arjuna Natural

PAID CONTENT

Shoden: Enhancing ashwagandha's effectiveness

A new pharmacokinetic study shows that Shoden ashwagandha is more bioavailable and lasts longer in the body than standard ashwagandha.



Ashwagandha: Entering the mainstream

$342 million
Consumer sales in 2023[1]

+36%
Increase in sales between 2021 and 2023[2]

20.1%
Growth in mainstream channels year-over-year[3]



Chart-topper: Ashwagandha is a top-five selling herbal supplement, across multichannel and natural channel outlets[4]

Big growth potential: 31% of consumers haven't yet heard of ashwagandha[5]

Ashwagandha is on the precipice of mainstream acceptance. It's critical that the products consumers choose are bioavailable, effective and safe.

Shoden: Ancient tradition + modern technology = a more bioactive ashwagandha



Ashwagandha (Withania somnifera) has been used as a traditional Indian ayurvedic medical plant for thousands of years, with records dating back to 6,000 B.C.

Shoden benefits from a modern extraction process that captures the unique withanolide glycosides present in the ashwagandha plant. The result? A more bioactive and bioavailable ingredient, created in a clean, two-step extraction process utilizing just water and ethanol.

Minimum **35%** withanolide glycoside content

Low dosages for ease of use: 60 mg or 120 mg daily

21 different withanolide glycosides for full-spectrum support

Extended release for **24 hours** of efficacy

Transparency and sustainability

Shoden ashwagandha is grown on family-owned farms in India. The farmers…

1. Utilize the whole crop producing less waste
2. Receive a sustainable income and fair wages
3. Use eco-friendly practices like hand harvesting, natural fertilizers and pesticides, and minimal water consumption

Shoden pharmacokinetic study demonstrates better bioavailability than standard ashwagandha[6]

The challenge: Animal studies and human clinical trials show that ashwagandha's powerful withanolides have a short half-life and eliminate rapidly from the body.

The study: Researchers compared Shoden (standardized to at least 35% withanolide glycosides) with a competing ashwagandha extract (standardized to 2.5%). Both ingredients contained 185 mg total withanolides.

The results:
Shoden showed…



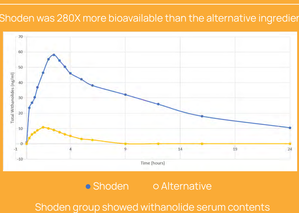
5X times higher half-life

5X times higher concentration of actives in the blood

4X times longer time spent in the body, up to 24 hours

…vs. competitor after a single dose (Other ashwagandha extracts delivered withanolides to the body in a quick shot, with blood levels returning to zero within six hours)

Shoden was 280X more bioavailable than the alternative ingredient



● Shoden ○ Alternative

Shoden group showed withanolide serum contents at nearly **60 ng/ml within four hours**

Conclusion: The study highlights the importance of withanolide glycosides to improve the pharmacokinetics of *Withania somnifera*.

Formulating with Shoden

Shoden ashwagandha benefits:

Mental wellness
Promotes feelings of wellness and healthy stress response[7]

Vitality
Supports healthy testosterone levels[8] in males

Healthy sleep
Increases restorative sleep[9]

Immunity
Activates both innate and adaptive immune systems

Shoden carries claims that matter to today's consumers:

Dairy free | Vegan | Halal | Kosher | GRAS | Non-GMO Project Verified



A versatile ingredient for innovative formulations

- High bulk density and water-soluble options available
- Clinically substantiated low dosing at 60 mg to 120 mg for better value
- Subject of 11 international studies

About Arjuna Natural
Arjuna Natural is India's leading manufacturer of standardized spice and botanical extracts for the nutraceutical industry.

1. Nutrition Business Journal. Herbs and Botanicals Report 2023.
2. Ibid.
3. HerbalGram. US Sales of Herbal Supplements Decline Slightly in 2022. Spring 2024. Issue 139.
4. Ibid.
5. Ibid. Herbs and Botanicals Report.
6. Kim et al. "Pharmacokinetics and bioequivalence of *Withania somnifera* (Ashwagandha) extracts – A double blind, crossover study in healthy adults." Heliyon. 2023 Nov 28;9(12):e22843.
7. Lopresti AL et al. "An investigation into the stress-relieving and pharmacological actions of an ashwagandha (*Withania somnifera*) extract: A randomized, double-blind, placebo-controlled study." Medicine (Baltimore). 2019 Sep; 98(37).
8. Lopresti AL et al. "A Randomized, Double-Blind, Placebo-Controlled, Crossover Study Examining the Hormonal and Vitality Effects of Ashwagandha (*Withania somnifera*) in Aging, Overweight Males." Am J Mens Health. Mar/Apr 2019;13(2).
9. Deshpande A et al. "A randomized, double blind, placebo-controlled study to evaluate the effects of ashwagandha (*Withania somnifera*) extract on sleep quality in healthy adults." Sleep Medicine. 2020; 72: 28-36.

These statements have not been evaluated by the Food and Drug Administration.
This product is not intended to diagnose, treat, cure or prevent any disease.

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