

ASHWAGANDHA ADULTERATION: A GROWING THREAT TO QUALITY AND TRUST

PART OF THE ASHWAGANDHA EXPERIENCE



Ashwagandha (*Withania somnifera*), revered in Ayurveda as the “King of Herbs,” has earned recognition as a global adaptogen. In recent years, the sector has seen substantial growth, attributed to extensive scientific research, marketing, and investment efforts surrounding the best-selling ashwagandha root extract, KSM-66.

However, this rapid rise in demand has inadvertently paved the way for a troubling undercurrent: widespread adulteration. With consumer interest at an all-time high, unscrupulous manufacturers and suppliers have begun to exploit the supply chain by economically substituting root material with significantly cheaper leaf or aerial components. These adulterants, often 100 times less costly than roots, offer substantial profit margins while compromising product authenticity. But the issue extends far beyond economics.

Why Root-Only Matters

The integrity of Ashwagandha as a therapeutic agent lies in its traditional and scientifically validated root usage. Recognizing this, the Government of India issued a formal advisory in 2021 restricting internal use exclusively to the roots due to insufficient safety and efficacy data on leaves.

The American Botanical Council published a detailed monograph outlining the rampant substitution of roots with aerial parts in the supply chain.

ELIMINATING ADULTERANTS THROUGH IDENTIFICATION:

Scientific studies reinforce the scale of this issue. In a published study, researchers utilized HPLC-UV to analyze authenticated Ashwagandha leaves (n=5), aerial parts (n=3), and roots (n=17) sourced from India and Egypt. Additionally, 10 commercial extracts marketed as “root-derived” were tested for flavonol glycosides, chemical markers indicating adulteration. Alarming, only two samples were free of these markers, revealing that most root extracts in the market were contaminated with aerial components.¹

Another published research, this time using high-performance thin-layer chromatography (HPTLC), examined 584 commercial extract batches. The findings showed that 14.0% were rejected due to leaf residue and 20.4% contained incomplete root material.² These results underline the inadequacy of current quality controls and the urgent need for robust verification mechanisms.

Recent data from a center (one of several across India) that facilitates the exchange of ashwagandha raw material among farmers, traders, and manufacturers reveals alarming figures. It reported that over 2,500 tons of ashwagandha leaves were sold in just three months. However, these transactions and sales are not reflected in publicly available export records. Additionally, there is a significant discrepancy in ashwagandha products on the global market, with most branded as ‘ashwagandha root.’

WHERE ARE ALL THE LEAVES GOING?

Industry insiders, speaking anonymously, confirmed that many manufacturers knowingly blend leaf extracts with root materials and mislabel the finished extract as root-derived, then export it at higher prices. Such deceptive practices not only violate regulatory and ethical standards but also pose a health risk. Ayurvedic practitioners have long cautioned against internal use of aerial parts due to their potential adverse effects.

While cost-based adulteration may seem like a business tactic, its consequences are far more serious. The Government of India's advisory reiterates the absence of substantiated health benefits from leaves and aerial components. This lack of clinical validation, paired with anecdotal reports of toxicity, jeopardizes consumer safety and undermines trust in the global Ashwagandha industry.

A representative of the world's best and leading brand said, "We at KSM-66 strongly believe this is all happening because of rampant adulteration in the ashwagandha sector." Since its inception, Ixoreal Biomed has remained committed to using only high-quality roots in its organic formula, extracted through a proprietary green chemistry process.

THE SOLUTION IS: MORE TESTING, AGAIN AND AGAIN.

The path forward lies in methodical quality assurance. Both HPTLC and HPLC are scientifically validated techniques for detecting plant part-specific markers and should be standard practice across the industry. Every batch must be tested, not just periodically, but consistently, by manufacturers, suppliers, and third-party labs to ensure raw material integrity.

Beyond analytical vigilance, structural changes are needed. Another desirable solution, and something currently missing from the scene, according to KSM-66, would be for the Government of India to establish clear rules for labeling exported goods from India (country of origin) through plant part identification.

REFERENCES

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