

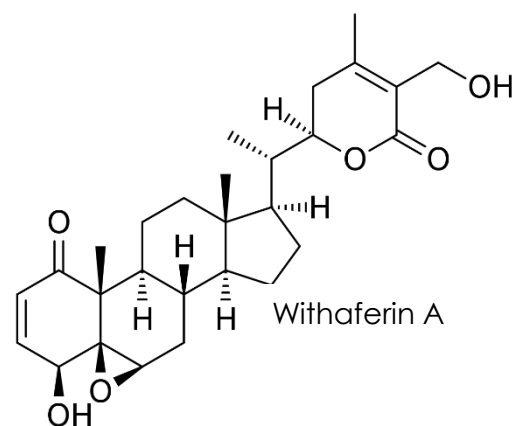


## Ashwagandha (*Withania Somnifera*)



*Withania somnifera* is an extensively used herb in the Indian system of Medicine - Ayurveda. This herb is being used traditionally since more than 4000 years in India. Indian name: Ashwagandha, Botanical name: *Withania somnifera* (Solanaceae) [1].

**Active Constituents:** The major biochemical constituents of ashwagandha root are steroidal alkaloids and steroidal lactones in a class of constituents called withanolides [2]. At present, 12 alkaloids, 35 withanolides, and several sitoindosides from this plant have been isolated and studied. A sitoindoside is a withanolide containing a glucose molecule at carbon 27. Much of ashwagandha's pharmacological activity has been attributed to two main withanolides, withaferin A and withanolide D [3].



**Medicinal Uses:** Literature review indicates *Withania somnifera* possesses thyroid stimulant, anti-stress, anti-tumor, radiosensitizing, immunomodulatory, hepatoprotective, anticonvulsant, cardioprotective, hypoglycemic, diuretic, hypocholesterolemic, adaptogenic and anti-oxidant properties. Ashwagandha is having diverse pharmacological actions on different systems [4].



### Clinical Studies:

- In a double-blind clinical trial, ashwagandha was tested in a group of 101 healthy males, 50-59 years old, at a dosage of 3 grams daily for one year. A significant improvement in hemoglobin, red blood cell count, hair melanin was observed. Serum cholesterol decreased and nail calcium was preserved. Erythrocyte sedimentation rate decreased significantly and 71.4 percent reported improvement in sexual performance.
- Hypoglycemic, diuretic, and hypocholesterolemic effects of ashwagandha root were assessed in human subjects, in which six type 2 diabetes mellitus subjects and six mildly hypercholesterolemic subjects were treated with a powder extract for 30 days. A decrease in blood glucose comparable to that of an oral hypoglycemic drug was observed. Significant increases in urine sodium, urine volume, and decreases in serum cholesterol, triglycerides, and low-density lipoproteins were also seen.

**Available Grades:** 1.5%, 2.5% Withanolides

### Specification:

<b>Botanical/ Scientific name</b>	<i>Withania somnifera</i>
<b>Identification</b>	TLC
<b>Heavy metal</b>	Not more than 20 ppm
<b>Arsenic</b>	Not more than 1 ppm
<b>Lead</b>	Not more than 3 ppm
<b>Microbiological profile</b>	As per JPN Food Regulation

### References:

1. Kaur Narinderpal et al., "A Review on Pharmacological Profile of *Withania somnifera* (Ashwagandha)" RRJBS | Volume 2 | Issue 4 | October-December, 2013
2. Elsakka M, Grigorescu E, Stanescu U, et al. New data referring to chemistry of *Withania somnifera* species. Rev Med Chir Soc Med Nat Iasi 1990;94:385-387.
3. Bone K. Clinical Applications of Ayurvedic and Chinese Herbs. Monographs for the Western Herbal Practitioner. Australia: Phytotherapy Press; 1996:137-141.
4. Bilal Ahmad Mir et al., "Botanical, chemical and pharmacological review of *Withania somnifera* (Indian ginseng): an ayurvedic medicinal plant" Indian Journal of Drugs and Diseases Vol:1 Issue:6 Sep. 2012 ISSN: 2278- 2958