

# PHYTOR

**Consulting in Human Health, Toxicology & Regulatory Affairs**

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### **Summary for the Product *POTENTMEL***

*POTENTMEL* is a product from Zuf, recommended for those who wish to strengthen the male lower urinary tract, build energy and diminish the undesired problems caused by erectile dysfunction. *POTENTMEL* should be taken continuously as a dietary supplement in order to strengthen the male reproductive system and consequently its performance. The blend of herbs which comprise the bees' feed used in the production of *POTENTMEL* possess bioactive substances, such as ginsenosides which promote endothelial nitric oxide (NO) release, which exerts a direct effect on erectile dysfunction through triggering erection mediated by relaxation of the smooth muscles of the corpus cavernosum. In addition, the herbal components are cited in numerous experimental reports supporting beneficial effects on male reproductive system, as well as showing anti-fatigue and neuroprotective effects.

These biological activities are recorded on the WHO monographs. The biological activities of the herbs composing the bees' feed are all corroborated by peer-reviewed scientific publications.

The main biological activities of *POTENTMEL* related to its herbal components is listed below:

1) *Panax ginseng*

The major chemical constituents are triterpene saponins, which comprise many forms of ginsenosides. Clinical reports indicate that these compounds act as potent anti-fatigue agents, due to their adaptogenic effects on the human body. Additional clinical data supports the use of these substances to treat impotence and to improved sperm production.

2) *Serenoa repens*

The major active constituents in this herb are free fatty acid (mainly oleic, lauric and linolenic acids) and sterols (mainly  $\beta$ -sitosterol and stigmasterol). In experimental models, anti-androgenic and anti-estrogenic activities were reported. In addition, clinical reports support the role of these chemicals in adjuvant treatment of lower urinary tract symptoms, which can be secondary to benign prostate hyperplasia.

3) *Aralia racemose*

The major groups of compounds found in this plant are terpenoids, saponins and acetylenic lipids. These are thought to produce anti-inflammatory effects, as well as hypoglycemic and hepato-protective effects. In addition, some reports suggest that these compounds may protect the cardiovascular system against ischemic events.

4) *Angelica atropurpurea (dong quai , Angelica sinensis)*

The major chemical constituent of the roots is alkyl ligustilide. Other characteristic components are terpenes (mainly  $\beta$ -cadinene and carvacrol), phenylpropanoids, benzenoids and coumarins. Recent experimental evidences indicate that these compounds may support elevated levels of testosterone.

#### 5) *Inula helenium*

The main active ingredients are sesquiterpene lactones, mainly alantolactone, isoalantolactone and alloalantolactone. These compounds exhibit potent anti-oxidant and anti-inflammatory activities.

#### 6) *Plantago major*

*Plantago major* main chemical constituents are the flavonoids hispidulin, luteolin and apigenin. fatty acids and polysaccharides were also identified.

Several experimental reports support the use of these compounds as potent anti-oxidant and anti-inflammatory agents.

#### 7) *Vitex agnus-castus*

Two major group of compounds are found in this plant: Flavonoids (Casticin, Cymaroside and Chrysosplenol D are the major) and Diterpenes (Vitexilactone, Rotundifuran and Vitexlactam A). Experimental and pre-clinical evidences support the protective and therapeutic effect of these compounds against prostate cancer.

#### 8) *Eleutherococcus senticosus*

*Eleutherococcus senticosus*, also called Siberian ginseng, was reported to have adaptogenic/ anti-stress activity and may boost mental performance. In addition, it may stimulate the immune system. *Eleutherococcus senticosus* also shows anti-microbial and antioxidant activities.

#### 9) *Schisandra chinensis*

The major groups of chemicals are dibenzocyclooctadiene lignans, mainly Schisandrin A and B. Experimental reports show the evidence that these compounds act as potent anti-oxidant and anti-inflammatory agents. Additional studies suggest that these compounds can improve semen count and quality in infertile men.

10) *Lepidium meyenii*

The major groups of compound present in this plant are imidazole alkaloids, mainly forms of Lepidiline. There are experimental reports supporting beneficial effects on male reproductive system, as well as anti-fatigue and neuroprotective effects.

11) *Tribulus terrestris*

The major constituents of the fruit are steroidal saponins including, among other, protodioscin, tribulosaponins A and B and tribulosin. In experimental models, these compounds exhibit both anti-inflammatory and diuretic effects.

There are clinical reports supporting the evidence that daily administration of protodioscin increased sperm quantity and quality in men.

12) *Vitis vinifera*

The major groups of chemicals found in grapevine are polyphenol flavonoids, anthocyanins, catechins and stilbenes. In experimental models, these compounds were reported to improve spermatogenesis and sperm quality markers, as well as other urinary tract symptoms.

**Bibliographic References in addition to the WHO monographs regarding the herbal substances in the formula.**

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