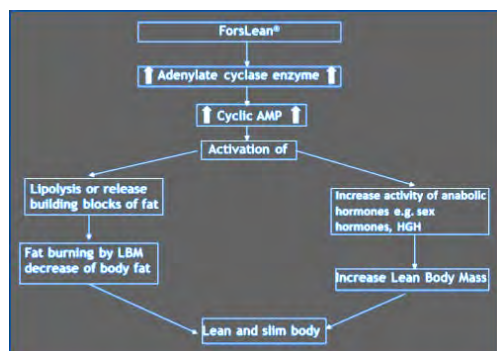


Forslean Coleus

Forslean® is manufactured by a proprietary process and is a standardized extract from the roots of the *Coleus forskohlii* plant, the only known plant source of forskohlin. ForsLean® is a registered trademark of Sabinsa Corporation.



Sustainability

Sabinsa is growing Coleus in part of its 44 000 acres, and do the extraction in its own plant selection fully dedicated to the production of Coleus extracts, to provide you the best quality and the best sustainability.

Forslean® is Sabinsa's new proprietary composition extract of *Coleus forskohlii* root, standardized for Forskolin. Forslean® has shown promising results in three areas; enhancing lean body mass, promoting fat loss and promoting weight loss. In September of 1998 Sabinsa was granted a use patent for this application of Forskolin in its Forslean® composition.

Mechanism of Action

The mechanism of action on how Forslean® works is well defined : «Forskohlin, the active compound in Forslean®, is recognized as an adenylate cyclase activator. Adenylate cyclase is the enzyme involved in the production of cyclic adenosine monophosphate (cAMP), a significant biochemical agent in metabolic processes. The role of cyclic AMP is indispensable to many body functions. It induces a chain reaction of biochemical events that trigger metabolic processes and diet induced thermogenesis, thereby providing the means to maintain healthy body composition and lean body mass levels.

Cosmeceutical applications

Topical fat reduction in specific areas of the body is a common concern for women. Ronsard popularized the term "cellulite" to describe the dimpling and "orange peel" external appearance of the thighs, the cause of which was attributed to the aging process by later researchers. The structure of subcutaneous adipose tissue accounts for the development of the "orange peel" appearance. Groups of fat cells are attached to the

underside of the dermis by fibrous connective tissue. As fat cells enlarge, the fibers are stretched and pull down on the underlying skin. This causes the indentation or dimpling of the skin called cellulite.

It has been demonstrated that adipose tissue metabolism varies from one region of the body to another, for example, in severely obese women losing weight after the jejunioileal bypass surgery, fat was seen to be absorbed more slowly in the thigh region than the abdominal region¹⁰. These differences lead to the hypothesis that localized application of agents that trigger lipolysis or fat breakdown could help in cases of fat accumulation at specific subcutaneous sites.

Forskolin accelerates lipolysis through the activation of hormone-sensitive lipase — adrenoreceptors playing important roles in the regulation of lipolysis (adrenoreceptors are neurons that are activated by adrenaline (epinephrine) or similar substance). Based on clinical studies reported in literature, Coleus forskohlii extract 95% is potentially useful in dislodging localized fat deposits immediately under the skin, when applied topically.

As an alternative to **tanning** by exposure to the sun that can cause skin cancer, topical application of forskolin induces tanning and is safer to use.

Dosage Form

The recommended levels of use as a skin conditioning agent : 0.1 to 0.5% of a topical formulation, such as an ointment, cream or lotion.