

# ABS Orange Polyphenols PBF



natural  
slimming  
fruit-derived  
slimming + toning  
increases circulation  
minimizes the appearance of cellulite

## BACKGROUND

*Citrus aurantium* (subspecies *amara*), or Bitter Orange, is a spiny evergreen tree that is native to Southern Vietnam but is now widely cultivated. It is used as a grafting stock for citrus trees, in marmalade, in liqueurs, and it is also cultivated for its essential oils. The extract of Bitter Orange has been used in dietary supplements as an aid to fat-loss, is known to have anti-cellulite properties, and is loaded with vitamins and minerals (especially Vitamin C).

## SCIENCE

Flavones and flavanones both belong to a group of compounds known as flavonoids. Flavonoids are colorful antioxidants that are found in plants, and in addition to their antioxidant properties, they are also known for their abilities to strengthen capillary walls and assist in circulation. Furthermore, flavanoids are reputed to have anti-inflammatory effects. This may be related to flavanoids' ability to inhibit enzymes, such as cyclo-oxygenase and lipoxygenase, which act on arachidonic acid in cell membranes to form potent inflammatory substances.

To take advantage of all of these properties, Active Concepts has created **ABS Orange Polyphenols PBF** from an enriched fraction of Bitter Orange petals. This product is abundant in methoxylated flavones and flavanones so that it may reduce dimply skin by stimulating microcirculation and facilitating the draining of tissues.

## BENEFITS

**ABS Orange Polyphenols PBF** is a lipolytic active ingredient that inhibits the activity of the enzyme phosphodiesterase and catalyzes the production of cyclic AMP (cAMP). This stimulates lipolysis, increases the levels of free fatty acids, favors the hydrolysis of triglycerides, and thereby promotes the mobilization of stored fats. In addition, the vasodilating action of **ABS Orange Polyphenols PBF** activates skin microcirculation; this leads to the progressive elimination of venous stasis and

**Code Number: 16734**

**INCI Name:** Water & Propylene Glycol & Citrus Aurantium Amara (Bitter Orange) Flower Extract

**INCI Status:** Conforms

**REACH Status:** Compliant

**CAS Number:** 7732-18-5 & 57-55-6 & 72968-50-4

**EINCS Number:** 231-791-2 & 200-338-0 & 277-143-2

**Origin:** Botanical

**Processing:**

GMO Free

No Ethoxylation

No Irradiation

No Sulphonation

**Additives:**

Preservatives: None

Antioxidants: None

Other additives: None

**Solvents Used:** Water & Propylene Glycol

**Appearance:** Clear Liquid

**Soluble/ Miscible:** Water

**Ecological Information:**

100% Biodegradability

**Microbial Count:**

< 100opg, No Pathogens

**Suggested Use Levels:** 1.0 – 10.0%

**Suggested Applications:**

Anti-Cellulite, Slimming, Draining

**Benefits of ABS Orange Polyphenols PBF:**

- Fruit Derived
- Slimming & Toning
- Increased Circulation
- Minimize Appearance of Cellulite

# ABS Orange Polyphenols PBF

edema, tissues are decongested and drained, and the appearance of dimply skin is visibly relieved. **ABS Orange Polyphenols PBF** can thus be included in all claims for filtration and slimming actions.

**ABS Orange Polyphenols PBF** is a lipolytic and decongesting active ingredient, recommended in the formulation of all slimming products to smooth, tone, and improve the aesthetic appearance of dimply skin.

## EFFICACY

According to tests, **ABS Orange Polyphenols PBF** should significantly inhibit the activity of phosphodiesterase III (PDE), which is responsible for the conversion of cAMP to 5'-AMP, and thus favors lipolysis by increasing the intracellular cAMP content.

Inhibition was measured *in-vitro* using a biochemical model based on liquid scintillation quantification of the conversion of cAMP to 5'-AMP by purified human phosphodiesterase III. **ABS Orange Polyphenols PBF** was tested at 1%, 3%, and 5% and was found to significantly inhibit PDE activity by 62%, 92%, and 98%.

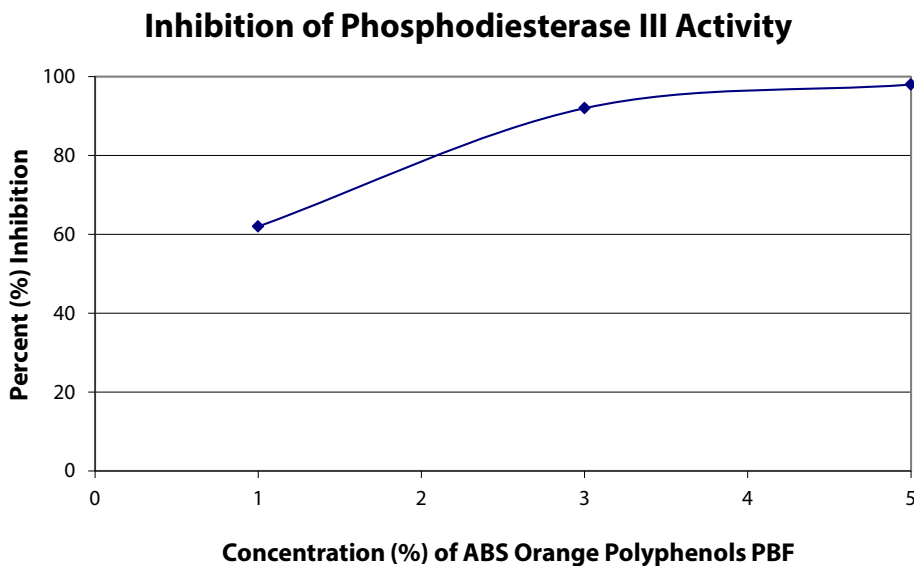


Figure 1. Results of PDE Activity when **ABS Orange Polyphenols PBF** was tested *in-vitro* at 1%, 3% and 5%.

### Benefits of **ABS Orange Polyphenols PBF**:

- Fruit Derived
- Slimming & Toning
- Increased Circulation
- Minimize Appearance of Cellulite

#### References:

- 1) Leung A, Foster S. Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics . New York, NY: John Wiley and Sons, Inc; 1996: 393-397 .
- 2) Chevallier A . The Encyclopedia of Medicinal Plants . New York, NY: DK Publishing; 1996 : 188-189
- 3) Carvalho-Freitas M, Costa M. Anxiolytic and sedative effects of extracts and essential oil from Citrus aurantium L. Biol Pharm Bull. 2002; 25 (12): 1629-1633.

Active Concepts LLC • Lincolnton, USA • [www.activeconceptsllc.com](http://www.activeconceptsllc.com) • Tel +1 704-276-7100 • [info@activeconceptsllc.com](mailto:info@activeconceptsllc.com)



Active Concepts, America Latina  
 Monterrey, N.L. Mexico  
[www.activeconceptsal.com](http://www.activeconceptsal.com)  
 Office: +52 (81) 1971 9846  
[info@activeconceptsal.com](mailto:info@activeconceptsal.com)

Active Concepts S.r.l.  
 Milano ITALY  
[www.activeconcepts.it](http://www.activeconcepts.it)  
 Tel +39 02 90360719  
[info@activeconcepts.it](mailto:info@activeconcepts.it)

Active Concepts LLC, Asia  
 Kaohsiung, Taiwan  
[www.activeconceptsllc.com](http://www.activeconceptsllc.com)  
 Tel + 886 73599900  
[josephyeh@activeconceptsllc.com](mailto:josephyeh@activeconceptsllc.com)