



DETOX, ANTIOXIDANT, HEALTHY SKIN

 **indena®**
INDUSTRIA
DERIVATI
NATURALI

NUTRACEUTICAL

PUREBKALE™

STANDARDIZED BLACK KALE
SEED EXTRACT

These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure, or prevent any disease.

pureBkale™

Please note that the physiological activity of the ingredient described herein is supported by the referenced clinical trial reports. Marketers of finished products containing the ingredient described herein are responsible for determining whether the claims made for such products are lawful and in compliance with the laws of the country in which they will market the products.

WHAT IS PUREBKALE™?

PUREBKALE™ is an **aqueous dry extract** from seeds of *Brassica oleracea var. viridis* (L.) (syn. *Brassica oleracea var. acephala* DC.) - Brassicaceae family, standardized in glucoraphanin.

SPECIFICATIONS

PUREBKALE™ is standardized to provide **≥17% of glucoraphanin** by HPLC.

RECOMMENDED USE AND DOSE

PUREBKALE™ is a dark brown powder for use in nutritional supplements.
Recommended dose:¹ 150 mg/day (providing 25 mg/day of sulforaphane glucosinolate).

TRADEMARKS

PUREBKALE™ is a trademark of Indena S.p.A. and its logo and usage guidelines are available from Indena.

References

- ¹ Kikuchi M *et al.*, *Jpn Pharmacol Ther* (2018) vol. 46 no. 1
² Cascajosa-Lira *et al.*, *Phytomedicine* 130 (2024) 155731.
³ Samec *et al.*, *Critical Reviews in Food Science and Nutrition*, DOI: 10.1080/10408398 (2018) 1454400
⁴ Moskwa *et al.*, *Nutrients* (2023), 15, 3594.

WHAT MAKES PUREBKALE™ UNIQUE?

PUREBKALE™ is crafted with the hallmark quality that defines Indena's manufacturing processes.

From the very beginning, **Indena selected the optimal source of *Brassica oleracea*** through a meticulous screening of more than 20 seed samples from different varieties.

This effort resulted in an extract **produced exclusively from 100% Italian Tuscan black kale seeds** with a **unique high concentration of glucoraphanin - at least 17% -** using exclusively water as solvent, resulting in a **food-grade product**.

Glucoraphanin is a precursor to sulforaphane, a compound extensively studied for its **health-promoting properties**.

Scientific literature supports the **enzymatic conversion of glucoraphanin into sulforaphane** by the myrosinase activity of a specific bacteria of the human gut microbiota.²

This transformation unlocks the bioactive potential of sulforaphane, which has been linked to a **variety of benefits like detoxifying and antioxidant capabilities**, as well as in the context of "beauty from within".

Specifically, sulforaphane has shown promise in **preventing photoaging of the skin and reducing the risk of sunburns by modulating the effects of UV radiation**. Additionally, sulforaphane promotes **skin nourishment**, making it a **powerful ingredient for overall skin health**.^{3,4}

From a **supply chain** perspective, Indena takes pride in a fully controlled and entirely Italian supply chain. **By working in harmony with local communities**, Indena ensures that seed sourcing is sustainable, with no negative impact on the plant itself.

This **commitment to quality, sustainability, and community respect** is at the core of Indena's approach, further distinguishing **PUREBKALE™** as a premium ingredient.

