



## High quality synthetic Sulforaphane

### SULFORAPHANE (SFN)

Sulforaphane (SFN) is an antioxidant compound contained in cruciferous vegetables such as broccoli, Brussels sprouts and cabbage. Broccoli has the highest concentration of SFN.

SFN is only released upon chewing and digestion of the plant source, when the enzyme myrosinase (only available in the plant source) reacts and transforms its precursor, glycoraphanin, into sulforaphane.

### ADVANTAGES

Clinical studies have shown that, at high doses, SFN has cancer- preventive and neuro-protective qualities against breast cancer, prostate cancer, neurodegenerative disorders, multiple sclerosis, diabetes and autism.

SFN also enhances the efficacy of anti-cancer drugs including cisplatin, gemcitabine, doxorubicin, and 5-fluorouracil, toward pancreatic and prostate cancer cells, while limiting their toxicity to normal cells.

SFN has beneficial effects to the skin when it comes to photoaging and sunburn cell formation, by maintaining collagen levels and protecting the skin from wrinkling.

### FEATURES

- Antioxidant status,
- natural protection of cells,
- high chemical reactivity,
- anti-inflammatory effect.

### BENEFITS

We offer synthetically produced and stabilized sulforaphane that provides several advantages, including API-level quality, lower production cost manufacturing robustness and supply chain security.

### APPLICATIONS

Active sulforaphane is used in food ingredients & dietary supplements (for adults to support immune system, combat inflammation and promote detoxification), pharmaceutical formulations (to enhance the efficacy of anti-cancer drugs) and skin care products (in ointments for topical anti-inflammatory treatment and anti-dehydration, and in sunscreens for protection from UV radiation).

## TECHNICAL PROFILE

Chemical name: 1-Isothiocyanato-4-(methanesulfinyl)butane

CAS No: 4478-93-7

Empirical formula: C<sub>6</sub>H<sub>11</sub>NOS<sub>2</sub>

Molecular weight: 177.29 g/mol

## CHEMICAL STRUCTURE



TEST	METHOD REFERENCE	SPECIFICATION
Appearance	In-house	Yellowish to yellow oil
Identification by IR	Ph.Eur. 2.2.24	The IR spectrum of the sample conforms to the reference standard.
% Water content (by KF)	Ph.Eur. 2.5.12	Not more than 1.5% w/w
Loss on drying (105°C, 3 hrs without vacuum)	Ph.Eur. 2.2.32	Not more than 2% w/w
%Sulfated ash	Ph.Eur. 2.4.14	Not more than 0.1% w/w
Related substances (by HPLC)  Chromatographic purity of main peak Any other impurity	In-house	Not less than 97.0% Not more than 1.5%
Residual solvents (by GC)	In-house	According to ICH Q3C guideline
Content of methylamine hydrochloride (by HPLC)	In-house	Not more than 100 ppm