



PHYTOCHEMICAL CHARACTERIZATION OF TURNIP GREENS

(Brassica rapa ssp. rapa):
A Systematic Review

Compounds Identified in Turnip Greens

GLUCOSINOLATES

- 4-Hydroxyglucobrassicin
- Glucobrassicinapin
- Glucobrassicin
- Gluconapin
- Gluconapoleiferin
- Gluconasturtiin
- Glucoraphanin
- Neoglucobrassicin
- Progoitrin
- 4-Methoxyglucobrassicin
- Glucoerucin
- Glucoiberin
- Glucoiberverin
- Glucoalyssin
- Gluconapoleiferin

PHENOLIC COMPOUNDS

- Quercetin
- Kaempferol
- isorhamnetic derivatives

ORGANIC ACIDS

- Oxalic Acid
- Malic Acid
- Citric Acid
- Ascorbic Acid
- Aconitic Acid
- Ketoglutaric Acid
- Shikimic Acid
- Fumaric Acid





AIM

Better understand the nutrient and phytochemical content of turnip greens to provide insight into the plant's health effects.

METHODS

Systematic review of published studies evaluating the presence and levels of nutrients and bioactive components in turnip greens to provide a comprehensive nutritional profile and connections to human health.

Studies were included in review if they 1) used samples of turnip greens (the leaves) and 2) evaluated phytochemical content.

OUTCOMES

18

Studies

The review pulled out 18 high-quality studies detailing the chemical composition of turnip greens

129

Phytochemicals

129 unique phytochemicals categorized into 4 groups (glucosinolates, glucosinolate-breakdown products, organic acids, polyphenolic compounds)

MOST PREVALENT COMPOUNDS IN TURNIP GREENS

59

Polyphenolic compounds including flavonoids

19

Glucosinolates and 33 glucosinolate breakdown products

10

Organic acids

KEY FLAVONOIDS IDENTIFIED

- Quercetin
- Kaempferol
- Isorhamnetin derivatives