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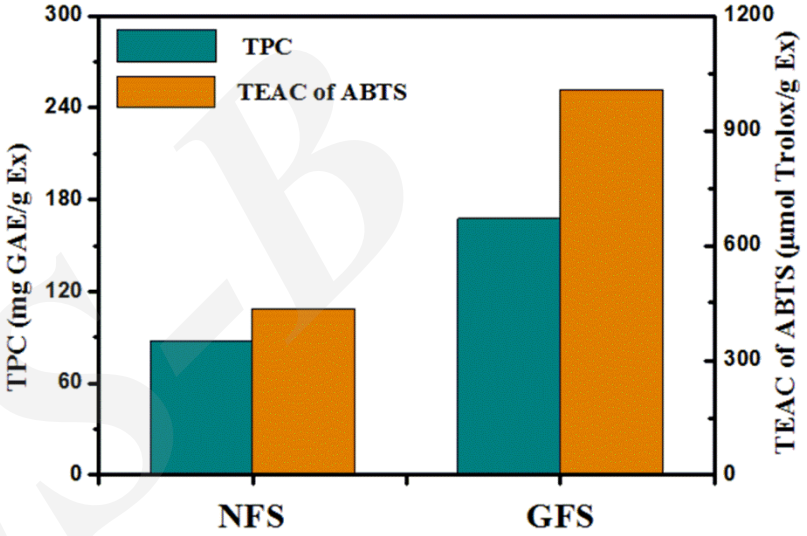
Improving the antioxidant activity and enriching salvianolic acids by the fermentation of *Salvia miltiorrhizae* with *Geomyces luteus*

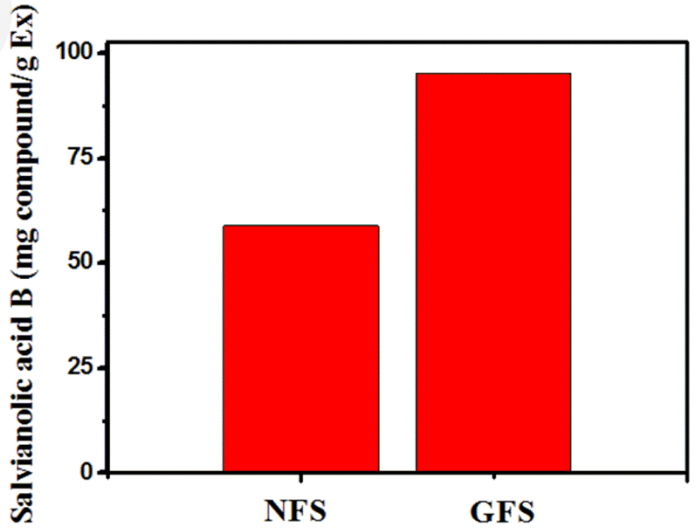
Key words: ***Salvia miltiorrhiza***, ***Geomyces luteus***, **Salvianolic acids, Antioxidant, Fermentation**

Graphical abstract

Salvia miltiorrhizae

Geomyces luteus fermentation





Research Summary

- ***Geomyces luteus* fermentation could significantly improve the antioxidant activity and total phenolic content of *S. miltiorrhiza*.**

- **The main antioxidant constituents were characterized by spectroscopic analysis as salvianolic acids.**

Innovation points

- **Explores a new method to enrich the salvianolic acids in *S. miltiorrhiza* by microorganism fermentation.**
- ***Geomyces luteus* fermentation was effective in *S. miltiorrhiza* processing.**
- **Antioxidants of fermented *S. miltiorrhiza* significantly enhanced.**
- **UV–vis, FT-IR, ^{1}H and ^{13}C NMR spectra and HPLC were used for characterization.**