

Supplementary Materials: The following supporting information can be downloaded at:

Table S1. The nutrients profile in MO and FMO

Indexes	MO	FMO	Signification
Tannin nmol/g	2144.96±37.06	1780.84±43.95	-16.98%**
Flavonoid mg/g	15.88±0.31	12.82±0.14	-19.27%**
Total Phenols mg/g	10.88±0.13	14.77±0.09	+35.75%**
DPPH radical scavenging rate %	76.23±1.98	90.52±4.69	+18.75%**
T-AOC nmol/g	183.90±0.37	253.35±0.10	+37.77%**
Anti-superoxide anion activity U/gprot	10.13±0.24	12.51±0.06	+23.49%**
Superoxide dismutase activity U/mgprot	35.92±0.30	51.11±0.60	+42.29%**

Note: "*" indicates a significant difference between MO and FMO ($P < 0.05$, independent T-test); "**" indicates an extremely significant difference between MO and FMO ($P < 0.01$, independent T-test).

Abbreviation: DPPH: 1,1-diphenyl-2-picrylhydrazyl, T-AOC: Total antioxidant capacity.

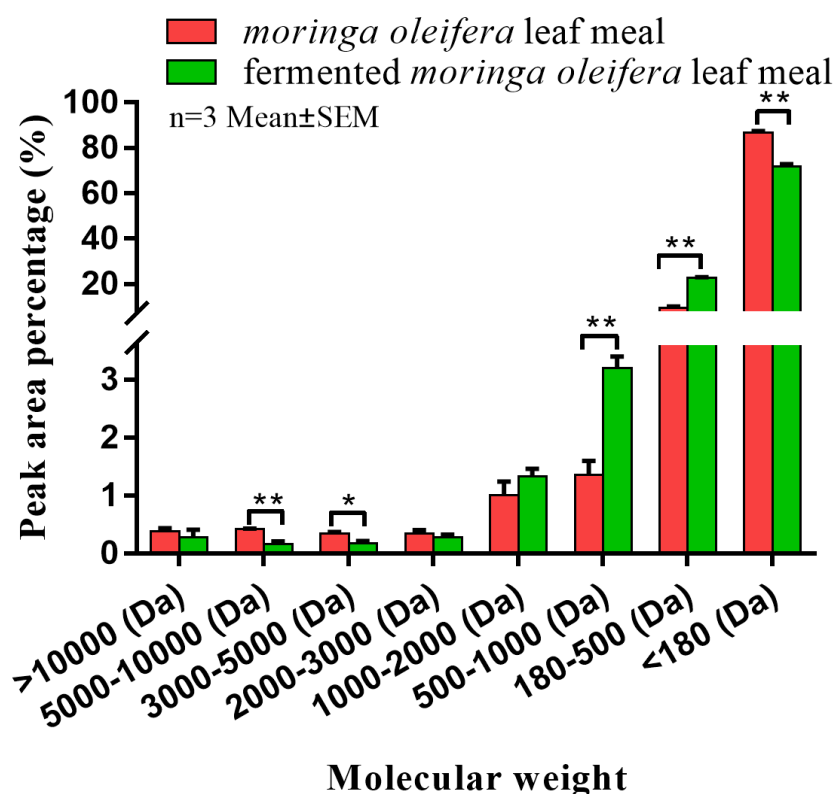


Figure S1. Molecular weight distribution of peptides in MO and FMO; * indicates a significant difference ($P < 0.05$; Independent T-test); ** indicates an extremely significant difference ($P < 0.01$; Independent T-test).