

# Supplementary Materials

## Effect of Traditional Cooking and *In Vitro* Gastrointestinal Digestion of the Ten Most Consumed Beans from the Fabaceae Family in Thailand on Their Phytochemicals, Antioxidant and Anti-Diabetic Potentials

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**Table S1.** The collected 10 taxa of the Fabaceae beans species cover the whole floristic regions in Thailand.

**Table S2:** Pearson correlation coefficient linking phytochemicals antioxidant and anti-diabetic activities of extracts from beans from ten Fabaceae species subjected to traditional cooking and in vitro gastrointestinal digestion.

**Table S1.** The collected 10 taxa of the Fabaceae beans species cover the whole floristic regions in Thailand.

Taxon No.	Scientific Name	Floristic regions	Localities
1	<i>Pisum sativum</i>	N	Lampang
		PEN	Surat Thani
2	<i>Cajanus cajan</i>	SW	Chumphon
		E	Yasothon
3	<i>Vigna unguiculata</i>	C	Chainat
4	<i>Vigna unguiculata</i> subsp. <i>sesquipedalis</i>	N	Lampang
		N	Chiang Mai
		N	Nakhon Sawan
		E	Chaiyaphum
5	<i>Vigna radiata</i>	N	Lamphun
		N	Lampang
		N	Chiang Mai
		N	Nakhon Sawan
		E	Buriram
6	<i>Vigna mungo</i>	E	Ubon Ratchathani
		N	Sukhothai
		NE	Nakhon Phanom
		E	Ubon Ratchathani
		N	Phichit
7	<i>Vigna angularis</i>	SW	Uthai Thani
		C	Lop Buri
		SW	Kanchanaburi
		SW	Phetchaburi
		SE	Chanthaburi
		SE	Prachin Buri
8	<i>Phaseolus vulgaris</i>	C	Ang Thong
		NE	Phetchabun
		SE	Prachin Buri
		N	Phichit
		N	Phitsanulok
		C	Chainat
		N	Chiang Mai
		N	Chiang Rai
		N	Mae Hong Son
		SE	Trat
		N	Tak
		SW	Uthai Thani
9	<i>Glycine max</i>	C	Suphan Buri
		C	Pathum Thani
		N	Chiang Mai
		NE	Kalasin
		NE	Loei
		N	Uttaradit
10	<i>Arachis hypogaea</i>	N	Kamphaeng Phet
		N	Nan
		N	Nan

NE	Phetchabun
N	Phayao
E	Surin
C	Nakhon Nayok

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**Table S2:** Pearson correlation coefficient linking phytochemicals antioxidant and anti-diabetic activities of extracts from beans from ten Fabaceae species subjected to traditional cooking and *in vitro* gastrointestinal digestion.

	TPC	TFC	TAC	DPPH	ABTS	FRAP	CAA	vespAGE	pentAGE	AMYL	GLUC
TPC											
TFC	0.730 ***										
TAC	0.464 **	0.775 **									
DPPH	0.552 **	0.596 **	0.627 ***								
ABTS	0.463 *	0.598 ***	0.719 ***	0.888 ***							
FRAP	0.766 ***	0.747 ***	0.572 ***	0.640 ***	0.618 ***						
CAA	0.638 ***	0.545 **	0.467 ***	0.506 ***	0.537 **	0.769 ***					
vespAGE	0.847 ***	0.591 ***	0.333 ns	0.432 *	0.354 ns	0.699 ***	0.751 ***				
pentAGE	0.691 ***	0.731 ***	0.536 *	0.452 *	0.478 ***	0.645 ***	0.718 ***	0.788 ***			
AMYL	0.829 ***	0.863 ***	0.611 ***	0.646 ***	0.580 **	0.897 ***	0.790 ***	0.789 ***	0.768 ***		
GLUC	0.855 ***	0.808 ***	0.477 **	0.476 ***	0.418 *	0.784 ***	0.686 ***	0.880 ***	0.863 **	0.8928 **	
Glc uptake	0.689 ***	0.581 ***	0.265 ns	0.256 ns	0.237 ns	0.495 ns	0.530 *	0.809 *	0.848 **	0.605 **	0.876 ***

\*\*\* significant  $p < 0.001$ ; \*\* significant  $p < 0.01$ ; \* significant  $p < 0.05$ ; ns: non-significant  $p > 0.05$ . TPC: total phenolic content; TFC: total flavonoid content; MAC: monomeric anthocyanin content; DPPH: in vitro antioxidant DPPH assay; ABTS: in vitro antioxidant ABTS assay; FRAP: in vitro antioxidant FRAP assay; CAA: cellular antioxidant assay; vespAGE: inhibition of vesperlysine-like AGEs formation; pentAGE: inhibition of pentosidine-like AGEs formation; AMYL: inhibition of  $\alpha$ -amylase activity; GLUC: inhibition of  $\alpha$ -glucosidase activity; Glc uptake: increase of cellular glucose uptake.