



Nutritional Analysis and Testing Service Rates

Nutraceutical Research and Innovation Laboratory
Research Institute for Health Sciences, Chiang Mai University

WE ARE A NUTRACEUTICAL SOLUTION

1. Analysis of nutritional value and chemical composition of food

No.	Analysis list	Unit	Analysis method	Price (USD/Sample)
1.1	Total Calories	Kcal/100g	Bomb calorimeter	\$21
1.2	Moisture Content	g/100g	Moisture balance	\$9
1.3	Ash	g/100g	Dry ashing	\$15
1.4	Total Protein	g/100g	Combustion Method	\$21
1.5	Total Fat	g/100g	Fat extraction	\$21
1.6	Carbohydrate	g/100g	Include results of Protein, Fat, Ash, and Moisture	\$66
1.7	Crude Fiber	g/100g	Acid-Base hydrolysis	\$21
1.8	Dietary Fiber	g/100g	Enzymatic hydrolysis	\$60
1.9	Soluble Dietary Fiber	g/100g	Enzymatic hydrolysis	\$60
1.10	Insoluble Dietary Fiber	g/100g	Enzymatic hydrolysis	\$60
1.11	Total Dietary Fiber	g/100g	Calculation	\$9
1.12	Total Sugar	g/100g	HPLC	\$30
1.13	Sugar profile (5 items)	g/100g	HPLC	\$75
1.14	Proximate analysis	-	Include results of Calories, Moisture, Ash, Protein, Fat, Carbohydrate and Crude Fiber	\$90
1.15	Macronutrients	-	Include results of Calories, Moisture, Ash, Protein, Fat, Carbohydrate and Dietary Fiber	\$120
1.16	Fatty acid profile	g/100g	Gas chromatography	\$180
1.17	Amino acid Profile (19 items)	g/100g	Gas chromatography	\$360
1.18	Protein digestibility	PDCAAS	Enzyme-based digestion model and Amino acid Profile	The first sample costs \$1,200 and each subsequent sample is charged at \$600 per sample.
1.19	Omega 3,6,9	g/100g	Gas chromatography	\$180
1.20	Cholesterol	g/100g	Gas chromatography	\$60
1.21	Resistant starch	g/100g	Enzymatic method	\$180
1.22	Total starch	g/100g	Enzymatic method	\$180
1.23	In Vitro Glycemic index	-	Enzymatic method	\$240
1.24	In Vivo Glycemic index	-	-	Starting at \$7,500

2. Nutrition labeling

NO.	Analysis list	Unit	Analysis method	Price (USD/Sample)
2.1	Package: Full Nutrition Facts - Thai Language (Thai Labeling)	-	Thai Nutrition Labeling Regulations: Ministry of Public Health Notification No. 445 and 446 (2023)	\$270
2.2	Package: Full Nutrition Facts - Thai and English Language (Thai & USA Labeling)	-		\$480

3. Minerals and heavy metals in food

NO.	Analysis list	Unit	Analysis method	Price (USD/Sample)
3.1	Calcium,Ca	mg/100g	AAS	\$21
3.2	Copper,Cu	mg/100g	AAS	\$21
3.3	Iron,Fe	mg/100g	AAS	\$21
3.4	Potassium,K	mg/100g	AAS	\$21
3.5	Sodium,Na	mg/100g	AAS	\$21
3.6	Zinc,Zn	mg/100g	AAS	\$21
3.7	Total N	mg/100g	AAS	\$21
3.8	Chloride (cal from NaCl)	mg/100g	AAS	\$21
3.9	Megnesium,Mg	mg/100g	AAS	\$21
3.10	Fluoride,F	mg/100g	AAS	\$21
3.11	Serenium,Se	mg/100g	AAS	\$30
3.12	Asenic,As	mg/100g	AAS	\$30
3.13	Cadmium,Cd	mg/100g	AAS	\$30
3.14	Lead,Pb	mg/100g	AAS	\$30
3.15	Mercuric,Hg	mg/100g	AAS	\$30
3.16	Manganise,Mn	mg/100g	AAS	\$30
3.17	Chromium,Cr	mg/100g	AAS	\$30
3.18	Potassium,K	mg/100g	AAS	\$30
3.19	Phosphorus,P	mg/100g	AAS	\$30
3.20	Molybdenum,Mo	mg/100g	AAS	\$30

4. Vitamins in food

NO.	Analysis list	Unit	Analysis method	Price (USD/Sample)
4.1	Vitamin A (Beta carotene)	mg/100g	HPLC	\$72
4.2	Vitamin B1 (Thiamin)	mg/100g	HPLC	\$72
4.3	Vitamin B2 (Riboflavin)	mg/100g	HPLC	\$72
4.4	Vitamin B3 (Niacin)	mg/100g	HPLC	\$108
4.5	Vitamin B5 (Pantothenic acid)	mg/100g	HPLC	\$150
4.6	Vitamin B6 (Pyridoxine)	mg/100g	HPLC	\$108
4.7	Vitamin B7 (Biotin)	mg/100g	HPLC	\$195
4.8	Vitamin B9 (Folic acid)	mg/100g	HPLC	\$195
4.9	Vitamin B12 (Cobalamain)	mg/100g	HPLC	\$195
4.10	Vitamin B complex	mg/100g	HPLC	\$804
4.11	Vitamin C (Ascobic)	mg/100g	HPLC	\$72
4.12	Vitamin D (Total,D2,D3)	mg/100g	HPLC	\$360
4.13	Vitamin E (Alpha Tecopherol)	mg/100g	HPLC	\$180
4.14	Vitamin K	mg/100g	HPLC	\$180

5. Microorganisms in food

NO.	Analysis list	Unit	Analysis method	Price (USD/Sample)
5.1	Total Bacterial Count	CFU/g or CFU/ml	AOAC, Aerobic plate count	\$14
5.2	Yeast and Mold Count	CFU/g or CFU/ml	AOAC, Aerobic plate count	\$21
5.3	Total coliforms	MPN/g or MPN/ml	MPN	\$14
5.4	<i>Escherichia coli</i>	MPN/g or MPN/ml	BAM	\$23
5.5	<i>Salmonella spp.</i>	CFU/g or CFU/ml or Detected/Not detected in 25g/ml	BAM	\$23
5.6	<i>Staphylococcus aureus</i>	CFU/g or CFU/ml	BAM	\$24
5.7	<i>Bacillus cereus</i>	CFU/g or CFU/ml	BAM	\$23
5.8	<i>Clostridium perfringens</i>	CFU/g or CFU/ml	BAM	\$36
5.9	<i>Fecal Coliform bacteria</i>	MPN/g or MPN/ml	BAM	\$14
5.10	<i>Lactic acid bacteria count</i>	CFU/g or CFU/ml	BAM	\$24
5.11	<i>Listeria monocytogenes</i>	CFU/g or CFU/ml	ISO,AOAC	\$54
5.12	<i>Antibacterial test</i>			
	<i>Staphylococcus aureus</i>	-	Agar disk diffusion	\$60
	<i>Staphylococcus epidermidis</i>	-	Agar disk diffusion	\$60
	<i>Escherichia coli</i>	-	Agar disk diffusion	\$60
	<i>Salmonella enterica; serovar Enteritidis</i>	-	Agar disk diffusion	\$60
	<i>Bacillus cereus</i>	-	Agar disk diffusion	\$60

6. In vitro biological activity assay

NO.	Analysis list	Unit	Analysis method	Price (USD/Sample)
6.1	Antioxidant (DPPH, FRAP, ABTS)	IC50 TE/g	DPPH/ABTS/FRAP assay	\$60
6.2	Inhibition of protein denaturation	IC50 (mg/ml)	Spectrophotometry	\$60
6.3	Inhibition of α -glucosidase activity	IC50 (mg/ml)	Spectrophotometry	\$60
6.4	Inhibition of α -amylase	IC50 (mg/ml)	Spectrophotometry	\$60
6.5	Inhibition of pancreatic lipase	IC50 (mg/ml)	Spectrophotometry	\$150
6.6	Inhibition of acetylcholine esterase	IC50 (mg/ml)	Spectrophotometry	\$150
6.7	Inhibition of HMG CoA reductase	IC50 (mg/ml)	Spectrophotometry	\$150
6.8	Inhibition of Cholesterol esterase activity	IC50 (mg/ml)	Spectrophotometry	\$150
6.9	Inhibition of ACE activity	IC50 (mg/ml)	Spectrophotometry	\$300
6.10	Inhibition of COX-2 activity	IC50 (mg/ml)	Spectrophotometry	\$300
6.11	Inhibition tyrosinase activity	IC50 (mg/ml)	Spectrophotometry	\$450
6.12	Inhibition elastase activity	IC50 (mg/ml)	Spectrophotometry	\$450
6.13	Inhibition collagenase activity	IC50 (mg/ml)	Spectrophotometry	\$450

7. Active compounds in food samples, plants, herbs, and agricultural raw materials

NO.	Analysis list	Unit	Analysis method	Price (USD/Sample)
7.1	Total saponin	mg/100g	Spectrophotometry	\$15
7.2	Total carotenoid	mg/100g	Spectrophotometry	\$15
7.3	Total phenolic	mg/g	Spectrophotometry	\$15
7.4	Total flavonoids	mg/g	Spectrophotometry	\$15
7.5	Total anthocyanins	mg/g	Spectrophotometry	\$15
7.6	Total tannin	mg/100g	Spectrophotometry	\$15
7.7	Total alkaloid	mg/100g	Spectrophotometry	30\$
7.8	Astraxantrin	mg/g	Spectrophotometry	\$135
7.9	Allicin	mg/g	HPLC	\$60
7.10	Alliin	mg/g	HPLC	\$60
7.11	S-allyl cysteine	mg/g	HPLC	\$120
7.12	Caffeine	mg/g	HPLC	\$60
7.13.	Capsaicin	mg/g	HPLC	\$60
7.14	Quercetin	mg/g	HPLC	\$60
7.15	Galic acid	mg/g	HPLC	\$90
7.16	lycopene	mg/g	HPLC	\$72
7.17	Ellagic Acid	mg/g	HPLC	\$120
7.18	GABA	mg/g	HPLC	\$135
7.19	Chlorogenic	mg/g	HPLC	\$150
7.20	Apigenin	mg/100g	HPLC	\$150
7.21	Gamma oryzanol	mg/100g	HPLC	\$180
7.20	THC	mg/kg	HPLC	\$240
7.23	CBD	mg/kg	HPLC	\$240
7.24	CBN	mg/kg	HPLC	\$240
7.25	Sesamin	mg/100g	HPLC	\$300
7.26	Sesamolin	mg/100g	HPLC	\$300
7.27	Asiatic acid	mg/100g	HPLC	\$300
7.28	Madecassoside	mg/100g	HPLC	\$300
7.29	Asiaticoside	mg/100g	HPLC	\$450
7.30	Madecassic acid	mg/100g	HPLC	\$450
7.31	Phenolic profile (19 item)	mg/100g	HPLC	\$600

8. Bioactivity testing in cultured cells

NO.	Analysis list	Unit	Analysis method	Price (USD/Sample)
8.1	Testing for cytotoxicity in cultured cells (Cytotoxicity)	IC50 (mg/ml)	MTT assay	\$450
8.2	Antioxidant activity in cultured cells	IC50 (mg/ml)	Cell culture and ELISA test	\$900
8.3	Anti-inflammatory activity in cultured cells	IC50 (mg/ml)	Cell culture and ELISA test	\$2,400
8.4	Inhibitory effect on melanin production in cultured cells	IC50 (mg/ml)	Cell culture and ELISA test	\$2,400
8.5	Anti-vascular calcification activity in cultured cells	IC50 (mg/ml)	Cell culture and ELISA test	\$3,000
8.6	Anti-lipid accumulation activity in cultured cells	IC50 (mg/ml)	Cell culture and ELISA test	\$3,000

9. Bioactivity testing in experimental animals

NO.	Analysis list	Unit	Analysis method	Price (USD/Sample)
9.1	Acute toxicity in experimental animals	-	-	\$3,000
9.2	Subchronic toxicity in experimental animals	-	-	\$30,000

10. Bioactive compounds or biological activity in blood, serum, plasma, or urine samples

NO.	Analysis list	Unit	Analysis method	Price (USD/Sample)
10.1	Urine iodine	TE/ml	Ammonium persulfate digestion and spectrophotometry	\$9
10.2	Total antioxidant capacity	TE/ml	TEAC assay	\$30
10.3	Lipid peroxidation	mg/ml	MDA assay	\$30
10.4	Insulin	mIU/ml	ELISA	\$45
10.5	Tumor necrosis factor-alpha	pg/ml	ELISA	\$60
10.6	Interleukin-1 beta	pg/ml	ELISA	\$60
10.7	Interleukin-6	pg/ml	ELISA	\$60
10.8	High sensitive C-reactive protein	pg/ml	ELISA	\$60
10.9	Leptin	pg/ml	ELISA	\$60
10.10	Adiponectin	pg/ml	ELISA	\$60
10.11	Advanced Glycation End Product	pg/ml	ELISA	\$60

11. Health testing service

NO.	Analysis list	Unit	Analysis method	Price (USD/Sample)
11.1	Body composition analysis service (In Body)	-	Body composition Analyzer	\$15
11.2	Blood glucose testing service using fingertip puncture	-	Self – Monitoring of Blood Glucose	\$15

12. Prototype product testing and development services

NO.	Analysis list	Analysis method	Price (USD/Sample)
12.1	Prototype product and packaging development with guidelines for product quality improvement (just about right scale ; JAR)	Product development & just about right (JAR) Scale	Starting at \$900 (depends on the number of experimental designs)
12.2	Sensory Test		

- Basic Level <u>Criteria</u> <ul style="list-style-type: none"> • 50 untrained panelists readily available • Testing conducted in a sensory evaluation room • No complex sample preparation required 	A single product	\$600
- Intermediate Level <u>Criteria</u> <ul style="list-style-type: none"> • 50 untrained panelists readily available • Testing conducted in a sensory evaluation room • No complex sample preparation required 	A single product	\$900
- Advanced Level <u>Criteria</u> <ul style="list-style-type: none"> • 20–30 trained specialized panelists • Testing conducted in a sensory evaluation room 	A single product	\$1,500

13. Other services

NO.	Analysis list	Analysis method	Price (USD/Sample)
13.1	Bilingual analysis report issuance service (Thai and English Language)	A single copy	\$3
13.2	Domestic EMS delivery service for analysis reports and receipts	Two copies	\$1.2
13.3	Sample return service after analysis	A single copy	\$3
13.4	Copying or data correction service for analysis reports	A single copy	\$3
13.5	Service for Preparing Glycemic Index Test Reports in Humans (Thai Version)	A single sample	Starting at \$1,200
13.6	Service for Preparing Glycemic Index Test Reports in Humans (English Version)	A single sample	Starting at \$1,200
13.7	Additional information service on measurement uncertainty (Uncertainty Value)	A single sample	\$30
13.8	Expedited sample analysis service	A single sample	Charged at twice the regular price
13.9	Research Consultation and Information Retrieval Services	One project	Starting at \$600
13.10	Import service (shipping) and import tax management	A single sample	According to the shipping rate
13.11	International delivery service for analysis reports and receipts	Two copies	According to the shipping rate
13.12	International return service for samples after analysis	A single sample	According to the shipping rate