



INSTITUTE OF NUTRITION, MAHIDOL UNIVERSITY

Analytical Services Pricelist

Important note: Discount of 5% will be offered for customer when service cost has over \$3,000 USD.

1. NUTRITIVE VALUES

Analysis	Methods	Test duration (days)	Service cost (\$USD)
1.1 Common nutrients			
Energy/Carbohydrate (include results of protein, fat, ash, moisture and) dietary fiber)	By calculation	14	249
Energy/Carbohydrate (include results of protein, fat, ash and moisture)	By calculation	14	91
Energy (bomb)	ASTM Method D 2015-77	10	48
Protein/Nitrogen	AOAC (2019) 991.20, 992.23	6	24
Real protein	In-house method based on AOAC (2019) 991.20	3	32
Fat/Total lipid	AOAC (2019) 932.06, 989.05, 922.06	4	32
Ash	AOAC (2019) 930.30, 945.46	5	20
Moisture/Total solid	AOAC (2019) 927.05, 925.10, 925.45	3	16
Dietary fiber	AOAC (2019) 985.29	15	158
Insoluble dietary fiber	AOAC (2019) 991.42	15	158
Soluble dietary fiber	AOAC (2019) 993.19	15	79
Total sugar	AOAC (2019) 980.13	6	79
Glucose ¹	AOAC (2019) 980.13	7	119
Fructose ¹	AOAC (2019) 980.13	6	119
Sucrose ¹	AOAC (2019) 980.13	6	119
Lactose ¹	AOAC (2019) 980.13	6	119
Sorbitol	AOAC (2019) 980.13	6	119
Glucose, Fructose, Sucrose	AOAC (2019) 980.13	6	119
Isomaltulose (Palatinose)	AOAC (2019) 980.13	6	119
Milk solid	AOAC (2019) 952.08, 982.14	9	95
Milk solid not fat	AOAC (2019) 952.08, 982.14, 922.32, 948.15, 945.16	9	126
Total solid not fat	AOAC (2019) 990.21	5	48

¹Additional sugar in the same sample costs 1,000 baht each



INSTITUTE OF NUTRITION, MAHIDOL UNIVERSITY

Analysis	Methods	Test duration (days)	Service cost (\$USD)
1.2 Vitamins			
Vitamin A	In-house method based on Kangsadalampai K., and Sungpuag P. 1984	5	79
β -carotene	In-house method based on Speek AJ, et al. Food Chem. 1986	5	79
Vitamin D (D3)	AOAC (2019) 995.05	7	158
Vitamin D (D3+D2)	AOAC (2019) 995.05	7	276
Vitamin E	In-house method based on Speek AJ, et al. J Food Sci 1985	5	79
Vitamin C	Odriozola-Serrano L, et al. Food Chem. 2007	7	60
Thiamin (B ₁)	In-house method based on AOAC (2019) 942.23	7	60
Riboflavin (B ₂)	In-house method based on AOAC (2019) 970.65	7	52
Niacin (B ₃)	In house method based on AOAC (2019) 961.14	12	79
Vitamin B ₆	In house method based on AOAC (2019) 961.15	12	119
Vitamin B ₁₂	In house method based on AOAC (2019) 960.46 and 952.20	12	111
Folate (B ₉)	In house method based on AOAC (2019) 960.46 and 2004.05	12	138
Pantothenic (B ₅)	In house method based on AOAC (2019) 960.46 and 945.74	12	99
Biotin (B ₇)	In house method based on AOAC (1980) Microbiological method, 13th Ed., Ch 43.150-43.158 pp. 763- 764.	12	86
Trypsin inhibitor activity	AACC (1999) Method 22-40	10	111

HPLC = High Pressure Liquid Chromatography



INSTITUTE OF NUTRITION, MAHIDOL UNIVERSITY

Analysis	Methods	Test duration (days)	Service cost (\$USD)
1.3 Minerals			
Calcium ²	AOAC (2019) 985.35	7	24
Sodium ²	AOAC (2019) 985.35	7	20
Potassium ²	AOAC (2019) 985.35	7	20
Chloride ²	In house method based on AOAC (2019) AOAC (2019) 971.27	10	32
Magnesium ²	AOAC (2019) 984.27	7	28
Iron ²	AOAC (2019) 984.27	7	28
Zinc ²	AOAC (2019) 984.27	7	28
Copper ²	AOAC (2019) 984.27	7	28
² Additional mineral in the same sample costs 500 baht for dry ashing or wet digestion			
1.4 Fatty acids			
Fatty acids (profile)	In-house method based on AOAC (2019) 963.22, 969.33	7	119
Fatty acids (profile and quantitative)	In-house method based on AOAC (2019) 963.22, 969.33	7	150
Trans Fatty acid	In-house method based on AOAC (2019) 963.22, 969.33	7	138
1.5 Others			
Cholesterol	AOAC (2019) 994.10	7	95
Salt (sodium+chloride)	AOAC (2019) 985.35, In house method based on AOAC (2019) AOAC (2019) 971.27	14	71
Fructans (Inulin + Fructo-oligosaccharides)	In-house method based on AOAC (2019) 997.08 and J. AOAC Inter, 2000	7	316
Fructo-oligosaccharides (FOS)	In-house method based on AOAC (2019) 997.08 and J. AOAC Inter, 2000	7	355
Antioxidant Activity (ORAC) (Food)	Ou B, et al. J Agric Food Chem, 2001	7	138
Antioxidant Activity (ORAC) (Oil)	Prior R.L. et al. J Agric Food Chem, 2003	7	355
Antioxidant Activity (FRAP)	Benzie IF & Strain JJ. Anal Biochem 1996	7	99
Antioxidant Activity (DPPH)	Katsuke T. J Agric Food Chem 2004	7	99
Total Polyphenol	Lu J, et al. J Agric Food Chem 2007	7	79
Co-Enzyme Q10	Kettawan A, et al., J Clin Biochem Nutr. 2007	7	138
Freeze dry (live weight)	Freeze dry system		79
Deuterium by IRMS	IAEA Human Health Series No. 13 (2011)	7	119
Deuterium by FTIR	IAEA Human Health Series No. 7 (2010)	7	40

²Additional sugar in the same sample costs \$40 USD for each sugar.



INSTITUTE OF NUTRITION, MAHIDOL UNIVERSITY

Note: - This pricelist can be changed without prior notification.

- Fees of shipping and transfer payment are not included in this analytical service.

Institute of Nutrition, Mahidol University at Salaya

Putthamonthon IV Rd., Nakhon Pathom 73170, Thailand.

Tel. +662 441 9346, +662 800 2380 ext. 406, 418. Fax. +662 441 9344

E-mail: wimolrat.mee@mahidol.ac.th, vaewmanee.cha@mahidol.ac.th, Sujintra.Som@mahidol.ac.th

Head of Technical survive unit: Assoc. Prof. Aikkarach Kettawan

E-mail: aikkarach.ket@mahidol.ac.th

Quality manager of ISO 17025: Assoc.Prof. Kunchit Judprasong

E-mail: kunchit.jud@mahidol.ac.th

จัดทำ: วิมลรัตน์ มีทวี	ทบทวน: ศุจินตรา สมประชา	อนุมัติ: ครรชิต จุดประสงค์	วันที่ออกใช้: 18 มกราคม 2564
------------------------	-------------------------	----------------------------	------------------------------