

Food Composition TABLE for Mongolia



Mongolian University of
Life Sciences



Rural Development
Administration



MINISTRY OF FOOD,
AGRICULTURE AND LIGHT INDUSTRY

FOOD COMPOSITION TABLE FOR MONGOLIA



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ABBREVIATIONS

AOAC	Association of Official Analytical Chemists
ASEAN	Association of Southeast Asian Nations
DB	Database
DM	Dry matter
EP	Edible portion on a fresh weight basis
FAO	Food and Agriculture Organization of the United Nations
FCDB	Food Composition database
FCDBMS	Food Composition Database Management system
FCT	Food Composition Table
FDA	Food Drug Administration
g	gram
HPLC	High-performance liquid chromatography
INFOODS	International Network of Food Data Systems
IU	International Unit
kcal	kilocalories
kJ	kilojoules
NGO	Non Government Organization
µg	microgram
mg	milligram
mL	milliliter
NV	Nutrient value
RF	Nutrient retention factor
SD	Standard deviation
SE	Standard error
SOP	Standard operating procedure
USDA	United States Department of Agriculture

INTRODUCTION

This new edition of the Mongolia food composition table is based on a systematic data management process and international standards and guidelines for food composition. Food composition data from various Mongolian University of Life Science and research institutes of SAMO in Mongolia were collected and compiled. In addition, some samples were analyzed for fiber, fatty acid, and amino acid composition.

The FCT contains 108 foods and 14 mandatory components. Most of the data are raw foods. The FST is divided into a main table (containing values on proximates, minerals, and vitamins) and several annex tables for amino acids, and fatty acids. Moreover, this edition contains protein values based on food-specific nitrogen-to-protein conversion factors instead of a general factor of 6.25, and emphasis was given to include values for total dietary fiber.

EXPLANATORY NOTES

Compilation Process

Nutritional data were compiled into the FAO/INFOOD Compilation Tool version 1.2.1, a food composition database management system in Excel (<http://www.fao.org/infood/software-tools/en/>), and the compilation process shown in Fig.1 was followed. In the reference DB, food entries of the same/similar foods were aggregated and mean values were calculated.

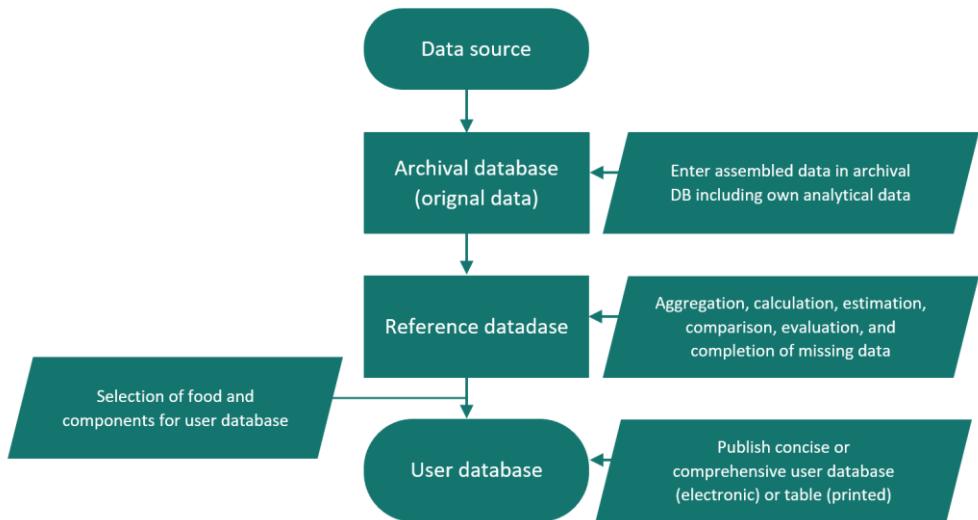


Figure 1. Different stages in food composition database management

(adapted from Charrondiere, 2012a)

FAO/INFOOD Guidelines

Quality checks were applied throughout the compilation process by applying FAO/INFOOD Guidelines (available at http://www.fao.org/infood/infoods_standards-guidlines/en/). FAO/INFOOD Guidelines for converting Units, Denominators, and Expressions Version 1.0 were used to assist in recalculation issues whenever data were not available expressed as per 100g edible portion on a fresh weight basis. FAO/INFOOD Guidelines for checking food composition Data prior to the publication of a Table/Database-version 1.0 helped to detect outliers and to comprehensively check data by food group, component, and food name.

TAG NAMES

Tag names are abbreviated food component identifiers that facilitate international and regional interchange of compositional data through unambiguous identification of all food components (available at http://www.fao.org/infood/infoods_standards-guidlines/food-component-identifiers-tagnames/en/) INFOODS Tagnames were used through the entire complication process. For the list of Tag names applied in the current table 2.

Food Identification

Foods have been arranged alphabetically by English name within each food group. The Mongolian name of each food has been given next to the English food name in the table. The scientific names of the foods are list in Table 5.

The foods have been classified in the following, 13 food groups. The number of food items within each food group is indicated in brackets.

Table 1. Food groups and collected samples

No	Food groups	Collected samples amount
01	Cereals and cereal products	18
02	Starchy Roots & starch products	2
03	Pulses and legumes	2
04	Vegetables	24
05	Fruits	16
06	Nuts and seeds	6
07	Meat and meat products	10
08	Eggs	1
09	Fish and fish products	2
10	Milk and milk ducts	22
11	Seasonings	2
12	Mushrooms	1
13	Others	2

To allow tracing the data throughout the table every food has been given a unique food code. The food codes consist of the food group (e.g. 01, 02, etc.) and the food code within this group (e.g. raw foods like 01_0001, 02_0001, processed foods like 01_0101, 02_0101).

Definition and expression of components

All values for foods including those for beverages and other liquids are presented per 100g edible portion of fresh weight. The values reported in the table are average values derived from foods with the same/similar description that have been compiled in the archival database and aggregated in the reference database. Values per component were standardized and are expressed in a fixed maximal number of decimal places. The components, units, and corresponding TAGMANES used are listed in Table 2.

Table 2. Components, units, and corresponding TAGNAMES
(per 100g edible portion of fresh weight)

Nutrients (English)	TAG NAME	Unit
Edible portion coefficient (calculated as the edible portion of the total food as purchased)		ratio
Proximate		
Energy	ENERC	kcal
Water	WATER	g
Protein	PROT	g
Fat by Soxhlet	FATCE	g
Carbohydrates available by difference	CHOCDF	g
Dietary fiber or if missing dietary value, then (crude fiber)	FIBTG	g

Table 2. (continued)

Nutrients (English)	TAG NAME	Unit
Minerals		
Ash	ASH	g
Calcium	CA	mg
Iron	FE	mg
Magnesium	MG	mg
Phosphorus	P	mg
Potassium	K	mg
Sodium	NA	mg
Vitamin		
Vitamin A	VITA_RAE	µg
Thiamin	THIA	mg
Riboflavin	RIBF	mg
Folate	FOLDFE	µg
Food folate	FOLFD	µg
Vitamin C	VITC	mg

Table 2. (continued)

Nutrients (English)	TAG NAME	Unit
Fatty acid		
Total fatty acids	FACID	g
Total essential fatty acids	FAESS	g
Total saturated fatty acids	FASAT	g
Butyric acid	F4D0	mg
Caproic acid	F6D0	mg
Caprylic acid	F8D0	mg
Capric acid	F10D0	mg
Lauric acid	F12D0	mg
Tridecanoic acid	F13D0	mg
Myristic acid	F14D0	mg
Pentadecanoic acid	F15D0	mg
Palmitic acid	F16D0	mg
Heptadecanoic acid	F17D0	mg
Palmitic acid	F16D0	mg
Heptadecanoic acid	F17D0	mg
Palmitic acid	F16D0	mg

Table 2. (continued)

Nutrients (English)	TAG NAME	Unit
Heptadecanoic acid	F17D0	mg
Palmitic acid	F16D0	mg
Heptadecanoic acid	F17D0	mg
Palmitic acid	F16D0	mg
Heptadecanoic acid	F17D0	mg
Palmitoleic acid	F16D1	mg
Heptadecenoic acid	F17D1	mg
Oleic acid	F18D1N9	mg
Vaccenic acid	F18D1N7	mg
Gadoleic acid	F20D1	mg
Erucic acid	F22D1	mg
Nervonic acid	F24D1	mg
Total polyunsaturated fatty acids	FAPU	g
Linoleic acid	F18D2N6	mg
α -Linolenic acid	F18D3N3	mg
γ -Linolenic acid	F18D3N6	mg
Eicosadienoic acid	F20D2N6	mg

Table 2. (continued)

Nutrients (English)	TAG NAME	Unit
Dihomolinolenic acid	F20D3N3	mg
Eicosatrienoic acid	F20D3N6	mg
Arachidonic acid	F20D4N6	mg
Eicosapentaenoic acid (EPA)	F20D5N3	mg
Docosadienoic acid	F22D2	mg
Docosapentaenoic acid (DPA)	F22D5N3	mg
Docosahexaenoic acid (DHA)	F22D6N3	mg
Total n-3 polyunsaturated fatty acids	FAPUN3	g
Total n-6 polyunsaturated fatty acids	FAPUN6	g
Total <i>trans</i> -fatty acids	FATRN	g
<i>trans</i> -Oleic acids	F18D1TN9	mg
<i>trans</i> -Linoleic acids	F18D2TN6	mg
<i>trans</i> -Linolenic acids	F18D3TN3	mg

Table 2. (continued)

Nutrients (English)	TAG NAME	Unit
Amino acid		
Total amino acids	-	mg
Total essential amino acids	AAE10A	mg
Isoleucine	ILE	mg
Leucine	LEU	mg
Lysine	LYS	mg
Methionine	MET	mg
Phenylalanine	PHE	mg
Threonine	THR	mg
Tryptophan	TRP	mg
Valine	VAL	mg
Histidine	HIS	mg
Arginine	ARG	mg
Tyrosine	TYR	mg
Cysteine	CYSTE	mg
Alanine	ALA	mg
Aspartic acid	ASP	mg

Table 2. (continued)

Nutrients (English)	TAG NAME	Unit
Glutamic acid	GLU	mg
Glycine	GLY	mg
Proline	PRO	mg
Serine	SER	mg
Taurine	TAU	mg

Notes on components

All values, including for beverages and other liquids, are presented per 100 g edible portion on a fresh weight basis (EP) (Guidelines for converting units, denominators, and expressions. Version 1.0 (FAO/IN FOODS, 2012b).

Edible portion

Two edible portion coefficients are presented. The first is from the whole food as purchased to the food as described. The second is for the food as described as eaten. For example, Cedar pine nuts have an edible portion coefficient as described as eaten at 0.44 and account for inedible parts of bones. The value of the second edible portion coefficient is important for other foods it is 1.0.

PROXIMATE

Energy (kcal) <ENERC>

Metabolizable energy is presented in kilocalories (kcal) for all food. Metabolizable energy is calculated based on protein, fat, available carbohydrate, and dietary fiber values by applying the energy conversion factors according to the formulae below.

$$\text{Energy (kcal/100 g EP)} = \text{total protein (g/100 g EP)} \times 4 + \text{total fat (g/100 g EP)} \times 9$$

+ available carbohydrate (g/100 g EP) × 4 + total dietary fiber (g/100 g EP)

Table 3. Metabolizable energy conversion factors

Components	Kcal/g
Protein	4
Fat	9
Available carbohydrate	4
Fiber	2
Alcohol	7

Water (g) <WATER>

Water content of KFs was determined from weight loss on drying of the sample in oven at 105°C for 6 h (*AOAC 2000*). The moisture-free samples were charred to 600°C until a constant weight was achieved, the residue being quantified as ash (*AOAC 2000*). Method of estimating water values of secondary data sources included mainly oven-drying method, except in few cases where the values for water were calculated.

Protein, total (g) <PROT>

The main analytical method used to determine total nitrogen is the Kjeldahl method (*No. 984.13; AOAC 2000*). The protein content was calculated by multiplying the nitrogen values with conversion factors (XN). The total protein is then estimated from the total amount of nitrogen in the food sample, using the following formula:

Total protein (g/100 g EP) = nitrogen conversion factor (XN) × total nitrogen (g/100 g EP)

Table 4. Nitrogen to protein conversion factors adapted
from Jones (1941), unless indicated

Animal products			
Foodstuff	Factor	Foodstuff	Factor
Meat and fish**	6.25	Whole eggs	6.25
Gelatin	5.55		
Milk	6.38		
Plant products			
Wheat-whole kernel	5.83	Beans	6.25
Rye		Soybean	5.71
Barley		Nuts	5.30
Oats			

Fat, total (g) <FATCE>

The majority of fat value was derived by the continuous extraction method (Soxhlet method) (no. 991.36 of AOAC 2000).

Carbohydrate, available (g) <CHOALDF>

The content of available carbohydrate for all foods in the table was determined “by difference”. Available carbohydrates by difference:

Carbohydrate, available; calculated by difference (g/100 g EP) = 100 – (water + total fat + total protein+ ash + total dietary fiber) (g/100 g EP)

In cases where grude fiber was used in the calculation, the value is of lower quality.

Fiber, total dietary (g) <FIBC>

Fiber, total dietary (g) Dietary fiber was determined by the acid detergent method (ADF). The Acid Detergent Fiber method is based on the assumption that the waste obtained with the use of the detergent is made up of cellulose and lignin. ADF is determined gravimetrically as the residue remaining after extraction (AOAC Official Method 973.18).

Ash (g) <ASH>

The ash content of foods is determined by gravimetric methods. It was estimated by heating the dried raw sample in a Muffle furnace at 600°C to burn out all organic materials for 3-5 hours till to constant weight (AOAC, 1998d).

MINERALS

Minerals (mg)

Mineral contents including, calcium, magnesium, sodium, potash, sodium, and iron were determined by the Atomic Absorption Spectrophotometer (AAS) (AOAC, 2000) and determined of phosphorous by the UV visible spectrophotometric method (ASEAN Manual of Food Analysis, 2011).

VITAMINS

Water-soluble vitamins

Vitamin C (mg) < VITC >

The content of L-Ascorbic acid was estimated by the colorimetric method (Method of Folin). The determination of ascorbic acid is an example of the analysis of a colored product resulting from an oxidation-reduction reaction. The method is based on the use of Folin's phosphorus-molybdenum reagent, which when interacting with ascorbic acid, is reduced to molybdenum blue, the color intensity depends on the concentration of the reducing agent.

Vitamin Folic acid (mg) < FOLDFE >

Folic acid can be determined using reverse-phase HPLC with C18 columns and ultraviolet detection. The method includes folic acid extraction with phosphate buffer solution and purification by solid-phase extraction with strong anion exchange cartridges (Journal of Composition and Analysis 21 (2008) 336-342).

Vitamin B1 (Thiamin) (mg) <THIA>

For foods, the aqueous extract obtained from the food by acid hydrolysis followed by enzymatic hydrolysis was injected onto a reverse-phase HPLC with a C18 column and then Thiamin was determined after post-column derivatization with alkaline potassium ferricyanide that converted Thiamin to this chrome which fluorescence in ultraviolet light ($\lambda=942.23$) (ASEAN Manual of food Analysis, 2011).

Vitamin B2 (Riboflavin) (mg) <RIBF>

For the estimation of the riboflavin content of KFs, the aqueous extract of the food by acid hydrolysis followed by enzymatic hydrolysis was injected onto a reverse-phase HPLC with Ca 18 column and then the fluorescence of riboflavin was measured (ASEAN Manual of food Analysis, 2011).

Fat-soluble vitamins

Vitamin A and beta carotene (mcg) <CARTBEQ>

Beta-carotene of the sample extract for foods was estimated by HPLC according to the method the of ASEAN Manual of Nutrient Analysis (2011).

FATTY ACIDS AND AMINO ACIDS

Fatty acids (g)

Fatty acids, total saturated; total monounsaturated; and total polyunsaturated were determined by gas chromatography (GC) (AOAC Official Method 963.22)

Amino acids (mg)

Present composition of amino acid of sample was estimated by the modified method of Moore et al. The amino acid composition was determined in fully

automated liquid chromatography (LC-MS/MS [J]. Anhui Agricultural Sciences, 2022, 50(19): 187-192)

Statistical analyses:

Data (basic nutrients n=3-5; micro nutrients-n=3) were described as $x \pm Sd$ and statistically analyzed using Excel for Windows Software.

Methodology for foods identification and analysis

Foods approach

Foods are those foods that, in the aggregate, contribute more than 75% of the nutrient intake for selected nutrients of public health importance from the diet.

Selecting of food or commodity based on the main criteria of Strategic raw materials and products, locally specific brand food, Culture, and customs, and Exported food items.

Laboratory analysis of selected Foods for analysis

The analysis of nutrients and other constituents of 108 foods (Table 5) was preceded by an appropriate food sampling process and careful food collection and transportation procedures.

Table 5. Foods for analysis

№	Food code and name			
	Food Code	English name	Native name	Scientific name
FOOD GROUPS				
01. Cereals and Cereal products				
1	01_0001	Wheat, whole, raw	Улаан буудай	<i>Triticum aestivum L</i>
2	01_0002	Barley, whole, raw	Арвай	<i>Hordeum vulgare L</i>
3	01_0003	Pearled barley, whole, raw	Халтар арвай	<i>Hordeum vulgare L</i>
4	01_0004	Rye, whole grain, raw	Хөх тарна	<i>Secale cereale L</i>

Table 5 (continued)

№	Food code and name			
	Food Code	English name	Native name	Scientific name
FOOD GROUPS				
01. Cereals and Cereal products				
5	01_0005	Oat, Polished, Raw	Овъёос	<i>Avena sativa L</i>
6	01_0101	Wheat flour, Strong white	Буудайн гурил-055	wheat processed
7	01_0102	Wheat flour, white	Буудайн гурил-085	wheat processed
8	01_0103	Wheat flour, brown	Буудайн гурил-140	wheat processed
9	01_0104	Wheat flour, whole	Бүхэл үрийн гурил	wheat processed
10	01_0105	Pearled barley flour, whole	Халтар арвайн гурил	pearled barley processed
11	01_0106	Barley flour, whole, raw	Арвайн эслэгт гурил	barley processed
12	01_0107	Rye flour	Хөх тарианы гурил	rye processed

Table 5 (continued)

№	Food code and name			
	Food Code	English name	Native name	Scientific name
FOOD GROUPS				
01. Cereals and Cereal products				
13	01_0108	Oat flour	Овъёосны гурил	oat processed
14	01_0109	Wheat flour bread	Бүүдайн талх	flour processed
15	01_0110	Rye flour bread	Хөх тарианы талх	flour processed
16	01_0112	Bread, flour, multi-seeds	Олон үрийн талх	flour processed
17	01_0113	Noodles, wheat flour	Гоймон	flour processed
18	01_0114	Noodles, wheat flour, fortified	Гоймон (олон үрийн)	flour processed
02. Starchy Roots & Starch products				
19	02_0001	Potato, raw	Төмс	<i>Solanum tuberosum</i>
20	02_0101	Vermicelli	Пүнтүүз	processed
03. Pulses, legumes				
21	03_0001	Soybean, dried, raw	Шар буурцаг	<i>Glycine hispida L</i>
22	03_0002	Peas, dried, raw	Вандуй	<i>Pisum arvense</i>

Table 5 (continued)

№	Food code and name			
	Food Code	English name	Native name	Scientific name
FOOD GROUPS				
04. Vegetables				
23	04_0001	Cabbage, green, raw	Бээрэнхий байцаа	<i>Brassica oleracea</i>
24	04_0002	Cabbage, purple, raw	Хүрэн байцаа	<i>Brassica oleracea</i> var. <i>capitata</i>
25	04_0003	Broccoli, raw	Брокколи	<i>Brassica oleracea</i> var. <i>italica</i>
26	04_0004	Celery, raw	Шанцай	<i>Apium graveolens</i>
27	04_0005	Spinach, raw	Бууцай	<i>Basella alba</i>
28	04_0006	Pepper bell, red, raw	Улаан чинжүү	<i>Capsicum annuum</i>
29	04_0007	Pepper bell, green, raw	Ногоон чинжүү	<i>Capsicum annuum</i>
30	04_0008	Pepper bell, yellow, raw	Шар чинжүү	<i>Capsicum annuum</i>
31	04_0009	Cucumbers, raw	Өргөст хэмх	<i>Cucumis sativus</i>

Table 5 (continued)

№	Food code and name			
	Food Code	English name	Native name	Scientific name
FOOD GROUPS				
04. Vegetables				
32	04_0010	Eggplant, raw	Хаш	<i>Solanum melongena</i>
33	04_0011	Tomatoes, raw	Улаан лооль	<i>Solanum lycopersicum</i>
34	04_0012	Pumpkin, raw	Хулүү	<i>Cucurbita argyrosperma</i>
35	04_0013	Carrots, raw	Лууван	<i>Daucus carota</i>
36	04_0014	beetroot, yellow, raw	Шар манжин	<i>Beta vulgaris</i>
37	04_0015	beetroot, red, raw	Хүрэн манжин	<i>Beta vulgaris</i>
38	04_0016	Garlic, raw	Сармис	<i>Allium sativum</i>
39	04_0017	Onion, raw	Сонгино, бөөрөнхий	<i>Allium cepa L</i>
40	04_0018	Onion spring, raw	Ногоон сонгино	<i>Allium cepa L</i>
41	04_0019	Lettuce, raw	Салат навч	<i>Lactuca sativa</i>

Table 5 (continued)

№	Food code and name			
	Food Code	English name	Native name	Scientific name
FOOD GROUPS				
04. Vegetables				
42	04_0020	Parsley, raw	Яншуй	<i>Coriandrum sativum</i> <i>L.</i>
43	04_0021	Cauliflower, raw	Цэцэгт байцаа	<i>Brassica oleracea var. botrytis</i>
44	04_0022	Tomato cherry, raw	Улаан лооль, үрлэн	<i>S. lycopersicum</i>
45	04_0023	Basilic, raw	Базилик	<i>Ocimum basilicum</i>
46	04_0024	Kale, raw	Кейл	<i>Brassica oleracea var. sabellica</i>
05. Fruits				
47	05_0001	Seabuckthorn, fruit	Чацаргана жимс	<i>Hippophae rhamnoides</i>
48	05_0002	Apple, small	Бэсрэг алим	<i>Malus domestica</i>
49	05_0003	Peruvian groundcherry	Газрын алим	<i>Physalis peruviana</i>
50	05_0004	Siberian crabapple fruit, wild	Үрэл	<i>Malus baccata</i>

Table 5 (continued)

№	Food code and name			
	Food Code	English name	Native name	Scientific name
FOOD GROUPS				
05. Fruits				
51	05_0005	Watermelon	Тарвас	<i>Citrullus lanatus</i>
52	05_0006	Musk melon	Амтат гуа	<i>Cucumis melo</i>
53	05_0007	Strawberry, farm	Гүзээлзгэнэ /таримал/	<i>Fragaria × ananassa</i>
54	05_0008	Currants, black, wild	Үхрийн нүд /байгалийн/	<i>Ribes nigrum</i>
55	05_0009	Strawberry, wild	Гүзээлзгэнэ (байгалийн)	<i>Fragaria vesca</i>
56	05_0010	Cranberry, wild	Аньс	<i>Vaccinium erythrocarpum</i>
57	05_0011	Blueberry, wild	Нэрс	<i>Vaccinium caesariense</i>
58	05_0012	Bird cherry, wild	Мойл	<i>Prunus cerasus</i>
59	05_0013	Black currant, wild	Хад	<i>Ribes nigrum</i>
60	05_0101	Seabuckthorn, syrup	Чацараганы шүүс	Sea-buckthorn processed

Table 5 (continued)

№	Food code and name			
	Food Code	English name	Native name	Scientific name
FOOD GROUPS				
05. Fruits				
61	05_0102	Seabuckthorn, seed oil	Чацаарганы тос, үрийн	Sea-buckthorn processed
62	05_0103	Seabuckthorn, oil	Чацаарганы тос, зөвлөн эдийн	Sea-buckthorn processed
06. Nuts and seeds				
63	06_0001	Cedar (pine) nut kernels	Хушны самар	<i>Pinus sibirica</i>
64	06_0002	Flax seeds, raw	Маалингийн үр	<i>Linum usitatissimum</i>
65	06_0003	Sunflower seeds	Наранцэцгийн үр	<i>Helianthus</i>
66	06_0101	Cedar (pine) nut, raw	Хушны самарны чөмөг	Cedar processed
67	06_0102	Cedar (pine) nuts oil	Самрын тос	Cedar processed
68	06_0103	Flax flour	Маалингийн гурил	Flax processed

Table 5 (continued)

№	Food code and name			
	Food Code	English name	Native name	Scientific name
FOOD GROUPS				
07. Meat and meat products				
69	07_0001	Beef, meat, boneless, raw, farm	Үхрийн ясгүй мах, ферм, Сэлэнгэ	<i>Bos taurus</i>
70	07_0002	Sheep, meat, boneless, raw, from Khangai	Хонины ясгүй мах, Сэлэнгэ аймаг	<i>Ovis aries</i>
71	07_0003	Hourse, meat, boneless, raw	Адууны ясгүй мах	<i>chevaline</i>
72	07_0004	Goat, meat, boneless, raw	Ямааны ясгүй мах	<i>Capra aegagrus</i> <i>hircus</i>
73	07_0005	Camel, meat, boneless, raw	Тэмээний ясгүй мах	<i>Camelus bactrianus</i>
74	07_0006	Yak, meat, boneless, raw	Сарлагийн ясгүй мах	<i>Bos grunniens</i>
75	07_0101	Yak, dried meat, borts	Сарлагийн борц	Yak meat processed

Table 5 (continued)

№	Food code and name			
	Food Code	English name	Native name	Scientific name
FOOD GROUPS				
07. Meat and meat products				
76	07_0102	Beef, meat, boneless, raw, from Khangai	Үхрийн ясгүй мах, Хөвсгөл аймаг	<i>Bos taurus</i>
77	07_0103	Sheep, meat, boneless, raw, from Gobi	Хонины ясгүй мах, Дундговь аймаг	<i>Ovis aries</i>
78	07_0104	Reindeer, meat, boneless, raw, from Taigaeindeer meat, raw	Цаа бугын ясгүй мах, тэжээвэр	<i>Rangifer tarandus linnaeus</i>
08. Egg				
79	08_0001	Egg, chicken, whole, raw	Тахианы өндөр	
09. Fish and fish products				
80	09_0001	Humpback whitefish, frozen, raw	Загасны мах, цагаан	<i>Coregonus pidschian</i>
81	09_0101	Fish, canned, boiled	Лаазалсан загас	Fish processed

Table 5 (continued)

№	Food code and name			
	Food Code	English name	Native name	Scientific name
FOOD GROUPS				
10. Milk and milk products				
82	10_0001	Milk, cow, raw	Үнээний сүү	<i>Bos taurus taurus</i>
83	10_0002	Milk, goat, raw	Ямааны сүү	<i>Capra hircus</i>
84	10_0003	Milk, camel, raw	Ингэний сүү	<i>Camelus</i>
85	10_0004	Milk, mare, raw, from Khangai	Гүүний сүү, Булган	<i>Equus caballus</i>
86	10_0006	Milk, yak, raw	Сарлагийн сүү	<i>Bos grunniens</i>
87	10_0101	Milk, cow, UHT	Халааж ариутгасан сүү	milk processed
88	10_0102	Yogurt, milk, cow, fresh	Элгэн тараг	milk processed
89	10_0103	Curd, milk, cow, fresh	Аарц	milk processed
90	10_0104	Curd, milk, cow, dried	Ааруул, үнээний сүү	milk processed
91	10_0105	Cheese, milk yak, fresh	Бяслаг	milk processed
92	10_0106	Eezgii, cheese, boiled	Ээзгий	milk processed

Table 5 (continued)

№	Food code and name			
	Food Code	English name	Native name	Scientific name
FOOD GROUPS				
10. Milk and milk products				
93	10_0107	Butter, of 88% fat	Цөцгийн тос	milk processed
94	10_0108	Ghee, milk, yak	Сарлагийн шар тос	milk processed
95	10_0109	Kumis, milk, mare, from Khangai	Айраг, Булган	milk processed
96	10_0110	Milk, camel, fermented	Ингэний хоормог	milk processed
97	10_0111	Milk, mare, raw, from Gobi	Гүүний сүү, Дундговь	<i>Equus caballus</i>
98	10_0112	Curd, milk, yak, sweet, dried	Ааруул, сүү хурууд, сарлагийн сүү	milk processed
99	10_0113	Curd, milk, camel, dried	Ааруул, ингэний сүү	milk processed
100	10_0114	Curd, milk, reindeer, dreid	Ааруул, цааны сүү	milk processed
101	10_0115	Kumis, milk, mare, from Gobi	Айраг, Дундговь	milk processed

Table 5 (continued)

№	Food code and name			
	Food Code	English name	Native name	Scientific name
FOOD GROUPS				
10. Milk and milk products				
102	10_0116	Cream, milk, cow, raw	Цөцгий	milk processed
103	10_0117	Milk, reindeer, raw	Цаа бугын сүү	<i>Cervidae</i>
11. Seasonings				
104	11_0001	Cumin, powder, raw	Гоньд	<i>Cuminum cuminum L</i>
105	11_0002	Jalapeno, raw	Халапено	<i>Capsicum annuum L</i>
12. Mushrooms				
106	12_0001	Mushroom, button, wild, raw	Бор мөөг (байгалийн)	<i>Agaricus bisporus</i>
13. Prepared foods				
107	13_0101	Biscuit, kheviin boov, fried	Хэвийн боов	Cooked
108	13_0102	Cream, clotted, milk, yak, boiled	Өрөм, сарлагийн сүү	Cooked
Total 108				

Food sampling protocol

Selecting of food or commodity based on the main criteria of Strategic raw materials and products, locally specific brand food, Culture, and customs, and Exported food items.

The fresh 108 samples were collected from the 13 different provinces (Ulaanbaatar, Darhan city and Tov, Selenge, Hentiy, Bulgan, Dundgovi, Omnogovi, Hovsgol, Dornod, Arhangay, Hovd, Uvs provinces) and “Atriin shim” LLC, “Enkhiin shim” LLC, “Rashaant-61” LLC, “Suu” LLC, “Uvs Foods” JSC, “Ulaanbaatar Guril” JSC, “Altan Duulga” JSC, “Hushkhan” LLC, “Monfood land” LLC, “Gatsuurt Food” JSC, “Talkh Chiher” JSC, “Ogooj Chiher Boov” JSC, “Green Industry” LLC and “Tumen Shuvuut” LLC a total of 15 companies and local producers.



Figure 2. Sample collected areas and food manufactures

Sampling collection protocol

The actual collection of the sample was done following random methods. The samplers randomly chose food samples of the dominant variety from preselected sites. The dominant varieties, their scientific documentation, and associated features as some food sample pictures were supplied by Plant Protection Institute in Darkhan to the team in advance. This was then shared with the samplers for the sample collection.

Logging the laboratory samples

Logging was done by simulating the way the producers, wholesalers, and retailers pack, store and transport their food commodities to consumers.

The samples tagged collected samples and maintained a log to record pertinent details that accompanied the samples.

Laboratory analysis protocol

Each selected method to analyze foods for their constituents was standardized in the laboratory and validated according to the AOAC/IUPAC validation protocol and standard procedures (SOP). Each method was also documented for quality control and quality assurance programme. Minimum triplicate analysis of each food item was done to calculate the mean content of each nutrient. For more details on the methodology used per component see, Notes on Components, page 14.

Composite test samples

A single composite sample of a homogeneous mix of units of the same type and variety of food items was followed. FDA analyzed a single composite sample based on a minimum of 5 batch lots of each sample. Therefore, it was considered satisfactory to follow a rule of thumb in developing a database including 5 units in each single composite sample to be analyzed.

Selection of analytical methods

To ensure accuracy, precision, specificity, sensitivity, and linearity of the estimated values for food constituents, appropriate methods as given in the most recent edition of Official Methods of Analysis of AOAC International were selected. For some nutrients, modification of the AOAC Official methods was needed. In such a case, the ASEAN Manual of Nutrient Analysis (ASIANFOODS 2011) was considered to be useful for a list of methods adopted after method validation as per AOAC/IUPAC protocol in order to analyze the composite sample. Each analytical procedure was accompanied by a quality assurance program to ensure the quality of the data. Extensive documentation of every single step for laboratory analysis was carried out.

These documentations have been kept for data management, identification of missing steps and values, as well as recall points for repeats of analysis.

Prepared Foods and Recipes

Food is generally cooked in some form before consumption. Depending on the types and conditions of the food and the desired end products, the required heat treatment will follow (e.g. boiling in water, frying in oil, or steaming). The purpose of the preparation is to convert the food into an edible form that is termed the recipe.

Bioavailability

Food composition values represent the total amount of the nutrient in the food while bioavailability represents the amount potentially available for actual absorption or actually absorbed in the body. Bioavailability is a measure of the extent becomes available to the body after ingestion and thus is available to the tissues. The bioavailability of nutrients in the local diet should also be considered when nutrient intake data are assessed. Diet composition and food processing used will need to be considered in evaluating the bioavailability of nutrients, notably micronutrients in the diet. The current FCT does not include bioavailability assessment but considers this an area for further work.

Documentation, quality, and source of data

Documentation

For each food group, the source of the data is compared and evaluated by bibliographic codes (BibioID), which are included in Annex 3 and the reference list.

The food presented in this table represents the mean values of the collected compositional data. For water, exceptionally, the median was calculated. When the number of data points was # or above the standard deviation (SD) was calculated. Some vitamins not detected during the analysis were marked as "0". For each value, the number of data points is indicated (n).

Quality of data

Foods were collected according to a sampling plan that represented the nationally representative samples of key foods of Mongolia. At the same time, it was ensured that compositional data were generated for highly consumed dominant varieties. These data for foods (n=108) were generated according to AOAC recommended methods with method validation, precision, and accuracy.

Limitations

Data were compared and evaluated using the following from other sources (Korean FCT, Russian FCT, Bangladesh FCT, Turkish FCT, Pakistan FCT, Negerian FCT, Finland FCT, France FCT, Denmark FCT, Estonia FCT, South Africa FCT, USDA, FAO/INFOODS analytical Food composition Database -ADB, FAO/INFOOD and Food composition Database for Biodiversity-BID). Fat estimation was done by the Soxhlet method which might cause underestimation of fat values for certain food groups.

A total of 13 groups and 108 food items entries were compiled in the archival DB. These have been entered into an archival database for their original analysis of nutrient compositional data.

RECOMMENDATIONS

- Reliable nutrient compositional data of foods are required in nutritional assessment, dietary management of disease, prevention and control of nutrient deficiencies, epidemiological research on non-communicable diseases, nutrition education and nutrition labelling as well as for a variety of applications in the field of nutrition, agriculture, trade, development and assistance. Further work is necessary for which allocation of funding is required in order to generate in the first time primary analytical data for the rest of key foods as determined present project.
- To develop a comprehensive FCDB in response to long-term change in the food chain, efforts have been made to increase the quality of data by the generation of data of 108 foods and including as many analytical data of Mongolian foods, generated by food scientists of Mongolia and abroad.
- Only two food items selected from mixed recipes were included in the current FCT due to time constraints. The future edition of the database should include traditional and frequently consumed recipes.

MAIN TABLE

01 Cereals and cereal products

Seeds or grains from cereals such as wheat, barley, rye, and oats are the main sources of human nutrition throughout the world. Cereals are grown for their seeds that are rich in carbohydrates.

Wheat is the staple food for Mongolia as well as for many other Asian countries. In Mongolia, 20 varieties of soft wheat are grown in Selenge, Central, Darkhan-uul, Bulgan, Khentii, and Övörkhangai Arkhangai provinces, which are the main agricultural regions. Wheat is not only the main source of carbohydrates; it is also one of the main sources of protein considering the large amounts in which it is consumed by the majority of the population. Widely consumed products of the population include wheat flour and baked goods made from it, such as bread and noodles.



Table 6. Foods Cereals and cereal products

Code	Food name in English	Food name in Mongolia	Edible portion coefficient	Energy (Kcal)	Water (g)	Protein (g)	Fat (g)	Carbohydrate (g)	Total dietary fiber (g)	Ash (g)
01_0001	Wheat, whole, raw	Улаан буудай	1.0	362	13.6	12.48	1.77	70.84	6.5	1.35
01_0002	Barley, whole, raw	Арвай	1.0	360	14.2	12.46	1.42	70.15	8.5	1.76
01_0003	Pearled barley, whole, raw	Халтар арвай	1.0	362	14.7	12.63	1.41	69.32	10.7	1.95
01_0004	Rye, whole grain, raw	Хөх тария	1.0	359	13.1	9.43	1.88	73.75	4.5	1.84
01_0005	Oat,Polished, Raw	Овъёос	1.0	383	13.7	10.83	6.17	67.40	7.4	1.91
01_0101	Wheat flour, Strong white	Буудайн гурил-055	1.0	352	13.8	15.15	1.38	69.07	1.3	0.57
01_0102	Wheat flour, white	Буудайн гурил-085	1.0	348	13.7	14.85	1.17	69.43	0.4	0.86
01_0103	Wheat flour, brown	Буудайн гурил-140	1.0	357	12.2	13.22	1.93	71.30	0.9	1.39
01_0104	Wheat flour, whole	Бүхэл үрийн гурил	1.0	363	10.6	13.29	2.06	72.67	0.4	1.41

Table 6 (continued)

Code	Food name in English	Food name in Mongolia	Edible portion coefficient	Energy (Kcal)	Water (g)	Protein (g)	Fat (g)	Carbohydrate (g)	Total dietary fiber (g)	Ash (g)
01_0105	Pearled barley flour, whole	Халтар арвайн гурил	1.0	370	7.7	12.67	1.32	76.40	1.1	1.90
01_0106	Barley flour, whole, raw	Арвайн эслэгт гурил	1.0	362	9.7	12.05	0.55	76.13	2.2	1.59
01_0107	Rye flour	Хөх тарианы гурил	1.0	378	10.3	12.29	5.22	70.40	0.1	1.75
01_0108	Oat flour	Овьёосны гурил	1.0	368	9.3	14.25	1.65	73.74	0.5	1.05
01_0109	Wheat flour bread	Буудайн талх	1.0	250	39.2	7.70	2.11	49.63	0.8	1.38
01_0110	Rye flour bread	Хөх тарианы талх	1.0	298	36.4	10.62	9.00	42.25	2.7	1.78
01_0112	Bread, flour, multi-seeds	Олон үрийн талх	1.0	313	38.8	14.77	14.21	30.62	1.8	1.59
01_0113	Noodles, wheat flour	Гоймон	1.0	349	14.1	9.19	1.21	74.83	-	0.64
01_0114	Noodles, wheat flour, fortified	Гоймон (олон үрийн)	1.0	346	12.5	14.64	1.52	68.39	-	2.94

Table 6 (continued)

Code	Food name in English	Food name in Mongolia	Calcium (mg)	Iron (mg)	Phosphorus (mg)	Potassium (mg)	Sodium (mg)	Magnesium(mg)
01_0001	Wheat, whole, raw	Улаан буудай	78	23.37	23	8	2	26
01_0002	Barley, whole, raw	Арвай	97	41.39	20	10	2	28
01_0003	Pearled barley, whole, raw	Халтар арвай	100	18.60	20	10	5	29
01_0004	Rye, whole grain, raw	Хөх тария	86	17.20	19	12	5	27
01_0005	Oat,Polished, Raw	Овъёос	149	51.10	32	11	11	5
01_0101	Wheat flour, Strong white	Буудайн гурил-055	88	2.17	16	13	1	7
01_0102	Wheat flour, white	Буудайн гурил-085	85	16.07	18	15	1	12
01_0103	Wheat flour, brown	Буудайн гурил-140	248	50.05	27	9	1	26
01_0104	Wheat flour, whole	Бүхэл үрийн гурил	111	21.71	21	9	1	26

Table 6 (continued)

Code	Food name in English	Food name in Mongolia	Calcium (mg)	Iron (mg)	Phosphorus (mg)	Potassium (mg)	Sodium (mg)	Magnesium(mg)
01_0105	Pearled barley flour, whole	Халтар арвайн гурил	99	27.32	28	5	4	26
01_0106	Barley flour, whole, raw	Арвайн эслэгт гурил	100	18.70	24	7	2	23
01_0107	Rye flour	Хөх тарианы гурил	22	2.13	76	169	3	9
01_0108	Oat flour	Овьёосны гурил	41	3.53	49	355	21	10
01_0109	Wheat flour bread	Буудайн талх	24	1.19	38	122	4	10
01_0110	Rye flour bread	Хөх тарианы талх	35	3.77	217	245	6	61
01_0112	Bread, flour, multi-seeds	Олон үрийн талх	32	2.00	171	97	4	26
01_0113	Noodles, wheat flour	Гоймон	10	0.07	18	86	5	10
01_0114	Noodles, wheat flour, fortified	Гоймон (олон үрийн)	10	0.25	9	97	4	20

Table 6(continued)

Code	Food name in English	Food name in Mongolia	Vitamin A (μg)	Thiamin (mg)	Riboflavin (mg)	Folate (μg)	Vitamin C (mg)
01_0001	Wheat, whole, raw	Улаан буудай	10	0.449	0.146	100	16.23
01_0002	Barley, whole, raw	Арвай	0	0.328	0.130	476	12.89
01_0003	Pearled barley, whole, raw	Халттар арвай	0	0.490	0.111	432	15.57
01_0004	Rye, whole grain, raw	Хөх тария	20	0.438	0.198	449	11.11
01_0005	Oat,Polished, Raw	Овьёос	0	0.570	0.119	819	1.46
01_0101	Wheat flour, Strong white	Буудайн гурил-055	0	0.187	0.059	261	28.35
01_0102	Wheat flour, white	Буудайн гурил-085	0	0.251	0.081	43	28.65
01_0103	Wheat flour, brown	Буудайн гурил-140	0	0.370	0.120	48	71.83
01_0104	Wheat flour, whole	Бүхэл үрийн гурил	0	0.411	0.151	136	10.00

Table 6 (continued)

Code	Food name in English	Food name in Mongolia	Vitamin A (μg)	Thiamin (mg)	Riboflavin (mg)	Folate (μg)	Vitamin C (mg)
01_0105	Pearled barley flour, whole	Халтар арвайн гурил	10	0.421	0.128	375	34.42
01_0106	Barley flour, whole, raw	Арвайн эслэгт гурил	8	0.280	0.110	90	22.95
01_0107	Rye flour	Хөх тарианы гурил	0	0.226	0.175	56	63.13
01_0108	Oat flour	Овъёсны гурил	0	0.195	0.135	30	19.31
01_0109	Wheat flour bread	Бүүдайн талх	0	0.092	0.134	27	11.49
01_0110	Rye flour bread	Хөх тарианы талх	0	0.095	0.347	30	37.83
01_0112	Bread, flour, multi-seeds	Олон үрийн талх	0	0.025	0.256	27	23.17
01_0113	Noodles, wheat flour	Гоймон	0	0.049	0.018	24	32.59
01_0114	Noodles, wheat flour, fortified	Гоймон (олон үрийн)	0	0.096	0.137	22	5.40

02 Starchy roots, tubers, and their products

Roots and tubers are plants yielding starchy roots, tubers, rhizomes, corns, and stems. Apart from their high water content (70-80 percent), these crops contain mainly carbohydrates which are largely starches that account for 16-24 percent of their total weight with very little protein and fat (0-2 percent).

Root crops and tuber crops have very high yield potential although their protein, mineral, and vitamin content are generally low compared to cereals. However, potato tuber provides some minerals and vitamin C. The orange-fleshed sweet potato is especially a rich source of B-carotene.

Vermicelli is made from potato flour and is high in carbohydrates.



Table 7. Starchy roots, tubers, and their products

Code	Food name in English	Food name in Mongolia	Edible portion coefficient	Energy (Kcal)	Water (g)	Protein (g)	Fat (g)	Carbohydrate (g)	Total dietary fiber (g)	Ash (g)
02_0001	Potato, raw	Төмс	0.84	168	59.1	1.45	0.69	38.29	1.3	0.47
02_0101	Vermicelli	Пүнтүүз	1.0	344	14.2	0.82	0.77	83.42	-	0.84

Table 7 (continued)

Code	Food name in English	Food name in Mongolia	Calcium (mg)	Iron (mg)	Phosphorus (mg)	Potassium (mg)	Sodium (mg)	Magnesium(mg)
02_0001	Potato, raw	Төмс	7	0.63	46	414	4	9
02_0101	Vermicelli	Пүнтүүз	3	5.27	7	9	8	31

Table 7 (continued)

Code	Food name in English	Food name in Mongolia	Vitamin A (μg)	Thiamin (mg)	Riboflavin (mg)	Folate (μg)	Vitamin C (mg)
02_0001	Potato, raw	Төмс	0	0.231	0.119	26	17.90
02_0101	Vermicelli	Пүнтүүз	0	0.066	0.075	29	1.87

03 Legumes and their products

Peas and beans that grow as seeds inside a pod are collectively known as legumes. They are grown mainly for their ripe dried seeds but the unripe pods and leaves are also consumed as vegetables. The seeds contain approximately two to three times more protein than most cereals and the quality of protein is different from that of cereals

Soybean is a source of high-biological value protein containing 40% protein. Soybean and red kidney bean contain an antitrypsin factor which interferes with the utilization of soy protein in the small intestine. Some beans also contain anti-nutrients like lectins and hemagglutinins. However, all these toxins are destroyed by heating during cooking.

Peas are one of the best plant-based sources of protein, which is a major reason why they are so filling, along with their high amount of fiber.

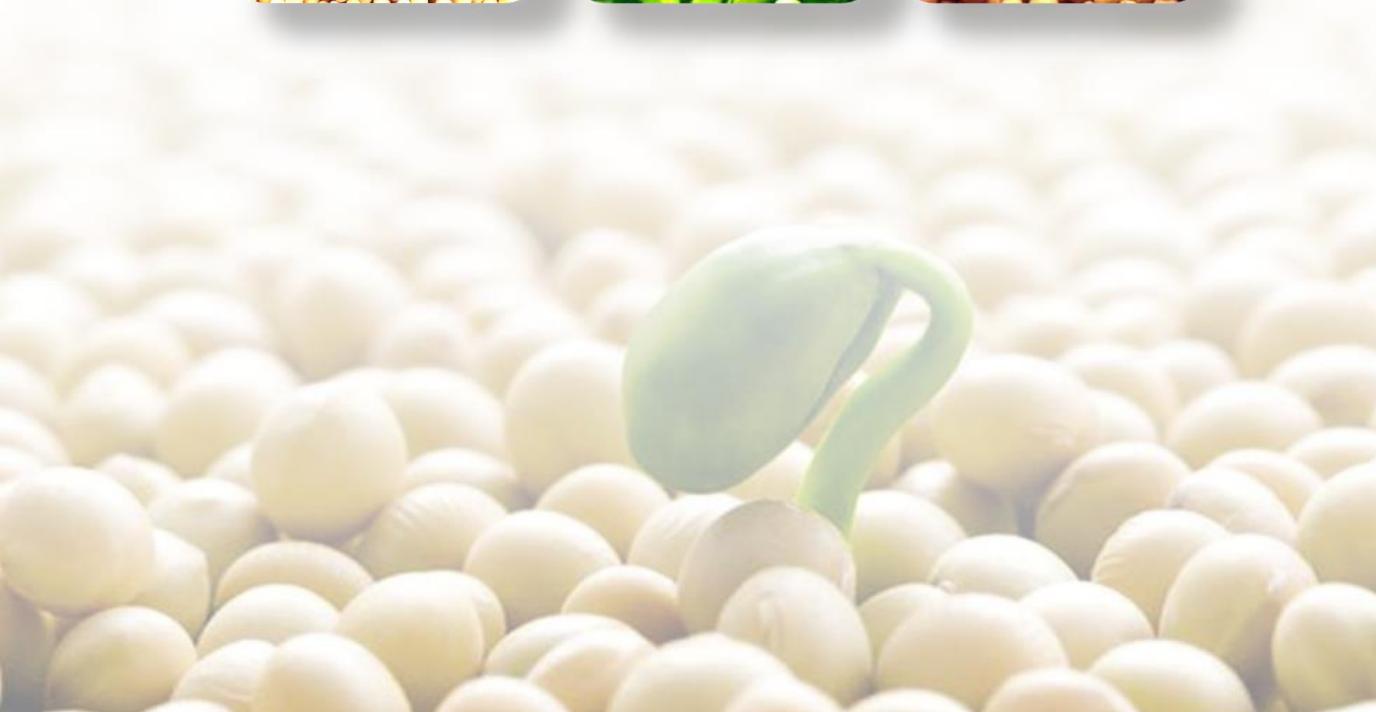


Table 8. Legumes and their products

Code	Food name in English	Food name in Mongolia	Edible portion coefficient	Energy (Kcal)	Water (g)	Protein (g)	Fat (g)	Carbohydrate (g)	Ash (g)
03_0001	Soybean, dried, raw	Шар буурцаг	1.0	349	13.6	12.48	1.77	70.84	1.35
03_0002	Peas, dried, raw	Вандуй	1.0	343	14.2	12.46	1.42	70.15	1.76

Table 8 (continued)

Code	Food name in English	Food name in Mongolia	Calcium (mg)	Iron (mg)	Phosphorus (mg)	Potassium (mg)	Sodium (mg)	Magnesium(mg)
03_0001	Soybean, dried, raw	Шар буурцаг	81	15.74	36	8	2	27
03_0002	Peas, dried, raw	Вандуй	79	14.93	34	24	7	28

Table 8 (continued)

Code	Food name in English	Food name in Mongolia	Vitamin A (µg)	Thiamin (mg)	Riboflavin (mg)	Folate (µg)	Vitamin C (mg)
03_0001	Soybean, dried, raw	Шар буурцаг	70	0.820	0.220	0	13.92
03_0002	Peas, dried, raw	Вандуй	10	0.580	0.150	150	14.86

04 Vegetables and their products

Plants or parts of plants including leaves, stems, roots, flowers and even fruits are regarded as vegetables. Most vegetables are cooked before they are eaten; those that are not eaten cooked are generally referred to as 'salad vegetables'. However, the distinction is far from hard and fast because in many cases 'salad vegetables' may be cooked. Some vegetables are more or less inedible until they are cooked. Cooking softens them by dissolving pectins and hemicelluloses and gelatinizing starch.

Vegetables constitute such a diverse group that it is difficult to generalize about their nutrient content. However, vegetables are generally a good source of vitamins and minerals and usually provide only a little energy and very little protein.

According to the Mongolian diet and food recommendations, it is recommended to consume 260 grams of vegetables per day, including cabbage, carrots, beets, onions, cucumbers, and tomatoes.



Table 9. Vegetables and their products

Code	Food name in English	Food name in Mongolia	Edible portion coefficient	Energy (Kcal)	Water (g)	Protein (g)	Fat (g)	Carbohydrate (g)	Total dietary fiber (g)	Ash (g)
04_0001	Cabbage, green, raw	Бэөрөнхий байцаа	0.83	110	73.2	0.77	0.58	24.86	1.2	0.59
04_0002	Cabbage, purple, raw	Хүрэн байцаа	0.80	107	72.4	1.02	0.71	23.62	0.8	2.27
04_0003	Broccoli, raw	Брокколи	0.89	242	37.7	2.26	1.24	55.41	0.1	3.36
04_0004	Celery, raw	Шанцай	0.86	107	72.7	0.32	0.53	24.35	1.7	2.10
04_0005	Spinach, raw	Бүүцай	0.93	63	84.2	1.80	0.93	10.98	1.7	2.05
04_0006	Pepper bell, red, raw	Улаан чинжүү	0.80	51	87.4	1.11	1.15	8.22	1.7	2.10
04_0007	Pepper bell, green, raw	Ногоон чинжүү	0.93	48	89.4	1.15	1.45	5.90	3.2	2.05
04_0008	Pepper bell, yellow, raw	Шар чинжүү	0.95	61	84.8	1.22	1.08	10.57	2.1	2.30

Table 9 (continued)

Code	Food name in English	Food name in Mongolia	Edible portion coefficient	Energy (Kcal)	Water (g)	Protein (g)	Fat (g)	Carbohydrate (g)	Total dietary fiber (g)	Ash (g)
04_0009	Cucumbers, raw	Өргөст хэмх	1.0	29	95.8	0.83	1.54	1.40	3.1	0.39
04_0010	Eggplant, raw	Хаш	0.97	38	90.3	1.17	1.29	5.17	0.7	2.10
04_0011	Tomatoes, raw	Улаан лооль	1.0	40	93.4	0.63	1.23	3.60	6.1	1.09
04_0012	Pumpkin, raw	Хүлүү	0.66	226	45.3	1.62	1.30	51.10	1.5	0.70
04_0013	Carrots, raw	Лууван	0.76	135	66.9	0.55	0.46	31.73	1.0	0.40
04_0014	beetroot, yellow, raw	Шар манжин	0.72	169	58.5	0.80	0.82	39.36	0.6	0.50
04_0015	beetroot, red, raw	Хүрэн манжин	0.81	131	67.8	1.26	0.36	30.18	0.8	0.44
04_0016	Garlic, raw	Сармис	0.84	212	48.0	5.89	1.58	43.46	0.2	1.03

Table 9 (continued)

Code	Food name in English	Food name in Mongolia	Edible portion coefficient	Energy (Kcal)	Water (g)	Protein (g)	Fat (g)	Carbohydrate (g)	Total dietary fiber (g)	Ash (g)
04_0017	Onion, raw	Сонгино, бөөрөнхий	0.86	85	79.2	0.31	0.31	19.92	0.8	0.26
04_0018	Onion spring, raw	Ногоон сонгино	0.91	77	82.2	0.95	1.37	13.89	2.8	1.61
04_0019	Lettuce, raw	Салат навч	0.94	66	84.9	1.05	1.41	11.11	2.5	1.50
04_0020	Parsley, raw	Яншуй	0.91	66	84.0	3.34	1.01	10.38	1.2	1.28
04_0021	Cauliflower, raw	Цэцэгт байцаа	0.80	118	71.6	1.62	0.98	25.12	1.0	0.73
04_0022	Tomato cherry, raw	Улаан лооль, үрлэн	0.99	41	90.4	0.03	1.03	7.25	2.7	1.25
04_0023	Basilic, raw	Базилик	0.90	106	73.5	0.94	1.19	22.37	0.1	2.00
04_0024	Kale, raw	Кейл	0.94	68	84.1	3.81	0.86	9.79	1.7	1.46

Table 9 (continued)

Code	Food name in English	Food name in Mongolia	Calcium (mg)	Iron (mg)	Phosphorus (mg)	Potassium (mg)	Sodium (mg)	Magnesium(mg)
04_0001	Cabbage, green, raw	Бээрэнхий байцаа	38	0.60	26	233	11	11
04_0002	Cabbage, purple, raw	Хүрэн байцаа	36	0.62	6	192	4	187
04_0003	Broccoli, raw	Брокколи	22	0.73	31	180	9	16
04_0004	Celery, raw	Шанцай	59	0.90	22	363	9	130
04_0005	Spinach, raw	Бүүцай	12	2.60	15	652	40	102
04_0006	Pepper bell, red, raw	Улаан чинжүү	7	0.32	8	151	2	7
04_0007	Pepper bell, green, raw	Ногоон чинжүү	6	0.35	18	147	3	79
04_0008	Pepper bell, yellow, raw	Шар чинжүү	7	0.31	7	151	10	25

Table 9 (continued)

Code	Food name in English	Food name in Mongolia	Calcium (mg)	Iron (mg)	Phosphorus (mg)	Potassium (mg)	Sodium (mg)	Magnesium(mg)
04_0009	Cucumbers, raw	Өргөст хэмх	17	0.41	35	189	7	6
04_0010	Eggplant, raw	Хаш	14	0.31	56	230	6	76
04_0011	Tomatoes, raw	Улаан лооль	12	0.77	14	281	8	2
04_0012	Pumpkin, raw	Хулүү	16	0.52	15	188	5	82
04_0013	Carrots, raw	Лууван	22	0.76	13	170	41	27
04_0014	beetroot, yellow, raw	Шар манжин	33	0.75	14	162	13	11
04_0015	beetroot, red, raw	Хүрэн манжин	29	1.01	13	216	37	6
04_0016	Garlic, raw	Сармис	16	1.39	20	379	9	43

Table 9 (continued)

Code	Food name in English	Food name in Mongolia	Calcium (mg)	Iron (mg)	Phosphorus (mg)	Potassium (mg)	Sodium (mg)	Magnesium(mg)
04_0017	Onion, raw	Сонгино, бөөрөнхий	23	0.11	14	140	10	11
04_0018	Onion spring, raw	Ногоон сонгино	88	0.79	22	236	9	52
04_0019	Lettuce, raw	Салат навч	68	0.51	67	191	8	237
04_0020	Parsley, raw	Яншуй	223	1.77	81	697	29	766
04_0021	Cauliflower, raw	Цэцэгт байцаа	12	0.30	11	402	7	125
04_0022	Tomato cherry, raw	Улаан лооль, үрлэн	21	0.70	14	160	24	43
04_0023	Basilic, raw	Базилик	14	0.90	17	284	10	3
04_0024	Kale, raw	Кейл	157	0.50	100	194	17	134

Table 9 (continued)

Code	Food name in English	Food name in Mongolia	Vitamin A (μg)	Thiamin (mg)	Riboflavin (mg)	Folate (μg)	Vitamin C (mg)
04_0001	Cabbage, green, raw	Бээрэнхий байцаа	0	0.063	0.075	46	57.29
04_0002	Cabbage, purple, raw	Хүрэн байцаа	0	0.018	0.039	10	46.22
04_0003	Broccoli, raw	Брокколи	0	0.231	0.188	13	9.83
04_0004	Celery, raw	Шанцай	1	0.124	0.557	11	9.83
04_0005	Spinach, raw	Бүүцай	409	0.217	0.137	133	45.03
04_0006	Pepper bell, red, raw	Улаан чинжүү	1	0.174	0.184	23	47.33
04_0007	Pepper bell, green, raw	Ногоон чинжүү	2	0.485	0.141	16	41.52
04_0008	Pepper bell, yellow, raw	Шар чинжүү	4	0.275	0.493	21	47.32

Table 9 (continued)

Code	Food name in English	Food name in Mongolia	Vitamin A (μg)	Thiamin (mg)	Riboflavin (mg)	Folate (μg)	Vitamin C (mg)
04_0009	Cucumbers, raw	Өргөст хэмх	2	0.258	0.163	23	7.59
04_0010	Eggplant, raw	Хаш	0	0.115	0.038	31	34.24
04_0011	Tomatoes, raw	Улаан лооль	9	0.231	0.163	10	10.16
04_0012	Pumpkin, raw	Хүлүү	369	0.177	0.259	17	8.32
04_0013	Carrots, raw	Лууван	329	0.012	0.882	6	17.12
04_0014	beetroot, yellow, raw	Шар манжин	100	0.018	0.023	0	20.30
04_0015	beetroot, red, raw	Хүрэн манжин	0	0.016	0.072	19	26.74
04_0016	Garlic, raw	Сармис	0	0.059	0.084	20	26.07

Table 9 (continued)

Code	Food name in English	Food name in Mongolia	Vitamin A (μg)	Thiamin (mg)	Riboflavin (mg)	Folate (μg)	Vitamin C (mg)
04_0017	Onion, raw	Сонгино, бөөрөнхий	3	0.095	0.028	13	25.11
04_0018	Onion spring, raw	Ногоон сонгино	2	0.016	0.019	2	23.05
04_0019	Lettuce, raw	Салат навч	2	0.163	0.916	39	23.74
04_0020	Parsley, raw	Яншуй	397	0.102	0.304	104	107.46
04_0021	Cauliflower, raw	Цэцэгт байцаа	1	0.038	0.050	42	13.66
04_0022	Tomato cherry, raw	Улаан лооль, үрлэн	250	0.167	0.144	11	9.19
04_0023	Basilic, raw	Базилик	264	0.567	0.125	88	94.64
04_0024	Kale, raw	Кейл	215	0.286	0.119	55	92.40

05 Fruits and their products

Botanically, a fruit is a matured ovary of a flowering plant including the seed (or seeds) and any part of the plant that is attached to it. Fruits which conform strictly to this definition include nuts, legumes, berries and drupes. Botanists also regard peas, tomatoes, peppers and cucumbers as fruits. However, fruits are generally regarded as the succulent parts of plants which are characterized by a sweet or acid taste and a distinct flavour.

The taste of a fruit is a subtle blend of sweetness and acidity delicately complemented by the flavour of the particular fruit. Fruits are sweet because of the presence of abundant quantities of sugars which are formed when a fruit ripens, and, if 'fruit acids' are present in combination with sugars, they will produce a sharp taste. Therefore, the relative amount of sweet and acids present largely determines whether a particular fruit is sweet or sour.

Most fruits consist largely of water; hence their nutrient content is low. However, fruits are a good source of vitamin C and minerals. Wide fruits, such as blueberry, gooseberry, currants, moyle, sea buckthorn many local sour fruits are rich sources of vitamin C in the Mongolian diet.

Fruits also contain cellulose, hemicelluloses, and pectins which provide bulk to the diet and help bowel movement. However, seasonal fruits must be encouraged to provide vitamin C and beta carotene in the diet.



Table 10.Fruits and their products

Code	Food name in English	Food name in Mongolia	Edible portion coefficient	Energy (Kcal)	Water (g)	Protein (g)	Fat (g)	Carbohydrate (g)	Total dietary fiber (g)	Ash (g)
05_0001	Seabuckthorn, fruit	Чацаргана жимс	0.88	85	81.0	2.05	2.06	14.64	-	0.25
05_0002	Apple, small	Бэсрэг алим	0.97	91	78.4	0.73	2.52	16.35	-	1.97
05_0003	Peruvian groundcherry	Газрын алим	0.98	97	82.8	1.17	0.89	14.48	4.3	0.62
05_0004	Siberian crabapple fruit, wild	Үрэл	0.96	186	56.9	0.64	2.04	39.50	3.5	0.93
05_0005	Watermelon	Тарвас	0.79	131	68.4	0.46	0.20	30.50	2.8	0.47
05_0006	Musk melon	Амтат гуа	0.79	111	71.8	0.67	0.32	26.32	0.3	0.87
05_0007	Strawberry, farm	Гүзээлзгэнэ /таримал/	1.0	42	90.9	0.70	1.15	6.84	0.7	0.43
05_0008	Currants, black, wild	Үхрийн нүд /байгалийн/	0.99	70	82.1	1.57	0.82	13.32	1.8	2.16

Table 10 (continued)

Code	Food name in English	Food name in Mongolia	Edible portion coefficient	Energy (Kcal)	Water (g)	Protein (g)	Fat (g)	Carbohydrate (g)	Total dietary fiber (g)	Ash (g)
05_0009	Strawberry, wild	Гүзээлзгэнэ (байгалийн)	1.0	64	85.9	0.74	0.87	11.83	3.0	0.70
05_0010	Cranberry, wild	Анъс	0.99	78	82.8	0.69	0.85	15.28	3.2	0.39
05_0011	Blueberry, wild	Нэрс	1.0	60	86.6	1.09	1.55	9.90	1.2	0.84
05_0012	Bird cherry, wild	Мойл	0.81	215	51.0	1.23	2.29	44.52	5.5	0.99
05_0013	Black currant, wild	Хад	0.95	109	78.0	1.26	2.29	17.50	6.5	0.99
05_0101	Seabuckthorn, syrup	Чацарганы шүүс	1.0	199	50.5	0.65	0.45	48.03	-	0.53
05_0102	Seabuckthorn, seed oil	Чацарганы тос, үрийн	1.0	559	2.3	0.54	57.70	9.32	-	0.19
05_0103	Seabuckthorn, oil	Чацарганы тос, зөөлөн эдийн	1.0	844	1.7	0.22	90.37	7.56	-	0.12

Table 10 (continued)

Code	Food name in English	Food name in Mongolia	Calcium (mg)	Iron (mg)	Phosphorus (mg)	Potassium (mg)	Sodium (mg)	Magnesium(mg)
05_0001	Seabuckthorn, fruit	Чацаргана жимс	92	30.76	0	7	5	0
05_0002	Apple, small	Бэсрэг алим	14	1.87	0	239	1	0
05_0003	Peruvian groundcherry	Газрын алим	8	0.97	0	123	2	0
05_0004	Siberian crabapple fruit, wild	Үрэл	33	1.09	0	357	2	0
05_0005	Watermelon	Тарвас	5	0.22	0	67	1	0
05_0006	Musk melon	Амтат гуа	40	1.99	0	365	13	0
05_0007	Strawberry, farm	Гүзээлзгэнэ /таримал/	43	0.87	0	14	18	0
05_0008	Currants, black, wild	Үхрийн нүд /байгалийн/	35	1.26	0	365	2	0

Table 10 (continued)

Code	Food name in English	Food name in Mongolia	Calcium (mg)	Iron (mg)	Phosphorus (mg)	Potassium (mg)	Sodium (mg)	Magnesium(mg)
05_0009	Strawberry, wild	Гүзээлэгэнэ (байгалийн)	39	1.10	0	15	1	0
05_0010	Cranberry, wild	Анъс	38	0.31	0	70	2	0
05_0011	Blueberry, wild	Нэрс	14	28.55	0	49	1	0
05_0012	Bird cherry, wild	Мойл	9	0.23	0	161	4	0
05_0013	Black currant, wild	Хад	49	1.37	0	340	1	0
05_0101	Seabuckthorn, syrup	Чацарганы шүүс	58	19.61	0	5	4	0
05_0102	Seabuckthorn, seed oil	Чацарганы тос, үрийн	13	4.95	0	1	3	0
05_0103	Seabuckthorn, oil	Чацарганы тос, зөөлөн эдийн	12	2.59	0	0	2	0

Table 10 (continued)

Code	Food name in English	Food name in Mongolia	Vitamin A (μg)	Thiamin (mg)	Riboflavin (mg)	Folate (μg)	Vitamin C (mg)
05_0001	Seabuckthorn, fruit	Чацаргана жимс	7930	0.303	0.211	53	24.55
05_0002	Apple, small	Бэсрэг алим	33	0.027	0.047	11	63.40
05_0003	Peruvian groundcherry	Газрын алим	36	0.178	0.159	3	8.21
05_0004	Siberian crabapple fruit, wild	Үрэл	2	0.084	0.059	28	22.43
05_0005	Watermelon	Тарвас	354	0.072	0.045	11	20.84
05_0006	Musk melon	Амтат гуа	179	0.153	0.121	4	13.12
05_0007	Strawberry, farm	Гүзээлзгэнэ /таримал/	660	0.039	0.244	32	53.68
05_0008	Currants, black, wild	Үхрийн нүд /байгалийн/	12	0.272	0.405	21	8.51

Table 10 (continued)

Code	Food name in English	Food name in Mongolia	Vitamin A (μg)	Thiamin (mg)	Riboflavin (mg)	Folate (μg)	Vitamin C (mg)
05_0009	Strawberry, wild	Гүзээлзгэнэ (байгалийн)	3	0.186	0.162	4	65.59
05_0010	Cranberry, wild	Анъс	3	0.272	0.343	20	69.15
05_0011	Blueberry, wild	Нэрс	2	0.073	0.605	9	20.02
05_0012	Bird cherry, wild	Мойл	0	0.177	0.276	4	29.02
05_0013	Black currant, wild	Хад	0	0.209	0.221	8	18.65
05_0101	Seabuckthorn, syrup	Чацарганы шүүс	7590	0.266	0.268	6	13.20
05_0102	Seabuckthorn, seed oil	Чацарганы тос, үрийн	0	0.018	0.030	0	0
05_0103	Seabuckthorn, oil	Чацарганы тос, зөөлөн эдийн	0	0	0	0	0

06 Nuts, seeds, and their products

Seeds, nuts and kernels of leguminous crops with high fat-content are the main sources of edible oils and fats. Nuts are rich in energy and excellent sources of monounsaturated fatty acids (MUFA) such as oleic and palmitoleic acid. They are also rich sources of essential fatty acids like Linoleic acid and alpha- Linolenic acid (ALA) and other n-3 fatty acids like Eicosapentaenoic acid and Docosahexonic acid.

Nuts provide protein and B-complex vitamins, particularly thiamin and niacin. However, in the amounts consumed, they may not contribute much to the intake of minerals and vitamins. Nuts also contain good amount of vitamin E, a powerful lipid soluble antioxidant. Vitamin E is required for maintaining the integrity of cell and membrane and skin, thus, protecting it from harmful oxygen-free radicals.

Nuts are a storehouse of health beneficial bioactive compounds which exert antioxidant role. Furthermore, they are a compact source of nutrients in that, in addition to energy, protein and vitamins, they are rich source of minerals like manganese, potassium, calcium, iron, magnesium, zinc, fluoride and selenium.

Cedar nut is the most widely used in Mongolia, and it is a product with high protein content in addition to biologically active compounds



Table 11. Nuts, seeds, and their products

Code	Food name in English	Food name in Mongolia	Edible portion coefficient	Energy (Kcal)	Water (g)	Protein (g)	Fat (g)	Carbohydrate (g)	Total dietary fiber (g)	Ash (g)
06_0001	Cedar (pine) nut kernels	Хүшны самар	0.5	646	8.6	15.05	63.93	9.88	-	2.56
06_0002	Flax seeds, raw	Маалингийн үр	1.0	452	5.7	12.79	15.98	63.48	1.3	2.08
06_0003	Sunflower seeds	Наранцэцгийн үр	0.5	624	3.9	5.07	47.55	41.76	4.5	1.70
06_0101	Cedar (pine) nut, raw	Хүшны самарны чөмөг	1.0	681	8.6	15.05	63.93	11.43	-	1.01
06_0102	Cedar (pine) nuts oil	Самрын тос	1.0	836	1.7	0.74	90.6	4.44	-	2.56
06_0103	Flax flour	Маалингийн гурил	1.0	449	6.0	38.68	17.59	33.44	1.3	4.31

Table 11 (continued)

Code	Food name in English	Food name in Mongolia	Calcium (mg)	Iron (mg)	Phosphorus (mg)	Potassium (mg)	Sodium (mg)	Magnesium(mg)
06_0001	Cedar (pine) nut kernels	Хушны самар	99	28.80	35	13	1	4
06_0002	Flax seeds, raw	Маалингийн үр	227	4.87	46	775	30	15
06_0003	Sunflower seeds	Наранцэцгийн үр	351	4.70	61	628	2	11
06_0101	Cedar (pine) nut, raw	Хушны самарны чөмөг	45	11.74	5	2	0	2
06_0102	Cedar (pine) nuts oil	Самрын тос	15	3.42	4	1	1	1
06_0103	Flax flour	Маалингийн гурил	187	4.84	199	697	28	24

Table 11 (continued)

Code	Food name in English	Food name in Mongolia	Vitamin A (μg)	Thiamin (mg)	Riboflavin (mg)	Folate (μg)	Vitamin C (mg)
06_0001	Cedar (pine) nut kernels	Хушны самар	0	0.391	0.120	17	22.22
06_0002	Flax seeds, raw	Маалингийн үр	0	0.382	1.432	87	14.46
06_0003	Sunflower seeds	Наранцэцгийн үр	0	0.527	0.458	82	18.32
06_0101	Cedar (pine) nut, raw	Хушны самарны чөмөг	0	0.496	0.146	19	4.79
06_0102	Cedar (pine) nuts oil	Самрын тос	0	0.000	0.000	0	0.00
06_0103	Flax flour	Маалингийн гурил	0	0.056	0.068	5	52.58

07 Meat and meat products

Red meat is one of the main components of the Mongolian diet.

Lean meat is the flesh or muscular tissue of an animal. Its composition is different from that of the internal organs such as the kidney and liver. Muscle tissue consists of about three-quarters water and one-quarter protein together with a small variable amount of fat, one percent mineral elements and some vitamins.

Meat usually contains high levels of complete protein. The body typically uses protein to perform functions of cellular growth, repair, formation of new tissues and body maintenance. Protein is also considered crucial to the regulation of immune function and electrolyte balance.

The fat found in meats can also be a valuable source of energy for the body. The fat of meat is of particular interest in nutrition. Lean meat is the flesh or muscular tissue of animal. Its composition is different from that of the internal organs such as kidney and liver. Muscle tissue consists of about three-quarters of water and one quarter protein together with a small variable amount of fat, one percent mineral elements and some vitamins. because it is predominantly saturated in character. Meat typically contains important minerals including iron, phosphorous, zinc, and the complete range of B-complex vitamins. In particular, the organ meat is a good source of iron and B complex vitamins that help to support metabolic function, cognitive function, skin health, production of red blood cells, and digestion.

In addition meat from to the five main species of livestock, Mongolians also use the meat of yak, deer, and reindeer depending on the region.



Table 12. Meat and meat products

Code	Food name in English	Food name in Mongolia	Edible portion coefficient	Energy (Kcal)	Water (g)	Protein (g)	Fat (g)	Ash (g)
07_0001	Beef, meat, boneless, raw, farm	Үхрийн ясгүй мах, ферм, Сэлэнгэ	1.0	302	54.3	19.86	24.74	2.02
07_0002	Sheep, meat, boneless, raw, from Khangai	Хонины ясгүй мах, Сэлэнгэ аймаг	1.0	240	64.4	14.57	20.22	1.08
07_0003	Hourse, meat, boneless, raw	Адууны ясгүй мах	1.0	282	57.6	18.30	23.24	0.82
07_0004	Goat, meat, boneless, raw	Ямааны ясгүй мах	1.0	188	69.0	16.12	13.77	0.91
07_0005	Camel, meat, boneless, raw	Тэмээний ясгүй мах	1.0	250	60.1	20.31	18.70	1.11
07_0006	Yak, meat, boneless, raw	Сарлагийн ясгүй мах	1.0	231	59.6	22.84	15.55	0.85
07_0007	Beef, meat, boneless, raw, from Khangai	Үхрийн ясгүй мах, Хөвсгөл аймаг	1.0	310	53.5	19.84	25.66	1.03
07_0008	Sheep, meat, boneless, raw, from Gobi	Хонины ясгүй мах, Дундговь аймаг	1.0	235	62.5	18.80	17.75	0.95
07_0009	Reindeer, meat, boneless, raw, from Taigaeindeer meat, raw	Цаа бугын ясгүй мах, тэжээвэр	1.0	223	60.2	24.76	13.78	1.24
07_0101	Yak, dried meat, borts	Сарлагийн борц	1.0	503	8.2	61.15	28.75	1.94

Table 12(continued)

Code	Food name in English	Food name in Mongolia	Calcium (mg)	Iron (mg)	Phosphorus (mg)	Potassium (mg)	Sodium (mg)	Magnesium (mg)
07_0001	Beef, meat, boneless, raw, farm	Үхрийн ясгүй мах, ферм, Сэлэнгэ	6	2.56	19	152	65	20
07_0002	Sheep, meat, boneless, raw, from Khangai	Хонины ясгүй мах, Сэлэнгэ аймаг	7	2.16	18	286	80	2
07_0003	Hourse, meat, boneless, raw	Адууны ясгүй мах	8	7.80	18	130	50	18
07_0004	Goat, meat, boneless, raw	Ямааны ясгүй мах	21	2.51	6	342	48	2
07_0005	Camel, meat, boneless, raw	Тэмээний ясгүй мах	14	4.31	16	367	0	4
07_0006	Yak, meat, boneless, raw	Сарлагийн ясгүй мах	5	2.71	18	158	65	3
07_0007	Beef, meat, boneless, raw, from Khangai	Үхрийн ясгүй мах, Хөвсгөл аймаг	6	3.27	17	134	173	18
07_0008	Sheep, meat, boneless, raw, from Gobi	Хонины ясгүй мах, Дундговь аймаг	23	4.46	7	359	105	22
07_0009	Reindeer, meat, boneless, raw, from Taigaeindeer meat, raw	Цаа бугын ясгүй мах, тэжээвэр	7	0.06	50	307	78	12
07_0101	Yak, dried meat, borts	Сарлагийн борц	13	4.41	54	8	2	3

Table 12(continued)

Code	Food name in English	Food name in Mongolia	Vitamin A (μg)	Thiamin (mg)	Riboflavin (mg)	Folate (μg)	Vitamin C (mg)
07_0001	Beef, meat, boneless, raw, farm	Үхрийн ясгүй мах, ферм, Сэлэнгэ	10	0.408	0.39	14	1.61
07_0002	Sheep, meat, boneless, raw, from Khangai	Хонины ясгүй мах, Сэлэнгэ аймаг	12	0.214	0.15	8	1.08
07_0003	Hourse, meat, boneless, raw	Адууны ясгүй мах	220	0.372	0.36	9	2.31
07_0004	Goat, meat, boneless, raw	Ямааны ясгүй мах	16	0.238	0.35	9	8.35
07_0005	Camel, meat, boneless, raw	Тэмээний ясгүй мах	5	0.394	0.39	9	7.40
07_0006	Yak, meat, boneless, raw	Сарлагийн ясгүй мах	12	0.297	0.44	7	2.23
07_0007	Beef, meat, boneless, raw, from Khangai	Үхрийн ясгүй мах, Хөвсгөл аймаг	7	0.349	0.43	6	2.56
07_0008	Sheep, meat, boneless, raw, from Gobi	Хонины ясгүй мах, Дундговь аймаг	18	0.214	0.38	7	25.90
07_0009	Reindeer, meat, boneless, raw, from Taigaeindeer meat, raw	Цаа бугын ясгүй мах, тэжээвэр	0	0.284	0.47	0	4.12
07_0101	Yak, dried meat, borts	Сарлагийн борц	0	0.095	0.17	5	16.415

08 Eggs and their products

Chicken eggs are the most commonly eaten eggs. They supply all essential amino acids for humans (a source of 'complete protein') and provide several vitamins and minerals including retinol, riboflavin, folate, vitamin B6, vitamin B12, choline, iron, calcium, phosphorus, and potassium. Other popular choices for egg consumption are duck, quail, roe, and caviar.

The egg yolk makes up about 33% of the liquid weight of the egg. It contains all of the fat, slightly less than half of the protein, and most of the other nutrients. All of the egg's vitamins A, D, and E are in the egg yolk. It also contains choline, with one yolk containing approximately half of the recommended daily intake. Choline is an important nutrient for the development of the brain, and is said to be important for pregnant and nursing women to ensure healthy fetal brain development.

Chicken eggs are widely used in many types of dishes including many baked foods. Some of the most common preparation methods include scrambled, fried, hard-boiled, soft-boiled and pickled. The egg white contains protein but little or no fat, and can be used in cooking separately from the yolk as in meringue and desserts.

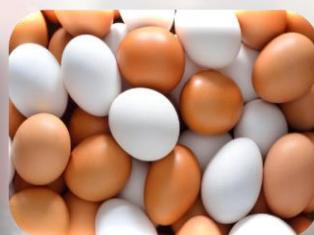


Table 13. Eggs and their products

Code	Food name in English	Food name in Mongolia	Edible portion coefficient	Energy (Kcal)	Water (g)	Protein (g)	Fat (g)	Ash (g)
08_0001	Egg, chicken, whole, raw	Тахианы өндөг	0.87	159	73.6	13.50	11.62	1.2803

Table 13 (continued)

Code	Food name in English	Food name in Mongolia	Calcium (mg)	Iron (mg)	Phosphorus (mg)	Potassium (mg)	Sodium (mg)	Magnesium(mg)
08_0001	Egg, chicken, whole, raw	Тахианы өндөг	46	1.86	49	136	134	0.879

Table 13 (continued)

Code	Food name in English	Food name in Mongolia	Vitamin A (µg)	Thiamin (mg)	Riboflavin (mg)	Folate (µg)	Vitamin C (mg)
08_0001	Egg, chicken, whole, raw	Тахианы өндөг	185	0.209	0.14	41	2.17

09 Fish and their products

Fish is an integral part of a healthy human diet. It's of value mainly as a rich source of easily metabolizable protein, the amount and quality of protein in fish and shellfish being similar to that in lean meat. Omega-3 fatty acids in fish play an important role in supporting our skin, heart, blood pressure, brain, eyes, kidneys, and other body systems.

Small-sized indigenous fishes are a valuable and easily available source of protein, oil, and minerals for the rural people in Bangladesh. As many small fish species are eaten whole, with head, viscera, and bones they are particularly rich in bioavailable calcium. Some are also rich in vitamin A, iron and zinc. Sea fish are a valuable source of iodine. Both sweet water and marine fishes are valuable sources of the fat-soluble vitamins A and D, fish-liver oil being exceptionally good sources of these vitamins. They also contain good amounts of B complex vitamins.

Apart from being preserved by freezing, canning, drying and smoking, fish is also converted into a number of convenience products such as fish fingers, fish cakes and fish spreads.



Table 14. Fish and their products

Code	Food name in English	Food name in Mongolia	Edible portion coefficient	Energy (Kcal)	Water (g)	Protein (g)	Fat (g)	Carbohydrate (g)	Ash (g)
09_0001	Humpback whitefish, frozen, raw	Загасны мах, цагаан	0.85	142	65.2	17.31	1.35	15.06	1.03
09_0101	Fish, canned, boiled	Лаазалсан загас	1.0	197	65.6	18.68	13.56	0.12	2.02

Table 14 (continued)

Code	Food name in English	Food name in Mongolia	Calcium (mg)	Iron (mg)	Phosphorus (mg)	Potassium (mg)	Sodium (mg)	Magnesium (mg)
09_0001	Humpback whitefish, frozen, raw	Загасны мах, цагаан	29	1.19	6	211	30	1
09_0101	Fish, canned, boiled	Лаазалсан загас	28	0.61	16	0	158	15

Table 14 (continued)

Code	Food name in English	Food name in Mongolia	Vitamin A (μg)	Thiamin (mg)	Riboflavin (mg)	Folate (μg)	Vitamin C (mg)
09_0001	Humpback whitefish, frozen, raw	Загасны мах, цагаан	0	0.186	0.14	11	0
09_0101	Fish, canned, boiled	Лаазалсан загас	0	0	0	7	5.29

10 Milk and dairy products

Milk, a food of outstanding interest, is produced by the mammary glands of mammals. It is designed by nature to be a complete food with extremely high nutritional value for very young animals. Early-lactation milk contains colostrum which carries the mother's antibodies to the baby and can reduce the risk of many diseases in the baby. The colloidal properties of milk are of great practical importance in making butter and cheese, especially from cow's milk.

Milk is an oil-in-water emulsion, whole milk containing 3.5-4% fat. In addition to milk fat, the fat phase contains fat-soluble vitamins, phospholipids, carotenoids, and cholesterol while the aqueous phase contains protein, minerals, lactose (sugar) and water-soluble vitamins. The most important proteins in milk are casein (2.6%) and whey protein (0.15%). Casein is not a single substance, but a family of phosphorous-containing proteins that bind the calcium and other minerals present. On the other hand, whey protein consists of two major proteins; lactalbumin (0.12%) and lactoglobulin (0.3%) both of them are not coagulated by digestive enzyme rennin but they are more easily coagulated by heat than casein. Thus, when milk is heated, lactalbumin and lactoglobuli coagulate and form a skin on the milk surface.

The composition of different specimens of milk may show some variations with many extrinsic factors. Between cow's and buffalo milk, the latter has a higher fat content expressed on a moisture free basis. Unless the whey is discarded, the products of milk retain all the nutrients present in the milk.

Cow's milk has been processed into dairy products. Milk and milk products cover liquid milk, milk powder, and fermented milk products like curd, yoghurt and butter milk. Other national dairy products also include urum, aaruul, ezhii, airag, khoormog in the Mongolian diet.

Table 15. Milk and dairy products

Code	Food name in English	Food name in Mongolia	Edible portion coefficient	Energy (Kcal)	Water (g)	Protein (g)	Fat (g)	Carbohydrate (g)	Ash (g)
10_0001	Milk, cow, raw	Үнээний сүү	1.0	56	90.4	3.69	3.98	1.31	0.59
10_0002	Milk, goat, raw	Ямааны сүү	1.0	77	85.2	5.64	4.46	3.62	1.10
10_0003	Milk, camel, raw	Ингэний сүү	1.0	71	87.6	3.86	4.99	2.69	0.84
10_0004	Milk, mare, raw, from Khangai	Гүүний сүү, Булган	1.0	51	89.1	2.34	1.83	6.41	0.28
10_0005	Milk, yak, raw	Сарлагийн сүү	1.0	103	81.9	4.21	6.57	6.67	0.67
10_0101	Milk, cow, UHT	Халааж ариутгасан сүү	1.0	61	88.4	3.29	3.59	3.99	0.69
10_0102	Yogurt, milk, cow, fresh	Элгэн тараг	1.0	54	88.8	2.83	2.40	5.28	0.66
10_0103	Curd, milk, cow, fresh	Аарц	1.0	142	72.2	15.08	8.80	0.71	3.18

Table 15 (continued)

Code	Food name in English	Food name in Mongolia	Edible portion coefficient	Energy (Kcal)	Water (g)	Protein (g)	Fat (g)	Carbohydrate (g)	Ash (g)
10_0104	Curd, milk, cow, dried	Ааруул, үнээний сүү	1.0	337	22.7	21.55	8.00	44.6	3.19
10_0105	Cheese, milk yak, fresh	Бяслаг	1.0	228	52.0	37.79	8.53	0.11	1.56
10_0106	Eezgii, cheese, boiled	Ээзгий	1.0	426	5.1	26.62	11.34	54.3	2.62
10_0107	Butter, of 88% fat	Цөцгийн тос	1.0	805	9.3	1.87	88.66	-	0.17
10_0108	Ghee, milk, yak	Сарлагийн шар тос	1.0	896	0.4	0.00	99.58	-	0.02
10_0109	Kumis, milk, mare, from Khangai	Айраг, Булган	1.0	26	95.2	2.64	1.54	0.35	0.24
10_0110	Milk, camel, fermented	Ингэний хоормог	1.0	68	89.1	3.75	5.54	0.92	0.66
10_0006	Milk, mare, raw, from Gobi	Гүүний сүү, Дундговь	1.0	50	89.2	1.56	1.55	7.49	0.23

Table 15 (continued)

Code	Food name in English	Food name in Mongolia	Edible portion coefficient	Energy (Kcal)	Water (g)	Protein (g)	Fat (g)	Carbohydrate (g)	Ash (g)
10_0111	Curd, milk, yak, sweet, dried	Ааруул, сүү хүрүүд, сарлагийн сүү	1.0	318	26.6	58.44	5.56	8.54	0.89
10_0112	Curd, milk, camel, dried	Ааруул, ингэний сүү	1.0	490	29.5	4.77	42.65	21.79	1.30
10_0113	Curd, milk, reindeer, dried	Ааруул, цааны сүү	1.0	634	8.9	29.52	55.98	2.90	2.73
10_0114	Kumis, milk, mare, from Gobi	Айраг, Дундговь	1.0	29	94.5	3.36	1.64	0.15	0.34
10_0115	Cream, milk, cow,	Цөцгий	1.0	413	46.1	2.15	39.84	11.42	0.46
10_0007	Milk, reindeer, raw	Цаа бугын сүү	1.0	337	40.0	12.16	20.55	25.74	1.52

Table 15 (continued)

Code	Food name in English	Food name in Mongolia	Calcium (mg)	Iron (mg)	Phosphorus (mg)	Potassium (mg)	Sodium (mg)	Magnesium(mg)
10_0001	Milk, cow, raw	Үнээний сүү	119	0.84	25	159	50	19
10_0002	Milk, goat, raw	Ямааны сүү	144	0.30	66	146	47	20
10_0003	Milk, camel, raw	Ингэний сүү	182	0.22	13	137	70	10
10_0004	Milk, mare, raw, from Khangai	Гүүний сүү, Булган	104	0.11	15	18	30	118
10_0005	Milk, yak, raw	Сарлагийн сүү	117	0.11	13	105	18	6
10_0101	Milk, cow, UHT	Халааж ариутгасан сүү	122	0.16	36	146	51	10
10_0102	Yogurt, milk, cow, fresh	Элгэн тараг	119	0.14	3	143	51	6
10_0103	Curd, milk, cow, fresh	Аарц	81	0.10	17	96	41	9

Table 15 (continued)

Code	Food name in English	Food name in Mongolia	Calcium (mg)	Iron (mg)	Phosphorus (mg)	Potassium (mg)	Sodium (mg)	Magnesium(mg)
10_0104	Curd, milk, cow, dried	Ааруул, үнээний сүү	161	0.19	43	109	51	12
10_0105	Cheese, milk yak, fresh	Бяслаг	76	0.10	45	87	41	6
10_0106	Eezgii, cheese, boiled	Ээзгий	114	0.86	68	134	53	21
10_0107	Butter, of 88% fat	Цөцгийн тос	10	0.16	8	14	16	5
10_0108	Ghee, milk, yak	Сарлагийн шар тос	6	0.03	15	0	0	0
10_0109	Kumis, milk, mare, from Khangai	Айраг, Булган	136	0.16	19	0	34	25
10_0110	Milk, camel, fermented	Ингэний хоормог	151	0.16	50	171	71	8
10_0006	Milk, mare, raw, from Gobi	Гүүний сүү, Дундговь	111	0.12	15	21	33	4

Table 15 (continued)

Code	Food name in English	Food name in Mongolia	Calcium (mg)	Iron (mg)	Phosphorus (mg)	Potassium (mg)	Sodium (mg)	Magnesium(mg)
10_0111	Curd, milk, yak, sweet, dried	Ааруул, сүү хурууд, сарлагийн сүү	167	0.19	13	111	78	2
10_0112	Curd, milk, camel, dried	Ааруул, ингэний сүү	161	0.20	23	111	51	5
10_0113	Curd, milk, reindeer, dried	Ааруул, цааны сүү	167	0.19	5	185	48	8
10_0114	Kumis, milk, mare, from Gobi	Айраг, Дундговь	140	0.18	6	0	35	6
10_0115	Cream, milk, cow,	Цөцгий	85	0.03	10	113	32	5
10_0007	Milk, reindeer, raw	Цаа бугын сүү	275	0.19	29	302	50	7

Table 15 (continued)

Code	Food name in English	Food name in Mongolia	Vitamin A (μg)	Thiamin (mg)	Riboflavin (mg)	Folate (μg)	Vitamin C (mg)
10_0001	Milk, cow, raw	Үнээний сүү	48	0.156	0.17	9	3.53
10_0002	Milk, goat, raw	Ямааны сүү	37	0.091	0.63	2	27.58
10_0003	Milk, camel, raw	Ингэний сүү	42	0.355	0.34	2	3.43
10_0004	Milk, mare, raw, from Khangai	Гүүний сүү, Булган	25	0.391	0.66	5	6.21
10_0005	Milk, yak, raw	Сарлагийн сүү	8	0.318	0.28	9	1.44
10_0101	Milk, cow, UHT	Халааж ариутгасан сүү	0	0.058	0.04	6	1.19
10_0102	Yogurt, milk, cow, fresh	Элгэн тараг	2	0.091	0.11	8	13.59
10_0103	Curd, milk, cow, fresh	Аарц	0	0.086	0.02	10	2.82

Table 15 (continued)

Code	Food name in English	Food name in Mongolia	Vitamin A (μg)	Thiamin (mg)	Riboflavin (mg)	Folate (μg)	Vitamin C (mg)
10_0104	Curd, milk, cow, dried	Ааруул, үнээний сүү	0	0.018	0.03	15	46.43
10_0105	Cheese, milk yak, fresh	Бяслаг	0	0.213	0.47	63	5.44
10_0106	Eezgii, cheese, boiled	Ээзгий	0	0	0	0	13.79
10_0107	Butter, of 88% fat	Цөцгийн тос	657	0	0	0	3.46
10_0108	Ghee, milk, yak	Сарлагийн шар тос	850	0	0	0	1.32
10_0109	Kumis, milk, mare, from Khangai	Айраг, Булган	0	0.391	0.36	15	10.71
10_0110	Milk, camel, fermented	Ингэний хоормог	0	0.154	0.14	10	2.65
10_0006	Milk, mare, raw, from Gobi	Гүүний сүү, Дундговь	0	0.963	0.38	4	5.20
10_0111	Curd, milk, yak, sweet, dried	Ааруул, сүү хурууд, сарлагийн сүү	0	0.013	0.02	8	15.46

Table 15 (continued)

Code	Food name in English	Food name in Mongolia	Vitamin A (μg)	Thiamin (mg)	Riboflavin (mg)	Folate (μg)	Vitamin C (mg)
10_0112	Curd, milk, camel, dried	Ааруул, ингэний сүү	0	0.038	0.03	12	4.63
10_0113	Curd, milk, reindeer, dried	Ааруул, цааны сүү	0	0.025	0.05	0	5.59
10_0114	Kumis, milk, mare, from Gobi	Айраг, Дундговь	0	0.123	0.12	12	5.73
10_0115	Cream, milk, cow,	Цөцгий	0	0	0	12	1.36
10_0007	Milk, reindeer, raw	Цаа бугын сүү	0	0.456	0.53	0	4.92

11 Seasonings

Cumin or anise is a plant with long, narrow seeds, and the seeds are used whole or ground in a variety of foods.

Cumin is a good source of vitamin A, calcium, and iron.

Jalapeño peppers are a type of spicy chili pepper that may also have health benefits, including fighting cancer, relieving pain, and preventing stomach ulcers. But consuming them may cause a burning feeling in the mouth.

Jalapeño peppers are a good source of fiber and also contain lots of vitamin C and vitamin B6.



Table 16. Seasonings

Code	Food name in English	Food name in Mongolia	Edible portion coefficient	Energy (Kcal)	Water (g)	Protein (g)	Fat (g)	Carbohydrate (g)	Total dietary fiber (g)	Ash (g)
11_0001	Cumin, powder, raw	Гоньд	1.0	68	8.6	1.81	5.29	81.12	-	3.21
11_0002	Jalapeno, raw	Халапено	1.0	83	80.4	1.32	0.69	17.09	1.3	0.51

Table 16 (continued)

Code	Food name in English	Food name in Mongolia	Calcium (mg)	Iron (mg)	Phosphorus (mg)	Potassium (mg)	Sodium (mg)	Magnesium(mg)
11_0001	Cumin, powder, raw	Гоньд	213	1.23	104	326	125	95
11_0002	Jalapeno, raw	Халапено	6	0.35	38	139	3	22

Table 16 (continued)

Code	Food name in English	Food name in Mongolia	Vitamin A (μg)	Thiamin (mg)	Riboflavin (mg)	Folate (μg)	Vitamin C (mg)
11_0001	Cumin, powder, raw	Гоньд	62	0.048	0.048	16	73.28
11_0002	Jalapeno, raw	Халапено	54	0.303	0.211	20	65.37

12. Mushrooms

Mushrooms are a low-calorie food and pack a nutritional punch. Loaded with many health-boosting vitamins, minerals, and antioxidants, they've long been recognized as an important part of any diet. Mushrooms exposed to ultraviolet light are a good source of vitamin D, an important component for bone and immune health.

Cremini mushrooms are an excellent source of zinc, which is an important nutrient for the immune system and is also needed for ensuring optimal growth in infants and children.

Mushrooms are a rich, low-calorie source of fiber, protein, and antioxidants. They may also help to lessen the risk of developing serious health conditions, such as Alzheimer's, heart disease, cancer, and diabetes.



Table 17. Mushrooms

Code	Food name in English	Food name in Mongolia	Edible portion coefficient	Energy (Kcal)	Water (g)	Protein (g)	Fat (g)	Total dietary fiber (g)	Ash (g)
12_0001	Mushroom, button, wild, raw	Бор мөөг (байгалийн)	0.87	123	72.6	23.21	3.07	1.2	1.08

Table 17 (continued)

Code	Food name in English	Food name in Mongolia	Calcium (mg)	Iron (mg)	Phosphorus (mg)	Potassium (mg)	Sodium (mg)	Magnesium(mg)
12_0001	Mushroom, button, wild, raw	Бор мөөг (байгалийн)	14	0.35	12	461	8	143

Table 17 (continued)

Code	Food name in English	Food name in Mongolia	Vitamin A (μg)	Thiamin (mg)	Riboflavin (mg)	Folate (μg)	Vitamin C (mg)
12_0001	Mushroom, button, wild, raw	Бор мөөг (байгалийн)	0	0.018	0.01	14	11.37

13. Prepared foods

Kheviin boov and urum are traditional food products of Mongolia.

Kheviin boov (Mongolian: үл боов) is a traditional Mongolian biscuit assembled in layers and often served as a Lunar New Year and “Naadam”. The number of layers in the cake represents the status of the family. The individual biscuits are stamped with a wooden block that imprints a design unique to the family, passed down through generations.

Dairy products such as urum can be processed only in such climatic conditions since urum’s skin consists of protein-lectin accumulated in the dryer and cooler conditions. Urum is a unique product with a high-fat content, protein and carbohydrates, and the taste of boiled milk.



Table 18. Prepared foods

Code	Food name in English	Food name in Mongolia	Edible portion coefficient	Energy (Kcal)	Water (g)	Protein (g)	Fat (g)	Carbohydrate (g)	Ash (g)
13_010 1	Biscuit, kheviin boov, fried	Хэвийн боов	1.0	456	9.9	7.73	20.71	59.80	1.92
13_010 2	Cream, clotted, milk, yak, boiled	Өрөм, сарлагийн сүү	1.0	585	32.1	4.20	63.08	0.10	0.49

Table 18 (continued)

Code	Food name in English	Food name in Mongolia	Calcium (mg)	Iron (mg)	Phosphorus (mg)	Potassium (mg)	Sodium (mg)	Magnesium(mg)
13_0101	Biscuit, kheviin boov, fried	Хэвийн боов	19	1.00	12	0	176	13
13_0102	Cream, clotted, milk, yak, boiled	Өрөм, сарлагийн сүү	52	0.10	13	1	20	5

Table 18 (continued)

Code	Food name in English	Food name in Mongolia	Vitamin A (μg)	Thiamin (mg)	Riboflavin (mg)	Folate (μg)	Vitamin C (mg)
13_0101	Biscuit, kheviin boov, fried	Хэвийн боов	0	0	0	0	46.33
13_0102	Cream, clotted, milk, yak, boiled	Өрөм, сарлагийн сүү	0	0	0	0	5.49

ANNEXURES

Annex 1. Fatty acids of selected food

Code	Food name in English	Water (g)	Fat (g)	FACID (g)	FAESS (g)	FASAT (g)	F4D0 (mg)	F6D0 (mg)	F8D0 (mg)
05. Fruits and their products									
05_0001	Seabuckthorn, fruit	81.0	2.06	100	59.09	40.81	4350	60	70
05_0102	Seabuckthorn, seed oil	2.3	57.70	100	89.18	10.74	0	0	0
05_0103	Seabuckthorn, oil	1.7	90.37	100	57.11	42.80	0	0	60
06 Nuts, seeds and their products									
06_0001	Cedar (pine) nut kernels	8.6	63.93	100	65.41	34.51	4160	100	0
06_0101	Cedar (pine) nut, raw	8.6	63.93	100	63.27	36.69	6820	110	0
06_0102	Cedar (pine) nuts oil	1.7	90.6	100	65.06	34.87	0	60	0
07. Meat and their products									
07_0001	Beef, meat, boneless, raw, farm	64.4	20.22	100	49.56	50.32	3210	0	0
07_0003	Hourse, meat, boneless, raw	57.6	23.24	100	61.12	38.77	1570	0	0
07_0004	Goat, meat, boneless, raw	69.0	13.77	100	50.94	48.96	8790	80	0
07_0005	Camel, meat, boneless, raw	60.1	18.70	100	52.42	47.34	4740	0	0
07_0006	Yak, meat, boneless, raw	59.6	15.55	100	48.89	50.99	4660	70	0
07_0007	Beef, meat, boneless, raw, from Khangai	8.2	28.75	100	52.42	47.34	4740	0	0
07_0008	Sheep, meat, boneless, raw, from Gobi	53.5	25.66	100	48.89	50.99	4660	70	0
07_0009	Reindeer, meat, boneless, raw, from Taigaeindeer meat, raw	62.5	17.75	100	72.59	27.29	8130	0	0
07_0101	Yak, dried meat, borts	60.2	13.78	100	50.94	48.96	8790	80	0
09. Fish and fish products									
09_0001	Humpback whitefish, frozen, raw	65.2	1.35	100	58.60	41.28	3130	0	0
09_0101	Fish, canned, boiled	65.6	13.56	100	51.17	48.69	3670	0	0

Code	Food name in English	F10D0 (mg)	F12D0 (mg)	F13D0 (mg)	F14D0 (mg)	F15D0 (mg)	F16D0 (mg)	F17D0 (mg)	F18D0 (mg)
05. Fruits and their products									
05_0001	Seabuckthorn, fruit	0	60	80	510	60	31460	1460	2520
05_0102	Seabuckthorn, seed oil	0	0	0	170	100	8430	90	1720
05_0103	Seabuckthorn, oil	50	60	60	450	0	38260	1320	2390
06 Nuts, seeds and their products									
06_0001	Cedar (pine) nut kernels	0	0	0	0	0	5330	110	23420
06_0101	Cedar (pine) nut, raw	0	0	0	0	0	5410	90	23860
06_0102	Cedar (pine) nuts oil	0	0	0	0	0	5510	0	28910
07. Meat and their products									
07_0001	Beef, meat, boneless, raw, farm	100	110	0	3400	600	27400	980	14170
07_0003	Hourse, meat, boneless, raw	60	210	0	3560	310	28490	340	3570
07_0004	Goat, meat, boneless, raw	140	130	0	3300	700	21430	1140	13250
07_0005	Camel, meat, boneless, raw	70	220	0	6010	380	23230	460	11570
07_0006	Yak, meat, boneless, raw	180	100	0	2760	380	23890	790	17100
07_0007	Beef, meat, boneless, raw, from Khangai	0	0	70	440	360	16380	680	14740
07_0008	Sheep, meat, boneless, raw, from Gobi	260	150	0	3020	520	20760	990	15120
07_0009	Reindeer, meat, boneless, raw, from Taigaeindeer meat, raw	0	0	0	830	370	1460	610	14970
07_0101	Yak, dried meat, borts	290	190	0	3380	350	21020	810	9300
09.Fish and fish products									
09_0001	Humpback whitefish, frozen, raw	0	110	0	5220	620	21050	950	2830
09_0101	Fish, canned, boiled	0	150	0	2120	360	14130	990	2700

Code	Food name in English	F20D0 (mg)	F21D0 (mg)	F22D0 (mg)	F23D0 (mg)	F24D0 (mg)	FAUS (g)	FAMS (g)	F14D1 (mg)
05. Fruits and their products									
05_0001	Seabuckthorn, fruit	110	0	0	70	0	59.09	38.76	0
05_0102	Seabuckthorn, seed oil	230	0	0	0	0	89.18	16.27	0
05_0103	Seabuckthorn, oil	150	0	0	0	0	57.11	44.75	0
06 Nuts, seeds and their products									
06_0001	Cedar (pine) nut kernels	1070	0	50	110	160	65.41	6.00	0
06_0101	Cedar (pine) nut, raw	220	0	0	0	180	36.69	4.18	0
06_0102	Cedar (pine) nuts oil	240	0	60	0	90	34.87	3.66	0
07. Meat and their products									
07_0001	Beef, meat, boneless, raw, farm	80	0	0	0	270	49.56	45.94	450
07_0003	Hourse, meat, boneless, raw	440	0	0	0	220	60.84	37.90	230
07_0004	Goat, meat, boneless, raw	0	0	0	0	0	50.75	46.31	220
07_0005	Camel, meat, boneless, raw	0	0	0	90	570	50.99	40.00	210
07_0006	Yak, meat, boneless, raw	0	0	0	110	950	48.73	35.75	250
07_0007	Beef, meat, boneless, raw, from Khangai	0	250	0	650	3780	60.65	20.97	0
07_0008	Sheep, meat, boneless, raw, from Gobi	110	0	0	70	650	49.94	44.65	250
07_0009	Reindeer, meat, boneless, raw, from Taigaeindeer meat, raw	70	0	0	690	160	72.37	39.56	330
07_0101	Yak, dried meat, borts	0	0	0	0	670	53.75	44.34	830
09. Fish and fish products									
09_0001	Humpback whitefish, frozen, raw	410	1660	0	1330	3970	58.62	23.43	510
09_0101	Fish, canned, boiled	1010	2620	0	1740	19200	51.04	27.35	210

Code	Food name in English	F16D1 (mg)	F17D1 (mg)	F18D1N9 (mg)	F18D1N7 (mg)	F20D1 (mg)	F22D1 (mg)	F24D1 (mg)	FAPU (g)
05. Fruits and their products									
05_0001	Seabuckthorn, fruit	31000	0	5710	-	0	2050	0	20.33
05_0102	Seabuckthorn, seed oil	2430	0.00	13150	-	120	570	0.00	72.91
05_0103	Seabuckthorn, oil	37850	0.00	6480	-	0	420	0.00	12.36
06 Nuts, seeds and their products									
06_0001	Cedar (pine) nut kernels	0	0	2150	-	270	3580	0	59.41
06_0101	Cedar (pine) nut, raw	0	0	1850	-	910	1420	0	59.09
06_0102	Cedar (pine) nuts oil	0	0	2130	-	970	560	0	61.40
07. Meat and their products									
07_0001	Beef, meat, boneless, raw, farm	3620	0	40670	-	0	1200	0.00	3.38
07_0003	Hourse, meat, boneless, raw	7220	0.00	29890	-	0	570	0.00	22.94
07_0004	Goat, meat, boneless, raw	550	70	42600	-	0	2870	0.00	4.44
07_0005	Camel, meat, boneless, raw	400	1260	37090	-	100	940	0.00	10.99
07_0006	Yak, meat, boneless, raw	3840	0.00	30500	-	0	1150	0.00	12.99
07_0007	Beef, meat, boneless, raw, from Khangai	440	160	20160	-	0	210	0.00	39.68
07_0008	Sheep, meat, boneless, raw, from Gobi	480	570.00	41130	-	60	2160	0.00	5.29
07_0009	Reindeer, meat, boneless, raw, from Taigaeindeer meat, raw	640	270.00	37210	-	0	1110	0.00	32.81
07_0101	Yak, dried meat, borts	380	1080.00	39700	-	0	2350	0.00	9.41
09. Fish and fish products									
09_0001	Humpback whitefish, frozen, raw	200	410	21360	-	0	950	0.00	35.17
09_0101	Fish, canned, boiled	330	240	25690	-	0	880	0.00	23.69

Code	Food name in English	F18D2N6 (mg)	F18D3N3 (mg)	F18D3N6 (mg)	F20D2N6 (mg)	F20D3N3 (mg)	F20D3N6 (mg)	F20D4N6 (mg)	F20D5N3 (mg)
05. Fruits and their products									
05_0001	Seabuckthorn, fruit	14370	4400	0	140	0	0	0	220
05_0102	Seabuckthorn, seed oil	35510	37030	0	0	0	0	0	0
05_0103	Seabuckthorn, oil	11220	830	0	0	0	0	0	80.0
06 Nuts, seeds and their products									
06_0001	Cedar (pine) nut kernels	55040	370	60	1270	0	0	0	0
06_0101	Cedar (pine) nut, raw	56450	360	0	1380	0	0	0	70.0
06_0102	Cedar (pine) nuts oil	59500	350	0	1290	0	0	0	0
07. Meat and their products									
07_0001	Beef, meat, boneless, raw, farm	1170	720	130	0	460	110	0	0
07_0003	Hourse, meat, boneless, raw	7510	14460	0	140	290	60	290	0
07_0004	Goat, meat, boneless, raw	970	700	0	100	440	0	0	140
07_0005	Camel, meat, boneless, raw	6570	1010	0	530	1380	190	0	0
07_0006	Yak, meat, boneless, raw	6380	2520	70	60	2290	240	0	0
07_0007	Beef, meat, boneless, raw, from Khangai	21760	4090	0	240	0	1730	10220	0
07_0008	Sheep, meat, boneless, raw, from Gobi	170	1330	0	410	1210	0	0	90
07_0009	Reindeer, meat, boneless, raw, from Taigaeindeer meat, raw	20540	1020	0	60	10030	410	0	0
07_0101	Yak, dried meat, borts	4110	1780	0	0	1330	0	0	120
09. Fish and fish products									
09_0001	Humpback whitefish, frozen, raw	4840	6970	0.00	140.0	6670	190.0	0.00	15660
09_0101	Fish, canned, boiled	2710	4720	70.0	620.0	4310	310.0	1770	8540

Code	Food name in English	F22D2 (mg)	F22D6N3 (mg)	FAPUN3 (g)	FAPUN6 (g)
05. Fruits and their products					
05_0001	Seabuckthorn, fruit	220	1200	5.60	14.37
05_0102	Seabuckthorn, seed oil	0	370	37.40	35.51
05_0103	Seabuckthorn, oil	80.0	230	1.06	11.22
06. Nuts, seeds and their products					
06_0001	Cedar (pine) nut kernels	0	2670	3.04	55.10
06_0101	Cedar (pine) nut, raw	70.0	750	1.19	56.45
06_0102	Cedar (pine) nuts oil	0	260	0.61	59.50
07. Meat and their products					
07_0001	Beef, meat, boneless, raw, farm	0	140	14.94	7.86
07_0003	Hourse, meat, boneless, raw	0	1930	3.23	0.97
07_0004	Goat, meat, boneless, raw	140	850	3.23	6.76
07_0005	Camel, meat, boneless, raw	0	530	6.24	6.69
07_0006	Yak, meat, boneless, raw	0	150	5.73	33.71
07_0007	Beef, meat, boneless, raw, from Khangai	0	1620	4.62	0.02
07_0008	Sheep, meat, boneless, raw, from Gobi	90	0	11.80	20.95
07_0009	Reindeer, meat, boneless, raw, from Taigaeindeer meat, raw	0	150	5.73	33.71
07_0101	Yak, dried meat, borts	120	1500	5.18	4.11
09. Fish and fish products					
09_0001	Humpback whitefish, frozen, raw	260	440	29.74	5.03
09_0101	Fish, canned, boiled	80	560	18.13	4.86

Code	Food name in English	Water (g)	Fat (g)	FACID (g)	FAESS (g)	FASAT (g)	F4D0 (mg)	F6D0 (mg)	F8D0 (mg)
10. Milk and milk products									
10_0001	Milk, cow, raw	90.4	3.98	100	34.59	64.03	6080	1360	1160
10_0002	Milk, goat, raw	85.2	4.46	100	25.43	73.92	4550	1680	2600
10_0003	Milk, camel, raw	87.6	4.99	100	31.94	67.62	13950	130	380
10_0004	Milk, mare, raw, from Khangai	89.1	1.83	100	56.79	43.01	5350	110	2200
10_0005	Milk, yak, raw	81.9	6.57	100	30.57	68.52	4200	1790	1450
10_0101	Milk, cow, UHT	88.4	3.59	100	32.27	67.27	5680	1490	1270
10_0102	Yogurt, milk, cow, fresh	88.8	2.40	100	24.50	75.19	9140	1730	1520
10_0104	Curd, milk, cow, dried	22.7	8.00	100	30.96	68.63	4980	1040	1000
10_0105	Cheese, milk yak, fresh	52.0	8.53	100	35.09	64.15	3320	1700	1120
10_0106	Eezgii, cheese, boiled	5.1	11.34	100	29.72	69.97	4450	1990	1670
10_0107	Butter, of 88% fat	9.3	88.66	100	31.11	68.51	730	1850	1480
10_0108	Ghee, milk, yak	0.4	99.58	100	16.49	82.67	950	2970	2250
10_0109	Kumis, milk, mare, from Khangai	95.2	1.54	100	62.91	36.80	2260	120	2080
10_0110	Milk, camel, fermented	89.1	5.54	100	34.99	64.61	6930	110	300
10_0006	Milk, mare, raw, from Gobi	89.2	1.55	100	53.48	46.29	5400	120	2100
10_0112	Curd, milk, camel, dried	29.5	42.65	100	33.96	65.64	9620	110	280
10_0113	Curd, milk, reindeer, dreid	8.9	55.98	100	26.78	72.86	2910	970	280
10_0114	Kumis, milk, mare, from Gobi	94.5	1.64	100	54.04	45.59	140	140	1980
10_0115	Cream, milk, cow, raw	46.1	39.84	100	30.74	68.88	690	1890	1620
10_0007	Milk, reindeer, raw	40.0	20.55	100	29.91	69.56	3440	1040	350
13. Prepared food									
13_0102	Cream, clotted, milk, yak, boiled	32.1	63.08	100	14.25	84.55	0	2280	1730

Code	Food name in English	F10D0 (mg)	F12D0 (mg)	F13D0 (mg)	F14D0 (mg)	F15D0 (mg)	F16D0 (mg)	F17D0 (mg)	F18D0 (mg)
10 Milk and milk products									
10_0001	Milk, cow, raw	2400	2800	90	10580	1530	28090	620	8670
10_0002	Milk, goat, raw	10200	5100	90	12230	1160	32040	480	3700
10_0003	Milk, camel, raw	350	1800	120	16430	1760	22790	620	8900
10_0004	Milk, mare, raw, from Khangai	4690	5630	0	5850	250	16700	720	730
10_0005	Milk, yak, raw	3040	2830	100	11690	2970	32940	860	6650
10_0101	Milk, cow, UHT	2750	3530	100	12010	1510	29580	600	8390
10_0102	Yogurt, milk, cow, fresh	3670	6220	100	14210	1220	29600	400	7280
10_0104	Curd, milk, cow, dried	2620	3280	80	12030	1310	29350	630	9660
10_0105	Cheese, milk yak, fresh	2130	1640	90	9330	3070	32620	950	7990
10_0106	Eezgii, cheese, boiled	3410	2620	60	10090	1340	34720	390	9090
10_0107	Butter, of 88% fat	3120	3570	90	13550	1440	32680	570	8800
10_0108	Ghee, milk, yak	4450	3830	110	14990	2020	50070	560	120
10_0109	Kumis, milk, mare, from Khangai	4230	5060	0	5540	300	16310	150	750
10_0110	Milk, camel, fermented	290	1630	100	15880	1640	23890	630	10900
10_0006	Milk, mare, raw, from Gobi	4750	6070	0	6970	440	18510	670	710
10_0112	Curd, milk, camel, dried	270	1740	110	14980	1560	23280	680	12880
10_0113	Curd, milk, reindeer, dried	550	850	100	13060	880	40310	470	12180
10_0114	Kumis, milk, mare, from Gobi	4260	6120	0	8150	410	22400	870	830
10_0115	Cream, milk, cow, raw	3540	4080	90	14450	1380	32340	530	8210
10_0007	Milk, reindeer, raw	690	900	0	13510	1600	39060	550	8420
13. Prepared food									
13_0102	Cream, clotted, milk, yak, boiled	3490	3110	140	14310	4190	43150	1200	10890

Code	Food name in English	F20D0 (mg)	F21D0 (mg)	F22D0 (mg)	F23D0 (mg)	F24D0 (mg)	FAUS (g)	FAMS (g)	F14D1 (mg)
10. Milk and milk products									
10_0001	Milk, cow, raw	280	0	0	0	370	34.59	29.82	860
10_0002	Milk, goat, raw	90	0	0	0	0	25.43	22.20	490
10_0003	Milk, camel, raw	0	0	0	80	310	31.94	26.78	1190
10_0004	Milk, mare, raw, from Khangai	160	0	0	0	620	56.79	15.11	600
10_0005	Milk, yak, raw	0	0	0	0	0	30.57	27.79	930
10_0101	Milk, cow, UHT	360	0	0	0	0	32.27	28.35	940
10_0102	Yogurt, milk, cow, fresh	100	0	0	0	0	24.50	22.40	1010
10_0104	Curd, milk, cow, dried	450	0	0	0	2200	30.96	27.41	910
10_0105	Cheese, milk yak, fresh	190	0	0	0	0	35.09	32.14	420
10_0106	Eezgii, cheese, boiled	140	0	0	0	0	29.72	26.96	480
10_0107	Butter, of 88% fat	420	0	0	0	210	31.11	27.53	1050
10_0108	Ghee, milk, yak	350	0	0	0	0	16.49	14.02	760
10_0109	Kumis, milk, mare, from Khangai	0	0	0	0	0	62.91	16.93	560
10_0110	Milk, camel, fermented	180	0	0	0	2130	34.99	30.13	1070
10_0006	Milk, mare, raw, from Gobi	160	0	0	0	390	53.48	17.55	860
10_0112	Curd, milk, camel, dried	60	0	0	0	70	33.96	29.98	880
10_0113	Curd, milk, reindeer, dreid	70	0	0	0	230	26.78	23.24	440
10_0114	Kumis, milk, mare, from Gobi	290	0	0	0	0	54.04	22.56	1030
10_0115	Cream, milk, cow, raw	0	0	0	0	60	30.74	27.67	1120
10_0007	Milk, reindeer, raw	0	0	0	0	0	29.91	26.41	500
13. Prepared food									
13_0102	Cream, clotted, milk, yak, boiled	0	0	0	0	60	14.25	10.15	940

Code	Food name in English	F16D1 (mg)	F17D1 (mg)	F18D1N9 (mg)	F18D1N7 (mg)	F20D1 (mg)	F22D1 (mg)	F24D1 (mg)	FAPU (mg)
10. Milk and milk products									
10_0001	Milk, cow, raw	250	0.00	26970	-	0	1740	0.00	4.77
10_0002	Milk, goat, raw	650	0.00	19520	-	0	1540	0.00	3.23
10_0003	Milk, camel, raw	710	100	22520	-	90	2170	0.00	5.16
10_0004	Milk, mare, raw, from Khangai	0	0	13140		100	1270	0	41.68
10_0005	Milk, yak, raw	290	0.00	26080	-	0	490	0.00	2.78
10_0101	Milk, cow, UHT	300	0.00	26420	-	0	690	0.00	3.92
10_0102	Yogurt, milk, cow, fresh	330	0.00	20570	-	0	500	0.00	2.10
10_0104	Curd, milk, cow, dried	360	0.00	25620	-	0	520	0.00	3.55
10_0105	Cheese, milk yak, fresh	230	90.00	30990	-	0	410	0.00	2.95
10_0106	Eezgii, cheese, boiled	190	0.00	25830	-	0	460	0.00	2.76
10_0107	Butter, of 88% fat	360	0.00	25720	-	0	400	0.00	3.58
10_0108	Ghee, milk, yak	320	0.00	12410	-	0	530	0.00	2.47
10_0109	Kumis, milk, mare, from Khangai	0	870.00	14500	-	0	1000	0.00	45.98
10_0110	Milk, camel, fermented	660	0.00	27080	-	0	1320	0.00	4.86
10_0006	Milk, mare, raw, from Gobi	0	0.00	16050	-	0	640	0.00	35.93
10_0112	Curd, milk, camel, dried	560	0.00	27630	-	90	820	0.00	3.98
10_0113	Curd, milk, reindeer, dried	250	0.00	22080	-	0	470	0.00	3.54
10_0114	Kumis, milk, mare, from Gobi	80	0.00	20930	-	0	520	0.00	31.48
10_0115	Cream, milk, cow, raw	340	0.00	25830	-	0	380	0.00	3.07
10_0007	Milk, reindeer, raw	310	0.00	24890	-	0	710	0.00	3.50
13. Prepared food									
13_0102	Cream, clotted, milk, yak, boiled	380	0.00	8170	-	0	660	0.00	4.10

Code	Food name in English	F18D2N6 (mg)	F18D3N3 (mg)	F18D3N6 (mg)	F20D2N6 (mg)	F20D3N3 (mg)	F20D3N6 (mg)	F20D4N6 (mg)	F20D5N3 (mg)
10. Milk and milk products									
10_0001	Milk, cow, raw	2300	950	0.00	0.00	130	0	0	170
10_0002	Milk, goat, raw	1220	740	0.00	90.00	90	0.00	0.00	100.00
10_0003	Milk, camel, raw	2140	920	0	70	80	0	70	330
10_0004	Milk, mare, raw, from Khangai	10390	29730	0	210	0	0	420	320
10_0005	Milk, yak, raw	1020	1070	0	0	90	0	60	150
10_0101	Milk, cow, UHT	2160	950	60	0	150	0	0	140
10_0102	Yogurt, milk, cow, fresh	810	1030	0	0	0	0	0	0
10_0104	Curd, milk, cow, dried	1500	1390	0	0	120	0	0	260
10_0105	Cheese, milk yak, fresh	1120	1050	120	70	150	0	0	130
10_0106	Eezgii, cheese, boiled	1030	1340	0	0	110	0	0	0
10_0107	Butter, of 88% fat	1700	1430	0	0	50	0	0	110
10_0108	Ghee, milk, yak	1030	1340	0	0	0	0	0	100
10_0109	Kumis, milk, mare, from Khangai	11650	33190	0	100	0	0	470	0
10_0110	Milk, camel, fermented	2330	1120	0	120	110	0	0	270
10_0006	Milk, mare, raw, from Gobi	11640	23340	0	200	0	0	330	170
10_0112	Curd, milk, camel, dried	2060	940	0	80	80	0	0	200
10_0113	Curd, milk, reindeer, dreid	1940	1130	0	0	120	0	0	70
10_0114	Kumis, milk, mare, from Gobi	9870	20590	0	250	0	0	420	130
10_0115	Cream, milk, cow, raw	1380	1210	0	0	80	0	0	100
10_0007	Milk, reindeer, raw	2410	190	250	0	190	0	0	0
13. Prepared food									
13_0102	Cream, clotted, milk, yak, boiled	1140	480	1540	140	160	0	0	180

Code	Food name in English	F22D2 (mg)	F22D6N3 (mg)	FAPUN3 (mg)	FAPUN6 (g)
10. Milk and milk products					
10_0001	Milk, cow, raw	0.00	1220	2.47	2.30
10_0002	Milk, goat, raw	0.00	990	1.82	1.22
10_0003	Milk, camel, raw	60	1490	2.82	2.21
10_0004	Milk, mare, raw, from Khangai	0	610	30.66	10.81
10_0005	Milk, yak, raw	70	320	1.63	1.08
10_0101	Milk, cow, UHT	0	460	1.70	2.22
10_0102	Yogurt, milk, cow, fresh	0	260	1.29	0.81
10_0104	Curd, milk, cow, dried	90	190	1.96	1.50
10_0105	Cheese, milk yak, fresh	70	240	1.57	1.24
10_0106	Eezgii, cheese, boiled	0	280	1.73	1.03
10_0107	Butter, of 88% fat	0	290	1.88	1.70
10_0108	Ghee, milk, yak	0	300	1.74	1.03
10_0109	Kumis, milk, mare, from Khangai	100	470	33.66	19.12
10_0110	Milk, camel, fermented	0	910	2.41	2.33
10_0006	Milk, mare, raw, from Gobi	0	250	23.76	11.97
10_0112	Curd, milk, camel, dried	0	620	1.84	2.06
10_0113	Curd, milk, reindeer, dried	0	280	1.60	1.94
10_0114	Kumis, milk, mare, from Gobi	80	140	20.86	10.29
10_0115	Cream, milk, cow, raw	0	300	1.69	1.38
10_0007	Milk, reindeer, raw	0	460	0.84	2.66
13. Prepared products					
13_0102	Cream, clotted, milk, yak, boiled	60	400	1.22	2.68

Annex 2. List of recipes

1. Kheviin boov (biscuit)

Ingredients (12 numbers which products weigh about 650g)

Ingredients	Weight (g)
Wheat flour	5000
Sugar	1200
Shar tos (Ghee-fatty dairy products)	1200
Milk (cow milk)	1000
Water	800
Yield, %	144

Procedure

Mix and knead the ingredients after adding wheat, water, milk, sugar, and shar tos. The dough is kept aside for approximately twenty minutes. The dough is divided into equal portions, shaped, round, and Stamped into the special wooden block it is named “Hevtei ul”. It is then fried in the oil and separated the product from oil.

2. Urum (Fatty dairy products)

Ingredients (The milk fat content is 6.6%)

Ingredients	Weight (g)
Milk (Yak milk)	5000
Yield, %	20

Procedure

Heat the milk and stir until it foams largest volumes. It is then down skin consisting of protein-lectin accumulated in the dryer and cooler conditions.

Annex 3. Food groups

No	Food groups	Composition	BibliID
1	Cereals their products	Promaxites Minerals Vitamins Fatty acids Fiber	P1-P20 M2-M7, M9-M20 V2, V4-V19
2	Starchy Roots & Tubers	Promaxites Minerals Vitamins Fatty acids Fiber	P5-P6, P10-P13, P15, M5-M6, V4-V6, V9-V12, V14
3	Pulses, legumes and their products	Promaxites Minerals Vitamins Fatty acids Fiber	P1-P2, P5-P6, P10-P13, P15 V2-V5, V9-V13, V15 M5, M6, M10-M13, M15, F4
4	Vegetables and their products	Promaxites Minerals Vitamins Fatty acids Fiber	P5-P6,P8-P9, P11-P14, M5- M6, M9, M11-M14, V4, V5,V11-V13
5	Fruits and their products	Promaxites Minerals Vitamins Fatty acids Fiber	P5,P6,P8,P9, P11-P13, P14- P15, V1,V4-V6, V10-V13, V15, V17, M5, M6, M8, M9, 11- M14, M16 F1, F2

No	Food groups	Composition	Biblioid
6	Nuts, seeds and their products	Promaxites Minerals Vitamins Fatty acids Fiber	P5, P7, P8, P11-P13, P15-P16, F2, M5, M8, M10-M13, M15-M16, V7, V10-V12, V17-V18
7	Meat and their products	Promaxites Minerals Vitamins Fatty acids Fiber	P5-P6, P8-P12, P13-P14, P17, M5-M6, M8, M10-M12, M14,M17, V7-V11, V13, V15-V16,
8	Egg and their products	Promaxites Minerals Vitamins Fatty acids Fiber	P5,P10-P11,P14, M5, M10-M11, M14, V4,V9-V10, V13
9	Fish and thear products	Promaxites Minerals Vitamins Fatty acids Fiber	P11, M11, V10,
10	Milk and dairy products	Promaxites Minerals Vitamins Fatty acids Fiber	P5, P8-P14, M5, M8-M14, V4, V7-V13
11	Seasonings	Promaxites Minerals Vitamins Fatty acids Fiber	P6, P11, P13, M6, M11, M13, V5,V10, V12

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