Food Composition Table for use in The Gambia

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Contents

Foreword

Accurate food composition data is the cornerstone of dietary assessment. There are many methods of collecting information on the types and quantity of foods eaten but in order to derive any quantitative assessment of the nutritional value of that food the use of reliable food composition data is essential.

The collection of dietary data in The Gambia started in the 1970s. At the time there were food composition tables for foods eaten in Africa but nutrient values were only for the raw ingredients. Following the example set by McCance and Widdowson's food composition tables for the UK it was recognised that what was needed was the nutrient composition of prepared foods. So, in addition to recording foods eaten by people living in rural Gambia, samples of those cooked foods were sent back to the MRC laboratory in Cambridge for analysis. Not all nutrients could be analysed but researchers in the field also collected information on the quantities of ingredients that were combined to make up dishes; thus arriving at a series of standard recipes that could be used for calculations if the nutrient content of the ingredients could be found in the existing literature.

Thus what started as a limited number of foods and nutrients has grown over the years into a useful compendium of foods eaten in rural Gambia. It is hoped that the wider dissemination of these Tables may assist others working in West African countries with similar foods and dietary habits.

Acknowledgements

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Introduction

Dietary intake studies have been an integral component of the UK Medical Research Council's (MRC's) nutritional research programme in the West Kiang District of The Gambia over many years. A food composition database has been developed during this time, and the present publication brings this together with the aim of making it more widely available to users in The Gambia and elsewhere. While it relates to one particular area of The Gambia, the foods encountered are characteristic of many other areas in the Sahel zone of West Africa.

The nutrient composition of the most commonly consumed rural Gambian foods as prepared by Mandinka people is given in the Food Composition Table. These are mostly cooked cereal foods and sauces, plus some of the main vegetables, fruits, fish and other foods. The Tables do not aim to cover foods consumed in urban areas of The Gambia where these differ from rural foods. Nutritional values for a much wider collection of food plants are given in Tattersall's publication from the Ministry of Agriculture and Natural Resources in The Gambia[1]. Further descriptions of the foods and the rural Gambian diet are given in McCrae & Paul's Foods of Rural Gambia[2]. Guidance on how to use food composition data is given in GAFNA Handbook No 1[3].

Sources of data

The original MRC Gambian nutrient database was derived from chemical analysis of foods most commonly consumed by young children[4]. This covered basic cooked cereals and prepared sauces, but not many of the possible variations of the basic sauces or many mixtures of cereals and sauces which were encountered when dietary recording was extended to adults[5,6]. In order to facilitate more recent computer coding of the dietary records, these mixtures were calculated and added to the database[7]. Some of the nutritive values for fruits, vegetables and some minor items were obtained from other published sources, as shown in Appendix 1. There are 463 foods in the Table.

Foods analysed

The information for the 38 basic foods is derived mainly from analyses of numerous individual samples of cooked foods collected in Keneba, Manduar and Kanton Kunda over many years (1974 to 1990). They were sent to Cambridge and analysed for water and protein (nitrogen x 6.25)[8]. Fat, available carbohydrates and fibre (unavailable carbohydrate, Southgate procedure) were analysed in pooled samples of the 10 most important foods[8]. Although more recent analyses of non-starch polysaccharides in Gambian foods by the Englyst method gave lower values for fibre[9], the Southgate values were retained for the present Food Composition Table, as they are compatible with the starch and sugars values for the same foods. Calcium and phosphorus were analysed in leaves, fish, other raw ingredients, and also in samples of cooked dishes[6]. Zinc and phytate were analysed in 16 common cooked cereal dishes and in fish and leaves[10]. Carotene was determined in key source foods, such as those containing green leaves or palm oil[11]. Further details of all analyses are given in Appendix 2.

Calculated values and recipes

Values from the analysed foods were also used for closely related foods, correcting for water content if appropriate. Sometimes a food could be adopted from another, and only one or two nutrients recalculated. The information for the remaining cooked cereal dishes and sauces in the Food Composition Table has been obtained by calculation from the ingredients, using recipe information primarily from Hudson[12], as described by Prynne *et al*[7]. Details of these calculations are given in Appendix 3.

Literature sources

These were used primarily for vitamin C and iron. Other literature values were mostly for items such as fruits and vegetables, or for minor non-local foods such as tinned milk and tea. Such information was obtained from published sources, details are given in Appendix 1. The information was scrutinised for factors such as food identity, expression of data, appropriateness for the present table, method of analysis and water content, following appropriate guidance[13,14].

Key to sources of data

The data sources for each food are noted in the Tables, as a letter key, A (most nutrients analysed), C (calculated from a related food), R (calculated from a recipe), L (literature) and E (estimated from a related food). For the analysed foods (A) and for data obtained from the literature (L), further details and reference numbers are given in Appendix 1. Details of recipes are given in Appendix 3.

Food descriptions

The foods are arranged in 17 sections, in order of cereals, groundnuts and sauces, leaf sauces, vegetables, fruit, nuts, fish, meat, milk, oils, sugars, water and drinks. Most of the cooked dishes are given by their Mandinka names, a few basic foods are in English, following the practice of local staff. Mandinka-Wolof-English vocabularies and further details of the foods are given in Appendix 4. Taxonomic names for plant foods and for fish are given in Appendix 5.

Expression of nutrients

All values are expressed per 100g edible portion, that is excluding the weight of material such as fruit stones or fish bones.

Food Codes These are in the range 4001 to 4999. The two letter food codes were the ones originally used, and are given again here to retain the familiar identification of the foods. These codes range from AA (4001) to ZZ (4676), using a mnemonic to assign the correct numerical code to letters. They were designed as a two level indictor, first letter for the cereal, e.g. R for rice, and second letter for the mode of preparation, e.g. mono. However, this became limited when there were numerous foods, so not all foods follow it. Three letter codes were used for the newer recipe calculations of mixed cereal and sauce dishes, based on the same principles.

Food Groups The food group sub-headings are those used for nutrient data analysis. There are 144 groups, whose numbers range from 101 to 284.

Protein is calculated from total nitrogen x 6.25 for all foods.

Carbohydrate is the sum of sugars, dextrin, starch and glycogen and is *available carbohydrate expressed as the monosaccharide equivalents*[13,18]. This means that sugar, code 4539, has 105g available carbohydrate per 100g. For foods taken from published tables[15,16] where carbohydrate is obtained 'by difference', values for available carbohydrate are estimated.

Fibre (unavailable carbohydrate or dietary fibre) is defined as the sum of polysaccharides and lignin which are not digested by the human gastrointestinal tract[13]. It is also expressed as monosaccharide equivalents. For foods taken from published tables[15,16] where crude fibre is given, values for total dietary fibre are estimated.

Available energy (metabolisable energy) values are calculated using the factors[13]:-

kilocalories (kcal) per g: protein = 4, fat = 9, carbohydrate = 3.75
kilojoules (kJ) were calculated as kilocalories x 4.184

For foods taken from published tables, energy values have been re-calculated using these factors.

Carotene is expressed as β-carotene equivalents, which is the sum of β-carotene plus half the α-carotene. This is important for palm oil, in which 45 % of the total carotene is α-carotene[11]. Leaves and

mangoes have no α-carotene. Where the different carotenoids had not been measured in other foods, they were assumed to be all β-carotene.

Tagnames The internationally recognised abbreviations for the nutrients (components) in the Tables are shown below:

Component	Tagname	Component	Tagname
Energy, kcal	ENERGYC	Water	WATER
Energy, kJ	ENERGYC	Calcium	CA
Protein	PROCNT	Phosphorus	P
Fat	FAT	Iron	FE
Carbohydrate	CHOAVLM	Zinc	ZN
Fibre	FIBTS	Carotene	CARBEQ
Phytate	PHYTAC	Vitamin C	VITC

From INFOODS[17]

Bioavailability of nutrients

The values given in the Tables, apart from carotene, give the total amount of the constituent in the food. There are many factors that influence bioavailability, and these can depend on the physiological state of the individual as well as the interactions of dietary components[18]. Fibre and phytate can inhibit absorption of some minerals, while vitamin C can enhance iron absorption.

Notes on food groups

Cereals A large number of items are given for rice, the main staple. A few foods are given for the other cereals, even though some, for example findo, are not often consumed nowadays. As it is usual practice, dried baobob leaf (naa) has been included in the steamed cereals futo and nyelengo. This makes an important contribution to micronutrients such as calcium and carotene.

Sauces These contain many ingredients, and can differ according to region of the country. For these Tables, sauces called 'jambo' have been assumed to contain groundnuts, while those called 'kucha' to have no groundnuts. Nomenclature for leaves can be the same for the leaf itself and for a sauce made from those leaves. The use of chilli peppers (kano) is specified in the Tables as this makes an important contribution to micronutrients such as calcium, iron, carotene and vitamin C. A similar situation holds for dried baobab leaves (naa).

Fish A large number of options for items containing fish are included as the three main fish *furo, challo* and *kujalo*, are used fresh or dried. Other fish are consumed occasionally and each of these varieties was related back to one of the main types, based on size and whether bones are discarded, as shown below:

Fish	Fish for coding	Fish	Fish for coding
Feta, fresh	Kujalo, fresh	Tabasse, fresh	Kujalo, fresh
Feta, dried	Kujalo, dried	Tabasse, dried	Kujalo, dried
Jotto, fresh	Challo, fresh	Tambajango, fresh	Furo, fresh
Jotto, dried	Kujalo, dried	Tambajango, dried	Challo, dried
Koso, fresh	Kujalo, fresh	Tarorow, fresh	Kujalo, fresh
Koso, dried	Kujalo, dried	Tarorow, dried	Kujalo, dried
Kunkalengo, fresh	Kujalo, fresh	Wangkango, fresh	Kujalo, fresh
Kunkalengo, dried	Kujalo, dried	Wangkango, dried	Kujalo, dried

If a fish has been weighed whole, but the bones are then discarded, the nutrient values should be multiplied by 0.9 for kujalo and 0.7 for other fish, these factors being the average edible proportions[2].

Use of the Tables

Variability in food composition

Average values are shown in the Table, but it should be remembered that all foods vary in composition between different samples and according to exact ingredients, and on the recipe calculation. The values in the Tables are therefore a guide, and should not be thought of as the exact composition for any of the foods. They may differ from those in other published sources.

Water content is an important determinant of energy density of a food which contains little or no fat, as is the case for most of the foods in

the Table. Examples of variability in water content are given below:

Food code number	Letter code	Food	Water, mean, g/100g	sd	No. of samples
4451	RI	Mani fajiringo	65.8	5.5	2666
4637	YM	Sanyo mono	87.9	3.8	107
4274	KN	Kinti futo and naa	37.9	6.4	46
4501	TG	Tia durango	79.5	4.3	150

From Dibba *et al*[19], Hudson *et al*[8]

Carotene and vitamin C are particularly variable, ranges of some important foods in this respect in the Table are given below:

Food code number	Letter code	Food	Carotene µg/100g	Vitamin C mg/100g
4192	HJ	Jambo sauce	1100-7300	
4207	HY	Kucha sauce	200-2500	
4043	BQ	Chilli pepper, dried	120-1200	2-50
4033	BG	Tomatoes	200-1000	
4323	MK	Mangoes, unripe	30-80	
4314	MB	Mangoes, ripe	1500-3400	10-180
4561	VO	Oranges		35-80
4550	VD	Baobab fruit		302-445
4554	VH	Palm oil	56700-71800	

From Villard & Bates[11], Platt[15], Wu Leung *et al*[16]

Calculation of nutrient intake

The calculation of nutrient intake needs information on the amount of a food eaten, and its composition. For most of the MRC studies of nutrient intake in The Gambia, the meals have been weighed[4,5,6,7], while snack foods such as fruits and handfuls of groundnuts are estimated using portion sizes. A list of the measured portion sizes is given in Appendix 6[20].

DINO coding and nutrient analysis program

A direct entry computer program DINO (Diet In Nutrients Out) has been prepared in MS-Access. This is a new procedure derived from the original program DIDO devised by the MRC Dunn Nutrition Unit which has been described elsewhere[7]. The DINO program is designed for coding dietary records on screen and for conducting nutrient analysis of those diets. The food items are chosen from a menu in which the foods are arranged in sections similar to those given in these Tables. The nutrient analysis uses the food composition database from which these Tables were printed.

Computer file of the Tables

The Tables in computer readable format is available from MRC Human Nutrition Research, Cambridge, UK.

Foods not in the Tables

It is inevitable that users will encounter a food that is not in the Tables. There are a number of options take:

a) Find a closely related food, e.g. mono for sato, nyelengo for serengo.
b) Combine two foods, or add another ingredient to an existing food.
c) If a mixed dish, obtain information on the amounts of ingredients and calculate the composition as shown in Appendix 3.
d) Use other food composition tables[15,16,18] or if facilities available, the internet for foods such as fruit, fish or purchased, manufactured items.

Probable level of accuracy when using the Tables

The variations in the composition of foods have a considerable influence on the level of accuracy that one can expect from food tables[13]. The greater the number of items in the diet, the more people that are studied and the greater the number of days all increase the accuracy of calculated average intakes. As close a match as possible to the food items actually consumed also increases accuracy.

Superscript numbers refer to the references given at the end of the document.

Composition per 100g

Food group	Code	Letter code	Name	Energy kcal	Energy kJ	Protein g	Fat g	Carbo-hydrate g	Fibre g	Phytate g	Water g
1. - Rice (Mano)											
101	4393	PC	Mani dempetengo	338	1414	7.2	1.2	79.5	7.8	0.18	10
101	4460	RR	Mani monko	327	1368	7.0	1.2	76.8	6.9	0.17	13
101	4451	RI	Mani fajiringo	114	477	2.7	0.5	26.7	2.9	0.06	66
1.1 - Mani Fajiringo and Tia Durango											
102	4449	RG	Mani fajiringo and tia durango	108	452	3.5	2.2	21.5	2.3	0.10	71
105	4708	RBV	Mani fajiringo, tia durango, chilli pepper and naa	108	453	3.1	1.9	21.6	2.6	0.07	69
102	4711	RBE	Mani fajiringo, tia durango, chilli pepper and okra	106	444	3.0	1.7	21.5	2.6	0.07	70
102	4712	RBD	Mani fajiringo, tia durango and tomato	107	447	3.0	1.8	21.5	2.6	0.07	70
102	4713	RFW	Mani fajiringo, tia durango and mango slices	107	448	2.9	1.6	22.0	2.6	0.07	70
102	4715	RQA	Mani fajiringo, tia durango and pumpkin	101	421	2.7	1.3	21.4	2.5	0.06	71
102	4716	RPQ	Mani fajiringo, tia durango and bitter tomato	105	439	3.0	1.6	21.4	2.6	0.07	70
106	4454	RL	Mani fajiringo, tia durango and meat	123	515	8.7	3.3	17.2	1.8	0.09	70
114	4709	ROQ	Mani fajiringo, tia durango and oil	118	495	3.1	3.1	21.5	2.5	0.07	68
1.1.1 - Mani Fajiringo, Tia Durango and Fish											
103	4717	RHK	Mani fajiringo, tia durango and dried challo	112	467	3.8	2.0	21.5	2.5	0.07	68
104	4718	RBN	Mani fajiringo, tia durango, dried challo and naa	112	468	3.8	2.0	21.6	2.6	0.07	68
103	4720	ROO	Mani fajiringo, tia durango and dried furo	111	465	3.8	2.0	21.5	2.5	0.07	69
104	4721	RPV	Mani fajiringo, tia durango, dried furo and naa	111	467	3.8	1.9	21.6	2.6	0.07	68
103	4722	RHW	Mani fajiringo, tia durango and dried kujalo	111	465	3.8	2.0	21.5	2.5	0.07	69
104	4723	RFT	Mani fajiringo, tia durango, dried kujalo and naa	111	466	3.8	1.9	21.5	2.7	0.07	68
103	4724	RPX	Mani fajiringo, tia durango and dried fish (unspecified)	111	466	3.8	2.0	21.5	2.5	0.07	69
103	4726	RTR	Mani fajiringo, tia durango and fresh furo	109	456	3.7	1.8	21.4	2.5	0.07	67
103	4727	RHV	Mani fajiringo, tia durango and fresh challo	109	456	3.7	1.8	21.4	2.5	0.07	67
103	4728	RPY	Mani fajiringo, tia durango and fresh kujalo	109	456	3.7	1.8	21.4	2.5	0.07	67
103	4725	RQV	Mani fajiringo, tia durango and fresh fish (unspecified)	109	456	3.7	1.8	21.4	2.5	0.07	67
103	4834	RJM	Mani fajiringo, tia durango, fresh challo and naa	109	457	3.7	1.8	21.5	2.6	0.07	67
103	4730	RTY	Mani fajiringo, tia durango and shellfish	107	447	3.3	1.5	21.8	2.6	0.07	69
103	4731	RHL	Mani fajiringo, tia durango and fish dajiwo	98	412	2.8	1.2	20.9	2.4	0.06	71
104	4732	RHT	Mani fajiringo, tia durango, fish dajiwo and naa	99	413	2.8	1.2	21.0	2.6	0.07	71

Composition per 100g

Food group	Code	Letter code	Name	Calcium mg	Phos-phorus mg	Magnes-ium mg	Potass-ium mg	Iron mg	Zinc mg	Carot-ene µg	Vitamin C mg	Source of data
1. - Rice (Mano)												
101	4393	PC	Mani dempetengo	6	238	66	223	3.7	1.2	0	0	C
101	4460	RR	Mani monko	9	127	64	216	3.5	0.9	0	0	C
101	4451	RI	Mani fajiringo	6	34	25	84	1.4	0.4	0	0	A
1.1 - Mani Fajiringo and Tia Durango												
102	4449	RG	Mani fajiringo and tia durango	11	45	38	148	1.3	0.6	10	0	A
105	4708	RBV	Mani fajiringo, tia durango, chilli pepper and naa	15	42	38	151	1.4	0.5	90	0	R
102	4711	RBE	Mani fajiringo, tia durango, chilli pepper and okra	11	42	37	145	1.4	0.5	70	1	R
102	4712	RBD	Mani fajiringo, tia durango and tomato	9	41	38	145	1.3	0.5	30	1	R
102	4713	RFW	Mani fajiringo, tia durango and mango slices	9	40	35	140	1.1	0.4	130	1	R
102	4715	RQA	Mani fajiringo, tia durango and pumpkin	9	38	30	139	1.3	0.4	60	1	R
102	4716	RPQ	Mani fajiringo, tia durango and bitter tomato	9	40	35	136	1.3	0.4	10	0	R
106	4454	RL	Mani fajiringo, tia durango and meat	10	52	35	145	1.4	1.1	10	0	C
114	4709	ROQ	Mani fajiringo, tia durango and oil	9	42	37	143	1.3	0.5	10	0	R
1.1.1 - Mani Fajiringo, Tia Durango and Fish												
103	4717	RHK	Mani fajiringo, tia durango and dried challo	22	55	38	153	1.3	0.6	10	0	R
104	4718	RBN	Mani fajiringo, tia durango, dried challo and naa	23	53	38	157	1.4	0.5	40	0	R
103	4720	ROO	Mani fajiringo, tia durango and dried furo	54	72	38	106	1.4	0.6	10	0	R
104	4721	RPV	Mani fajiringo, tia durango, dried furo and naa	60	72	38	155	1.5	0.6	40	0	R
103	4722	RHW	Mani fajiringo, tia durango and dried kujalo	11	46	38	150	1.3	0.6	10	0	R
104	4723	RFT	Mani fajiringo, tia durango, dried kujalo and naa	16	47	38	153	1.4	0.6	40	0	R
103	4724	RPX	Mani fajiringo, tia durango and dried fish (unspecified)	17	51	38	148	1.3	0.5	10	0	R
103	4726	RTR	Mani fajiringo, tia durango and fresh furo	10	44	36	151	1.3	0.5	10	0	R
103	4727	RHV	Mani fajiringo, tia durango and fresh challo	12	47	36	146	1.3	0.5	10	0	R
103	4728	RPY	Mani fajiringo, tia durango and fresh kujalo	10	43	37	147	1.3	0.5	10	0	R
103	4725	RQV	Mani fajiringo, tia durango and fresh fish (unspecified)	11	45	37	147	1.3	0.5	10	0	R
103	4834	RJM	Mani fajiringo, tia durango, fresh challo and naa	17	47	36	149	1.4	0.5	40	0	R
103	4730	RTY	Mani fajiringo, tia durango and shellfish	14	53	39	144	1.4	0.6	10	0	R
103	4731	RHL	Mani fajiringo, tia durango and fish dajiwo	10	42	31	109	1.1	0.4	10	0	R
104	4732	RHT	Mani fajiringo, tia durango, fish dajiwo and naa	15	43	31	113	1.3	0.4	40	0	R

Composition per 100g

Food group	Code	Letter code	Name	Energy kcal	Energy kJ	Protein g	Fat g	Carbo-hydrate g	Fibre g	Phytate g	Water g
1.2 Mani Fajiringo and Kucha											
109	4463	RU	Mani fajiringo and kucha	101	424	2.8	0.5	22.9	3.4	0.05	69
109	4681	RPP	Mani fajiringo, kucha and naa	101	424	2.8	0.5	22.7	3.5	0.06	69
109	4699	RXG	Mani fajiringo, kucha, naa and tulingo	104	434	3.0	0.6	22.9	3.6	0.06	69
109	4706	RXI	Mani fajiringo, kucha and bitter tomato	101	421	2.7	0.5	22.7	3.3	0.06	70
108	4682	RPG	Mani fajiringo, kucha and dried challo	103	433	3.2	0.6	22.6	3.4	0.05	69
108	4690	RQD	Mani fajiringo, kucha, dried challo and naa	104	434	3.2	0.6	22.7	3.4	0.06	69
108	4700	RPK	Mani fajiringo, kucha, dried challo and tulingo	105	441	3.4	0.6	22.9	3.6	0.06	68
108	4683	RQB	Mani fajiringo, kucha and dried furo	103	432	3.2	0.5	22.6	3.4	0.05	69
108	4691	RQE	Mani fajiringo, kucha, dried furo and naa	104	434	3.2	0.5	22.7	3.4	0.06	69
108	4701	RQH	Mani fajiringo, kucha, dried furo and tulingo	105	441	3.4	0.6	22.9	3.6	0.06	68
108	4684	RPH	Mani fajiringo, kucha and dried kujalo	103	432	3.2	0.5	22.6	3.4	0.05	69
108	4692	RQF	Mani fajiringo, kucha, dried kujalo and naa	104	434	3.2	0.5	22.7	3.4	0.06	69
108	4702	RQI	Mani fajiringo, kucha, dried kujalo and tulingo	105	441	3.4	0.6	22.9	3.6	0.06	68
108	4182	GZ	Mani fajiringo, kucha and dried fish (unspecified)	103	433	3.2	0.5	22.6	3.4	0.05	69
108	4693	RQG	Mani fajiringo, kucha, dried fish (unspecified) and naa	104	434	3.2	0.5	22.7	3.4	0.06	69
108	4703	RXJ	Mani fajiringo, kucha, dried fish (unspecified) and tulingo	105	441	3.4	0.6	22.9	3.6	0.06	68
108	4836	RNU	Mani fajiringo, kucha, dried fish, tulingo and naa	106	443	3.4	0.6	22.9	3.6	0.06	68
108	4686	RQJ	Mani fajiringo, kucha and fresh challo	102	429	3.1	0.5	22.6	3.3	0.05	68
108	4687	RQK	Mani fajiringo, kucha and fresh furo	102	429	3.1	0.5	22.6	3.3	0.05	68
108	4688	RQL	Mani fajiringo, kucha and fresh kujalo	102	429	3.1	0.5	22.6	3.3	0.05	68
108	4689	RQM	Mani fajiringo, kucha and fresh fish (unspecified)	102	429	3.1	0.5	22.6	3.3	0.05	68
108	4694	RQO	Mani fajiringo, kucha, fresh fish (unspecified) and naa	103	430	3.2	0.5	22.7	3.4	0.06	68
108	4704	RQN	Mani fajiringo, kucha, fresh fish (unspecified) and tulingo	105	437	3.3	0.6	22.8	3.5	0.06	67
116	4707	RXK	Mani fajiringo, kucha and palm oil	108	452	2.7	1.3	22.6	3.4	0.05	69
116	4695	RPN	Mani fajiringo, kucha, dried challo and palm oil	110	462	3.2	1.3	22.6	3.3	0.05	68
116	4696	RXL	Mani fajiringo, kucha, dried furo and palm oil	110	461	3.2	1.3	22.6	3.3	0.05	68
116	4697	RPM	Mani fajiringo, kucha, dried kujalo and palm oil	110	461	3.2	1.3	22.6	3.3	0.05	68
116	4698	RXR	Mani fajiringo, kucha, dried fish (unspecified) and palm oil	110	462	3.2	1.3	22.6	3.3	0.05	68
116	4705	RNW	Mani fajiringo, kucha, palm oil, fresh fish and tulingo	111	466	3.3	1.4	22.8	3.4	0.06	66

Composition per 100g

Food group	Code	Letter code	Name	Calcium mg	Phos-phorus mg	Magnes-ium mg	Potass-ium mg	Iron mg	Zinc mg	Carot-ene µg	Vitamin C mg	Source of data
1.2 Mani Fajiringo and Kucha												
109	4463	RU	Mani fajiringo and kucha	21	36	31	118	1.8	0.4	100	1	R
109	4681	RPP	Mani fajiringo, kucha and naa	24	36	31	120	1.8	0.5	120	1	R
109	4699	RXG	Mani fajiringo, kucha, naa and tulingo	27	38	31	128	1.8	0.5	120	1	R
109	4706	RXI	Mani fajiringo, kucha and bitter tomato	18	35	29	119	1.7	0.5	80	1	R
108	4682	RPG	Mani fajiringo, kucha and dried challo	26	42	31	122	1.8	0.5	100	1	R
108	4690	RQD	Mani fajiringo, kucha, dried challo and naa	29	43	31	125	1.8	0.5	120	1	R
108	4700	RPK	Mani fajiringo, kucha, dried challo and tulingo	29	44	30	130	1.8	0.5	90	1	R
108	4683	RQB	Mani fajiringo, kucha and dried furo	50	56	31	121	1.8	0.5	100	1	R
108	4691	RQE	Mani fajiringo, kucha, dried furo and naa	54	56	31	123	1.9	0.5	120	1	R
108	4701	RQH	Mani fajiringo, kucha, dried furo and tulingo	53	57	31	128	1.9	0.6	90	1	R
108	4684	RPH	Mani fajiringo, kucha and dried kujalo	22	38	31	120	1.8	0.5	100	1	R
108	4692	RQF	Mani fajiringo, kucha, dried kujalo and naa	25	39	31	122	1.8	0.5	120	1	R
108	4702	RQI	Mani fajiringo, kucha, dried kujalo and tulingo	24	40	30	127	1.8	0.6	90	1	R
108	4182	GZ	Mani fajiringo, kucha and dried fish (unspecified)	25	42	31	118	1.8	0.5	100	1	R
108	4693	RQG	Mani fajiringo, kucha, dried fish (unspecified) and naa	29	42	31	121	1.8	0.5	120	1	R
108	4703	RXJ	Mani fajiringo, kucha, dried fish (unspecified) and tulingo	28	44	30	126	1.8	0.5	90	1	R
108	4836	RNU	Mani fajiringo, kucha, dried fish, tulingo and naa	31	44	30	125	1.8	0.5	110	1	R
108	4686	RQJ	Mani fajiringo, kucha and fresh challo	21	39	30	121	1.7	0.5	90	1	R
108	4687	RQK	Mani fajiringo, kucha and fresh furo	20	37	30	122	1.7	0.5	90	1	R
108	4688	RQL	Mani fajiringo, kucha and fresh kujalo	20	36	30	122	1.7	0.5	90	1	R
108	4689	RQM	Mani fajiringo, kucha and fresh fish (unspecified)	20	38	30	122	1.7	0.5	90	1	R
108	4694	RQO	Mani fajiringo, kucha, fresh fish (unspecified) and naa	24	38	30	125	1.8	0.6	110	1	R
108	4704	RQN	Mani fajiringo, kucha, fresh fish (unspecified) and tulingo	23	40	30	130	1.8	0.5	90	1	R
116	4707	RXK	Mani fajiringo, kucha and palm oil	20	35	30	116	1.8	0.5	620	1	R
116	4695	RPN	Mani fajiringo, kucha, dried challo and palm oil	25	42	30	120	1.8	0.5	520	1	R
116	4696	RXL	Mani fajiringo, kucha, dried furo and palm oil	50	55	31	118	1.8	0.6	620	1	R
116	4697	RPM	Mani fajiringo, kucha, dried kujalo and palm oil	21	38	30	117	1.7	0.5	520	1	R
116	4698	RXR	Mani fajiringo, kucha, dried fish (unspecified) and palm oil	25	41	30	116	1.8	0.5	620	1	R
116	4705	RNW	Mani fajiringo, kucha, palm oil, fresh fish and tulingo	22	39	30	120	1.7	0.5	600	1	R

Food group	Code	Letter code	Name	Energy kcal	Energy kJ	Protein g	Fat g	Carbo-hydrate g	Fibre g	Phytate g	Water g
1.3 - Mani Fajiringo and Jambo											
105	4457	RO	Mani fajiringo and jambo	119	498	4.0	2.2	22.2	2.4	0.10	70
105	4737	RQR	Mani fajiringo, jambo and tulingo	115	481	4.0	2.8	20.0	2.9	0.11	69
105	4750	RBZ	Mani fajiringo, jambo and bitter tomato	104	436	3.3	2.1	19.4	2.4	0.08	71
105	4752	RTP	Mani fajiringo, jambo and pumpkin	97	407	2.9	1.7	19.1	2.3	0.07	72
104	4738	RQS	Mani fajiringo, jambo and dried challo	115	482	4.5	2.8	19.5	2.4	0.09	69
104	4739	RQT	Mani fajiringo, jambo and dried furo	115	481	4.5	2.7	19.5	2.4	0.09	69
104	4740	RQU	Mani fajiringo, jambo and dried kujalo	115	481	4.5	2.7	19.5	2.4	0.09	69
104	4741	RIH	Mani fajiringo, jambo and dried fish (unspecified)	115	482	4.5	2.8	19.5	2.4	0.09	69
104	4742	RQW	Mani fajiringo, jambo and fresh challo	111	466	4.3	2.5	19.4	2.4	0.09	67
104	4743	RQX	Mani fajiringo, jambo and fresh furo	111	466	4.3	2.5	19.4	2.4	0.09	67
104	4744	RQY	Mani fajiringo, jambo and fresh kujalo	111	466	4.3	2.5	19.4	2.4	0.09	67
104	4685	RQZ	Mani fajiringo, jambo and fresh fish (unspecified)	111	466	4.3	2.5	19.4	2.4	0.09	67
104	4746	RNY	Mani fajiringo, jambo and shellfish	111	463	4.1	2.5	19.4	2.4	0.09	70
106	4748	RUG	Mani fajiringo, jambo and chicken	113	473	4.9	2.5	19.2	2.3	0.08	70
106	4747	RUF	Mani fajiringo, jambo and meat	118	494	5.6	2.8	19.2	2.3	0.08	69
116	4736	RQQ	Mani fajiringo, jambo and palm oil	125	522	3.5	4.3	19.5	2.4	0.09	69
1.4 - Mani Fajiringo and Vegetable Oil Stew											
114	4467	RY	Mani fajiringo and vegetable oil stew	137	575	2.5	4.3	23.7	2.8	0.06	65
114	4753	RWQ	Mani fajiringo, vegetable oil stew and pumpkin	118	492	2.5	2.2	23.7	2.7	0.06	68
114	4754	RHQ	Mani fajiringo, vegetable oil stew and fresh challo	127	531	3.7	2.8	23.5	2.6	0.05	66
114	4755	RHR	Mani fajiringo, vegetable oil stew and fresh furo	127	531	3.7	2.8	23.5	2.6	0.05	66
114	4756	RHS	Mani fajiringo, vegetable oil stew and fresh kujalo	127	531	3.7	2.8	23.5	2.6	0.05	66
114	4757	RMU	Mani fajiringo, vegetable oil stew and shellfish	126	526	3.4	2.8	23.5	2.6	0.05	66
115	4758	RVM	Mani fajiringo and vegetables in palm oil	137	575	2.5	4.4	23.8	2.7	0.06	66
115	4759	RUU	Mani fajiringo, vegetables in palm oil and fresh challo	127	531	3.7	2.8	23.5	2.6	0.05	66
115	4760	RUV	Mani fajiringo, vegetables in palm oil and fresh furo	127	531	3.7	2.8	23.5	2.6	0.05	66
115	4761	RUW	Mani fajiringo, vegetables in palm oil and fresh kujalo	127	531	3.7	2.8	23.5	2.6	0.05	66
115	4762	RUX	Mani fajiringo, vegetables in palm oil and fresh fish (unspecifie	127	531	3.7	2.8	23.5	2.6	0.05	66
115	4763	RMV	Mani fajiringo, vegetables in palm oil and shellfish	126	526	3.4	2.8	23.5	2.6	0.05	66
115	4764	RXW	Mani fajiringo, vegetables in palm oil and meat	131	547	4.2	3.0	23.5	2.6	0.05	66
115	4765	RXX	Mani fajiringo, vegetables in palm oil and chicken	130	542	3.4	3.2	23.6	2.6	0.05	66

Composition per 100g

Food group	Code	Letter code	Name	Calcium mg	Phos-phorus mg	Magnes-ium mg	Potass-ium mg	Iron mg	Zinc mg	Carot-ene µg	Vitamin C mg	Source of data
1.3 - Mani Fajiringo and Jambo												
105	4457	RO	Mani fajiringo and jambo	44	51	42	194	2.2	0.6	850	6	A
105	4737	RQR	Mani fajiringo, jambo and tulingo	53	56	41	208	2.2	0.5	800	5	R
105	4750	RBZ	Mani fajiringo, jambo and bitter tomato	38	47	38	173	2.0	0.5	700	5	R
105	4752	RTP	Mani fajiringo, jambo and pumpkin	31	43	32	172	1.7	0.4	540	4	R
104	4738	RQS	Mani fajiringo, jambo and dried challo	57	66	42	200	2.2	0.6	810	5	R
104	4739	RQT	Mani fajiringo, jambo and dried furo	108	93	40	197	2.3	0.7	810	5	R
104	4740	RQU	Mani fajiringo, jambo and dried kujalo	49	58	40	195	2.2	0.6	810	5	R
104	4741	RIH	Mani fajiringo, jambo and dried fish (unspecified)	57	65	41	193	2.3	0.6	810	5	R
104	4742	RQW	Mani fajiringo, jambo and fresh challo	46	58	40	188	2.2	0.5	750	5	R
104	4743	RQX	Mani fajiringo, jambo and fresh furo	45	55	40	189	2.2	0.5	750	5	R
104	4744	RQY	Mani fajiringo, jambo and fresh kujalo	44	52	40	190	2.1	0.5	750	5	R
104	4685	RQZ	Mani fajiringo, jambo and fresh fish (unspecified)	45	56	40	191	2.2	0.5	750	5	R
104	4746	RNY	Mani fajiringo, jambo and shellfish	49	58	45	177	2.4	0.5	750	5	R
106	4748	RUG	Mani fajiringo, jambo and chicken	38	61	38	177	2.0	0.5	640	4	R
106	4747	RUF	Mani fajiringo, jambo and meat	38	61	38	185	2.2	0.9	640	4	R
116	4736	RQQ	Mani fajiringo, jambo and palm oil	46	51	41	187	2.4	0.5	1890	5	R
1.4 - Mani Fajiringo and Vegetable Oil Stew												
114	4467	RY	Mani fajiringo and vegetable oil stew	14	33	25	97	1.3	0.4	20	1	R
114	4753	RWQ	Mani fajiringo, vegetable oil stew and pumpkin	9	33	24	102	1.4	0.4	40	1	R
114	4754	RHQ	Mani fajiringo, vegetable oil stew and fresh challo	13	44	25	99	1.4	0.4	10	1	R
114	4755	RHR	Mani fajiringo, vegetable oil stew and fresh furo	11	39	25	99	1.4	0.4	10	1	R
114	4756	RHS	Mani fajiringo, vegetable oil stew and fresh kujalo	10	36	25	99	1.4	0.4	10	1	R
114	4757	RMU	Mani fajiringo, vegetable oil stew and shellfish	16	44	27	97	1.7	0.5	10	1	R
115	4758	RVM	Mani fajiringo and vegetables in palm oil	10	33	25	97	1.3	0.5	3040	1	R
115	4759	RUU	Mani fajiringo, vegetables in palm oil and fresh challo	13	44	25	99	1.4	0.4	1760	1	R
115	4760	RUV	Mani fajiringo, vegetables in palm oil and fresh furo	11	39	25	99	1.4	0.4	1760	1	R
115	4761	RUW	Mani fajiringo, vegetables in palm oil and fresh kujalo	10	36	25	99	1.4	0.4	1760	1	R
115	4762	RUX	Mani fajiringo, vegetables in palm oil and fresh fish (unspecifie	11	41	25	99	1.4	0.4	1760	1	R
115	4763	RMV	Mani fajiringo, vegetables in palm oil and shellfish	16	44	27	97	1.8	0.5	1760	1	R
115	4764	RXW	Mani fajiringo, vegetables in palm oil and meat	8	43	25	101	1.5	0.7	1610	0	R
115	4765	RXX	Mani fajiringo, vegetables in palm oil and chicken	9	41	25	98	1.3	0.5	1980	0	R

Composition per 100g

Food group	Code	Letter code	Name	Energy kcal	Energy kJ	Protein g	Fat g	Carbo-hydrate g	Fibre g	Phytate g	Water g
1.5 - Mani Fajiringo and Bukolo											
107	4483	SO	Mani fajiringo and bukolo	102	427	2.5	0.4	23.7	2.9	0.05	70
107	4767	RUI	Mani fajiringo, bukolo and dried challo	104	436	3.1	0.5	23.6	2.9	0.05	70
107	4776	RXT	Mani fajiringo, bukolo, dried challo and naa	105	437	3.1	0.5	23.6	3.0	0.05	69
107	4768	RUJ	Mani fajiringo, bukolo and dried furo	104	435	3.1	0.5	23.6	2.9	0.05	70
107	4777	RXU	Mani fajiringo, bukolo, dried furo and naa	104	437	3.1	0.5	23.6	3.0	0.05	69
107	4769	RUK	Mani fajiringo, bukolo and dried kujalo	104	435	3.1	0.5	23.6	2.9	0.05	70
107	4778	RXV	Mani fajiringo, bukolo, dried kujalo and naa	104	437	3.1	0.5	23.6	3.0	0.05	69
107	4170	GN	Mani fajiringo, bukolo and dried fish (unspecified)	104	436	3.1	0.5	23.6	2.9	0.05	70
107	4779	RXS	Mani fajiringo, bukolo, dried fish (unspecified) and naa	104	437	3.1	0.5	23.6	3.0	0.05	69
107	4771	RUN	Mani fajiringo, bukolo and fresh challo	103	430	3.0	0.5	23.4	2.9	0.05	68
107	4772	RUP	Mani fajiringo, bukolo and fresh furo	103	430	3.0	0.5	23.4	2.9	0.05	68
107	4773	RUQ	Mani fajiringo, bukolo and fresh kujalo	103	430	3.0	0.5	23.4	2.9	0.05	68
107	4774	RUR	Mani fajiringo, bukolo and fresh fish (unspecified)	103	430	3.0	0.5	23.4	2.9	0.05	68
107	4775	RNZ	Mani fajiringo, bukolo and shellfish	102	428	2.9	0.5	23.4	2.9	0.05	70
110	4260	JZ	Mani fajiringo, bukolo, naa and palm oil	111	462	2.5	1.4	23.6	2.9	0.05	69
1.6 - Mani Fajiringo and Other Additions											
105	4714	RHI	Mani fajiringo and nada (naa durango)	111	466	3.4	1.9	21.9	4.0	0.08	68
109	4680	RFL	Mani fajiringo and nada kolikolo	99	413	2.7	0.4	22.9	3.7	0.06	69
109	4677	RJH	Mani fajiringo, jambanduro sauce and chilli pepper	84	354	2.8	0.4	18.9	1.9	0.05	72
101	4212	ID	Mani fajiringo, tulingo and chilli pepper	113	472	3.1	0.7	25.6	3.2	0.07	66
114	4469	SA	Mani Fajiringo and oil (Benechin)	186	778	1.9	6.5	30.0	3.3	0.06	62
114	4833	RAZ	Benechin and corned beef	194	810	8.1	7.9	22.5	2.5	0.05	61
110	4476	SH	Mani fajiringo and palm oil	186	778	1.9	6.5	30.0	3.3	0.06	62
1.7 - Mani Nyankantango											
102	4443	RA	Mani nyankantango	153	640	3.3	4.5	27.4	3.0	0.12	63
102	4453	RK	Mani nyankantango and tulingo	163	682	4.8	3.9	28.9	3.1	0.12	61
103	4354	NP	Mani nyankantango, dried challo and tulingo	163	682	5.3	4.8	27.0	4.0	0.16	60
103	4473	SE	Mani nyankantango and dried fish (unspecified)	153	640	4.8	3.5	27.4	3.0	0.10	62
113	4492	SX	Mani nyankantango, dried fish (unspecified) and palm oil	141	590	4.8	4.1	22.6	3.0	0.10	62

Composition per 100g

Food group	Code	Letter code	Name	Calcium mg	Phos-phorus mg	Magnes-ium mg	Potass-ium mg	Iron mg	Zinc mg	Carot-ene µg	Vitamin C mg	Source of data
1.5 - Mani Fajiringo and Bukolo												
107	4483	SO	Mani fajiringo and bukolo	16	42	26	116	1.2	0.3	30	2	R
107	4767	RUI	Mani fajiringo, bukolo and dried challo	15	44	26	121	1.3	0.4	30	2	R
107	4776	RXT	Mani fajiringo, bukolo, dried challo and naa	19	44	26	124	1.3	0.5	50	2	R
107	4768	RUJ	Mani fajiringo, bukolo and dried furo	44	60	27	119	1.3	0.5	30	2	R
107	4777	RXU	Mani fajiringo, bukolo, dried furo and naa	48	60	27	122	1.4	0.5	50	2	R
107	4769	RUK	Mani fajiringo, bukolo and dried kujalo	10	39	26	118	1.2	0.5	30	2	R
107	4778	RXV	Mani fajiringo, bukolo, dried kujalo and naa	14	39	26	121	1.3	0.5	50	2	R
107	4170	GN	Mani fajiringo, bukolo and dried fish (unspecified)	14	43	26	116	1.3	0.5	30	2	R
107	4779	RXS	Mani fajiringo, bukolo, dried fish (unspecified) and naa	18	44	26	119	1.3	0.5	50	2	R
107	4771	RUN	Mani fajiringo, bukolo and fresh challo	10	40	26	116	1.3	0.4	30	2	R
107	4772	RUP	Mani fajiringo, bukolo and fresh furo	9	38	26	117	1.3	0.4	30	2	R
107	4773	RUQ	Mani fajiringo, bukolo and fresh kujalo	9	37	26	117	1.2	0.4	30	2	R
107	4774	RUR	Mani fajiringo, bukolo and fresh fish (unspecified)	9	39	26	117	1.3	0.4	30	2	R
107	4775	RNZ	Mani fajiringo, bukolo and shellfish	11	40	28	115	1.4	0.4	30	2	R
110	4260	JZ	Mani fajiringo, bukolo, naa and palm oil	12	36	26	116	1.4	0.4	710	1	R
1.6 - Mani Fajiringo and Other Additions												
105	4714	RHI	Mani fajiringo and nada (naa durango)	39	49	25	105	1.4	0.5	30	0	R
109	4680	RFL	Mani fajiringo and nada kolikolo	34	41	23	92	2.0	0.4	30	0	R
109	4677	RJH	Mani fajiringo, jambanduro sauce and chilli pepper	109	42	30	94	2.0	0.5	1950	11	R
101	4212	ID	Mani fajiringo, tulingo and chilli pepper	14	38	24	144	1.5	0.5	200	6	R
114	4469	SA	Mani Fajiringo and oil (Benechin)	6	45	22	73	1.3	0.4	20	0	C
114	4833	RAZ	Benechin and corned beef	8	64	20	90	1.7	1.7	10	0	R
110	4476	SH	Mani fajiringo and palm oil	6	34	22	73	1.3	0.4	2600	0	C
1.7 - Mani Nyankantango												
102	4443	RA	Mani nyankantango	10	56	36	156	1.6	0.8	0	0	C
102	4453	RK	Mani nyankantango and tulingo	36	84	34	210	1.6	0.8	0	0	A
103	4354	NP	Mani nyankantango, dried challo and tulingo	42	82	34	221	1.7	0.9	0	0	R
103	4473	SE	Mani nyankantango and dried fish (unspecified)	34	76	35	159	1.3	1.2	0	0	A
113	4492	SX	Mani nyankantango, dried fish (unspecified) and palm oil	34	76	34	151	1.3	1.2	2610	0	C

Composition per 100g

Food group	Code	Letter code	Name	Energy kcal	Energy kJ	Protein g	Fat g	Carbo-hydrate g	Fibre g	Phytate g	Water g
1.8 - Mani Mono and Churo											
117	4455	RM	Mani mono	30	126	0.7	0.1	7.9	0.9	0.02	90
119	4450	RH	Mani mono and sugar	40	167	0.7	0.1	10.4	1.1	0.02	87
120	4472	SD	Mani mono and sour milk	50	209	1.6	1.2	8.9	1.0	0.02	85
121	4447	RE	Mani mono, sour milk and sugar	38	159	1.0	0.5	8.1	0.9	0.02	88
117	4487	SS	Mani mono and baobab juice	30	126	0.7	0.1	7.9	0.9	0.02	90
120	4486	SR	Mani mono, sour milk and baobab juice	50	209	1.6	1.2	8.9	1.0	0.02	85
119	4411	PU	Mani mono, sugar and baobab juice	39	162	0.6	0.1	10.3	1.1	0.02	88
117	4462	RT	Mani churo	54	226	1.2	0.3	13.3	1.4	0.03	83
119	4479	SK	Mani churo and sugar	49	205	0.9	0.2	11.8	0.9	0.03	86
120	4175	GS	Mani churo and sour milk	56	235	1.7	1.1	11.4	1.1	0.02	84
122	4497	TC	Tiakere churo	62	259	2.0	1.9	9.9	1.2	0.06	85
123	4505	TK	Tiakere churo and sugar	68	285	2.0	1.9	11.2	1.2	0.06	83
122	4504	TJ	Tiakere churo and sour milk	67	281	2.3	2.3	9.7	0.9	0.06	84
123	4516	TV	Tiakere churo, sour milk and sugar	73	307	2.1	2.0	13.3	1.1	0.06	82
122	4502	TH	Tiakere churo, sour milk and baobab juice	67	281	2.3	2.3	9.7	0.9	0.06	84
2 - Millet (Sanyo/Suno)											
136	4638	YN	Sanyo nyelengo and naa	152	636	4.3	0.6	30.7	4.0	0.20	58
127	4636	YL	Sanyo futo and naa	221	925	6.2	1.1	48.1	6.7	0.24	39
2.1 - Sanyo Nyelengo and Sauces											
137	4631	YG	Sanyo nyelengo, naa and tia durango	115	481	4.5	2.2	22.2	2.4	0.15	70
138	4377	OM	Sanyo nyelengo, naa, tia durango and dried fish (unspecified)	134	560	5.4	2.9	21.2	3.0	0.17	65
137	4245	JK	Sanyo nyelengo, naa and jambo	137	574	4.7	2.8	22.3	3.2	0.19	65
137	4249	JO	Sanyo nyelengo, naa, jambo and pumpkin	122	512	3.9	1.7	21.7	3.1	0.17	67
2.2 - Sanyo Futo and Sauces											
128	4372	OH	Sanyo futo, naa and water	133	556	3.9	0.7	28.6	4.0	0.14	63
128	4781	YAF	Sanyo futo, naa and fish dajiwo	118	493	3.8	0.6	25.0	3.5	0.12	66
128	4782	YTQ	Sanyo futo, naa and tia dajiwo	129	541	3.8	1.8	25.2	3.7	0.15	66
128	4783	YCE	Sanyo futo, naa and leaf (jambanduro) dajiwo	116	486	3.4	0.6	25.2	3.5	0.13	67
128	4784	YVW	Sanyo futo, naa and pumpkin dajiwo	115	483	3.2	0.6	25.1	3.5	0.13	68

Composition per 100g

Food group	Code	Letter code	Name	Calcium mg	Phos-phorus mg	Magnes-ium mg	Potass-ium mg	Iron mg	Zinc mg	Carot-ene µg	Vitamin C mg	Source of data
1.8 - Mani Mono and Churo												
117	4455	RM	Mani mono	5	12	7	25	0.4	0.1	0	0	A
119	4450	RH	Mani mono and sugar	5	12	7	26	0.4	0.1	0	0	C
120	4472	SD	Mani mono and sour milk	32	32	8	54	0.3	0.2	60	0	C
121	4447	RE	Mani mono, sour milk and sugar	32	32	8	54	0.3	0.2	60	0	C
117	4487	SS	Mani mono and baobab juice	9	12	9	36	0.4	0.1	0	6	C
120	4486	SR	Mani mono, sour milk and baobab juice	36	32	10	62	0.5	0.2	60	3	C
119	4411	PU	Mani mono, sugar and baobab juice	9	11	9	37	0.4	0.2	0	5	R
117	4462	RT	Mani churo	5	12	13	42	0.4	0.2	0	0	A
119	4479	SK	Mani churo and sugar	5	12	12	43	0.4	0.2	0	0	C
120	4175	GS	Mani churo and sour milk	32	30	12	68	0.3	0.2	50	0	R
122	4497	TC	Tiakere churo	6	29	15	57	0.4	0.3	0	0	A
123	4505	TK	Tiakere churo and sugar	6	29	15	57	0.5	0.3	0	0	C
122	4504	TJ	Tiakere churo and sour milk	33	49	14	79	0.4	0.3	30	0	C
123	4516	TV	Tiakere churo, sour milk and sugar	33	49	14	79	0.4	0.3	30	0	C
122	4502	TH	Tiakere churo, sour milk and baobab juice	37	49	15	82	0.5	0.3	30	3	C
2 - Millet (Sanyo/Suno)												
136	4638	YN	Sanyo nyelengo and naa	31	82	76	317	14.3	1.0	70	0	A
127	4636	YL	Sanyo futo and naa	57	147	110	452	18.1	1.5	70	0	A
2.1 - Sanyo Nyelengo and Sauces												
137	4631	YG	Sanyo nyelengo, naa and tia durango	28	86	77	317	11.0	0.8	70	0	A
138	4377	OM	Sanyo nyelengo, naa, tia durango and dried fish (unspecified)	39	91	76	317	11.2	0.9	60	0	R
137	4245	JK	Sanyo nyelengo, naa and jambo	65	85	76	340	10.9	0.9	900	6	R
137	4249	JO	Sanyo nyelengo, naa, jambo and pumpkin	48	74	66	318	10.2	0.8	590	4	R
2.2 - Sanyo Futo and Sauces												
128	4372	OH	Sanyo futo, naa and water	34	89	66	271	11.1	0.9	40	0	A
128	4781	YAF	Sanyo futo, naa and fish dajiwo	34	100	66	247	10.1	0.9	40	0	R
128	4782	YTQ	Sanyo futo, naa and tia dajiwo	31	106	68	255	10.1	0.9	40	0	R
128	4783	YCE	Sanyo futo, naa and leaf (jambanduro) dajiwo	48	79	67	246	10.1	0.8	340	1	R
128	4784	YVW	Sanyo futo, naa and pumpkin dajiwo	31	77	65	245	10.1	0.8	50	0	R

Food group	Code	Letter code	Name	Energy kcal	Energy kJ	Protein g	Fat g	Carbo-hydrate g	Fibre g	Phytate g	Water g
2.3 - Sanyo Mono											
145	4637	YM	Sanyo mono	38	159	0.8	0.2	8.8	1.2	0.04	88
146	4625	YA	Sanyo mono and sugar	50	209	1.2	0.2	11.0	1.4	0.04	85
147	4627	YC	Sanyo mono and sour milk	52	218	1.7	1.0	8.9	1.3	0.04	86
148	4373	OI	Sanyo mono, milk and sugar	51	213	1.5	0.5	10.6	1.4	0.04	85
145	4390	OZ	Sanyo mono and baobab juice	38	159	0.8	0.2	8.8	1.2	0.04	88
147	4369	OE	Sanyo mono, sour milk and baobab juice	48	201	1.5	0.8	9.3	1.4	0.04	87
146	4606	XH	Sanyo mono, sugar and baobab juice	46	191	0.7	0.2	11.1	1.4	0.04	86
150	4630	YF	Sanyo mono, groundnuts, sugar and baobab juice	80	336	1.9	1.8	15.0	1.2	0.10	80
3 - Millet (Findo)											
156	4105	EA	Findi nyelengo and naa	108	452	2.8	0.4	25.0	4.6	0.11	65
3.1 - Findi Nyelengo and Tia Durango											
157	4082	DD	Findi nyelengo, naa and tia durango	97	406	3.5	2.4	14.8	3.4	0.12	72
157	4789	DBE	Findi nyelengo, naa, tia durango and okra and chilli pepper	98	410	3.3	2.3	17.6	3.5	0.11	71
157	4790	DBD	Findi nyelengo, naa, tia durango and tomato	99	415	3.3	2.4	17.6	3.5	0.11	71
157	4793	DQA	Findi nyelengo, naa, tia durango and pumpkin	90	376	2.8	1.6	17.4	3.4	0.10	73
157	4794	DPQ	Findi nyelengo, naa, tia durango and bitter tomato	96	403	3.2	2.2	17.5	3.5	0.11	72
158	4799	DPX	Findi nyelengo, naa, tia durango and dried fish (unspecified)	106	444	4.4	2.7	17.6	3.4	0.11	70
158	4803	DQV	Findi nyelengo, naa, tia durango and fresh fish (unspecified)	102	429	4.2	2.5	17.5	3.4	0.11	67
158	4804	DPZ	Findi nyelengo, naa, tia durango and fresh fish and oil	117	491	4.1	4.2	17.4	3.4	0.11	66
158	4805	DHL	Findi nyelengo, naa, tia durango and fish dajiwo	86	361	2.9	1.5	16.7	3.2	0.10	73
161	4786	DTL	Findi nyelengo, naa, tia durango and chicken	100	419	4.9	1.8	17.3	3.5	0.11	70
157	4787	DOQ	Findi nyelengo, naa, tia durango and oil	117	490	3.3	4.4	17.6	3.4	0.11	69
3.2 - Findi Nyelengo and Other Sauces											
160	4090	DL	Findi nyelengo, naa and jambo	123	515	4.9	2.2	22.2	2.4	0.12	70
160	4169	GM	Findi nyelengo, naa, jambo and pumpkin	93	391	2.9	1.6	17.9	3.5	0.11	71
3.3 - Findi Mono											
167	4085	DG	Findi mono	32	134	0.8	0.1	7.9	1.5	0.03	89
168	4084	DF	Findi mono and sugar	44	184	1.1	0.2	11.2	1.5	0.03	86
169	4097	DS	Findi mono and sour milk	52	218	1.7	1.0	8.9	1.3	0.03	86

Composition per 100g

Food group	Code	Letter code	Name	Calcium mg	Phos-phorus mg	Magnes-ium mg	Potass-ium mg	Iron mg	Zinc mg	Carot-ene µg	Vitamin C mg	Source of data
2.3 - Sanyo Mono												
145	4637	YM	Sanyo mono	5	13	22	86	3.6	0.3	0	0	A
146	4625	YA	Sanyo mono and sugar	5	13	21	85	3.5	0.3	0	0	A
147	4627	YC	Sanyo mono and sour milk	32	33	19	102	2.7	0.4	60	0	A
148	4373	OI	Sanyo mono, milk and sugar	32	33	19	101	2.7	0.4	60	0	C
145	4390	OZ	Sanyo mono and baobab juice	9	13	22	86	3.3	0.3	0	6	C
147	4369	OE	Sanyo mono, sour milk and baobab juice	36	33	20	101	3.0	0.4	60	3	A
146	4606	XH	Sanyo mono, sugar and baobab juice	9	12	19	101	3.3	0.3	0	5	R
150	4630	YF	Sanyo mono, groundnuts, sugar and baobab juice	10	19	27	153	4.3	0.5	0	3	C
3 - Millet (Findo)												
156	4105	EA	Findi nyelengo and naa	38	51	63	267	1.6	0.6	60	0	A
3.1 - Findi Nyelengo and Tia Durango												
157	4082	DD	Findi nyelengo, naa and tia durango	33	56	70	297	1.2	0.6	60	1	A
157	4789	DBE	Findi nyelengo, naa, tia durango and okra and chilli pepper	33	57	68	293	1.4	0.6	140	1	R
157	4790	DBD	Findi nyelengo, naa, tia durango and tomato	31	56	67	293	1.4	0.6	80	1	R
157	4793	DQA	Findi nyelengo, naa, tia durango and pumpkin	32	51	57	284	1.3	0.5	130	1	R
157	4794	DPQ	Findi nyelengo, naa, tia durango and bitter tomato	31	53	64	279	1.4	0.6	50	1	R
158	4799	DPX	Findi nyelengo, naa, tia durango and dried fish (unspecified)	43	71	69	279	1.7	0.7	50	1	R
158	4803	DQV	Findi nyelengo, naa, tia durango and fresh fish (unspecified)	33	62	67	297	1.4	0.6	50	1	R
158	4804	DPZ	Findi nyelengo, naa, tia durango and fresh fish and oil	33	60	66	290	1.5	0.6	50	1	R
158	4805	DHL	Findi nyelengo, naa, tia durango and fish dajiwo	32	58	58	237	1.4	0.5	60	1	R
161	4786	DTL	Findi nyelengo, naa, tia durango and chicken	31	67	64	285	1.5	0.7	60	1	R
157	4787	DOQ	Findi nyelengo, naa, tia durango and oil	31	56	68	291	1.4	0.7	50	1	R
3.2 - Findi Nyelengo and Other Sauces												
160	4090	DL	Findi nyelengo, naa and jambo	67	63	68	322	2.0	0.6	1230	6	A
160	4169	GM	Findi nyelengo, naa, jambo and pumpkin	52	54	60	298	1.8	0.5	570	4	R
3.3 - Findi Mono												
167	4085	DG	Findi mono	6	13	20	79	0.6	0.2	0	0	A
168	4084	DF	Findi mono and sugar	6	13	19	78	0.4	0.2	0	0	C
169	4097	DS	Findi mono and sour milk	33	33	18	96	0.5	0.3	60	0	C

Composition per 100g

Food group	Code	Letter code	Name	Energy kcal	Energy kJ	Protein g	Fat g	Carbo-hydrate g	Fibre g	Phytate g	Water g
4. - Sorghum (Kinto)											
183	4267	KG	Kinti nyelengo and naa	106	444	3.2	0.5	21.7	3.6	0.04	68
175	4274	KN	Kinti futo and naa	202	845	6.3	1.3	42.4	7.0	0.31	38
4.1 - Kinti Nyelengo and Sauces											
184	4264	KD	Kinti nyelengo, naa and tia durango	98	410	3.7	2.2	15.0	2.9	0.09	72
185	4307	LU	Kinti nyelengo, naa, tia durango and dried fish	105	439	4.7	2.8	15.5	2.8	0.07	71
185	4256	JV	Kinti nyelengo, naa, tia durango, dried challo and oil	120	502	4.6	4.5	15.4	2.8	0.07	70
187	4268	KH	Kinti nyelengo, naa, meat and durango	115	481	8.9	3.3	12.0	2.3	0.09	70
189	4255	JU	Kinti nyelengo, naa, kucha and dried fish (unspecified)	97	405	3.6	0.5	18.4	4.0	0.04	71
190	4250	JP	Kinti nyelengo, naa and jambo	106	445	4.0	2.7	16.2	2.9	0.08	71
188	4780	KUL	Kinti nyelengo, naa, bukolo and dried fish (unspecified)	98	409	3.5	0.5	19.5	3.5	0.04	71
4.2 - Kinti Futo and Sauces											
176	4269	KI	Kinti futo, naa and water	117	490	3.7	0.8	24.6	4.1	0.18	64
176	4279	KS	Kinti futo, naa and fish dajiwo	117	491	4.3	0.8	24.6	4.1	0.18	64
177	4177	GU	Kinti futo, naa, tia dajiwo and chilli pepper	119	499	3.9	1.8	22.4	3.8	0.18	65
4.3 - Kinti Mono											
194	4261	KA	Kinti mono	37	155	1.1	0.2	8.8	1.5	0.05	87
195	4266	KF	Kinti mono and sugar	47	197	0.9	0.2	11.0	1.1	0.05	86
196	4265	KE	Kinti mono and sour milk	52	218	1.7	1.0	9.5	1.6	0.05	87
194	4294	LH	Kinti mono and baobab juice	37	155	1.1	0.2	8.8	1.5	0.05	87
197	4283	KW	Kinti mono, sour milk and sugar	49	205	1.3	0.5	10.2	1.3	0.05	86
196	4286	KZ	Kinti mono, sour milk and baobab juice	52	218	1.7	0.9	9.5	1.6	0.05	87
5. - Maize (Tubanyo)											
202	4657	ZG	Tubanyo, on the cob, roast	231	967	7.9	4.9	41.4	10.6	0.58	34
209	4664	ZN	Tubanyo nyelengo and naa	142	594	3.9	1.1	30.4	6.3	0.27	60
201	4651	ZA	Tubanyo futo and naa	206	862	5.7	1.6	44.1	9.1	0.32	42
5.1 - Tubanyo Nyelengo and Tia Durango											
210	4671	ZU	Tubanyo nyelengo, naa and tia durango	123	516	4.2	3.1	21.2	4.6	0.22	68
210	4821	ZBE	Tubanyo nyelengo, naa, tia durango, okra and chilli pepper	120	500	4.0	2.8	21.0	4.6	0.21	68
210	4822	ZQA	Tubanyo nyelengo, naa, tia durango and pumpkin	111	465	3.5	2.0	20.8	4.4	0.20	70
210	4823	ZPQ	Tubanyo nyelengo, naa, tia durango and bitter tomato	118	493	3.9	2.6	20.9	4.5	0.21	68
211	4810	ZHK	Tubanyo nyelengo, naa, tia durango and dried challo	127	531	5.2	3.2	21.1	4.5	0.21	66

Composition per 100g

Food group	Code	Letter code	Name	Calcium mg	Phos-phorus mg	Magnes-ium mg	Potass-ium mg	Iron mg	Zinc mg	Carot-ene µg	Vitamin C mg	Source of data
4. - Sorghum (Kinto)												
183	4267	KG	Kinti nyelengo and naa	25	84	33	243	1.4	0.2	60	0	A
175	4274	KN	Kinti futo and naa	56	219	64	483	4.1	1.1	120	0	A
4.1 - Kinti Nyelengo and Sauces												
184	4264	KD	Kinti nyelengo, naa and tia durango	24	80	50	282	1.2	0.3	60	1	A
185	4307	LU	Kinti nyelengo, naa, tia durango and dried fish	35	92	49	282	1.7	0.4	60	1	R
185	4256	JV	Kinti nyelengo, naa, tia durango, dried challo and oil	36	93	48	284	1.6	0.4	60	1	R
187	4268	KH	Kinti nyelengo, naa, meat and durango	23	87	44	274	1.9	0.8	60	1	C
189	4255	JU	Kinti nyelengo, naa, kucha and dried fish (unspecified)	41	84	37	238	2.7	0.3	150	1	R
190	4250	JP	Kinti nyelengo, naa and jambo	61	86	47	289	2.3	0.3	890	6	R
188	4780	KUL	Kinti nyelengo, naa, bukolo and dried fish (unspecified)	30	84	32	232	1.7	0.3	80	2	R
4.2 - Kinti Futo and Sauces												
176	4269	KI	Kinti futo, naa and water	35	127	38	280	1.4	0.7	70	0	C
176	4279	KS	Kinti futo, naa and fish dajiwo	40	156	45	290	1.4	0.7	70	0	A
177	4177	GU	Kinti futo, naa, tia dajiwo and chilli pepper	31	142	47	300	2.3	0.7	270	11	R
4.3 - Kinti Mono												
194	4261	KA	Kinti mono	3	29	13	99	0.4	0.2	0	0	A
195	4266	KF	Kinti mono and sugar	3	29	13	98	0.4	0.2	0	0	A
196	4265	KE	Kinti mono and sour milk	30	49	13	117	0.3	0.3	60	0	A
194	4294	LH	Kinti mono and baobab juice	7	29	18	116	0.4	0.2	0	6	C
197	4283	KW	Kinti mono, sour milk and sugar	30	49	13	115	0.3	0.3	60	0	C
196	4286	KZ	Kinti mono, sour milk and baobab juice	34	49	16	129	0.3	0.3	60	3	C
5. - Maize (Tubanyo)												
202	4657	ZG	Tubanyo, on the cob, roast	26	447	56	215	1.4	1.8	270	0	L
209	4664	ZN	Tubanyo nyelengo and naa	30	88	35	147	1.4	0.8	70	0	C
201	4651	ZA	Tubanyo futo and naa	56	128	50	205	2.5	1.0	70	0	A
5.1 - Tubanyo Nyelengo and Tia Durango												
210	4671	ZU	Tubanyo nyelengo, naa and tia durango	27	82	43	187	1.5	0.7	70	1	R
210	4821	ZBE	Tubanyo nyelengo, naa, tia durango, okra and chilli pepper	28	80	42	184	1.4	0.7	150	2	R
210	4822	ZQA	Tubanyo nyelengo, naa, tia durango and pumpkin	27	74	35	177	1.3	0.6	140	1	R
210	4823	ZPQ	Tubanyo nyelengo, naa, tia durango and bitter tomato	26	77	40	173	1.2	0.7	60	1	R
211	4810	ZHK	Tubanyo nyelengo, naa, tia durango and dried challo	45	100	43	193	1.5	0.8	70	0	R

Food group	Code	Letter code	Name	Energy kcal	Energy kJ	Protein g	Fat g	Carbo-hydrate g	Fibre g	Phytate g	Water g
211	4811	ZOO	Tubanyo nyelengo, naa, tia durango and dried furo	127	533	5.1	3.1	21.0	4.5	0.21	66
211	4812	ZHW	Tubanyo nyelengo, naa, tia durango and dried kujalo	127	533	5.1	3.1	21.0	4.5	0.21	66
211	4816	ZQV	Tubanyo nyelengo, naa, tia durango and fresh fish (unspecifie	124	518	4.9	2.9	20.9	4.5	0.21	64
211	4817	ZPZ	Tubanyo nyelengo, naa, tia durango, fresh fish and oil	139	581	4.8	4.7	20.8	4.4	0.21	62
211	4818	ZHL	Tubanyo nyelengo, naa, tia durango and fish dajiwo	108	450	3.6	2.0	20.1	4.3	0.20	70
211	4832	ZPS	Tubanyo nyelengo, naa, tia durango, dried challo and oil	143	597	5.0	4.9	20.9	4.5	0.21	65
210	4824	ZTS	Tubanyo nyelengo, naa, tia durango and meat	122	509	5.6	2.2	20.7	4.5	0.21	67
210	4825	ZTL	Tubanyo nyelengo, naa, tia durango and chicken	122	509	5.6	2.2	20.7	4.5	0.21	67
210	4827	ZOQ	Tubanyo nyelengo, naa, tia durango and oil	138	579	4.0	4.9	21.0	4.5	0.21	66
5.2 - Tubanyo Nyelengo and Other Sauces											
213	4224	IP	Tubanyo nyelengo, naa, kucha and fish dajiwo	122	512	3.6	1.0	25.6	5.8	0.23	65
216	4232	IX	Tubanyo nyelengo, naa, bukolo and dried fish	127	530	4.0	1.0	26.6	5.6	0.22	65
5.3 - Tubanyo Futo and Sauces											
203	4653	ZC	Tubanyo futo, naa and water	117	490	3.2	0.9	25.1	5.2	0.18	67
203	4809	ZTQ	Tubanyo futo, naa and tia dajiwo	133	560	3.9	2.0	26.2	5.5	0.21	64
203	4596	WX	Tubanyo futo, naa, tia dajiwo and cassava	146	611	3.8	1.7	30.0	5.7	0.21	60
203	4597	WY	Tubanyo futo, naa, tia dajiwo and pumpkin	154	646	4.8	3.5	28.2	6.3	0.23	59
203	4829	ZCE	Tubanyo futo, naa and leaf (jambanduro) dajiwo	123	513	3.5	0.9	26.2	5.4	0.19	65
203	4830	ZVW	Tubanyo futo, naa and pumpkin dajiwo	122	510	3.4	0.9	26.1	5.4	0.19	65
203	4808	ZAF	Tubanyo futo, naa and fish dajiwo	124	519	3.9	1.0	26.0	5.4	0.19	64
5.4 - Tubanyo Mono											
218	4656	ZF	Tubanyo mono	43	180	1.5	0.4	9.0	2.4	0.08	86
219	4658	ZH	Tubanyo mono and sugar	59	247	1.3	1.1	11.7	2.4	0.08	84
220	4663	ZM	Tubanyo mono and sour milk	66	276	2.3	2.1	10.2	1.8	0.08	85
221	4665	ZO	Tubanyo mono, sour milk and sugar	62	259	1.9	1.7	10.5	2.1	0.08	85
6. - Wheat (Farinyo)											
226	4118	EN	Wheat flour, white	350	1464	9.8	1.2	80.1	3.4	0.13	13
283	4574	WB	Bread	263	1100	9.0	1.9	56.1	2.7	0.05	29
283	4586	WN	Pancakes	349	1460	6.0	15.8	48.8	1.5	0.05	26
6.1 - Wheat (Farinyo) Mono											
230	4143	FM	Wheat mono	46	192	1.8	0.1	10.0	0.6	0.02	87
231	4144	FN	Wheat mono and sugar	53	222	1.8	0.1	12.0	1.1	0.02	85
232	4145	FO	Wheat mono, sugar and milk (fresh)	52	218	2.1	0.7	10.3	1.0	0.02	86

Composition per 100g

Food group	Code	Letter code	Name	Calcium mg	Phos-phorus mg	Magnes-ium mg	Potass-ium mg	Iron mg	Zinc mg	Carot-ene µg	Vitamin C mg	Source of data
211	4811	ZOO	Tubanyo nyelengo, naa, tia durango and dried furo	96	127	44	191	1.4	0.8	60	0	R
211	4812	ZHW	Tubanyo nyelengo, naa, tia durango and dried kujalo	29	87	43	189	1.5	0.8	60	0	R
211	4816	ZQV	Tubanyo nyelengo, naa, tia durango and fresh fish (unspecifie	28	85	42	186	1.3	0.7	60	0	R
211	4817	ZPZ	Tubanyo nyelengo, naa, tia durango, fresh fish and oil	28	84	41	182	1.5	0.7	60	0	R
211	4818	ZHL	Tubanyo nyelengo, naa, tia durango and fish dajiwo	27	81	35	143	1.5	0.6	70	0	R
211	4832	ZPS	Tubanyo nyelengo, naa, tia durango, dried challo and oil	39	95	42	188	1.5	0.8	60	0	R
210	4824	ZTS	Tubanyo nyelengo, naa, tia durango and meat	26	90	40	188	1.5	0.9	70	0	R
210	4825	ZTL	Tubanyo nyelengo, naa, tia durango and chicken	26	90	40	178	1.4	0.8	70	0	R
210	4827	ZOQ	Tubanyo nyelengo, naa, tia durango and oil	26	80	42	182	1.5	0.7	60	0	R
5.2 - Tubanyo Nyelengo and Other Sauces												
213	4224	IP	Tubanyo nyelengo, naa, kucha and fish dajiwo	34	81	36	149	1.8	0.7	110	1	R
216	4232	IX	Tubanyo nyelengo, naa, bukolo and dried fish	34	87	34	164	1.5	0.7	90	2	R
5.3 - Tubanyo Futo and Sauces												
203	4653	ZC	Tubanyo futo, naa and water	33	73	29	119	1.4	0.6	30	0	C
203	4809	ZTQ	Tubanyo futo, naa and tia dajiwo	34	101	39	138	1.4	0.7	40	0	R
203	4596	WX	Tubanyo futo, naa, tia dajiwo and cassava	36	97	38	68	1.4	0.7	40	2	R
203	4597	WY	Tubanyo futo, naa, tia dajiwo and pumpkin	42	138	38	143	1.4	0.8	180	1	R
203	4829	ZCE	Tubanyo futo, naa and leaf (jambanduro) dajiwo	49	78	38	130	1.6	0.6	300	1	R
203	4830	ZVW	Tubanyo futo, naa and pumpkin dajiwo	35	76	37	130	1.4	0.6	50	0	R
203	4808	ZAF	Tubanyo futo, naa and fish dajiwo	37	96	37	131	1.4	0.7	40	0	R
5.4 - Tubanyo Mono												
218	4656	ZF	Tubanyo mono	5	33	12	46	0.4	0.3	0	0	C
219	4658	ZH	Tubanyo mono and sugar	5	33	12	46	0.4	0.3	0	0	C
220	4663	ZM	Tubanyo mono and sour milk	32	53	12	69	0.3	0.3	70	0	C
221	4665	ZO	Tubanyo mono, sour milk and sugar	32	53	12	69	0.3	0.3	70	0	C
6. - Wheat (Farinyo)												
226	4118	EN	Wheat flour, white	15	110	140	190	1.5	0.7	0	0	L
283	4574	WB	Bread	10	100	31	138	0.9	0.8	0	0	L
283	4586	WN	Pancakes	21	184	17	141	0.9	1.0	0	0	L
6.1 - Wheat (Farinyo) Mono												
230	4143	FM	Wheat mono	5	11	140	190	0.3	0.1	0	0	C
231	4144	FN	Wheat mono and sugar	5	11	31	138	0.3	0.1	0	0	C
232	4145	FO	Wheat mono, sugar and milk (fresh)	32	33	17	141	0.2	0.2	20	0	C

Composition per 100g

Food group	Code	Letter code	Name	Energy kcal	Energy kJ	Protein g	Fat g	Carbo-hydrate g	Fibre g	Phytate g	Water g
7. - Cassava (Nyambo)											
234	4345	NG	Nyambi, boiled	152	638	0.8	0.2	38.5	2.1	0.06	60
234	4352	NN	Nyambi, raw	152	638	0.8	0.2	38.5	2.1	0.06	60
237	4347	NI	Nyambi and oil	179	749	0.8	3.2	38.6	2.0	0.06	58
7.1 - Nyambi Mono											
240	4339	NA	Nyambi mono	45	188	0.2	0.1	11.6	0.6	0.02	88
241	4353	NO	Nyambi mono and sugar	53	222	0.2	0.1	13.6	0.5	0.02	86
242	4340	NB	Nyambi mono and sour milk	59	247	0.9	0.9	12.6	0.5	0.02	87
243	4342	ND	Nyambi mono, sour milk and sugar	55	230	0.5	0.5	13.0	0.5	0.02	87
8. - Groundnuts (Tio)											
248	4399	PI	Groundnuts, fresh, raw	388	1623	16.5	33.2	5.8	5.5	0.59	35
248	4495	TA	Groundnuts (Tio)	573	2397	24.4	49.0	8.6	8.1	0.86	4
248	4408	PR	Groundnuts, roast	584	2443	23.2	50.9	8.8	8.3	0.88	2
248	4500	TF	Groundnuts, baobab juice and sugar (sita nono)	92	386	4.5	6.6	5.3	1.5	0.18	80
8.1 - Tia Durango (groundnut sauce)											
249	4501	TG	Tia durango	92	385	4.5	6.6	5.3	1.5	0.12	80
252	4030	BD	Tia durango and tomato	84	352	4.1	5.9	5.1	1.5	0.11	81
252	4407	PQ	Tia durango and bitter tomato	76	320	3.8	5.3	4.8	1.5	0.10	83
252	4031	BE	Tia durango, okra and chilli pepper	81	340	4.1	5.6	4.9	1.6	0.11	81
252	4048	BV	Tia durango, naa and chilli pepper	90	378	4.5	6.2	5.6	1.8	0.12	79
255	4417	QA	Tia durango and pumpkin	59	246	2.7	3.6	4.4	1.3	0.08	87
252	4153	FW	Tia durango and mango	85	357	3.7	5.3	7.3	1.5	0.10	81
252	4507	TM	Tia durango and kucha	63	264	3.9	3.5	3.4	4.0	0.16	83
253	4277	KQ	Tia durango, naa and meat	117	489	10.9	6.7	4.4	1.5	0.09	75
249	4381	OQ	Tia durango and oil	132	554	4.3	11.3	5.0	1.4	0.11	76
254	4183	HA	Tia durango and palm oil	132	554	4.3	11.3	5.0	1.4	0.11	76
8.1.1 - Tia Durango and Fish											
250	4193	HK	Tia durango and dried challo	103	432	7.2	6.7	5.1	1.4	0.12	77
250	4040	BN	Tia durango, dried challo and naa	105	438	7.3	6.7	5.4	1.8	0.12	76
250	4409	PS	Tia durango and dried challo and oil	143	601	6.9	11.4	4.8	1.4	0.11	73
254	4259	JY	Tia durango, dried challo and palm oil	143	601	6.9	11.4	4.8	1.4	0.11	73

Composition per 100g

Food group	Code	Letter code	Name	Calcium mg	Phos-phorus mg	Magnes-ium mg	Potass-ium mg	Iron mg	Zinc mg	Carot-ene µg	Vitamin C mg	Source of data
7. - Cassava (Nyambo)												
234	4345	NG	Nyambi, boiled	25	22	19	342	0.5	0.6	0	15	E
234	4352	NN	Nyambi, raw	25	22	19	342	0.5	0.6	0	30	L
237	4347	NI	Nyambi and oil	25	22	18	332	0.5	0.6	0	28	C
7.1 - Nyambi Mono												
240	4339	NA	Nyambi mono	6	6	6	103	0.2	0.2	0	0	C
241	4353	NO	Nyambi mono and sugar	6	6	6	102	0.2	0.2	0	0	C
242	4340	NB	Nyambi mono and sour milk	33	26	7	114	0.1	0.3	50	0	C
243	4342	ND	Nyambi mono, sour milk and sugar	33	26	7	113	0.1	0.3	50	0	C
8. - Groundnuts (Tio)												
248	4399	PI	Groundnuts, fresh, raw	29	182	114	680	2.6	2.3	0	10	C
248	4495	TA	Groundnuts (Tio)	45	280	184	675	3.8	3.1	0	0	L
248	4408	PR	Groundnuts, roast	46	286	188	689	3.9	3.7	0	0	L
248	4500	TF	Groundnuts, baobab juice and sugar (sita nono)	51	27	35	207	0.6	0.9	0	46	C
8.1 - Tia Durango (groundnut sauce)												
249	4501	TG	Tia durango	21	69	80	348	0.9	0.6	50	2	A
252	4030	BD	Tia durango and tomato	20	64	73	338	0.9	0.5	110	4	R
252	4407	PQ	Tia durango and bitter tomato	19	58	65	298	0.8	0.5	40	2	R
252	4031	BE	Tia durango, okra and chilli pepper	26	67	76	337	1.6	0.5	280	6	R
252	4048	BV	Tia durango, naa and chilli pepper	42	69	80	362	1.2	0.6	370	4	R
255	4417	QA	Tia durango and pumpkin	21	50	47	313	1.1	0.4	250	3	R
252	4153	FW	Tia durango and mango	19	58	66	314	1.1	0.5	520	6	R
252	4507	TM	Tia durango and kucha	74	99	78	343	2.3	0.6	200	3	R
253	4277	KQ	Tia durango, naa and meat	39	101	66	353	1.8	1.7	160	1	R
249	4381	OQ	Tia durango and oil	20	66	76	331	0.9	0.6	50	2	R
254	4183	HA	Tia durango and palm oil	20	66	76	331	0.9	0.6	3300	2	R
8.1.1 - Tia Durango and Fish												
250	4193	HK	Tia durango and dried challo	71	120	78	372	1.0	1.1	50	2	R
250	4040	BN	Tia durango, dried challo and naa	76	112	78	386	1.3	0.8	170	2	R
250	4409	PS	Tia durango and dried challo and oil	54	107	74	353	1.0	0.8	50	2	R
254	4259	JY	Tia durango, dried challo and palm oil	54	107	74	353	1.2	0.8	3320	2	R

Food group	Code	Letter code	Name	Energy kcal	Energy kJ	Protein g	Fat g	Carbo-hydrate g	Fibre g	Phytate g	Water g
251	4258	JX	Tia durango, dried challo and kucha leaves	97	407	7.0	6.1	4.9	1.3	0.11	77
250	4379	OO	Tia durango and dried furo	102	428	7.2	6.6	5.1	1.4	0.11	77
250	4412	PV	Tia durango, dried furo and naa	104	434	7.4	6.5	5.4	1.8	0.12	76
250	4205	HW	Tia durango and dried kujalo	102	428	7.2	6.6	5.1	1.4	0.11	77
250	4150	FT	Tia durango, dried kujalo and naa	103	430	7.4	6.5	5.2	2.1	0.12	76
250	4414	PX	Tia durango and dried fish (unspecified)	103	431	7.2	6.7	5.1	1.4	0.11	77
250	4246	JL	Tia durango, dried fish (unspecified) and naa	104	437	7.3	6.6	5.4	1.8	0.12	76
250	4254	JT	Tia durango, dried fish and okra	95	399	6.9	6.0	4.8	1.6	0.11	78
250	4204	HV	Tia durango and fresh challo	93	389	6.7	6.0	4.7	1.3	0.11	70
250	4512	TR	Tia durango and fresh furo	93	389	6.7	6.0	4.7	1.3	0.11	70
250	4415	PY	Tia durango and fresh kujalo	93	389	6.7	6.0	4.7	1.3	0.11	70
250	4438	QV	Tia durango and fresh fish (unspecified)	93	389	6.7	6.0	4.7	1.3	0.11	70
250	4416	PZ	Tia durango, fresh fish (unspecified) and oil	133	558	6.4	10.7	4.4	1.2	0.10	66
250	4247	JM	Tia durango, fresh challo and naa	94	395	6.8	6.0	5.1	1.7	0.11	70
250	4251	JQ	Tia durango, fresh fish and okra	85	358	6.4	5.4	4.4	1.5	0.10	71
250	4519	TY	Tia durango and shellfish	84	353	5.2	4.5	6.1	1.5	0.12	80
250	4194	HL	Tia durango and fish dajiwo	49	205	3.0	3.4	2.6	0.8	0.08	87
250	4202	HT	Tia durango, fish dajiwo and naa	50	209	3.2	3.4	2.8	1.5	0.08	86
9.- Leaves and Other Vegetables											
9.1 - Leaves											
256	4045	BS	Kucha leaves, fresh	31	133	3.3	0.3	4.1	5.0	0.03	80
256	4046	BT	Morongo leaves, fresh	38	162	4.6	0.1	5.0	4.7	0.05	77
256	4047	BU	Jambanduro leaves, fresh	51	217	6.2	0.2	6.5	7.2	0.08	68
256	4044	BR	Baobab leaves, fresh	61	258	4.0	0.2	11.4	7.2	0.08	76
256	4146	FP	Baobab leaves, dried	214	895	13.1	2.3	37.7	29.9	0.26	12
256	4128	EX	Keren-kerengo leaves, fresh	41	174	4.5	0.3	5.4	5.0	0.08	80
9.2 - Kucha Leaf Sauces (without groundnuts)											
256	4207	HY	Kucha sauce =kucha durango	34	142	3.1	0.4	3.4	6.3	0.03	87
256	4406	PP	Kucha and naa	35	147	3.3	0.4	3.6	6.9	0.03	86
256	4358	NT	Kucha, naa and okra	34	144	3.1	0.4	3.9	6.3	0.03	86
256	4605	XG	Kucha and naa and tulingo	49	205	4.3	0.9	5.2	7.6	0.08	82

Composition per 100g

Food group	Code	Letter code	Name	Calcium mg	Phos-phorus mg	Magnes-ium mg	Potass-ium mg	Iron mg	Zinc mg	Carot-ene µg	Vitamin C mg	Source of data
251	4258	JX	Tia durango, dried challo and kucha leaves	89	109	63	331	2.4	0.8	300	5	R
250	4379	OO	Tia durango and dried furo	208	193	80	363	1.4	1.0	50	2	R
250	4412	PV	Tia durango, dried furo and naa	229	194	81	377	2.0	1.0	170	2	R
250	4205	HW	Tia durango and dried kujalo	28	85	77	356	0.9	1.0	50	2	R
250	4150	FT	Tia durango, dried kujalo and naa	50	86	78	370	1.2	1.0	170	2	R
250	4414	PX	Tia durango and dried fish (unspecified)	53	106	77	348	1.1	0.8	50	2	R
250	4246	JL	Tia durango, dried fish (unspecified) and naa	74	108	77	362	1.4	0.9	170	2	R
250	4254	JT	Tia durango, dried fish and okra	57	105	72	330	1.7	0.8	70	3	R
250	4204	HV	Tia durango and fresh challo	29	87	72	340	1.1	0.5	50	2	R
250	4512	TR	Tia durango and fresh furo	24	78	73	343	1.1	0.5	50	2	R
250	4415	PY	Tia durango and fresh kujalo	22	70	73	345	0.9	0.5	50	2	R
250	4438	QV	Tia durango and fresh fish (unspecified)	26	80	74	347	1.1	0.5	50	2	R
250	4416	PZ	Tia durango, fresh fish (unspecified) and oil	25	76	70	329	1.1	0.6	50	2	R
250	4247	JM	Tia durango, fresh challo and naa	51	89	73	354	1.2	0.5	160	2	R
250	4251	JQ	Tia durango, fresh fish and okra	31	79	69	329	1.6	0.5	70	3	R
250	4519	TY	Tia durango and shellfish	39	114	84	331	1.7	1.1	50	2	A
250	4194	HL	Tia durango and fish dajiwo	21	69	49	187	0.6	0.4	50	1	C
250	4202	HT	Tia durango, fish dajiwo and naa	42	70	50	203	1.0	0.4	170	1	R
9.- Leaves and Other Vegetables												
9.1 - Leaves												
256	4045	BS	Kucha leaves, fresh	354	49	77	419	3.4	0.9	2500	32	L
256	4046	BT	Morongo leaves, fresh	433	144	110	250	6.8	1.9	3000	43	L
256	4047	BU	Jambanduro leaves, fresh	705	124	91	280	6.2	1.0	12700	120	L
256	4044	BR	Baobab leaves, fresh	319	89	78	376	7.1	1.0	2650	42	L
256	4146	FP	Baobab leaves, dried	1790	193	103	1559	26.1	3.6	9710	0	L
256	4128	EX	Keren-kerengo leaves, fresh	358	122	100	407	7.2	1.2	6410	80	L
9.2 - Kucha Leaf Sauces (without groundnuts)												
256	4207	HY	Kucha sauce =kucha durango	100	44	62	295	3.8	0.6	650	7	C
256	4406	PP	Kucha and naa	120	46	63	310	4.1	0.6	760	7	R
256	4358	NT	Kucha, naa and okra	117	47	61	322	4.4	0.6	720	7	R
256	4605	XG	Kucha and naa and tulingo	137	57	63	357	4.0	0.7	730	7	R

Composition per 100g

Food group	Code	Letter code	Name	Energy kcal	Energy kJ	Protein g	Fat g	Carbo-hydrate g	Fibre g	Phytate g	Water g
256	4400	PJ	Kucha and tulingo	47	196	4.2	0.9	4.7	7.3	0.07	83
256	4607	XI	Kucha and bitter tomato	30	125	2.7	0.3	3.7	5.3	0.03	88
256	4148	FR	Kucha and chilli pepper	34	140	3.0	0.4	3.5	6.0	0.03	87
257	4149	FS	Kucha, chilli pepper and dried challo	47	199	5.8	0.8	3.5	5.7	0.03	84
257	4397	PG	Kucha and dried challo	48	200	5.8	0.8	3.3	6.0	0.03	84
257	4138	FH	Kucha, dried challo and okra	46	194	5.7	0.8	3.4	5.7	0.03	84
257	4420	QD	Kucha, dried challo and naa	50	210	5.9	0.8	3.8	6.3	0.03	83
257	4297	LK	Kucha, dried challo, naa and okra	48	202	5.8	0.8	3.9	6.0	0.03	83
257	4401	PK	Kucha, dried challo and tulingo	61	254	6.9	1.3	4.7	7.0	0.07	80
257	4418	QB	Kucha and dried furo	47	196	5.9	0.7	3.3	6.0	0.03	84
257	4421	QE	Kucha and dried furo and naa	49	206	6.0	0.7	3.8	6.3	0.03	83
257	4424	QH	Kucha, dried furo and tulingo	60	250	7.0	1.1	4.7	7.0	0.07	80
257	4398	PH	Kucha and dried kujalo	47	197	5.9	0.7	3.3	6.0	0.03	84
257	4422	QF	Kucha, dried kujalo and naa	49	206	6.0	0.7	3.8	6.3	0.03	83
257	4425	QI	Kucha, dried kujalo and tulingo	60	251	7.0	1.1	4.7	7.0	0.07	80
257	4419	QC	Kucha and dried fish (unspecified)	48	199	5.9	0.8	3.3	6.0	0.03	84
257	4423	QG	Kucha, dried fish (unspecified) and naa	50	208	6.0	0.8	3.8	6.3	0.03	83
257	4608	XJ	Kucha, dried fish (unspecified) and tulingo	60	253	6.9	1.2	4.7	7.0	0.07	80
257	4359	NU	Kucha, dried fish (unspecified), tulingo and naa	62	262	7.0	1.2	5.1	7.3	0.08	79
257	4426	QJ	Kucha and fresh challo	42	175	5.4	0.6	3.2	5.5	0.03	77
257	4427	QK	Kucha and fresh furo	42	175	5.4	0.6	3.2	5.5	0.03	77
257	4428	QL	Kucha and fresh kujalo	42	175	5.4	0.6	3.2	5.5	0.03	77
257	4429	QM	Kucha and fresh fish (unspecified)	42	175	5.4	0.6	3.2	5.5	0.03	77
257	4431	QO	Kucha, fresh fish (unspcified) and naa	44	184	5.5	0.6	3.7	5.8	0.03	76
257	4430	QN	Kucha, fresh fish (unspecified) and tulingo	55	229	6.5	1.0	4.6	6.5	0.07	73
257	4362	NX	Kucha and shellfish	40	166	4.9	0.5	3.2	5.5	0.03	86
261	4306	LT	Kucha and meat	72	300	9.7	2.2	3.0	4.7	0.02	81
258	4432	QP	Kucha and oil	77	323	2.9	5.4	3.3	6.0	0.03	83
259	4609	XK	Kucha and palm oil	77	323	2.9	5.4	3.3	6.0	0.03	83
257	4404	PN	Kucha, palm oil and dried challo	91	382	5.7	5.8	3.3	5.7	0.03	80
257	4610	XL	Kucha, palm oil and dried furo	90	377	5.8	5.6	3.3	5.7	0.03	80

Composition per 100g

Food group	Code	Letter code	Name	Calcium mg	Phos-phorus mg	Magnes-ium mg	Potass-ium mg	Iron mg	Zinc mg	Carot-ene µg	Vitamin C mg	Source of data
256	4400	PJ	Kucha and tulingo	116	55	62	342	3.7	0.7	620	7	R
256	4607	XI	Kucha and bitter tomato	82	38	51	301	3.1	0.5	520	6	R
256	4148	FR	Kucha and chilli pepper	96	44	62	293	3.7	0.6	820	12	R
257	4149	FS	Kucha, chilli pepper and dried challo	126	87	61	319	4.0	0.8	790	12	R
257	4397	PG	Kucha and dried challo	131	87	61	321	3.7	0.8	650	7	R
257	4138	FH	Kucha, dried challo and okra	128	89	59	309	4.1	0.8	580	8	R
257	4420	QD	Kucha, dried challo and naa	151	89	62	336	4.0	0.8	730	7	R
257	4297	LK	Kucha, dried challo, naa and okra	148	90	60	330	4.3	0.8	690	7	R
257	4401	PK	Kucha, dried challo and tulingo	147	98	58	367	3.9	0.9	590	6	R
257	4418	QB	Kucha and dried furo	283	169	63	312	4.1	1.0	620	7	R
257	4421	QE	Kucha and dried furo and naa	304	171	64	327	4.4	1.1	730	7	R
257	4424	QH	Kucha, dried furo and tulingo	300	180	60	359	4.2	1.1	590	6	R
257	4398	PH	Kucha and dried kujalo	104	61	60	305	3.6	1.0	650	7	R
257	4422	QF	Kucha, dried kujalo and naa	124	63	61	320	3.9	1.0	730	7	R
257	4425	QI	Kucha, dried kujalo and tulingo	120	72	58	352	3.8	1.1	590	6	R
257	4419	QC	Kucha and dried fish (unspecified)	128	83	60	297	3.8	0.9	620	7	R
257	4423	QG	Kucha, dried fish (unspecified) and naa	148	84	61	312	4.1	0.9	730	7	R
257	4608	XJ	Kucha, dried fish (unspecified) and tulingo	144	94	57	344	4.0	1.0	590	6	R
257	4359	NU	Kucha, dried fish (unspecified), tulingo and naa	165	95	58	341	4.1	1.0	700	6	R
257	4426	QJ	Kucha and fresh challo	99	65	57	315	3.5	0.5	570	6	R
257	4427	QK	Kucha and fresh furo	94	56	57	318	3.5	0.5	570	6	R
257	4428	QL	Kucha and fresh kujalo	92	48	58	320	3.3	0.5	570	6	R
257	4429	QM	Kucha and fresh fish (unspecified)	95	58	58	321	3.5	0.5	570	6	R
257	4431	QO	Kucha, fresh fish (unspcified) and naa	115	60	59	336	3.8	0.6	680	6	R
257	4430	QN	Kucha, fresh fish (unspecified) and tulingo	112	69	57	368	3.7	0.6	540	6	R
257	4362	NX	Kucha and shellfish	106	66	73	306	4.7	0.7	570	6	R
261	4306	LT	Kucha and meat	78	80	52	359	3.7	0.7	490	5	R
258	4432	QP	Kucha and oil	95	42	59	280	3.6	0.7	620	7	R
259	4609	XK	Kucha and palm oil	95	42	59	280	3.6	0.7	3890	7	R
257	4404	PN	Kucha, palm oil and dried challo	126	85	58	305	3.5	0.9	3270	6	R
257	4610	XL	Kucha, palm oil and dried furo	278	167	60	296	3.9	1.1	3860	6	R

Food group	Code	Letter code	Name	Energy kcal	Energy kJ	Protein g	Fat g	Carbo-hydrate g	Fibre g	Phytate g	Water g
257	4616	XR	Kucha, palm oil and dried fish (unspecified)	91	380	5.7	5.8	3.3	5.7	0.03	80
257	4304	LR	Kucha, palm oil and fresh fish (unspecified)	85	356	5.3	5.6	3.2	5.2	0.02	72
9.3 - Jambo Leaf Sauces (with groundnuts and chilli pepper)											
252	4192	HJ	Jambo sauce	107	448	5.5	7.3	5.1	1.5	0.16	78
252	4434	QR	Jambo and tulingo	117	490	6.5	7.4	6.3	2.8	0.20	75
252	4052	BZ	Jambo and bitter tomato	84	353	4.4	5.5	4.6	1.5	0.14	81
252	4510	TP	Jambo and pumpkin	67	280	3.3	4.0	4.3	1.3	0.10	86
251	4435	QS	Jambo and dried challo	117	492	8.1	7.4	4.9	1.4	0.15	75
251	4436	QT	Jambo and dried furo	116	488	8.2	7.2	4.9	1.4	0.15	75
251	4437	QU	Jambo and dried kujalo	116	488	8.2	7.3	4.9	1.4	0.15	75
251	4216	IH	Jambo and dried fish (unspecified)	117	491	8.1	7.4	4.9	1.4	0.15	75
251	4439	QW	Jambo and fresh challo	106	444	7.5	6.7	4.5	1.3	0.14	69
251	4440	QX	Jambo and fresh furo	106	444	7.5	6.7	4.5	1.3	0.14	69
251	4441	QY	Jambo and fresh kujalo	106	444	7.5	6.7	4.5	1.3	0.14	69
251	4442	QZ	Jambo and fresh fish (unspecified)	106	444	7.5	6.7	4.5	1.3	0.14	69
251	4215	IG	Jambo and fish dajiwo	56	236	3.4	3.7	2.5	0.8	0.08	86
251	4363	NY	Jambo and shellfish	104	435	7.0	6.6	4.5	1.3	0.14	78
260	4526	UF	Jambo and meat	126	530	11.5	7.3	3.8	1.1	0.12	74
260	4527	UG	Jambo and chicken	111	464	9.2	6.6	3.8	1.1	0.12	77
259	4433	QQ	Jambo and palm oil	147	614	5.2	11.9	4.8	1.4	0.15	74
251	4074	CV	Jambo, palm oil and dried kujalo	156	654	7.9	11.9	4.6	1.4	0.14	71
251	4525	UE	Jambo, palm oil and fresh fish (unspecified)	146	610	7.3	11.3	4.2	1.2	0.13	65
9.4 - Other Leaf Sauces											
256	4142	FL	Nada kolikolo (no groundnuts)	18	75	2.9	0.0	2.8	7.9	0.03	87
257	4132	FB	Nada kolikolo (no groundnuts) and dried fish (unspecified)	21	88	3.1	0.4	1.4	6.3	0.03	87
252	4191	HI	Nada/naa durango (with groundnuts)	101	423	6.1	7.3	3.7	7.9	0.15	75
251	4184	HB	Naa durango (with groundnuts) and dried fish (unspecified)	112	467	8.7	7.4	3.5	7.6	0.15	72
256	4242	JH	Jambanduro sauce (no groundnuts) with chilli pepper	24	103	2.9	0.1	3.1	0.0	0.04	84
256	4203	HU	Jambanduro sauce (no groundnuts) and baobab seeds	67	283	5.6	3.1	5.0	0.3	0.03	77

Composition per 100g

Food group	Code	Letter code	Name	Calcium mg	Phos-phorus mg	Magnes-ium mg	Potass-ium mg	Iron mg	Zinc mg	Carot-ene µg	Vitamin C mg	Source of data
257	4616	XR	Kucha, palm oil and dried fish (unspecified)	123	80	57	282	3.6	0.9	3860	6	R
257	4304	LR	Kucha, palm oil and fresh fish (unspecified)	90	56	55	305	3.4	0.6	3810	6	R
9.3 - Jambo Leaf Sauces (with groundnuts and chilli pepper)												
252	4192	HJ	Jambo sauce	133	91	77	416	3.9	0.6	2570	17	A
252	4434	QR	Jambo and tulingo	149	101	73	458	3.9	0.7	2440	16	R
252	4052	BZ	Jambo and bitter tomato	103	73	63	352	3.2	0.5	2130	14	R
252	4510	TP	Jambo and pumpkin	82	62	45	350	2.4	0.4	1630	11	R
251	4435	QS	Jambo and dried challo	162	132	75	436	3.9	0.9	2440	16	R
251	4436	QT	Jambo and dried furo	315	214	70	427	4.2	1.1	2440	16	R
251	4437	QU	Jambo and dried kujalo	135	106	71	421	3.8	1.1	2440	16	R
251	4216	IH	Jambo and dried fish (unspecified)	159	127	74	412	4.0	0.9	2440	16	R
251	4439	QW	Jambo and fresh challo	128	106	70	400	3.7	0.6	2260	15	R
251	4440	QX	Jambo and fresh furo	123	97	70	403	3.7	0.6	2260	15	R
251	4441	QY	Jambo and fresh kujalo	121	89	71	405	3.5	0.6	2260	15	R
251	4442	QZ	Jambo and fresh fish (unspecified)	124	99	71	406	3.7	0.6	2260	15	R
251	4215	IG	Jambo and fish dajiwo	71	70	48	220	2.5	0.5	1280	8	R
251	4363	NY	Jambo and shellfish	135	107	87	366	4.4	0.8	2260	15	R
260	4526	UF	Jambo and meat	102	116	63	390	3.8	1.7	1920	13	R
260	4527	UG	Jambo and chicken	102	116	63	366	3.2	0.8	1920	13	R
259	4433	QQ	Jambo and palm oil	126	86	73	395	N	0.7	5710	16	R
251	4074	CV	Jambo, palm oil and dried kujalo	128	101	70	378	3.8	1.1	5590	15	R
251	4525	UE	Jambo, palm oil and fresh fish (unspecified)	118	95	65	352	3.8	0.6	5400	14	R
9.4 - Other Leaf Sauces												
256	4142	FL	Nada kolikolo (no groundnuts)	182	76	10	131	3.2	0.5	170	0	C
257	4132	FB	Nada kolikolo (no groundnuts) and dried fish (unspecified)	170	87	10	141	3.7	1.1	150	0	C
252	4191	HI	Nada/naa durango (with groundnuts)	161	107	25	213	1.2	0.9	870	0	R
251	4184	HB	Naa durango (with groundnuts) and dried fish (unspecified)	186	142	25	219	1.5	1.2	830	0	R
256	4242	JH	Jambanduro sauce (no groundnuts) with chilli pepper	320	58	54	145	3.2	0.5	5920	32	R
256	4203	HU	Jambanduro sauce (no groundnuts) and baobab seeds	314	201	79	221	1.4	0.5	5330	29	R

Food group	Code	Letter code	Name	Energy kcal	Energy kJ	Protein g	Fat g	Carbo-hydrate g	Fibre g	Phytate g	Water g
9.5 - Other Vegetables											
264	4035	BI	Aubergine	14	59	0.7	0.0	3.0	2.5	0.03	93
264	4566	VT	Bitter tomato	14	59	0.9	0.0	2.8	1.5	0.03	93
264	4037	BK	Cabbage	22	92	1.9	0.0	3.8	2.7	0.03	90
264	4042	BP	Chilli pepper, fresh	26	109	1.8	0.3	4.2	3.5	0.03	86
264	4043	BQ	Chilli pepper, dried	283	1190	15.0	11.0	33.0	23.0	0.20	8
264	4570	VX	Okra	17	71	2.0	0.1	2.3	4.0	0.03	90
264	4049	BW	Okra, dried	159	665	17.8	1.2	20.5	35.6	0.20	11
264	4034	BH	Onions	23	96	0.9	0.0	5.2	1.3	0.01	93
262	4549	VC	Pumpkin, boiled	18	75	0.5	0.0	3.4	1.0	0.03	95
262	4547	VA	Pumpkin and groundnuts	73	305	2.8	5.1	4.3	1.8	0.08	87
264	4551	VE	Sweet potato	94	393	1.2	0.6	22.3	2.5	0.01	69
264	4033	BG	Tomatoes	14	59	0.9	0.0	2.8	1.5	0.03	93
283	4127	EW	Tomato paste	76	318	5.0	0.3	14.2	2.8	0.02	75
264	4560	VN	Yam	119	498	1.9	0.2	27.8	2.5	0.01	69
9.5.1 - Beans											
263	4210	IB	Beans, boiled	142	594	10.8	0.5	25.2	7.4	0.44	60
263	4226	IR	Locust beans, fermented (Tulingo)	423	1770	37.0	25.5	12.0	3.5	0.98	22
263	4228	IT	Locust Bean Pod Powder (Nete munko)	220	920	3.1	0.3	54.6	24.4	0.93	15
263	4227	IS	Nete mono and sugar	49	206	0.1	0.0	12.0	1.5	0.12	86
9.6 - Vegetable Oil Stew - Oil Sauce											
258	4552	VF	Vegetable oil stew (oil sauce)	294	1230	1.4	30.3	4.1	1.0	0.03	64
258	4197	HO	Vegetable oil stew and cassava	266	1112	1.3	24.3	11.0	1.2	0.04	63
258	4589	WQ	Vegetable oil stew and pumpkin	142	595	0.9	13.6	3.7	1.0	0.03	81
271	4199	HQ	Vegetable oil stew and fresh challo	213	889	10.3	18.4	2.4	0.6	0.02	69
271	4200	HR	Vegetable oil stew and fresh furo	213	889	10.3	18.4	2.4	0.6	0.02	69
271	4201	HS	Vegetable oil stew and fresh kujalo	213	889	10.3	18.4	2.4	0.6	0.02	69
271	4540	UT	Vegetable oil stew and fresh fish (unspecified)	213	889	10.3	18.4	2.4	0.6	0.02	69
271	4333	MU	Vegetable oil stew and shellfish	205	856	8.4	18.2	2.4	0.6	0.02	69
273	4196	HN	Vegetable oil stew and meat	243	1016	14.6	19.5	2.2	0.5	0.02	64
273	4185	HC	Vegetable oil stew and chicken	234	978	8.1	21.2	2.7	0.6	0.02	68

Composition per 100g

Food group	Code	Letter code	Name	Calcium mg	Phos-phorus mg	Magnes-ium mg	Potass-ium mg	Iron mg	Zinc mg	Carot-ene µg	Vitamin C mg	Source of data
9.5 - Other Vegetables												
264	4035	BI	Aubergine	10	12	16	255	0.8	0.2	0	9	L
264	4566	VT	Bitter tomato	10	12	8	97	0.5	0.1	0	8	L
264	4037	BK	Cabbage	44	36	17	194	0.5	0.5	60	40	L
264	4042	BP	Chilli pepper, fresh	16	39	42	203	1.2	0.3	4100	225	L
264	4043	BQ	Chilli pepper, dried	150	256	161	1931	14.3	1.2	600	10	L
264	4570	VX	Okra	70	60	49	260	1.0	0.9	270	47	L
264	4049	BW	Okra, dried	825	397	440	2313	26.3	5.3	60	20	L
264	4034	BH	Onions	31	30	7	161	0.8	0.1	0	10	L
262	4549	VC	Pumpkin, boiled	20	26	7	270	0.5	0.2	480	4	L
262	4547	VA	Pumpkin and groundnuts	21	153	23	331	0.8	0.4	330	1	C
264	4551	VE	Sweet potato	25	41	18	275	2.0	0.3	1230	37	L
264	4033	BG	Tomatoes	13	21	10	242	0.5	0.2	600	50	L
283	4127	EW	Tomato paste	35	94	44	916	1.4	0.5	1780	10	L
264	4560	VN	Yam	52	61	22	368	0.8	0.3	0	6	L
9.5.1 - Beans												
263	4210	IB	Beans, boiled	15	5	65	452	3.5	1.2	0	0	L
263	4226	IR	Locust beans, fermented (Tulingo)	449	282	0	1304	3.6	2.6	0	0	L
263	4228	IT	Locust Bean Pod Powder (Nete munko)	130	160	290	2030	3.5	2.5	800	190	L
263	4227	IS	Nete mono and sugar	16	17	47	327	0.4	0.3	90	10	C
9.6 - Vegetable Oil Stew - Oil Sauce												
258	4552	VF	Vegetable oil stew (oil sauce)	36	29	27	182	0.6	0.6	120	6	C
258	4197	HO	Vegetable oil stew and cassava	34	28	25	214	0.9	0.6	90	8	R
258	4589	WQ	Vegetable oil stew and pumpkin	27	27	18	222	0.9	0.4	320	5	R
271	4199	HQ	Vegetable oil stew and fresh challo	59	109	26	194	1.2	0.3	70	3	C
271	4200	HR	Vegetable oil stew and fresh furo	42	76	26	197	1.2	0.3	70	3	C
271	4201	HS	Vegetable oil stew and fresh kujalo	33	48	27	199	0.5	0.3	70	3	C
271	4540	UT	Vegetable oil stew and fresh fish (unspecified)	46	84	27	200	1.1	0.3	70	3	R
271	4333	MU	Vegetable oil stew and shellfish	84	111	37	185	4.4	1.0	70	3	R
273	4196	HN	Vegetable oil stew and meat	24	105	25	214	2.1	2.6	70	3	C
273	4185	HC	Vegetable oil stew and chicken	27	85	25	190	0.8	0.8	70	3	C

Food group	Code	Letter code	Name	Energy kcal	Energy kJ	Protein g	Fat g	Carbo-hydrate g	Fibre g	Phytate g	Water g
259	4559	VM	Vegetables in palm oil	294	1230	1.4	30.3	4.1	1.0	0.03	64
271	4234	IZ	Super kanje (okra, kereng-kerengo leaves, fish, palm oil)	206	863	10.8	17.1	2.7	2.1	0.03	65
271	4541	UU	Vegetables in palm oil and fresh challo	213	889	10.3	18.4	2.4	0.6	0.02	69
271	4542	UV	Vegetables in palm oil and fresh furo	213	889	10.3	18.4	2.4	0.6	0.02	69
271	4543	UW	Vegetables in palm oil and fresh kujalo	213	889	10.3	18.4	2.4	0.6	0.02	69
271	4544	UX	Vegetables in palm oil and fresh fish (unspecified)	213	889	10.3	18.4	2.4	0.6	0.02	69
271	4334	MV	Vegetables in palm oil and shellfish	205	856	8.4	18.2	2.4	0.6	0.02	69
273	4621	XW	Vegetables in palm oil and meat	243	1016	14.6	19.5	2.2	0.5	0.02	64
273	4622	XX	Vegetables in palm oil and chicken	234	978	8.1	21.2	2.7	0.6	0.02	68
9.7 - Bukolo (tomato, onion and flour sauce)											
264	4206	HX	Bukolo	49	205	1.8	0.1	10.8	3.0	0.03	88
264	4528	UH	Bukolo and naa	51	213	1.9	0.1	11.1	3.3	0.03	87
264	4535	UO	Bukolo and okra	46	192	1.8	0.1	9.9	3.0	0.03	88
265	4529	UI	Bukolo and dried challo	62	260	4.6	0.5	10.3	2.9	0.03	85
265	4618	XT	Bukolo, dried challo and naa	64	269	4.7	0.6	10.6	3.2	0.03	84
265	4530	UJ	Bukolo and dried furo	61	256	4.7	0.4	10.3	2.9	0.03	85
265	4619	XU	Bukolo, dried furo and naa	63	265	4.8	0.4	10.6	3.2	0.03	84
265	4531	UK	Bukolo and dried kujalo	61	257	4.7	0.4	10.3	2.9	0.03	85
265	4620	XV	Bukolo, dried kujalo and naa	63	265	4.8	0.4	10.6	3.2	0.03	84
265	4532	UL	Bukolo and dried fish (unspecified)	62	259	4.6	0.5	10.3	2.9	0.03	85
265	4617	XS	Bukolo, dried fish (unspecified) and naa	64	268	4.7	0.5	10.6	3.2	0.03	84
265	4534	UN	Bukolo and fresh challo	55	231	4.3	0.3	9.5	2.6	0.03	77
265	4536	UP	Bukolo and fresh furo	55	231	4.3	0.3	9.5	2.6	0.03	77
265	4537	UQ	Bukolo and fresh kujalo	55	231	4.3	0.3	9.5	2.6	0.03	77
265	4538	UR	Bukolo and fresh fish (unspecified)	55	231	4.3	0.3	9.5	2.6	0.03	77
265	4168	GL	Bukolo, fresh fish (unspecified) and naa	57	239	4.4	0.3	9.8	3.0	0.03	77
265	4364	NZ	Bukolo and shellfish	53	221	3.7	0.3	9.5	2.6	0.03	86
265	4181	GY	Bukolo, fresh fish, dried fish and oil	203	849	8.7	14.3	10.9	0.8	0.02	65

Composition per 100g

Food group	Code	Letter code	Name	Calcium mg	Phos-phorus mg	Magnes-ium mg	Potass-ium mg	Iron mg	Zinc mg	Carot-ene µg	Vitamin C mg	Source of data
259	4559	VM	Vegetables in palm oil	36	29	27	182	0.7	0.6	23400	6	C
271	4234	IZ	Super kanje (okra, kereng-kerengo leaves, fish, palm oil)	165	150	33	288	2.6	1.0	11650	11	R
271	4541	UU	Vegetables in palm oil and fresh challo	59	109	26	194	1.2	0.3	13570	3	R
271	4542	UV	Vegetables in palm oil and fresh furo	42	76	26	197	1.2	0.3	13570	3	R
271	4543	UW	Vegetables in palm oil and fresh kujalo	33	48	27	199	0.5	0.3	13570	3	R
271	4544	UX	Vegetables in palm oil and fresh fish (unspecified)	46	84	27	200	1.2	0.3	13570	3	R
271	4334	MV	Vegetables in palm oil and shellfish	84	111	37	185	4.4	1.0	13570	3	R
273	4621	XW	Vegetables in palm oil and meat	24	105	25	214	2.1	2.6	12400	3	R
273	4622	XX	Vegetables in palm oil and chicken	27	85	25	190	0.8	0.8	15210	3	R
9.7 - Bukolo (tomato, onion and flour sauce)												
264	4206	HX	Bukolo	18	44	30	249	0.6	0.2	170	10	C
264	4528	UH	Bukolo and naa	39	46	31	264	0.9	0.2	290	9	R
264	4535	UO	Bukolo and okra	23	46	32	250	1.2	0.2	180	10	R
265	4529	UI	Bukolo and dried challo	52	87	31	277	0.7	0.4	170	9	R
265	4618	XT	Bukolo, dried challo and naa	74	89	32	293	1.0	0.5	280	9	R
265	4530	UJ	Bukolo and dried furo	205	169	33	268	1.0	0.7	170	9	R
265	4619	XU	Bukolo, dried furo and naa	226	171	34	284	1.3	0.7	280	9	R
265	4531	UK	Bukolo and dried kujalo	25	61	30	261	0.6	0.6	170	9	R
265	4620	XV	Bukolo, dried kujalo and naa	47	63	31	277	0.9	0.7	280	9	R
265	4532	UL	Bukolo and dried fish (unspecified)	50	83	30	253	0.8	0.5	170	9	R
265	4617	XS	Bukolo, dried fish (unspecified) and naa	71	84	31	269	1.1	0.5	280	9	R
265	4534	UN	Bukolo and fresh challo	27	65	29	252	0.7	0.2	150	8	R
265	4536	UP	Bukolo and fresh furo	22	56	29	256	0.7	0.2	150	8	R
265	4537	UQ	Bukolo and fresh kujalo	19	48	30	257	0.5	0.2	150	8	R
265	4538	UR	Bukolo and fresh fish (unspecified)	23	58	30	259	0.7	0.2	150	8	R
265	4168	GL	Bukolo, fresh fish (unspecified) and naa	44	60	31	274	1.0	0.2	270	8	R
265	4364	NZ	Bukolo and shellfish	34	66	40	244	0.7	0.4	150	8	R
265	4181	GY	Bukolo, fresh fish, dried fish and oil	61	108	30	281	0.9	0.6	100	3	R

Food group	Code	Letter code	Name	Energy kcal	Energy kJ	Protein g	Fat g	Carbo-hydrate g	Fibre g	Phytate g	Water g
9.8. - Dajiwo Sauces (thin sauces)											
234	4356	NR	Cassava dajiwo	8	32	0.0	0.0	1.9	0.1	0	97
249	4511	TQ	Tia dajiwo	29	121	1.2	2.5	0.4	0.4	0.05	95
255	4572	VZ	Tia dajiwo and pumpkin	24	100	0.9	1.4	1.8	0.7	0.04	95
250	4188	HF	Tia dajiwo and fresh fish (unspecified)	38	161	3.8	2.4	0.4	0.4	0.04	84
250	4186	HD	Tia dajiwo and shellfish	35	146	3.2	2.4	0.4	0.4	0.04	93
256	4057	CE	Jambanduro dajiwo	3	11	0.3	0.0	0.3	0.0	0	97
252	4077	CY	Jambanduro dajiwo and groundnuts	32	134	1.5	2.6	1.4	0.2	0	93
251	4078	CZ	Jambanduro dajiwo, groundnuts and fresh fish	44	184	4.2	2.8	1.4	0.2	0	81
262	4569	VW	Pumpkin dajiwo	1	4	0.0	0.0	0.2	0.1	0	99
262	4214	IF	Pumpkin dajiwo and dried fish	16	67	2.9	0.4	0.2	0.0	0	95
262	4213	IE	Pumpkin dajiwo, groundnuts and dried fish	45	187	4.1	2.8	0.6	0.5	0.04	90
263	4593	WU	Soso dajiwo	37	155	1.9	0.1	7.6	2.3	0.06	90
270	4006	AF	Fish dajiwo	6	25	1.3	0.1	0.0	0.0	0	95
270	4011	AK	Shellfish plus dajiwo	32	134	7.2	0.6	0.0	0.0	0	90
272	4018	AR	Meat plus dajiwo	59	247	8.0	3.0	0.0	0.0	0	90
272	4121	EQ	Meat dajiwo	9	39	1.5	0.4	0.0	0.0	0	97
10. - Fruit and Nuts											
10.1 - Mangoes											
266	4314	MB	Mangoes	59	247	0.5	0.1	15.3	1.5	0.03	83
266	4321	MI	Mangoes, boiled	59	247	0.5	0.1	15.3	1.5	0.03	83
266	4323	MK	Mangoes, green, unripe	56	236	0.5	0.1	14.2	1.5	0.03	84
266	4324	ML	Mangoes, bush	70	293	1.4	0.1	16.7	1.1	0.03	80
266	4336	MX	Mango, dried	307	1284	2.9	0.9	76.7	4.4	0.14	18
10.2 - Other Fruit											
268	4568	VV	Banana	79	331	1.1	0.3	19.2	3.4	0.02	71
268	4550	VD	Baobab fruit	199	833	2.0	0.3	50.2	22.8	0.70	21
268	4545	UY	Cashew fruit	53	222	1.0	0.7	11.7	2.0	0.03	86
268	4553	VG	Guava	58	244	1.0	0.4	13.0	5.5	0.03	80
268	4558	VL	Lime	35	146	0.8	0.0	8.5	2.0	0.01	86
267	4561	VO	Oranges	35	146	0.8	0.0	8.5	2.0	0.01	86

Composition per 100g

Food group	Code	Letter code	Name	Calcium mg	Phos-phorus mg	Magnes-ium mg	Potass-ium mg	Iron mg	Zinc mg	Carot-ene µg	Vitamin C mg	Source of data
9.8. - Dajiwo Sauces (thin sauces)												
234	4356	NR	Cassava dajiwo	4	1	18	25	0.0	0.0	0	1	R
249	4511	TQ	Tia dajiwo	2	62	23	42	0.2	0.2	0	0	C
255	4572	VZ	Tia dajiwo and pumpkin	10	46	22	54	0.3	0.2	220	2	R
250	4188	HF	Tia dajiwo and fresh fish (unspecified)	9	74	24	77	0.3	0.2	0	0	R
250	4186	HD	Tia dajiwo and shellfish	20	82	33	62	0.6	0.4	0	0	R
256	4057	CE	Jambanduro dajiwo	38	6	22	22	0.5	0.1	640	3	R
252	4077	CY	Jambanduro dajiwo and groundnuts	40	24	26	56	1.2	0.1	640	3	R
251	4078	CZ	Jambanduro dajiwo, groundnuts and fresh fish	47	43	28	95	1.3	0.1	640	3	R
262	4569	VW	Pumpkin dajiwo	4	1	17	22	0.1	0.0	20	0	R
262	4214	IF	Pumpkin dajiwo and dried fish	36	42	18	37	0.4	0.3	20	0	R
262	4213	IE	Pumpkin dajiwo, groundnuts and dried fish	38	56	22	70	0.6	0.5	20	0	R
263	4593	WU	Soso dajiwo	11	24	17	37	0.6	0.2	80	0	R
270	4006	AF	Fish dajiwo	9	50	19	25	0.2	0.3	3	0	C
270	4011	AK	Shellfish plus dajiwo	50	75	23	18	0.2	0.8	0	0	C
272	4018	AR	Meat plus dajiwo	17	19	19	84	0.7	1.3	0	0	C
272	4121	EQ	Meat dajiwo	3	10	18	24	0.1	0.3	0	0	R
10. - Fruit and Nuts												
10.1 - Mangoes												
266	4314	MB	Mangoes	10	13	10	179	1.5	0.1	2380	40	L
266	4321	MI	Mangoes, boiled	10	13	10	179	1.5	0.1	2380	20	E
266	4323	MK	Mangoes, green, unripe	17	8	9	169	1.4	0.1	60	80	L
266	4324	ML	Mangoes, bush	29	142	12	211	1.8	0.1	310	74	L
266	4336	MX	Mango, dried	116	107	48	865	5.8	0.5	2740	30	C
10.2 - Other Fruit												
268	4568	VV	Banana	7	28	30	277	0.8	0.2	200	10	L
268	4550	VD	Baobab fruit	390	35	149	891	2.1	4.2	0	370	L
268	4545	UY	Cashew fruit	12	45	269	647	0.5	0.1	760	252	L
268	4553	VG	Guava	15	30	15	302	1.3	0.1	290	230	L
268	4558	VL	Lime	22	19	10	142	0.7	0.1	50	29	L
267	4561	VO	Oranges	30	18	10	166	0.5	0.1	50	45	L

Food group	Code	Letter code	Name	Energy kcal	Energy kJ	Protein g	Fat g	Carbo-hydrate g	Fibre g	Phytate g	Water g
268	4038	BL	Paw-paw	39	163	0.6	0.0	9.0	0.7	0.03	89
268	4565	VS	Tallo fruit	116	484	1.9	0.4	27.3	2.3	0.03	67
268	4563	VQ	Tamba fruit (Gingerbread plum)	142	594	1.4	0.1	35.0	2.4	0.03	60
268	4564	VR	Tomborongo (Jujube)	63	264	1.8	0.0	14.0	0.6	0.03	83
10.3 - Nuts and Seeds											
268	4641	YQ	Baobab seeds	452	1898	30.0	29.6	21.5	3.2	0.80	8
264	4225	IQ	Kola nut, fresh	120	502	2.2	0.4	28.7	5.0	1.00	63
264	4220	IL	Kola nut, dried	278	1163	5.8	1.5	64.3	12.0	2.40	12
263	4594	WV	Bambara groundnuts, fresh	152	638	7.8	3.1	27.0	3.0	0.30	57
11. - Fish											
270	4001	AA	Challo, dried	328	1372	61.1	9.3	0	0	0	20
270	4021	AU	Furo/furundingo, dried	307	1284	63.0	6.1	0	0	0	20
270	4002	AB	Kujalo, dried	309	1293	63.0	6.3	0	0	0	20
270	4624	XZ	Dried fish (unspecified)	322	1347	61.7	8.4	0	0	0	20
270	4023	AW	Challo, flesh only	103	431	19.1	2.9	0	0	0	75
270	4022	AV	Furo, flesh only	96	402	19.7	1.9	0	0	0	77
270	4024	AX	Kujalo, flesh only	85	356	17.6	1.6	0	0	0	80
270	4025	AY	Fish (unspecified) flesh only	94	393	18.4	2.3	0	0	0	77
270	4009	AI	Shellfish, boiled	81	339	18.0	1.5	0	0	0	75
283	4017	AQ	Fish cakes	269	1124	9.6	11.5	34.2	1.0	0.03	41
12. - Meat											
272	4014	AN	Meat, boiled	185	774	29.5	7.4	0	0	0	63
272	4020	AT	Chicken, boiled	122	510	20.4	4.4	0	0	0	74
272	4026	AZ	Corned beef, canned (Aid Food)	217	905	26.9	12.1	0	0	0	58
13. - Milk and Eggs											
277	4039	BM	Breastmilk	67	278	1.1	3.9	7.2	0	0	87
274	4058	CF	Milk, cows	64	268	3.3	3.8	4.7	0	0	88
274	4071	CS	Milk, sour	64	268	3.3	3.8	4.7	0	0	88
274	4073	CU	Milk and water	43	181	2.3	2.5	3.1	0	0	92
274	4133	FC	Milk, sour and baobab	64	268	3.3	3.8	4.7	0	0.01	88

Composition per 100g

Food group	Code	Letter code	Name	Calcium mg	Phos-phorus mg	Magnes-ium mg	Potass-ium mg	Iron mg	Zinc mg	Carot-ene µg	Vitamin C mg	Source of data
268	4038	BL	Paw-paw	20	15	11	224	0.6	0.1	1800	60	L
268	4565	VS	Tallo fruit	27	48	25	450	2.8	0.1	170	1290	L
268	4563	VQ	Tamba fruit (Gingerbread plum)	42	54	126	450	1.7	0.1	40	95	L
268	4564	VR	Tomborongo (Jujube)	25	40	21	350	0.4	0.1	0	65	L
10.3 - Nuts and Seeds												
268	4641	YQ	Baobab seeds	263	1494	297	910	13.9	2.0	0	0	L
264	4225	IQ	Kola nut, fresh	58	86	15	129	2.0	3.0	30	54	L
264	4220	IL	Kola nut, dried	108	176	39	348	6.0	7.0	0	0	L
263	4594	WV	Bambara groundnuts, fresh	14	258	60	539	1.2	1.0	0	5	L
11. - Fish												
270	4001	AA	Challo, dried	750	960	41	851	3.2	3.6	0	0	L
270	4021	AU	Furo/furundingo, dried	4000	2700	92	657	10.4	11.2	0	0	L
270	4002	AB	Kujalo, dried	177	409	27	515	1.1	9.4	0	0	L
270	4624	XZ	Dried fish (unspecified)	693	863	23	340	5.5	6.4	0	0	C
270	4023	AW	Challo, flesh only	90	220	18	279	1.7	1.6	0	0	L
270	4022	AV	Furo, flesh only	50	140	21	308	3.2	1.0	0	0	L
270	4024	AX	Kujalo, flesh only	30	75	25	321	0.3	1.0	0	0	L
270	4025	AY	Fish (unspecified) flesh only	60	160	31	335	2.0	1.3	0	0	C
270	4009	AI	Shellfish, boiled	150	225	112	207	10.0	1.6	0	0	L
283	4017	AQ	Fish cakes	25	156	11	155	1.0	1.2	0	0	C
12. - Meat												
272	4014	AN	Meat, boiled	10	190	21	311	2.5	5.0	0	0	L
272	4020	AT	Chicken, boiled	10	190	21	216	1.5	1.1	0	0	L
272	4026	AZ	Corned beef, canned (Aid Food)	14	120	15	140	2.9	5.6	0	0	L
13. - Milk and Eggs												
277	4039	BM	Breastmilk	20	14	3	49	0.1	0.2	0	4	L
274	4058	CF	Milk, cows	128	93	12	159	0.1	0.3	80	2	L
274	4071	CS	Milk, sour	128	93	12	159	0.1	0.3	80	2	C
274	4073	CU	Milk and water	85	62	8	106	0.1	0.2	40	1	C
274	4133	FC	Milk, sour and baobab	132	87	63	433	0.1	0.5	50	5	C

Food group	Code	Letter code	Name	Energy kcal	Energy kJ	Protein g	Fat g	Carbo-hydrate g	Fibre g	Phytate g	Water g
275	4054	CB	Milk, fresh and sugar	100	420	3.0	3.8	12.7	0	0	80
275	4056	CD	Milk, sour and sugar	100	420	3.0	3.8	12.7	0	0	80
276	4072	CT	Milk, tinned (for example 'Peak' brand)	158	664	8.6	9.0	11.3	0	0	69
276	4064	CL	Milk, tinned and water	64	268	3.3	3.8	4.7	0	0	88
276	4061	CI	Milk, tinned, and sugar and water	100	420	3.0	3.8	12.7	0	0	80
280	4111	EG	Egg	158	664	13.0	11.5	0.5	0	0	74
14. - Oils and Fats											
279	4557	VK	Groundnut oil	900	3766	0	99.9	0	0	0	0
279	4120	EP	Vegetable oil	900	3766	0	99.9	0	0	0	0
278	4554	VH	Palm oil	900	3766	0	99.9	0	0	0	0
279	4067	CO	Butter	740	3096	0.4	82.0	0	0	0	15
15. - Sugar											
284	4539	US	Sugar	394	1648	0	0	105.0	0	0	0
284	4523	UC	Sugar cane	60	251	1.0	0	14.0	2.0	0	82
284	4522	UB	Honey	301	1259	0.4	0	79.8	0	0	19
16. - Water and Salt											
282	4592	WT	Water	0	0	0	0	0	0	0	100
282	4581	WI	Water and salt	0	0	0	0	0	0	0	99
282	4180	GX	Water, salt and sugar	19	78	0	0	5.2	0	0	94
283	4584	WL	Salt, local	0	0	0	0	0	0	0	0
283	4598	WZ	Maggi cube	237	990	16.8	9.2	0.0	0	0	6
17. - Drinks											
268	4571	VY	Baobab and water (baobab juice/milk) (Sita jio)	30	126	0.3	0	7.8	3.6	0.03	88
268	4591	WS	Baobab ice/drink	30	126	0.3	0	7.8	3.6	0.03	88
268	4590	WR	Wonjo (sorrel) ice/drink	18	75	0	0	4.7	0.9	0	95
283	4123	ES	Tea and sugar	38	159	0	0	10.5	0	0	90
283	4124	ET	Tea, milk and sugar	46	192	1.0	1.1	8.8	0	0	89
283	4122	ER	Tea, tinned milk and sugar	17	73	0.6	0.6	2.6	0	0	96
283	4125	EU	Coffee, instant (made up), tinned milk and sugar	17	73	0.5	0.6	2.6	0	0	95

Composition per 100g

Food group	Code	Letter code	Name	Calcium mg	Phos-phorus mg	Magnes-ium mg	Potass-ium mg	Iron mg	Zinc mg	Carot-ene µg	Vitamin C mg	Source of data
275	4054	CB	Milk, fresh and sugar	120	87	11	149	0.1	0.3	80	2	C
275	4056	CD	Milk, sour and sugar	120	87	11	149	0.1	0.3	80	2	C
276	4072	CT	Milk, tinned (for example 'Peak' brand)	280	220	30	396	0.2	1.1	50	1	L
276	4064	CL	Milk, tinned and water	126	99	13	160	0.1	0.3	40	1	C
276	4061	CI	Milk, tinned, and sugar and water	118	86	12	151	0.1	0.3	40	1	C
280	4111	EG	Egg	55	220	12	134	2.0	1.5	0	0	L
14. - Oils and Fats												
279	4557	VK	Groundnut oil	0	0	0	0	0	0	0	0	L
279	4120	EP	Vegetable oil	0	0	0	0	0	0	0	0	L
278	4554	VH	Palm oil	0	0	0	0	0.4	0	65490	0	L
279	4067	CO	Butter	15	24	2	18	0.2	0.2	430	0	L
15. - Sugar												
284	4539	US	Sugar	2	0	5	59	0	0	0	0	L
284	4523	UC	Sugar cane	10	6	2	24	0	0	0	0	L
284	4522	UB	Honey	11	4	2	55	0.6	0	0	0	L
16. - Water and Salt												
282	4592	WT	Water	1	0	1	0	0	0	0	0	A
282	4581	WI	Water and salt	3	0	18	9	0.1	0	0	0	C
282	4180	GX	Water, salt and sugar	3	0	17	11	0.0	0	0	0	C
283	4584	WL	Salt, local	275	5	333	171	1.6	0	0	0	A
283	4598	WZ	Maggi cube	40	240	32	490	1.2	0.8	0	0	L
17. - Drinks												
268	4571	VY	Baobab and water (baobab juice/milk) (Sita jio)	47	4	24	134	0.3	0.7	0	58	C
268	4591	WS	Baobab ice/drink	47	4	24	134	0.3	0.7	0	58	C
268	4590	WR	Wonjo (sorrel) ice/drink	58	22	3	0	1.4	0.0	100	5	C
283	4123	ES	Tea and sugar	1	1	1	21	0.0	0.0	0	0	C
283	4124	ET	Tea, milk and sugar	38	28	4	61	0.0	0.1	0	0	C
283	4122	ER	Tea, tinned milk and sugar	17	18	3	46	0.0	0.1	10	0	C
283	4125	EU	Coffee, instant (made up), tinned milk and sugar	18	18	8	84	0.0	0.1	10	0	C

Appendix 1
Sources of data

The data sources for each food are noted in The Tables, as a letter key, as shown below.

Key to sources of data

A	Analysed	Water, protein, fat, carbohydrate reported in 1980[8], fibre in 1980[8] and 1995[9], Ca and P in 1991[6], Zn and Phy in 1998[10], see Appendix 2
C	Calculated	Calculated from a related food, correcting for water content, or from mixtures of foods.
R	Recipe calculation	All values calculated from recipes, see Appendix 3. Most of these were calculated in 1998, a few in 1997 and 2006.
L	Literature	All values from published literature, further details and reference sources below.
E	Estimated	Estimated from a related food, or an assumed zero.

The Tables originally contained values for energy, protein and water in foods consumed by young children[4]. When a new nutrient was incorporated into the Tables, basic foods known to be good sources were analysed, and the rest of the foods and mixtures were obtained by calculation from the basic foods. This approach applied to carotene[11], calcium[6] and phosphorus[6], and zinc[10] and phytate[10]. In contrast, vitamin C was obtained from published food composition tables (see details below). Iron, potassium and magnesium values were obtained from a number of publications, the references to these are given at the end of the reference section of the Food Composition Table.

Source details for foods obtained from the literature

Food code	Letter code	Food name	Data source (food number in the source is given in parenthesis)
		Cereals and roots	
4657	ZG	Tubanyo, on the cob, roast	Murphy
4118	EN	Wheat flour, white	MW4 (12), Ca and Fe unfortified flour
4574	WB	Bread	MW6 (11-471), Ca and Fe unfortified flour
4586	WN	Pancakes	MW4 (85) doughnut
4352	NN	Nyambi, raw	Platt (34)
		Groundnuts	
4399	PI	Groundnuts, fresh, raw	Calculated, except Vit C Platt (55)
4495	TA	Groundnuts (Tio)	MW4 (835), except Ca[6] and P[6], Fe FAO (327), Zn[10]
4408	PR	Groundnuts, roast	FAO (328), except CHO, fibre, Ca, P, calculated from code 4495
		Leaves	
4045	BS	Kucha leaves, fresh	Toury, except fibre[9], Ca[6] and P[6], Zn[10], carotene[11]
4046	BT	Morongo leaves, fresh	Toury, except fibre[9], Ca[6] and P[6], Zn[10]
4047	BU	Jambanduro leaves, fresh	Toury, except fibre[9], Ca[6] and P[6], Zn[10], carotene[11]
4044	BR	Baobab leaves, fresh	Toury, except fibre[9], Ca[6] and P[6], Zn[10], carotene from FAO (518)

Food code	Letter code	Food name	Data source (food number in the source is given in parenthesis)
4146	FP	Baobab leaves, dried	Toury, except fibre[9], Ca[6] and P[6], Zn[10], carotene FAO (518)
4128	EX	Keren-kerengo leaves, fresh	FAO (676), except Ca[6], Zn[10]
		Other vegetables	
4035	BI	Aubergine	MW4 (560); except Vit C FAO (619)
4566	VT	Bitter tomato	As Tomatoes, except Ca, P, carotene; Vit C Toury
4037	BK	Cabbage	MW4 (560)
4042	BP	Chilli pepper, fresh	MW6 (13-317)
4043	BQ	Chilli pepper, dried	Platt (229)
4570	VX	Okra	MW4 (612); except Zn[10], Vit C FAO (720)
4049	BW	Okra , dried	FAO (722) but protein, CHO, fibre calculated from code 4570
4034	BH	Onions	MW4 (613)
4549	VC	Pumpkin, boiled	MW4 (653); except Vit C 50 % of FAO (757)
4551	VE	Sweet Potato	MW4 (664); except Vit C FAO (246)
4033	BG	Tomatoes	MW4 (666); except Vit C FAO (831)
4127	EW	Tomato paste	MW6 (17-516)
4560	VN	Yam	FAO (271)
		Beans	
4210	IB	Beans boiled	FAO (293), calculated on solids
4226	IR	Locust bean, fermented (Tulingo)	Platt (237), except Ca[6], P[6]
4228	IT	Locust Bean Pod Powder	Toury, except Ca[6], P[6], Vit C Platt (311)
		Mangoes	
4314	MB	Mangoes	MW4 (759), except carotene[11]
4323	MK	Mangoes, green, unripe	FAO (969), except carotene[11]
4324	ML	Mangoes, bush	FAO (879)
4336	MX	Mango, dried	Calculated, except Vit C[26]
		Other fruit	
4568	VV	Banana	MW4 (693), except Vit C Platt (131)
4550	VD	Baobab fruit	Toury, except Ca[6] and P[6], Zn[10]
4545	UY	Cashew fruit	FAO (888)
4553	VG	Guava	Platt (144)
4558	VL	Lime	Mostly Platt (136)
4561	VO	Oranges	MW4 (773)
4038	BL	Paw-paw	Platt (157)
4565	VS	Tallo fruit	FAO (903)
4563	VQ	Tamba fruit (Gingerbread plum)	FAO (1001)
4564	VR	Tomborongo (Jujube)	Platt (147)
		Nuts and seeds	
4641	YQ	Baobab seeds	FAO (374)

Food code	Letter code	Food name	Data source (food number in the source is given in parenthesis)
4225	IQ	Kola nut, fresh	FAO (395)
4220	IL	Kola nut, dried	FAO (396), except carotene, Vit C Platt (260)
4594	WV	Bambara groundnuts, fresh	FAO (515) except Vit C as 50% of groundnuts fresh
		Fish	
4001	AA	Challo, dried	Based on Platt (183) except Ca[6], P[6]. Zn[10]
4021	AU	Furo/furundingo, dried	Based on Platt (183) except Ca[6], P[6]. Zn[10]
4002	AB	Kujalo, dried	Platt (183) except Ca[6], P[6]. Zn[10]
4023	AW	Challo, flesh only	FAO (1414) except Ca[6], P[6]. Zn[10]
4022	AV	Furo, flesh only	FAO (1264) except Ca[6], P[6]. Zn[10]
4024	AX	Kujalo, flesh only	FAO (1254) except Ca[6], P[6]
4009	AI	Shellfish, boiled	Platt (184)
		Meat	
4014	AN	Meat, boiled	MW4 based
4020	AT	Chicken, boiled	MW4 based
4026	AZ	Corned beef, canned (Aid Food)	MW4 (393)
		Milk and eggs	
4039	BM	Breastmilk	Protein[10], fat[10], Ca[6], P[6], Zn[10]; MW4 (138) CHO, Fe, Vit C
4058	CF	Milk, cows	MW4 (124), except Ca[6], P[6]
4072	CT	Milk, tinned (for example 'Peak' brand)	MW4 (134)
4111	EG	Egg	Platt (200) protein, fat, CHO, water; MW4 (165) minerals & vitamins
		Oils and fats	
4557	VK	Groundnut oil	MW4 (195)
4120	EP	Vegetable oil	MW4 (195)
4554	VH	Palm oil	MW4 (195), except carotene[11]
4067	CO	Butter	MW4 (140)
		Sugar	
4539	US	Sugar	MW4 (843), except Ca[6]
4523	UC	Sugar cane	Platt (267)
4522	UB	Honey	FAO (1060)
		Water and salt	
4592	WT	Water	Ca[6], P[6]
4584	WL	Salt, local	Ca[6], P[6]
4598	WZ	Maggi cube	MW6 (17-368 & 17-369)

References: FAO[16], Platt[15], MW4[13], MW6[18], Toury *et al*[24], Murphy *et al*[25]

Appendix 2
Analytical methods

Analytical methods for the nutrients analysed by the MRC Dunn Nutrition Unit and MRC Human Nutrition Research are summarised below:

Nutrient	Samples	Method	Reference(s)
Water	Samples, n= 6 to n=197, of 38 cooked foods, analysed individually, sampled 1975-1977	Loss of weight on freeze drying, followed by loss of weight on drying to 105 degrees.	Hudson *et al.*[8]
Nitrogen	Same as water above	Micro-Kjeldhal procedure	Hudson *et al.*[8]
Fat	Bulked samples of each of 10 cooked foods, from the individual samples as for water above	Neutral fat determined by specific gravity (Foss Oil Meter, York), after extraction into tetrachloroethylene	Hudson *et al.*[8]
Available carbohydrate	Same as fat above	Free sugars and starch	Hudson *et al.*[21], Southgate[22] reported in Hudson *et al.*[8]
Unavailable carbohydrate	Same as fat above	Southgate procedure	Southgate[22] reported in Hudson *et al.*[8]
Calcium	19 cooked foods from samples as collected for water above, individual analyses, n=1 to n=16; 11 raw ingredients, 4 fishes and 11 types of leaves, sampled in 1990, pooled analyses, n=1 to n=7	Atomic absorption spectrophotometry	Prentice *et al.*[6]
Phosphorus	As calcium above	Colorimetric	Fiske and Subarrow, reported in Prentice *et al.*[6]
Zinc – cereals	2 samples analysed of each of 19 cooked foods, selected from the samples for water above	Atomic absorption spectrophotometry	Davies (unpublished, Rowett Research Institute, 1976), reported in Paul *et al.*[10]
Zinc – fish and leaves	Same samples as for calcium, see above	Flame atomic absorption spectophotometry	Tsuchiya, as reported in Paul *et al.*[10]
Phytate	Same samples as zinc – cereals, see above	Fe precipitation	Davies and Reid, by modification of Holt, reported in Paul *et al.*[10]
Carotene	180 foods containing palm oil, leaves or leaf sauces, fruits, vegetables, mangoes	HPLC	Villard and Bates[11]

Appendix 3
Recipe calculations

The recipes were compiled from a great many observations and measurements carried out by workers in the field[6,12].
For each of the five main sauces, default percentages of each of the possible ingredients and additions were established, as shown in Table 1 below.
These percentages were then used in the calculations for multi-ingredient sauces[7].

Table 1. Main and subsidiary ingredients of Gambian Sauces[7]. g/100g sauce

Type of sauce	Durango	Kucha	Jambo	Oil stew	Bukolo
Ingredients					
Groundnuts	26 (roast)		22 (raw)		
Fresh leaves	10	45	45		
Dried baobab leaf (naa)	1.2	1.2	1.2		1.2
Salt	2.4	3.8	1.8	5.2	1.7
Maggi cube	0.9	0.9	0.9	0.9	0.9
Tomato paste	3.5	2.6	2.0	10	10
Tomato fruit	10			10	34
Onion	4.6	1.9	5.1	17	17
Fresh chilli pepper	1.6	1.8	0.9	2.0	
Dried chilli pepper	1.0	1.7	0.6	1.0	
Rice flour	6	6	5		10
Oil	5	5	5	30	
*Possible additions to basic sauce**					
Dried fish	4.7	4.7	4.7		4.7
Fresh fish	12	12	12	42	12
Meat	25	25	25	47	25
Locust bean	4.7	4.7	4.7	4.7	4.7
Okra	10	10	10	10	10
Bitter tomato	20	20	20	20	20
Pumpkin	45	45	45	55	45

Sauces also contain variable amounts of water, but the amounts are not included in the table.
Not every sauce necessarily has all these ingredients at the same time. Ingredients in bold are usually present, those in plain text may be present
* i.e. if fresh fish is added to durango there will be 88g of basic sauce and 12g of fish per 100g.

Dajiwo sauces were calculated as either 12 % fresh fish, 4.7% dried fish, 10% beans, or 5% groundnuts, leaves, pumpkin or cassava.

Rice was the cereal most often weighed with the sauce so all possible combinations had to be added to the database. In order to determine average percentage contributions of rice and sauce in a mixture, a number of dietary records were examined to find the individual weights of rice and sauce eaten at the same meal. It was found that the proportion of sauce to cereal varied according to the type of sauce but for each type the proportion in the mixture was fairly constant. The proportions were also similar for the other cereals, apart from durango, whether cooked by boiling or steaming (*fajiringo* or *nyelengo*), or steamed to a drier consistency (*futo*). Defaults were therefore established for the percentages of cereal and sauce recorded together, as shown in Table 2 below.

Table 2. Default percentages of sauce in cereal plus sauce mixtures used in recipe calculations

Sauce	%
With fajiringo and nyelengo	
Durango*	24
Kucha	16
Jambo	33
Vegetable oil stew	13
Palm oil stew	13
Bukolo	19
With futo	
Dajiwo	44
Water	44

*Cereals other than rice, which are steamed as nyelengo, the sauce durango = 37%

All cereals could be prepared as *mono*, a thin porridge, but millet the most frequently. *Churo* is a slightly thicker rice porridge. The porridges often had additions, default percentages of these were arrived at as above to formulate recipes for the mixtures, as shown in Table 3 below.

Table 3. Default percentages of additions to porridges used in recipe calculations

With mono or churo	%
Sour milk	22
Sugar	2.5
Sour milk plus sugar	24
Sour milk plus baobab juice	24
Baobab juice	10

Standard worksheets were prepared, one for sauces listing all possible ingredients, one for cereal plus sauces mixtures, and one for porridges listing all possible ingredients.
A recipe program[23] was used to enter all the "new" sauces and combinations of cereals and sauces.
The method of calculation is shown in Table 4 below, for energy and four nutrients. The other nutrients are calculated in the same way.

Table 4. Calculating a cooked food from proportions of cooked ingredients

4074 Jambo, palm oil and dried kujalo

Composition per 100g ingredient

Food code	Ingredient	Water	Protein	Fat	Carbohydrate	kcal
		g	g	g	g	
4192	Jambo sauce	78.0	5.5	7.3	5.1	107
4554	Palm oil	0	0	99.9	0	900
4002	Dried kujalo	20.0	63.0	6.3	0	309

Amounts in multi-ingredient food

Food code	Ingredient	Weight	Water	Protein	Fat	Carbohydrate	kcal	(kJ)
		g	g	g	g	g		
4192	Jambo sauce	90.3	70.4	5.0	6.6	4.6	97	
4554	Palm oil	5.0	0	0	5.0	0	45	
4002	Dried kujalo	4.7	0.9	2.9	0.3	0	14	
Total in recipe		100.0	71.3	7.9	11.9	4.6	156	(654)

Since the recipe is calculated using proportions of ingredients in the *cooked* food, there is no need to make allowance for loss of water on cooking.
A 50% cooking loss[18] has been adopted for vitamin C for leaf sauces and vegetables.

Calculating a new recipe from raw ingredients

If you have a cooked food mixture which is not in the tables, and have obtained information on the weight of each ingredient *before* it was cooked, you can calculate the composition of the cooked food. It is assumed that you do not know how much water was added before cooking and how much is lost during cooking. So you will need to make an adjustment for the amount of water estimated to be lost in cooking, this is done by adopting the water content of a similar food.

The method of calculation is shown in Table 5 below, for energy and four nutrients. The other nutrients are calculated in the same way.

Table 5. Calculating a cooked food from raw ingredients

Bukolo, fresh fish, dried fish and oil

Composition per 100g ingredient

Food code	Ingredient	Water g	Protein g	Fat g	Carbohydrate g	kcal
4118	Wheat flour, white	13	9.8	1.2	80.1	350
4127	Tomato paste	75	5.0	0.3	14.2	76
4001	Challo dried	20	61.1	9.3	0.0	328
4023	Challo, flesh only	75	19.1	2.9	0.0	103
4033	Tomatoes	93	0.9	0.0	2.8	14
4034	Onions	93	0.9	0.0	5.2	23
4043	Chilli pepper, dried	8	15.0	11.0	33.0	283
4120	Vegetable oil	0	0.0	99.9	0.0	900

Amounts in the sauce

Food code	Ingredient	Amount g	Water g	Protein g	Fat g	Carbohydrate g	kcal (kJ)
4118	Wheat flour, white	267	35	26.2	3.2	213.9	935
4127	Tomato paste	100	75	5.0	0.3	14.2	76
4001	Challo dried	326	65	199.2	30.3	0.0	1069
4023	Challo, flesh only	170	128	32.5	4.9	0.0	175
4033	Tomatoes	259	241	2.3	0.0	7.3	36
4034	Onions	200	186	1.8	0.0	10.4	46
4043	Chilli pepper, dried	10	1	1.5	1.1	3.3	28
4120	Vegetable oil	360	0	0.0	359.6	0.0	3240
	Water added (unknown quantity)						
	Total in recipe (apart from added water) (a)	1692	730	268.5	399.5	249.0	5605
	Composition per 100g (apart from added water) (b)	100	43	15.9	23.6	14.7	331
	Composition per 100g, adjusted for added water (c)	100	65*	9.8	14.5	9.0	203 (849)

*Estimated water content typical for Vegetables in oil sauce. Solids are 100-65 = 35g per 100g.

(a) Sum of the ingredients

(b) Line (a) divided by the weight of the total recipe (apart from added water) (1692) multiplied by 100

(c) Line (b) divided by solids per 100g (100-43 =57) then multiplied by solids adjusted to 65% water (100-65 =35)

You will see that the final composition is not identical to the 'Bukolo, fresh fish, dried fish and oil' in the Food Composition Table (code 4181). This is because the item in the Table is the average of four different recipes.

Appendix 4a
Mandinka - Wolof - English Vocabulary

(Based on McCrae and Paul[2]; Wolof provided by the Gambian National Nutrition Agency (NaNa))

Mandinka	Wolof	English	Section
Banano	Banana	Banana	10.2
Benechin	Benachin	A rice dish with a rich oil sauce	1.6
Biabo	Guyab	Guava	10.2
Bukolo	Sauce farring	A flour and tomato sauce. It sometimes contains fish and may also contain oil	9.7
Casuo	Cashew	Cashew	10.2
Challo, chalo	Kobo	West African herring, bonga, shad	11
Churo	Chura	A term used with rice for a thick porridge	1.8
Dajio, dajiwo		A watery sauce eaten with futo. It is usually made from the water the vegetables, leaves, fish or meat were cooked in, and may contain groundnuts or fish, but not chilli pepper	9.8
Dempetengo	Dempeteng	A snack food made of parched flaked rice	1
Domoda	Bisab	Sour leaf or sorrel. Also a sauce made from these leaves in Lower River Division. A similar sauce to kucha	9.2
Domoda		Groundnut sauce in McCarthy Island and at the coast	
Durango	Domoda	A thick sauce, most commonly as tio durango, a groundnut sauce made from roasted groundnuts	8.1
Duto	Mango	Bush or wild mango	10.1
Fajiringo	Bahal	A method of cooking rice by boiling	1
Farinyi munko		Wheat flour	6
Farinyo	Farring	Wheat	6
Feta	Tonon	Ladyfish	see p3
Findi mono	Ruiyi findi	A thin gruel made from findo	3.3
Findi nyelengo	Nyelengi findi	Steamed findo	3
Findo	Findi	A locally grown millet type grass	3
Furo	Wass	A fish, tilapia	11

Mandinka	Wolof	English	Section
Furundingo	Wass bundow	Small tilapia	11
Futo	Cherreh	Cereals (apart from rice) steamed to a dry product	
Jabo	Linyong	Onion	9.5
Jambanduro	Mbum ndurr	A dark leaf	9.1
Jambo	Hob	Any leaf or leaf sauce made using for example jambo or jambanduro but not kucha. This sauce also contains groundnuts, chilli pepper and sometimes vegetables, fish, meat or oil	9.3
Jambo dajiwo		A thin sauce made from leaves, any except kucha	9.8
Jato	Jahatu	Bitter tomato	9.5
Jio	Ndoh	Water	16
Jotto, njoto	Jotto	A fish	see p3
Kanjo	Kanja	Okra	9.5
Kano, karno	Kani	Chilli pepper	9.5
Kekewo	Mew	Milk	13
Keren-kerengo	Kerengkereng	Bush okra, a leaf used in sauces	9.1
Kinti futo	Cherreh diting	Steamed sorghum; drier than nyelengo	4.2
Kinti mono	Ruiyi diting	A thin gruel made from sorghum	4.3
Kinti nyelengo	Nyelengi diting	Steamed sorghum	4
Kinto	Diting	A type of white sorghum	4
Ko	Horom	Salt	16
Koso		Catfish	see p3
Kucha	Bissap	Sour leaf or sorrel or a sauce made from these leaves. This sauce has no groundnuts, and sometimes contains fish, meat, vegetables or oil	9.2
Kucha durango	Domoda bissap	Sauce made from sour leaf or sorrel	9.2
Kujalo	Kujali	Spanish fish	11
Kunkalengo	Kong	Catfish	see p3
Kunyambo	Nyambaba	Yam	9.5
Kuruo	Guru	Cola nut, kola nut	10.3
Lemuna mesengo	Lemong	Lime, sour lime	10.2
Mani churo	Churo malo	Rice boiled into a thick porridge	1.8

Mandinka	Wolof	English	Section
Mani fajiringo	Malo bunj bahal	Boiled rice	1
Mani mono	Chura malo	A thin gruel made from rice	1.8
Mani munko	Sungufi malo	Rice flour, or small uncooked rice cake	1
Mano	Malo	Rice	1
Mentengo	Mentem, tamateh	Tomato	9.5
Mono	Rui	A thin cereal gruel	
Morongo	Boroboro	Bush greens or spinach	9.1
Naa	Lalo	Baobab leaf	9.1
Nada, na durango	Domoda lalo	Sauce made using dried baobab leaves, usually containing groundnuts	9.4
Nada kolikolo		Sauce made from dried baobab leaves without added groundnuts	9.4
Nemuno	Sorance	Sweet orange	10.2
Nete mono	Ruiyi netteh	Locust bean pod powder gruel	9.5.1
Nete munko		Locust bean pod powder (the yellow powder surrounding the seeds)	9.5.1
Neto, netto	Netteh	Locust bean tree and fruit (pod)	9.5.1
Njengo	Banga	Pumpkin	9.5
Nyambi dajiwo	Njeh nyambi	Cassava root (fresh) plus groundnuts, made into a thin sauce	9.8
Nyambi mono	Ruiyi nyambi	Thin gruel made from cassava flour	7.1
Nyambo	Nyambi	Cassava	7
Nyankantango	Nyangkatang	Boiled rice steamed again with groundnuts, and sometimes dried fish	1.7
Nyelengo	Nyeleng	A method of cooking cereals by steaming (not used for rice)	
Pakaia	Papakaya	Paw-paw or papaya	10.2
Patanseo	Batense	Garden egg, aubergine or egg plant	9.5
Patat, patato	Patat	Sweet potato	9.5
Sanyo	Sanyo, duguub	A type of white millet	2
Sanyo futo	Cherreh sanyo	Steamed millet, drier than nyelengo	2.2
Sanyo mono	Ruiyi duguub	Thin gruel made from millet	2.3
Sanyo nyelengo	Nyelengi duguub	Steamed millet	2.1
Sitajio	Dhohi bui	Baobab fruit ‘juice’ or ‘milk’	17
Sitanono	Ngineh jobe	A dish made from baobab fruit ‘juice’ (sitajio), groundnut paste and sugar. A rich food eaten at feasts	8

Mandinka	Wolof	English	Section
Sito	Bui	Baobab fruit	10.2
Soso	Nyebeh	Black-eyed beans, cow-peas or any other beans	9.5.1
Soso dajiwo	Nyehi nyebeh	A thin sauce made from beans	9.8
Soupa kanja	Soupa kanja	A sauce containing okra, kerenkerengo leaves, palm oil and fish	9.6
Sunkungo	Sisob	Custard apple, sour sop or sweet sop	10.2
Suss tulo	Chuwi dewlin	Oil stew	9.6
Tabasse	Nguka	A fish, cassava fish	see p3
Tallo, talo	Dittah	A kind of fruit, tallow	10.2
Tamba	Neew	Gingerbread plum	10.2
Tambajango	Tambajang	A fish, red mullet, goatfish	see p3
Tarorow, taro		Moonfish	see p3
Teng Tulo	Dewtirr	Palm oil	14
Tengo	Tirr	Oil palm	14
Tia dajiwo		Thin groundnut sauce	9.8
Tia durango	Maffeh gerteh	A thick sauce made from roast groundnuts. It often contains fish or vegetables	8.1
Tiakere churo	Churrah gerteh	A thick porridge made from pounded rice and raw groundnuts	1.8
Tianding kolon	Tia kolon	Bambara groundnuts	10.3
Tio	Guerteh	Groundnut, peanut	8
Tomato	Tamateh	Tomato paste	9.5
Tomborongo	Saedaim	Jujube, a fruit	10.2
Tubab duto	Mango	Mango	10.1
Tubanyo	Mboha	Maize (corn)	5
Tubanyo futo	Cherreh mboha	Steamed maize, to a dry consistency	5
Tubanyo mono	Ruiyi mboha	Thin gruel made from maize	5.4
Tubanyo nyelengo	Nyelengi mboha	Steamed maize	5
Tulingo	Netetu	Fermented locust bean seeds	9.5.1
Wangkango	Seda	A fish, barracouda	see p3

Appendix 4b
Wolof – Mandinka - English Vocabulary

(Based on McCrae and Paul[2]; Wolof provided by the Gambian National Nutrition Agency (NaNa))

Wolof	Mandinka	English	Section
Bahal	Fajiringo	A method of cooking rice by boiling	1
Banana	Banano	Banana	10.2
Banga	Njengo	Pumpkin	9.5
Batense	Patanseo	Garden egg, aubergine or egg plant	9.5
Benachin	Benechin	A rice dish with a rich oil sauce	1.6
Bisab	Domoda	Sour leaf or sorrel. Also a sauce made from these leaves in Lower River Division. A similar sauce to kucha	9.2
Bissap	Kucha	Sour leaf or sorrel or a sauce made from these leaves. This sauce has no groundnuts, and sometimes contains fish, meat, vegetables or oil	9.2
Boroboro	Morongo	Bush greens or spinach	9.1
Bui	Sito	Baobab fruit	10.2
Cashew	Casuo	Cashew	10.2
Cherreh	Futo	Cereals (apart from rice) steamed to a dry product	
Cherreh diting	Kinti futo	Steamed sorghum; drier than nyelengo	4.2
Cherreh mboha	Tubanyo futo	Steamed maize, to a dry consistency	5
Cherreh sanyo	Sanyo futo	Steamed millet, drier than nyelengo	2.2
Chura	Churo	A term used with rice for a thick porridge	1.8
Chura malo	Mani mono	A thin gruel made from rice	1.8
Churo malo	Mani churo	Rice boiled into a thick porridge	1.8
Churrah gerteh	Tiakere churo	A thick porridge made from pounded rice and raw groundnuts	1.8
Chuwi dewlin	Suss tulo	Oil stew	9.6
Dempeteng	Dempetengo	A snack food made of parched flaked rice	1
Dewtirr	Teng Tulo	Palm oil	14
Dhohi bui	Sitajio	Baobab fruit ‘juice’ or ‘milk’	17
Diting	Kinto	A type of white sorghum	4

Wolof	Mandinka	English	Section
Dittah	Tallo, talo	A kind of fruit, tallow	10.2
Domoda	Durango	A thick sauce, most commonly as tio durango, a groundnut sauce made from roasted groundnuts	8.1
Domoda bissap	Kucha durango	Sauce made from sour leaf or sorrel	9.2
Domoda lalo	Nada, na durango	Sauce made using dried baobab leaves, usually containing groundnuts	9.4
Farring	Farinyo	Wheat	6
Findi	Findo	A locally grown millet type grass	3
Guerteh	Tio	Groundnut, peanut	8
Guru	Kuruo	Cola nut, kola nut	10.3
Guyab	Biabo	Guava	10.2
Hob	Jambo	Any leaf or leaf sauce made using for example jambo or jambanduro but not kucha. This sauce also contains groundnuts, chilli pepper and sometimes vegetables, fish, meat or oil	9.3
Horom	Ko	Salt	16
Jahatu	Jato	Bitter tomato	9.5
Jotto	Jotto, njoto	A fish	see p3
Kani	Kano, karno	Chilli pepper	9.5
Kanja	Kanjo	Okra	9.5
Kerengkereng	Keren-kerengo	Bush okra, a leaf used in sauces	9.1
Kobo	Challo, chalo	West African herring, bonga, shad	11
Kong	Kunkalengo	Catfish	see p3
Kujali	Kujalo	Spanish fish	see p3
Lalo	Naa	Baobab leaf	9.1
Lemong	Lemuna mesengo	Lime, sour lime	10.2
Linyong	Jabo	Onion	9.5
Maffeh gerteh	Tia durango	A thick sauce made from roast groundnuts. It often contains fish or vegetables	8.1
Malo	Mano	Rice	1
Malo bunj bahal	Mani fajiringo	Boiled rice	1
Mango	Duto	Bush or wild mango	10.1
Mango	Tubab duto	Mango	10.1

Wolof	Mandinka	English	Section
Mboha	Tubanyo	Maize (corn)	5
Mbum ndurr	Jambanduro	A dark leaf	9.1
Mentem, tamateh	Mentengo	Tomato	9.5
Mew	Kekewo	Milk	13
Ndoh	Jio	Water	16
Neew	Tamba	Gingerbread plum	10.2
Netetu	Tulingo	Fermented locust bean seeds	9.5.1
Netteh	Neto, netto	Locust bean tree and fruit (pod)	9.5.1
Ngineh jobe	Sitanono	A dish made from baobab fruit 'juice' (sitajio), groundnut paste and sugar. A rich food eaten at feasts	8
Nguka	Tabasse	A fish, cassava fish	see p3
Njeh nyambi	Nyambi dajiwo	Cassava root (fresh) plus groundnuts, made into a thin sauce	9.8
Nyambaba	Kunyambo	Yam	9.5
Nyambi	Nyambo	Cassava	7
Nyangkatang	Nyankantango	Boiled rice steamed again with groundnuts, and sometimes dried fish	1.7
Nyebeh	Soso	Black-eyed beans, cow-peas or any other beans	9.5.1
Nyehi nyebeh	Soso dajiwo	A thin sauce made from beans	9.8
Nyeleng	Nyelengo	A method of cooking cereals by steaming (not used for rice)	
Nyelengi diting	Kinti nyelengo	Steamed sorghum	4
Nyelengi duguub	Sanyo nyelengo	Steamed millet	2.1
Nyelengi findi	Findi nyelengo	Steamed findo	3
Nyelengi mboha	Tubanyo nyelengo	Steamed maize	5
Papakaya	Pakaia	Paw-paw or papaya	10.2
Patat	Patat, patato	Sweet potato	9.5
Rui	Mono	A thin cereal gruel	
Ruiyi diting	Kinti mono	A thin gruel made from sorghum	4.3
Ruiyi duguub	Sanyo mono	Thin gruel made from millet	2.3
Ruiyi findi	Findi mono	A thin gruel made from findo	3.3
Ruiyi mboha	Tubanyo mono	Thin gruel made from maize	5.4
Ruiyi netteh	Nete mono	Locust bean pod powder gruel	9.5.1

Wolof	Mandinka	English	Section
Ruiyi nyambi	Nyambi mono	Thin gruel made from cassava flour	7.1
Saedaim	Tomborongo	Jujube, a fruit	10.2
Sanyo, duguub	Sanyo	A type of white millet	2
Sauce farring	Bukolo	A flour and tomato sauce. It sometimes contains fish and may also contain oil	9.7
Seda	Wangkango	A fish, barracouda	see p3
Sisob	Sunkungo	Custard apple, sour sop or sweet sop	10.2
Sorance	Nemuno	Sweet orange	10.2
Soupa kanja	Soupa kanja	A sauce containing okra, kerenkerengo leaves, palm oil and fish	9.6
Sungufi malo	Mani munko	Rice flour, or small uncooked rice cake	1
Tamateh	Tomato	Tomato paste	9.5
Tambajang	Tambajango	A fish, red mullet, goatfish	see p3
Tia kolon	Tianding kolon	Bambara groundnuts	10.3
Tirr	Tengo	Oil palm	14
Tonon	Feta	Ladyfish	see p3
Wass	Furo	A fish, tilapia	11
Wass bundow	Furundingo	Small tilapia	11
	Dajio, dajiwo	A watery sauce eaten with futo. It is usually made from the water the vegetables, leaves, fish or meat were cooked in, and may contain groundnuts or fish, but not chilli pepper	9.8
	Domoda	Groundnut sauce in McCarthy Island and at the coast	
	Farinyi munko	Wheat flour	6
	Jambo dajiwo	A thin sauce made from leaves, any except kucha	9.8
	Koso	Catfish	see p3
	Nada kolikolo	Sauce made from dried baobab leaves without added groundnuts	9.4
	Nete munko	Locust bean pod powder (the yellow powder surrounding the seeds)	9.5.1
	Tarorow, taro	Moonfish	see p3
	Tia dajiwo	Thin groundnut sauce	9.8

Appendix 4c
English - Mandinka - Wolof Vocabulary

(Based on McCrae and Paul[2]; Wolof provided by the Gambian National Nutrition Agency (NaNa))

English	Mandinka	Wolof	Section
Aubergine/egg plant	Patanseo	Batanse	9.5
Baobab fruit	Sito	Bui	10.2
Baobab fruit 'juice' or 'milk'	Sitajio	Dhohi bui	17
Baobab fruit juice, groundnuts and sugar	Sitanono	Ngineh jobe	8
Baobab leaf sauce	Nada, na durango	Domoda lalo	9.4
Baobab leaves	Naa	Lalo	9.1
Beans	Soso	Nyebeh	9.5.1
Bitter tomato	Jato	Jahatu	9.5
Boiled	Fajiringo	Bahal	
Bonga fish	Challo, chalo	Kobo	11
Bush greens	Morongo	Boroboro	9.1
Cashew	Casuo	Cashew	10.2
Cassava	Nyambo	Nyambi	7
Catfish	Kunkalengo	Kong	see p3
Chilli pepper	Karno, kano	Kani	9.5
Cola nut	Kuruo	Guru	
Cow peas	Soso	Nyebe	9.5.1
Custard apple	Sunkungo	Sisob	10.2
Egg plant	Patanseo	Batanse	9.5
Flour	Munko		
Groundnuts	Tio	Guerteh	8
Groundnut sauce	Tia durango	Maffeh gerteh	8.1
Gruel	Mono	Rui	
Guava	Biabo	Guyab	10.2
Jujube tree	Tomborongo	Saedaim	10.2

English	Mandinka	Wolof	Section
Kola nut	Kuruo	Guru	
Ladyfish	Feta	Tonon	see p3
Leaf or leaf sauce	Jambo	Hob	9.3
Locust bean fruit (pod)	Neto, Netto	Netteh	9.5.1
Locust bean pod powder	Nete munko		
Locust bean pod powder gruel	Nete jio, nete bero, nete mono	Ruiyi netteh	9.5.1
Locust bean seed, fermented	Tulingo	Netetu	9.5.1
Maize	Tubanyo, manyo	Mboha	5
Mango	Tubab duto	Mango	10.1
Milk	Kekewe	Mew	13
Millets, various types	Sanyo, suno	Sanyo, duguub	2
Mullet, red	Tambajango	Tambajang	see p3
Oil stew	Suss tulo	Chewi dewlin	9.6
Okra	Kanjo	Kanja	9.5
Onion	Jabo	Linyong	9.5
Palm oil	Teng tulo	Dewtirr	14
Peanut	Tio	Guerteh	8
Pepper, chilli	Karno, kano	Kani	9.5
Porridge, thick	Churo	Chura	
Porridge, thin	Mono	Rui	
Potato, sweet	Patato, batato	Patat	9.5
Pumpkin	Njengo	Banga	9.5
Rice	Mano	Malo	1
Rice, boiled	Mani fajiringo	Malo bunj bahal	1
Rice, thick porridge with groundnuts	Tiakere churo	Churrah gerteh	1.8
Rice, flour	Mani munko		
Rice, gruel	Mani mono	Ruiyi malo	1.8
Rice, steamed with groundnuts	Nyankantango	Nyangkatang	1.7
Rice, thick porridge	Mani churo	Chura malo	1.8
Salt	Ko	Horom	16

English	Mandinka	Wolof	Section
Sauce, flour based	Bukolo	Sauce farring	9.7
Sauce, groundnut	Tia durango	Maffeh gerteh	8.1
Sauce, leaf, any except sour	Jambo	Hob	9.3
Sauce, leaf, sour	Domoda, kucha, kucha durango	Bissap	9.2
Sauce, thick	Durango	Domoda	8.1
Sauce, thin	Dajiwo, dajio		9.8
Sorghum, white	Kinto	Diting	4
Sorrel leaves	Domoda, kucha	Bisab	9.1
Sour leaf sauce	Domoda, kucha, kucha durango	Bisab	9.2
Sour leaves	Domoda, kucha	Bisab	9.1
Sour sop	Sunkungo	Dorgot	10.2
Spanish fish	Kujalo	Jan	11
Spinach, various types	Morongo, bologi	Boroboro	9.1
Steamed (cereal)	Nyelengo	Nyeleng	
Steamed to dryness (cereal)	Futo	Cherreh	
Sweet potato	Patat, patato, batato	Patat	9.5
Tilapia fish	Furo	Wass	11
Tilapia fish, small	Furundingo	Wass bundo	11
Tinned milk	Keke porto		13
Tomato	Mentengo	Mentem	9.5
Tomato, bitter	Jato	Jahato	9.5
Water	Jio	Ndoh	16
Yam	Kunyambo	Nyambaba	9.5

Appendix 5
Taxonomic names
(From McCrae and Paul[2])

Mandinka	Wolof	English	Taxonomic name	Section
Cereals				
Farinyo	Farring	Wheat	*Triticum* spp.	6
Findo	Findi	A wild grass	*Digitaria exilis*	3
Kinto	Diting	Sorghum	*Sorghum gambicum*	4
Mano	Malo	Rice	*Oryza sativa*	1
Sanyo	Sanyo, duguub	Millet (Bulrush, pearl)	*Pennisetum typhoideum*	2
Tubanyo	Mboha	Maize	*Zea mays*	5
Roots and tubers				
Kunyambo	Nyambaba	Yam	*Dioscorea* spp.	9.5
Nyambo	Nyambi	Cassava	*Manihot esculenta*	7
Patat	Patat	Sweet potato	*Ipomoea batatas*	9.5
Leaves				
Jambanduro	Mbum ndurr	A dark leaf	*Cassia tora*	9.1
Keren-kerengo	Kerengkereng	Bush okra	*Corchorus olitorius*	9.1
Kucha	Bissap	Red sorrel, sour leaves	*Hibiscus sabdariffa*	9.1
Morongo	Boroboro	Bush greens, amaranth spinach	*Amaranthus caudatus*	9.1
Naa	Lalo	Baobab, cream of tartar tree	*Adansonia digitata*	9.1
Vegetables				
Jabo	Linyong	Onion	*Allium cepa*	9.5
		Cabbage	*Brassica oleracea*	9.5
Jato	Jahatu	Bitter tomato	*Solanum incanum*	9.5
Kanjo	Kanja	Okra, ladies' fingers	*Hibiscus esculentus*	9.5

Mandinka	Wolof	English	Taxonomic name	Section
Kano	Kani	Chilli pepper	*Capsicum frutescens*	9.5
Mentengo	Mentem, tamateh	Tomato	*Lycopersicon esculentum*	9.5
Njengo	Banga	Pumpkin	*Cucurbita pepo*	9.5
Patanseo	Batense	Aubergine, egg plant	*Solanum melongena*	9.5
Nuts and pulses				
Kuruo	Guru	Cola nut, kola nut	*Cola acuminata*	10.3
Tulingo	Nete tuo	Locust bean seeds (fermented)	*Parkia biglobosa*	9.5.1
Soso	Nyeheh	Cow-pea, black-eyed pea or black-eyed bean	*Vigna unguiculata*	9.5.1
Tianding kolon	Tia kolon	Bambara groundnut	*Voandzeia subterranea*	10.3
Tio	Guerteh	Groundnut, peanut	*Arachis hypogaea*	8
Fruits				
Banano	Banana	Banana	*Musa* sp. prob *sapientum*	10.2
Biabo	Guyab	Guava	*Psidium guajava*	10.2
Casuo	Cashew	Cashew	*Anacardium occidentale*	10.2
Duto	Mango	Bush or wild mango	*Cordyla africana*	10.1
Lemuna mesengo	Lemong	Lime, sour lime	*Citrus aurantifolia*	10.2
Nemuno	Sorance	Sweet orange	*Citrus sinensis*	10.2
Netto	Netteh	Locust bean	*Parkia biglobosa*	9.5.1
Pakaia	Papakaya	Pawpaw or papaya	*Carica papaya*	10.2
Sito	Bui	Baobab	*Adansonia digitata*	10.2
Sunkungo	Sisob	Sour sop, custard apple	*Anona* spp.	10.2
Tallo	Dittah	Tallow	*Detarium senegalense*	10.2
Tamba	Neew	Gingerbread plum	*Parinari macrophylla*	10.2
Tengo	Tirr	Oil palm	*Elaeis guineensis*	14
Tomborongo	Saedaim	Jujube	*Ziziphus jujuba*	10.2
Tubab duto	Mango	Mango	*Mangifera indica*	10.1

Mandinka	Wolof	English	Taxonomic name	Section
Fish				
Challo	Kobo	West African herring	*Ethmalosa fimbriata*	11
Feta	Tonon	Ladyfish	*Pseudotholithus senegalensis*	see p3
Furo	Wass	Tilapia	*Tilapia galilaea*	11
Furundingo	Wass bundow	Tilapia	*Tilapia* spp.; *Hemichromis* spp.	11
Jotto	Jotto	A large freshwater fish	*Sciaena nigrita*	see p3
Koso		Catfish	*Synodontis* spp.	see p3
Kujalo	Kujali	Spanish fish	*Polynemus quadrifilis*	11
Kunkalengo	Kong	Catfish	*Chrysichthys* spp.	see p3
Tabasse	Nguka	Cassava fish	*Otolythus* spp.	see p3
Tambanjango	Tambajang	Red mullet, goatfish	*Mullus surmuletus*	see p3
Tarorow		Moonfish	*Citharinus citherus*	see p3
Wangkango	Seda	Barracouda	*Spyraena* spp.	see p3

Appendix 6
Portion sizes for some Gambian foods

The portion sizes given below have been measured in up to 10 subjects each, in studies of pregnant and lactating women over many years in Keneba[5,6] as reported in Fenn[20]

Food	Weight, g (edible portion)	Food	Weight, g (edible portion)
Baobab drink	150	Lime, whole	40
Baobab ice	80	Locust bean, (Tulingo) 1 handful	30
Baobab fruit, 1 'finger'	5	Maize cob, small	30
1 handful	20	medium	50
1 seed	1	large	70
Bread stick, half	150	Mango, whole	60
whole	400	Orange, whole	150
Bush mango, whole	40	Palm oil added to dish	50
Cassava, large	200	Pancake, plain	60
small	100	'Porridge' type foods, 10 ml spoonful	10
cut (piece)	50	Pumpkin, piece	30
Cereal, boiled etc, with/without sauce, 1 handful	60	Rice, boiled etc, 10ml spoonful	15
Egg	40	Rice, boiled etc, with/without sauce, 1 handful	60
Fish, Challo, piece	50	Sugar cane, each	50
Fish, Furo, whole	40	Sweet potato, each	100
Fish, Furundingo, whole	10	small piece	50
Groundnuts, shelled, 1 handful	30	Tallo fruit, whole	10
Groundnuts, unshelled, 1 handful	15	Tamba fruit, whole	85
Guava, whole	30	Tea / Instant coffee, 1 cup	150
Kola nut, whole	22	Tea / Instant coffee, 1 large mug	250
half	11		

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