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Exploring Food Fortification and An Analysis of the Sociodemographic Impact on Basic WASH Practices: Evidence from the 2018 Pakistan Household Integrated Economic Survey

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Abstract

Exploring Food Fortification and An Analysis of the Sociodemographic Impact on Improved WASH Practices: Evidence from the 2018 Pakistan Household Integrated Economic Survey

By Sheerin Roxana Shirajan

Objective: Micronutrient deficiencies, food insecurity, and water, sanitation, and hygiene (WASH) practices are complex and common issues in public health, especially in low-and-middle income countries (LMIC). Yet, the three are rarely studied together and research is lacking on the combined occurrences in public health. The aim of this study is to (1) explore the current fortification mandates and prepare data for fortification analysis in Pakistan, (2) investigate the association between sociodemographic variables and basic WASH practices in Pakistan, and (3) map the significant results of aim two by province.

Methods: Data were obtained from the 2018 Pakistan Household Integrated Household Survey (HIES) for all three aims. Energy and nutrients associated with the synthesis of hemoglobin were chosen as nutrients of interest for aim one (iron, folic acid, copper, vitamin B12, vitamin B6, vitamin C, zinc, riboflavin, vitamin A, thiamine, and vitamin E). Descriptive analyses for aim two on provincial and national levels were performed. Multiple logistic regressions were used to test the association of covariates (food insecurity experience scale, food decisions, home ownership status, literacy, number of rooms in the house, province, and region) with household WASH practices (basic drinking water, basic hygiene, and basic sanitation).

Results: Basic WASH practices were significantly associated with all covariates of interest but one. Punjab was strongly associated with basic drinking water [OR = 23.147 (22.998, 23.297)], urban areas were strongly associated with basic sanitation practices [OR = 30.852 (30.816, 30.888)], and the food insecurity experience scale (FIES) at mild, moderate, and severe levels were negatively associated with basic drinking water, basic hygiene, and basic sanitation when compared to food secure households. The number of rooms in the household were associated with basic hygiene and sanitation, where the association grew stronger as the rooms in the household increased when compared to homes with 12-15 rooms.

Conclusion: Our findings were, all but one, statistically significant for associations of sociodemographic and WASH. Effective WASH practices, micronutrient supplementation, and food security are necessary to ensure the health of the public in Pakistan, and more research is needed on their intersections.

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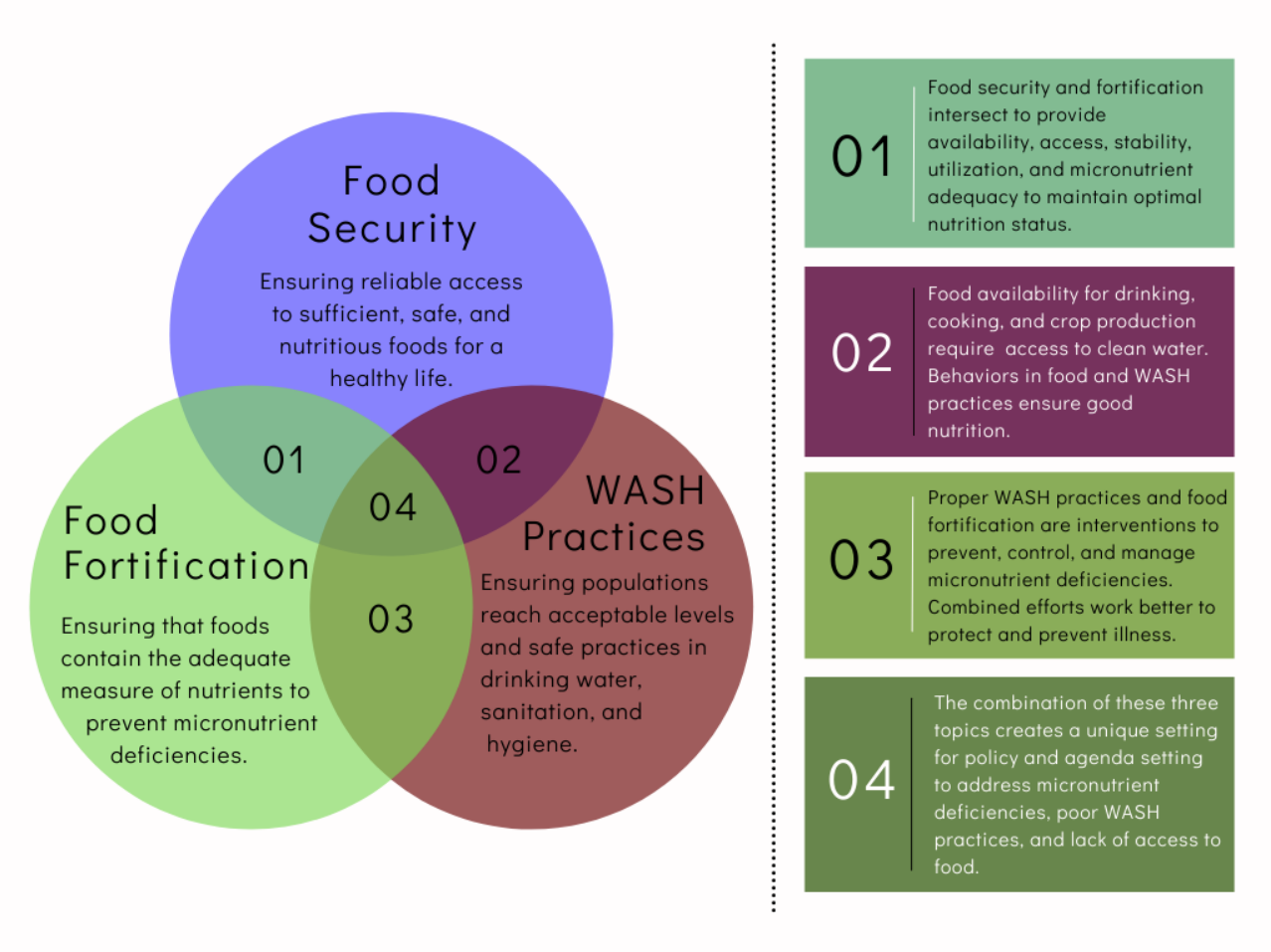
Table of Contents

1. Introduction

Nutritional deficiencies, safe water, sanitation, and hygiene (WASH) practices, and food insecurity are all serious global health problems that have become increasingly more urgent and have all gathered the attention of the United Nations Sustainable Development Goals (SDG) 2030 Agenda for Sustainable Development [1]. The intersection of the three public health issues is visualized in **Figure 1**.

Figure 1: Venn Diagram of the Intersections Between Food Fortification, Food Security, and WASH Practices.



Micronutrient Deficiencies

Goal 2 of the UN SDG targets hunger reduction, food security, improved nutrition, and sustainable agriculture [2]. Micronutrients deficiencies, or a lack of essential vitamins and minerals consumed in small portions by the body, affect the health and development of individuals [3]. Without the necessary micronutrients, there is potential for several negative health outcomes. According to the World Health Organization, the most impactful micronutrient deficiencies include vitamin A, iodine, and iron [4]. Additionally, Anemia is a condition that arises when there is a in red blood cells or hemoglobin concentration, and it can be caused by micronutrient deficiencies and other factors such as infectious disease and genetic mutations [5].

The WHO reports that while the prevalence of anemia has decreased in the last decades, it is still a major public health issue that is estimated to impact nearly 2 billion people globally [6]. Nutritional anemia occurs when the body lacks the necessary micronutrients to produce or sustain hemoglobin [5]. The specific nutrients that support hemoglobin production are iron, folic acid, copper, vitamin B12, vitamin B6, vitamin C, zinc, riboflavin, vitamin A, thiamine, and vitamin E [7].

Women of reproductive age (WRA) (15-49 years old) and children bear the greatest burden of anemia [4]. In Pakistan, WRA face a high prevalence of anemia when compared to other South Asian countries, as 44% of WRA are anemic [8]. It is hypothesized that the anemia in Pakistan is due to low iron intake in the country, meaning that diet plays a strong role in determining the population's hemoglobin levels [9].

Food Fortification

Food fortification is the process of adding additional vitamins and minerals to foods during food processing to provide nutrients to those who consume the food those populations

receiving inadequate amounts of nutrients in their food [10]. The WHO fortification guidelines provide recommendations for staple foods such as wheat flour, maize flour, oil, rice, and salt [11]. Staple foods are chosen as micronutrient vehicles for fortification per country basis as they can reach larger populations to ensure adequate intake [11].

Food fortification can be either mandatory through government determined mandates and regulations, or voluntary by allowing food producers the choice to fortify their products [10]. Scaled up mandatory or voluntary fortification is referred to as large-scale food fortification (LSFF) [12]. Food fortification is a necessary tool in combatting micronutrient deficiencies as it intervenes and protects populations. Food fortification regulations are currently in place in 140 countries, where most have placed fortification as mandatory [13]. The cost effectiveness of food remains a popular factor of the intervention globally, specifically due to the long-term plan of supplementing foods with necessary nutrients which can reduce mortalities and morbidities [14]. In Pakistan, fortification has historically been nationally intact for oil alone, but recent years have encouraged voluntary fortification of salt and wheat flour [15].

Food Insecurity

The Food and Agriculture Organization of the United Nations (FAO) defines food security as a state "when all people, at all times, have physical, social, and economic access to safe, sufficient, and nutritious foods which meets dietary needs and food preferences for an active and healthy life" [16]. Food insecurity has decreased globally in the past two decades, but around 793 million people are still considered food insecure [17]. Food insecurity guidelines set by the FAO recommend monitoring food insecurity with the Prevalence of Undernourishment (PoU) or the Food Insecurity Experience Scale (FIES) [16]. The FIES collects data from interviews asking about their experiences with food insecurity. Responses create categories of

secure, mild insecurity, moderate insecurity, and severe insecurity, which then are used as indicators of food insecurity [16].

Children and pregnant women are high-risk groups in food insecure areas as they require adequate nutrients in their development and well-being [18]. Pregnant women and children who face food insecurity are associated with increased risks of birth defects, anemia, lowered nutrient intakes, cognitive issues, behavioral changes, asthma, depression, and poor oral health [18]. Adults are also at risk of decreased nutrient intakes, mental health problems and depression, diabetes, and hypertension [18]. In Pakistan, the 2018 National Nutrition Survey reported that 36.9% of the population is food insecure, where the incidence is twice as high in rural populations than urban [19].

WASH and WASH Education

Goal 6 of the UN SGDs target access to water and sanitation for all by achieving improvements in drinking water, equitable sanitation and hygiene, increasing water-use efficiency, integrating water resource management, restoring water-related ecosystems, and international cooperation to support developing countries [1]. The WHO defines WASH as access and practices of safe drinking water, sanitation, and hygiene for all [20]. In addition to that, WASH programs promote safe water provisions, adequate sanitation, and hygiene education within communities to support WASH practices [20]. A 2015 report on WASH policies and programs by the WHO estimated 30% of the world lacks access to safe and clean drinking water, and less than 40% use safely managed sanitation services and areas [21].

Poor WASH practices are linked to transmission of diarrheal disease, infectious diseases, and can spread antimicrobial resistance in a population [22]. Such diseases can lead to undernutrition, malnutrition, and impact the body's ability to properly absorb nutrients in the gut

[22]. Children are at high risk undernutrition and malnutrition when there is a lack of proper WASH intervention and can enter a cycle of diarrhea and undernutrition where their nutritional health becomes compromised [22]. The WHO and UNICEF Joint Monitoring Program (JMP) monitors the progress of WASH practices in households, schools and health care facilities around the globe [20]. The JMP has established "ladders" to monitor the level of safely managed WASH practices. Drinking water ladders begin from surface water to unimproved practices, limited practices, basic practices, and safely managed practices [20]. Sanitation ladders start from open defecation, to unimproved, limited, basic, and finally safely managed [20]. Hygiene ladders are not as well defined as recall in surveys than by observations of handwashing practices. Hygiene begins at no handwashing facility, to limited facilities, and finally basic facilities [20].

In Pakistan, 25 million people continue practicing open defecation, and estimated 70% of households drink water contaminated with bacteria, and 53,000 children under five die annually from diarrheal disease [23].

2. Study Purpose

This study will 1) complete preparation work for future food fortification analysis by gathering current fortification standards and creating a food composition table specific to the 2018 Pakistan HIES that includes key nutrients and energy involved in hemoglobin production (energy, iron, folic acid, copper, vitamin B12, vitamin B6, vitamin C, zinc riboflavin, vitamin A, thiamin, and vitamin E); 2) analyze the relationship between sociodemographic factors and basic drinking water, hygiene, and sanitation practices in Pakistani households; and 3) based in the results of aim 2, we will design a map to visualize the associations found by province.

3. Methods

This paper followed the 22-point STROBE (strengthening the reporting of observational studies in epidemiology) guidelines for observational and cross-sectional studies [24].

IRB Considerations

This project's protocol was submitted to the Emory University Institutional Review Board for consideration. It was determined by the board that the de-identified datasets used in this project did not constitute human subjects research, and no further review was required.

Database Selection

To conduct this analysis, an extensive search was completed to identify a nationally representative survey from Pakistan in the last 10 years that provided data on both diet and water, sanitation, and hygiene (WASH). In addition to those requirements, the database needed to be publicly available for download. An infographic of the nationally representative databases searched is available in **Appendix 1**.

Following a database search of five potential surveys fitting these qualifications, The Pakistan Household Integrated Economic Survey (HIES) of 2018-19 was selected as the data source. The cross-sectional HIES collected data on socio-economic status (SES), literacy rates, knowledge and access to clean water and sanitation, consumption of food and goods, income patterns, and other information. The data are representative at the provincial and national levels. Data were downloaded from the Pakistan Bureau of Statistics website [25].

The most recent food composition table from Pakistan was also acquired to create a food composition table specific to the HIES dietary data. The Pakistan Food Composition Table (FCT) of 2001 was selected and downloaded from the Allama Iqbal Open University website [26]. The goal of generating a new FCT was to provide nutritional data of the unique foods

consumed and purchased by households in the 2018 HIES to be used in dietary analyses to influence nutrition policy in the future.

Objective 1

Constructing the Food Composition Table

The 2018 Pakistan HIES included 112 unique foods, organized into 14 food categories. To carry out dietary analyses in the future, the nutrient profile of these foods is required. The nutrients of interest were select vitamins and minerals that are involved in hemoglobin biology and thus can influence the prevalence of anemia: iron, folic acid, copper, vitamin B12, vitamin B6, vitamin C, zinc, riboflavin, vitamin A, thiamine, and vitamin E [5]. From the 112 unique foods in the 2018 HIES, the 2001 Pakistan FCT included nutrient values for 61 of them. However, the 2001 Pakistan FCT was missing five micronutrients of interest (copper, folic acid, vitamin B12, vitamin B6, and vitamin E). Additionally, some foods in the 2001 Pakistan FCT had blanks in place of micronutrient values. This created many gaps in the completion of this project's FCT and required the review of several additional sources to provide those nutritional values. Those sources were the USDA (United States Department of Agriculture) FoodData Central Standard Reference (SR) Legacy and the Food and Nutrient Database for Dietary Studies (FNDDS), and the food composition tables of Bangladesh [27] and India [28].

Grouped Foods in the FCT

The individual foods from the 2018 HIES were often grouped within their subsections, hereafter referred to as "grouped foods". For example, food 11408 (Curd/Yogurt loose/packed) contained two nutritionally different foods (curd and yogurt) under one code and survey question. To properly calculate each food's nutritional value without altering the survey format, the nutritional value of the "grouped food" was obtained by calculating the mean across all foods

that made up the "grouped food". All nutrient values were expressed in 100g of the food. This process was applied to the 75 grouped foods.

A second method was used to calculate the energy and nutritional values of grouped foods. This method created weighted values from the Food and Agriculture Organization Statistics (FAOSTAT) site [29]. The FAOSTAT webpage provides free access to data of various domains such as food production quantities. To calculate the weighted value, FAOSTAT was searched under the Crop and Livestock products section, filtered for Pakistan, production quantities, and 2018. Production quantities were used to weigh the annual food production per metric ton. The year 2018 was selected as it aligned with the data collection from the HIES. If the desired food item(s) were available, data were downloaded and placed into the HIES food code specific worksheet in the FCT. Using energy and nutrient values from food composition sources, the value of each food in metric tons was converted into a percentage and then multiplied by the energy in kcalories. This was repeated for energy and each nutrient of interest, as well.

For example, FAOSTAT provided three of the four foods in grouped food 11612 (Almond, pistachio, walnut, and kaju). Domestic production data for the three were downloaded from FAOSTAT, and the metric tons domestically produced of each food were summed up (**Table 1**). A proportion was calculated by dividing the individual food value by the summed value. For instance, 20,615 tons of almonds were produced in 2018; this value was divided by the production sum for almonds, pistachios, and walnuts (35,887), yielding a proportion of 0.57 for almonds. The energy profile of almonds, reflected in kcals per 100g of food, was collected from the Pakistan FCT, and was 613 kcals per 100g of almonds. The 613 kcals were multiplied by the proportion of almonds produced in Pakistan (0.57), equaling a weighted average of 352.13

kcals per 100g of almonds. This process was repeated for each food in the group and each nutrient. The total sum of energy per 100g of the grouped food 11612 (Almond, pistachio, walnut, and kaju) was 629.28 kcals.

Table 1: An Example of Using FAOSTAT Data on the Domestic Production of Foods to Calculate the Weighted Average of Energy in Grouped Food 11612.

Item[1]	Year[1]	Domestic Production (tons)[1]	Proportion[2]	Energy in Kcals per 100g of food[3]	Kcals per 100g of food average, weighted[2]
Almond, with shell	2018	20615	0.5744	613	352.13
Pistachio	2018	654	0.0183	590	10.75
Walnut, with shell	2018	14618	0.4073	654	266.39
Sum		35887	1.0	1857	629.28

[1] Data obtained from FAOSTAT [29].
[2]Calculations completed with FAOSTAT data in the Domestic Production column.
[3]Data obtained from 2001 Pakistan FCT [26].

Recipe Calculations in the FCT

The 2018 HIES included nine foods that required recipe calculations. A reference recipe online was used to provide accurate measurements of each ingredient in the recipe, and then the nutrient values for each ingredient were found. These reference recipes were from various Pakistani cooking websites. Once this information was compiled, the energy and nutrients were summed together and calculated to represent 100g of the recipe. Those final values were added into the FCT.

For example, the recipe for food 11116 (Biscuits (sweet and salty)) was not available in the context of Pakistani biscuits in any of the food composition sources. To account for this, a recipe for jeera/zeera biscuits, a popular sweet and salty biscuit in Pakistan (Zameer Haider, Nutrition International, personal communication, 2021) was found online and referenced within

the FCT. The ingredients of wheat flour, butter, salt, eggs, cumin seeds, and icing sugar were listed by their recipe measurements and converted into grams for uniformity (**Table 2**).

Table 2: Recipe Calculation for Food 11116: Biscuits (sweet and salty).

Zeera Biscuits (Sweet Biscuit)			
Ingredients	**Amount in Recipe**	**Unit in Recipe**	**Final Amount (g)**
Wheat flour	250	g	250
Butter	125	g	125
Salt	1	tsp	5.9
Egg	1	egg	50
Cumin seeds	1	tbsp	8.53
Icing sugar	125	g	125
Total			**564.43**

Nutrient values obtained from a food composition table were calculated by multiplying the ingredient value (g) by nutrient amount (expressed per 100g) of the ingredient and dividing by 100. As an example, the iron in wheat flour for jeera/zeera biscuits was calculated as:

mg iron in recipe for wheat flour/250g wheat flour multiplied by 1.3mg of iron divided by 100.

The total nutrient value in the recipe (expressed per 100g) was calculated with the sum of the nutrients in each ingredient divided by the sum of the ingredients (in grams) (**Table 3**). For iron in jeera/zeera biscuits, this was calculated as:

9.19 mg of iron in recipe divided by 564.43 g of total ingredients multiplied by 100 =1.62 mg.

Table 3: Iron Calculation from a Recipe for Food 11116: Biscuits (sweet and salty).

Ingredient	FCT Source[2]	Code[3]	Iron (mg/100g)	Amount in recipe (g)	Iron in recipe (mg)
Wheat flour	[30]	20481	1.30	250.00	3.25
Butter	[30]	1145	0.02	125.00	0.02
Salt	[30]	2047	0.33	5.90	0.02
egg	[30]	1124	0.08	50.00	0.04
Cumin seeds	[30]	2014	66.40	8.53	5.66
Icing sugar	[30]	91305020	0.16	125.00	0.20
Total				564.43	9.19
Per 100 grams, iron (mg)[1]					1.62

[1]The iron in the recipe (mg) per 100 g of the food.
[2]FCT Source: Source of the food's nutrient value.
[3]Code: Food code from the food composition table.

Objective 2

HIES Data

The total household sample size of the HIES was 24,809 consisting of 158,924 individuals. The survey areas included households in the four provinces of Pakistan, specifically Balochistan, Khyber Pakhtunkhwa, Punjab, and Sindh.

Households survey data were collected individually from all eligible residents. Eligibility was determined by any person who primarily eats and lives in the place of residence. This included all males and females who fit this requirement. Two enumerators visited each home, where female enumerators interviewed the females in the home, and male enumerators interviewed the males. The female and male questionnaires both varied and overlapped in their questions and designed modules. **Table 4** highlights the similarities and differences in the two surveys for indicators of interest to this paper.

Table 4: Portions of the Survey Questionnaire Asked of Female and Male Respondents.

Variables	Female	Male
Age	Y	Y
Currently pregnant	Y	N
Food decisions	Y	N
Food expenditure	Y	Y
Food insecurity	N	Y
Home ownership	N	Y
Housing characteristics	N	Y
Income	Y	Y
Literacy	Y	Y
Pregnancy	Y	N
WASH	N	Y

Household level variables used in the analysis were food insecurity, food decisions, home ownership, housing characteristics, income, literacy, province, region, and WASH. Male respondents answered food insecurity, home ownership, housing characteristics, and WASH questions for their households. For this paper, the variables of interest by province included urban, rural, proportion of males and females, and average total annual income.

Food insecurity was surveyed by following the FAO's Food Insecurity Experience Scale (FIES) [31]. The FIES is a global reference scale to measure the unobservable traits of food insecurity in populations. It consists of eight questions that range from none to severe food insecurity (**Table 5**). Survey participants are asked to recall food insecurity experiences in the past 12 months: worried, healthy foods, few types of foods, skipped meals, eating less, running out of food, hunger, and going a whole day without eating. The specific questions are listed in the component column of **Table 5.** The responses to eight yes/no questions were used to categorize households as food secure, or experiencing mild food insecurity, moderate food insecurity, or severe food insecurity.

Covariates

Sociodemographic factors surveyed from the HIES were the covariates in this analysis. Specifically, the variables included food insecurity FIES questions (mild, moderate, severe), food decisions (who decides on purchases), home ownership status (owned, rented, other), hygiene education in the past 12 months (yes/no), literacy (ability to read and complete basic math), number of rooms in the house, province (Balochistan, Khyber Pakhtunkhwa, Punjab, and Sindh), and region (rural or urban). These covariates can be seen in detail in **Table 5.**

Table 5: Covariates, Survey Questions, and Categorized Code for Objective 2[1].

Indicator	HIES Code	Components[2]	Survey Question Response	Rename	Categorized Code
FIES Questions		Was there a time in the past 12 months when you or your household...	1=Yes 2=No 98=I do not know 99=Refuse	**Rename:** Q1=Worried Q2=Healthy Q3=Fewfood Q4=Skipped Q5=Ateless Q6=Runout Q7=Hungry Q8=Whlday	**Recode:** Yes=1 No=0 Food Secure = 0 if All[3]=0 **Mild Food Insecurity=1** if Worried=1 or Healthy=1 or Fewfood=1 or **Moderate Food Insecurity=1** if Skipped=1 or Ateless=1 or Runout=1 or **Severe Food Insecurity=1** if Hungry=1 or Whlday=1 or
	Q1	worried about not having enough food to eat because of a lack of money or other resources?			
	Q2	were unable to eat healthy and nutritious food because of a lack of money or other resources?			
	Q3	ate only a few kinds of foods because of a lack of money or other resources?			
	Q4	had to skip a meal because there was not enough money or other resources to get food?			
	Q5	ate less than you thought you should because of a lack of money or other resources?			
	Q6	ran out of food because of a lack of money or other resources?			
	Q7	were hungry but did not eat because there was not enough money or other resources for food?			
	Q8	went without eating for a whole day because of lack of money or other resources?			
Food Decisions	S4EQ71	Who in your household makes decisions about food purchases?	1=Woman herself 2=Head of HH 3=Head consulting with spouse 4=Head in consultation with the woman 5=Head and spouse in consultation with woman	**Rename:** S4EQ71=buyfood	As is

Indicator	HIES Code	Components[2]	Survey Question Response	Rename	Categorized Code
			6=Head and other male members decide 7=Other combinations		
Home Ownership	S5AQ01	What is your present occupancy status?	1=Owner occupied (not self-hired) 2=Owner occupied (self-hired) 3=On rent 4=Subsidized rent 5=Rent free	**Rename:** S5AQ01=home	**Home = 1** if Homeown=1-2 **Home = 2** if Homeown =3-4 **Home = 3** if Homeown =5
Hygiene Education	S4FQ01	In the last 12 months, has anybody talked to you, or have you heard any message about hygiene (boiling your drinking water, washing hands before eating and after using toilet etc.) or about diseases you can catch from unclean water?	1=Yes 2=No	**Rename:** S4FQ01= hygiene_talk	Yes=1 No=0
Literacy >10 years	S2AQ01	Can you read simple statements in any language with full understanding?	1=Yes 2=No		Yes=1 No=0
	S2AQ03	Can you solve simple math (plus, minus, sums)?	1=Yes 2=No		Yes=1 No=0
Region	Region	What region do you live in?	1=Rural 2=Urban	N/A	As is
Rooms in home	S5AQ04	How many rooms are there in this residential building?	N/A	**Rename:** S5AQ04= Homeroom	**Homeroom=1** if s5aq04= 1-3 **Homeroom=2** if S5aq04=4-6 **Homeroom = 3** if s5aq04= 7-10

[1]Objective 2: Analyzing the relationship between socio-demographic and economic factors to WASH practices in Pakistan
[2]Survey questions used to make these variables.
[3] "All" refers to the sum of worried+healthy+fewfood+skipped+ateless+runout+hungry+whlday=0

Outcome variables

The goal of objective two is to inspect the national association of socio-demographic and economic factors on WASH practices in Pakistan. To achieve this, three new binary variables were constructed and categorized from 11 questions that best highlight basic WASH status based on the WHO-UNICEF Joint Monitoring Program (JMP) 2017 guidelines [20]. These questions can be found listed in **Table 6.** The three outcomes of interest focused on status of drinking water, hygiene, and sanitation, falling under the "basic" category of the WHO-UNICEF JMP 2017 guidelines.

Table 6: Outcome Variables, Survey Questions, and Categorized Code for Objective 2 [1]

Indicator	**HIES Code**	**Components**[2]	**Survey Question Response**	**Renamed Codes**	**Categorized Code**
Drinking Water	S5AQ11	**Inside dwelling** **Outside dwelling**	1=Piped water 2=Hand pump 3=Bore Hole (Motor Pump) /Tube Well 4=Closed well 5=Open well 6=Protected Spring 7=Unprotected Spring 8=Piped Water/Public Tap/ Standpipe 9=Hand pump 10=Motorized pumping/ Tube well 11=Closed well 12=Open well 13= Spring (protected) 14=Spring (Unprotected) 15=Pond/Canal/ River/Stream 16=Bottled 17=Tanker /Truck/water bearer 18=Filtration Plant 19=Others	**Rename:** S5AQ11=Watersource	**Drinkwater=1 if** Watersource=1-4, 6, 8-11, 13, 16, 17 or DistanceW= 1-2 or TimeW= 1-2 or DosafeW= 1 Else, Drinkwater=0

Indicator	HIES Code	Components[2]	Survey Question Response	Renamed Codes	Categorized Code
	S5AQ13	How far (round trip) is the source of drinking water from your house?	0=inside household 1=0 – .5 Km 2=0.5+ - 1 Km 3=1+ – 2 Km 4=2+-5Km 5=5+ Km	**Rename:** S5AQ13=DistanceW	
	S5AQ14	On average how much time spent on a Round trip to fetch the drinking water?	1= 1-15 minutes 2=16-30 minutes 3= 31-45 minutes 4=46-60 minutes 5=60+minutes	**Rename:** S5AQ14=TimeW	
	S5AQ15	Do you do something to make water safer to drink?	1=Yes 2=No 3=Do not Know	**Rename:** S5AQ15=DosafeW	
Hygiene	S5AQ26	What is the main source of water used for the hand washing for household?	1=Piped water 2=Hand pump 3=Bore Hole (Motor Pump)/ Tube Well 4=Closed well 5=Open well 6=Spring (protected) 7=Spring (Un Protected) 8=Pond/Canal / River / Stream 9=Tanker /Truck/water bearer 10=Others	**Rename:** S5AQ26=Wherehand	**Hygiene= 1 if** Wherehand=1-4 or Handwater=1 or Soap=1 Else, Hygiene=0
	S5AQ27A	Do you have a specific place in your dwelling for hand washing?	Yes=1 No=2	**Rename:** S5AQ27A=Handwater	
	S5AQ27B	Do you have soap/liquid soap/etc. in your dwelling?	Yes=1 No=2	**Rename:** S5AQ27B=Soap	
Sanitation	S5AQ21	What type of toilet is used by your household?	1=No Toilet 2=Flush connected to public sewage 3=Flush connected to septic tank 4=Flush connected to pit	**Rename:** S5AQ21=toiletype	**Sanitation=1 if** Toiletype=2-9 or Notoilet=0 or Sharetoilet=0 or

Indicator	HIES Code	Components[2]	Survey Question Response	Renamed Codes	Categorized Code
			5=Flush connected to open drain 6=Dry raised latrine 7=Dry pit latrine 8=Composting toilet 9=Other		HHtrash=1-2 Else, Sanitation=0
	S5AQ22	Where do the household members go for their necessities?	1=Fields / open places 2=Communal latrine 3=Others	**Rename:** S5AQ22=notoilet	
	S5AQ23	Do you share this toilet facility with others who are not members of your households?	1=Yes 2= No	**Rename:** S5AQ23=sharetoilet	
	S5AQ28A	How is the garbage collected from your household?	1=Municipality 2=Privately 3=No formal system	**Rename:** S5AQ28A=HHtrash	

[1]Objective 2: Analyzing the relationship between socio-demographic and economic factors to WASH practices in Pakistan
[2]Survey questions used to make these variables.

Statistical Analysis

Descriptive statistics were completed in the form of means, standard deviations, and percentages at the provincial level. National level relationship between household socioeconomic factors and improved household WASH practices in Pakistan were analyzed using logistic regression and chi-square test. Survey weights provided by the HIES were integrated into the models. All analyses were performed using SAS/ACCESS® software 9.4, where all tests were two-sided and statistical significance was determined if p-value was ≤ 0.05 or 5%.

Bias

The 2018 HIES had potential recall bias in the survey. Many questions used in our analysis, both outcomes and covariates, utilized retrospective questions. For our analysis, those with recall questions included food insecurity, education, drinking water, sanitation, hygiene, and hygiene education.

Objective 3

ArcGIS

A map was created within ArcGIS to visualize the results of the regression analysis from objective two. An outline of the Pakistan borders and provinces served as the base map. Layers were selected based on the results of objective two relating WASH practices by province.

4. Results

Objective 1

The list of missing nutrients from the four sources used to complete the FCT are presented in **Table 6.** The most complete resource was the USDA FoodData Central, but as there are specific foods listed in the HIES, it often lacked our foods of interest.

Table 6: Missing Nutrient Data for Constructing the Food Composition Table

Nutrients of Interest	Available in Pakistan FCT 2001?	Available in Bangladesh FCT?	Available in India FCT?	Available in USDA FoodData Central?
Copper	No	Yes	Yes	Yes
Folate	No	Yes	Yes	Yes
Iron	Yes	Yes	Yes	Yes
Riboflavin	Yes	Yes	Yes	Yes
Thiamin	Yes	Yes	Yes	Yes
Vitamin A	Yes	Yes	Yes	Yes
Vitamin B12	No	No	No	Yes
Vitamin B6	No	Yes	Yes	Yes
Vitamin C	Yes	No	No[1]	Yes
Vitamin E	No	Yes	Yes	Yes
Zinc	Yes	Yes	Yes	Yes

[1]Some foods included Vitamin C values, but many were blank in the table.

The current national fortification standards in Pakistan are presented in **Table 7**. The national and provincial rows represent food fortification regulated and mandatory by the government of Pakistan. Currently, only Balochistan and Sindh are provinces that have implemented fortification standards for mandatory wheat flour fortification. Voluntary fortification currently only exists for salt and wheat flour.

Table 7: Fortification Standards in Pakistan.

National and Provincial Standards	Edible oil/ghee	Salt	Wheat flour
National	Yes	Yes	No
Provincial	Yes	Yes	Mandatory in Balochistan and Sindh
Voluntary	No	Yes	Yes

The completed Pakistan FCT for the Pakistan 2018 HIES can be found in **Appendix 2.** The results provided a table of the 112 unique foods found in the HIES alongside the nutritional composition of the energy and 11 micronutrients of interest: iron, folic acid, copper, vitamin B12, vitamin B6, vitamin C, zinc, riboflavin, vitamin A, thiamine, and vitamin E.

Objective 2

Descriptive statistics of the population by provincial level and the national level can be found in **Table 9** and **Table 10**, respectively. Punjab (43.1%) was the highest surveyed province in Pakistan, followed by Sindh (24.4%), KP (20.9%), and Balochistan (11.5%). There was nearly double the number of rural households surveyed than urban households by province. The survey interviewed near equal numbers of males and females, best highlighted in **Table 9**. Khyber Pakhtunkhwa reported the highest average household income at 357,983.05 PKR, while Sindh reported the lowest average at 318,176.51 PKR.

Table 9: Population Demographics by Province.

Province	N (%)[1]	Urban [2]	Rural[2]	Male[3]	Female[3]	Average Total HH Income (PKR)[4], mean (SD)
Balochistan	18,334 (11.5%)	5,463	11,880	9,676	8,658	327,098.76 (±260205.01)
Khyber Pakhtunkhwa	33,303 (20.9%)	10,198	21,637	16,252	17,051	357,983.05 (±462968.02)
Punjab	68,454 (43.1%)	22,285	45,371	33,572	34,882	346,762,75 (±443528.02)
Sindh	38,833 (24.4%)	13,919	21,776	19,978	18,855	318,176.51 (±296782.90)

[1]Population N values are reported on an individual level
[2]Urban and rural observations are reported on an individual level.
[3]Male and female observations are reported on an individual level.
[4] Total HH Income reported in Pakistani Rupees (PKR), reported in mean (SD (Standard Deviation))

In **Table 10**, the household respondents on average were 23.9 years of age, where 91% could solve simple math problems, and 56% of the respondents could read. On average, each household questioned had 1.87 rooms in their home.

Table 10: National Descriptive Statistics.

Characteristics	Observations	Mean (SD)
Total individuals in survey	158911	-
Total households sampled (weighted)	24,809	-
Age in years	158911	23.94 (±19.06)
Married	158924	1.46 (±0.59)
Literacy[1]-Reading	115771	0.56 (±0.49)
Literacy[1]-Math	115771	0.91 (±0.27)
Currently pregnant (women only)	107873	1.89 (±0.33)
Total household income (PKR)	158911	329,464 (±399,007.54)
Rooms in household	152529	1.87(±0.59)

[1]Reports observations of individuals aged >10

Our predictive analysis assessed the association of sociodemographic factors and each WASH outcome of objective two (basic improvement in drinking water, basic improvement in hygiene, and basic improvement in sanitation), presented in **Table 11**. The sociodemographic

factors utilized as covariates for the three models were food security (FIES), food decisions, home ownership, hygiene education, literacy (>10 years of age), region, and rooms in the household. Of the 158,911 observations in the survey, the sample size of the regression consisted of 152,529 observations, due to missing values in at least one variable of interest. All covariates and models resulted in statistically significant odd ratios ($p<0.05$), apart from one covariate, rooms in the home (9-11) to improved basic drinking water, which reported a p-value of 0.97 [OR = 0.80 (<.001, >999)].

Households residing in Punjab had a 23.14 times greater likelihood of having basic drinking water than Balochistan [OR = 23.14 (22.99, 23.29)]. Households in Sindh had a 1.2 times greater odds of basic drinking water than Balochistan [OR = 1.25 (1.24, 1.25)]. KP households were less likely to have basic drinking water than Balochistan [OR = 0.38 (0.38, 0.39)]. Compared to food secure households, the mild, moderate, and severely food insecure households in Pakistan were less likely to have basic drinking water. Similarly, all FIES factors (mild, moderate, and severe food insecurity) were negatively associated (odds ratio below 1) to basic sanitation were when compared to food secure households.

The largest odds ratio calculated was for the association residing in a region and basic sanitation, where urban regions were 30.85 times more likely to have basic sanitation than rural regions [OR = 30.85 (30.81, 30.88)]. This OR was over seven times greater than the odds ratio of urban households with basic drinking water [OR = 4.34 (4.33, 4.36)] and over 10 times greater than the odds ratio of urban households with basic sanitation [3.00 (2.99, 3.00)] when compared to rural homes. Regarding food decisions in the household, all covariates showed positive associations with basic drinking water, hygiene, and sanitation when compared to the reference group, except for one. Households where the head of the household and a woman decided on

food purchases had a negative association to improved basic sanitation [OR = 0.97 (0.97, 0.97)] when compared to decisions made by the head of the household, the spouse of the head, and other women in the home.

Reading literacy resulted in positive association with of basic sanitation [OR = 1.80 (1.79, 1.80)], basic hygiene [OR = 1.55 (1.54, 1.55)], and basic drinking water [OR = 1.48 (1.47, 1.48)] when compared to those who cannot read. The ability to solve math problems was associated with greater basic sanitation than the inability to solve math problems [OR = 1.04 (1.04, 1.04)] but was less likely to be associated with basic drinking water [OR = 0.84 (0.84, 0.84)] and hygiene [OR = 0.97 (0.97, 0.98)]. Hygiene education had greater odds being associated with hygiene [OR = 2.51 (2.51, 2.51)] and sanitation [OR = 1.70 (1.69, 1.70)] when compared to no hygiene education.

The odds ratio of rooms in the home decreased for all outcome variables as the number of rooms increased. Those with one room in the household had less odd of having basic hygiene [OR = 0.910 (<.001, >.999)] than 5-8 rooms [OR = <.001 (<.001, 0.014)] when compared to homes with 12-15 rooms. Basic sanitation in homes with one room [OR = 1.06 (1.05, 1.07)] showed a positive association, but the odds increased a with 2-4 rooms [OR = 1.98 (1.96, 2.00)], 5-8 rooms [OR = 2.57 (2.55, 2.60)], and slightly increased in 9-11 rooms [OR = 1.13 (1.12, 1.15)] when compared to homes with 12-15 rooms. When compared to those who do not pay rent in their households, those who do rent had greater odds of basic drinking water [OR = 5.24 (5.20, 5.28)], basic hygiene [OR = 3.43 (3.42, 3.44)] and basic sanitation [OR = 4.03 (4.02, 4.04)].

Table 11: Logistic Regression of Socioeconomic Factors Associated with Basic[1] WASH Practices in Pakistani Households.

Variables	N	Basic Drinking Water in HH		Basic Hygiene in HH		Basic Sanitation in HH	
		OR (95%CI)	*P value*	OR (95%CI)	*P value*	OR (95%CI)	*P value*
Province	**152,529**						
Balochistan		Ref	Ref	Ref	Ref	Ref	Ref
KP		0.383 (0.382, 0.385)	<.001	0.103 (0.102, 0.103)	<.001	2.630 (2.622, 2.637)	<.001
Punjab		23.147 (22.998, 23.297)	<.001	0.262 (0.261, 0.263)	<.001	3.528 (3.519, 3.538)	<.001
Sindh		1.250 (1.245, 1.256)	<.001	0.707 (0.705, 0.710)	<.001	3.898 (3.888, 3.908)	<.001
Region	**152,529**						
Rural		Ref	Ref	Ref	Ref	Ref	Ref
Urban		4.347 (4.330, 4.365)	<.001	3.00 (2.995, 3.004)	<.001	30.852 (30.816, 30.888)	<.001
FIES	**152,529**						
Secure		Ref	Ref	Ref	Ref	Ref	Ref
Mild		0.777 (0.775, 0.779)	<.001	1.252 (1.251, 1.254)	<.001	0.796 (0.794, 0.797)	<.001
Moderate		0.679 (0.677, 0.681)	<.001	0.782 (0.781, 0.783)	<.001	0.626 (0.625, 0.627)	<.001
Severe		0.549 (0.547, 0.551)	<.001	0.354 (0.354, 0.355)	<.001	0.452 (0.451, 0.453)	<.001
Food Decisions	**152,529**						
Head HH, spouse, & woman		Ref	Ref	Ref	Ref	Ref	Ref
Woman herself		2.348 (2.338, 2.359)	<.001	1.639 (1.636, 1.642)	<.001	1.101 (1.099, 1.103	<.001
Head of HH		2.968 (2.965, 2.980)	<.001	1.320 (1.318, 1.323)	<.001	1.177 (1.174, 1.180)	<.001
Head of HH & spouse		3.103 (3.090, 3.117)	<.001	1.037 (1.035, 1.039)	<.001	1.395 (1.392, 1.398)	<.001
Head of HH & woman		5.124 (5.092, 5.155)	<.001	2.715 (2.708, 2.723)	<.001	0.975 (0.972, 0.977)	<.001
Head of HH & males		4.834 (4.803, 4.864)	<.001	1.110 (1.107, 1.113)	<.001	1.277 (1.273, 1.280)	<.001
Literacy	**152,529**						
Cannot read		Ref	Ref	Ref	Ref	Ref	Ref

Can read		1.482 (1.478, 1.486)	<.001	1.551 (1.549, 1.553)	<.001	1.800 (1.798, 1.803)	<.001
Cannot solve math		Ref	Ref	Ref	Ref	Ref	Ref
Can solve math		0.846 (0.843, 0.849)	<.001	0.978 (0.976, 0.980)	<.001	1.042 (1.040, 1.045)	<.001
Home Ownership	**152,529**						
Rent free		Ref	Ref	Ref	Ref	Ref	Ref
Own		1.374 (1.369, 1.379)	<.001	1.634 (1.631, 1.637)	<.001	0.774 (.773, 0.776)	<.001
Rent		5.245 (5.208, 5.283)	<.001	3.434 (3.425, 3.443)	<.001	4.035 (4.027, 4.042)	<.001
Hygiene Education	**152,529**						
Not educated		Ref	Ref	Ref	Ref	Ref	Ref
Educated		0.223 (0.222, 0.223)	<.001	2.512 (2.510, 2.515)	<.001	1.70 (1.69, 1.70)	<.001
Rooms in Home	**152,529**						
12-15		Ref	Ref	Ref	Ref	Ref	Ref
9-11		**0.800 (<.001, >999)**	**0.974**	1.966 (1.933, 1.999)	.001	1.138 (1.125, 1.152)	<.001
5-8		<.001 (<.001, 0.014)	0.002	1.020 (1.008, 1.032)	.001	2.577 (2.552, 2.602	<.001
2-4		<.001 (<.001, 0.016)	0.003	0.627 (0.620, 0.634)	.001	1.984 (1.965, 2.003)	<.001
1		0.910 (<.001, >.999)	0.004	0.424 (0.419, 0.429)	<.001	1.063 (1.053, 1.073)	<.001

[1]Basic WASH refers to the WHO/UNICEF JMP WASH ladders [20].
[2]FIES is abbreviated for the Food Insecurity Experience Scale.

Objective 3

The results from **Table 11** of the odds ratios for the three outcome variables (drinking water, hygiene, and sanitation) by province were extracted to create maps. They can be found in **in Figure 2, Figure 3**, and **Figure 4**. As can be seen in the figure legends, the Balochistan province lacks any data as it was used as the reference in our analyses. **Figure 2** highlights the association between drinking water by provinces.

Figure 2: Mapping of the Odds of Basic Drinking Water by Province.

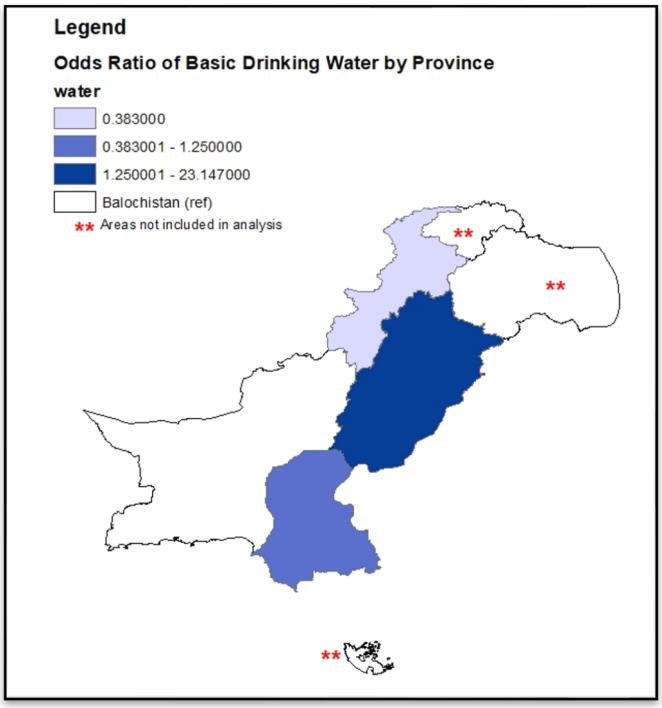


Figure 3 displays the association between hygiene and provinces

Figure 3: Mapping of the Odds of Basic Hygiene by Province.

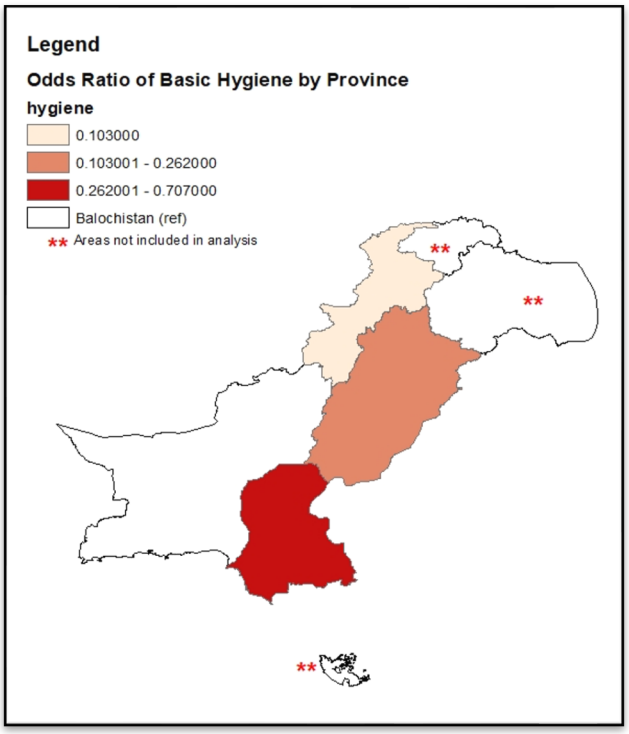
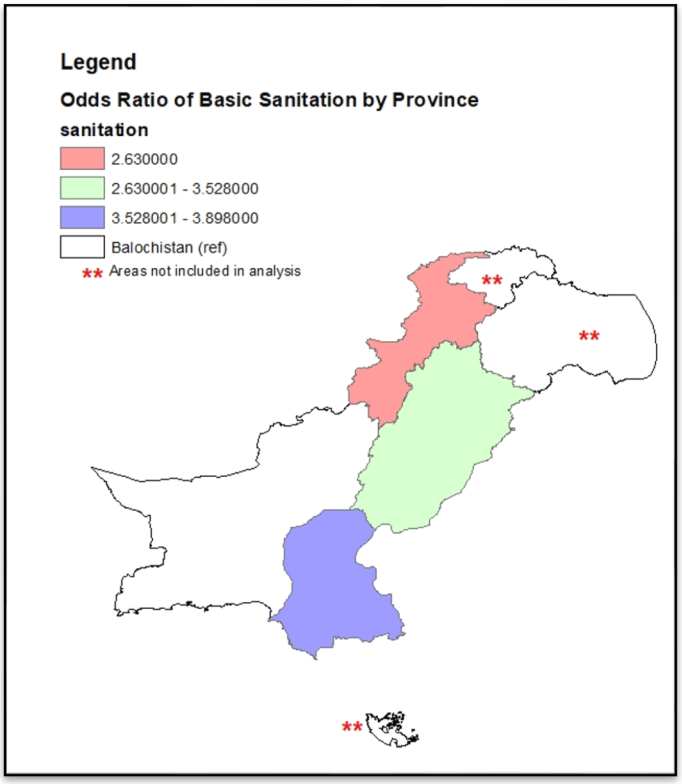


Figure 4 displays the association between sanitation and provinces.

Figure 4: Mapping of the Odds of Basic Sanitation by Province.



5. Discussion

Objective 1

This objective aimed to create and complete a new food composition table based on the food consumption section of the 2018 Pakistan HIES. Food composition data are necessary for several reasons. FCTs provide the energy and nutrient profile for commonly consumed foods for a country of interest. FCTs are used in analyses that estimate the energy and nutrient intakes as well as insufficient consumption of these by the population. Those results ideally influence stakeholders and policymakers to identify population groups that may consistently have insufficient diets and then to develop, adjust or broaden programs to improve nutrient intakes. As mentioned in the methods section, the most recently updated food composition table from the

government of Pakistan is from 2001 [26]. Over time, a food's nutrient composition can change and FCT will need to be updated nationally.

Kapsokefalou et al. reviewed challenges in food composition data that are shared across countries, where the data cannot accurately reflect the country's current food and nutrient composition due to the ever-changing production of new foods [32]. They found that new processed foods, lack of maintenance to national food composition data, and little consistency in creating FCTs caused complications for research to be available and representative of the population. Our objective one results highlight this issue where nutrients, many new foods, and recipes appeared in the 2018 HIES that were not included in the 2001 Pakistan FCT. This supports the strength of our new FCT, where it provides an updated table of Pakistan's food composition that can be used in future projects to represent the foods now.

The FCT created for this paper is meant to contribute to the future work of the non-governmental organization Nutrition International in reducing anemia in Pakistani women of reproductive age (15-49 years) that is due to nutrient deficiencies. Assessing whether and which micronutrients are limited in the blood samples of women from this population will inform Nutrition International of what foods can be targeted as vehicles to increase fortification efforts. This will be done by exploring the potential dietary impact of food fortification from the foods in the FCT with nutrients involved in hemoglobin biology. One of Nutrition International's goals is to strengthen large-scale food fortification (LSFF) in collaboration with the government of Pakistan on a national and provincial scale[33].

When discussing the potential of food fortification, cost-benefits and feasibility are important factors to account for. Food fortification is known to be cost-effective, but often faces constraints. Olson et al. found that low private-public partnerships and limited national

regulations for food fortification in low and middle income counties (LMICs) altered the effectiveness of programs [10]. Our results provide insight on Pakistan's relationship with food fortification.

Pakistan currently has both national and provincial fortification standards, with each staple food sustaining a varying level of regulation. National and provincial fortification standards are those enforced by the government, and voluntary fortification standards follow an existing guideline, but are ultimately in the choice of food producers. Only recently have Balochistan and Sindh improved their fortification efforts to incorporate wheat flour. In November 2021, the government of Sindh passed the Sindh Food Fortification Bill, a mandatory legislation which ensures that all wheat flour-producing mills produce fortified wheat flour [34]. Osendarp et al. reviewed the efficacy, effectiveness, and economics of large-scale food fortification initiatives [35]**.** They found that LLFF programs were significantly associated with increases in hemoglobin, serum ferritin, and in reducing anemia and iron deficiencies. Regarding programming, they found that for any mandatory food fortification plan to function well, consistency and proper monitoring are necessary. Specifically, they found that 80% of governments with current funding for their fortification programs did not have the funding lasting past the next five years, limiting the ability of programs to act long term as LSFF. This may be a factor to Pakistan's slow jump to implementing food fortification mandates.

Objectives 2 & 3

This objective aimed to analyze the association of sociodemographic factors on basic WASH status in Pakistan. We found that the provinces accurately reflect the population distribution in Pakistan, where Punjab is the most populated, followed by Sindh, KP, and Balochistan [36]. In our analyses, we found disparities between urban vs rural WASH practices,

favoring the urban settings for sanitation first, followed by drinking water and hygiene. In 2018, 36.68% of Pakistan's population resided in urban areas, at an annual growth of 2.67% [37]. In the 2017 UNICEF Snapshot of Global and Regional Urban Water, Sanitation, and Hygiene Inequalities, it was found that most countries have higher WASH coverage in their urban areas than in rural areas [38]. Our study results align with UNICEF's findings, but most of Pakistan's population is still considered to live in rural areas. This highlights the lack of WASH equity in the access and quality of drinking water, hygiene, and sanitation.

A similar and recent study by Adil et al. explored the determinants that influence drinking water and sanitation in Punjab, Pakistan [39]. They found that urban areas in Punjab were 1.52 times more likely to have improved sanitation, and 1.06 times more likely to have improved drinking water than when compared to rural areas. They predicted that those urban areas create boundaries in openly defecating, therefore preventing it from happening. Compared to our results, we found that Punjab was 3.52 times more likely to have basic sanitation, and 23.14 times more likely to have improved basic drinking water than our reference province of Balochistan. We also found strong associations with urban areas than rural ones. Their focused solely on Punjab, but as Punjab is the most populous province in Pakistan, their results align with ours.

Our results suggest a linkage between food insecurity and WASH insecurity in Pakistan. Mild, moderate, and severe food insecurity were less likely to be associated with basic WASH in our analysis when compared to food secure homes, meaning poorer food security aligned with poor WASH practices. Severely food insecure households were the less likely to be associated with basic hygiene [OR = 0.35 (0.35, 0.35)] when compared to food secure homes. As was the association of basic sanitation [OR = 0.45 (0.45, 0.45)] and basic drinking water [OR = 0.54

(0.54, 0.55)] when compared to food secure homes. Often, food insecurity and nutritional status are researched together as they provide a comprehensive understanding of food access that can determine optimal nutritional status, but WASH factors are not considered outcomes in such studies [40]. It is less common to see WASH insecurity incorporated with food insecurity and nutrition in studies as they are segmented outcomes, but their interactions contribute to significant health impacts.

Workman et al. conducted a literature review and found that insecurities and deficiencies in sanitation, food, and nutrition are linked and could provide for additional exposure pathways for WASH security [40]. Most significantly, the spatial and temporal variability of programs working to address and resolve these insecurities are the most resourceful protecting populations at risk. This supports our hypothesis where WASH improvement in Pakistani households may be influenced by food insecurity. Although our study did not inspect the challenges of WASH, food insecurity, and nutrient deficiencies in children, children in Pakistan are burdened with nutritional deficiencies. A lack of proper food and illness brought on by WASH-related diarrheal diseases can cause nutrient deficiencies, and be most impactful on children [41]. In a secondary analysis of the 2011 National Nutrition Survey (NNS) of Pakistan, Di Cesare et al. reported that 33% of the country's children were underweight, 15% experienced wasting, and 33% had iron-deficiency anemia [42]. Additionally, the reported that 42% of women of reproductive age in Pakistan are anemic. Our results underscore the relationship of food insecurities and WASH insecurities that could play a starring role in nutrient deficiencies together rather than separately. More research is necessary to properly examine and support this relationship's impacts in Pakistan.

Households often have different constructs in decision-making, depending on who is considered the head of the household. Our results suggest that when the woman herself makes food decisions for the household, there is a greater likelihood of practicing basic drinking water, hygiene, and sanitation than in homes that have a non-woman head of household. The strongest association for food decisions and basic drinking water was in households that make food decisions with the head of the household and women in the household when compared to the head of household, spouse of household, and women. Amugsi et al. conducted a secondary analysis of nationally representative data from Ghana, where they found that when women are involved in making household food purchase decisions, they are likely to have higher dietary diversity in the home[43]. Bisung & Dickin similarly examined household data in Asutfi North, Ghana, where they reported the association of household WASH and decision making [44]. These studies are different than ours because it did not assess who makes food decisions in the household, but rather those who make WASH decisions in the household. They are also from a different country. This is due to there being no studies of food decision making and WASH in Pakistan. The 2018 Pakistan HIES did not survey women regarding household WASH decisions, only on hygiene education [25]. As mentioned in the methods, this is due to the survey consisting of two different questionnaires for males and females. Pakistan may benefit from incorporating more WASH questions into their female questionnaires of household level surveys to better examine the strength in association.

The association between WASH practices and respondents' capabilities was greater for reading literacy than for math problem-solving. The odds ratio between ability to read and basic drinking water, hygiene, and sanitation favored those with literacy than those who cannot read. The ability to solve math problems was less likely to be associated with basic drinking water and

hygiene than with those who cannot solve math. This is interesting as it was expected that those with greater literacy in reading and mathematics would be more likely to practice WASH in their homes. When compared to the hygiene education, those who received hygiene education in the past 12 months were less likely to have basic drinking water [OR = 0.22 (0.22, 0.22)] than those who did not receive education, but there was a greater likelihood of having improved basic hygiene and sanitation. Our results supported our expectation that, as education is hygiene-specific, it would be associated with greater odds than without the hygiene education. The lesser odds of improved basic drinking water could be due to many things, and more involved data would be required to adequately analyze the possible reasons behind the lower odds.

Strengths

We acknowledge several strengths in this study, and have reported them based on their objectives, respectively.

Objective 1

The creation of the FCT, using the HIES food consumption data, is a table ready to be used for analyses. The reproducibility of this FCT is an important factor as it can be used to determine the future of fortification initiatives in Pakistan. The Nutrition International Pakistan team provided insight on certain foods and recipes, providing the decisions we made in the table to be appropriate in the context of the country.

Objective 2 & 3

One of our strengths in this study is the high-quality data collection and large sample size (n=158,911) of the 2018 Pakistan HIES, enabled high statistical power for our analyses with covariates of interest to basic WASH practices. To our knowledge, there have been little studies encompassing the association of our sociodemographic covariates to WASH practices in

Pakistan on a national scale. We hope that this can encourage more research of this topic and the intersections of our objectives one and two in Pakistan.

Limitations

Like the strengths section, we will acknowledge several limitations in this study based on their objectives, respectively.

Objective 1

The creation of the FCT faced many challenges, as the required nutrient values were not easily accessible through existing documents and Pakistan's FCT. As stated previously, the most recent FCT from Pakistan was published in 2001, making it over 20 years old. This is normally not an issue with FCTs since food composition remains the same, but it provided an outdated list of food and lacked the nutrients of interest to this project. Additionally, recipe calculations of both grouped and non-grouped foods may be over- or under-estimated as we did not account for food preparation, cooking, and referencing food with similar profiles rather than the exact food. Sources used for nutrient composition data may not have been representative of the foods in Pakistan, as they were from Bangladesh, India, and the United States. Overall, these three issues extended the time it took to complete the table and limited further analysis with it in this specific paper. For future analyses with this FCT, it should be noted that utilizing a household-level economic expenditure survey as a dietary data source for individuals has its own limitations, specifically as it is acting as a proxy for dietary data [45]

Objectives 2 & 3

The HIES data required extensive data cleaning and organization to ensure that it was prepared for analysis, Additionally, many variables that could have been covariates were left out due to time constraints in the project, creating an omitted variable bias. The data had many

missing values, which may have contributed to bias in the results. The cross-sectional study design limited the ability make causal inference. Finally, the HIES questionnaires relied on participants recalling food insecurity, hygiene education, and WASH topics. This recall bias may account for some over- or -underestimation of the reality of the food security, food hygiene and WASH situations in Pakistan.

In objective 3, there was a lack of publicly available maps of Pakistan, organized by province, to be used. Balochistan was also left out of mapping and our analyses in objective two. The province may have had associations that this paper could not investigate due to time constraints.

6. Conclusion and Recommendations

In the context of previous studies, or lack thereof, the intersection of food fortification, food insecurities, and WASH practices may be useful in future studies as predictors of one another. The completion of the Pakistan 2018 HIES FCT will provide a newer database to recommend for Pakistan's food consumption. The women of reproductive age (WRA) in Pakistan face high prevalence of anemia. Sound interventions supported by predictive analyses are needed to understand where and what type of fortification programs are needed. We recommend that future predictive analyses for food fortification in Pakistan utilize the FCT made here with the 2018 Pakistan HIES data. As a newer FCT with survey data accompanying it, analyses may provide the next steps to supplementing the population with micronutrients.

The WASH practices in Pakistan, albeit better now than two decades ago, continue to burden populations [46]. Our analysis found that found that Pakistan's basic status of drinking water, hygiene, and sanitation, as defined by the WHO and UNICEF JMP, is positively associated with living in urban regions, residing in the Punjab province, and with those with the

ability to read and solve math. The FIES' associations grew weaker and negative as the severity increased, showing a worsening of WASH practices as the severity of food insecurity increases.

The findings from this study provide insight to food fortification, food security, and WASH practices. Underlying in the research are the important programming implications for nutritional and WASH interventions in Pakistan. While programs focus on fortification, food security, and WASH separately, the diversity in focusing on all three can highlight associations and provide the evidence necessary to implement programming for the three issues together.

7. Appendices

Appendix 1: An Infographic of Pakistan Fortification Timeline and Datasets for Nutritional Analysis


Pakistan Fortification Timeline and Datasets
Dietary Dataset
Hb Dataset
Food Composition Table
Fortification Dates
1965
West Pakistan Pure Food Rules 1965 and PSQCA Standard for Edible Oils/Ghee
• oils deemed as the only mandatory fortified food nationally
2001
Allama Iqbal Open University (AIOU) Pakistan Food Composition Table/ UNICEF Islamabad, Gov't. Pakistan, and NWFP Agricultural University Peshawar
• Last nationally updated Food Fortification Table for Pakistan
• Kcal values
• Not available in word or excel file, only a scan of a printed document
2008
Voluntary Salt Fortification in Pakistan
• Nationally voluntary, but is mandatory in some states in the country
• Fortified with calcium iodate, potassium iodtae, and potassium iodide
2012-13
USAID Demographic and Health Services (DHS) Pakistan Standard DHS
• Data on fertility, family planning, childhood mortality, maternal and child health, women's and children's nutritional status, micronutrients, women's empowerment, domestic violence, and knowledge of HIV/AIDS
2015-16
HIICS (Household Integrated Income and Consumption Survey) and PSLM (Pakistan Social and Living Standards Measuerment)
• Provides social and economic indicators of living.
• Data available for diet by household consumption
2016
Mineral Content of Pakistani foods: An update of food composition database of Pakistan through indirect methods
• Updates food composition database from existing literature
• Revised 8 nutrients for 37 foods
• Not accurate for fibre and carbs, but minteral data is strong
2017-18
USAID DHS Pakistan Standard Survey
• Newer that 2012-13
• Provides data on fertility, family planning, childhood mortality, maternal and child health, women's and children's nutritional status, micronutrients, women's empowerment, domestic violence, and knowledge of HIV/AIDS
2018-19
Pakistan National Nutrition Survey
• Surveyed to generate nutrition information and micronutrient deficiencies in women of reproductive age (WRA) and children
• Data available for Hb of women of childbearing age, and other groups
2018-19
HIES (Household Integrated Economic Survey)
• Most recent HIES in country
• Very similar to HIICS/PSLM
• Data available for diet by household consumption
2019
Global Nutrition Report
• Data at global, regional, and nation levels
• includes Hb data for women of childbearing age and estimated diet data
• Calcium and sodium data
• most recent data from 2019

Appendix 2: Pakistan Food Composition Table for 2018-19 Pakistan Household Integrated Economic Survey

Introduction

Pakistan Food Composition Table for 2018-19 Pakistan Household Integrated Economic Survey	
Objective:	This food composition table (FCT) was created with the dietary foods surveyed in the Pakistan Household Integrated Economic Survey (HIES) 2018-19. Its intention was to be used in a dietary analysis of the daily intake of micronutrients related to hemoglobin production.
Worksheet Directory:	
Nutrients:	**This sheet provides the list of nutrients included in this food composition table, along with additional details about which form of the nutrient was used.**
How to cite:	This sheet provides the citation of this FCT and how to cite it.
Source Codes:	This sheet provides the nutrient value sources and their respective citations. The Pakistan FCT [1] was missing some micronutrient values and foods. These additional sources [2]-[6] were used to fill in these missing values. Some foods in the FCT and numbered worksheets may have more than one source, meaning that the grouped food nutrient values came from different sources.
Calculated Foods:	This sheet provides a list of all foods from the HIES 2018 that required calculations. One reason for this is because some foods were grouped together. The nutrient values of grouped foods were calculated separately, and then averaged together.
FCT:	This sheet contains the FCT matched to the food codes in the 2018-19 Pakistan HIES. The first row provides the titles of each column (Classification, HIES 2018 food code, HIES 2018 food title, foods fortified/unfortified in Pakistan's current national fortification mandates and as directed by Pakistan office of Nutrition International, and the 12 micronutrients of interest and energy (kcal)). The column titled, "Fortification" refers to the foods in the FCT that include either wheat flour or oil, meaning that they are of interest to this project's fortification scenarios of wheat flour and oil. This classification was determined by the Nutrition International Pakistan office, who reviewed all the foods and identified those of interest. The HIES 2018-19 food data was organized into sections to organize and define the types of foods they survey was asking for. These sections (meat, fish, fruit, etc.) remain in this FCT for the same purpose. For each food, there are three rows that are organized by food, source, and code. The food row provides the food code, food title, fortified/unfortified classification, and the values of the 12 micronutrients and energy (kcal). The source row provides the source of the values and are listed as symbols [1]-[6] in the Source Codes sheet. The code row provides the codes relative to the sources they were found in. In this FCT, there is either an exact code to the source, or a calculation code (this is written as [code number (calc)]). The calculation or recipe information can be found under a sheet of the same code.

Worksheets with a number:	65 foods in the HIES dietary data were made up of grouped foods, or of foods that required calculations to achieve accurate nutrient values. All worksheets after the FCT sheet include the calculations for those foods. For example, sheet 11408 (Curd/Yogurt (Loose/packed)) required two different foods to be valued nutritionally, curd and yogurt. For the most accurate calculation, nutrient values curd and yogurt were found separately (from specified source codes) per 100g each, and then averaged together to create values representative of the grouped food. Other foods required recipe calculations when sources lacked information on the whole food. In sheet 11402 (Lassi made with yogurt, Olala, umang, milo, etc.) the ingredients to make 100g of lassi were collected and nutrient values added to create the food itself. Some foods are in both categories (averaging grouped foods and recipe calculations). For these, they will appear in both groups.

Nutrients

Definitions of nutrients		
Nutrient	**Unit**	**Details**
Energy	kcal	
Iron	mg	
Folate DFE	mcg	Total dietary folate equivalents (DFE)
Vitamin B12	mcg	
Vitamin E	mg	Alpha-tocopherol
Vitamin C	mg	Total ascorbic acid
Zinc	mg	
Riboflavin	mg	
Vitamin A RAE	mcg	Retiniol activity equivalents (RAE)
Thiamin	mg	
Copper	mg	
Vitamin D	mcg	D2 + D3
Vitamin B6	mg	

How to cite

Shirajan S. *Exploring Food Fortification and An Analysis of the Sociodemographic Impact on Basic WASH Practices: Evidence from the 2018 Pakistan Household Integrated Economic Survey*. Master of Public Health Thesis. Emory University. 2022.

Source Codes

Source Number	Source	Citation
[1]	FCT Pakistan, Department of Agricultural Chemistry NWFP Agricultural University Peshawar, UNICEF Islamabad, Ministry of Planning and Development Government of Pakistan Islamabad, "Food Composition Table for Pakistan", 2001.	AIOU, *Food composition table for Pakistan*. 2001, Allama Iqbal Open University Islamabad.
[2]	FAO Food Balances	FAOSTAT. Food Balances (2010-). 2020. https://www.fao.org/faostat/en/#data/FBS
[3]	USDA FoodData Central	USDA, FoodData Central. 2019. https://fdc.nal.usda.gov/index.html
[4]	India Food Composition Table	Longvah, T., et al., Indian food Composition Tables. 2017. https://www.researchgate.net/publication/313226719_Indian_food_Composition_Tables
[5]	Bangladesh Food Composition Table	Nazma Shaheen, A.T.M.R., Mohiduzzaman, Cadi Parvin Banu, Latiful Baru, Avonti Basak Tukun, Lalita Bhattacharjee, Barbara Stadlmayr, Food Composition Table for Bangladesh. 2013, University of Dhaka, Bangladesh: Institute of Nutrition and Food Science Centre for Advanced Research. 227. http://fpmu.gov.bd/agridrupal/content/food-composition-database-bangladesh-special-reference-selected-ethnic-foods
[6]	Description Measure Vitamin B-12 (µg) Per Measure	Description Measure Vitamin B-12 (µg) Per Measure. (2018). https://www.nal.usda.gov/sites/www.nal.usda.gov/files/vitamin_b12.pdf

Recipe Sources

Food Code	Food	Source
11402	Lassi made with yogurt, Olala, umang, milo, etc.	https://www.allrecipes.com/recipe/20435/indian-lassi/
11407	Cheese	https://www.nal.usda.gov/sites/www.nal.usda.gov/files/vitamin_b12.pdf
111104	Nihari/ Payee, Halwa Poori	https://www.teaforturmeric.com/easy-instant-pot-nihari-pakistani-beef-stew/
111110	Pizza, Cake, Burger, Sandwiches, Shwarma/Roll Paratha Chips/Fries, etc.	https://palatablepastime.com/2020/05/19/pakistani-chapli-burger/
111111	Soups/ Yakni, Chaat (Channa/Dahi Baray/Fruit Chaat), Salads(Vegetable/Fruit) etc.	https://www.indianhealthyrecipes.com/aloo-chaat-recipe/#Recipe_card
11116	Biscuits (Sweet & Saltish)	https://en.petitchef.com/recipes/cumin-biscuits-a-classic-pakistani-sweet-and-salty-cookie-fid-1360493
11117	Bread, Bun, Sheermal	https://zestysouthindiankitchen.com/sheermal-saffron-flat-bread-with-touch-of-cardamom/
11118	Cake, Bakar khani	https://www.masala.tv/kashmiri-bakarkhani-by-rida-aftab-at-tarka/
11120	Other baked or fried products (Pakoras, Samosa, Qatlama, popcorn etc).	https://cookpad.com/us/recipes/13358830-lahori-katlama

Calculated Foods

Grouped foods code	Grouped foods name	Recipe foods code	Recipe food name
11408	Curd / Yogurt (Loose/packed)	11402	Lassi made with yogurt, Olala, umang, milo, etc.
11410	Other items like Femi, Kheer, Condensed milk, Cream, Kulfi, etc.	11407	Cheese
11204	Other poultry birds (ducks, quail, turkey etc.)	111104	Nihari/ Payee, Halwa Poori
11302	Prawns, Shrimps or Crabs (fresh, frozen, canned)	111110	Pizza, Cake, Burger, Sandwiches, Shwarma/Roll Paratha Chips/Fries, etc.
11602	Malta/Mosami/Kinno	111111	Soups/ Yakni, Chaat (Channa/Dahi Baray/Fruit Chaat), Salads(Vegetable/Fruit) etc.
11608	Water Melon/ Melon (Turbooz/ Kharbooza/ Garma/ Sarda)	11116	Biscuits (Sweet & Saltish)
11609	Alou Bukhara (Plum), Apricot (Khobani), Guava	11117	Bread, Bun, Sheermal
11612	Almond, walnut, pistachio, kaju	11118	Cake , Bakar khani
11613	Other dry fruits (Dry Dates, Peanut, Aniseed, Cashew, Coconut, Sesame seeds, etc.)	11120	Other baked or fried products (Pakoras, Samosa, Qatlama, popcorn etc).
11704	Cabbage, Cauliflower		
11705	Bitter Gourd, Lady Finger, Brinjal, Cucumber		
11706	Tinda, Pumpkin, Bottle Gourd		
11707	Turnip, Raddish, Carrot		
11708	Peas, Moongra		
11709	Turai, Arvi, Green pepper		
11713	Others (Spinach, Saag, Methi, Chillies Green, Dhania, etc.)		
11904	Coriander Seeds, Turmeric Powder, Curry Powder		
11905	Ginger (powder/Paste/Whole)		
11907	Cumin Seeds, Pepper Black, Cloves		

Grouped foods code	Grouped foods name	Recipe foods code	Recipe food name
11908	Other spices (saunf, cinnamon, etc.)		
11802	Gur, Shaker		
11804	Toffee/Chocolate		
11805	Barfi, Jaleebi, Halwa & other Sweetmeats		
11806	Glucose, Energile, Tang, Lemon Pani, etc.		
11808	Custard Powder/ Jelly powder		
11809	Jam/ Marmalade/ Jellies		
11202	Squash/ Sharbat		
11203	Fruit Juice Fresh/ sugarcane juice		
111101	Cooked Mutton, Beef, Chicken etc.		
111102	Cooked Dal(mong, Masur, Channa etc.), Chick pea, Black Chick Pea		
111106	Tea Prepared, Kashmiri Tea/Coffee etc.		
111107	Milk Shakes, Fresh Juices, Ice cream shakes, ice cream etc.		
111110	Pizza, Cake, Burger, Sandwiches, Shwarma/Roll Paratha Chips/Fries, etc.		
111111	Soups/ Yakni, Chaat (Channa/Dahi Baray/Fruit Chaat), Salads(Vegetable/Fruit) etc.		
111112	Tikka/boti/ Rost/Sajji/Fish fried, Kabab(Seikh/Shami/Chapli)		
111113	Bread , Paratha,Nan,Roti etc.		
11103	Rice and rice flour		
11104	Maize, Barley, Jawar And Millet (Whole& Flour)		
11105	Maida, Suji, Besan		
11107	Other Cereals products (cornflakes, Noodles, Macronis, Spaghetti etc.)		

Grouped foods code	Grouped foods name	Recipe foods code	Recipe food name
11108	Wheat, Rice , Jawar And Millet (Grinding ,Husking ,Cleaning) etc		
11109	Gram whole Black/White		
11114	Beans (lobia red and white)		
11115	Other Pulses (Arhar, chick / pigeon /garden peas, sunflower etc)		
11116	Biscuits (Sweet & Saltish)		
11117	Bread, Bun, Sheermal		
11118	Cake , Bakar khani		
11119	Pasteries, Paties etc		
11120	Other baked or fried products (Pakoras, Samosa, Qatlama, popcorn etc).		
11501	Butter products (Butter oil/Desi Ghee)		
11502	Butter /Margarine (Loose/ packed)		
11056	Other Oils and Fats (animal fats etc.)		
12103	Other (Milo/Ovaltine , Horlicks ,complan e.tc)		
11909	Tomato Ketchup/Mayonnaise		
11910	Pickles (Loose/Packed) , Chatni		
11912	Other (Baking powder, yeast etc.)		

Food Composition Table

Classification	HIES Food Code	Food title	Fortification	Energy (kCAL)	Iron (mg)	Folate DFE (mcg)	Vitamin B12 (mcg)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (mcg)	Vitamin B6 (mg)
Section	11400	**MILK, CHEESE, AND EGGS**														
Food	11401	Milk, fresh	U	66	0.3	2.01	0.45	0.07	1	0.2	0.16	44	0.04	0.03	0.1	0.036
Source				[1]	[1]	[4]	[3]	[3]	[1]	[1]	[1]	[1]	[1]	[4]	[3]	[3]
Code				H-134	H-134	L002	1211	1211	H-134	H-134	H-134	H-134	H-134	L002	1211	1211
Food	11402	Lassi made with yogurt, olala, umang, milo, etc.	U	76.78	0.40	6.87	0.36	0.02	0.49	0.59	0.19	29.43	0.03	0.01	0.01	0.03
Source				[1], [3]	[1], [3]	[3]	[3]	[3]	[1], [3]	[1], [3]	[1], [3]	[1], [3]	[1], [3]	[3]	[3]	[3]

Classification	HIES Food Code	Food title	Fortification	Energy (kCAL)	Iron (mg)	Folate DFE (mcg)	Vitamin B12 (mcg)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (mcg)	Vitamin B6 (mg)
Code				11402 (calc)	11402 (calc)	11402 (calc)	11402 (calc)	11402 (calc)	11402 (calc)	11402 (calc)	11402 (calc)	11402 (calc)	11402 (calc)	11402 (calc)	11402 (calc)	11402 (calc)
Food	11403	Milk tetra pack	U	66	0.3	2.01	0.45	0.07	1	0.2	0.16	44	0.04	0.03	0.1	0.036
Source				[1]	[1]	[4]	[3]	[3]	[1]	[1]	[1]	[1]	[1]	[4]	[3]	[3]
Code				H-134	H-134	L002	1211	1211	H-134	H-134	H-134	H-134	H-134	L002	1211	1211
Food	11404	Tea whitner (Tea Max, tarang, every day, etc.)	U	529	0.26	0	0	1.26	0	0.07	0	0	0	0.018	0	0
Source				[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
Code				12210400	12210400	12210400	12210400	12210400	12210400	12210400	12210400	12210400	12210400	12210400	12210400	12210400

Classification	HIES Food Code	Food title	Fortification	Energy (kCAL)	Iron (mg)	Folate DFE (mcg)	Vitamin B12 (mcg)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (mcg)	Vitamin B6 (mg)
Food	11405	Dry milk powder for children (formula milk)	F	510	9.2	81	1.54	6.9	62	5.1	0.72	458	0.41	0.38	7.5	0.31
Source				[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
Code				33877	33877	33877	33877	3805	33877	33877	33877	33877	33877	33877	33877	33877
Food	11406	Milk powder	F	497	0.7	38	3	7.07	30	3.71	1.37	238	0.31	0.06	0.005	1
Source				[5]	[5]	[5]	[3]	[3]	[3]	[5]	[5]	[5]	[5]	[5]	[5]	[3]
Code				12_0006	12_0006	12_0006	95202000	95202000	95202000	12_0006	12_0006	12_0006	12_0006	12_0006	12_0006	95202000

Classification	HIES Food Code	Food title	Fortification	Energy (kCAL)	Iron (mg)	Folate DFE (mcg)	Vitamin B12 (mcg)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (mcg)	Vitamin B6 (mg)
Food	11407	Cheese	U	85	0.13	10	0.42	0.08	0	0.61	0.234	69	0.02	0.03	0	0.05
Source				[3]	[3]	[3]	[3]	[3]	[1]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
Code				1015	1015	1015	1015	1015	H-131	1015	1015	1015	1015	1015	1953592	1015
Food	11408	Curd/yogurt (loose/packed)	U	71.50	0.28	8.00	0.42	0.06	0.00	0.54	0.18	16.00	0.03	0.06	0.1	0.032
Source				[1],[3]	[1],[3]	[1],[3]	[3]	[3]	[3]	[1],[3]	[1],[3]	[1],[3]	[1],[3]	[3]	[3]	[3]
Code				11408 (calc)	11408 (calc)	11408 (calc)	11408 (calc)	11408 (calc)	11408 (calc)	11408 (calc)	11408 (calc)	11408 (calc)	11408 (calc)	11408 (calc)	11408 (calc)	11408 (calc)
Food	11409	Eggs	U	155	2.7	4	0.09	0	0	1.1	0.29	191	0.1	0.02	0	0.005

Classification	HIES Food Code	Food title	Fortification	Energy (kCAL)	Iron (mg)	Folate DFE (mcg)	Vitamin B12 (mcg)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (mcg)	Vitamin B6 (mg)
Source				[1]	[1]	[3]	[3]	[3]	[1]	[1]	[1]	[1]	[1]	[3]	[3]	[3]
Code				K-166	K-166	1124	1124	1124	K-166	K-166	K-166	K-166	K-166	1124	1124	1124
Food	11410	Other items like femi, kheer, condensed milk, cream, kulfi, etc.	U	238.48	0.30	7.29	0.36	0.26	1.16	0.63	0.25	99.77	0.07	0.03	0.23	0.05
Source				[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
Code				11410 (calc)	11410 (calc)	11410 (calc)	11410 (calc)	11410 (calc)	11410 (calc)	11410 (calc)	11410 (calc)	11410 (calc)	11410 (calc)	11410 (calc)	11410 (calc)	11410 (calc)
Section	11200	**MEAT**														

Classification	HIES Food Code	Food title	Fortification	Energy (kCAL)	Iron (mg)	Folate DFE (mcg)	Vitamin B12 (mcg)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (mcg)	Vitamin B6 (mg)
Food	11201	Beef (fresh/frozen)	U	244	2.4	7	2.69	0.35	0	1	0.23	0	0.06	0.07	0	0.355
Source				[1]	[1]	[3]	[3]	[3]	[1]	[1]	[1]	[1]	[1]	[3]	[3]	[3]
Code				I-141	I-141	13002	13002	13047	I-141	I-141	I-141	I-141	I-141	13002	23359	13047
Food	11202	Mutton (fresh/frozen)	U	234	4.76	0	4.44	0.8	0	5.93	0.3	9	0.06	0.062	0.4	0.337
Source				[3]	[3]	[3]	[3]	[3]	[5]	[3]	[3]	[5]	[3]	[3]	[5]	[3]
Code				35141	35141	35141	35141	35141	10_0012	35141	35141	10_0012	35141	35141	10_0002	35141
Food	11203	Chicken meat (fresh/frozen)	U	187	1.9	7	0.38	0.24	0	1.5	0.16	16	0.08	0.09	0.2	0.512

Classification	HIES Food Code	Food title	Fortification	Energy (kCAL)	Iron (mg)	Folate DFE (mcg)	Vitamin B12 (mcg)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (mcg)	Vitamin B6 (mg)
Source				[1]	[1]	[3]	[3]	[3]	[1]	[1]	[1]	[1]	[1]	[3]	[3]	[3]
Code				I-146	I-146	5125	5125	5125	I-146	I-146	I-146	I-146	I-146	5125	24198720	5332
Food	11204	Other poultry birds (ducks, quail, turkey, etc.)	U	220.67	2.14	12.00	0.36	0.50	2.03	2.03	0.22	38.00	0.13	0.30	0.20	0.58
Source				[1], [3]	[1], [3]	[3]	[3]	[3]	[1], [3]	[1], [3]	[1], [3]	[1], [3]	[1], [3]	[3]	[3]	[3]
Code				11204 (calc)	11204 (calc)	11204 (calc)	11204 (calc)	11204 (calc)	11204 (calc)	11204 (calc)	11204 (calc)	11204 (calc)	11204 (calc)	11204 (calc)	11204 (calc)	11204 (calc)
Section	11300	**FISH**														

Classification	HIES Food Code	Food title	Fortification	Energy (kCAL)	Iron (mg)	Folate DFE (mcg)	Vitamin B12 (mcg)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (mcg)	Vitamin B6 (mg)
Food	11301	Fish (fresh, frozen, dried)	U	105	1.78	8	15.6	0.5	1.6	0.56	0.476	218	0.1	0.026	5.6	0.442
Source				[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
Code				15049	15049	15049	15049	26100100	15049	15049	15049	15049	15049	15049	26100100	15049
Food	11302	Prawns, shrimps, or crabs (fresh, frozen, canned)	U	95.33	1.47	36.67	1.68	1.59	0.33	2.00	0.32	10.33	0.32	0.40	0.10	0.17
Source				[1]	[1]	[3]	[3]	[3]	[1]	[1]	[1]	[1]	[1]	[3]	[3]	[3]
Code				11302 (calc)	11302 (calc)	11302 (calc)	11302 (calc)	11302 (calc)	11302 (calc)	11302 (calc)	11302 (calc)	11302 (calc)	11302 (calc)	11302 (calc)	11302 (calc)	11302 (calc)
Section	11600	**FRUITS**														

Classification	HIES Food Code	Food title	Fortification	Energy (kCAL)	Iron (mg)	Folate DFE (mcg)	Vitamin B12 (mcg)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (mcg)	Vitamin B6 (mg)
Food	11601	Bananas	U	96	0.7	20	0	0.1	10	0.2	0.05	261	0.03	0.08	0	0.367
Source				[1]	[1]	[3]	[3]	[3]	[1]	[1]	[1]	[1]	[1]	[3]	[3]	[3]
Code				F-85	F-85	9040	9040	9040	F-85	F-85	F-85	F-85	F-85	9040	9040	9040
Food	11602	Malta/mosami/kinno	U	39.00	0.53	21.00	0.00	0.18	32.37	0.13	0.03	40.33	0.24	0.05	0.00	0.06
Source				[1],[3]	[1],[3]	[3]	[1],[3]	[3]	[1],[3]	[1],[3]	[1],[3]	[1],[3]	[1],[3]	[3]	[3]	[3]
Code				11602 (calc)	11602 (calc)	11602 (calc)	11602 (calc)	11602 (calc)	11602 (calc)	11602 (calc)	11602 (calc)	11602 (calc)	11602 (calc)	11602 (calc)	11602 (calc)	11602 (calc)
Food	11603	Apple	U	57	0.6	3	0	0.18	8	0.1	0.03	5	0.03	0.03	0	0.051

Classification	HIES Food Code	Food title	Fortification	Energy (kCAL)	Iron (mg)	Folate DFE (mcg)	Vitamin B12 (mcg)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (mcg)	Vitamin B6 (mg)
Source				[1]	[1]	[3]	[3]	[3]	[1]	[1]	[1]	[1]	[1]	[3]	[3]	[3]
Code				F-83	F-83	9501	9501	9501	F-83	F-83	F-83	F-83	F-83	9501	6310 1000	9501
Food	11604	Peach (aroo)	U	47	1	4	0	0.73	9	0.1	0.04	54	0.02	0.07	0	0.025
Source				[1]	[1]	[3]	[3]	[3]	[1]	[1]	[1]	[1]	[1]	[3]	[3]	[3]
Code				F-106	F-106	9236	9236	9236	F-106	F-106	F-106	F-106	F-106	9236	9236	9236
Food	11605	Grapes	U	74	0.9	2	0	0.19	6	0.1	0.03	7	0.1	0.13	0	0.086
Source				[1]	[1]	[3]	[3]	[3]	[1]	[1]	[1]	[1]	[1]	[3]	[3]	[3]

Classification	HIES Food Code	Food title	Fortification	Energy (kCAL)	Iron (mg)	Folate DFE (mcg)	Vitamin B12 (mcg)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (mcg)	Vitamin B6 (mg)
Code				F-90	F-90	9132	9132	9132	F-90	F-90	F-90	F-90	F-90	9132	9132	9132
Food	11606	Mango	U	64	0.5	43	0	0.9	37	0.1	0.05	389	0.06	0.11	0	0.119
Source				[1]	[1]	[3]	[3]	[3]	[1]	[1]	[1]	[1]	[1]	[3]	[3]	[3]
Code				F-99	F-99	9176	9176	9176	F-99	F-99	F-99	F-99	F-99	9176	9176	9176
Food	11607	Dates	U	131	0.8	15	0	0.05	12	0.3	0.05	5	0.07	0.36	0	0.249
Source				[1]	[1]	[3]	[3]	[3]	[1]	[1]	[1]	[1]	[1]	[3]	[3]	[3]
Code				F-88	F-88	9421	6211 0100	6211 0100	F-88	F-88	F-88	F-88	F-88	9421	9421	9421

Classification	HIES Food Code	Food title	Fortification	Energy (kCAL)	Iron (mg)	Folate DFE (mcg)	Vitamin B12 (mcg)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (mcg)	Vitamin B6 (mg)
Food	11608	Watermelon/ melon (turbooz/ kharbooza/ garma/ sarda)	U	32.50	0.21	15.75	0.00	0.04	22.68	0.12	0.02	135.25	0.04	0.03	0.00	0.07
Source				[1], [3]	[1], [3]	[3]	[3]	[3]	[1], [3]	[1], [3]	[1], [3]	[1], [3]	[1], [3]	[1], [3]	[3]	[3]
Code				11608 (calc)	11608 (calc)	11608 (calc)	11608 (calc)	11608 (calc)	11608 (calc)	11608 (calc)	11608 (calc)	11608 (calc)	11608 (calc)	11608 (calc)	11608 (calc)	11608 (calc)
Food	11609	Alou bukhara (plum), apricot (khobani), guava	U	59.00	0.80	0.00	0.00	0.58	79.00	0.20	0.05	124.00	0.04	0.12	0.00	0.06
Source				[1]	[1]	[3]	[3]	[3]	[1]	[1]	[1]	[1]	[1]	[3]	[3]	[3]
Code				11609 (calc)	11609 (calc)	11609 (calc)	11609 (calc)	11609 (calc)	11609 (calc)	11609 (calc)	11609 (calc)	11609 (calc)	11609 (calc)	11609 (calc)	11609 (calc)	11609 (calc)

Classification	HIES Food Code	Food title	Fortification	Energy (kCAL)	Iron (mg)	Folate DFE (mcg)	Vitamin B12 (mcg)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (mcg)	Vitamin B6 (mg)
Food	11610	Other fresh fruits (pomegranate, strawberry, papaya, etc.)	U	48.00	0.70	0.00	0.00	0.40	39.33	0.11	0.04	187.00	0.04	0.08	0.00	0.05
Source				[1]	[1]	[3]	[3]	[3]	[1]	[1]	[1]	[1]	[1]	[3]	[3]	[3]
Code				11610 (calc)	11610 (calc)	11610 (calc)	11610 (calc)	11610 (calc)	11610 (calc)	11610 (calc)	11610 (calc)	11610 (calc)	11610 (calc)	11610 (calc)	11610 (calc)	11610 (calc)
Food	11611	Canned fruits	U	48	0.09	4	0	0.02	0.4	0.01	0.02	0	0.02	0.01	0	0.011
Source				[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
Code				14264	14264	14264	14264	14264	14264	14264	14264	14264	14264	14264	14264	14264

Classification	HIES Food Code	Food title	Fortification	Energy (kCAL)	Iron (mg)	Folate DFE (mcg)	Vitamin B12 (mcg)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (mcg)	Vitamin B6 (mg)
Section	11600	**DRY FRUITS**														
Food	11612	Almond, walnut, pistachio, kaju	U	629.28	3.71	66.12	0.00	15.04	1.63	3.26	0.38	3.21	0.61	1.14	0.00	0.80
Source				[1], [2]	[1], [2]	[2], [3]	[2],[3]	[3]	[1], [2]	[1], [2]	[1], [2]	[1], [2]	[1], [2]	[2],[3]	[3]	[3]
Code				11612 (calc)	11612 (calc)	11612 (calc)	11612 (calc)	11612 (calc)	11612 (calc)	11612 (calc)	11612 (calc)	11612 (calc)	11612 (calc)	11612 (calc)	11612 (calc)	11612 (calc)
Food	11613	Other dry fruits (dry dates, peanut, aniseed, cashew, coconut, sesame seeds, etc.)	U	436.50	5.20	66.67	0.00	1.99	4.50	3.63	0.16	5.67	0.37	1.56	0.00	0.45
Source				[1]	[1]	[3]	[3]	[3]	[1], [3]	[1]	[1]	[1]	[1]	[3]	[1]	[1]

Classification	HIES Food Code	Food title	Fortification	Energy (kCAL)	Iron (mg)	Folate DFE (mcg)	Vitamin B12 (mcg)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (mcg)	Vitamin B6 (mg)
Code				11613 (calc)	11613 (calc)	11613 (calc)	11613 (calc)	11613 (calc)	11613 (calc)	11613 (calc)	11613 (calc)	11613 (calc)	11613 (calc)	11613 (calc)	11613 (calc)	11613 (calc)
Section	11700	**VEGETABLES (FRESH/CHILLED/FROZEN/DRIED)**														
Food	11701	Potato	U	83	0.8	17	0	0.52	15	0.4	0.04	0	0.1	0.42	0	0.239
Source				[1]	[1]	[3]	[3]	[3]	[1]	[1]	[1]	[1]	[1]	[3]	[3]	[3]
Code				D-71	D-71	11362	11362	71000100	D-71	D-71	D-71	D-71	D-71	11362	11362	11362
Food	11702	Onion	U	44	0.7	19	0	0.02	10	0.2	0.03	0	0.05	0.04	0	0.12
Source				[1]	[1]	[3]	[3]	[3]	[1]	[1]	[1]	[1]	[1]	[3]	[3]	[3]

Classification	HIES Food Code	Food title	Fortification	Energy (kCAL)	Iron (mg)	Folate DFE (mcg)	Vitamin B12 (mcg)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (mcg)	Vitamin B6 (mg)
Code				D-70	D-70	11282	11282	11282	D-70	D-70	D-70	D-70	D-70	11282	11282	11282
Food	11703	Tomato	U	21	0.7	15	0	0.54	23	0.1	0.04	62	0.07	0.06	0	0.08
Source				[1]	[1]	[3]	[3]	[3]	[1]	[1]	[1]	[1]	[1]	[3]	[3]	[3]
Code				D-63	D-63	11529	11529	11529	D-63	D-63	D-63	D-63	D-63	11529	11529	11529
Food	11704	Cabbage, cauliflower	U	25.00	0.65	50.00	0.00	0.12	52.50	0.25	0.06	7.50	0.07	0.03	0.00	0.15
Source				[1]	[1]	[3]	[3]	[3]	[1]	[1]	[1]	[1]	[1]	[3]	[3]	[3]
Code				11704 (calc)	11704 (calc)	11704 (calc)	11704 (calc)	11704 (calc)	11704 (calc)	11704 (calc)	11704 (calc)	11704 (calc)	11704 (calc)	11704 (calc)	11704 (calc)	11704 (calc)

Classification	HIES Food Code	Food title	Fortification	Energy (kCAL)	Iron (mg)	Folate DFE (mcg)	Vitamin B12 (mcg)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (mcg)	Vitamin B6 (mg)
Food	11705	Bitter gourd, lady finger, brinjal, cucumber	U	22.50	0.39	40.25	0.00	0.15	28.00	0.44	0.04	16.50	0.08	0.07	0.00	0.10
Source				[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
Code				11705 (calc)	11705 (calc)	11705 (calc)	11705 (calc)	11705 (calc)	11705 (calc)	11705 (calc)	11705 (calc)	11705 (calc)	11705 (calc)	11705 (calc)	11705 (calc)	11705 (calc)
Food	11706	Tinda, pumpkin, bottle gourd	U	21.33	0.83	9.33	0.00	0.42	17.67	0.40	0.05	156.00	0.05	0.06	0.00	0.05
Source				[1], [3]	[1]	[3]	[3]	[3]	[1]	[1]	[1]	[1], [3]	[1]	[3]	[3]	[3]
Code				11706 (calc)	11706 (calc)	11706 (calc)	11706 (calc)	11706 (calc)	11706 (calc)	11706 (calc)	11706 (calc)	11706 (calc)	11706 (calc)	11706 (calc)	11706 (calc)	11706 (calc)
Food	11707	Turnip, raddish, carrot	U	26.33	0.77	19.67	0.00	0.23	15.23	0.26	0.05	278.33	0.03	0.06	0.00	0.10

Classification	HIES Food Code	Food title	Fortification	Energy (kCAL)	Iron (mg)	Folate DFE (mcg)	Vitamin B12 (mcg)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (mcg)	Vitamin B6 (mg)
Source				[1]	[1],[3]	[3]	[3]	[3]	[1],[3]	[1],[3]	[1],[3]	[1],[3]	[1],[3]	[3]	[3]	[3]
Code				11707 (calc)	11707 (calc)	11707 (calc)	11707 (calc)	11707 (calc)	11707 (calc)	11707 (calc)	11707 (calc)	11707 (calc)	11707 (calc)	11707 (calc)	11707 (calc)	11707 (calc)
Food	11708	Peas, moongra	U	53	4.75	65	0	0.13	29.5	0.88	0.1415	32	0.32	0.148	0	0.227
Source				[1], [3]	[1]	[3]	[3]	[3]	[1], [3]	[1], [3]	[1]	[1]	[1]	[3]	[3]	[3]
Code				11708 (calc)	11708 (calc)	11708 (calc)	11708 (calc)	11708 (calc)	11708 (calc)	11708 (calc)	11708 (calc)	11708 (calc)	11708 (calc)	11708 (calc)	11708 (calc)	11708 (calc)
Food	11709	Turai, arvi, green pepper	U	65.33	0.70	28.33	0.00	1.12	69.25	0.31	0.05	38.00	0.12	0.12	0.00	0.24
Source				[1],[3]	[1],[3]	[3]	[3]	[3]	[1],[3]	[1],[3]	[1],[3]	[1],[3]	[1],[3]	[3]	[3]	[3]

Classification	HIES Food Code	Food title	Fortification	Energy (kCAL)	Iron (mg)	Folate DFE (mcg)	Vitamin B12 (mcg)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (mcg)	Vitamin B6 (mg)
Code				11709 (calc)	11709 (calc)	11709 (calc)	11709 (calc)	11709 (calc)	11709 (calc)	11709 (calc)	11709 (calc)	11709 (calc)	11709 (calc)	11709 (calc)	11709 (calc)	11709 (calc)
Food	11710	Lemon	U	30	0.4	11	0	0.15	52	0.1	0.02	3	0.04	0.04	0	0.08
Source				[1]	[1]	[3]	[3]	[3]	[1]	[1]	[1]	[1]	[1]	[3]	[3]	[3]
Code				F-94	F-94	9150	9150	9150	F-94	F-94	F-94	F-94	F-94	9150	9150	9150
Food	11711	Garlic	U	121	1.4	3	0	0.08	9	1.2	0.06	0	0.21	0.3	0	1.24
Source				[1]	[1]	[3]	[3]	[3]	[1]	[1]	[1]	[1]	[1]	[3]	[3]	[3]
Code				D-68	D-68	11215	11215	11215	D-68	D-68	D-68	D-68	D-68	11215	11215	11215

Classification	HIES Food Code	Food title	Fortification	Energy (kCAL)	Iron (mg)	Folate DFE (mcg)	Vitamin B12 (mcg)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (mcg)	Vitamin B6 (mg)
Food	11712	Canned vegetables/ olives/ sweet corn/ mushroooms, etc.	U	49	1.05	24	0	0.29	5	0.41	0.048	583	0.046	0.073	0	0.079
Source				[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
Code				11581	11581	11581	11581	11581	11581	11581	11581	11581	11581	11581	11581	11581
Food	11713	Others (spinach, saag, methi, chillies green, dhania, etc.)	U	62.80	1.79	60.60	0.00	1.85	87.42	0.37	0.13	233.40	0.08	0.17	0.00	0.20
Source				[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
Code				11713 (calc)	11713 (calc)	11713 (calc)	11713 (calc)	11713 (calc)	11713 (calc)	11713 (calc)	11713 (calc)	11713 (calc)	11713 (calc)	11713 (calc)	11713 (calc)	11713 (calc)

Classification	HIES Food Code	Food title	Fortification	Energy (kCAL)	Iron (mg)	Folate DFE (mcg)	Vitamin B12 (mcg)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (mcg)	Vitamin B6 (mg)
Section	11900	**CONDIMENTS AND SPICES (WHOLE AND POWDER)**														
Food	11901	Salt (simple, rock, and sea)	U	0	0	0	0	0	0	0	0	0	0	0	0	0
Source				[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
Code				2047	2047	2047	2047	2047	2047	2047	2047	2047	2047	2047	2047	2047
Food	11902	Salt (iodized)	F	0	0	0	0	0	0	0	0	0	0	0	0	0
Source				[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
Code				2047	2047	2047	2047	2047	2047	2047	2047	2047	2047	2047	2047	2047

Classification	HIES Food Code	Food title	Fortification	Energy (kCAL)	Iron (mg)	Folate DFE (mcg)	Vitamin B12 (mcg)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (mcg)	Vitamin B6 (mg)
Food	11903	Chillies (loose/packed)	U	40	1.03	23	0	0.69	144	2.48	0.086	48	0.072	0.129	0	0.506
Source				[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
Code				11819	11819	11819	11819	11819	11819	11819	11819	11819	11819	11819	11819	11819
Food	11904	Coriander seeds, turmeric powder, curry powder	U	339.00	17.53	25.33	0.00	9.88	1.23	4.60	0.20	0.33	5.73	1.16	0.00	1.00
Source				[1], [3]	[1], [3]	[3]	[3]	[3]	[1], [3]	[1], [3]	[1], [3]	[1], [3]	[1], [3]	[3]	[3]	[3]
Code				11904 (calc)	11904 (calc)	11904 (calc)	11904 (calc)	11904 (calc)	11904 (calc)	11904 (calc)	11904 (calc)	11904 (calc)	11904 (calc)	11904 (calc)	11904 (calc)	11904 (calc)

Classification	HIES Food Code	Food title	Fortification	Energy (kCAL)	Iron (mg)	Folate DFE (mcg)	Vitamin B12 (mcg)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (mcg)	Vitamin B6 (mg)
Food	11905	Ginger (powder/paste/whole)	U	194	10.75	12	0	0.13	1.85	1.97	0.1	1	0.028	0.353	0	0.393
Source				[1], [3]	[1], [3]	[3]	[3]	[3]	[1], [3]	[1], [3]	[1], [3]	[1], [3]	[1], [3]	[3]	[3]	[3]
Code				11905 (calc)	11905 (calc)	11905 (calc)	11905 (calc)	11905 (calc)	11905 (calc)	11905 (calc)	11905 (calc)	11905 (calc)	11905 (calc)	11905 (calc)	11905 (calc)	11905 (calc)
Food	11906	Cardamom (loose/packed)	U	326	19.7	2.85	0	0	0	0.15	0.7	0	0.87	0.38	0	0.23
Source				[1]	[1]	[4]	[3]	[3]	[1]	[1]	[1]	[1]	[1]	[3]	[3]	[3]
Code				E-75	E-75	5020	2006	2025	E-75	E-75	E-75	E-75	E-75	2006	2006	2006
Food	11907	Cumin seeds, pepper black, cloves	U	302.67	17.20	17.33	0.00	4.40	1.00	2.43	0.07	66.33	0.22	0.86	0.00	1.00

Classification	HIES Food Code	Food title	Fortification	Energy (kCAL)	Iron (mg)	Folate DFE (mcg)	Vitamin B12 (mcg)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (mcg)	Vitamin B6 (mg)
Source				[1]	[1]	[3]	[3]	[3]	[1]	[1]	[1]	[1]	[1]	[3]	[3]	[3]
Code				11907 (calc)	11907 (calc)	11907 (calc)	11907 (calc)	11907 (calc)	11907 (calc)	11907 (calc)	11907 (calc)	11907 (calc)	11907 (calc)	11907 (calc)	11907 (calc)	11907 (calc)
Food	11908	Other spices (saunf, cinnamon, etc.)	U	302.00	16.75	16.50	0.00	1.45	10.50	2.85	0.38	16.50	0.25	0.70	0.00	0.31
Source				[1], [3]	[1], [3]	[3]	[3]	[3]	[1], [3]	[1], [3]	[1], [3]	[1], [3]	[1], [3]	[3]	[3]	[3]
Code				11908 (calc)	11908 (calc)	11908 (calc)	11908 (calc)	11908 (calc)	11908 (calc)	11908 (calc)	11908 (calc)	11908 (calc)	11908 (calc)	11908 (calc)	11908 (calc)	11908 (calc)
Section	11800	**SUGAR, JAM, HONEY, CHOCOLATE, & CONFECTIONARY**														
Food	11801	Sugar all kinds (desi/milled)	U	385	0.06	0	0	0	0	0	0	0	0	0.007	0	0

Classification	HIES Food Code	Food title	Fortification	Energy (kCAL)	Iron (mg)	Folate DFE (mcg)	Vitamin B12 (mcg)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (mcg)	Vitamin B6 (mg)
Source				[3]	[1]	[3]	[3]	[3]	[1]	[3]	[1]	[1]	[1]	[3]	[3]	[3]
Code				91101010	M-185	91101010	91101010	91101010	M-185	91101010	M-185	M-185	M-185	91101010	91101010	91101010
Food	11802	Gur, shaker	U	340.5	2.95	0.5	0	0	1.5	1.45	0.015	0	0.005	0.267	0	0.3555
Source				[1]	[1]	[3]	[3]	[3]	[1]	[1]	[1]	[1]	[1]	[3]	[3]	[3]
Code				11802 (calc)	11802 (calc)	11802 (calc)	11802 (calc)	11802 (calc)	11802 (calc)	11802 (calc)	11802 (calc)	11802 (calc)	11802 (calc)	11802 (calc)	11802 (calc)	11802 (calc)
Food	11803	Honey	U	310	0.9	2	0	0	0	0.4	0.04	0	0.01	0.036	0	0.024
Source				[1]	[1]	[3]	[3]	[3]	[1]	[1]	[1]	[1]	[1]	[3]	[3]	[3]

Classification	HIES Food Code	Food title	Fortification	Energy (kCAL)	Iron (mg)	Folate DFE (mcg)	Vitamin B12 (mcg)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (mcg)	Vitamin B6 (mg)
Code				M-188	M-188	19296	19296	19296	M-188	M-188	M-188	M-188	M-188	19296	19296	19296
Food	11804	Toffee/chocolate	U	547.50	1.19	6.50	0.43	0.73	0.50	1.21	0.18	189.00	0.06	0.25	0.05	0.02
Source				[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
Code				11804 (calc)	11804 (calc)	11804 (calc)	11804 (calc)	11804 (calc)	11804 (calc)	11804 (calc)	11804 (calc)	11804 (calc)	11804 (calc)	11804 (calc)	11804 (calc)	11804 (calc)
Food	11805	Barfi, jaleebi, halwa & other sweetmeats	F	420.00	1.43	95.67	0.08	0.44	0.00	0.07	0.00	0.00	0.00	0.15	0.03	0.07
Source				[1]	[1]	[3], [5]	[3], [5]	[3], [5]	[1]	[1]	[1]	[1]	[1]	[3], [5]	[3], [5]	[3], [5]

Classification	HIES Food Code	Food title	Fortification	Energy (kCAL)	Iron (mg)	Folate DFE (mcg)	Vitamin B12 (mcg)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (mcg)	Vitamin B6 (mg)
Code				11805 (calc)	11805 (calc)	11805 (calc)	11805 (calc)	11805 (calc)	11805 (calc)	11805 (calc)	11805 (calc)	11805 (calc)	11805 (calc)	11805 (calc)	11805 (calc)	11805 (calc)
Food	11806	Glucose, Energile, Tang, lemon pani, etc.	U	149.33	0.14	5.04	0.00	0.00	85.06	0.03	0.23	201.90	0.01	0.01	0.00	0.28
Source				[3]	[1],[3]	[3]	[3]	[3]	[3]	[3]	[3]	[1], [3]	[3]	[3]	[3]	[3]
Code				11806 (calc)	11806 (calc)	11806 (calc)	11806 (calc)	11806 (calc)	11806 (calc)	11806 (calc)	11806 (calc)	11806 (calc)	11806 (calc)	11806 (calc)	11806 (calc)	11806 (calc)
Food	11807	Ice cream	U	148	0.1	5	0.39	0.3	1	0.7	0.19	117	0.04	0.02	0.2	0.048
Source				[1]	[1]	[3]	[3]	[3]	[1]	[1]	[1]	[1]	[1]	[3]	[3]	[3]
Code				H-140	H-140	19095	19095	19095	H-140	H-140	H-140	H-140	H-140	19095	19095	19095

Classification	HIES Food Code	Food title	Fortification	Energy (kCAL)	Iron (mg)	Folate DFE (mcg)	Vitamin B12 (mcg)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (mcg)	Vitamin B6 (mg)
Food	11808	Custard powder/ jelly powder	U	395.5	1.03	16.5	0.585	0.015	0.2	0.53	0.2255	31.5	0.074	0.085	0.55	0.0335
Source				[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
Code				11808 (calc)	11808 (calc)	11808 (calc)	11808 (calc)	11808 (calc)	11808 (calc)	11808 (calc)	11808 (calc)	11808 (calc)	11808 (calc)	11808 (calc)	11808 (calc)	11808 (calc)
Food	11809	Jam/ marmalade/ jellies	U	263.33	0.28	7.33	0.00	0.06	4.83	0.04	0.04	1.00	0.01	0.07	0.00	0.02
Source				[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
Code				11809 (calc)	11809 (calc)	11809 (calc)	11809 (calc)	11809 (calc)	11809 (calc)	11809 (calc)	11809 (calc)	11809 (calc)	11809 (calc)	11809 (calc)	11809 (calc)	11809 (calc)
Food	11810	Other (ice etc.)	U	0	0	0	0	1	0	0	0	0	0	0.009	0	1

Classification	HIES Food Code	Food title	Fortification	Energy (kCAL)	Iron (mg)	Folate DFE (mcg)	Vitamin B12 (mcg)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (mcg)	Vitamin B6 (mg)
Source				[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
Code				14429	14429	14429	14429	14429	14429	14429	14429	14429	14429	14429	14429	14429
Section	12200	**MINERAL WATER, SOFT DRINKS, FRUIT & VEGETABLE JUICE**														
Food	12201	Cold drink (carbonated)	U	39	0	0	0	0	0	0.01	0	0	0	0.007	0	0
Source				[1]	[1]	[3]	[3]	[3]	[1]	[1]	[1]	[1]	[1]	[3]	[3]	[3]
Code				M-193	M-193	14148	14148	14148	M-193	M-193	M-193	M-193	M-193	14148	14148	14148
Food	12202	Squash/ sharbat	U	103.31	0.64	4.31	0.00	0.10	31.58	0.12	0.03	3.69	0.03	0.05	0.00	0.05

Classification	HIES Food Code	Food title	Fortification	Energy (kCAL)	Iron (mg)	Folate DFE (mcg)	Vitamin B12 (mcg)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (mcg)	Vitamin B6 (mg)
Source				[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
Code				12202 (calc)	12202 (calc)	12202 (calc)	12202 (calc)	12202 (calc)	12202 (calc)	12202 (calc)	12202 (calc)	12202 (calc)	12202 (calc)	12202 (calc)	12202 (calc)	12202 (calc)
Food	12203	Fruit juice (fresh, sugarcane juice)	U	45.75	0.625	15.75	0	0.2625	1.25	0.08	0.016	0.5	0.045	0.06175	0	0.04225
Source				[1], [5]	[1], [5]	[3]	[3]	[3]	[1], [3]	[1], [5]	[1], [3]	[1], [5]	[1], [5]	[3], [5]	[3]	[3]
Code				12203 (calc)	12203 (calc)	12203 (calc)	12203 (calc)	12203 (calc)	12203 (calc)	12203 (calc)	12203 (calc)	12203 (calc)	12203 (calc)	12203 (calc)	12203 (calc)	12203 (calc)
Food	12204	Fruit juice packed	U	50	0.11	0	0	0.01	28.2	0.05	0.015	0	0.006	0.01	0	0.021
Source				[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]

Classification	HIES Food Code	Food title	Fortification	Energy (kCAL)	Iron (mg)	Folate DFE (mcg)	Vitamin B12 (mcg)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (mcg)	Vitamin B6 (mg)
Code				64100110	64100110	64100110	64100110	64100110	64100110	64100110	64100110	64100110	64100110	64100110	64100110	64100110
Food	12205	Mineral water	U	0	0	0	0	0	0	0	0	0	0	0	0	0
Source				[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
Code				14075	14075	14075	14075	14075	14075	14075	14075	14075	14075	14075	14075	14075
Section	110000	**RESTAURANTS AND HOTELS, READYMADE FOOD EATEN OUT OF HOME, PUBLIC PLACES, OFFICES**														
Food	111101	Cooked mutton, beef, chicken, etc.	U	221.67	3.02	4.67	2.52	0.49	0.00	4.54	0.23	10.67	0.07	0.07	0.20	0.40
Source				[1], [3]	[1], [3]	[3]	[3]	[3]	[1], [5]	[1], [3]	[1], [3]	[1], [5]	[1], [3]	[3]	[3], [5]	[3]

Classification	HIES Food Code	Food title	Fortification	Energy (kCAL)	Iron (mg)	Folate DFE (mcg)	Vitamin B12 (mcg)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (mcg)	Vitamin B6 (mg)
Code				111101 (calc)	111101 (calc)	111101 (calc)	111101 (calc)	111101 (calc)	111101 (calc)	111101 (calc)	111101 (calc)	111101 (calc)	111101 (calc)	111101 (calc)	111101 (calc)	111101 (calc)
Food	111102	Cooked dal (mong, masur, channa, etc.), chick pea, black chick pea	U	111	2	110	0	0	3	1	0	1	0	0	0	0
Source				[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
Code				111102 (calc)	111102 (calc)	111102 (calc)	111102 (calc)	111102 (calc)	111102 (calc)	111102 (calc)	111102 (calc)	111102 (calc)	111102 (calc)	111102 (calc)	111102 (calc)	111102 (calc)
Food	111103	Cooked vegetable	U	70	0.7	24	0	0.64	2.5	0.35	0.053	151	0.042	0.069	0	0.057
Source				[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]

Classification	HIES Food Code	Food title	Fortification	Energy (kCAL)	Iron (mg)	Folate DFE (mcg)	Vitamin B12 (mcg)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (mcg)	Vitamin B6 (mg)
Code				75311030	75311030	75311030	75311030	75311030	75311030	75311030	75311030	75311030	75311030	75311030	75311030	75311030
Food	111104	Nihari/payee, halwa poori	F	352.00	0.62	77.18	0.85	1.40	0.40	2.11	0.08	10.11	0.01	0.17	0.04	0.34
Source				[1], [3]	[1], [3]	[3], [5]	[3], [5]	[3], [5]	[1], [3]	[1], [3]	[1], [3]	[1], [3]	[1], [3]	[3], [5]	[3], [5]	[3], [5]
Code				111104 (calc)	111104 (calc)	111104 (calc)	111104 (calc)	111104 (calc)	111104 (calc)	111104 (calc)	111104 (calc)	111104 (calc)	111104 (calc)	111104 (calc)	111104 (calc)	111104 (calc)
Food	111105	Biryani, pulao, etc.	U	197	0.9	28	0.47	0.25	3.6	1.4	0.08	16	0.061	0.077	0.1	0.136
Source				[1]	[1]	[3]	[3]	[3]	[1]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
Code				TF-13	TF-13	27213010	27213010	27213010	TF-13	27213010	27213010	27213010	27213010	27213010	27213010	27213010

Classification	HIES Food Code	Food title	Fortification	Energy (kCAL)	Iron (mg)	Folate DFE (mcg)	Vitamin B12 (mcg)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (mcg)	Vitamin B6 (mg)
Food	111106	Tea prepared, kashmiri tea/coffee, etc.	U	17.67	0.03	2.67	0.00	0.01	0.00	0.08	0.03	9.33	0.01	0.01	0.17	0.02
Source				[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
Code				111106 (calc)	111106 (calc)	111106 (calc)	111106 (calc)	111106 (calc)	111106 (calc)	111106 (calc)	111106 (calc)	111106 (calc)	111106 (calc)	111106 (calc)	111106 (calc)	111106 (calc)
Food	111107	Milkshakes, fresh juices, ice cream shakes, ice cream, etc.	U	106.17	0.12	14.50	0.30	0.16	1.17	0.41	0.14	47.67	0.04	0.04	0.47	0.06
Source				[1], [3]	[1], [3]	[3]	[3]	[3]	[1], [3]	[1], [3]	[1], [3]	[1], [3]	[1], [3]	[3]	[3]	[3]
Code				111107 (calc)	111107 (calc)	111107 (calc)	111107 (calc)	111107 (calc)	111107 (calc)	111107 (calc)	111107 (calc)	111107 (calc)	111107 (calc)	111107 (calc)	111107 (calc)	111107 (calc)

Classification	HIES Food Code	Food title	Fortification	Energy (kCAL)	Iron (mg)	Folate DFE (mcg)	Vitamin B12 (mcg)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (mcg)	Vitamin B6 (mg)
Food	111108	Carbonated drinks, juices, lemon soda, etc.	U	39	0	0	0	0	0	0.01	0	0	0	0.007	0	0
Source				[1]	[1]	[3]	[3]	[3]	[1]	[1]	[1]	[1]	[1]	[3]	[3]	[3]
Code				M-193	M-193	14148	14148	14148	M-193	M-193	M-193	M-193	M-193	14148	14148	14148
Food	111109	Mineral water	U	0	0	0	0	1	0	0	0	0	0	0	0	0
Source				[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
Code				14075	14075	14075	14075	14075	14075	14075	14075	14075	14075	14075	14075	14075
Food	111110	Pizza, cake, burger, sandwiches, shwarma/roll	F	218.96	1.40	28.05	0.36	0.83	5.29	0.98	0.13	23.15	0.27	0.09	0.04	0.14

Classification	HIES Food Code	Food title	Fortification	Energy (kCAL)	Iron (mg)	Folate DFE (mcg)	Vitamin B12 (mcg)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (mcg)	Vitamin B6 (mg)
		, paratha, chips/fries, etc.														
Source				[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
Code				111110 (calc)	111110 (calc)	111110 (calc)	111110 (calc)	111110 (calc)	111110 (calc)	111110 (calc)	111110 (calc)	111110 (calc)	111110 (calc)	111110 (calc)	111110 (calc)	111110 (calc)
Food	111111	Soups/yakni, chaat (channa/dahi baray/fruit chaat), salads(vegetable/fruit), etc.	F	318.66	1.27	10.54	0.03	0.88	8.46	0.39	0.06	8.82	0.03	0.16	0.00	0.13
Source				[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
Code				111111 (calc)	111111 (calc)	111111 (calc)	111111 (calc)	111111 (calc)	111111 (calc)	111111 (calc)	111111 (calc)	111111 (calc)	111111 (calc)	111111 (calc)	111111 (calc)	111111 (calc)

Classification	HIES Food Code	Food title	Fortification	Energy (kCAL)	Iron (mg)	Folate DFE (mcg)	Vitamin B12 (mcg)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (mcg)	Vitamin B6 (mg)
Food	111112	Tikka/boti, rost/sajji/fish fried, kabab(seikh/ shami/chapli)	F	193.83	1.50	17.17	1.41	0.43	6.40	3.03	0.17	12.50	0.14	0.10	1.65	0.22
Source				[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
Code				111112 (calc)	111112 (calc)	111112 (calc)	111112 (calc)	111112 (calc)	111112 (calc)	111112 (calc)	111112 (calc)	111112 (calc)	111112 (calc)	111112 (calc)	111112 (calc)	111112 (calc)
Food	111113	Bread, paratha, nan, roti, etc.	F	308.75	1.97	27.00	0.00	0.97	0.00	1.31	0.15	1.00	0.27	0.19	0.00	0.19
Source				[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
Code				111113 (calc)	111113 (calc)	111113 (calc)	111113 (calc)	111113 (calc)	111113 (calc)	111113 (calc)	111113 (calc)	111113 (calc)	111113 (calc)	111113 (calc)	111113 (calc)	111113 (calc)

Classification	HIES Food Code	Food title	Fortification	Energy (kCAL)	Iron (mg)	Folate DFE (mcg)	Vitamin B12 (mcg)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (mcg)	Vitamin B6 (mg)
Food	111114	Others (corn, challi/bhutta), etc.	F	96	0.45	23	0	0.09	5.5	0.62	0.057	13	0.093	0.054	0	0.139
Source				[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
Code				11770	11770	11770	11770	11770	11770	11770	11770	11770	11770	11770	11770	11770
Section	11100	**BREAD & CEREALS**														
Food	11101	Wheat	F	332	3.97	30.9	0	0.53	0	2.85	0.15	0	0.46	0.49	0	0.191
Source				[3]	[4]	[4]	[3]	[3]	[3]	[4]	[4]	[3]	[4]	[4]	[3]	[3]
Code				20649	A021	A022	20080	20649	20649	A025	A026	20649	A028	A029	20649	20649

Classification	HIES Food Code	Food title	Fortification	Energy (kCAL)	Iron (mg)	Folate DFE (mcg)	Vitamin B12 (mcg)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (mcg)	Vitamin B6 (mg)
Food	11102	Wheat flour	F	357	4.5	38	0	0.71	0	2.9	0.06	0	0.3	0.41	0	0.407
Source				[1]	[1]	[5]	[3]	[3]	[1]	[1]	[1]	[1]	[1]	[3]	[3]	[3]
Code				A-15	A-15	01_0033	20080	20080	A-15	A-15	A-15	A-15	A-15	20080	20080	20080
Food	11103	Rice and rice flour	U	363	0.925	5.5	0	0.11	0	1	0.0305	0	0.134	0.1505	0	0.2715
Source				[1], [3]	[1], [3]	[3]	[3]	[3]	[1], [3]	[1], [3]	[1], [3]	[1], [3]	[1], [3]	[3]	[3]	[3]
Code				11103 (calc)	11103 (calc)	11103 (calc)	11103 (calc)	11103 (calc)	11103 (calc)	11103 (calc)	11103 (calc)	11103 (calc)	11103 (calc)	11103 (calc)	11103 (calc)	11103 (calc)
Food	11104	Maize, barley, jawar, millet (whole/flour)	U	325.25	4.4	26	0	0.325	0	1.6	0.145	11.75	0.3725	0.335	0	0.392

Classification	HIES Food Code	Food title	Fortification	Energy (kCAL)	Iron (mg)	Folate DFE (mcg)	Vitamin B12 (mcg)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (mcg)	Vitamin B6 (mg)
Source				[1]	[1]	[3]	[3]	[3]	[1]	[1]	[1]	[1]	[1]	[3]	[3]	[3]
Code				11104 (calc)	11104 (calc)	11104 (calc)	11104 (calc)	11104 (calc)	11104 (calc)	11104 (calc)	11104 (calc)	11104 (calc)	11104 (calc)	11104 (calc)	11104 (calc)	11104 (calc)
Food	11105	Maida, suji, besan	F	369	3.55	192.00	0.00	0.54	0.00	2.50	0.10	0.67	0.34	0.53	0.00	0.26
Source				[1], [3]	[1], [3]	[3]	[3]	[3]	[1], [3]	[1], [3]	[1], [3]	[1], [3]	[1], [3]	[3]	[3]	[3]
Code				11105 (calc)	11105 (calc)	11105 (calc)	11105 (calc)	11105 (calc)	11105 (calc)	11105 (calc)	11105 (calc)	11105 (calc)	11105 (calc)	11105 (calc)	11105 (calc)	11105 (calc)
Food	11106	Vermicelli	F	345	1.9	0	0	0.51	0	2.3	0.05	0	0.19	1.92	0	0
Source				[1]	[1]	[3]	[3]	[3]	[1]	[1]	[1]	[1]	[1]	[3]	[3]	[3]

Classification	HIES Food Code	Food title	Fortification	Energy (kCAL)	Iron (mg)	Folate DFE (mcg)	Vitamin B12 (mcg)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (mcg)	Vitamin B6 (mg)
Code				A-14	A-14	43114	43114	43114	A-14	A-14	A-14	A-14	A-14	43114	43114	43114
Food	11107	Other cereals products (cornflakes, noodles, macronis, spaghetti, etc.)	F	290.50	2.75	262.00	1.34	0.24	0.00	0.53	0.19	35.00	0.37	0.10	1.78	0.51
Source				[1], [3]	[1], [3]	[3]	[3]	[3]	[1], [3]	[1], [3]	[1], [3]	[1], [3]	[1], [3]	[3]	[3]	[3]
Code				11107 (calc)	11107 (calc)	11107 (calc)	11107 (calc)	11107 (calc)	11107 (calc)	11107 (calc)	11107 (calc)	11107 (calc)	11107 (calc)	11107 (calc)	11107 (calc)	11107 (calc)
Food	11108	Wheat, rice, jawar, millet (grinding, husking, cleaning), etc.	F	346.25	1.94	20.50	0.00	0.38	0.20	1.24	0.06	0.00	0.22	0.21	0.00	0.31
Source				[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]

Classification	HIES Food Code	Food title	Fortification	Energy (kCAL)	Iron (mg)	Folate DFE (mcg)	Vitamin B12 (mcg)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (mcg)	Vitamin B6 (mg)
Code				11108 (calc)	11108 (calc)	11108 (calc)	11108 (calc)	11108 (calc)	11108 (calc)	11108 (calc)	11108 (calc)	11108 (calc)	11108 (calc)	11108 (calc)	11108 (calc)	11108 (calc)
Food	11109	Gram whole black/white	U	334.5	5.5	173.5	0	1.5	4.4	2.5	0	3.5	0	1	0	0
Source				[5]	[5]	[5]	[5]	[5]	[5]	[5]	[5]	[5]	[5]	[5]	[5]	[5]
Code				11109 (calc)	11109 (calc)	11109 (calc)	11109 (calc)	11109 (calc)	11109 (calc)	11109 (calc)	11109 (calc)	11109 (calc)	11109 (calc)	11109 (calc)	11109 (calc)	11109 (calc)
Food	11110	Pulse gram (dal chana)	U	360	5.8	140	0	2	8	3.4	0.19	7	0.44	2	0	1
Source				[1]	[1]	[5]	[5]	[5]	[1]	[1]	[1]	[1]	[1]	[5]	[5]	[5]
Code				B-26	B-26	02_0005	02_0005	02_0005	B-26	B-26	B-26	B-26	B-26	02_0005	02_0005	02_0005

Classification	HIES Food Code	Food title	Fortification	Energy (kCAL)	Iron (mg)	Folate DFE (mcg)	Vitamin B12 (mcg)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (mcg)	Vitamin B6 (mg)
Food	11111	Pulse mash (whole/broken/wash)	U	347	6.74	625	0	0	4.8	2.68	0.233	6	0.621	0.941	0	0.382
Source				[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
Code				16080	16080	16080	16080	16080	16080	16080	16080	16080	16080	16080	16080	16080
Food	11112	Pulse moong (whole/broken)	U	347	6.74	625	0	0	4.8	2.68	0.233	6	0.621	0.941	0	0.382
Source				[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
Code				16080	16080	16080	16080	16080	16080	16080	16080	16080	16080	16080	16080	16080
Food	11113	Pulse masoor (whole/broken)	U	352	6.51	479	0	0.49	4.5	3.27	0.211	2	0.873	0.754	0	0.54

Classification	HIES Food Code	Food title	Fortification	Energy (kCAL)	Iron (mg)	Folate DFE (mcg)	Vitamin B12 (mcg)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (mcg)	Vitamin B6 (mg)
Source				[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
Code				16069	16069	16069	16069	16069	16069	16069	16069	16069	16069	16069	16069	16069
Food	11114	Beans (lobia red and white)	U	335	8.545	391	0	0.21	2.25	3.23	0.1805	0	0.5225	0.8415	0	0.3575
Source				[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
Code				11114 (calc)	11114 (calc)	11114 (calc)	11114 (calc)	11114 (calc)	11114 (calc)	11114 (calc)	11114 (calc)	11114 (calc)	11114 (calc)	11114 (calc)	11114 (calc)	11114 (calc)
Food	11115	Other Pulses (arhar, chick, pigeon, garden peas, sunflower, etc.)	U	302	3.04	96.5	0	9.4025	0.825	2.505	0.16825	2.75	0.593	0.78275	0	0.4115

Classification	HIES Food Code	Food title	Fortification	Energy (kCAL)	Iron (mg)	Folate DFE (mcg)	Vitamin B12 (mcg)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (mcg)	Vitamin B6 (mg)
Source				[3]	[3]	[3]	[3]	[3], [5]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
Code				11115 (calc)	11115 (calc)	11115 (calc)	11115 (calc)	11115 (calc)	11115 (calc)	11115 (calc)	11115 (calc)	11115 (calc)	11115 (calc)	11115 (calc)	11115 (calc)	11115 (calc)
Food	11116	Biscuits (sweet & saltish)	F	432.70	1.42	16.84	9.64	0.84	0.06	0.57	0.11	106.76	0.08	0.16	0.00	0.04
Source				[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
Code				11116 (calc)	11116 (calc)	11116 (calc)	11116 (calc)	11116 (calc)	11116 (calc)	11116 (calc)	11116 (calc)	11116 (calc)	11116 (calc)	11116 (calc)	11116 (calc)	11116 (calc)
Food	11117	Bread, bun, sheermal	F	296.28	2.00	50.66	0.11	0.66	0.45	0.89	0.21	28.34	0.30	0.12	0.01	0.08
Source				[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]

Classification	HIES Food Code	Food title	Fortification	Energy (kCAL)	Iron (mg)	Folate DFE (mcg)	Vitamin B12 (mcg)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (mcg)	Vitamin B6 (mg)
Code				11117 (calc)	11117 (calc)	11117 (calc)	11117 (calc)	11117 (calc)	11117 (calc)	11117 (calc)	11117 (calc)	11117 (calc)	11117 (calc)	11117 (calc)	11117 (calc)	11117 (calc)
Food	11118	Cake, bakar khani	F	353.27	1.16	13.61	9.72	0.75	6.80	0.50	0.14	143.41	0.06	0.15	0.15	0.06
Source				[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
Code				11118 (calc)	11118 (calc)	11118 (calc)	11118 (calc)	11118 (calc)	11118 (calc)	11118 (calc)	11118 (calc)	11118 (calc)	11118 (calc)	11118 (calc)	11118 (calc)	11118 (calc)
Food	11119	Pastries, patties, etc.	F	477.5	2.41	42	0	1.775	0	0.7	0.208	0	0.2895	0.1315	0	0.062
Source				[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
Code				11119 (calc)	11119 (calc)	11119 (calc)	11119 (calc)	11119 (calc)	11119 (calc)	11119 (calc)	11119 (calc)	11119 (calc)	11119 (calc)	11119 (calc)	11119 (calc)	11119 (calc)

Classification	HIES Food Code	Food title	Fortification	Energy (kCAL)	Iron (mg)	Folate DFE (mcg)	Vitamin B12 (mcg)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (mcg)	Vitamin B6 (mg)
Food	11120	Other baked or fried products (pakoras, samosa, qatlama, popcorn, etc.)	F	290.43	2.07	85.32	0.11	0.95	1.05	1.35	0.11	20.50	0.17	0.21	0.00	0.14
Source				[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
Code				11120 (calc)	11120 (calc)	11120 (calc)	11120 (calc)	11120 (calc)	11120 (calc)	11120 (calc)	11120 (calc)	11120 (calc)	11120 (calc)	11120 (calc)	11120 (calc)	11120 (calc)
Section	11500	**EDIBLE OILS AND FATS**														
Food	11501	Butter products (butter oil/desi ghee)	U	875	0	0	0.01	2.8	0	0.01	0.005	840	0.001	0.001	0	0.001
Source				[1], [3]	[1], [3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]

Classification	HIES Food Code	Food title	Fortification	Energy (kCAL)	Iron (mg)	Folate DFE (mcg)	Vitamin B12 (mcg)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (mcg)	Vitamin B6 (mg)
Code				11501 (calc)	11501 (calc)	11501 (calc)	11501 (calc)	11501 (calc)	11501 (calc)	11501 (calc)	11501 (calc)	11501 (calc)	11501 (calc)	11501 (calc)	11501 (calc)	11501 (calc)
Food	11502	Butter/margarine (loose/packed)	U	724	0.12	2.5	0.085	3.1	0.1	0.06	0.0285	751.5	0.007	0.013	0	0.006
Source				[1], [3]	[1], [3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
Code				11502 (calc)	11502 (calc)	11502 (calc)	11502 (calc)	11502 (calc)	11502 (calc)	11502 (calc)	11502 (calc)	11502 (calc)	11502 (calc)	11502 (calc)	11502 (calc)	11502 (calc)
Food	11503	Vegetable ghee (tin/loose)	U	465	0.04	1	0	9.2	0	0.01	0.01	819	0	0.001	0	0
Source				[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
Code				42151	42151	42151	42151	42151	42151	42151	42151	42151	42151	42151	42151	42151

Classification	HIES Food Code	Food title	Fortification	Energy (kCAL)	Iron (mg)	Folate DFE (mcg)	Vitamin B12 (mcg)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (mcg)	Vitamin B6 (mg)
Food	11504	Cooking oil (tin/loose)	F	844	0.56	0	0	14.4	0	0	0	0	0	0	0	0
Source				[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
Code				4053	4053	4053	4053	4053	4053	4053	4053	4053	4053	4053	4053	4053
Food	11505	Mustard oil (cooking purpose)	U	884	0	0	0	14.4	0	0	0	0	0	0	1	0
Source				[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
Code				4583	4583	4583	4583	4053	4583	4583	4583	4583	4583	4583	4054	4583
Food	11506	Other oils and fats (animal fats, etc.)	U	791.11	1.44	0.00	0.00	13.02	0.00	0.01	0.01	0.00	0.01	0.00	0.28	0.00

Classification	HIES Food Code	Food title	Fortification	Energy (kCAL)	Iron (mg)	Folate DFE (mcg)	Vitamin B12 (mcg)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (mcg)	Vitamin B6 (mg)
Source				[1]	[1]	[3]	[3]	[3]	[1]	[1], [3]	[1]	[1]	[1]	[3]	[3]	[3]
Code				11506 (calc)	11506 (calc)	11506 (calc)	11506 (calc)	11506 (calc)	11506 (calc)	11506 (calc)	11506 (calc)	11506 (calc)	11506 (calc)	11506 (calc)	11506 (calc)	11506 (calc)
Section	12100	**COFFEE, TEA, AND COCOA**														
Food	12101	Tea (all kinds, packed/loose)	U	1	0.08	1	0	0	0	0.04	0.004	0	0.01	0.015	0	0
Source				[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
Code				92306000	92306000	92306000	92306000	92306000	92306000	92306000	92306000	92306000	92306000	92306000	92306000	92306000
Food	12102	Coffee	U	1	0.01	2	0	0.01	0	0.02	0.076	0	0.014	0.002	0	0.001

Classification	HIES Food Code	Food title	Fortification	Energy (kCAL)	Iron (mg)	Folate DFE (mcg)	Vitamin B12 (mcg)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (mcg)	Vitamin B6 (mg)
Source				[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
Code				14209	14209	14209	14209	14209	14209	14209	14209	14209	14209	14209	14209	14209
Food	12103	Other (Milo/Ovaltine, Horlicks, Complan, etc.)	F	238.5	8.715	10.75	0.28	6.5225	30.425	7.3325	0.0935	726.5	0.73425	0.9725	5.075	0.979
Source				[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
Code				12103 (calc)	12103 (calc)	12103 (calc)	12103 (calc)	12103 (calc)	12103 (calc)	12103 (calc)	12103 (calc)	12103 (calc)	12103 (calc)	12103 (calc)	12103 (calc)	12103 (calc)
Section	11900	**CONDIMENTS AND SPICES (WHOLE AND POWDER)**														

Classification	HIES Food Code	Food title	Fortification	Energy (kCAL)	Iron (mg)	Folate DFE (mcg)	Vitamin B12 (mcg)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (mcg)	Vitamin B6 (mg)
Food	11909	Tomato ketchup/mayonnaise	U	217.50	0.28	7.00	0.06	2.37	2.20	0.16	0.09	21.00	0.01	0.05	0.1	0.083
Source				[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
Code				11909 (calc)	11909 (calc)	11909 (calc)	11909 (calc)	11909 (calc)	11909 (calc)	11909 (calc)	11909 (calc)	11909 (calc)	11909 (calc)	11909 (calc)	11909 (calc)	11909 (calc)
Food	11910	Pickles (loose/packed), chatni	U	128.5	0.415	5.5	0	0.1	4.35	0.035	0.0385	5	0.007	0.087	0	0.0135
Source				[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
Code				11910 (calc)	11910 (calc)	11910 (calc)	11910 (calc)	11910 (calc)	11910 (calc)	11910 (calc)	11910 (calc)	11910 (calc)	11910 (calc)	11910 (calc)	11910 (calc)	11910 (calc)
Food	11911	Vinegar (sirka), etc.	U	18	0.03	0	0	0	0	0.01	0	0	0	0.006	0	0

Classification	HIES Food Code	Food title	Fortification	Energy (kCAL)	Iron (mg)	Folate DFE (mcg)	Vitamin B12 (mcg)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (mcg)	Vitamin B6 (mg)
Source				[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
Code				2053	2053	2053	2053	2053	2053	2053	2053	2053	2053	2053	2053	2053
Food	11912	Other (baking powder, yeast, etc.)	U	101	5.71	392.5	0	0	0.05	5.345	0.565	0	0.94	0.0835	0	0.215
Source				[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
Code				11912 (calc)	11912 (calc)	11912 (calc)	11912 (calc)	11912 (calc)	11912 (calc)	11912 (calc)	11912 (calc)	11912 (calc)	11912 (calc)	11912 (calc)	11912 (calc)	11912 (calc)

11402

NAME	kCAL	Iron (mg)	Folate DFE (ug)	Vitamin B12 (ug)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (ug)	Vitamin B6 (mg)
Lassi	76.77	0.40333	6.86612	0.36292	0.02255	0.49043	0.58879	0.18671	29.4262	0.02942	0.00898	0.00980	0.03138
Final Values													
	76.78	0.40	6.87	0.36	0.02	0.49	0.59	0.19	29.43	0.03	0.01	0.01	0.03
	[1].[3]	[1], [3]	[3]	[3]	[3]	[1], [3]	[1], [3]	[1], [3]	[1], [3]	[1], [3]	[3]	[3]	[3]
	11402 (calc)	11402 (calc)	11402 (calc)	11402 (calc)	11402 (calc)	11402 (calc)	11402 (calc)	11402 (calc)	11402 (calc)	11402 (calc)	11402 (calc)	11402 (calc)	11402 (calc)

Recipe calculations:

Lassi			
Recipe	Amount	Unit	Final Amount (g)
Plain Yogurt	1.75	cups	428.75
Sugar	2	Tsp	8
Salt (to taste)	0.0625	tsp	0.36
Ice	6	cubes	/

Ingredient	Source	Code	Iron(mg/100g)	Recipe(g)	Iron in recipe(mg)
Plain Yogurt	[1]	H-39	0.4	428.75	1.715
Sugar	[1]	M-185	0.6	8	0.048
Salt	[3]	2047	0	0.36	0
Total				437.11	1.763
Per 100 grams, iron(mg):					0.40333097

Ingredient	Source	Code	Folate(mcg/100g)	Recipe(g)	Folate in recipe(mg)
Plain Yogurt	[3]	1116	7	428.75	30.0125
Sugar	[3]	19335	0	8	0
Salt	[3]	2047	0	0.36	0
Total				437.11	30.0125
Per 100 grams, folate(mcg):					6.86612066

Ingredient	Source	Code	Vit A in recipe(mcg/100g)	Recipe(g)	Vit.A RAE in recipe(mcg)
Plain Yogurt	[1]	H-39	30	428.75	128.625
Sugar	[1]	M-185	0	8	0
Salt	[3]	2047	0	0.36	0
Total				437.11	128.625
Per 100 grams, Vit.A RAE(mcg):					29.4262314

Ingredient	Source	Code	Vit B12 in recipe(mcg/100g)	Recipe(g)	Vit.B12 in recipe(mcg)
Plain Yogurt	[3]	1116	0.37	428.75	1.586375
Sugar	[3]	19335	0	8	0
Salt	[3]	2047	0	0.36	0
Total				437.11	1.586375
Per 100 grams, Vit.B12(mcg):					0.36292352

Ingredient	Source	Code	Zinc(mg/100g)	Recipe(g)	Zinc in recipe(mg)
Plain Yogurt	[1]	H-39	0.6	428.75	2.5725
Sugar	[3]	19335	0.01	8	0.0008
Salt	[3]	2047	0.1	0.36	0.00036
Total				437.11	2.57366
Per 100 grams, Zinc(mg):					0.58879001

Ingredient	Source	Code	Thiamin(mg/100g)	Recipe(g)	Thiamin in recipe(mg)
Plain Yogurt	[1]	H-39	0.03	428.75	0.128625
Sugar	[1]	M-185	0	8	0
Salt	[3]	2047	0	0.36	0
Total				437.11	0.128625
Per 100 grams, Thiamin(mg):					0.02942623

Ingredient	Source	Code	Riboflavin(mg/100g)	Recipe(g)	Riboflavin in recipe(mg)
Plain Yogurt	[1]	H-39	0.19	428.75	0.814625
Sugar	[3]	19335	0.019	8	0.00152
Salt	[3]	2047	0	0.36	0
Total				437.11	0.816145
Per 100 grams, Riboflavin(mg):					0.18671387

Ingredient	Source	Code	Vit.C(mg/100g)	Recipe(g)	Vit.C in recipe(mg)
Plain Yogurt	[3]	1116	0.5	428.75	2.14375
Sugar	[3]	19335	0	8	0
Salt	[3]	2047	0	0.36	0
Total				437.11	2.14375
Per 100 grams, Vit.C(mg):					0.49043719

Ingredient	Source	Code	Copper(mg/100g)	Recipe(g)	Copper in recipe(mg)
Plain Yogurt	[3]	1116	0.009	428.75	0.0385875
Sugar	[3]	19335	0.007	8	0.00056
Salt	[3]	2047	0.03	0.36	0.000108
Total				437.11	0.0392555
Per 100 grams, Copper(mg):					0.00898069

Ingredient	Source	Code	Vit.E(mg/100g)	Recipe(g)	Vit.E in recipe(mg)
Plain Yogurt	[3]	1116	0.06	428.75	0.006654
Sugar	[3]	19335	0	8	0.0047709
Salt	[3]	2047	0	0.36	0
Total				72.83	0.0164257
Per 100 grams, Vit.E(mg):					0.02255348

Ingredient	Source	Code	Vitamin B6 (mg/100)	Recipe(g)	Vitamin B6 in recipe(mg)
Plain Yogurt	[3]	1116	0.032	428.75	0.1372
Sugar	[3]	19335	0	8	0
Salt	[3]	2047	0	0.36	0
Total				437.11	0.1372
Per 100 grams, Vitamin B6(mg):					0.03138798

Ingredient	Source	Code	Vitamin D (ug/100)	Recipe(g)	Vitamin D in recipe(ug)
Plain Yogurt	[3]	1116	0.01	428.75	0.042875
Sugar	[3]	19335	0	8	0
Salt	[3]	2047	0	0.36	0
Total				437.11	0.042875
Per 100 grams, Vitamin D (ug):					0.00980874

Ingredient	Source	Code	kCAL/100g	Recipe(g)	kCal in recipe
Plain Yogurt	[1]	H-39	71	428.75	304.4125
Sugar	[1]	M-185	390	8	31.2
Salt	[3]	2047	0	0.36	0
Total				437.11	335.6125
Per 100 grams, kCal:					76.7798723

11407

Cheese		
Source	Vitamin B12	
USDA Vit.B12 database:	4oz=0.53 micrograms	
[6]	3.5oz=100g	
	3.5oz/x=	4.0oz/0.53
	x=0.46 micrograms	

11408

11408	**Curd / Yogurt (Loose/packed)**														
available individually in FCT 2001 and not in FAO Infoods, we will average the two without weighing															
numbers in FCT 2001	NDB # in USDA	NAME	kCAL	Iron (mg)	Folate DFE (ug)	Vitamin B12 (ug)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (ug)	Vitamin B6 (mg)
H-130	1116	Curd (Dahi)	72	0.15	9	0.46	0.06	0	0.47	0.226	2	0.023	0.03	0.1	0.032
			[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]

H-139	1116	Yogurt	71	0.4	7	0.37	0.06	0	0.6	0.14	30	0.03	0.09	0.1	0.032
			[1]	[1]	[3]	[3]	[3]	[1]	[1]	[1]	[1]	[1]	[3]	[3]	[3]
		Calculated average													
			71.5	0.275	8	0.415	0.06	0	0.535	0.183	16	0.0265	0.06	0.1	0.032
			[1],[3]	[1],[3]	[1],[3]	[3]	[3]	[3]	[1],[3]	[1],[3]	[1],[3]	[1],[3]	[3]	[3]	[3]
			11408 (calc)	11408 (calc)	11408 (calc)	11408 (calc)	11408 (calc)	11408 (calc)	11408 (calc)	11408 (calc)	11408 (calc)	11408 (calc)	11408 (calc)	11408 (calc)	11408 (calc)

11410

Other items like Femi, Kheer, Condensed milk, Cream, Kulfi, etc.														
available individually in FCT 2001 and not in FAO Infoods, we will average the five without weighing. For Femi and Kheer, sources did not contained nutritional values. Recipes were used to calculate this below.														
NBD # in USDA FDC	NAME	kCAL	Iron (mg)	Folate DFE (ug)	Vitamin B12 (ug)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (ug)	Vitamin B6 (mg)
	Femi	129.210263	0.53623279	5.21902378	0.3514393	0.05466834	0	0.51455569	0.14290488	35.9249061	0.06971715	0.05184606	0.07809762	0.04820275
		calculated recipe below												
	Kheer	129.210263	0.53623279	5.21902378	0.3514393	0.05466834	0	0.51455569	0.14290488	35.9249061	0.06971715	0.05184606	0.07809762	0.04820275
		calculated recipe below												
1095	Condensed Milk	321	0.19	11	0.44	0.16	2.6	0.94	0.416	74	0.09	0.015	0.2	0.051
		[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
1052	Cream	292	0.03	4	0.2	0.88	0.6	0.25	0.125	279	0.024	0.007	0.6	0.028
			[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
	Kulfi	321	0.19	11	0.44	0.16	2.6	0.94	0.416	74	0.09	0.015	0.2	0.051
		[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
	Calculated average													
		238.484105	0.29649312	7.28760951	0.35657572	0.26186733	1.16	0.63182228	0.24856195	99.7699625	0.06868686	0.02813842	0.23123905	0.0452811

		[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
		11410 (calc)	11410 (calc)	11410 (calc)	11410 (calc)	11410 (calc)	11410 (calc)	11410 (calc)	11410 (calc)	11410 (calc)	11410 (calc)	11410 (calc)	11410 (calc)	11410 (calc)

11410 Recipe Calculation

Rice Kheer: Recipe from 2001 Pakistan FCT			
Recipe	Amount	Unit	Final Amount (g)
Rice	30	g	30
Milk	120	ml	124.8
Sugar	5	g	5

Ingredient	Source	Code	Iron(mg/100g)	Recipe(g)	Iron in recipe(mg)
Rice	[3]	20054	1.6	30	0.48
Milk	[3]	1211	0.3	124.8	0.3744
Sugar	[3]	19335	0.05	5	0.0025
Total				159.8	0.8569
Per 100 grams, iron(mg):					0.53623279

Ingredient	Source	Code	Folate(mcg/100g)	Recipe(g)	Folate in recipe(mg)
Rice	[3]	20054	7	30	2.1
Milk	[3]	1211	5	124.8	6.24
Sugar	[3]	19335	0	5	0
Total				159.8	8.34
Per 100 grams, Folate (mcg):					5.21902378

Ingredient	Source	Code	Vit A in recipe(mcg/100g)	Recipe(g)	Vit.A RAE in recipe(mcg)
Rice	[3]	20054	0	30	0
Milk	[3]	1211	46	124.8	57.408
Sugar	[3]	19335	0	5	0
Total				159.8	57.408
Per 100 grams, Vit.A RAE(mcg):					35.9249061

Ingredient	Source	Code	Vit B12 in recipe(mcg/100g)	Recipe(g)	Vit.B12 in recipe(mcg)
Rice	[3]	20054	0	30	0
Milk	[3]	1211	0.45	124.8	0.5616
Sugar	[3]	19335	0	5	0
Total				159.8	0.5616
Per 100 grams, Vitamin B12 (mcg):					0.3514393

Ingredient	Source	Code	Zinc(mg/100g)	Recipe(g)	Zinc in recipe(mg)
Rice	[3]	20054	1.2	30	0.36
Milk	[3]	1211	0.37	124.8	0.46176
Sugar	[3]	19335	0.01	5	0.0005
Total				159.8	0.82226

Per 100 grams, Zinc (mg):	0.51455569

Ingredient	Source	Code	Thiamin(mg/100g)	Recipe(g)	Thiamin in recipe(mg)
Rice	[3]	20054	0.18	30	0.054
Milk	[3]	1211	0.046	124.8	0.057408
Sugar	[3]	19335	0	5	0
Total				159.8	0.111408
Per 100 grams, Thiamin (mg):					0.06971715

Ingredient	Source	Code	Riboflavin(mg/100g)	Recipe(g)	Riboflavin in recipe(mg)
Rice	[3]	20054	0.055	30	0.0165
Milk	[3]	1211	0.169	124.8	0.210912
Sugar	[3]	19335	0.019	5	0.00095
Total				159.8	0.228362
Per 100 grams, Riboflavin (mg):					0.14290488

Ingredient	Source	Code	Vit.C(mg/100g)	Recipe(g)	Vit.C in recipe(mg)
Rice	[3]	20054	0	30	0
Milk	[3]	1211	0	124.8	0

Sugar	[3]	19335	0	5	0
Total				159.8	0
Per 100 grams, Vitamin C (mg):					0

Ingredient	Source	Code	Copper(mg/100g)	Recipe(g)	Copper in recipe(mg)
Rice	[3]	20054	0.171	30	0.0513
Milk	[3]	1211	0.025	124.8	0.0312
Sugar	[3]	19335	0.007	5	0.00035
Total				159.8	0.08285
Per 100 grams, Copper (mg):					0.05184606

Ingredient	Source	Code	Vit.E(mg/100g)	Recipe(g)	Vit.E in recipe(mg)
Rice	[3]	20054	0	30	0
Milk	[3]	1211	0.07	124.8	0.08736
Sugar	[3]	19335	0	5	0
Total				159.8	0.08736
Per 100 grams, Vitamin E (mg):					0.05466834

Ingredient	Source	Code	Vit.B6 (mg/100g)	Recipe(g)	Vit. B6 in recipe(mg)
Rice	[3]	20054	0.107	30	0.0321
Milk	[3]	1211	0.036	124.8	0.044928
Sugar	[3]	19335	0	5	0

Total	159.8	0.077028
Per 100 grams, Vitamin B6 (mg):		0.04820275

Ingredient	Source	Code	Vit.D (mcg/100g)	Recipe(g)	Vit. D in recipe(mcg)
Rice	[3]	20054	0	30	0
Milk	[3]	1211	0.1	124.8	0.1248
Sugar	[3]	19335	0	5	0
Total				159.8	0.1248
Per 100 grams, Vitamin D(mcg):					0.07809762

Ingredient	Source	Code	Kcal/100g	Recipe(g)	Kcal in recipe
Rice	[3]	20054	370	30	111
Milk	[3]	1211	61	124.8	76.128
Sugar	[3]	19335	387	5	19.35
Total				159.8	206.478
Per 100 grams, kCAL					129.210263

11204

11204	Other poultry birds (ducks, quail, turkey etc.)															
available individually in FCT 2001 and not in FAO Infoods, we will average the three without weighing																
Indian FCT code	FCT 2001 code	NBD # in USDA FDC	NAME	kCAL	Iron (mg)	Folate DFE (ug)	Vitamin B12 (ug)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (ug)	Vitamin B6 (mg)
	I-147	5144 and 5141	Duck	326	1.6	21	0.65	0.7	0	1.9	0.22	24	0.09	0.31	0.1	0.53
				[1]	[1]	[3]	[3]	[3]	[1]	[1]	[1]	[1]	[1]	[3]	[3]	[3]
N015		5157 and 1098643	Quail	192	3.97	8	0.43	0.7	6.1	2.42	0.26	73	0.24	0.51	0.2	0.6
				[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
		5165	Turkey	144	0.86	7	0	0.09	0	1.78	0.185	17	0.05	0.07	0.3	0.599
				[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
calculated average:																
				220.67	2.14	12.00	0.36	0.50	2.03	2.03	0.22	38.00	0.13	0.30	0.20	0.58
				[1], [3]	[1], [3]	[3]	[3]	[3]	[1], [3]	[1], [3]	[1], [3]	[1], [3]	[1], [3]	[3]	[3]	[3]
				11204	11204 (calc)	11204 (calc)	11204 (calc)	11204 (calc)	11204 (calc)	11204 (calc)	11204 (calc)	11204 (calc)	11204 (calc)	11204	11204 (calc)	11204 (calc)

				(calc)										(calc)		

11302

11302	Prawns, Shrimps or Crabs (fresh, frozen, canned)															
available individually in FCT 2001 and USDA FDC,not in FAO Infoods. We will average the three without weighing.																
Indian FCT code	FCT 2001	NBD # in USDA FDC	NAME	kCAL	Iron (mg)	Folate DFE (ug)	Vitamin B12 (ug)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (ug)	Vitamin B6 (mg)
r008	J-162	1099155	Prawns	96	1	18	0.85	1.68	0	1.3	0.8	11	0.03	0.209	0.1	0.185
				[1]	[1]	[3]	[3]	[3]	[1]	[1]	[1]	[1]	[1]	[3]	[3]	[3]
	J-163	15149	Shrimp	102	1.6	19	1.11	1.32	1	1.2	0.12	18	0.85	0.182	0.1	0.161
				[1]	[1]	[3]	[3]	[3]	[1]	[1]	[1]	[1]	[1]	[3]	[3]	[3]
	I-154	26305131	Crab	88	1.8	73	3.08	1.77	0	3.5	0.03	2	0.08	0.808	0.1	0.159

				[1]	[1]	[3]	[3]	[3]	[1]	[1]	[1]	[1]	[1]	[3]	[3]	[3]
Calculated average																
				95.33	1.47	36.67	1.68	1.59	0.33	2.00	0.32	10.33	0.32	0.40	0.10	0.17
				[1]	[1]	[3]	[3]	[3]	[1]	[1]	[1]	[1]	[1]	[3]	[3]	[3]
				11302 (calc)	11302 (calc)	11302 (calc)	11302 (calc)	11302 (calc)	11302 (calc)	11302 (calc)	11302 (calc)	11302 (calc)	11302 (calc)	11302 (calc)	11302 (calc)	11302 (calc)

11602

11602	Malta/Mosami/Kinno

available individually in FCT 2001 and USDA FDC,not in FAO Infoods. We will average the three without weighing.

numbers	NDB # in	NAME	kCAL	Iron (mg)	Folate DFE (ug)	Vitamin B12 (ug)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (ug)	Vitamin B6 (mg)
F-105	9201,	Malta	43	0.5	39	0	0.11	43	0.1	0.03	21	0.07	0.04	0	0.051
			[1]	[1]	[3]	[3]	[3]	[1]	[1]	[1]	[1]	[1]	[3]	[3]	[3]
	9159	Mosami	30	0.6	8	0	0.22	29.1	0.1	0.02	2	0.03	0.065	0	0.043
			[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[1]	[3]	[3]	[3]	[3]
F-	9218	Kinn	44	0.5	16	0	0.2	25	0.2	0.05	98	0.63	0.04	0	0.078
			[1]	[1]	[3]	[3]	[3]	[1]	[1]	[1]	[1]	[1]	[3]	[3]	[3]

Malta and Kinno Averaged:

			39.00	0.53	21.00	0.00	0.18	32.37	0.13	0.03	40.33	0.24	0.05	0.00	0.06
			[1],[3]	[1],[3]	[3]	[1],[3]	[3]	[1],[3]	[1],[3]	[1],[3]	[1],[3]	[1],[3]	[3]	[3]	[3]
			11602 (calc)	11602 (calc)	11602 (calc)	11602 (calc)	11602 (calc)	11602 (calc)	11602 (calc)	11602 (calc)	11602 (calc)	11602 (calc)	11602 (calc)	11602 (calc)	11602 (calc)

11608

11608		Water Melon/ Melon (Turbooz/ Kharbooza/ Garma/ Sarda)													
available individually in FCT 2001 and USDA FDC,not in FAO Infoods. We will average the three withought weighing.															
FCT 2001 CODE	NBD # in USDA FDC	NAME	kCAL	Iron (mg)	Folate DFE (ug)	Vitamin B12 (ug)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (ug)	Vitamin B6 (mg)
F-101	9326	Watermelon	23	0.2	3	0	0.05	6	0.1	0.03	37	0.03	0.042	0	0.045
			[1]	[1]	[3]	[3]	[3]	[1]	[1]	[1]	[1]	[1]	[3]	[3]	[3]
	9184	Kharbooza	36	0.17	19	0	0.02	18	0.09	0.012	3	0.038	0.024	0	0.088
			[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
	9181	Garma	34	0.21	21	0	0.05	36.7	0.18	0.019	169	0.041	0.041	0	0.073
			[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
F-100	1662215, calculated average below	Sarda	37	0.27	20	0	0.035	30	0.1	0.03	332	0.04	0.0325	0	0.0805
			[3]	[3]	Avg. below	Avg. below	Avg. below)	[1]	[1]	[1]	[1]	[1]	Avg. below	Avg. below	Avg. below
Calculated average:															

			32.50	0.21	15.75	0.00	0.04	22.68	0.12	0.02	135.25	0.04	0.03	0.00	0.07
			[1], [3]	[1], [3]	[3]	[3]	[3]	[1], [3]	[1], [3]	[1], [3]	[1], [3]	[1], [3]	[1], [3]	[3]	[3]
			11608 (calc)	11608 (calc)	11608 (calc)	11608 (calc)	11608 (calc)	11608 (calc)	11608 (calc)	11608 (calc)	11608 (calc)	11608 (calc)	11608 (calc)	11608 (calc)	11608 (calc)

11609

11609		Alou Bukhara (Plum), Apricot (Khobani), Guava													
available individually in FCT 2001 and not in FAO Infoods, we will average the three without weighing															
FCT 2001 code	NBD # in USDA FDC	NAME	kCAL	Iron (mg)	Folate DFE (ug)	Vitamin B12 (ug)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (ug)	Vitamin B6 (mg)
110	9279	Alou Bukhara (plum)	51	0.6	0	0	0.12	10	0.1	0.04	32	0.03	0.057	0	0.029
			[1]	[1]	[3]	[3]	[3]	[1]	[1]	[1]	[1]	[1]	[3]	[3]	[3]
84	9021	Apricot (Khobani)	53	0.9	0	0	0.89	10	0.3	0.05	261	0.04	0.078	0	0.054
			[1]	[1]	[3]	[3]	[3]	[1]	[1]	[1]	[1]	[1]	[3]	[3]	[3]
92	9139	Guava	73	0.9	0	0	0.73	217	0.2	0.07	79	0.05	0.23	0	0.11
			[1]	[1]	[3]	[3]	[3]	[1]	[1]	[1]	[1]	[1]	[3]	[3]	[3]
calculated average															
			59.00	0.80	0.00	0.00	0.58	79.00	0.20	0.05	124.00	0.04	0.12	0.00	0.06
			[1]	[1]	[3]	[3]	[3]	[1]	[1]	[1]	[1]	[1]	[3]	[3]	[3]

			11609 (calc)	11609 (calc)	11609 (calc)	11609 (calc)	11609 (calc)	11609 (calc)	11609 (calc)	11609 (calc)	11609 (calc)	11609 (calc)	11609 (calc)	11609 (calc)	11609 (calc)

11610

11610		Other fresh Fruits (Pomegranate, Strawberry, Papaya, etc.)													
available individually in FCT 2001 and not in FAO Infoods, we will average the three without weighing															
FCT 2021 code	NBD # IN FDC	NAME	kCAL	Iron (mg)	Folate DFE (ug)	Vitamin B12 (ug)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (ug)	Vitamin B6 (mg)
F-111	9286	Pomegrana -te	66	0.8	0	0	0.6	13	0.1	0.05	0	0.06	0.158	0	0.075
			[1]	[1]	[3]	[3]	[3]	[1]	[1]	[1]	[1]	[1]	[3]	[3]	[3]
F-112	9226	Papaya	43	0.4	0	0	0.3	59	0.1	0.04	28	0.03	0.045	0	0.038
			[1]	[1]	[3]	[3]	[3]	[1]	[1]	[1]	[1]	[1]	[3]	[3]	[3]

F-114	9316	Strawberry	35	0.9	0	0	0.29	46	0.13	0.04	533	0.04	0.048	0	0.047
			[1]	[1]	[3]	[3]	[3]	[1]	[1]	[1]	[1]	[1]	[3]	[3]	[3]
calculated average															
			48.00	0.70	0.00	0.00	0.40	39.33	0.11	0.04	187.00	0.04	0.08	0.00	0.05
			[1]	[1]	[3]	[3]	[3]	[1]	[1]	[1]	[1]	[1]	[3]	[3]	[3]
			11610 (calc)	11610 (calc)	11610 (calc)	11610 (calc)	11610 (calc)	11610 (calc)	11610 (calc)	11610 (calc)	11610 (calc)	11610 (calc)	11610 (calc)	11610 (calc)	11610 (calc)

11612

11612	Almond, walnut, pistachio, kaju

Almond, Pistachio, Walnut were available on FAO stat and these values were used to weigh the nutrient values. Kaju (Cashew) was unavailable on FAO stat and is excluded in this calculation.

Element Code	Item Code (FAO)	Item	Year Code	Year	Unit	Value	Percentage	kCAL value	kCAL average of almond.	Element					
5510	221	Almonds, with shell	2018	2018	tonnes	20615	0.574442	613	352.132945	Production					
5510	223	Pistachios	2018	2018	tonnes	654	0.018 22387	590	10.75 20829	Production					
5510	222	Walnuts, with shell	2018	2018	tonnes	14618	0.407 33413	654	266.3 96522	Production					
						35887			629.2 8155						
Individual foods unweighted															

FCT 2001 code	NDB # in USDA FDC	Name	kCAL	Iron (mg)	Folate DFE (ug)	Vitamin B12 (ug)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (ug)	Vitamin B6 (mg)
G-117	12061	Almond	613	4.5	44	0	25.6	0	3.4	0.6	1	0.25	1.03	0	0.137
G-124	12151	Pistachio	590	6	51	0	2.86	0	2.2	0.19	55	0.7	1.3	0	1.7
G-119	12155	Walnut	654	2.5	98	0	0.7	4	3.1	0.09	4	0.45	1.59	0	0.537
	source		[1]	[1]	[1]	[3]	[3]	[3]	[1]	[1]	[1]	[1]	[1]	[3]	[3]
Individual foods weighted															
			kCAL	Iron (mg)	Folate DFE (ug)	Vitamin B12 (ug)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (ug)	Vitamin B6 (mg)
		Almond	352.13 29451	2.5849 88993	25.27 5448	0	14.70 57152	0	1.953 10279	0.344 6652	0.574 442	0.143 6105	0.591 67526	0	0.078 69855
		Pistachio	10.752 08293	0.1093 43216	0.929 4173	0	0.052 12027	0	0.040 09251	0.003 46254	1.002 31282	0.285 13389	0.023 69103	0	0.030 98058
		Walnut	266.39 65224	1.0183 3533	39.91 8745	0	0.285 13389	1.629 33653	1.262 73581	0.036 66007	1.629 33653	0.183 30036	0.529 53437	0	0.692 46802
Calculation, weighted foods averaged															
calculation code:	11612 (calc)	Almond, Pistachio, Walnut	kCAL	Iron (mg)	Folate DFE (ug)	Vitamin B12 (ug)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (ug)	Vitamin B6 (mg)
			629.28	3.71	66.12	0.00	15.04	1.63	3.26	0.38	3.21	0.61	1.14	0.00	0.80
			[1], [2]	[1], [2]	[2], [3]	[2],[3]	[3]	[1], [2]	[1], [2]	[1], [2]	[1], [2]	[1], [2]	[2],[3]	[3]	[3]
			11612 (calc)	11612 (calc)	11612 (calc)	11612 (calc)	11612 (calc)	11612 (calc)	11612 (calc)	11612 (calc)	11612 (calc)	11612 (calc)	11612 (calc)	11612 (calc)	11612 (calc)

11613

11613		Other dry fruits (Dry Dates, Peanut, Aniseed, Cashew, Coconut, Sesame seeds, etc.)													
available individually in FCT 2001 and not in FAO Infoods, we will average the three without weighing															
FCT 2001 CODE	NBD # in USDA	NAME	kCAL	Iron (mg)	Folate DFE (ug)	Vitamin B12 (ug)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (ug)	Vitamin B6 (mg)
F-87	9087	Dry dates	293	3	19	0	0.05	2	0.2	0.07	2	0.1	0.206	0	0.165
			[1]	[1]	[3]	[3]	[3]	[1]	[1]	[1]	[1]	[1]	[3]	[3]	[3]
G-126	16087	Peanut	552	2.6	240	0	8.33	0	1.8	0.21	0	0.82	1.14	0	0.348
			[1]	[1]	[3]	[3]	[3]	[1]	[1]	[1]	[1]	[1]	[3]	[3]	[3]
G-119	2002	Aniseed	345	3.6	10	0		21	5.3	0	31	0	0.91	0	0.65
			[1]	[1]	[3]	[3]		[3]	[1]	[1]	[1]	[1]	[3]	[3]	[3]
G-121	12087	Cashew	528	3.3	25	0	0.9	1	5.6	0.24	0	0.46	2.2	0	0.417
			[1]	[1]	[3]	[3]	[3]	[1]	[1]	[1]	[1]	[1]	[3]	[3]	[3]

G-122	12108	Coconut	321	2	9	0	0.44	3	1.1	0.03	0	0.07	0.796	0	0.3
			[1]	[1]	[3]	[3]	[3]	[1]	[1]	[1]	[1]	[1]	[3]	[3]	[3]
G-127	12023	Sesame seed	580	16.7	97	0	0.25	0	7.8	0.41	1	0.77	4.08	0	0.79
			[1]	[1]	[3]	[3]	[3]	[3]	[1]	[1]	[1]	[1]	[3]	[3]	[3]
Calculated average															
			436.50	5.20	66.67	0.00	1.99	4.50	3.63	0.16	5.67	0.37	1.56	0.00	0.45
			[1]	[1]	[3]	[3]	[3]	[1], [3]	[1]	[1]	[1]	[1]	[3]	[1]	[1]
			11613 (calc)	11613 (calc)	11613 (calc)	11613 (calc)	11613 (calc)	11613 (calc)	11613 (calc)	11613 (calc)	11613 (calc)	11613 (calc)	11613 (calc)	11613 (calc)	11613 (calc)

11704

11704		Cabbage, Cauliflower														
available individually in FCT 2001 and not in FAO Infoods, we will average the three without weighing																
FCT 2001	NDB # in	ID # in	NAME	kCAL	Iron (mg)	Folate DFE (ug)	Vitamin B12 (ug)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (ug)	Vitamin B6 (mg)
C-48	11135	169986	Cauliflow	27	0.8	57	0	0.08	48	0.3	0.07	2	0.07	0.039	0	0.184
				[1]	[1]	[3]	[3]	[3]	[1]	[1]	[1]	[1]	[1]	[3]	[3]	[3]
C-50	11109	169975	Cabbage	23	0.5	43	0	0.15	57	0.2	0.05	13	0.06	0.019	0	0.124
Calculated average:																

				25.00	0.65	50.00	0.00	0.12	52.50	0.25	0.06	7.50	0.07	0.03	0.00	0.15
				[1]	[1]	[3]	[3]	[3]	[1]	[1]	[1]	[1]	[1]	[3]	[3]	[3]
				11704 (calc)	11704 (calc)	11704 (calc)	11704 (calc)	11704 (calc)	11704 (calc)	11704 (calc)	11704 (calc)	11704 (calc)	11704 (calc)	11704 (calc)	11704 (calc)	11704 (calc)

11705

11705	Bitter Gourd, Lady Finger, Brinjal, Cucumber														
available individually in FCT 2001 and not in FAO Infoods, we will average the three without weighing															
FCT 2001	NDB # in	NAME	kCAL	Iron (mg)	Folate DFE (ug)	Vitamin B12 (ug)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (ug)	Vitamin B6 (mg)
C-	112	Cucumber,	15	0.28	7	0	0.03	2.8	0.2	0.033	5	0.027	0.041	0	0.04
			[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
C-47	11209	Bringal (Eggplant, raw)	25	0.23	22	0	0.3	2.2	0.16	0.037	1	0.039	0.081	0	0.084
			[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
C-	112	Lady Fing	33	0.62	60	0	0.27	23	0.58	0.06	36	0.2	0.109	0	0.215

			[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
C-46	11024, 11220	Bitter Gourd (Balsam-pear, pods, raw)	17	0.43	72	0	0.01	84	0.8	0.04	24	0.04	0.034	0	0.043
			[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
Calculated average:															
			22.50	0.39	40.25	0.00	0.15	28.00	0.44	0.04	16.50	0.08	0.07	0.00	0.10
			[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
			11705 (calc)	11705 (calc)	11705 (calc)	11705 (calc)	11705 (calc)	11705 (calc)	11705 (calc)	11705 (calc)	11705 (calc)	11705 (calc)	11705 (calc)	11705 (calc)	11705 (calc)

11706

11706	Tinda, Pumpkin, Bottle Gourd														
available individually in FCT 2001 and not in FAO Infoods, we will average the three without weighing															
FCT 2001	NDB # in	NAME	kCAL	Iron (mg)	Folate DFE (ug)	Vitamin B12 (ug)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (ug)	Vitamin B6 (mg)
C-61	11422	Pumpki	26	0.6	16	0	1.06	13	0.3	0.09	426	0.05	0.127	0	0.061
			[3]	[1]	[3]	[3]	[3]	[1]	[1]	[1]	[3]	[1]	[3]	[3]	[3]
C-45	11218	Bottle	15	0.8	6	0	0.1	9	0.7	0.02	21	0.02	0.026	0	0.04

			[1]	[1]	[3]	[3]	[3]	[1]	[1]	[1]	[1]	[1]	[3]	[3]	[3]
C-64	N/A	Tinda	23	1.1	6	0	0.1	31	0.2	0.04	21	0.07	0.026	0	0.04
			[1]	[1]	[3]	[3]	[3]	[1]	[1]	[1]	[1]	[1]	[3]	[3]	[3]
Calculated average															
			21.33	0.83	9.33	0.00	0.42	17.67	0.40	0.05	156.00	0.05	0.06	0.00	0.05
			[1], [3]	[1]	[3]	[3]	[3]	[1]	[1]	[1]	[1], [3]	[1]	[3]	[3]	[3]
			11706 (calc)	11706 (calc)	11706 (calc)	11706 (calc)	11706 (calc)	11706 (calc)	11706 (calc)	11706 (calc)	11706 (calc)	11706 (calc)	11706 (calc)	11706 (calc)	11706 (calc)

11707

11707	Turnip, Raddish, Carrot														
available individually in FCT 2001 and not in FAO Infoods, we will average the three withought weighing															
FCT 2001	NDB # in	NAME	kCAL	Iron (mg)	Folate DFE (ug)	Vitamin B12 (ug)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (ug)	Vitamin B6 (mg)
D-73	11564	Turnip	26	0.46	15	0	0.03	25	0.3	0.05	0	0.04	0.085	0	0.09
			[1]	[1]	[3]	[3]	[3]	[1]	[1]	[1]	[1]	[1]	[3]	[3]	[3]
D-72	11429	Raddish	16	0.34	25	0	0	14.8	0.28	0.039	0	0.012	0.05	0	0.071

			[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
D-66	1112	Carro	37	1.5	19	0	0.66	5.9	0.2	0.05	835	0.05	0.045	0	0.138
			[1]	[1]	[3]	[3]	[3]	[3]	[1]	[1]	[3]	[1]	[3]	[3]	[3]
Calculated average:															
			26.33	0.77	19.67	0.00	0.23	15.23	0.26	0.05	278.33	0.03	0.06	0.00	0.10
			[1]	[1],[3]	[3]	[3]	[3]	[1],[3]	[1],[3]	[1],[3]	[1],[3]	[1],[3]	[3]	[3]	[3]
			11707 (calc)	11707 (calc)	11707 (calc)	11707 (calc)	11707 (calc)	11707 (calc)	11707 (calc)	11707 (calc)	11707 (calc)	11707 (calc)	11707 (calc)	11707 (calc)	11707 (calc)

11708

11708	Peas, Moongra														
available individually in FCT 2001 and not in FAO Infoods, we will average the three without weighing															
FCT 2001	NBD # in	NAME	kCAL	Iron (mg)	Folate DFE (ug)	Vitamin B12 (ug)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (ug)	Vitamin B6 (mg)
B-40	11304	Peas	81	5.2	65	0	0.13	2	1.2	0.18	64	0.56	0.176	0	0.169
			[3]	[1]	[3]	[3]	[3]	[1]	[1]	[1]	[1]	[1]	[3]	[3]	[3]

C-56	11676	Moongra	25	4.3	65	0	0.13	57	0.56	0.103	0	0.08	0.12	0	0.285
			[1]	[1]	[3]	[3]	[3]	[1]	[3]	[1]	[1]	[1]	[3]	[3]	[3]
Calculated average:															
			53	4.75	65	0	0.13	29.5	0.88	0.1415	32	0.32	0.148	0	0.227
			[1], [3]	[1]	[3]	[3]	[3]	[1], [3]	[1], [3]	[1]	[1]	[1]	[3]	[3]	[3]
			11708 (calc)	11708 (calc)	11708 (calc)	11708 (calc)	11708 (calc)	11708 (calc)	11708 (calc)	11708 (calc)	11708 (calc)	11708 (calc)	11708 (calc)	11708 (calc)	11708 (calc)

11709

11709	Turai, Arvi, Green pepper														
available individually in FCT 2001 and not in FAO Infoods, we will average the three without weighing															
FCT 2001	NDB # in	NAME	kCAL	Iron (mg)	Folate DFE (ug)	Vitamin B12 (ug)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (ug)	Vitamin B6 (mg)
	75220101	Turai	59	0.65	53	0	0.6	20/4	0.6	0.06	47	0.187	0.113	0	0.219

			[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
	11518	Arvi	112	0.55	22	0	2.38	4.5	0.23	0.025	4	0.095	0.172	0	0.283
			[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
C-59	11333	Green Pepper	25	0.9	10	0	0.37	134	0.1	0.06	63	0.07	0.066	0	0.224
			[1]	[1]	[3]	[3]	[3]	[1]	[1]	[1]	[1]	[1]	[3]	[3]	[3]
Calculated Average															
			65.33	0.70	28.33	0.00	1.12	69.25	0.31	0.05	38.00	0.12	0.12	0.00	0.24
			[1],[3]	[1],[3]	[3]	[3]	[3]	[1],[3]	[1],[3]	[1],[3]	[1],[3]	[1],[3]	[3]	[3]	[3]
			11709 (calc)	11709 (calc)	11709 (calc)	11709 (calc)	11709 (calc)	11709 (calc)	11709 (calc)	11709 (calc)	11709 (calc)	11709 (calc)	11709 (calc)	11709 (calc)	11709 (calc)

11713

11713	Others (Spinach, Saag, Methi, Chillies Green, Dhania, etc.)
available individually in FCT 2001 and not in FAO Infoods, we will average the three without weighing	

NBD # in	NAME	kCAL	Iron (mg)	Folate DFE (ug)	Vitamin B12 (ug)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (ug)	Vitamin B6 (mg)
11457	Spinac	23	2.71	194	0	2.03	28.1	0.53	0.189	469	0.078	0.13	0	0.195
		[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]

11270	Saag	114	1.64	12	0	2.01	70	0.25	0.11	151	0.08	0.165	0	0.18
		[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
2019	Meth	114	1.64	12	0	2.01	70	0.25	0.11	151	0.08	0.165	0	0.18
		[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
11670	Green	40	1.2	23	0	0.69	242	0.3	0.09	59	0.09	0.174	0	0.278
		[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
11165	Dhania	23	1.77	62	0	2.5	27	0.5	0.162	337	0.067	0.225	0	0.149
		[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
calculated average														
		62.80	1.79	60.60	0.00	1.85	87.42	0.37	0.13	233.40	0.08	0.17	0.00	0.20
		[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
		11713 (calc)	11713 (calc)	11713 (calc)	11713 (calc)	11713 (calc)	11713 (calc)	11713 (calc)	11713 (calc)	11713 (calc)	11713 (calc)	11713 (calc)	11713 (calc)	11713 (calc)

11904

11904	Coriander Seeds, Turmeric Powder, Curry Powder													
available individually in FCT 2001 and not in FAO Infoods, we will average the three without weighing														
FCT 2001	NBD # in	NAME	kCAL	Iron (mg)	Folate DFE (ug)	Vitamin B12 (ug)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (ug)	Vitamin B6 (mg)

E-81	2013	Coriander	327	16.7	0	0	0	0	4.7	0.35	0	0.22	0.975	0	0.149
			[1]	[1]	[3]	[3]	[3]	[1]	[1]	[1]	[1]	[1]	[3]	[3]	[3]
E-80	2043	Turmeric	365	16.8	20	0	4.43	3	4.4	0.05	0	16.8	1.3	0	0.107
			[1]	[1]	[3]	[3]	[3]	[1]	[1]	[1]	[1]	[1]	[3]	[3]	[3]
	2015	Curry	325	19.1	56	0	25.2	0.7	4.7	0.2	1	0.176	1.2	0	0.105
			[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
Calculated average															
			339.00	17.53	25.33	0.00	9.88	1.23	4.60	0.20	0.33	5.73	1.16	0.00	1.00
			[1], [3]	[1], [3]	[3]	[3]	[3]	[1], [3]	[1], [3]	[1], [3]	[1], [3]	[1], [3]	[3]	[3]	[3]
			11904 (calc)	11904 (calc)	11904 (calc)	11904 (calc)	11904 (calc)	11904 (calc)	11904 (calc)	11904 (calc)	11904 (calc)	11904 (calc)	11904 (calc)	11904 (calc)	11904 (calc)

11905

11905	Ginger (powder/Paste/Whole)
*values of ginger paste not directly found, so the average of whole ginger and powder were calculated for this group	

FCT 2001	NBD # in	NAME	kCAL	Iron (mg)	Folate DFE (ug)	Vitamin B12 (ug)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (ug)	Vitamin B6 (mg)
	2021	Ginger	335	19.8	13	0	0	0.7	3.64	0.17	2	0.046	0.48	0	0.626
			[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
	15513	Ginger													
	11216	ginger	53	1.7	11	0	0.26	3	0.3	0.03	0	0.01	0.226	0	0.16
			[1]	[1]	[3]	[3]	[3]	[1]	[1]	[1]	[1]	[1]	[3]	[3]	[3]
Calculated average															
			194	10.75	12	0	0.13	1.85	1.97	0.1	1	0.028	0.353	0	0.393
			[1], [3]	[1], [3]	[3]	[3]	[3]	[1], [3]	[1], [3]	[1], [3]	[1], [3]	[1], [3]	[3]	[3]	[3]
			11905 (calc)	11905 (calc)	11905 (calc)	11905 (calc)	11905 (calc)	11905 (calc)	11905 (calc)	11905 (calc)	11905 (calc)	11905 (calc)	11905 (calc)	11905 (calc)	11905 (calc)

11907

11907	Cumin Seeds, Pepper Black, Cloves

available individually in FCT 2001 and not in FAO Infoods, we will average the three without weighing															
FCT 2001 code	NDB # in USDA	NAME	kCAL	Iron (mg)	Folate DFE (ug)	Vitamin B12 (ug)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (ug)	Vitamin B6 (mg)
E-77	2014	Cumin seeds	336	25.3	10	0	3.33	3	4.8	0.036	127	0.55	0.867	0	0.435
			[1]	[1]	[3]	[3]	[3]	[1]	[1]	[1]	[1]	[1]	[3]	[3]	[3]
E-82	2030	Pepper black	268	20.8	17	0	1.04	0	1.4	0	19	0	1.33	0	0.291
			[1]	[1]	[3]	[3]	[3]	[1]	[1]	[1]	[1]	[1]	[3]	[3]	[3]
E-79	2011	Cloves	304	5.5	25	0	8.82	0	1.1	0.18	53	0.1	0.368	0	0.391
			[1]	[1]	[3]	[3]	[3]	[1]	[1]	[1]	[1]	[1]	[3]	[3]	[3]
Calculated average:															
			302.67	17.20	17.33	0.00	4.40	1.00	2.43	0.07	66.33	0.22	0.86	0.00	1.00
			[1]	[1]	[3]	[3]	[3]	[1]	[1]	[1]	[1]	[1]	[3]	[3]	[3]
			11907 (calc)	11907 (calc)	11907 (calc)	11907 (calc)	11907 (calc)	11907 (calc)	11907 (calc)	11907 (calc)	11907 (calc)	11907 (calc)	11907 (calc)	11907 (calc)	11907 (calc)

11908

11908	Other spices (saunf, cinnamon, etc.)

available individually in FCT 2001 and not in FAO Infoods, we will average the three without weighing															
FCT 2001code	NBD # in USDA FDC	NAME	kCAL	Iron (mg)	Folate DFE (ug)	Vitamin B12 (ug)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (ug)	Vitamin B6 (mg)
	2018, 11957	Saunf	345	18.5	27	0	0.58	21	3.7	0.353	7	0.408	1.07	0	0.47
			[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
E-76	2010	Cinnamon	259	15	6	0	2.32	0	2	0.4	26	0.1	0.339	0	0.158
			[1]	[1]	[3]	[3]	[3]	[1]	[1]	[1]	[1]	[1]	[3]	[3]	[3]
Calculated average															
			302.00	16.75	16.50	0.00	1.45	10.50	2.85	0.38	16.50	0.25	0.70	0.00	0.31
			[1], [3]	[1], [3]	[3]	[3]	[3]	[1], [3]	[1], [3]	[1], [3]	[1], [3]	[1], [3]	[3]	[3]	[3]
			11908 (calc)	11908 (calc)	11908 (calc)	11908 (calc)	11908 (calc)	11908 (calc)	11908 (calc)	11908 (calc)	11908 (calc)	11908 (calc)	11908 (calc)	11908 (calc)	11908 (calc)

11802

11802	Gur, Shaker

available individually in FCT 2001 and not in FAO Infoods, we will average the three without weighing															
FCT 2001	NBD # in	NAME	kCAL	Iron (mg)	Folate DFE (ug)	Vitamin B12 (ug)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (ug)	Vitamin B6 (mg)
M-187	19304	Gur	310	3.1	0	0	0	3	0	0	0	0	0.487	0	0.67
			[1]	[1]	[3]	[3]	[3]	[1]	[1]	[1]	[1]	[1]	[3]	[3]	[3]
M-186	19334	Shaker	371	2.8	1	0	0	0	2.9	0.03	0	0.01	0.047	0	0.041
			[1]	[1]	[3]	[3]	[3]	[1]	[1]	[1]	[1]	[1]	[3]	[3]	[3]
Calculated average															
			340.5	2.95	0.5	0	0	1.5	1.45	0.015	0	0.005	0.267	0	0.3555
			[1]	[1]	[3]	[3]	[3]	[1]	[1]	[1]	[1]	[1]	[3]	[3]	[3]
			11802 (calc)	11802 (calc)	11802 (calc)	11802 (calc)	11802 (calc)	11802 (calc)	11802 (calc)	11802 (calc)	11802 (calc)	11802 (calc)	11802 (calc)	11802 (calc)	11802 (calc)

11804

11804	Toffee/Chocolate
available individually in FCT 2001 and not in FAO Infoods, we will average the three without weighing	

FCT 2001	NBD # in	NAME	kCAL	Iron (mg)	Folate DFE (ug)	Vitamin B12 (ug)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (ug)	Vitamin B6 (mg)
	19383	Toffee	560	0.03	2	0.11	0.94	0.2	0.12	0.068	319	0.008	0.003	0.1	0.009
			[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
	19120	Chocolate	535	2.35	11	0.75	0.51	0.8	2.3	0.298	59	0.112	0.491	0	0.036
			[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
Calculated average															
			547.50	1.19	6.50	0.43	0.73	0.50	1.21	0.18	189.00	0.06	0.25	0.05	0.02
			[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
			11804 (calc)	11804 (calc)	11804 (calc)	11804 (calc)	11804 (calc)	11804 (calc)	11804 (calc)	11804 (calc)	11804 (calc)	11804 (calc)	11804 (calc)	11804 (calc)	11804 (calc)

11805

11805	Barfi, Jaleebi, Halwa & other Sweetmeats															
available individually in FCT 2001 and not in FAO Infoods, we will average the three without weighing																
Bangladesh	FCT 2001	NBD # in	kCAL	Iron (mg)	Folate DFE (ug)	Vitamin B12 (ug)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (ug)	Vitamin B6 (mg)	Vitamin B6
	M-189	13252500	Barfi	384	1.7	4	0.23	0.71	0	0.2	0	0	0	0.047	0.1	0.07
				[1]	[1]	[3]	[3]	[3]	[1]	[1]	[1]	[1]	[1]	[3]	[3]	[3]
1103656	M-190		Jaleebi	395	1.6	129	0	0.62	0	0	0	0	0	0.167	0	0
				[1]	[1]	[5]	[5]	[5]	[1]	[1]	[1]	[1]	[1]	[5]	[5]	[5]
8066	M-192		Halwa	481	1	154	0	0	0	0	0	0	0	0.239	0	0.152
				[1]	[1]	[5]	[5]	[5]	[1]	[1]	[1]	[1]	[1]	[5]	[5]	[5]
calculated average																
				420.00	1.43	95.67	0.08	0.44	0.00	0.07	0.00	0.00	0.00	0.15	0.03	0.07
				[1]	[1]	[3], [5]	[3], [5]	[3], [5]	[1]	[1]	[1]	[1]	[1]	[3], [5]	[3], [5]	[3], [5]
				11805 (calc)	11805 (calc)	11805 (calc)	11805 (calc)	11805 (calc)	11805 (calc)	11805 (calc)	11805 (calc)	11805 (calc)	11805 (calc)	11805 (calc)	11805 (calc)	11805 (calc)

11806

11806		Glucose, Energile, Tang, Lemon Pani, etc.													
Because we cannot find nutritional information of Lemon Pani, we need to self calculate the nutrient contents using the recipe															
FCT 2001	NBD # in USDA FDC	NAME	kCAL	Iron (mg)	Folate DFE (ug)	Vitamin B12 (ug)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (ug)	Vitamin B6 (mg)
N/A	95330500	Glucose	0	0	0	0	0	0	0.01	0	0	0	0.01	0	0
			[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
N/A	N/A	Energile													
N/A	92900100	Tang	396	0.02	0	0	0	230.8	0.01	0.68	599	0.001	0.013	0	0.8
			[3]	[3]	[3]	[3]		[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
N/A		Lemon Pani	52	0.39890704	15.124536	0	0.00913634	24.3926404	0.064587395	0.02255348	6.6906 4946	0.0167 34862	0.0212 6116	0	0.0313 4807
Calculated average:															
			149.33	0.14	5.04	0.00	0.00	85.06	0.03	0.23	201.90	0.01	0.01	0.00	0.28
			[3]	[1],[3]	[3]	[3]	[3]	[3]	[3]	[3]	[1], [3]	[3]	[3]	[3]	[3]
			11806 (calc)	11806 (calc)	11806 (calc)	11806 (calc)	11806 (calc)	11806 (calc)	11806 (calc)	11806 (calc)	11806 (calc)	11806 (calc)	11806 (calc)	11806 (calc)	11806 (calc)

Recipe calculation

Lemon Pani

Recipe	Amount	Unit	Final Amount (g)
Lemon Juice	3	Tbsp	44.36
Sugar	2	Tbsp	25.11
Salt (to taste)	/	/	/
Black salt	0.25	Tsp	1.48
Ice	5	cubes	/
Mint Leaves	1	Tbsp	1.88

Ingredient	Source	Code	Iron(mg/100g)	Recipe(g)	Iron in recipe(mg)
Lemon Juice	[1]	M-194	0.1	44.36	0.04436
Sugar	[1]	M-185	0.6	25.11	0.15066
Black salt	[3]	2047	0	1.48	0
Mint Leaves	[3]	2064	5.08	1.88	0.095504
Total				72.83	0.290524
Per 100 grams, iron(mg):					0.39890704

Ingredient	Source	Code	Folate(mcg/100g)	Recipe(g)	Folate in recipe(mg)
Lemon Juice	[3]	9152	20	44.36	8.872
Sugar	[3]	19335	0	25.11	0
Black salt	[3]	2047	0	1.48	0
Mint Leaves	[3]	2064	114	1.88	2.1432
Total				72.83	11.0152
Per 100 grams, folate(mcg):					15.1245366

Ingredient	Source	Code	Vit A in recipe(mcg/100g)	Recipe(g)	Vit.A RAE in recipe(mcg)
Lemon Juice	[1]	M-194	2	44.36	0.8872
Sugar	[1]	M-185	0	25.11	0
Black salt	[3]	1135517	0	1.48	0
Mint Leaves	[3]	2064	212	1.88	3.9856
Total				72.83	4.8728
Per 100 grams, Vit.A RAE(mcg):					6.69064946

Ingredient	Source	Code	Vit B12 in recipe(mcg/100g)	Recipe(g)	Vit.B12 in recipe(mcg)
Lemon Juice	[3]	9152	0	44.36	0
Sugar	[3]	19335	0	25.11	0
Black salt	[3]	2047	0	1.48	0
Mint Leaves	[3]	2064	0	1.88	0
Total				72.83	0
Per 100 grams, Vit.B12(mcg):					0

Ingredient	Source	Code	Zinc(mg/100g)	Recipe(g)	Zinc in recipe(mg)
Lemon Juice	[3]	9152	0.05	44.36	0.02218
Sugar	[3]	19335	0.01	25.11	0.002511
Black salt	[3]	2047	0.1	1.48	0.00148
Mint Leaves	[3]	2064	1.11	1.88	0.020868
Total				72.83	0.047039
Per 100 grams, Zinc(mg):					0.0645874

Ingredient	Source	Code	Thiamin(mg/100g)	Recipe(g)	Thiamin in recipe(mg)
Lemon Juice	[3]	9152	0.024	44.36	0.0106464
Sugar	[3]	19335	0	25.11	0
Black salt	[3]	2047	0	1.48	0
Mint Leaves	[3]	2064	0.082	1.88	0.0015416
Total				72.83	0.012188
Per 100 grams, Thiamin(mg):					0.01673486

Ingredient	Source	Code	Riboflavin(mg/100g)	Recipe(g)	Riboflavin in recipe(mg)
Lemon Juice	[3]	9152	0.015	44.36	0.006654
Sugar	[3]	19335	0.019	25.11	0.0047709
Black salt	[3]	2047	0	1.48	0
Mint Leaves	[3]	2064	0.266	1.88	0.0050008
Total				72.83	0.0164257
Per 100 grams, Riboflavin(mg):					0.02255348

Ingredient	Source	Code	Vit.C(mg/100g)	Recipe(g)	Vit.C in recipe(mg)
Lemon Juice	[3]	9152	38.7	44.36	17.16732
Sugar	[3]	19335	0	25.11	0
Black salt	[3]	2047	0	1.48	0
Mint Leaves	[3]	2064	31.8	1.88	0.59784
Total				72.83	17.76516
Per 100 grams, Vit.C(mg):					24.3926404

Ingredient	Source	Code	Copper(mg/100g)	Recipe(g)	Copper in recipe(mg)
Lemon Juice	[3]	9152	0.016	44.36	0.0070976
Sugar	[3]	19335	0.007	25.11	0.0017577
Black salt	[3]	2047	0.03	1.48	0.000444
Mint Leaves	[3]	2064	0.329	1.88	0.0061852
Total				72.83	0.0154845
Per 100 grams, Copper(mg):					0.02126116

Ingredient	Source	Code	Vit.E(mg/100g)	Recipe(g)	Vit.E in recipe(mg)
Lemon Juice	[3]	9152	0.015	44.36	0.006654
Sugar	[3]	19335	0	25.11	0
Black salt	[3]	2047	0	1.48	0
Mint Leaves	[3]	2064		1.88	
Total				72.83	0.006654
Per 100 grams, Riboflavin(mg):					0.00913634
** could not find Vit.E for mint leaves					

Ingredient	Source	Code	Vit.D(ug/100g)	Recipe(g)	Vit.D in recipe(ug)
Lemon Juice	[3]	9152	0	44.36	0
Sugar	[3]	19335	0	25.11	0
Black salt	[3]	2047	0	1.48	0
Mint Leaves	[3]	2064	0	1.88	0
Total				72.83	0
Per 100 grams, Vit.D(ug):					0

Ingredient	Source	Code	Vit.B6 (mg/100g)	Recipe(g)	Vit.B6 in recipe(mg)
Lemon Juice	[3]	9152	0.046	44.36	0.0204056
Sugar	[3]	19335	0	25.11	0
Black salt	[3]	2047	0	1.48	0
Mint Leaves	[3]	2064	0.129	1.88	0.0024252
Total				72.83	0.0228308
Per 100 grams, Vit.B6 (mg):					0.03134807

11808

11808	Custard Powder/ Jelly powder													
not available individually in FCT 2001 and not in FAO Infoods, we will average the three without weighing with values reported in the USDA Food Data Central														
NDB # in	NAME	kCAL	Iron (mg)	Folate DFE (ug)	Vitamin B12 (ug)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (ug)	Vitamin B6 (mg)
19169,	Custard	410	1.93	30	1.17	0.03	0.4	1.05	0.41	63	0.145	0.05	1.1	0.066
		[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
19172	Jelly	381	0.13	3	0	0	0	0.01	0.041	0	0.003	0.12	0	0.001
		[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
calculated average														
		395.5	1.03	16.5	0.585	0.015	0.2	0.53	0.2255	31.5	0.074	0.085	0.55	0.0335
		[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
		11808 (calc)	11808 (calc)	11808 (calc)	11808 (calc)	11808 (calc)	11808 (calc)	11808 (calc)	11808 (calc)	11808 (calc)	11808 (calc)	11808 (calc)	11808 (calc)	11808 (calc)

11809

11809	Jam/ Marmalade/ Jellies													
not available individually in FCT 2001 and not in FAO Infoods, we will average the three without weighing with values reported in the USDA Food Data Central														
NBD # in	NAME	kCAL	Iron (mg)	Folate DFE (ug)	Vitamin B12 (ug)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (ug)	Vitamin B6 (mg)
19297	Jam	278	0.49	11	0	0.12	8.8	0.06	0.076	0	0.016	0.1	0	0.02
		[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
1930	Jelly	266	0.19	2	0	0	0.9	0.03	0.026	0	0.001	0.011	0	0.02
		[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
19303	Marmalad	246	0.15	9	0	0.06	4.8	0.04	0.025	3	0.005	0.09	0	0.019
		[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
calculated average														
		263.33	0.28	7.33	0.00	0.06	4.83	0.04	0.04	1.00	0.01	0.07	0.00	0.02
		[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
		11809 (calc)	11809 (calc)	11809 (calc)	11809 (calc)	11809 (calc)	11809 (calc)	11809 (calc)	11809 (calc)	11809 (calc)	11809 (calc)	11809 (calc)	11809 (calc)	11809 (calc)

11202

12202		Squash/ Sharbat												
NBD # in	NAME	kCAL	Iron (mg)	Folate DFE (ug)	Vitamin B12 (ug)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (ug)	Vitamin B6 (mg)
9084	Squash	103.31	0.64	4.31	0.00	0.10	31.58	0.12	0.03	3.69	0.03	0.05	0.00	0.05
		[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
		12202 (calc)	12202 (calc)	12202 (calc)	12202 (calc)	12202 (calc)	12202 (calc)	12202 (calc)	12202 (calc)	12202 (calc)	12202 (calc)	12202 (calc)	12202 (calc)	12202 (calc)

12203

12203	Fruit Juice Fresh/ sugarcane juice													
not available individually in FCT 2001 and not in FAO Infoods, we will average the three without weighing with values reported in the USDA Food Data Central														
NDB # in	name	kCAL	Iron (mg)	Folate DFE (ug)	Vitamin B12 (ug)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (ug)	Vitamin B6 (mg)
9152,	Fresh	58.5	0.15	31.5	0	0.525	2.5	0.15	0.03	1	0.05	0.0635	0	0.0825
		[1]	[1]	[3]	[3]	[3]	[1]	[1]	[1]	[1]	[1]	[3]	[3]	[3]
92612010	Sugarcane	33	1.1	0	0	0	0	0.01	0.002	0	0.04	0.06	0	0.002
		[5]	[5]	[3]	[3]	[3]	[3]	[5]	[3]	[5]	[5]	[5]	[3]	[3]
calculated average														
		45.75	0.625	15.75	0	0.2625	1.25	0.08	0.016	0.5	0.045	0.06175	0	0.04225
		[1], [5]	[1], [5]	[3]	[3]	[3]	[1], [3]	[1], [5]	[1], [3]	[1], [5]	[1], [5]	[3], [5]	[3]	[3]
		12203 (calc)	12203 (calc)	12203 (calc)	12203 (calc)	12203 (calc)	12203 (calc)	12203 (calc)	12203 (calc)	12203 (calc)	12203 (calc)	12203 (calc)	12203 (calc)	12203 (calc)

111101

111101		Cooked Mutton, Beef, Chicken etc.														
FCT 2001	NDB # in	number in	NAME	kCAL	Iron (mg)	Folate DFE (ug)	Vitamin B12 (ug)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (ug)	Vitamin B6 (mg)
I-141	23220	n/a	Cooked Beef	244	2.4	9	2.73	0.43	0	6.19	0.23	7	0.06	0.07	0	0.355
				[1]	[1]	[3]	[3]	[3]	[1]	[3]	[1]	[3]	[1]	[3]	[3]	[3]
n/a	35141	10_0012	Cooked Mutton	234	4.76	0	4.44	0.8	0	5.93	0.3	9	0.06	0.062	0.4	0.337
				[3]	[3]	[3]	[3]	[3]	[5]	[3]	[3]	[5]	[3]	[3]	[5]	[3]
I-146	5125,	n/a	Cooked Chicken	187	1.9	5	0.38	0.24	0	1.5	0.16	16	0.08	0.09	0.2	0.512
				[1]	[1]	[3]	[3]	[3]	[1]	[1]	[1]	[1]	[1]	[3]	[3]	[3]
calculated average																
				221.67	3.02	4.67	2.52	0.49	0.00	4.54	0.23	10.67	0.07	0.07	0.20	0.40
				[1], [3]	[1], [3]	[3]	[3]	[3]	[1], [5]	[1], [3]	[1], [3]	[1], [5]	[1], [3]	[3]	[3], [5]	[3]
				111101 (calc)	111101 (calc)	111101 (calc)	111101 (calc)	111101 (calc)	111101 (calc)	111101 (calc)	111101 (calc)	111101 (calc)	111101 (calc)	111101 (calc)	111101 (calc)	111101 (calc)

111102

111102	Cooked Dal(mong, Masur, Channa etc.), Chick pea, Black Chick Pea													
NDB # in	name	kCAL	Iron (mg)	Folate DFE (ug)	Vitamin B12 (ug)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (ug)	Vitamin B6 (mg)
11	Cooked Dal	101	3.1	67	0	0.86	12.6	1.6	0.09	2	0.22	0.337	0	0.164
		[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
160	Cooked Dal	116	3.33	181	0	0.11	1.5	1.27	0.073	0	0.169	0.251	0	0.178
		[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
16086	Cooked Dal channa	118	1.29	65	0	0.03	0.4	1	0.056	0	0.19	0.181	0	0.048
		[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
16057	Cooked chickpea	164	2.89	172	0	0.35	1.3	1.53	0.063	1	0.116	0.352	0	0.139
		[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
16057	Cooked black chickpea	164	2.89	172	0	0.35	1.3	1.53	0.063	1	0.116	0.352	0	0.139
		[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
calculated average														

		110.5	2.25	109.5	0	0.28333333	2.85	1.155	0.0575	0.66666667	0.13516667	0.2455	0	0.11133333
		[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
		111102 (calc)	111102 (calc)	111102 (calc)	111102 (calc)	111102 (calc)	111102 (calc)	111102 (calc)	111102 (calc)	111102 (calc)	111102 (calc)	111102 (calc)	111102 (calc)	111102 (calc)

111104

111104		Nihari/ Payee, Halwa Poori													
Banglades	FCT 2001	NDB # in	name	kCAL	Iron (mg)	Folate DFE (ug)	Vitamin B12 (ug)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (ug)	Vitamin B6 (mg)
			Nihari	223.000119	0.23308877	0.36116017	1.7081181	2.7915 2263	0.8052 4494	4.2154 0342	0.1638623	20.212 0734	0.029875	0.0994 3344	0.0806 9506	0.5277 7857
calculated in recipe																
8066		M-192	Halwa	481	1	154	0	0	0	0	0	0	0	0.239	0	0.152
				[1]	[1]	[5]	[5]	[5]	[1]	[1]	[1]	[1]	[1]	[5]	[5]	[5]
calculated average																
				352.00	0.62	77.18	0.85	1.40	0.40	2.11	0.08	10.11	0.01	0.17	0.04	0.34
				[1], [3]	[1], [3]	[3], [5]	[3], [5]	[3], [5]	[1], [3]	[1], [3]	[1], [3]	[1], [3]	[1], [3]	[3], [5]	[3], [5]	[3], [5]
				111104 (calc)	111104 (calc)	111104 (calc)	111104 (calc)	111104 (calc)	111104 (calc)	111104 (calc)	111104 (calc)	111104 (calc)	111104 (calc)	111104 (calc)	111104 (calc)	111104 (calc)

Recipe calculations

Nihari			
Recipe	Amount	Unit	Final Amount (g)
Star anise	1	anise	1
Bay leaf	2	leaves	0.4
Whole cloves	3	cloves	4.4
Cardamom	3	pods	3
Paprika	1	tsp	2.3
Cumin	1	tsp	2.03
Turmeric	0.25	tsp	0.8
Cayenne	0.25	tsp	0.8
grapeseed oil	0.33	cup	71.94
Ghee	1	tbsp	14
Garlic	5	cloves	15
Ginger	1	Tbsp	5.7
Beef Stew pieces	1	lb	454
Salt	1.25	Tsp	9
Duram Atta Flour	0.25	cup	32.5
Beef Bones	0.5	lbs	226.8
Water	3	cups	720

Ingredient	Source	Code	Iron(mg/100g)	Recipe(g)	Iron in recipe(mg)
Star anise	[3]	2002	37	1	0.37
Bay leaf	[3]	2004	43	0.4	0.172
Whole cloves	[3]	2011	11.8	4.4	0.5192
Cardamom	[3]	2006	14	3	0.42
Paprika	[3]	2028	21.1	2.3	0.4853
Cumin	[3]	2014	66.4	2.03	1.34792
Turmeric	[3]	2043	55	0.8	0.44
Cayenne	[3]	2031	7.8	0.8	0.0624
grapeseed oil	[3]	4517	0	71.94	0
Ghee	[3]	1323	0	14	0
Garlic	[3]	11215	1.7	15	0.255
Ginger	[3]	11216	0.6	5.7	0.0342
Beef Stew pieces	[3]	23095	2.09	454	9.4886
Salt	[3]	2047	0.33	9	0.0297
Duram Atta Flour	[3]	20076	3.52	32.5	1.144
Beef Bones	[3]	13478	1.66	226.8	3.76488
Total				843.67	18.5332
Per 100 grams, iron (mg):					2.19673569

Ingredient	Source	Code	Folate(mcg/100g)	Recipe(g)	Folate in recipe(mg)
Star anise	[3]	2002	10	1	0.1
Bay leaf	[3]	2004	180	0.4	0.72
Whole cloves	[3]	2011	25	4.4	1.1
Cardamom	[3]	2006		3	
Paprika	[3]	2028	49	2.3	1.127
Cumin	[3]	2014	10	2.03	0.203
Turmeric	[3]	2043	20	0.8	0.16

Cayenne	[3]	2031	106	0.8	0.848
grapeseed oil	[3]	4517	0	71.94	0
Ghee	[3]	1323		14	
Garlic	[3]	11215	3	15	0.45
Ginger	[3]	11216	11	5.7	0.627
Beef Stew pieces	[3]	23095	3	454	13.62
Salt	[3]	2047	0	9	0
Duram Atta Flour	[3]	20076	43	32.5	13.975
Beef Bones	[3]	13478	4	226.8	9.072
Total				843.67	42.002
Per 100 grams, folate (mcg):					4.97848685

Ingredient	Source	Code	Vit A (mcg/100g)	Recipe(g)	Vit.A RAE in recipe(mcg)
Star anise	[3]	2002	16	1	0.16
Bay leaf	[3]	2004	309	0.4	1.236
Whole cloves	[3]	2011	8	4.4	0.352
Cardamom	[3]	2006	0	3	
Paprika	[3]	2028	2460	2.3	56.58
Cumin	[3]	2014	64	2.03	1.2992
Turmeric	[3]	2043	0	0.8	0
Cayenne	[3]	2031	2080	0.8	16.64
grapeseed oil	[3]	4517	0	71.94	0
Ghee	[1]	L-173	576	14	80.64
Garlic	[3]	11215	0	15	0

Ginger	[3]	11216	0	5.7	0
Beef Stew pieces	[3]	23095	2	454	9.08
Salt	[3]	2047	0	9	0
Duram Atta Flour	[3]	20076	0	32.5	0
Beef Bones	[3]	13478	2	226.8	4.536
Total				843.67	170.5232
Per 100 grams, Vit A (mcg):					20.2120734

Ingredient	Source	Code	Vit B12 in recipe(mcg/100g)	Recipe(g)	Vit.B12 in recipe(mcg)
Star anise	[3]	2002	0	1	0
Bay leaf	[3]	2004	0	0.4	0
Whole cloves	[3]	2011	0	4.4	0
Cardamom	[3]	2006	0	3	0
Paprika	[3]	2028	0	2.3	0
Cumin	[3]	2014	0	2.03	0
Turmeric	[3]	2043	0	0.8	0
Cayenne	[3]	2031	0	0.8	0
grapeseed oil	[3]	4517	0	71.94	0
Ghee	[3]	1323		14	
Garlic	[3]	11215	0	15	0
Ginger	[3]	11216	0	5.7	0
Beef Stew pieces	[3]	23095	2.27	454	10.3058
Salt	[3]	2047	0	9	0
Duram Atta Flour	[3]	20076	0	32.5	0
Beef Bones	[3]	13478	1.81	226.8	4.10508

Total	843.67	14.41088
Per 100 grams, Vit B12 (mcg):		1.7081181

Ingredient	Source	Code	Zinc(mg/100g)	Recipe(g)	Zinc in recipe(mg)
Star anise	[3]	2002	5.3	1	0.053
Bay leaf	[3]	2004	3.7	0.4	0.0148
Whole cloves	[3]	2011	2.32	4.4	0.10208
Cardamom	[3]	2006	7.47	3	0.2241
Paprika	[3]	2028	4.33	2.3	0.09959
Cumin	[3]	2014	4.88	2.03	0.099064
Turmeric	[3]	2043	4.5	0.8	0.036
Cayenne	[3]	2031	2.48	0.8	0.01984
grapeseed oil	[3]	4517	0	71.94	0
Ghee	[3]	1323		14	
Garlic	[3]	11215	1.16	15	0.174
Ginger	[3]	11216	0.34	5.7	0.01938
Beef Stew pieces	[3]	23095	5.41	454	24.5614
Salt	[3]	2047	0.1	9	0.009
Duram Atta Flour	[3]	20076	4.16	32.5	1.352
Beef Bones	[3]	13478	3.88	226.8	8.79984
Total				843.67	35.564094
Per 100 grams, Zinc (mg):					4.21540342

Ingredient	Source	Code	Thiamin(mg/100g)	Recipe(g)	Thiamin in recipe(mg)
Star anise	[3]	2002	0.34	1	0.0034
Bay leaf	[3]	2004	0.009	0.4	0.000036

Whole cloves	[3]	2011	0.158	4.4	0.006952
Cardamom	[3]	2006	0.198	3	0.00594
Paprika	[3]	2028	0.33	2.3	0.00759
Cumin	[3]	2014	0.628	2.03	0.0127484
Turmeric	[3]	2043	0.058	0.8	0.000464
Cayenne	[3]	2031	0.328	0.8	0.002624
grapeseed oil	[3]	4517	0	71.94	0
Ghee	[1]	L-173	0	14	0
Garlic	[3]	11215	0.2	15	0.03
Ginger	[3]	11216	0.025	5.7	0.00456
Beef Stew pieces	[3]	23095	0.08	454	0
Salt	[3]	2047	0	9	0.03771
Duram Atta Flour	[3]	20076	0.419	32.5	0.01755
Beef Bones	[3]	13478	0.054	226.8	0.122472
Total				843.67	0.2520464
Per 100 grams, Thiamin (mg):					0.029875

Ingredient	Source	Code	Riboflavin(mg/100g)	Recipe(g)	Riboflavin in recipe(mg)
Star anise	[3]	2002	0.29	1	0.0029
Bay leaf	[3]	2004	0.421	0.4	0.001684
Whole cloves	[3]	2011	0.22	4.4	0.00968
Cardamom	[3]	2006	0.182	3	0.00546
Paprika	[3]	2028	1.32	2.3	0.03036
Cumin	[3]	2014	0.327	2.03	0.0066381
Turmeric	[3]	2043	0.15	0.8	0.0012
Cayenne	[3]	2031	0.919	0.8	0.007352
grapeseed oil	[3]	4517	0	71.94	0
Ghee	[1]	L-173	0	14	0

Garlic	[3]	11215	0.11	15	0.0165
Ginger	[3]	11216	0.034	5.7	0.001938
Beef Stew pieces	[3]	23095	0.17	454	0.7718
Salt	[3]	2047	0	9	0
Duram Atta Flour	[3]	20076	0.121	32.5	0.039325
Beef Bones	[3]	13478	0.215	226.8	0.48762
Total				843.67	1.3824571
Per 100 grams, Riboflavin (mg):					0.1638623

Ingredient	Source	Code	Vit.C(mg/100g)	Recipe(g)	Vit.C in recipe(mg)
Star anise	[3]	2002	21	1	0.21
Bay leaf	[3]	2004	46.5	0.4	0.186
Whole cloves	[3]	2011	0.2	4.4	0.0088
Cardamom	[3]	2006	21	3	0.63
Paprika	[3]	2028	0.9	2.3	0.0207
Cumin	[3]	2014	7.7	2.03	0.15631
Turmeric	[3]	2043	0.7	0.8	0.0056
Cayenne	[3]	2031	76.4	0.8	0.6112
grapeseed oil	[3]	4517	0	71.94	0
Ghee	[3]	1323	0	14	0
Garlic	[3]	11215	31.2	15	4.68
Ginger	[3]	11216	5	5.7	0.285
Beef Stew pieces	[3]	23095	0	454	0
Salt	[3]	2047	0	9	0
Duram Atta Flour	[3]	20076	0	32.5	0
Beef Bones	[3]	13478	0	226.8	0

Total				843.67	6.79361
Per 100 grams, Vitamin C (mg):					0.80524494

Ingredient	Source	Code	Copper(mg/100g)	Recipe(g)	Copper in recipe(mg)
Star anise	[3]	2002	0.91	1	0.0091
Bay leaf	[3]	2004	0.416	0.4	0.001664
Whole cloves	[3]	2011	0.368	4.4	0.016192
Cardamom	[3]	2006	0.383	3	0.01149
Paprika	[3]	2028	0.713	2.3	0.016399
Cumin	[3]	2014	0.867	2.03	0.0176001
Turmeric	[3]	2043	1.3	0.8	0.0104
Cayenne	[3]	2031	0.373	0.8	0.002984
grapeseed oil	[3]	4517		71.94	
Ghee	[3]	1323		14	
Garlic	[3]	11215	0.299	15	0.04485
Ginger	[3]	11216	0.226	5.7	0.012882
Beef Stew pieces	[3]	23095	0.084	454	0.38136
Salt	[3]	2047	0.03	9	0.0027
Duram Atta Flour	[3]	20076	0.553	32.5	0.179725
Beef Bones	[3]	13478	0.058	226.8	0.131544
Total				843.67	0.8388901
Per 100 grams, Copper (mg):					0.09943344

Ingredient	Source	Code	Vit.E(mg/100g)	Recipe(g)	Vit.E in recipe(mg)
Star anise	[3]	2002		1	
Bay leaf	[3]	2004		0.4	
Whole cloves	[3]	2011	8.82	4.4	0.38808
Cardamom	[3]	2025	0	3	
Paprika	[3]	2028	29.1	2.3	0.6693
Cumin	[3]	2014	3.33	2.03	0.067599
Turmeric	[3]	2043	4.43	0.8	0.03544
Cayenne	[3]	2031	29.8	0.8	0.2384
grapeseed oil	[3]	4517	28.8	71.94	20.71872
Ghee	[3]	1323		14	
Garlic	[3]	11215	0.08	15	0.012
Ginger	[3]	11216	0.26	5.7	0.01482
Beef Stew pieces	[3]	23095	0.18	454	0.8172
Salt	[3]	2047	0	9	0
Duram Atta Flour	[3]	20076		32.5	
Beef Bones	[3]	13478	0.26	226.8	0.58968
Total				843.67	23.551239
Per 100 grams, Vitamin E (mg):					2.79152263

Ingredient	Source	Code	Vitamin D (ug/100)	Recipe(g)	Vitamin D in recipe(ug)
Star anise	[3]	2002	0	1	
Bay leaf	[3]	2004	0	0.4	
Whole cloves	[3]	2011	0	4.4	0
Cardamom	[3]	2006	0	3	
Paprika	[3]	2028	0	2.3	0
Cumin	[3]	2014	0	2.03	0
Turmeric	[3]	2043	0	0.8	0
Cayenne	[3]	2031	0	0.8	0
grapeseed oil	[3]	4517		71.94	
Ghee	[3]	1323		14	
Garlic	[3]	11215	0	15	0
Ginger	[3]	11216	0	5.7	0
Beef Stew pieces	[3]	23095	0.1	454	0.454
Salt	[3]	2047	0	9	0
Duram Atta Flour	[3]	20076	0	32.5	0
Beef Bones	[3]	13478	0.1	226.8	0.2268
Total				843.67	0.6808
Per 100 grams, Vitamin D (mcg):					0.08069506

Ingredient	Source	Code	Vitamin B6 (mg/100)	Recipe(g)	Vitamin B6 in recipe(mg)
Star anise	[3]	2002	0.65	1	
Bay leaf	[3]	2004	1.74	0.4	
Whole cloves	[3]	2011	0.391	4.4	0.017204
Cardamom	[3]	2006	0.23	3	
Paprika	[3]	2028	2.14	2.3	0.04922
Cumin	[3]	2014	0.435	2.03	0.0088305
Turmeric	[3]	2043	0.107	0.8	0.000856
Cayenne	[3]	2031	2.45	0.8	0.0196
grapeseed oil	[3]	4517	0	71.94	0
Ghee	[3]	1323		14	
Garlic	[3]	11215	1.24	15	0.186
Ginger	[3]	11216	0.16	5.7	0.00912
Beef Stew pieces	[3]	23095	0.568	454	2.57872
Salt	[3]	2047	0	9	0
Duram Atta Flour	[3]	20076	0.419	32.5	0.136175
Beef Bones	[3]	13478	0.638	226.8	1.446984
Total				843.67	4.4527095
Per 100 grams, Vitamin B6 (mg):					0.52777857

Ingredient	Source	Code	kCAL/100g	Recipe(g)	kCal in recipe
Star anise	[3]	2002	337	1	3.37
Bay leaf	[3]	2004	313	0.4	1.252
Whole cloves	[3]	2011	274	4.4	12.056
Cardamom	[3]	2006	311	3	9.33
Paprika	[3]	2028	282	2.3	6.486
Cumin	[3]	2014	375	2.03	7.6125
Turmeric	[3]	2043	312	0.8	2.496
Cayenne	[3]	2031	318	0.8	2.544
grapeseed oil	[3]	4517	884	71.94	635.9496
Ghee	[3]	1323	900	14	126
Garlic	[3]	11215	149	15	22.35
Ginger	[3]	11216	80	5.7	4.56
Beef Stew pieces	[3]	23095	130	454	590.2
Salt	[3]	2047	0	9	0
Duram Atta Flour	[3]	20076	339	32.5	110.175
Beef Bones	[3]	13478	153	226.8	347.004
Total				843.67	1881.3851
Per 100 grams, Kcal					223.000119

111106

111106		Tea Prepared, Kashmiri Tea/Coffee etc.												
NBD # in	NAME	kCAL	Iron (mg)	Folate DFE (ug)	Vitamin B12 (ug)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (ug)	Vitamin B6 (mg)
14355	Black tea	1	0.02	5	0	0	0	0.02	0.014	0	0	0.01	0	0
		[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
9230680	Kashmiri Tea	50	0.02	3	0	0.02	0	0.21	0.072	28	0.027	0.007	0.5	0.029
		[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
14214	Coffee	2	0.04	0	0	0	0	0.01	0.001	0	0	0.011	0	0.029
		[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
calculated average														
		17.67	0.03	2.67	0.00	0.01	0.00	0.08	0.03	9.33	0.01	0.01	0.17	0.02
		[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
		111106 (calc)	111106 (calc)	111106 (calc)	111106 (calc)	111106 (calc)	111106 (calc)	111106 (calc)	111106 (calc)	111106 (calc)	111106 (calc)	111106 (calc)	111106 (calc)	111106 (calc)

111107

111107		Milk Shakes, Fresh Juices, Ice cream shakes, ice cream etc.													
FCT 2001	NBD # in	NAME	kCAL	Iron (mg)	Folate DFE (ug)	Vitamin B12 (ug)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (ug)	Vitamin B6 (mg)
n/a	111	milk	112	0.1	7	0.52	0.05	0	0.39	0.195	25	0.03	0.05	1.2	0.042
			[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
M-194,	9176,	fresh juice	58.5	0.15	31.5	0	0.12	2.5	0.15	0.03	1	0.05	0.0635	0	0.0825
see below for calculations and sources/codes															
n/a	1111	ice cream	112	0.1	7	0.52	0.05	0	0.39	0.195	25	0.03	0.05	1.2	0.042
			[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
H-140	19095	ice cream	148	0.1	5	0.39	0.3	1	0.7	0.19	117	0.04	0.02	0.2	0.048
			[1]	[1]	[3]	[3]	[3]	[1]	[1]	[1]	[1]	[1]	[3]	[3]	[3]
111107 calculated average															
			106.17	0.12	14.50	0.30	0.16	1.17	0.41	0.14	47.67	0.04	0.04	0.47	0.06
			[1], [3]	[1], [3]	[3]	[3]	[3]	[1], [3]	[1], [3]	[1], [3]	[1], [3]	[1], [3]	[3]	[3]	[3]
			111107 (calc)	111107 (calc)	111107 (calc)	111107 (calc)	111107 (calc)	111107 (calc)	111107 (calc)	111107 (calc)	111107 (calc)	111107 (calc)	111107 (calc)	111107 (calc)	111107 (calc)

111110

111110		Pizza, Cake, Burger, Sandwiches, Shwarma/Roll Paratha Chips/Fries, etc.												
NBD # in USDA FDC	NAME	kCAL	Iron (mg)	Folate DFE (ug)	Vitamin B12 (ug)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (ug)	Vitamin B6 (mg)
21484	Pizza	280	2.41	88	0.48	0.91	1.7	1.32	0.19	68	0.345	0.111	0	0.08
		[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
53102800	Cake	264	1.1	8	0.21	0.75	13.6	0.28	0.19	80	0.03	0.057	0.3	0.06
		[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
	Burger	51.71288133	0.71433253	5.82086292	0.38425529	0.19250995	12.696411	0.96267457	0.05954123	6.02949208	0.02440197	0.03285543	0	0.10911914
calculated below														
17059 and 51300185	Shwarma	230	1.69	15.5	1.365	0.785	0	2.485	0.158	1	0.109	0.1335	0	0.12
calculated below														
51300185	Paratha	326	1.61	8	0	1.35	0	0.82	0.076	2	0.088	0.146	0	0.08
		[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
71401032	Chips/Fries	224	0.53	21	0	1.42	7.8	0.32	0.029	0	0.118	0.095	0	0.273
		[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
21154	Sandwich	157	1.72	50	0.08	0.42	1.2	0.66	0.23	5	1.16	0.076	0	0.259
		[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
calculated average														
		218.96	1.40	28.05	0.36	0.83	5.29	0.98	0.13	23.15	0.27	0.09	0.04	0.14
		[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
		111110 (calc)	111110 (calc)	111110 (calc)	111110 (calc)	111110 (calc)	111110 (calc)	111110 (calc)	111110 (calc)	111110 (calc)	111110 (calc)	111110 (calc)	111110 (calc)	111110 (calc)

Recipe calculation

Pakistani Chapli Burger			
Recipe	Amount	Unit	Final Amount (g)
Beef mince	0.25	kg	250
Onion	1	onion	225
Green Chilies	2	chilies	60
Red chili powder	1	Tsp	2.7
Cumin seeds	1	Tsp	3
Coriander	1	Tsp	3
Egg	1	egg	50
Chedder cheese	2	slice	56
Tomato	1	tomato	123
Cucumber	1	cucumber	100
Lettuce	1	bunch	324
Mayo	1	Tbsp	15
Burger buns	1	bun	70

Ingredient	Source	Code	Iron(mg/100g)	Recipe(g)	Iron in recipe(mg)
Beef mince	[3]	13047	1.99	250	4.975
Onion	[3]	11282	0.21	225	0.4725
Green Chilies	[3]	11670	1.2	60	0.72
Red chili powder	[3]	2009	17.3	2.7	0.4671
Cumin seeds	[3]	2014	66.4	3	1.992
Coriander	[3]	2013	16.3	3	0.489
Egg	[3]	1124	0.08	50	0.04
Chedder cheese	[3]	1270	0.16	56	0.0896
Tomato	[3]	11529	0.27	123	0.3321
Cucumber	[3]	11205	0.28	100	0.28
Lettuce	[3]	11251	0.97	324	3.1428
Mayo	[3]	4708	0	15	0
Burger buns	[3]	51154100	3.43	70	2.401
Total				1281.7	9.1556
Per 100 grams, iron(mg):					0.71433253

Ingredient	Source	Code	Folate(mcg/100g)	Recipe(g)	Folate in recipe(mcg)
Beef mince	[3]	13047	6	250	15
Onion	[3]	11282	19	225	42.75
Green Chilies	[3]	11670	23	60	13.8
Red chili powder	[3]	2009	28	2.7	0.756
Cumin seeds	[3]	2014	10	3	0.3
Coriander	[3]	2013	0	3	0
Egg	[3]	1124	4	50	2
Chedder cheese	[3]	1270	27	56	15.12

Tomato	[3]	11529	15	123	18.45
Cucumber	[3]	11205	7	100	7
Lettuce	[3]	11251	136	324	440.64
Mayo	[3]	4708	0	15	0
Burger buns	[3]	51154100	94	70	65.8
Total				1281.7	74.606
Per 100 grams, Folate(mcg):					5.82086292

Ingredient	Source	Code	Vit A in recipe(mcg/100g)	Recipe(g)	Vit.A RAE in recipe(mcg)
Beef mince	[3]	13047	0	250	0
Onion	[3]	11282	0	225	0
Green Chilies	[3]	11670	59	60	35.4
Red chili powder	[3]	2009	1480	2.7	39.96
Cumin seeds	[3]	2014	64	3	1.92
Coriander	[3]	2013	0	3	0
Egg	[3]	1124	0	50	0
Chedder cheese	[3]	1270	263	56	147.28
Tomato	[3]	11529	42	123	51.66
Cucumber	[3]	11205	5	100	5
Lettuce	[3]	11251	436	324	1412.64
Mayo	[3]	4708	8	15	1.2
Burger buns	[3]	51154100	0	70	0
Total				1281.7	77.28
Per 100 grams, Vitamin A (mcg):					6.02949208

Ingredient	Source	Code	Vit B12 in recipe(mcg/100g)	Recipe(g)	Vit.B12 in recipe(mcg)
Beef mince	[3]	13047	1.97	250	4.925
Onion	[3]	11282	0	225	0
Green Chilies	[3]	11670	0	60	0
Red chili powder	[3]	2009	0	2.7	0
Cumin seeds	[3]	2014	0	3	0
Coriander	[3]	2013	0	3	0
Egg	[3]	1124	0.09	50	0.045
Chedder cheese	[3]	1270	0.88	56	0.4928
Tomato	[3]	11529	0	123	0
Cucumber	[3]	11205	0	100	0
Lettuce	[3]	11251	0	324	0
Mayo	[3]	4708	0.12	15	0.018
Burger buns	[3]	51154100	0.2	70	0.14
Total				1281.7	4.925
Per 100 grams, Vitamn B12 (mg):					0.38425529

Ingredient	Source	Code	Zinc(mg/100g)	Recipe(g)	Zinc in recipe(mg)
Beef mince	[3]	13047	4.55	250	11.375
Onion	[3]	11282	0.17	225	0.3825
Green Chilies	[3]	11670	0.3	60	0.18
Red chili powder	[3]	2009	4.3	2.7	0.1161
Cumin seeds	[3]	2014	4.8	3	0.144
Coriander	[3]	2013	4.7	3	0.141
Egg	[3]	1124	0.03	50	0.015

Chedder cheese	[3]	1270	3.74	56	2.0944
Tomato	[3]	11529	17	123	20.91
Cucumber	[3]	11205	0.2	100	0.2
Lettuce	[3]	11251	0.23	324	0.7452
Mayo	[3]	4708	0.07	15	0.0105
Burger buns	[3]	51154100	0.73	70	0.511
Total				1281.7	12.3386
Per 100 grams, Zinc (mg):					0.96267457

Ingredient	Source	Code	Thiamin(mg/100g)	Recipe(g)	Thiamin in recipe(mg)
Beef mince	[3]	13047	0.049	250	0.1225
Onion	[3]	11282	0.046	225	0.1035
Green Chilies	[3]	11670	0.09	60	0.054
Red chili powder	[3]	2009	0.25	2.7	0.00675
Cumin seeds	[3]	2014	0.628	3	0.01884
Coriander	[3]	2013	0.239	3	0.00717
Egg	[3]	1124	0.004	50	0.002
Chedder cheese	[3]	1270	0.027	56	0.01512
Tomato	[3]	11529	0.037	123	0.04551
Cucumber	[3]	11205	0.027	100	0.027
Lettuce	[3]	11251	0.072	324	0.23328
Mayo	[3]	4708	0.008	15	0.0012
Burger buns	[3]	51154100	0.543	70	0.3801
Total				1281.7	0.31276
Per 100 grams, Thiamin (mg):					0.02440197

Ingredient	Source	Code	Riboflavin(mg/100g)	Recipe(g)	Riboflavin in recipe(mg)
Beef mince	[3]	13047	0.154	250	0.385
Onion	[3]	11282	0.027	225	0.06075
Green Chilies	[3]	11670	0.09	60	0.054
Red chili powder	[3]	2009	0.94	2.7	0.02538
Cumin seeds	[3]	2014	0.327	3	0.00981
Coriander	[3]	2013	0.29	3	0.0087
Egg	[3]	1124	0.439	50	0.2195
Chedder cheese	[3]	1270	0.434	56	
Tomato	[3]	11529		123	
Cucumber	[3]	11205		100	
Lettuce	[3]	11251		324	
Mayo	[3]	4708		15	
Burger buns	[3]	51154100		70	
Total				1281.7	0.76314
Per 100 grams, Riboflavin (mg):					0.05954123

Ingredient	Source	Code	Vit.C(mg/100g)	Recipe(g)	Vit.C in recipe(mg)
Beef mince	[3]	13047	0	250	0
Onion	[3]	11282	7.4	225	16.65
Green Chilies	[3]	11670	242	60	145.2
Red chili powder	[3]	2009	0.7	2.7	0.0189
Cumin seeds	[3]	2014	7.7	3	0.231
Coriander	[3]	2013	21	3	0.63
Egg	[3]	1124	0	50	0

Chedder cheese	[3]	1270	0	56	0
Tomato	[3]	11529	13.7	123	16.851
Cucumber	[3]	11205	2.8	100	2.8
Lettuce	[3]	11251	4	324	12.96
Mayo	[3]	4708	0	15	0
Burger buns	[3]	51154100	1.3	70	0.91
Total				1281.7	162.7299
Per 100 grams, Vitamin C(mg):					12.696411

Ingredient	Source	Code	Copper(mg/100g)	Recipe(g)	Copper in recipe(mg)
Beef mince	[3]	13047	0.063	250	0.1575
Onion	[3]	11282	0.039	225	0.08775
Green Chilies	[3]	11670	0.174	60	0.1044
Red chili powder	[3]	2009	0.174	2.7	0.004698
Cumin seeds	[3]	2014	0.867	3	0.02601
Coriander	[3]	2013	0.975	3	0.02925
Egg	[3]	1124	0.023	50	0.0115
Chedder cheese	[3]	1270	0.035	56	0.0196
Tomato	[3]	11529	0.059	123	0.07257
Cucumber	[3]	11205	0.041	100	0.041
Lettuce	[3]	11251	0.048	324	0.15552
Mayo	[3]	4708	0.019	15	0.00285
Burger buns	[3]	51154100	0.109	70	0.0763
Total				1281.7	0.421108
Per 100 grams, Copper (mg):					0.03285543

Ingredient	Source	Code	Vit.E(mg/100g)	Recipe(g)	Vit.E in recipe(mg)
Beef mince	[3]	13047	0.35	250	0.875
Onion	[3]	11282	0.02	225	0.045
Green Chilies	[3]	11670	0.69	60	0.414
Red chili powder	[3]	2009	38.1	2.7	1.0287
Cumin seeds	[3]	2014	3.33	3	0.0999
Coriander	[3]	2013	0.16	3	0.0048
Egg	[3]	1124	0	50	0
Chedder cheese	[3]	1270	0.78	56	0.4368
Tomato	[3]	11529	0.54	123	0.6642
Cucumber	[3]	11205	0.03	100	0.03
Lettuce	[3]	11251	0.13	324	0.4212
Mayo	[3]	4708	2.19	15	0.3285
Burger buns	[3]	51154100	0.27	70	0.189
Total				1281.7	2.4674
Per 100 grams, Vitamin E(mg):					0.19250995

Ingredient	Source	Code	Vit.B6 (mg/100g)	Recipe(g)	Vit. B6 in recipe(mg)
Beef mince	[3]	13047	0.355	250	0.8875
Onion	[3]	11282	0.12	225	0.27
Green Chilies	[3]	11670	0.278	60	0.1668
Red chili powder	[3]	2009	2.09	2.7	0.05643
Cumin seeds	[3]	2014	0.435	3	0.01305
Coriander	[3]	2013	0.16	3	0.0048
Egg	[3]	1124	0.005	50	0.0025
Chedder cheese	[3]	1270	0.075	56	0.042

Tomato	[3]	11529	0.08	123	0.0984
Cucumber	[3]	11205	0.04	100	0.04
Lettuce	[3]	11251	0.074	324	0.23976
Mayo	[3]	4708	0.002	15	0.0003
Burger buns	[3]	51154100	0.063	70	0.0441
Total				1281.7	1.39858
Per 100 grams, Vitamin B6 (mg):					0.10911914

Ingredient	Source	Code	Vit.D (mcg/100g)	Recipe(g)	Vit. D in recipe(mcg)
Beef mince	[3]	13047		250	0
Onion	[3]	11282	0	225	0
Green Chilies	[3]	11670	0	60	0
Red chili powder	[3]	2009	0	2.7	0
Cumin seeds	[3]	2014	0	3	0
Coriander	[3]	2013	0	3	0
Egg	[3]	1124	0	50	0
Chedder cheese	[3]	1270	1	56	0.56
Tomato	[3]	11529	0	123	0
Cucumber	[3]	11205	0	100	0
Lettuce	[3]	11251	0	324	0
Mayo	[3]	4708	0	15	0
Burger buns	[3]	51154100	0	70	0
Total				1281.7	0
Per 100 grams, Vitamin D (mcg):					0

Ingredient	Source	Code	Kcal/100g	Recipe(g)	Kcal in recipe
Beef mince	[3]	13047	198	250	495
Onion	[3]	11282	40	225	90
Green Chilies	[3]	11670	40	60	24
Red chili powder	[3]	2009	282	2.7	7.614
Cumin seeds	[3]	2014	375	3	11.25
Coriander	[3]	2013	298	3	8.94
Egg	[3]	1124	52	50	26
Chedder cheese	[3]	1270	410	56	229.6
Tomato	[3]	11529	18	123	22.14
Cucumber	[3]	11205	15	100	15
Lettuce	[3]	11251	17	324	55.08
Mayo	[3]	4708	361	15	54.15
Burger buns	[3]	51154100	279	70	195.3
Total				1281.7	662.804
Per 100 grams, kCAL:					51.7128813

111111

111111		Soups/ Yakni, Chaat (Channa/Dahi Baray/Fruit Chaat), Salads(Vegetable/Fruit) etc.												
NBD # in	NAME	kCAL	Iron (mg)	Folate DFE (ug)	Vitamin B12 (ug)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (ug)	Vitamin B6 (mg)
1100133	Soup	750	0.45	6	0.08	0.13	0.2	0.62	0.108	3	0.044	0.062	0	0.102
		[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
	Chaat	86.9706291	3.12679271	17.627278	0	1.16974395	19.8715921	0.42071961	0.04335053	10.4468316	0.02659786	0.38884807	0	0.23056581
calculated below														
74506000	Salad	119	0.23	8	0	1.34	5.3	0.13	0.017	13	0.022	0.033	0	0.045
		[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
calculated average														
		318.66	1.27	10.54	0.03	0.88	8.46	0.39	0.06	8.82	0.03	0.16	0.00	0.13
		[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
		111111 (calc)	111111 (calc)	111111 (calc)	111111 (calc)	111111 (calc)	111111 (calc)	111111 (calc)	111111 (calc)	111111 (calc)	111111 (calc)	111111 (calc)	111111 (calc)	111111 (calc)

Recipe calculation

Aloo Chaat			
Recipe	Amount	Unit	Final Amount (g)
Potato	2	potato	346
Oil	1	Tbsp	13.6
Ginger	1	tsp	2.02
Green chilies	1	chili	14.8
Cumin seeds	0.5	Tsp	1.02
Chaat powder	0.5	Tsp	1.02
pomegranate	2	tbsp	8.75
lemon juice	0.5	tsp	2.4
red chili powder	0.5	tsp	1.02
coriander	1	tbsp	5

Ingredient	Source	Code	Iron(mg/100g)	Recipe(g)	Iron in recipe(mg)
Potato	[3]	11362	3.24	346	11.2104
Oil	[3]	4517	0	13.6	0
Ginger	[3]	11216	0.6	2.02	0.01212
Green chilies	[3]	11670	1.2	14.8	0.1776
Cumin seeds	[3]	2014	66.4	1.02	0.67728
Chaat powder	[3]	2074	0	1.02	0
pomegranate	[3]	9286	0.3	8.75	0.02625
lemon juice	[3]	9152	0.08	2.4	0.00192
red chili powder	[3]	2009	17.3	1.02	0.17646
coriander leaf	[3]	11165	1.77	5	0.0885
Total				395.63	12.37053
Per 100 grams, iron(mg):					3.12679271

Ingredient	Source	Code	Vit B12 in recipe(mcg/100g)	Recipe(g)	Vit.B12 in recipe(mcg)
Potato	[3]	11362	0	346	0
Oil	[3]	4517	0	13.6	0
Ginger	[3]	11216	0	2.02	0
Green chilies	[3]	11670	0	14.8	0
Cumin seeds	[3]	2014	0	1.02	0
Chaat powder	[3]	2074		1.02	0
pomegranate	[3]	9286	0	8.75	0
lemon juice	[3]	9152	0	2.4	0
red chili powder	[3]	2009	0	1.02	0
coriander leaf	[3]	11165	0	5	0
Total				395.63	0
Per 100 grams, Vitamn B12 (mg):					0
Ingredient	Source	Code	Riboflavin(mg/100g)	Recipe(g)	Riboflavin in recipe(mg)
Potato	[3]	11362	0.038	346	0.13148
Oil	[3]	4517	0	13.6	0
Ginger	[3]	11216	0.034	2.02	0.0006868
Green chilies	[3]	11670	0.09	14.8	0.01332
Cumin seeds	[3]	2014	0.327	1.02	0.0033354
Chaat powder	[3]	2074		1.02	0
pomegranate	[3]	9286	0.053	8.75	0.0046375
lemon juice	[3]	9152	0.015	2.4	0.00036
red chili powder	[3]	2009	0.94	1.02	0.009588
coriander leaf	[3]	11165	0.162	5	0.0081
Total				395.63	0.1715077
Per 100 grams, Riboflavin (mg):					0.04335053

Ingredient	Source	Code	Vit.E(mg/100g)	Recipe(g)	Vit.E in recipe(mg)
Potato	[3]	11362		346	0
Oil	[3]	4517	28.8	13.6	3.9168
Ginger	[3]	11216	0.26	2.02	0.005252
Green chilies	[3]	11670	0.69	14.8	0.10212
Cumin seeds	[3]	2014	3.33	1.02	0.033966
Chaat powder	[3]	2074		1.02	0
pomegranate	[3]	9286	0.6	8.75	0.0525
lemon juice	[3]	9152	0.15	2.4	0.0036
red chili powder	[3]	2009	38.1	1.02	0.38862
coriander leaf	[3]	11165	2.5	5	0.125
Total				395.63	4.627858
Per 100 grams, Vitamin E(mg):					1.16974395
Ingredient	Source	Code	Kcal/100g	Recipe(g)	Kcal in recipe
Potato	[3]	11362	58	346	200.68
Oil	[3]	4517	884	13.6	120.224
Ginger	[3]	11216	80	2.02	1.616
Green chilies	[3]	11670	40	14.8	5.92
Cumin seeds	[3]	2014	375	1.02	3.825
Chaat powder	[3]	2074	0	1.02	0
pomegranate	[3]	9286	83	8.75	7.2625
lemon juice	[3]	9152	22	2.4	0.528
red chili powder	[3]	2009	282	1.02	2.8764
coriander leaf	[3]	11165	23	5	1.15
Total				395.63	344.0819
Per 100 grams, kCAL:					86.9706291

Ingredient	Source	Code	Folate(mcg/100g)	Recipe(g)	Folate in recipe(mcg)
Potato	[3]	11362	17	346	58.82
Oil	[3]	4517	0	13.6	0
Ginger	[3]	11216	11	2.02	0.2222
Green chilies	[3]	11670	23	14.8	3.404
Cumin seeds	[3]	2014	10	1.02	0.102
Chaat powder	[3]	2074		1.02	
pomegranate	[3]	9286	38	8.75	3.325
lemon juice	[3]	9152	20	2.4	0.48
red chili powder	[3]	2009	28	1.02	0.2856
coriander leaf	[3]	11165	62	5	3.1
Total				395.63	69.7388
Per 100 grams, Folate(mcg):					17.627278
Ingredient	Source	Code	Zinc(mg/100g)	Recipe(g)	Zinc in recipe(mg)
Potato	[3]	11362	0.423	346	1.46358
Oil	[3]	4517	0	13.6	0
Ginger	[3]	11216	0.34	2.02	0.006868
Green chilies	[3]	11670	0.3	14.8	0.0444
Cumin seeds	[3]	2014	4.8	1.02	0.04896
Chaat powder	[3]	2074		1.02	
pomegranate	[3]	9286	0.35	8.75	0.030625
lemon juice	[3]	9152	0.05	2.4	0.0012
red chili powder	[3]	2009	4.3	1.02	0.04386
coriander leaf	[3]	11165	0.5	5	0.025
Total				395.63	1.664493

Per 100 grams, Zinc (mg):					0.42071961
Ingredient	Source	Code	Vit.C(mg/100g)	Recipe(g)	Vit.C in recipe(mg)
Potato	[3]	11362	11.4	346	39.444
Oil	[3]	4517	0	13.6	0
Ginger	[3]	11216	5	2.02	0.101
Green chilies	[3]	11670	242	14.8	35.816
Cumin seeds	[3]	2014	7.7	1.02	0.07854
Chaat powder	[3]	2074	0	1.02	0
pomegranate	[3]	9286	10.2	8.75	0.8925
lemon juice	[3]	9152	38.7	2.4	0.9288
red chili powder	[3]	2009	0.7	1.02	0.00714
coriander leaf	[3]	11165	27	5	1.35
Total				395.63	78.61798
Per 100 grams, Vitamin C(mg):					19.8715921
Ingredient	Source	Code	Vit.B6 (mg/100g)	Recipe(g)	Vit. B6 in recipe(mg)
Potato	[3]	11362	0.239	346	0.82694
Oil	[3]	4517	0	13.6	0
Ginger	[3]	11216	0.16	2.02	0.003232
Green chilies	[3]	11670	0.278	14.8	0.041144
Cumin seeds	[3]	2014	0.435	1.02	0.004437
Chaat powder	[3]	2074		1.02	0
pomegranate	[3]	9286	0.075	8.75	0.0065625
lemon juice	[3]	9152	0.046	2.4	0.001104
red chili powder	[3]	2009	2.09	1.02	0.021318

coriander leaf	[3]	11165	0.149	5	0.00745
Total				395.63	0.9121875
Per 100 grams, Vitamin B6 (mg):					0.23056581

Ingredient	Source	Code	Vit A in recipe(mcg/100g)	Recipe(g)	Vit.A RAE in recipe(mcg)
Potato	[3]	11362	0	346	0
Oil	[3]	4517	0	13.6	0
Ginger	[3]	11216	0	2.02	0
Green chilies	[3]	11670	59	14.8	8.732
Cumin seeds	[3]	2014	64	1.02	0.6528
Chaat powder	[3]	2074		1.02	
pomegranate	[3]	9286	0	8.75	0
lemon juice	[3]	9152	0	2.4	0
red chili powder	[3]	2009	1480	1.02	15.096
coriander leaf	[3]	11165	337	5	16.85
Total				395.63	41.3308
Per 100 grams, Vitamin A (mcg):					10.4468316
Ingredient	Source	Code	Thiamin(mg/100g)	Recipe(g)	Thiamin in recipe(mg)
Potato	[3]	11362	0.021	346	0.07266
Oil	[3]	4517	0	13.6	0
Ginger	[3]	11216	0.025	2.02	0.000505
Green chilies	[3]	11670	0.09	14.8	0.01332
Cumin seeds	[3]	2014	0.628	1.02	0.0064056
Chaat powder	[3]	2074		1.02	

pomegranate	[3]	9286	0.067	8.75	0.0058625
lemon juice	[3]	9152	0.024	2.4	0.000576
red chili powder	[3]	2009	0.25	1.02	0.00255
coriander leaf	[3]	11165	0.067	5	0.00335
Total				395.63	0.1052291
Per 100 grams, Thiamin (mg):					0.02659786
Ingredient	Source	Code	Copper(mg/100g)	Recipe(g)	Copper in recipe(mg)
Potato	[3]	11362	0.423	346	1.46358
Oil	[3]	4517		13.6	0
Ginger	[3]	11216	0.226	2.02	0.0045652
Green chilies	[3]	11670	0.174	14.8	0.025752
Cumin seeds	[3]	2014	0.867	1.02	0.0088434
Chaat powder	[3]	2074		1.02	
pomegranate	[3]	9286	0.158	8.75	0.013825
lemon juice	[3]	9152	0.016	2.4	0.000384
red chili powder	[3]	2009	1	1.02	0.0102
coriander leaf	[3]	11165	0.225	5	0.01125
Total				395.63	1.5383996
Per 100 grams, Copper (mg):					0.38884807
Ingredient	Source	Code	Vit.D (mcg/100g)	Recipe(g)	Vit. D in recipe(mcg)
Potato	[3]	11362	0	346	0
Oil	[3]	4517		13.6	0

Ginger	[3]	11216	0	2.02	0
Green chilies	[3]	11670	0	14.8	0
Cumin seeds	[3]	2014	0	1.02	0
Chaat powder	[3]	2074		1.02	
pomegranate	[3]	9286	0	8.75	0
lemon juice	[3]	9152	0	2.4	0
red chili powder	[3]	2009	0	1.02	0
coriander leaf	[3]	11165	0	5	0
Total				395.63	0
Per 100 grams, Vitamin D (mcg):					0

111112

111112		Tikka/boti/ Rost/Sajji/Fish fried, Kabab(Seikh/Shami/Chapli)												
NBD # in	NAME	kCAL	Iron (mg)	Folate DFE (ug)	Vitamin B12 (ug)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (ug)	Vitamin B6 (mg)
1099655	Tikka/boti	102	0.62	14	0.16	0.38	12.8	0.9	0.12	12	0.06	0.097	0	0.1988
		[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
1098355	Rost/Sajji	265	1.96	20	2.59	0.14	0	4.78	0.253	0	0.094	0.111	0.1	0.139
		[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]

1098942	Fried	284	1.35	24	0.95	1.28	0	0.93	0.193	44	0.508	0.074	9.6	0.184
		[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
1099591	Seikh	120	1.43	14	0.77	0.38	12.8	2.52	0.111	8	0.06	0.102	0.1	0.268
		[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
1099652	Sharmi	120	1.25	21	1.22	0.27	12.8	2.9	0.155	8	0.069	0.12	0.1	0.154
		[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
109821	Chapli	272	2.41	10	2.75	0.12	0	6.17	0.175	3	0.048	0.077	0	0.365
		[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
calculated average														
		193.83	1.50	17.17	1.41	0.43	6.40	3.03	0.17	12.50	0.14	0.10	1.65	0.22
		[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
		111112 (calc)	111112 (calc)	111112 (calc)	111112 (calc)	111112 (calc)	111112 (calc)	111112 (calc)	111112 (calc)	111112 (calc)	111112 (calc)	111112 (calc)	111112 (calc)	111112 (calc)

111113

111113		Bread , Paratha,Nan,Roti etc.												
NBD # in USDA FDC	NAME	kCAL	Iron (mg)	Folate DFE (ug)	Vitamin B12 (ug)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (ug)	Vitamin B6 (mg)
28285	Bread	299	2.2	45	0	0.55	0	1.54	0.15	0	0.45	0.229	0	0.28
		[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
28286	Paratha	326	1.61	10	0	1.35	0	0.82	0.076	2	0.11	0.146	0	0.08
		[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
51108100	Nan	311	1.88	15	0	1.44	0	1.35	0.196	2	0.153	0.172	0	0.139
		[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
51300175	Roti	299	2.2	38	0	0.55	0	1.54	0.18	0	0.36	0.229	0	0.28
		[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
calculated average														
		308.75	1.97	27.00	0.00	0.97	0.00	1.31	0.15	1.00	0.27	0.19	0.00	0.19
		[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
		111113 (calc)	111113 (calc)	111113 (calc)	111113 (calc)	111113 (calc)	111113 (calc)	111113 (calc)	111113 (calc)	111113 (calc)	111113 (calc)	111113 (calc)	111113 (calc)	111113 (calc)

11103

11103		Rice and rice flour													
numbers	NBD # in USDA	NAME	kCAL	Iron (mg)	Folate DFE (ug)	Vitamin B12 (ug)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (ug)	Vitamin B6 (mg)
A-8	20054	Rice	360	1.5	7	0		0	1.2	0.04	0	0.13	0.171	0	0.107
			[1]	[1]	[3]	[3]	[3]	[1]	[1]	[1]	[1]	[1]	[3]	[3]	[3]
n/a	20061	Rice flour	366	0.35	4	0	0.11	0	0.8	0.021	0	0.138	0.13	0	0.436
			[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
Calculated average of rice and rice flour															
			363	0.925	5.5	0	0.11	0	1	0.0305	0	0.134	0.1505	0	0.2715
			[1], [3]	[1], [3]	[3]	[3]	[3]	[1], [3]	[1], [3]	[1], [3]	[1], [3]	[1], [3]	[3]	[3]	[3]
			11103 (calc)	11103 (calc)	11103 (calc)	11103 (calc)	11103 (calc)	11103 (calc)	11103 (calc)	11103 (calc)	11103 (calc)	11103 (calc)	11103 (calc)	11103 (calc)	11103 (calc)

11104

11104		Maize, Barley, Jawar And Millet (Whole& Flour)													
For Jawar whole flour and millet whole flour, Vitamin B12 and Vitamin D values were unavailable. Because of this, they are excluded from the final Vitamin B12 and Vitamin D calculation.															
numbers in EGT	NBD # in USDA	NAME	kCAL	Iron (mg)	Folate DFE (ug)	Vitamin B12 (ug)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (ug)	Vitamin B6 (mg)
A-2	20019	Maize whole flour	276	2.2	29	0	0.12	0	1.7	0.11	47	0.38	0.209	0	0.475
			[1]	[1]	[3]	[3]	[3]	[1]	[1]	[1]	[1]	[1]	[3]	[3]	[3]
A-1	20130	Barley whole flour	339	4.4	8	0	0.57	0	2	0.17	0	0.35	0.343	0	0.396
			[1]	[1]	[3]	[3]	[3]	[1]	[1]	[1]	[1]	[1]	[3]	[3]	[3]
A-12	20648	Jawar whole flour	341	4.5	25		0.5	0	1	0.15	0	0.4	0.253		0.325
			[1]	[1]	[3]		[3]	[1]	[1]	[1]	[1]	[1]	[3]		[3]
A-5	20647	Millet whole flour	345	6.5	42		0.11	0	1.7	0.15	0	0.36	0.535		0.372
			[1]	[1]	[3]		[3]	[1]	[1]	[1]	[1]	[1]	[3]		[3]
Calculated average															
			325.25	4.4	26	0	0.325	0	1.6	0.145	11.75	0.3725	0.335	0	0.392
			[1]	[1]	[3]	[3]	[3]	[1]	[1]	[1]	[1]	[1]	[3]	[3]	[3]
			11104 (calc)	11104 (calc)	11104 (calc)	11104 (calc)	11104 (calc)	11104 (calc)	11104 (calc)	11104 (calc)	11104 (calc)	11104 (calc)	11104 (calc)	11104 (calc)	11104 (calc)

11105

11105		Maida, Suji, Besan													
numbers	NBD # in	NAME	kCAL	Iron (mg)	Folate DFE (ug)	Vitamin B12 (ug)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (ug)	Vitamin B6 (mg)
A-16	20649	Maida	350	2.6	28	0	0.53	0	2	0.08	0	0.24	0.475	0	0.191
			[1]	[1]	[3]	[3]	[3]	[1]	[1]	[1]	[1]	[1]	[3]	[3]	[3]
A-17	20066	Suji	370	3.2	111	0	0.26	0	2.7	0.12	0	0.28	0.189	0	0.103
			[1]	[1]	[3]	[3]	[3]	[1]	[1]	[1]	[1]	[1]	[3]	[3]	[3]
n/a	16157	Besan	387	4.86	437	0	0.83	0	2.81	0.106	2	0.486	0.912	0	0.492
			[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
Calculated average															
			369	3.55	192.00	0.00	0.54	0.00	2.50	0.10	0.67	0.34	0.53	0.00	0.26
			[1], [3]	[1], [3]	[3]	[3]	[3]	[1], [3]	[1], [3]	[1], [3]	[1], [3]	[1], [3]	[3]	[3]	[3]
			11105 (calc)	11105 (calc)	11105 (calc)	11105 (calc)	11105 (calc)	11105 (calc)	11105 (calc)	11105 (calc)	11105 (calc)	11105 (calc)	11105 (calc)	11105 (calc)	11105 (calc)

11107

11107		Other Cereals products (cornflakes, Noodles, Macronis, Spaghetti etc.)													
numbers	NBD # in	NAME	kCAL	Iron (mg)	Folate DFE (ug)	Vitamin B12 (ug)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (ug)	Vitamin B6 (mg)
A3	8506	Cornflake	375	2	714	5.36	0.02	0	0.3	0.1	140	0.41	0.075	7.1	1.91
			[1]	[1]	[3]	[3]	[3]	[1]	[1]	[1]	[1]	[1]	[3]	[3]	[3]
n/a	20113	Noodles	471	6.43	188	0	0.83	0	0.81	0.397	0	0.567	0.124	0	0.043
			[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
	20121	Macaro	158	1.28	73	0	0.06	0	0.51	0.136	0	0.247	0.1	0	0.049
			[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
	20121	Spaghett	158	1.28	73	0	0.06	0	0.51	0.136	0	0.247	0.1	0	0.049
			[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
Calculated:															
			290.50	2.75	262.00	1.34	0.24	0.00	0.53	0.19	35.00	0.37	0.10	1.78	0.51
			[1], [3]	[1], [3]	[3]	[3]	[3]	[1], [3]	[1], [3]	[1], [3]	[1], [3]	[1], [3]	[3]	[3]	[3]
			11107 (calc)	11107 (calc)	11107 (calc)	11107 (calc)	11107 (calc)	11107 (calc)	11107 (calc)	11107 (calc)	11107 (calc)	11107 (calc)	11107 (calc)	11107 (calc)	11107 (calc)

11108

11108		Wheat, Rice , Jawar And Millet (Grinding ,Husking ,Cleaning) etc												
NBD # in	NAME	kCAL	Iron (mg)	Folate DFE (ug)	Vitamin B12 (ug)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (ug)	Vitamin B6 (mg)
20129	Wheat	361	0.9	33	0	0.4	0	0.85	0.06	0	0.08	0.182	0	0.037
		[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
20061	Rice	336	0.35	4	0	0.11	0	0.8	0.021	0	0.138	0.13	0	0.436
		[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
20067	Jawar	329	3.36	20	0	0.5	0	1.67	0.096	0	0.332	0.284	0	0.443
		[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
20067,	Millet	359	3.14	25	0	0.5	0.8	1.63	0.061	0	0.329	0.253	0	0.325
		[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
calculated average														
		346.25	1.94	20.50	0.00	0.38	0.20	1.24	0.06	0.00	0.22	0.21	0.00	0.31
		[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
		11108 (calc)	11108 (calc)	11108 (calc)	11108 (calc)	11108 (calc)	11108 (calc)	11108 (calc)	11108 (calc)	11108 (calc)	11108 (calc)	11108 (calc)	11108 (calc)	11108 (calc)

11109

11109		Gram whole Black/White												
Chickpeas are used for white gram as they are synonymous.														
Bangladesh FCT	NAME	kCAL	Iron (mg)	Folate DFE (ug)	Vitamin B12 (ug)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (ug)	Vitamin B6 (mg)
02_0003	Black Gram(Mashkalai)	317	6	140	0	2	4.8	2	0	2	0	1	0	0
		[5]	[5]	[5]	[5]	[5]	[5]	[5]	[5]	[5]	[5]	[5]	[5]	[5]
02_0007	Chickpeas (Pea Gram)	352	5	207	0	1	4	3	0	5	0	1	0	0
		[5]	[5]	[5]	[5]	[5]	[5]	[5]	[5]	[5]	[5]	[5]	[5]	[5]
calculated average														
		334.5	5.5	173.5	0	1.5	4.4	2.5	0	3.5	0	1	0	0
		[5]	[5]	[5]	[5]	[5]	[5]	[5]	[5]	[5]	[5]	[5]	[5]	[5]
		11109 (calc)	11109 (calc)	11109 (calc)	11109 (calc)	11109 (calc)	11109 (calc)	11109 (calc)	11109 (calc)	11109 (calc)	11109 (calc)	11109 (calc)	11109 (calc)	11109 (calc)

11114

NBD # in	NAME	kCAL	Iron (mg)	Folate DFE (ug)	Vitamin B12 (ug)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (ug)	Vitamin B6 (mg)
16032	lobia red	337	6.69	394	0	0.21	4.5	2.79	0.215	0	0.608	0.699	0	0.397
		[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
16049	lobia	333	10.4	388	0	0.21	0	3.67	0.146	0	0.437	0.984	0	0.318
		[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
Calculated average														
		335	8.545	391	0	0.21	2.25	3.23	0.1805	0	0.5225	0.8415	0	0.3575
		[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
		11114 (calc)	11114 (calc)	11114 (calc)	11114 (calc)	11114 (calc)	11114 (calc)	11114 (calc)	11114 (calc)	11114 (calc)	11114 (calc)	11114 (calc)	11114 (calc)	11114 (calc)

11115

11115		Other Pulses (Arhar, chick / pigeon /garden peas, sunflower etc)													
Bangladesh FCT	NBD # in USDA	NAME	kCAL	Iron (mg)	Folate DFE (ug)	Vitamin B12 (ug)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (ug)	Vitamin B6 (mg)
02_0005	16402	Arhar pulse	121	1.11	111	0	2	0	0.9	0.059	0	0.146	0.269	0	0.05
			[3]	[3]	[3]	[3]	[5]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
	16358	Chickpea Pulse	139	1.07	48	0	0.29	0.1	0.63	0.015	1	0.027	0.253	0	0.116
			[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
	16085	Garden Peas	364	4.73	0	0	0.12	1.8	3.49	0.244	7	0.719	0.809	0	0.14
			[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
	12036	Sunflower	584	5.25	227	0	35.2	1.4	5	0.355	3	1.48	1.8	0	1.34
			[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
calculated average															
			302	3.04	96.5	0	9.4025	0.825	2.505	0.16825	2.75	0.593	0.78275	0	0.4115
			[3]	[3]	[3]	[3]	[3], [5]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
			11115 (calc)	11115 (calc)	11115 (calc)	11115 (calc)	11115 (calc)	11115 (calc)	11115 (calc)	11115 (calc)	11115 (calc)	11115 (calc)	11115 (calc)	11115 (calc)	11115 (calc)

11116

11116	**Biscuits (Sweet & Saltish)**												
	Because we cannot find nutritional information of Sweet and Saltish Biscuits, we need to self calculate the nutrient contents using the recipe												
NAME	kCAL	Iron (mg)	Folate DFE (ug)	Vitamin B12 (ug)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (ug)	Vitamin B6 (mg)
Zeera Biscuit	422.858	1.630	14.458	0.046	0.930	0.116	0.422	0.136	6.691	0.066	0.083	0.000	0.027
	calculated	calculated	calculated	calculated	calculated	calculated	calculated	calculated	calculated	calculated	calculated	calculated	calculated
Bakar Khani	442.533055	1.21659705	19.22552155	19.2255215	0.74379473	0	0.71089212	0.08931623	206.826339	0.09773399	0.24310557	0	0.05586721
	calculated	calculated	calculated	calculated	calculated	calculated	calculated	calculated	calculated	calculated	calculated	calculated	calculated
calculated average													
	432.70	1.42	16.84	9.64	0.84	0.06	0.57	0.11	106.76	0.08	0.16	0.00	0.04
	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
	11116 (calc)	11116 (calc)	11116 (calc)	11116 (calc)	11116 (calc)	11116 (calc)	11116 (calc)	11116 (calc)	11116 (calc)	11116 (calc)	11116 (calc)	11116 (calc)	11116 (calc)

Recipe calculation

Zeera Biscuits

Recipe	Amount	Unit	Final Amount (g)		
Wheat flour	250	g	250		
butter	125	g	125		
Salt	1	tsp	5.9		
egg	1	egg	50		

Cumin seeds	1	Tbsp	8.53		
Icing sugar	125	gm	125		
	503				
Ingredient	Source	Code	Iron(mg/100g)	Recipe(g)	Iron in recipe(mg)
Wheat flour	[3]	20481	1.3	250	3.25
Butter	[3]	1145	0.02	125	0.025
Salt	[3]	2047	0.33	5.9	0.01947
egg	[3]	1124	0.08	50	0.04
Cumin seeds	[3]	2014	66.4	8.53	5.66392
Icing sugar	[3]	91305020	0.16	125	0.2
Total				564.43	9.19839
Per 100 grams, iron(mg):					1.62967773
Ingredient	Source	Code	Vit B12 in recipe(mcg/100g)	Recipe(g)	Vit.B12 in recipe(mcg)
Wheat flour	[3]	20481	0	250	0
Butter	[3]	1145	0.17	125	0.2125
Salt	[3]	2047	0	5.9	0
egg	[3]	1124	0.09	50	0.045
Cumin seeds	[3]	2014	0	8.53	0
Icing sugar	[3]	91305020	0	125	0
Total				564.43	0.2575
Per 100 grams, Vitamin B12 (mcg):					0.04562125
Ingredient	Source	Code	Riboflavin(mg/100g)	Recipe(g)	Riboflavin in recipe(mg)

Wheat flour	[3]	20481	0.04	250	0.1
Butter	[3]	1145	0.034	125	0.0425
Salt	[3]	2047	0	5.9	0
egg	[3]	1124	0.439	50	0.2195
Cumin seeds	[3]	2014	0.327	8.53	0.0278931
Icing sugar	[3]	91305020	0.302	125	0.3775
Total				564.43	0.7673931
Per 100 grams, Riboflavin (mg):					0.13595895
Ingredient	Source	Code	Vit.E(mg/100g)	Recipe(g)	Vit.E in recipe(mg)
Wheat flour	[3]	20481	0.06	250	0.15
Butter	[3]	1145	2.32	125	2.9
Salt	[3]	2047	0	5.9	0
egg	[3]	1124	0	50	0
Cumin seeds	[3]	2014	3.33	8.53	0.284049
Icing sugar	[3]	91305020	1.53	125	1.9125
Total				564.43	5.246549
Per 100 grams, Vitamin E (mg):					0.9295305
Ingredient	Source	Code	Kcal/100g	Recipe(g)	Kcal in recipe
Wheat flour	[3]	20481	364	250	910
Butter	[3]	1145	717	125	896.25
Salt	[3]	2047	0	5.9	0
egg	[3]	1124	52	50	26
Cumin seeds	[3]	2014	375	8.53	31.9875
Icing sugar	[3]	91305020	418	125	522.5
Total				564.43	2386.7375

Per 100 grams, kCAL				422.858016

Ingredient	Source	Code	Folate(mcg/100g)	Recipe(g)	Folate in recipe(mg)
Wheat flour	[3]	20481	26	250	65
Butter	[3]	1145	3	125	3.75
Salt	[3]	2047	0	5.9	0
egg	[3]	1124	4	50	2
Cumin seeds	[3]	2014	10	8.53	0.853
Icing sugar	[3]	91305020	8	125	10
Total				564.43	81.603
Per 100 grams, Folate (mcg):					14.4575944
Ingredient	Source	Code	Zinc(mg/100g)	Recipe(g)	Zinc in recipe(mg)
Wheat flour	[3]	20481	0.7	250	1.75
Butter	[3]	1145	0.09	125	0.1125
Salt	[3]	2047	0.1	5.9	0.0059
egg	[3]	1124	0.03	50	0.015
Cumin seeds	[3]	2014	4.8	8.53	0.40944
Icing sugar	[3]	91305020	0.07	125	0.0875
Total				564.43	2.38034
Per 100 grams, Zinc (mg):					0.42172457
Ingredient	Source	Code	Vit.C(mg/100g)	Recipe(g)	Vit.C in recipe(mg)
Wheat flour	[3]	20481	0	250	0
Butter	[3]	1145	0	125	0
Salt	[3]	2047	0	5.9	0

egg	[3]	1124	0	50	0
Cumin seeds	[3]	2014	7.7	8.53	0.65681
Icing sugar	[3]	91305020	0	125	0
Total				564.43	0.65681
Per 100 grams, Vitamin C (mg):					0.11636695
Ingredient	Source	Code	Vit.B6 (mg/100g)	Recipe(g)	Vit. B6 in recipe(mg)
Wheat flour	[3]	20481	0.044	250	0.11
Butter	[3]	1145	0.003	125	0.00375
Salt	[3]	2047	0	5.9	0
egg	[3]	1124	0.005	50	0.0025
Cumin seeds	[3]	2014	0.435	8.53	0.0371055
Icing sugar	[3]	91305020	0	125	0
Total				564.43	0.1533555
Per 100 grams, Vitamin B6 (mg):					0.02716998

Ingredient	Source	Code	Vit A in recipe(mcg/100g)	Recipe(g)	Vit.A RAE in recipe(mcg)
Lemon Juice	[1]	M-194	2	44.36	0.8872
Sugar	[1]	M-185	0	25.11	0
Black salt	[3]	1135517	0	1.48	0
Mint Leaves	[3]	2064	212	1.88	3.9856
Total				72.83	4.8728
Per 100 grams, Vit.A RAE(mcg):					6.69064946

Ingredient	Source	Code	Thiamin(mg/100g)	Recipe(g)	Thiamin in recipe(mg)
Wheat flour	[3]	20481	0.12	250	0.3
Butter	[3]	1145	0.005	125	0.00625
Salt	[3]	2047	0	5.9	0
egg	[3]	1124	0.004	50	0.002
Cumin seeds	[3]	2014	0.628	8.53	0.0535684
Icing sugar	[3]	91305020	0.01	125	0.0125
Total				564.43	0.3743184
Per 100 grams, Thiamin (mg):					0.06631795
Ingredient	Source	Code	Copper(mg/100g)	Recipe(g)	Copper in recipe(mg)
Wheat flour	[3]	20481	0.144	250	0.36
Butter	[3]	1145	0.016	125	0.02
Salt	[3]	2047	0.03	5.9	0.00177
egg	[3]	1124	0.023	50	0.0115
Cumin seeds	[3]	2014	0.867	8.53	0.0739551
Icing sugar	[3]	91305020	0	125	0
Total				564.43	0.4672251
Per 100 grams, Vitamin C (mg):					0.08277822
Ingredient	Source	Code	Vit.D (mcg/100g)	Recipe(g)	Vit. D in recipe(mcg)
Wheat flour	[3]	20481	0	250	0
Butter	[3]	1145	0	125	0
Salt	[3]	2047	0	5.9	0
egg	[3]	1124	0	50	0
Cumin seeds	[3]	2014	0	8.53	0

Icing sugar	[3]	91305020	0	125	0
Total				564.43	0
Per 100 grams, Vitamin D(mcg):					0

Bakar Khani

Bakar Khani (Saltish Biscuit)

Recipe	Amount	Unit	Final Amount (g)		
All Purpose Flour	0.5	Kg	500		
Butter	250	g	250		
Eggs	2	eggs	100		
Salt	1	Tsp	5.9		
Butter	2	Tbsp	28		
Sesame Seed	4	Tbsp	35.48		
Ingredient	Source	Code	Iron(mg/100g)	Recipe(g)	Iron in recipe(mg)
All Purpose Flour	[3]	20481	1.17	500	5.85
Butter	[3]	1145	0.02	250	0.05
Eggs	[3]	1124	0.08	100	0.08
Salt	[3]	2047	0.33	5.9	0.01947
Butter	[3]	1145	0.02	28	0.0056
Sesame Seed	[3]	12023	14.6	35.48	5.18008
Total				919.38	11.18515
Per 100 grams, iron(mg):					1.21659705
Ingredient	Source	Code	Vit B12 in recipe(mcg/100g)	Recipe(g)	Vit.B12 in recipe(mcg)

All Purpose Flour	[3]	20481	0	500	130
Butter	[3]	1145	0.17	250	7.5
Eggs	[3]	1124	0.09	100	4
Salt	[3]	2047	0	5.9	0
Butter	[3]	1145	0.17	28	0.84
Sesame Seed	[3]	12023	0	35.48	34.4156
Total				919.38	176.7556
Per 100 grams, Vitamin B12 (mcg):					19.2255215
Ingredient	Source	Code	Riboflavin(mg/100g)	Recipe(g)	Riboflavin in recipe(mg)
All Purpose Flour	[3]	20481	0.04	500	0.2
Butter	[3]	1145	0.034	250	0.085
Eggs	[3]	1124	0.439	100	0.439
Salt	[3]	2047	0	5.9	0
Butter	[3]	1145	0.034	28	0.00952
Sesame Seed	[3]	12023	0.247	35.48	0.0876356
Total				919.38	0.8211556
Per 100 grams, Riboflavin (mg):					0.08931623
Ingredient	Source	Code	Vit.E(mg/100g)	Recipe(g)	Vit.E in recipe(mg)
All Purpose Flour	[3]	20481	0.06	500	0.3
Butter	[3]	1145	2.32	250	5.8
Eggs	[3]	1124	0	100	0
Salt	[3]	2047	0	5.9	0
Butter	[3]	1145	2.32	28	0.6496
Sesame Seed	[3]	12023	0.25	35.48	0.0887

Total				919.38	6.8383
Per 100 grams, Vitamin E (mg):					0.74379473
Ingredient	Source	Code	Kcal/100g	Recipe(g)	Kcal in recipe
All Purpose Flour	[3]	20481	364	500	1820
Butter	[3]	1145	717	250	1792.5
Eggs	[3]	1124	52	100	52
Salt	[3]	2047	0	5.9	0
Butter	[3]	1145	717	28	200.76
Sesame Seed	[3]	12023	573	35.48	203.3004
Total				919.38	4068.5604
Per 100 grams, iron(mg):					442.533055

Ingredient	Source	Code	Folate(mcg/100g)	Recipe(g)	Folate in recipe(mcg)
All Purpose Flour	[3]	20481	26	500	130
Butter	[3]	1145	3	250	7.5
Eggs	[3]	1124	4	100	4
Salt	[3]	2047	0	5.9	0
Butter	[3]	1145	3	28	0.84
Sesame Seed	[3]	12023	97	35.48	34.4156
Total				919.38	176.7556
Per 100 grams, Folate (mcg):					19.2255215
Ingredient	Source	Code	Zinc(mg/100g)	Recipe(g)	Zinc in recipe(mg)

All Purpose Flour	[3]	20481	0.7	500	3.5
Butter	[3]	1145	0.09	250	0.225
Eggs	[3]	1124	0.03	100	0.03
Salt	[3]	2047	0.1	5.9	0.0059
Butter	[3]	1145	0.09	28	0.0252
Sesame Seed	[3]	12023	7.75	35.48	2.7497
Total				919.38	6.5358
Per 100 grams, Zinc (mg):					0.71089212
Ingredient	Source	Code	Vit.C(mg/100g)	Recipe(g)	Vit.C in recipe(mg)
All Purpose Flour	[3]	20481	0	500	0
Butter	[3]	1145	0	250	0
Eggs	[3]	1124	0	100	0
Salt	[3]	2047	0	5.9	0
Butter	[3]	1145	0	28	0
Sesame Seed	[3]	12023	0	35.48	0
Total				919.38	0
Per 100 grams, Vitami C (mg):					0
Ingredient	Source	Code	Vit.B6 (mg/100g)	Recipe(g)	Vit. B6 in recipe(mg)
All Purpose Flour	[3]	20481	0.044	500	0.22
Butter	[3]	1145	0.003	250	0.0075
Eggs	[3]	1124	0.005	100	0.005
Salt	[3]	2047	0	5.9	0
Butter	[3]	1145	0.003	28	0.00084
Sesame Seed	[3]	12023	0.79	35.48	0.280292

Total				919.38	0.513632
Per 100 grams, Vitamin B6 (mg):					0.05586721
Ingredient	Source	Code	Vit A in recipe(mcg/100g)	Recipe(g)	Vit.A RAE in recipe(mcg)
All Purpose Flour	[3]	20481	0	500	0
Butter	[3]	1145	684	250	1710
Eggs	[3]	1124	0	100	0
Salt	[3]	2047	0	5.9	0
Butter	[3]	1145	684	28	191.52
Sesame Seed	[3]	12023	0	35.48	0
Total				919.38	1901.52
Per 100 grams, Folate (mcg):					206.826339
Ingredient	Source	Code	Thiamin(mg/100g)	Recipe(g)	Thiamin in recipe(mg)
All Purpose Flour	[3]	20481	0.12	500	0.6
Butter	[3]	1145	0.005	250	0.0125
Eggs	[3]	1124	0.004	100	0.004
Salt	[3]	2047	0	5.9	0
Butter	[3]	1145	0.005	28	0.0014
Sesame Seed	[3]	12023	0.791	35.48	0.2806468
Total				919.38	0.8985468
Per 100 grams, Thiamine (mg):					0.09773399
Ingredient	Source	Code	Copper(mg/100g)	Recipe(g)	Copper in recipe(mg)
All Purpose Flour	[3]	20481	0.144	500	0.72

Butter	[3]	1145	0.016	250	0.04
Eggs	[3]	1124	0.023	100	0.023
Salt	[3]	2047	0	5.9	0
Butter	[3]	1145	0.016	28	0.00448
Sesame Seed	[3]	12023	4.08	35.48	1.447584
Total				919.38	2.235064
Per 100 grams, Copper (mg):					0.24310557
Ingredient	Source	Code	Vit.D (mcg/100g)	Recipe(g)	Vit. D in recipe(mcg)
All Purpose Flour	[3]	20481	0	500	0
Butter	[3]	1145	0	250	0
Eggs	[3]	1124	0	100	0
Salt	[3]	2047	0	5.9	0
Butter	[3]	1145	0	28	0
Sesame Seed	[3]	12023	0	35.48	0
Total				919.38	0
Per 100 grams, Vitamin D (mcg):					0

11117

11117		Bread, Bun, Sheermal												
NBD/food code # in USDA	NAME	kCAL	Iron (mg)	Folate DFE (ug)	Vitamin B12 (ug)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (ug)	Vitamin B6 (mg)
51108 100	Bread	311	1.88	15	0	1.44	0	1.35	0.196	2	0.153	0.172	0	0.139
		[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
51154 100	Bun	279	3.43	94	0.2	0.27	1.3	0.73	0.297	0	0.543	0.109	0	0.063
		[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
	Sheermal	298.835269	0.67630998	42.9861966	0.13968618	0.28360272	0.05307333	0.58351019	0.1417627	83.0252979	0.20715747	0.09049414	0.02966309	0.05246979
		calculated	calculated	calculated	calculated	calculated	calculated	calculated	calculated	calculated	calculated	calculated	calculated	calculated
Calculated average														
		296.28	2.00	50.66	0.11	0.66	0.45	0.89	0.21	28.34	0.30	0.12	0.01	0.08
		[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
		11117 (calc)	11117 (calc)	11117 (calc)	11117 (calc)	11117 (calc)	11117 (calc)	11117 (calc)	11117 (calc)	11117 (calc)	11117 (calc)	11117 (calc)	11117 (calc)	11117 (calc)

Recipe calculation

Sheermal

Recipe	Amount	Unit	Final Amount (g)		
All Purpose Flour	312.5	g	312.5		
Instant Yeast	1	packet	7		

Eggs	1	egg	30		
Salt	0.5	Tsp	3		
Milk	176	g	176		
Ghee	0.25	cups	49		
Saffron	8	strands	0.2		
Cardamom	0.25	Tsp	0.63		
Sugar	1	Tbsp	15		
Ingredient	Source	Code	Iron(mg/100g)	Recipe(g)	Iron in recipe(mg)
All Purpose Flour	[3]	20481	1.17	312.5	3.65625
Instant Yeast	[3]	18375	2.17	7	0.1519
Eggs	[3]	1124	0.08	30	0.024
Salt	[3]	2047	0.33	3	0.0099
Milk	[3]	1211	0.03	176	0.0528
Ghee	[3]	1323	0	49	0
Saffron	[3]	2037	11.1	0.2	0.0222
Cardamom	[3]	2006	14	0.63	0.0882
Sugar	[3]	19335	0.05	15	0.0075
Total				593.33	4.01275
Per 100 grams, iron(mg):					0.67630998
Ingredient	Source	Code	Vit B12 in recipe(mcg/100g)	Recipe(g)	Vit.B12 in recipe(mcg)

All Purpose Flour	[3]	20481	0	312.5	0
Instant Yeast	[3]	18375	0.07	7	0.0049
Eggs	[3]	1124	0.09	30	0.027
Salt	[3]	2047	0	3	0
Milk	[3]	1211	0.45	176	0.792
Ghee	[3]	1323	0.01	49	0.0049
Saffron	[3]	2037	0	0.2	0
Cardamom	[3]	2006	0	0.63	0
Sugar	[3]	19335	0	15	0
Total				593.33	0.8288
Per 100 grams, Vitamin B12(mcg):					0.13968618
Ingredient	Source	Code	Riboflavin(mg/100g)	Recipe(g)	Riboflavin in recipe(mg)
All Purpose Flour	[3]	20481	0.04	312.5	0.125
Instant Yeast	[3]	18375	4	7	0.28
Eggs	[3]	1124	0.439	30	0.1317
Salt	[3]	2047	0	3	0
Milk	[3]	1211	0.169	176	0.29744
Ghee	[3]	1323	0.005	49	0.00245
Saffron	[3]	2037	0.267	0.2	0.000534
Cardamom	[3]	2006	0.182	0.63	0.0011466
Sugar	[3]	19335	0.019	15	0.00285
Total				593.33	0.8411206
Per 100 grams, Riboflavin (mg):					0.1417627

Ingredient	Source	Code	Vit.E(mg/100g)	Recipe(g)	Vit.E in recipe(mg)
All Purpose Flour	[3]	20481	0.06	312.5	0.1875
Instant Yeast	[3]	18375	0	7	0
Eggs	[3]	1124	0	30	0
Salt	[3]	2047	0	3	0
Milk	[3]	1211	0.07	176	0.1232
Ghee	[3]	1323	2.8	49	1.372
Saffron	[3]	2037		0.2	0
Cardamom	[3]	2006	0	0.63	0
Sugar	[3]	19335	0	15	0
Total				593.33	1.6827
Per 100 grams, Vitamin E (mg):					0.28360272
Ingredient	Source	Code	Kcal/100g	Recipe(g)	Kcal in recipe
All Purpose Flour	[3]	20481	364	312.5	1137.5
Instant Yeast	[3]	18375	325	7	22.75
Eggs	[3]	1124	52	30	15.6
Salt	[3]	2047	0	3	0
Milk	[3]	1211	61	176	107.36
Ghee	[3]	1323	876	49	429.24
Saffron	[3]	2037	310	0.2	0.62
Cardamom	[3]	2006	311	0.63	1.9593

Sugar	[3]	19335	387	15	58.05
Total				593.33	1773.0793
Per 100 grams, Riboflavin (mg):					298.835269

Ingredient	Source	Code	Folate(mcg/100g)	Recipe(g)	Folate in recipe(mcg)
All Purpose Flour	[3]	20481	26	312.5	81.25
Instant Yeast	[3]	18375	2340	7	163.8
Eggs	[3]	1124	4	30	1.2
Salt	[3]	2047	0	3	0
Milk	[3]	1211	5	176	8.8
Ghee	[3]	1323	0	49	0
Saffron	[3]	2037	0	0.2	0
Cardamom	[3]	2006		0.63	0
Sugar	[3]	19335	0	15	0
Total				593.33	255.05
Per 100 grams, Folate(mcg):					42.9861966
Ingredient	Source	Code	Zinc(mg/100g)	Recipe(g)	Zinc in recipe(mg)
All Purpose Flour	[3]	20481	0.7	312.5	2.1875
Instant Yeast	[3]	18375	7.94	7	0.5558
Eggs	[3]	1124	0.03	30	0.009

Salt	[3]	2047	0.1	3	0.003
Milk	[3]	1211	0.37	176	0.6512
Ghee	[3]	1323	0.01	49	0.0049
Saffron	[3]	2037	1.09	0.2	0.00218
Cardamom	[3]	2006	7.47	0.63	0.047061
Sugar	[3]	19335	0.01	15	0.0015
Total				593.33	3.462141
Per 100 grams, Zinc (mg):					0.58351019
Ingredient	Source	Code	Vit.C(mg/100g)	Recipe(g)	Vit.C in recipe(mg)
All Purpose Flour	[3]	20481	0	312.5	0
Instant Yeast	[3]	18375	0.3	7	0.021
Eggs	[3]	1124	0	30	0
Salt	[3]	2047	0	3	0
Milk	[3]	1211	0	176	0
Ghee	[3]	1323	0	49	0
Saffron	[3]	2037	80.8	0.2	0.1616
Cardamom	[3]	2006	21	0.63	0.1323
Sugar	[3]	19335	0	15	0
Total				593.33	0.3149
Per 100 grams, Vitamin C (mg):					0.05307333

Ingredient	Source	Code	Vit.B6 (mg/100g)	Recipe(g)	Vit. B6 in recipe(mg)
All Purpose Flour	[3]	20481	0.044	312.5	0.1375
Instant Yeast	[3]	18375	1.5	7	0.105
Eggs	[3]	1124	0.005	30	0.0015
Salt	[3]	2047	0	3	0
Milk	[3]	1211	0.036	176	0.06336
Ghee	[3]	1323	0.001	49	0.00049
Saffron	[3]	2037	1.01	0.2	0.00202
Cardamom	[3]	2006	0.23	0.63	0.001449
Sugar	[3]	19335	0	15	0
Total				593.33	0.311319
Per 100 grams, Vitamin B6 (mg):					0.05246979

Ingredient	Source	Code	Vit A in recipe(mcg/100g)	Recipe(g)	Vit.A RAE in recipe(mcg)
All Purpose Flour	[3]	20481	0	312.5	0
Instant Yeast	[3]	18375	0	7	0
Eggs	[3]	1124	0	30	0
Salt	[3]	2047	0	3	0
Milk	[3]	1211	46	176	80.96
Ghee	[3]	1323	840	49	411.6
Saffron	[3]	2037	27	0.2	0.054
Cardamom	[3]	2006	0	0.63	0
Sugar	[3]	19335	0	15	0

Total				593.33	492.614
Per 100 grams, Vitamin A RAE (mcg):					83.0252979
Ingredient	Source	Code	Thiamin(mg/100g)	Recipe(g)	Thiamin in recipe(mg)
All Purpose Flour	[3]	20481	0.12	312.5	0.375
Instant Yeast	[3]	18375	11	7	0.77
Eggs	[3]	1124	0.004	30	0.0012
Salt	[3]	2047	0	3	0
Milk	[3]	1211	0.046	176	0.08096
Ghee	[3]	1323	0.001	49	0.00049
Saffron	[3]	2037	0.115	0.2	0.00023
Cardamom	[3]	2006	0.198	0.63	0.0012474
Sugar	[3]	19335	0	15	0
Total				593.33	1.2291274
Per 100 grams, Thaimine (mg):					0.20715747
Ingredient	Source	Code	Copper(mg/100g)	Recipe(g)	Copper in recipe(mg)
All Purpose Flour	[3]	20481	0.144	312.5	0.45
Instant Yeast	[3]	18375	0.436	7	0.03052
Eggs	[3]	1124	0.023	30	0.0069
Salt	[3]	2047	0.03	3	0.0009

Milk	[3]	1211	0.025	176	0.044
Ghee	[3]	1323	0.001	49	0.00049
Saffron	[3]	2037	0.328	0.2	0.000656
Cardamom	[3]	2006	0.383	0.63	0.0024129
Sugar	[3]	19335	0.007	15	0.00105
Total				593.33	0.5369289
Per 100 grams, Thaimine (mg):					0.09049414
Ingredient	Source	Code	Vit.D (mcg/100g)	Recipe(g)	Vit. D in recipe(mcg)
All Purpose Flour	[3]	20481	0	312.5	0
Instant Yeast	[3]	18375	0	7	0
Eggs	[3]	1124	0	30	0
Salt	[3]	2047	0	3	0
Milk	[3]	1211	0.1	176	0.176
Ghee	[3]	1323	0	49	0
Saffron	[3]	2037	0	0.2	0
Cardamom	[3]	2006	0	0.63	0
Sugar	[3]	19335	0	15	0
Total				593.33	0.176
Per 100 grams, Vitamin D (mcg):					0.02966309

11118

11118		Cake , Bakar khani												
NBD/food code # in USDA	NAME	kCAL	Iron (mg)	Folate DFE (ug)	Vitamin B12 (ug)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (ug)	Vitamin B6 (mg)
53102800	Cake	264	1.1	8	0.21	0.75	13.6	0.28	0.19	80	0.03	0.057	0.3	0.06
		[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
see below	Bakar Khani	442.533055	1.21659705	19.2255215	19.2255215	0.74379473	0	0.71089212	0.08931623	206.826339	0.09773399	0.24310557	0	0.05586721
		calculated	calculated	calculated	calculated	calculated	calculated	calculated	calculated	calculated	calculated	calculated	calculated	calculated
Calculated average														
		353.27	1.16	13.61	9.72	0.75	6.80	0.50	0.14	143.41	0.06	0.15	0.15	0.06
		[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
		11118 (calc)	11118 (calc)	11118 (calc)	11118 (calc)	11118 (calc)	11118 (calc)	11118 (calc)	11118 (calc)	11118 (calc)	11118 (calc)	11118 (calc)	11118 (calc)	11118 (calc)

Recipe calculation

Bakar Khani

Recipe	Amount	Unit	Final Amount (g)		
All Purpose Flour	0.5	Kg	500		
Butter	250	g	250		
Eggs	2	eggs	100		
Salt	1	Tsp	5.9		
Butter	2	Tbsp	28		

Sesame Seed	4	Tbsp	35.48		
Ingredient	Source	Code	Iron(mg/100g)	Recipe(g)	Iron in recipe(mg)
All Purpose Flour	[3]	20481	1.17	500	5.85
Butter	[3]	1145	0.02	250	0.05
Eggs	[3]	1124	0.08	100	0.08
Salt	[3]	2047	0.33	5.9	0.01947
Butter	[3]	1145	0.02	28	0.0056
Sesame Seed	[3]	12023	14.6	35.48	5.18008
Total				919.38	11.18515
Per 100 grams, iron(mg):					1.21659705
Ingredient	Source	Code	Vit B12 in recipe(mcg/100g)	Recipe(g)	Vit.B12 in recipe(mcg)
All Purpose Flour	[3]	20481	0	500	130
Butter	[3]	1145	0.17	250	7.5
Eggs	[3]	1124	0.09	100	4
Salt	[3]	2047	0	5.9	0
Butter	[3]	1145	0.17	28	0.84
Sesame Seed	[3]	12023	0	35.48	34.4156
Total				919.38	176.7556
Per 100 grams, Vitamin B12 (mcg):					19.2255215

Ingredient	Source	Code	Riboflavin(mg/100g)	Recipe(g)	Riboflavin in recipe(mg)
All Purpose Flour	[3]	20481	0.04	500	0.2
Butter	[3]	1145	0.034	250	0.085
Eggs	[3]	1124	0.439	100	0.439
Salt	[3]	2047	0	5.9	0
Butter	[3]	1145	0.034	28	0.00952
Sesame Seed	[3]	12023	0.247	35.48	0.0876356
Total				919.38	0.8211556
Per 100 grams, Riboflavin (mg):					0.08931623
Ingredient	Source	Code	Vit.E(mg/100g)	Recipe(g)	Vit.E in recipe(mg)
All Purpose Flour	[3]	20481	0.06	500	0.3
Butter	[3]	1145	2.32	250	5.8
Eggs	[3]	1124	0	100	0
Salt	[3]	2047	0	5.9	0
Butter	[3]	1145	2.32	28	0.6496
Sesame Seed	[3]	12023	0.25	35.48	0.0887
Total				919.38	6.8383
Per 100 grams, Vitamin E (mg):					0.74379473
Ingredient	Source	Code	Kcal/100g	Recipe(g)	Kcal in recipe

All Purpose Flour	[3]	20481	364	500	1820
Butter	[3]	1145	717	250	1792.5
Eggs	[3]	1124	52	100	52
Salt	[3]	2047	0	5.9	0
Butter	[3]	1145	717	28	200.76
Sesame Seed	[3]	12023	573	35.48	203.3004
Total				919.38	4068.5604
Per 100 grams, iron(mg):					442.533055

Ingredient	Source	Code	Folate(mcg/100g)	Recipe(g)	Folate in recipe(mcg)
All Purpose Flour	[3]	20481	26	500	130
Butter	[3]	1145	3	250	7.5
Eggs	[3]	1124	4	100	4
Salt	[3]	2047	0	5.9	0
Butter	[3]	1145	3	28	0.84
Sesame Seed	[3]	12023	97	35.48	34.4156
Total				919.38	176.7556
Per 100 grams, Folate (mcg):					19.2255215
Ingredient	Source	Code	Zinc(mg/100g)	Recipe(g)	Zinc in recipe(mg)
All Purpose Flour	[3]	20481	0.7	500	3.5
Butter	[3]	1145	0.09	250	0.225
Eggs	[3]	1124	0.03	100	0.03

Salt	[3]	2047	0.1	5.9	0.0059
Butter	[3]	1145	0.09	28	0.0252
Sesame Seed	[3]	12023	7.75	35.48	2.7497
Total				919.38	6.5358
Per 100 grams, Zinc (mg):					0.71089212
Ingredient	Source	Code	Vit.C(mg/100g)	Recipe(g)	Vit.C in recipe(mg)
All Purpose Flour	[3]	20481	0	500	0
Butter	[3]	1145	0	250	0
Eggs	[3]	1124	0	100	0
Salt	[3]	2047	0	5.9	0
Butter	[3]	1145	0	28	0
Sesame Seed	[3]	12023	0	35.48	0
Total				919.38	0
Per 100 grams, Vitami C (mg):					0
Ingredient	Source	Code	Vit.B6 (mg/100g)	Recipe(g)	Vit. B6 in recipe(mg)
All Purpose Flour	[3]	20481	0.044	500	0.22
Butter	[3]	1145	0.003	250	0.0075
Eggs	[3]	1124	0.005	100	0.005
Salt	[3]	2047	0	5.9	0
Butter	[3]	1145	0.003	28	0.00084
Sesame Seed	[3]	12023	0.79	35.48	0.280292
Total				919.38	0.513632

Per 100 grams, Vitamin B6 (mg):			0.05586721

Ingredient	Source	Code	Vit A in recipe(mcg/100g)	Recipe(g)	Vit.A RAE in recipe(mcg)
All Purpose Flour	[3]	20481	0	500	0
Butter	[3]	1145	684	250	1710
Eggs	[3]	1124	0	100	0
Salt	[3]	2047	0	5.9	0
Butter	[3]	1145	684	28	191.52
Sesame Seed	[3]	12023	0	35.48	0
Total				919.38	1901.52
Per 100 grams, Folate (mcg):					206.826339
Ingredient	Source	Code	Thiamin(mg/100g)	Recipe(g)	Thiamin in recipe(mg)
All Purpose Flour	[3]	20481	0.12	500	0.6
Butter	[3]	1145	0.005	250	0.0125
Eggs	[3]	1124	0.004	100	0.004
Salt	[3]	2047	0	5.9	0
Butter	[3]	1145	0.005	28	0.0014
Sesame Seed	[3]	12023	0.791	35.48	0.2806468
Total				919.38	0.8985468
Per 100 grams, Thiamine (mg):					0.09773399
Ingredient	Source	Code	Copper(mg/100g)	Recipe(g)	Copper in recipe(mg)

All Purpose Flour	[3]	20481	0.144	500	0.72
Butter	[3]	1145	0.016	250	0.04
Eggs	[3]	1124	0.023	100	0.023
Salt	[3]	2047	0	5.9	0
Butter	[3]	1145	0.016	28	0.00448
Sesame Seed	[3]	12023	4.08	35.48	1.447584
Total				919.38	2.235064
Per 100 grams, Copper (mg):					0.24310557
Ingredient	Source	Code	Vit.D (mcg/100g)	Recipe(g)	Vit. D in recipe(mcg)
All Purpose Flour	[3]	20481	0	500	0
Butter	[3]	1145	0	250	0
Eggs	[3]	1124	0	100	0
Salt	[3]	2047	0	5.9	0
Butter	[3]	1145	0	28	0
Sesame Seed	[3]	12023	0	35.48	0
Total				919.38	0
Per 100 grams, Vitamin D (mcg):					0

11119

11119		Pasteries, Paties etc												
NBD/food code # in USDA	NAME	kCAL	Iron (mg)	Folate DFE (ug)	Vitamin B12 (ug)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (ug)	Vitamin B6 (mg)
51300 180	Poori/ Puri	397	2.22	29	0	3	0	0.86	0.158	0	0.256	0.148	0	0.105
		[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
	Puff Pastry	558	2.6	55	0	0.55	0	0.54	0.258	0	0.323	0.115	0	0.019
		[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
calculated average														
		477.5	2.41	42	0	1.775	0	0.7	0.208	0	0.2895	0.1315	0	0.062
		[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
		11119 (calc)	11119 (calc)	11119 (calc)	11119 (calc)	11119 (calc)	11119 (calc)	11119 (calc)	11119 (calc)	11119 (calc)	11119 (calc)	11119 (calc)	11119 (calc)	11119 (calc)

11120

11120		Other baked or fried products (Pakoras, Samosa, Qatlama, popcorn etc).												
NBD/food code # in USDA	NAME	kCAL	Iron (mg)	Folate DFE (ug)	Vitamin B12 (ug)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (ug)	Vitamin B6 (mg)
75440400	Pakora	124	1.12	129	0	0.62	3.5	0.67	0.056	3	0.116	0.167	0	0.152
		[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
58124500	Samosa	305	1.74	44	0.11	1.78	0.7	0.43	0.198	51	0.235	0.058	0	0.063
		[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
	Qatlama	345.7	2.23	137.28	0.339	1.129	0.00824427	1.23051254	0.11087023	17.99	0.20605889	0.34721919	0	0.18707961
		(calculated)	(calculated)	(calculated)	(calculated)	(calculated)	(calculated)	(calculated)	(calculated)	(calculated)	(calculated)	(calculated)	(calculated)	(calculated)
19034	Popcorn	387	3.19	31	0	0.29	0	3.08	0.083	10	0.104	0.262	0	0.157
		[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
calculated average														
		290.43	2.07	85.32	0.11	0.95	1.05	1.35	0.11	20.50	0.17	0.21	0.00	0.14
		[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
		11120 (calc)	11120 (calc)	11120 (calc)	11120 (calc)	11120 (calc)	11120 (calc)	11120 (calc)	11120 (calc)	11120 (calc)	11120 (calc)	11120 (calc)	11120 (calc)	11120 (calc)

Recipe calculation

Qatlama					
Recipe	Amount	Unit	Final Amount (g)		
All Purpose Flour	2	cups	256		
Olive Oil	1	Tbsp	13.2		
Gram flour	1	cup	128		
Salt	1	Tsp	5.9		
Red chilli powder	2	Tsp	5.4		
Egg	1	egg	50		
Ingredient	Source	Code	Iron(mg/100g)	Recipe(g)	Iron in recipe(mg)
All Purpose Flour	[3]	20481	1.17	256	2.9952
Olive Oil	[1]	L-182	0	13.2	0
Gram flour	[3]	16157	4.86	128	6.2208
Salt	[3]	2047	0.33	5.9	0.01947
Red chilli powder	[3]	2009	17.3	5.4	0.9342
Egg	[3]	1124	0.08	50	0.04
Total				458.5	10.20967
Per 100 grams, iron(mg):					2.22675463
Ingredient	Source	Code	Vit B12 in recipe(mcg/100g)	Recipe(g)	Vit.B12 in recipe(mcg)

All Purpose Flour	[3]	20481	0	256	0
Olive Oil	[3]	100258	0	13.2	0
Gram flour	[3]	16157	0	128	0
Salt	[3]	2047	0	5.9	0
Red chilli powder	[3]	2009	28	5.4	1.512
Egg	[3]	1124	0.09	50	0.045
Total				458.5	1.557
Per 100 grams, Vitamin B12 (mcg):					0.33958561
Ingredient	Source	Code	Riboflavin(mg/100g)	Recipe(g)	Riboflavin in recipe(mg)
All Purpose Flour	[3]	20481	0.04	256	0.1024
Olive Oil	[3]	100258	0	13.2	0
Gram flour	[3]	16157	0.106	128	0.13568
Salt	[3]	2047	0	5.9	0
Red chilli powder	[3]	2009	0.94	5.4	0.05076
Egg	[3]	1124	0.439	50	0.2195
Total				458.5	0.50834
Per 100 grams, Riboflavin (mg):					0.11087023
Ingredient	Source	Code	Vit.E(mg/100g)	Recipe(g)	Vit.E in recipe(mg)
All Purpose Flour	[3]	20481	0.06	256	0.1536
Olive Oil	[3]	100258	14.4	13.2	1.9008
Gram flour	[3]	16157	0.83	128	1.0624
Salt	[3]	2047	0	5.9	0
Red chilli powder	[3]	2009	38.1	5.4	2.0574

Egg	[3]	1124	0	50	0
Total				458.5	5.1742
Per 100 grams, Vitamin E (mg):					1.128506
Ingredient	Source	Code	Kcal/100g	Recipe(g)	Kcal in recipe
All Purpose Flour	[3]	20481	364	256	931.84
Olive Oil	[1]	L-182	884	13.2	116.688
Gram flour	[3]	16157	387	128	495.36
Salt	[3]	2047	0	5.9	0
Red chilli powder	[3]	2009	282	5.4	15.228
Egg	[3]	1124	52	50	26
Total				458.5	1585.116
Per 100 grams, iron(mg):					345.717775

Ingredient	Source	Code	Folate(mcg/100g)	Recipe(g)	Folate in recipe(mg)
All Purpose Flour	[3]	20481	26	256	66.56
Olive Oil	[3]	100258	0	13.2	0
Gram flour	[3]	16157	437	128	559.36
Salt	[3]	2047	0	5.9	0
Red chilli powder	[3]	2009	28	5.4	1.512
Egg	[3]	1124	4	50	2
Total				458.5	629.432
Per 100 grams, Folate DFE(mcg):					137.280698

Ingredient	Source	Code	Zinc(mg/100g)	Recipe(g)	Zinc in recipe(mg)
All Purpose Flour	[3]	20481	0.7	256	1.792
Olive Oil	[3]	100258	0	13.2	0
Gram flour	[3]	16157	2.81	128	3.5968
Salt	[3]	2047	0.1	5.9	0.0059
Red chilli powder	[3]	2009	4.3	5.4	0.2322
Egg	[3]	1124	0.03	50	0.015
Total				458.5	5.6419
Per 100 grams, Zinc (mg):					1.23051254
Ingredient	Source	Code	Vit.C(mg/100g)	Recipe(g)	Vit.C in recipe(mg)
All Purpose Flour	[3]	20481	0	256	0
Olive Oil	[3]	100258	0	13.2	0
Gram flour	[3]	16157	0	128	0
Salt	[3]	2047	0	5.9	0
Red chilli powder	[3]	2009	0.7	5.4	0.0378
Egg	[3]	1124	0	50	0
Total				458.5	0.0378
Per 100 grams, Vitamin C (mg):					0.00824427
Ingredient	Source	Code	Vit.B6 (mg/100g)	Recipe(g)	Vit. B6 in recipe(mg)
All Purpose Flour	[3]	20481	0.044	256	0.11264
Olive Oil	[3]	100258	0	13.2	0

Gram flour	[3]	16157	0.492	128	0.62976
Salt	[3]	2047	0	5.9	0
Red chilli powder	[3]	2009	2.09	5.4	0.11286
Egg	[3]	1124	0.005	50	0.0025
Total				458.5	0.85776
Per 100 grams, Vitamin B6 (mg):					0.18707961

Ingredient	Source	Code	Vit A in recipe(mcg/100g)	Recipe(g)	Vit.A RAE in recipe(mcg)
All Purpose Flour	[3]	20481	0	256	0
Olive Oil	[3]	100258	0	13.2	0
Gram flour	[3]	16157	2	128	2.56
Salt	[3]	2047	0	5.9	0
Red chilli powder	[3]	2009	1480	5.4	79.92
Egg	[3]	1124	0	50	0
Total				458.5	82.48
Per 100 grams, Vitamin A RAE (mcg):					17.9890949
Ingredient	Source	Code	Thiamin(mg/100g)	Recipe(g)	Thiamin in recipe(mg)
All Purpose Flour	[3]	20481	0.12	256	0.3072
Olive Oil	[3]	100258	0	13.2	0
Gram flour	[3]	16157	0.486	128	0.62208
Salt	[3]	2047	0	5.9	0
Red chilli powder	[3]	2009	0.25	5.4	0.0135
Egg	[3]	1124	0.004	50	0.002

Total				458.5	0.94478
Per 100 grams, Thiamine (mg):					0.20605889
Ingredient	Source	Code	Copper(mg/100g)	Recipe(g)	Copper in recipe(mg)
All Purpose Flour	[3]	20481	0.144	256	0.36864
Olive Oil	[3]	100258	0	13.2	0
Gram flour	[3]	16157	0.912	128	1.16736
Salt	[3]	2047	0	5.9	0
Red chilli powder	[3]	2009	1	5.4	0.054
Egg	[3]	1124	0.004	50	0.002
Total				458.5	1.592
Per 100 grams, Copper (mg):					0.34721919
Ingredient	Source	Code	Vit.D (mcg/100g)	Recipe(g)	Vit. D in recipe(mcg)
All Purpose Flour	[3]	20481	0	256	0
Olive Oil	[3]	100258	0	13.2	0
Gram flour	[3]	16157	0	128	0
Salt	[3]	2047	0	5.9	0
Red chilli powder	[3]	2009	0	5.4	0
Egg	[3]	1124	0	50	0
Total				458.5	0
Per 100 grams, Vitamin D (mcg):					0

11501

11501		Butter products (Butter oil/Desi Ghee)													
FCT 2001	NBD # in USDA FDC	NAME	kCAL	Iron (mg)	Folate DFE (ug)	Vitamin B12 (ug)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (ug)	Vitamin B6 (mg)
	1003	Butter oil	876	0	0	0.01	2.8	0	0.01	0.005	840	0.001	0.001	0	0.001
			[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
L-172	1323, 81204000	Desi Ghee	874	0	0	0.01	2.8	0	0.01	0.005	840	0.001	0.001	0	0.001
			[1]	[1]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
Calculated average															
			875	0	0	0.01	2.8	0	0.01	0.005	840	0.001	0.001	0	0.001
			[1], [3]	[1], [3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
			11501 (calc)	11501 (calc)	11501 (calc)	11501 (calc)	11501 (calc)	11501 (calc)	11501 (calc)	11501 (calc)	11501 (calc)	11501 (calc)	11501 (calc)	11501 (calc)	11501 (calc)

11502

11502		Butter /Margarine (Loose/ packed)													
numbers in FCT	NBD # in USDA	NAME	kCAL	Iron (mg)	Folate DFE (ug)	Vitamin B12 (ug)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (ug)	Vitamin B6 (mg)
L-172	1145	Butter	721	0.2	3	0.17	2.32	[3]	0.09	0.034	684	0.005	0.016	0	0.003
			[1]	[1]	[3]	[3]	[3]	[]3	[3]	[3]	[3]	[3]	[3]	[3]	[3]
N/A	4585	Margarine	727	0.04	2	0	3.88	0.1	0.03	0.023	819	0.009	0.01	0	0.009
			[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
Calculated average															
			724	0.12	2.5	0.085	3.1	0.1	0.06	0.0285	751.5	0.007	0.013	0	0.006
			[1], [3]	[1], [3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
			11502 (calc)	11502 (calc)	11502 (calc)	11502 (calc)	11502 (calc)	11502 (calc)	11502 (calc)	11502 (calc)	11502 (calc)	11502 (calc)	11502 (calc)	11502 (calc)	11502 (calc)

11506

11506		Other Oils and Fats (animal fats etc.)													
*the only animal fat on the Pakistan 2001 FCT was lard.															
*all other oils listed in FCT that were not specified in HIES data are averaged here															
FCT 2001	NBD # in USDA FDC	NAME	kCAL	Iron (mg)	Folate DFE (ug)	Vitamin B12 (ug)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (ug)	Vitamin B6 (mg)
L-175	4002	Lard	899	0	0	0	0.6	0	0.1	0	0	0	0	2.5	0
			[1]	[1]	[3]	[3]	[3]	[1]	[1]	[1]	[1]	[1]	[3]	[3]	[3]
L-177	42289	Corn oil	900	0	0	0	14.8	0	0	0	0	0	0	0	0
			[1]	[1]	[3]	[3]	[3]	[1]	[3]	[1]	[1]	[1]	[3]	[3]	[3]
L-178	4531	Soybean oil	887	0	0	0	8.18	0	0	0	0	0	0	0	0
			[1]	[1]	[3]	[3]	[3]	[1]	[3]	[1]	[1]	[1]	[3]	[3]	[3]
L-179	4642, 4506	Sunflower oil	900	0	0	0	41.1	0	0	0	0	0	0	0	0
			[1]	[1]	[3]	[3]	[3]	[1]	[3]	[1]	[1]	[1]	[3]	[3]	[3]
L-180	4047	Coconut Oil	884	3	0	0	0.11	0	0.02	0	0	0	0	0	0
			[1]	[1]	[3]	[3]	[3]	[1]	[3]	[1]	[1]	[1]	[3]	[3]	[3]

L-181	4502	Cotton oil	882	0	0	0	35.3	0	0	0	0	0	0	0	0
			[1]	[1]	[3]	[3]	[3]	[1]	[3]	[1]	[1]	[1]	[3]	[3]	[3]
L-183	4042	Groundnut	882	0	0	0	15.7	0	0.01	0	0	0	0	0	0
			[1]	[1]	[3]	[3]	[3]	[1]	[3]	[1]	[1]	[1]	[3]	[3]	[3]
L-184		Sesame oil	886	10	0	0	1.4	0	0	0.07	0	0.1	0	0	0
			[1]	[1]	[3]	[3]	[3]	[1]	[3]	[1]	[1]	[1]	[3]	[3]	[3]
Calculated average															
			791.11	1.44	0.00	0.00	13.02	0.00	0.01	0.01	0.00	0.01	0.00	0.28	0.00
			[1]	[1]	[3]	[3]	[3]	[1]	[1], [3]	[1]	[1]	[1]	[3]	[3]	[3]
			11506 (calc)	11506 (calc)	11506 (calc)	11506 (calc)	11506 (calc)	11506 (calc)	11506 (calc)	11506 (calc)	11506 (calc)	11506 (calc)	11506 (calc)	11506 (calc)	11506 (calc)

12103

12103		Other (Milo/Ovaltine , Horlicks ,complan e.tc)												
NBD # in USDA FDC	NAME	kCAL	Iron (mg)	Folate DFE (ug)	Vitamin B12 (ug)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (ug)	Vitamin B6 (mg)
11514110	Milo	105	0.16	1	0.49	0.07	0	0.55	0.195	28	0.059	0.039	1	0.065
		[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
14309	Ovaltine	372	16.4	0	0	12.3	54.5	13.6	0	1360	1.36	1.82	9.1	1.82
		[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
14310	Horlicks	372	16.4	0	0	12.3	54.5	13.6	0	1360	1.36	1.82	9.1	1.82
		[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
95103000	Complan	105	1.9	42	0.63	1.42	12.7	1.58	0.179	158	0.158	0.211	1.1	0.211
		[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
calculated average														
		238.5	8.715	10.75	0.28	6.5225	30.425	7.3325	0.0935	726.5	0.73425	0.9725	5.075	0.979
		[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
		12103 (calc)	12103 (calc)	12103 (calc)	12103 (calc)	12103 (calc)	12103 (calc)	12103 (calc)	12103 (calc)	12103 (calc)	12103 (calc)	12103 (calc)	12103 (calc)	12103 (calc)

11909

11909		Tomato Ketchup/Mayonnaise												
NBD # in	NAME	kCAL	Iron (mg)	Folate DFE (ug)	Vitamin B12 (ug)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (ug)	Vitamin B6 (mg)
11935	Tomato	101	0.35	9	0	1.46	4.1	0.17	0.166	26	0.011	0.085	0	0.158
		[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
1103879,	Mayonnai	334	0.2	5	0.12	3.28	0.3	0.15	0.019	16	0.01	0.019	0.2	0.008
		[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
Calcualted average:														
		217.5	0.275	7	0.06	2.37	2.2	0.16	0.0925	21	0.0105	0.052	0.1	0.083
		[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
		11909 (calc)	11909 (calc)	11909 (calc)	11909 (calc)	11909 (calc)	11909 (calc)	11909 (calc)	11909 (calc)	11909 (calc)	11909 (calc)	11909 (calc)	11909 (calc)	11909 (calc)

11910

11910		Pickles (Loose/Packed) , Chatni												
NBD # in USDA FDC	NAME	kCAL	Iron (mg)	Folate DFE (ug)	Vitamin B12 (ug)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (ug)	Vitamin B6 (mg)
11941	Pickles	11	0.4	1	0	0.09	1	0.02	0.01	10	0	0.085	0	0.009
		[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
63409020	Chutney	246	0.43	10	0	0.11	7.7	0.05	0.067	0	0.014	0.089	0	0.018
		[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
Calculated average														
		128.5	0.415	5.5	0	0.1	4.35	0.035	0.0385	5	0.007	0.087	0	0.0135
		[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
		11910 (calc)	11910 (calc)	11910 (calc)	11910 (calc)	11910 (calc)	11910 (calc)	11910 (calc)	11910 (calc)	11910 (calc)	11910 (calc)	11910 (calc)	11910 (calc)	11910 (calc)

11912

11912		Other (Baking powder, yeast etc.)												
NBD # in USDA	NAME	kCAL	Iron (mg)	Folate DFE (ug)	Vitamin B12 (ug)	Vitamin E (mg)	Vitamin C (mg)	Zinc (mg)	Riboflavin (mg)	Vitamin A RAE (mcg)	Thiamine (mg)	Copper (mg)	Vitamin D (ug)	Vitamin B6 (mg)
18371	Baking Powder	97	8.17	0	0	0	0	0.72	0	0	0	0.019	0	0
		[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
18374	Yeast	105	3.25	785	0	0	0.1	9.97	1.13	0	1.88	0.148	0	0.43
		[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
Calculated average														
		101	5.71	392.5	0	0	0.05	5.345	0.565	0	0.94	0.0835	0	0.215
		[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
		11912 (calc)	11912 (calc)	11912 (calc)	11912 (calc)	11912 (calc)	11912 (calc)	11912 (calc)	11912 (calc)	11912 (calc)	11912 (calc)	11912 (calc)	11912 (calc)	11912 (calc)

Appendix 3

Abbreviations

FCT: Food Composition Table

FIES: Food Insecurity Experience Scale

HIES: Household Integrated Economic Survey

HHCODE: Household code

LSFF: Large-Scale Food Fortification

PKR: Pakistani Rupee

USDA: United States Department of Agriculture

WASH: Water, Sanitation, and Hygiene

WHO: World Health Organization

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