

**Reports and notes of the Public Health Laboratories, Cairo. No. 4, Nutritive value and characters of rations issued to officials and others in different administrations of the Egyptian government.**

**Contributors**

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MINISTRY OF THE INTERIOR, EGYPT.

DEPARTMENT OF PUBLIC HEALTH.

# REPORTS AND NOTES

OF THE

## PUBLIC HEALTH LABORATORIES,

### CAIRO.

NUTRITIVE VALUE AND CHARACTERS OF RATIONS  
ISSUED TO OFFICIALS AND OTHERS IN DIFFERENT ADMINISTRATIONS  
OF THE EGYPTIAN GOVERNMENT.

*(From the Public Health Laboratories, Department of Public Health, Cairo.)*

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DEPARTMENT OF PUBLIC HEALTH

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ANALYTICAL AND CHEMICAL EXAMINATIONS  
ISSUED TO OFFICIALS AND MEMBERS OF DIFFERENT ADMINISTRATIONS  
IN THE EGYPTIAN GOVERNMENT.



Printed and Published by the Government Press, Cairo.



MINISTRY OF THE INTERIOR, EGYPT.

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## PREFACE.

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In 1918 Dr. Wilson, Professor of Physiology at the Medical School, Qasr el 'Aini, who was then acting as Consulting Physiologist to the Public Health Laboratories, was asked by the Department of Public Health to investigate the nutritive value and characters of the rations issued to officials, employees, and others in the different Administrations of the Egyptian Government.

This investigation has involved the examination in detail of a large number of diets for different classes of individuals and the consideration of their adequacy and suitability, and in his Report Dr. Wilson has not only suggested modifications of certain rations but has laid down the general lines on which Egyptian diets should be drawn up.

Attention may be particularly drawn to the most useful appendix on the percentage composition and food-value of various foodstuffs.

C. TODD,

*Director, Public Health Laboratories.*

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## AUTHOR'S PREFACE.

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In reading this memorandum it is to be understood that the statements made and the conclusions come to express my own views and are not to be regarded as the considered opinion of the Public Health authorities.

The standards adopted are based on the accepted data of dietetics combined with the information gained from experience of the food problems special to this country.

Although deficiencies have been noted in the rations issued by certain Administrations, I am especially anxious to avoid any suggestion of adverse criticism. The Medical Officers of these Administrations, with a more intimate knowledge than I can have of the communities under their charge, may very well differ from my conclusions. Where, as has occurred in some cases, improvements have been introduced since the information was collected, such changes have been mentioned in foot-notes.

Reference to literature has not been given except where it appeared essential. The opinions of a few well-known authorities, whose judgment may be relied on, have, however, been quoted.

A discussion of the reasons governing the choice of certain standards with the authorities upon which they are based will be found in the Interim Report of the Prisons Diets Committee, Government Press, Cairo, 1917.

Every effort has been made to avoid arithmetical errors in the rather lengthy estimations involved in this work, and it is thought that no such errors, as may still exist, are of sufficient importance to affect the results. In this connection I have to thank the Computation Office of the Statistical Department, then under the charge of the late Mr. T. L. Bennett, for their kindness in taking out the averages shown in Table II.

WM. H. WILSON.



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NUTRITIVE VALUE AND CHARACTERS OF RATIONS  
ISSUED TO OFFICIALS AND OTHERS IN DIFFERENT ADMINISTRATIONS  
OF THE EGYPTIAN GOVERNMENT.

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At the request of the Department of Public Health the following investigation as to the nutritive value and characters of the rations issued to officials, employees, and others in the different Administrations of the Egyptian Government, has been carried out.

The information was required primarily for public health purposes, but it was thought that it might also be of value to the various Administrations concerned with the feeding of larger or smaller groups of individuals; it would also be essential, should the question of standardizing Government rations arise in the future. Some trouble has been taken to give as detailed a description as possible for the use of other workers in dietetics.

Letters were addressed to the various Administrations by the Director-General of the Department of Public Health in 1918, and it is from the very full replies received that the details required were obtained.

Fifty-seven groups of individuals (*see* Index Table I, p. 8), in some cases, as in the prisons, numbering in each group some thousands, in others a small number as in servants at the Police School, are given distinct ration scales. Of these, thirty-eight receive full daily rations, the remainder being provided with the midday meal only. The diet in thirty of the thirty-eight cases is approximately equal to the food requirements, in six much in excess of the requirements (for reasons which will be explained). Two appear to be family food allowances (Asylum Directors and Sub-Directors) and are not included in the comparative estimates of nutritive value and elementary composition.

These diets are numbered I to LVII in the tables, the elementary composition being shown in the Diet Tables (Appendix II) in columns having reference numbers 1 to 88. The difference in numbers being due to the fact that in the rations issued by the Ministry of Education estimates have been made of the three daily meals in each case, this Ministry giving instructions as to the components of each meal in the numerous different diets it provides.

Attached to this report is a tabulated list (Appendix I) of the composition of the various foodstuffs in use in this country with an explanatory note indicating the source of the information and the meaning of the terms employed. It is on the basis of this table that the estimates have been made of the food value of the various diets.

The quantities in grammes daily (or for each of the chief meals) of the rations issued are given for the different groups in the Diet Tables I to LVII (Appendix II); with this information as regards each section, Ministry, or Department, tables (columns 1 to 88) are attached, giving a detailed estimate of the constituents in proximate principles, gross and available calories, biological value, carbon, nitrogen, and other estimations, which may be of use for reference.

From the Diet Tables, averages have been taken out (Tables II-V):—

- (a) From thirty normal diets, including those of groups with hard, moderate, light labour, and those which may be described as leading a sedentary life (Table II).
- (b) Six diets receiving considerably more than the required amount of food.
- (c) Four groups (male), breakfast.
- (d) The mean of sixteen groups in which information is available regarding the midday meal (dinner).
- (e) Four groups (male), supper.
- (f) Four groups (female), per day.
- (g) Four groups (female), breakfast.
- (h) Four groups (female), dinner.
- (i) Four groups (female), supper.
- (j) Seven groups, hospital ordinary full diets.
- (k) Three groups, hospital milk diet.

A table (III) is also presented showing the amount in the most important dietetic factors (all raised to the adult standard) of the thirty diets marked "A," a table (IV) showing the deficiencies to be made good, and lastly a table (V) showing the amount of bread, meat (without bone), leguminous foods (lentils and beans), and fresh vegetables, in the above groupings.

These tables provide a means of gauging the sufficiency of the various diets dealt with.

In a recent series of lectures, Professor Starling makes the statement that a sufficient diet for ordinary work would contain 100 grammes of protein, 100 grammes of fat, and 500 grammes of carbohydrate. Loss by non-absorption would reduce the figures to approximately 85, 95, and 475 respectively.

It may be questioned whether 100 grammes of gross protein is sufficient unless it contains the proportion of animal protein generally present in the diet of well-fed Europeans. The sufficiency or insufficiency depends entirely on the quality of the protein, tabulated in this memorandum as the "Biological Value of Protein" (B.V.).

This is illustrated by reference to two diets, XXIX (convicts, No. II diet for light labour), in which the gross value of protein is 110.6 and the biological value no more than 33.5, and L (Waqfs Hospitals ordinary diet) gross protein 83, biological value 50.2. In the first case the protein is insufficient, in the second it is well above the minimum requirement.

Taking, however, 100 as the standard figure for gross protein, the average of the thirty diets (Table II) is 0.75 gramme daily above this, the figure 78.5 for available protein showing that 22 per cent of the protein is lost by non-absorption. (The estimate of availability is made on the basis of figures given by Rubner: *Handbuch der Hygiene*, RUBNER, FICKER, and GRUBER.) That the loss in the digestive tract should be as high as this is not surprising in view of the mainly vegetarian character of the majority of these diets.

Writing in 1914, I suggested, in view of the desirability of reforming the prisons dietaries, that 40 should be taken as the absolute minimum for the biological value of protein in any adult diet and that 45 should be the minimum for anything except light labour.

Recent experience with regard to the relation of diet to pellagra has led me to conclude that for moderate or hard labour a larger supply of protein is required, the biological value of which should not be less than 50.

The minima mentioned are much exceeded by most European (English) diets. In my own diet, which agrees fairly closely in value with that found for sedentary workers in Europe and America, the biological value of the protein is 80, due to the relatively large amount (45 grammes) of animal protein consumed (the gross protein is 103 grammes, the gross calories 2,681 daily).

For children and growing adolescents it would certainly be unsafe to arrange a diet in which the essential proteins were near the minimum value; as mentioned above, this is also true of those engaged in heavy labour or in those the calorie value of whose food is less than or only just sufficient to meet the energy requirements. I am inclined therefore to think that, *raised to the adult male value*, it would be wise in the case of children and adolescents of either sex to fix a minimum of 50 for the factor under discussion.

In February 1919 the writer recommended that in view of the number of relapses and high mortality from pellagra among the patients at the Abbâsiya Asylum on a diet the protein biological value of which was 49.5 (the diet being satisfactory in other respects), that this should be raised to 60. The result has confirmed the correctness of the assumption upon which the suggestion was made, a very remarkable diminution having taken place in the incidence and mortality from pellagra.

I have suggested elsewhere (Prison Diets Report) that the following should be the calorie values under different conditions :—

	Available.	Gross.
Non-labour... ..	2,450	2,600 to 2,650
Light labour ... ..	2,750	3,000
Hard labour ... ..	3,200	3,450

These are based on an "awake but at rest" requirement of 2,150. Hard labour here comes probably within the British scale of moderate labour.

In a work recently published, Bayliss states as the result of recent experiences that a sedentary worker needs food having a daily calorie value of 2,500 (gross), for light labour 3,000, moderate labour 3,500, and hard labour 4,000 and upwards.

Without more information than is available it is difficult to assess the degree of work done by the recipients of the various diets under discussion; an attempt has been made to do so in the last column of Table III. I think it is correct to class school pupils with light labour rather than sedentary workers.

The needful daily supply of fat is still a matter of dispute. While 100 grammes daily may be regarded as a moderate supply for Europeans in their own climate (during the war many nations have been reduced to much less, even less than 20 grammes with, however, in many people, apparent detriment to health) for Eastern races whose diet is mainly vegetarian the habitual intake of fat is far smaller; I would suggest tentatively that the minimum for any diet should not be less than 30, for light labour 35, and for moderate or hard labour 45 grammes daily. During the period of growth a supply of animal fat is essential, although the vitamine concerned seems to be less necessary in the later part of this period. A well-balanced diet is, however, more essential in youth than at adult age, and for this reason it would be well if such groups received an amount corresponding in the adult to 50 grammes daily.

The carbohydrates are deficient in none of these diets.

The following is a summary of the conclusions upon which the sufficiency of the various diets is to be judged:—

TYPE OF COMMUNITY.	Biological Value of Protein.	Fat (Gross).	Available Calories.	Gross Calories.
Moderate or "hard" labour ... ..	50	45	3,200	3,450
Light labour ... ..	40	35	2,800	3,000
Period of growth ... ..	50	50	2,800	3,000
Sedentary workers ... ..	40	30	2,450	2,600

The above are raised to the adult scale; the actual figures for women and children of both sexes under 14 years of age would be:—

	Biological Value of Protein.	Fat (Gross).	Available Calories.	Gross Calories.
Children under 14 ... ..	41·5	41·5	2,324	2,490
Women (sedentary) ... ..	33·2	25·0	2,033	2,160

If Tables II and III be consulted it will be seen that the means of the 30 full diets are as follows:—

	PROTEIN.		Biological Value.	Fat (Gross).	Carbohydrate (Gross).	CALORIES.	
	Gross.	Available.				Available.	Gross.
Actual ... ..	100·75	78·5	48·1	47·0	503	2,722	2,923
Raised to adult scale ... ..	104·00	81·0	50·0	48·8	519	2,822	3,080

It will be seen that the average (corrected for age and sex) would form a satisfactory combination for light labour and school children (14 or over), being considerably more than is required for sedentary workers and less than that needed for moderate or hard labour.

The following details of available calorie value in different types are of interest :—

COMMUNITY.	Number of Groups.	Showing Deficiency.	CALORIES.		
			Mean.	Maximum.	Minimum.
Moderate labour ... ..	7	6	2,877	3,205	2,647
Light labour and school age.	11	4	2,852	3,240	2,426
Sedentary ... ..	9	1	2,562	2,720	2,190

(Diets III and XIII, Table III, Nos. 1 and 2, which are much in excess of requirements, are left out of this calculation.)

The factors in which a deficiency occurs are in black figures in Table III. It will be seen that in addition to the available calorie deficiencies tabulated above, ten diets are deficient in protein and nine in fat.

Table IV gives the amount of the deficiencies to be made good where such are thought to exist.

The deficiency in biological value may be supplied by meat, cheese, or milk, or by the corresponding quantities of proteins from other sources as shown in the table of constitutions.

The mean constitution in elementary principles and other factors of these diets shown in column 1 of Table II must be briefly discussed. In general it may be said that the figures are those which would be expected in a series of diets in which vegetable foodstuffs or bread form the main source of nutriment. The averages of the chief factors have already been dealt with. The ratio of gross to available protein shows that about 22 per cent of protein is lost in the intestine and fails to be absorbed; this is to a considerable extent due to the coarse character of the native bread as compared with European white bread, 25 per cent of the protein of the bread being estimated as being lost.

The biological value of the protein is 1/1.63 as compared to animal protein 1/1.

It is of interest in reference to the above to compare the availability of the protein and biological value in diets of different types.

(a) No. I, column 4 (Secondary Schools for boys) containing a fair proportion of animal food.

(b) No. XLIX, column 76, a purely vegetarian diet with bread of good local quality.

(c) No. XXIX, column 56, containing a small amount of animal food with bread of poor quality made from millet.

In (a) 16 per cent of the protein is lost, the biological value of the absorbed protein being 1/1.4.

In (b) 28 per cent of the protein is lost, the biological value of the absorbed protein being 1/2.07.

In (c) 41 per cent of the protein is lost, the biological value of the absorbed protein being 1/2.07.

Better class English diet, 11 per cent of protein is lost and the biological value of the absorbed protein is 1/1.14.

It is interesting to note that in the partial metabolism experiment carried out by H. E. Roaf and myself on Turkish prisoners whose diet was of the same general nature as that of the Egyptian convicts, but with wheat and not millet bread, the loss in the intestine was 33 per cent. We found at the same time that the loss of fat was 19 per cent of the whole. The fat in the tables is given as gross fat, and in estimating the available calories 5 per cent has been deducted; it is probable that in these vegetarian diets a considerably larger deduction should be made; the available calorie value of the diets is therefore to be regarded as a maximum expression of the true value in this respect.

The protein from animal sources, as would be expected, is low. A moderate English diet would be 45, in the diet mentioned above (a) it is 33, in (b) 0, in (c) 6.

Three of the thirty diets contain no animal protein. Animal fat is also low. In European diets (northern) the bulk of the fat is, of animal origin, while in three of the diets under consideration no animal fat occurs.

Cane or other sugars (milk, fruit, etc.) is small in amount, averaging 18.7 grammes. Twelve diets contain no sugars; the average for the remainder is 31 grammes daily, the maximum being 60; this would be low for a European diet in which 90 grammes would not be unusual.

The percentage of dry nutritive matter to total weight is less in the better class diets containing meat and milk than in the purely vegetarian. The average is 46 per cent; in the purely vegetarian diet referred to above it is 55.6 per cent.

The proportion of bread, lentils, and rice accounts for this. The ratio of protein, fat, and carbohydrate is different to the ordinary European standard.

	Protein.	Fat.	Carbohydrate.
* The average for the thirty diets is ... ..	13.0	7.8	79.1
The lowest, XXX, column 57 ... ..	10.4	5.6	84.0
The highest, XXXVI, column 63 ... ..	16.3	10.3	73.4

Starling states that 100 of protein, 100 of fat, and 500 of carbohydrate forms a satisfactory combination for a working man.

	Protein.	Fat.	Carbohydrate.
The ratio in this case would be ... ..	14.3	14.3	71.4
A better class English diet would give ...	20.0	20.0	60.0
Voit's well-known statement ... ..	21.5	9.0	69.5

It will be seen that the ratio of the proteins and specially fats to carbohydrates is lower than the usually adopted standards. At the same time it probably represents a very reasonably good standard, for a largely vegetarian community.

The ratio of nitrogen to carbon is 1/21.4 estimated on the absorbed protein, 1/18.5 on the gross. It is stated that the ratio should normally not be more than 1/15 or less than 1/20. The minimum is readily obtained in most European diets; in purely vegetarian diets a smaller ratio is often found, *e.g.* diet XLIX, where it is 1/24; even here, however, on the gross values the ratio is almost exactly 1/20. The average of calories from fat is 14.6 of the total calories. Starling states that this factor should not be less than 20 per cent, a percentage comparatively seldom met with in the ordinary diets of this country. The lowest of the thirty diets in this respect is XXXVIII (Egyptian Army Hospitals) with a ratio of 10.2 per cent. There is little doubt that a European standard cannot be justly applied, particularly in this respect, in a comparatively hot climate such as that of Egypt.

Diets of Class B are all in excess of the normal requirements. The protein, especially from animal food, is above the normal even for England, particularly if it be considered that all these six diets are provided for persons leading sedentary lives.

Four of the diets, XV, XVI, XIX, and XX, are provided by the Department of Public Health, XV and XVI being for European hospital patients, XIX for hospital officers, and XX for pupils (women). A commission, of which the writer was a member, considered the various diets supplied by this Department three years ago, and these four were passed after a good deal of discussion.

The numbers involved are small in all the four groups, particularly in regard to hospital patients. These (European) pay in some cases fairly large fees for their keep, and the large allowances of food are partly given in order to provide power on the part of the staff for giving a varied diet meeting to some extent the tastes of the patients, it being presumed that when not required supplies are not indented for.

In the medical officers' and pupils' diets the ration includes meat for soup-making and oil or fat for cooking; even so the diet for pupils (gross calories 4,120) appears unnecessarily liberal.

The two diets, Class B, provided by the Lunacy Division for hospital officers and European employees, in view of the fact that they contain meat for soup, oil for cooking, and more bread than is essential, are probably not so greatly in excess of actual requirements.

In the four cases (School Diets, Boys) in which all three meals are specified (C, D, and E), the distribution of the meals as regards value is satisfactory, breakfast being a reasonably nourishing meal (27 per cent of total calorie value). In regard to the similar diets for girls, the distribution is not quite so satisfactory (24 per cent). In two cases, X and XIV, the Training College for

\* It is to be noted that if the ratio above stated is taken, not on the available protein, but on the gross values, the ratio would be 15.4, 7.2, and 77.4, which are the figures to be compared with the standards given.

School Mistresses and the School of Domestic Economy, the breakfast would seem to be insufficient (19·6 to 19 per cent only respectively), and some improvement in this meal is desirable both in quantity and variety.

In the Prisons Diets Report, 1914, referred to, the deficiency of the first meal of the day, taken (in summer) at 5·30 a.m., consisting only of bread and having a value of 22 per cent of the total food, has been pointed out. It is physiologically unsound that adult men should be engaged on heavy labour for six hours on so small a ration, especially as the meal contains no fat.

Of the sixteen midday meals considered, four show an average of 35 per cent of the total food; in the remaining twelve groups who provide their own breakfast or supper, assuming that their dinner is in the same ratio to their other food as in the four groups, the provision is sufficient.

57·5 per cent of the calories at this meal (in one case, Warders, Central Prisons, 74 per cent) is derived from bread which weighs 301 grammes in amount; it is doubtful whether in most cases all this could be eaten; the value of this meal therefore possibly appears higher than it actually is.

Table V gives in tabular form the quantities of bread, meat (minus bone), pulse, and vegetables, in forty-two full or partial diets.

*Bread.*—The bread varies in amount from 437 grammes (school girls) to 999 grammes (Agricultural College), i.e. from about 1 to 2½ lbs., the average being 741, forming 55·6 per cent of the total calories. In English diets 40 per cent would be a liberal allowance. In other words it is clear that while most of these diets are sufficient, with some exceptions they all depend for their sufficiency on the consumption of all the bread issued. The normal manner of eating bread (flat Egyptian loaves) is to dip it in the more liquid food (to use it as a spoon or fork), in this way it is easy to consume a large amount; if, however, this is not done (it is not permitted in the schools), to consume from 9 to 11 ounces of bread at a meal is only possible to a really hungry man, and it is open to question whether some of the apparently sufficient diets may not be deficient for this reason; this particularly applies to school diets (boys and girls).

*Meat.*—The average amount of meat, 90 grammes without bone (about 125 grammes or 4½ ounces plus bone) is low compared with European diets. Three diets contain none, three about an ounce or less.\*

Provided there is a sufficient protein value from other sources, it is doubtful whether meat is essential except occasionally to give variety to the food.

In the absence of meat or other animal protein care has to be taken to avoid the diets becoming bulky or indigestible.

*Pulse.*—Lentils or beans are the common foodstuffs of Egypt, lupins, peas, and *lubia* being less commonly eaten.

In five of the full diets pulse is excluded, in three others it is given in small quantities (mean daily 29, 30, and 40 grammes), all the diets referred to being provided by the Ministry of Education. These might be improved and possibly cheapened by the addition of these valuable and palatable foodstuffs.

*Fresh Vegetables.*—These are of all kinds, varying with the season, and include carrots, turnips, vegetable marrow, leeks, leaf vegetables such as cabbage and salads, tomatoes and cucumber. Potatoes, onions, and fruit are included under this heading. In general, sufficient of this form of food is given.

The absence of scurvy from the prisons is evidence that the supply in the rations, part of the vegetables being eaten in the uncooked state, provides enough of the required vitamins.

The hospital diets require no comment. With the exception of that of the Prisons hospitals they are sufficient in amount and variety, and are all based on the diet introduced twenty years ago on the advice of the late Dr. Sandwith and the writer, those of the Department of Public Health having been recently improved on the advice of a commission which revised the Department of Public Health diets generally.

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\* This is the mean daily ration, estimated on the weekly supply, meat not being given daily.

In conclusion, some brief observations must be made in regard to the rations supplied by certain Administrations providing for a large number of individuals :—

*Ministry of Education.*—With the exception of Diets III, XIII, and IV, coming first, second, and third in Table III (rank in order of calorie value), all are on the border line of sufficiency, and one, ranking seventeenth in the list, No. I (Boys' Secondary Schools), is below the requirement. If it be remembered how large a part (over 50 per cent) bread plays in maintaining the sufficiency of the diet, it is clear that any wastage (or failure to consume) the whole bread ration may lead to an insufficiency. There is little room for the waste which is bound to occur in cooking or by faulty distribution.

A fact which needs some explanation is that no provision is made in the regulations regarding diets supplied to schools for the feeding of the school servants (forming as much as ten to twelve per cent of the numbers). There is reason to think that in many cases the servants are fed from the food not consumed by the pupils; it is obvious that if this is the case the arrangement is much to be deprecated, leading as it must to a diminution of diets already not more than sufficient by an amount which may easily reach ten per cent.

The question of the sufficiency or insufficiency of the school diets is no doubt to some extent bound up with the view taken as to whether the pupils are regarded as leading sedentary lives or not; if exercise in the form of sports or drill is engaged in, I am of opinion that these diets should not be below the light labour scale, and in judging of the sufficiency of these diets on this basis it is particularly to be noted that Table III gives, not the actual calorie values, but (where the recipients are women, or children below the age of 14 years) the values are raised to the adult value, the actual values being seventeen per cent below those shown (for the figures see Diet Tables I-XIV).

Although it is now an established fact that brain work leads to little or no increase in the energy output, and that adult sedentary workers are sufficiently supplied with a diet of 2,500 calories in value, it is equally well established that anything approaching underfeeding in children or adolescents of school age is a fruitful source of defective physical and mental development not necessarily shown in obvious illness.

I pointed out some of these facts in a report to the Food Controller in 1919 (April), a copy of which was sent to the Education Department; in this I particularly drew attention to the complete absence of pulse from some of the diets and the considerable improvement in these diets and the economy which might be made by the introduction of beans, lentils, or other leguminous food into the school dietaries.

Far more, probably, depends on proper feeding during the years of school life than appears at that age: the underfeeding of adults may lead to ill-health which is recoverable, in childhood and adolescence it leads to the establishment of defects which are difficult to gauge and are permanent.

It should be noted that the suggested improvements given in Table IV represent the minimum, allowing for little if any wastage.

*Prisons Department.*—The Prisons Diets Commission reported on these diets in 1914. The only modifications of the findings of that Commission the writer would suggest is that 2,800 (3,000 gross) should be the accepted minimum calorie value for Diet No. II, and that some of the forms of labour engaged in by men at present consuming this diet should be transferred to the class receiving Diet No. III. Secondly that 50 should be the minimum biological value of protein for prisoners doing moderate or hard labour.

It should be mentioned that the replacement, recently made, of millet by wheaten bread for economic reasons (supply and cost) will without any other change greatly increase the value of the prisons diets.

*Ministry of War.*—The Army rations of all classes appear to be deficient. This may be accounted for by some facts not shown in the ration sheets. Presumably the men are able to supply themselves from a canteen; this, however, can hardly account for the low level of what is stated to be the active service rations.

The result of this investigation would seem to show that an enquiry should be made into the sufficiency of the diets supplied :—

- (a) By the Ministry of Education.
- (b) By the Ministry of War.
- (c) By the Prisons Department.
- (d) By the Frontier Districts Administration.

The following table gives a list of the groups of persons receiving rations with reference numbers to the tables of diets and elementary constitutions :—\*

TABLE I.—INDEX.

MINISTRY OR DEPARTMENT. (Groups).	Age. Years.	Diet.	Diet Table.	Tables of Elementary Constitution Columns.
<b>MINISTRY OF EDUCATION :—</b>				
(A) Secondary Schools, boys ... ..	14-19	Full	I	1-4
(A) Primary Schools, boys ... ..	9-14	"	II	5-8
(A) School of Agriculture, Mushtohor ... ..	18-24	"	III	9-12
(A) Ecole d'Arts et Métiers ... ..	18-24	"	IV	13-16
Sultania Training College ... ..	18-24	Dinner	V	17
Nasria Training College ... ..	18-24	"	VI	18
Polytechnic School, Giza ... ..	18-24	"	VII	19
Higher School of Commerce ... ..	18-24	"	VIII	20
Intermediate School of Commerce ... ..	18-24	"	IX	21
(A) Training College for School Mistresses, girls	14-20	Full	X	22-25
(A) Secondary and Primary Schools for Girls ...	9-19	"	XI	26-29
Maktabs attached to Training College, children	6-11	Dinner	XII	30-32
(A) Mistresses, Girls' Schools ... ..	18 upwards	Full	XIII	33-36
(A) School of Domestic Economy, girls and young women.	14-18	"	XIV	37-40
<b>DEPARTMENT OF PUBLIC HEALTH :—</b>				
(B) Hospitals, 1st and 2nd class patients ... ..	—	"	XV	41
(B) " 3rd class, Europeans ... ..	—	"	XVI	42
(A) " 3rd class, Egyptians... ..	—	"	XVII	43
" milk diet ... ..	—	"	XVIII	44
(B) " officers ... ..	—	"	XIX	45
(B) Pupils (Qasr el 'Aini), women ... ..	—	"	XX	46
<b>PRISONS DEPARTMENT :—</b>				
(A) Hospitals, ordinary diet ... ..	—	"	XXI	47
(A) Guard Company (Tura) ... ..	—	"	XXII	48
Warders, Central Prisons ... ..	—	Dinner	XXIII	49
" Subordinate Prisons ... ..	—	"	XXIV	50
" Convict Prisons ... ..	—	Dinner	XXV	51
(A) Boys' Reformatory ... ..	13-18	Full	XXVI	52
(A) " " ... ..	8-13	"	XXVI	53
(A) Hospitals, pellagrous patients (convalescent)...	—	"	XXVII	54
Prisons, No. III diet, hard labour ... ..	—	"	XXVIII	55
" No. II diet, light labour ... ..	—	"	XXIX	56
" No. I diet, no labour ... ..	—	"	XXX	57
" bread diet ... ..	—	"	XXXI	58

\* A signifies diets analysed in Tables III, IV, and V.

B " special diets, see page. 5 last five paragraphs.

Age. Where not otherwise stated the group is to be regarded as composed of adults.

TABLE I.—INDEX (continued).

MINISTRY OR DEPARTMENT. (Groups).	Age.  Years.	Diet.	Diet Table.	Tables of Elementary Constitution Columns.
<b>LUNACY DIVISION :—</b>				
(B) Asylums officials, English sisters ... ..	—	Full	XXXII	59
Doctors and clerks ... ..	—	Partial	XXXIII	60
(B) All officials * ... ..	—	Full	XXXIV	61
Subordinate employees ... ..	—	Partial	XXXV	62
(A) Patients' ordinary diet (and attendants) ... ..	—	Full	XXXVI	63
„ milk diet ... ..	—	„	XXXVII	64
<b>MINISTRY OF WAR :—</b>				
(A) Military Hospitals, ordinary ... ..	—	„	XXXVIII	65
(A) N.C.O.s and men, peace rations ... ..	—	„	XXXIX	66
(A) Officers, active service rations... ..	—	„	XL	67
(A) N.C.O.s and men, active service ... ..	—	„	XLI	68
(A) Military College, cadets ... ..	—	„	XLII	69
<b>QUARANTINE BOARD :—</b>				
(A) Tor Camp hospital, ordinary ... ..	—	„	XLIII	70
Tor Camp hospital diet, adult, mixed or half milk ... ..	—	„	XLIV	71
<b>PORTS AND LIGHTS ADMINISTRATION :—</b>				
(A) Crew, lighthouse tender 'Aida' ... ..	—	„	XLV	72
<b>FRONTIER DISTRICTS ADMINISTRATION :—</b>				
(A) Camel Corps... ..	—	„	XLVI	73
„ „ (new scale, January 1918) ... ..	—	„	XLVII	74
(A) Prisons rations, 2 days a week ... ..	—	„	XLVIII	75
„ „ 5 days a week ... ..	—	„	XLIX	76
<b>MINISTRY OF WAQFS :—</b>				
(A) Hospitals, ordinary diet ... ..	—	„	L	77
„ milk diet ... ..	—	„	LI	78
(A) Tekías, adults, mean daily, maximum, and minimum ... ..	—	„	LII	79-81
(A) Tekías, children, mean daily, maximum, and minimum ... ..	—	„	LIII	82-84
<b>MINISTRY OF JUSTICE :—</b>				
School of Law, students ... ..	—	Dinner	LIV	85
„ „ servants ... ..	—	„	LV	86
<b>MINISTRY OF THE INTERIOR :—</b>				
(A) Police School, cadets ... ..	—	Full	LVI	87
(A) „ „ servants ... ..	—	„	LVII	88

\* Also first and second class hospital diet.

TABLE II.—AVERAGES.

INSTITUTION OR GROUP RECEIVING DIET.																				
A	B	C	D	E	F	H	I	J	K											
Mean Value Thirty Full Diets marked A.	Mean Value Six Full Diets, in Excess of Requirement.	Breakfast, Four Diets.	Dinner, Midday Meal, Sixteen Diets.	Supper, Four Diets.	Women, Breakfast, Four Diets.	Midday Meal, Four Diets.	Women, Four Full Diets.	Hospitals, Ordinary Diets.	Hospitals, Three Milk Diets.											
Gross protein ... ..	147.0	25.4	44.1	41.0	17.6	35.8	86.0	96.0	70.7											
Available protein ... ..	134.5	15.7	35.0	34.2	14.7	30.5	71.1	77.7	61.1											
Biological value of protein ... ..	109.0	13.0	23.6	22.4	10.2	22.7	50.4	50.4	46.6											
Fat (gross) ... ..	129.0	20.0	21.1	23.0	14.8	19.5	49.4	56.0	72.0											
Carbohydrate (available) ... ..	504.0	140.2	205.4	195.8	100.0	154.6	424.3	421.8	319.0											
Mineral salts ... ..	22.5	—	—	—	—	—	—	—	—											
Common salt ... ..	17.5	—	—	—	—	—	—	—	—											
Total salts ... ..	40.0	—	—	—	—	—	—	—	—											
Gross calories ... ..	4,007.0	874.4	1,223.0	1,222.0	621.5	1,012.7	2,584.0	2,740.0	2,358.0											
Available calories ... ..	3,831.0	855.4	1,145.7	1,161.0	593.0	936.7	2,467.0	2,572.0	2,244.0											
Animal protein ... ..	68.5	7.6	12.9	14.5	7.1	14.3	28.6	25.5	35.1											
Animal fat ... ..	113.5	13.0	15.8	20.0	12.0	17.4	42.0	22.0	67.3											
Cane or other sugar ... ..	126.7	—	—	—	—	—	—	—	—											
Total weight, food materials ... ..	2,370.0	421.7	598.5	628.2	314.7	486.0	1,280.0	1,279.0	1,345.0											
Weight, dry nutritive components... ..	766.0	181.0	261.7	253.0	129.5	204.7	545.0	558.5	455.7											
Percentage of protein ... ..	17.5	11.2	13.4	13.5	11.6	15.0	13.0	14.4	13.3											
Percentage of fat ... ..	17.0	11.3	8.2	9.0	10.8	9.7	9.1	10.2	15.8											
Percentage of carbohydrate ... ..	66.0	77.4	78.4	77.4	77.7	75.3	77.8	75.4	70.7											
Nitrogen (available) ... ..	21.5	—	—	—	—	—	—	—	—											
Carbon (available) ... ..	370.0	—	—	—	—	—	—	—	—											
N/C ratio ... ..	1/17.2	1/25.4	1/20.8	1/20.8	1/24.8	1/19.0	1/21.4	1/19.9	1/21.0											
Percentage calories from fat (gross) ... ..	32.4	—	—	—	—	—	—	—	—											
Calories, percentage of whole diet ... ..	—	27.0	35.0	38.2	24.0	39.3	—	—	—											
Average amount of bread in grammes ... ..	496.0	216.0	301.0	270.0	149.0	226.0	602.2	605.0	440.0											
Average amount of meat (minus bones) ... ..	237.0	—	68.0	77.0	—	83.0	122.4	93.0	75.0											
Pulse (beans and lentils) ... ..	9.0	11.2	52.7	3.7	—	—	17.2	75.0	850.0											
Fresh vegetables and fruit ... ..	603.0	—	128.5	119.0	—	105.0	183.0	179.0	—											
Percentage of total calories from bread ... ..	29.0	57.0	57.5	52.4	57.0	53.3	53.2	52.6	45.0											

TABLE III.—RANK.

Diet Number.	Column No.	COMMUNITY.	CALORIES (AVAILABLE).		BIOLOGICAL VALUE.		GROSS PROTEIN.		FAT.		LABOUR.
			Number.	Rank.	Value.	Rank.	Amount in Grammes.	Rank.	Amount in Grammes.	Rank.	
III	12	School of Agriculture, Mushtohor	4,108	1	86.0	1	148.5	1	91.0	1	Moderate.
XIII	36	Mistresses, Girls' Schools	3,456	2	74.2	2	120.0	4	81.0	3	Sedentary.
IV	16	Ecole des Arts et Métiers	3,240	3	51.7	10	111.0	8	68.0	5	Light.
XLIX	76	Frontier Districts Administration, prisoners (5 days)	3,205	4	39.5	24	110.0	11	51.4	12	Moderate.
XLVIII	75	Frontier Districts Administration, prisoners (2 days)	3,110	5	44.7	21	116.5	5	38.3	20	Moderate.
LVII	88	Police School, servants	3,024	6	53.0	8	121.0	3	40.0	18	Light.
XLII	69	War Office, Military College, cadets	2,965	7	60.4	4	110.8	9	46.8	13	Light.
XLV	72	Ports and Lights, crew tender, sailors	2,925	8	46.0	19	113.0	7	37.2	21	Moderate.
XXVIII	55	Prisons, convicts, No. III diet	2,920	9	48.3	16	123.5	2	46.6	14	Hard to moderate.
XXIX	56	Prisons, convicts, No. II diet	2,854	10	33.5	26	110.6	10	43.5	16	Moderate to light.
XI	29	Secondary and Primary Girls' Schools	2,840	11	68.3	3	98.0	20	77.0	4	Light.
X	25	Training College for School Girls' Mistresses	2,810	12	46.5	17	93.5	24	44.0	15	Light.
XIV	40	School of Domestic Economy	2,810	12	54.0	7	103.0	15	36.0	22	Light.
II	8	Primary School for Boys	2,800	13	56.6	5	94.0	23	60.0	7	Light.
XXXVI	63	Asylum, ordinary patients	2,720	14	49.4	14	99.0	18	63.5	6	Sedentary.
XXVI	53	Reformatory, boys under 13	2,710	15	37.0	25	88.5	27	33.0	25	Light.
XXII	48	Prisons, Guard Company	2,710	15	54.0	7	115.0	6	34.7	23	Light.
XXVII	54	Prisons hospitals, pellagra cases	2,695	16	54.7	6	101.8	16	59.3	8	Sedentary.
I	4	Secondary Schools, boys 14-19	2,692	17	52.8	9	89.0	26	52.5	10	Light.
XLVI	73	Frontiers District, Camel Corps	2,670	18	49.0	15	109.6	12	33.2	24	Moderate.
L	77	Waqfs Hospitals, ordinary diet	2,658	19	50.2	11	83.0	29	87.0	2	Sedentary.
XXXIX	66	War Office, N.C.O.s and men	2,654	20	46.1	18	107.2	13	31.6	27	Moderate.
XXXVIII	65	War Office, hospitals, ordinary diet	2,650	21	45.8	20	106.7	14	31.3	28	Sedentary.
XL	67	War Office, officers, active service	2,647	22	44.5	22	101.3	17	31.1	29	Moderate to hard.
XVII	43	Department of Public Health, hospital, ordinary diet	2,597	23	53.0	8	97.5	21	52.0	11	Sedentary.
LII	79	Waqfs Tekias, adults	2,570	24	41.3	23	94.3	23	39.0	19	Sedentary.
XLIII	70	Quarantine hospitals, ordinary diet	2,495	25	50.0	13	98.4	19	42.5	17	Sedentary.
XXX	57	Prisons, No. I diet (no labour)	2,482	26	27.0	28	95.1	22	31.8	26	Sedentary.
XXVI	52	Reformatory, boys over 13	2,426	27	32.3	27	78.5	30	28.0	30	Light.
XXI	47	Prisons, hospitals, ordinary diet	2,190	28	50.1	12	86.0	28	57.0	9	Sedentary.
		Gross calories.									
		Mean	2,822	—	50.0	—	104.0	—	48.8	—	
		Maximum	4,108	III	86.0	III	148.5	III	91.0	III	
		Minimum	2,190	XXI	27.0	XXX	78.5	XXVI	28.6	XXVI	
		Not corrected for age or sex	2,722	—	48.0	—	—	—	47.0	—	

NOTE.—The factors in which a deficiency occurs are shown in black figures.

TABLE IV.—DEFICIENCIES.

Number in Table III. Col. 5.	Diet Number.	RÉSUMÉ OF CONCLUSIONS FROM TABLE III.	DEFICITS TO BE MADE GOOD.		
		Groups and Administrations.	Biological Value of Protein.	Fat.	Calories Available.
4	XLIV	Frontiers Districts Administration, prisoners (five days of week) ... ..	10.5	—	—
5	XLVIII	Frontiers Districts Administration, prisoners (two days of week) ... ..	—	—	60
20	XLVI	Frontiers Districts Administration, prisoners (Camel Corps) ... ..	—	11.7	530
8	XLV	Ports and Lights, sailors ... ..	4.0	6.8	275
9	XXVIII	Prisons, No. III diet * ... ..	1.7	—	280
10	XXIX	Prisons, No. II diet * ... ..	6.5	—	—
15	XXVI (a)	Prisons, Reformatory, boys 13 years or under	13.0	17.0	90
17	XXII	Prisons, Guard Company ... ..	—	—	90
28	XXX	Prisons, No. I diet ... ..	13.0	—	—
29	XXVI	Prisons, Reformatory, boys over 13 years ...	17.7	21.6	374
30	XXI	Prisons, hospitals, ordinary † ... ..	—	7.0	160
12	X	Education, Training College for School Mis- tresses ‡ ... ..	3.5	6.0	—
13	XIV	Education, School of Domestic Economy ...	—	14.0	—
19	I	Education, Secondary Schools for Boys ...	—	—	110
22	XXXIX	War Office, N.C.O.s and men, peace ration ...	3.9	8.4	546
24	XXXVIII	War Office, hospitals, ordinary diet ... ..	4.2	13.9	—
25	XL	War Office, active service ... ..	5.5	14.0	543

\* The deficit in protein in these two cases will be made good by the introduction (recently made) of wheat bread in place of millet.

† Extras may be added at the discretion of the M.O.; this is commonly done.

‡ The recent addition of 150 grammes of milk daily with cake will remove this deficit.

TABLE V.—CHIEF COMPONENTS.

Diet Number.	Reference No. Column	COMMUNITY.	BREAD.		Biological Value Rank.	MEAT.		PULSE.		FRESH VEGETABLES ONIONS AND POTATOES	
			Amount.	Rank.		Amount.	Rank.	Amount.	Rank.	Amount.	Rank.
III	12	Agricultural College, Mushthor	999.0	1	1	226.0	1	30.0	15	314.0	1
XXVIII	55	Prisons, convicts, No. III diet	936.0	2	16	118.5	7	131.0	4	112.5	16
XXIX	56	Prisons, convicts, No. II diet	936.0	2	29	31.2	19	150.0	3	112.5	16
XLV	72	Ports and Lights, tender, crew	936.0	2	19	62.0	18	125.0	5	156.0	9
XLVIII	75	Frontiers District, prisoners	936.0	2	21	—	21	187.0	1	—	20
XLIX	76	Frontiers District, prisoners	936.0	2	24	—	21	156.0	2	94.0	18
LVII	85	Police School, servants	936.0	2	9	92.0	12	125.0	5	187.0	8
IV	16	Ecole des Arts et Métiers	850.0	3	10	150.0	4	45.0	13	240.0	5
XXII	48	Prisons, Guard Company	780.0	4	7	110.0	8	125.0	5	155.0	4
XXVI	52	Reformatory, boys over 13	780.0	4	27	20.2	20	69.0	10	90.5	19
XXX	57	Prisons, No. I diet	780.0	4	26	—	21	150.0	3	112.5	16
XXXVIII	65	War Office, hospital ordinary diet	780.0	4	20	77.0	14	125.0	5	155.5	10
XXXIX	66	War Office, N.C.O.s and men	780.0	4	17	77.0	14	125.0	5	155.5	10
XL	67	War Office, officers, active service	780.0	4	22	77.0	14	93.5	7	155.5	10
XLII	69	War Office, Military College, cadets	780.0	4	4	164.0	3	46.8	12	203.0	6
XLVI	73	Frontier Districts, Camel Corps	780.0	4	15	83.0	13	125.0	5	186.0	8
LII	79	Waqfs Tekias, adults	780.0	4	23	65.5	17	78.0	8	140.5	13
XXVI(a)	53	Prisons, Reformatory, boys under 13	702.0	5	25	20.2	20	69.0	10	90.5	19
XIV	40	School of Domestic Economy, girls	660.0	6	12	100.0	10	40.0	14	117.0	14
I	4	Secondary Schools, boys	656.0	7	8	135.0	5	—	17	300.0	2
X	25	Training College, School Mistresses	656.0	7	18	75.0	15	29.0	16	115.0	15
XIII	36	Mistresses, Girls' Schools	656.0	7	2	165.0	2	—	17	280.0	3
XXVII	54	Prisons hospitals, pellagra cases	624.0	8	6	94.0	11	62.5	11	193.5	7
XVII	43	P.H.D. hospitals, ordinary diet	600.0	9	9	105.0	9	75.0	9	105.0	17
XLIII	70	Quarantine hospitals, ordinary diet	600.0	9	13	105.0	9	100.0	6	150.0	12
L	77	Waqfs hospitals, ordinary diet	600.0	9	11	70.0	16	—	17	270.0	4
XXXVI	63	Asylums hospitals, ordinary diet	562.0	10	14	105.0	9	100.0	6	300.0	2
II	8	Primary Schools, boys	525.0	11	5	130.0	6	—	17	280.0	3
XXI	47	Prisons hospitals, ordinary diet	468.0	12	12	194.0	11	62.5	11	193.5	7
XI	29	Primary and Secondary Schools, girls	437.0	13	3	750.0	4	—	17	280.0	3
		Mean	741.0	—	—	90.5	—	80.8	—	178.1	—
		Maximum	999.0	—	—	226.0	—	187.0	—	314.0	—
		Minimum (of those receiving)	437.0	—	—	20.2	—	29.0	—	90.5	—
						Average of recipients.					

## APPENDIX I.

### PERCENTAGE COMPOSITION AND FOOD VALUE OF VARIOUS FOODSTUFFS.

#### INTRODUCTORY NOTE.

The details as to the percentage composition are from different works of reference :—

Hutchison, "Food and Dietetics."

Locke, "Food Values" (Atwater and Bryant's Analyses).

Mayrhoft, "*Handbuch der Hygiene*" (Rubner, Gruber, and Ficker).

In some cases they are taken from analyses made in the Laboratories of the Department of Public Health or other laboratories in Egypt. Other estimates and deductions are from the compiler's own observations or are made from information given in the above-mentioned works.

The calorie value in columns G, H, and I is that of the available (absorbable) nutritive components. In estimating the value of a diet the available protein, carbohydrate, and fat (columns B, D, and E) only should be taken into consideration. Column A (gross protein) is for reference and for comparison with tabulated data in which, as is frequently done, the total protein content is used as the basis on which the protein value is estimated. The available fat and carbohydrate only are given, the difference between this and the gross value averaging about five per cent.

The biological value of protein (column C) gives the value of protein from various sources as compared to animal protein. In many cases the value is an assumed figure which is probably sufficiently accurate for practical purposes; in such cases this value is in brackets. The importance of the figures in column C is not great in an ordinary European diet in which food from animal sources forms a considerable part. In mainly vegetarian diets, such as are commonly met with in eastern countries, the biological value of protein cannot, however, be neglected. For an adult man it should not fall below 40 grammes daily.

*Note.*—The writer has adopted K. Thomas's results obtained by experiment with different foodstuffs in a single individual, as being the only available quantitative method of assessing the relative value of protein in different diets. It must, however, be clearly understood that the figures can only be approximately correct and that considerable individual variations undoubtedly occur in the minimum requirements. In the case of many foodstuffs the biological value of the protein has to be assumed without any proof of the correctness of the assumption, as, for example, in the case of vegetables and fruit; the amount of protein derived from such sources is, however, relatively so small that an erroneous assumption is of negligible importance.

The available value of protein is based chiefly on the observations of Rubner and his co-workers. Where no authority exists the value has been estimated from the value in the case of similar food materials and the nature of the particular food material in question.

It must be remembered that the composition of different samples of any given foodstuff shows considerable variations; it is never possible, except by analysis, to arrive at more than an approximation of the real value of any given diet. In most cases therefore in this list average values have been given and in some cases values rather below than above the average. The values are usually given in whole numbers, fractions being omitted where this does not lead to any real inaccuracy.

#### INFORMATION REGARDING CERTAIN COMMON FOODSTUFFS.

The table is constructed chiefly for use in Egypt. In most cases this makes very little difference; in regard to meat, however, the amount of refuse is considerably more and the percentage of fat considerably less than in European or American meat.

In first class English beef and in meat from America, the Argentine, New Zealand, and Australia, the amount of refuse (bone and other non-edible parts) estimated on the raw material as supplied by the butcher, is not more than 20 per cent, the fat content being 20 per cent or even more; while in Egyptian meat the refuse may be taken as being 30 per cent and the fat content 5 per cent. The reason of this is that in Egypt animals are most commonly not sold to the butcher until they are useless for any other purpose, and it is quite exceptional for animals to be fattened for the market.

The quality of South African and Madagascar beef imported into Egypt appears to be not very different to that of local origin.

Medium quality meat, provided that the gravy and dripping (or soup, if the meat is boiled) be consumed, might probably be correctly assumed to contain 25 per cent of refuse and 10 per cent of fat. (The percentage of fat in both cases is on the meat without bone.)

*Chickens.*—Ten chickens supplied to one hospital (Zagazig) weighed alive (average) 982 grammes; after bleeding, 952; plucked and cleaned, 728; edible portion (average) 291 grammes.

Egyptian chickens are small (700 grammes live weight would not be unusual). The edible portion forms about 34 per cent of the live weight, 40 per cent of the weight plucked and cleaned. One such chicken would yield about 245 grammes (about 8·5 ounces) of meat; the average, however, would be about 260 grammes (9·2 ounces).

One pigeon (young) contains on the live weight 33 per cent, on the cleaned weight 37 per cent of meat, yielding about 100 grammes of edible parts.

A rabbit contains on the live weight 34 per cent, on the cleaned weight 57 per cent of meat.

Egyptian rabbits (domestic) are very small compared to the common English varieties. The average weight of ten received at Qasr el 'Aini Hospital, Cairo, was 787 grammes: edible portion 268 grammes. English rabbits full grown weigh from 3 to 4 lbs. (1,359–1,812 grammes), yielding an average of 540 grammes of meat.

A chicken should yield at least 260 grammes.

A pigeon       "       "       "       100       "

A rabbit       "       "       "       260       "

*Eggs.*—An Egyptian egg weighs about 40 grammes, an English egg 60 grammes.

*Milk.*—Buffalo (*gamús*) specific gravity should not be less than 1.029, and not more than 1.035 taken at a temperature of 15° C. with a standard lactometer (Hogan and Pappel).

*Rice.*—50 grammes well boiled in water occupy a volume of 280 c.c. (about half a pint). An ordinary helping of milk-rice pudding contains about 25 grammes of rice; a good helping of boiled rice, 45 grammes.

50 grammes of boiled beans occupy about 200 c.c.

50 grammes of boiled lentils, about the same.

*Bread.*—Egyptian bread contains from 34 to 41 per cent of water, 40 per cent should be regarded as the permissible maximum. The amount of protein in bread made from local flour is less than in that made from imported flour. The composition of wheat grown in Egypt varies greatly with the variety and conditions of soil and culture. The total protein estimated from the total nitrogen of the grain may be as little as 8·5 per cent; bread made from flour obtained from such wheat would obviously be of very low protein content.

Bread made from mixtures of wheat and *dura* (maize) flour contains less protein than pure wheaten bread.

Egyptian cheese is of the nature of curd cheese, sometimes made from whole milk, sometimes from skimmed. It contains much water and salt.

Column H gives the calorie value of 1 ounce (avoirdupois) = 28·4 grammes, of the different foodstuffs; column I, the weight in grammes required to produce 100 calories. It shows the equivalence in energy value of various articles of diet and may be of use in estimating the amount of one foodstuff required to replace a given quantity of another in the diet.

Column K shows the amount in grammes of any foodstuff required to yield one gramme available protein.

TABLE FOR CONVERSION OF ENGLISH AND EGYPTIAN WEIGHTS.

1 pound (avoirdupois) ... = 453 grammes.	1 gramme ... .. = 0·0352 ounce.
1 ounce ... .. = 28·4 "	1 <i>dirhem</i> ... .. = 3·12 grammes.
1 grain ... .. = 0·065 "	1 <i>rotl</i> ... .. = 144 <i>dirhems</i> = 450 grammes
1 pint (20 ounces) ... = 568 c.c.	1 <i>oke</i> ... .. = 400 " = 1,248 "
1 gramme ... .. = 15·4 grains.	1 " ... .. = 2·75 lbs.
	1 kilogramme ... = 2·2 "

COMPOSITION OF FOOD MATERIALS.

	A	B	C	D	E	F	G	H	I	J	K
	Gross Protein per 100 Grammes.	Available Protein per Cent.	Biological Value of Available Protein.	Available Fat. (Gross, less 5 per Cent.)	Available Carbohydrate. (Gross, less 5 per Cent.)	Mineral Matter.	Available Calories per 100 Grammes.	Gross Calories per 100 Grammes.	Amount in Grammes to yield 100 Calories.	Gross Calories per Ounce.	Amount in Grammes to yield 1 Gramme Available Protein.
Bread, native (Egyptian), wheaten ...	6.7	5.0	2.0	0.95	47.5	1.2	224.0	242.0	44.6	68.0	20.0
" " millet ...	6.4	3.4	1.0	1.42	45.0	1.2	211.6	234.0	47.3	66.5	29.4
" European, medium quality ...	7.5	6.0	2.4	0.66	50.0	1.0	235.7	253.0	42.4	71.9	16.7
Biscuit, Egyptian (wheaten flour) ...	8.5	6.8	2.7	1.6	71.0	1.14	334.0	357.0	29.9	101.4	14.7
" American quality (with added fat) ...	10.7	9.4	3.8	7.6	68.0	1.0	388.0	412.0	25.8	117.0	10.6
<i>Animal Food :—</i>											
Beef without bone ...	20.0	19.0	19.0	4.7	—	1.3	121.6	128.0	82.2	36.4	5.3
Mutton without bone ...	18.0	17.1	17.1	5.7	—	1.9	123.1	129.6	81.2	36.8	5.8
Veal without bone ...	20.0	19.0	19.0	5.7	—	1.3	130.9	137.8	76.4	39.1	5.3
Bacon without bone ...	10.5	10.0	10.0	57.0	—	4.5	571.0	601.0	17.5	170.7	10.0
Rabbit, edible part ...	21.4	20.3	20.3	4.7	—	1.0	126.9	133.8	78.8	38.0	4.9
Chicken, edible part ...	21.0	20.0	20.0	5.7	—	1.0	135.0	141.9	74.1	40.3	5.0
Pigeon, edible part ...	22.0	20.8	20.8	1.0	—	1.0	94.6	100.0	105.7	28.4	4.8
1 rabbit (Egyptian) ...	56.0	52.7	52.7	12.3	—	2.6	330.0	346.0	30.3	98.3	1.9
1 chicken (Egyptian) ...	55.0	32.0	52.0	14.8	—	2.6	351.0	370.0	28.5	105.1	1.9
1 pigeon (Egyptian) ...	22.0	20.8	20.8	1.0	—	1.0	94.6	100.0	105.7	28.4	4.8
Tripe ...	11.7	11.0	11.0	1.14	—	1.0	55.7	59.1	179.5	16.8	9.1
Liver ...	20.4	20.0	20.0	3.8	1.7	1.0	124.3	128.2	80.5	36.4	5.0
Fish with bone ...	16.5	16.0	16.0	3.8	—	1.0	100.9	104.9	99.1	29.8	6.3
Dried herring, less 33 per cent refuse ...	21.0	20.0	20.0	10.4	—	11.0	178.7	187.9	56.0	53.4	5.0
<i>Dairy Products :—</i>											
Eggs (Egyptian, 1=40 grammes) ...	13.0	12.5	12.5	10.0	—	1.2	144.3	151.1	69.3	42.9	8.0
Cow's milk ...	3.5	3.4	3.4	3.8	5.0	0.7	69.8	73.1	143.3	20.8	29.4
Goats milk (water buffalo) ...	4.16	4.0	4.0	7.5	4.8	0.8	105.8	111.1	94.5	31.6	25.0
Condensed milk (unsweetened) ...	9.6	9.1	9.1	8.9	11.2	1.7	166.0	174.8	60.2	49.6	11.0

Dried milk ... ..	24.5	23.5	23.5	25.2	36.0	6.1	478.0	502.0	20.9	142.6	4.3
Cheese, Dutch ... ..	27.0	25.3	25.3	24.0	—	6.0	327.0	346.0	30.6	98.3	4.0
„ Egyptian, whole milk ... ..	12.6	12.0	12.0	15.1	—	9-15	189.0	199.4	52.9	56.5	8.3
„ „ skim milk ... ..	22.0	21.0	21.0	1.14	—		96.7	101.4	103.4	28.8	4.8
„ Maltese, whole milk ... ..	12.8	12.3	12.3	12.1	—		164.0	170.9	61.0	48.6	8.1

*Fats and Oils :—*

Suet ... ..	4.7	4.5	4.5	76.0	—	0.3	725.0	763.0	13.8	216.7	22.2
Fresh butter ... ..	1.0	1.0	1.0	81.0	0.5	3.0	760.0	799.0	13.2	226.9	100.0
Melted butter ( <i>sema</i> , ghee) ... ..	—	—	—	90.5	—	4.0	842.0	886.0	11.9	252.0	—
Vegetable butter or oil... ..	—	—	—	95.0	—	—	884.0	930.0	11.3	264.0	—
Egyptian Army margarine (vegetable fat plus five per cent animal fat).	—	—	—	95.0	—	—	884.0	930.0	11.3	264.0	—

*Leguminous Food :—*

Beans (horse)... ..	26.6	18.6	10.3	1.9	54.0	3.3	315.0	361.0	31.7	102.5	5.4
Lentils (husked) ... ..	27.5	19.3	10.7	1.9	54.8	2.7	322.0	368.0	31.1	104.5	5.2
Lupins ( <i>termis</i> ) ... ..	39.4	27.5	(15.2)	6.8	34.6	3.2	318.0	377.0	31.4	107.1	3.6
Lupins, treated, soaked in water 24 hours	14.5	10.1	(5.6)	2.0	5.6	1.7	83.0	103.2	120.5	29.3	9.9
<i>Lubia</i> ... ..	22.5	15.8	(8.7)	31.4	59.3	3.7	320.0	361.0	31.3	102.5	6.3
Shelled ground-nut ( <i>fâd sudânî</i> ), <i>Arachis hypogaea</i> ... ..	26.0	19.0	(10.5)	41.0	16.0	1.3	525.0	577.0	19.0	163.9	5.3
Soya bean meal (fat extracted) ... ..	40.0	32.0	17.6	2.0	28.5	—	267.0	307.0	37.5	87.2	3.1
Peas... ..	21.0	14.3	8.6	1.7	55.0	2.6	300.0	340.0	33.3	96.6	7.0

*Farinaceous Food :—*

Rice, husked or ground	7.7	6.5	6.0	0.4	76.0	0.4	342.0	363.0	29.2	103.1	15.4
Wheat flour, European	12.0	9.6	3.8	1.6	67.5	1.2	331.0	356.0	30.2	101.1	10.4
Wheat flour, Egyptian...	9.5	7.1	2.8	1.5	68.0	1.4	322.0	347.0	31.1	98.5	14.1
Barley flour	10.0	8.0	(3.2)	2.1	69.0	2.4	335.0	359.0	29.9	102.0	12.5
Millet flour, Egyptian	8.2	6.6	1.95	4.0	68.0	1.7	343.0	366.0	29.2	103.9	15.2
Maize flour, Egyptian	8.4	6.7	2.0	4.4	72.0	1.3	364.0	388.0	27.5	110.2	14.9
Oatmeal ... ..	15.0	12.0	(4.8)	6.6	64.0	2.0	373.0	402.0	26.8	114.2	8.3
Macaroni...	11.0	9.6	3.9	0.5	70.0	0.6	331.0	352.0	30.2	100.0	10.4
Vermicelli	12.0	9.8	3.9	0.5	70.0	0.7	332.0	356.0	30.1	101.1	10.2
Semolina...	12.0	9.8	3.9	0.7	71.0	0.7	338.0	362.0	29.6	102.8	10.2
Tapioca ... ..	—	—	—	0.2	80.0	—	330.0	347.0	30.3	98.5	—

COMPOSITION OF FOOD MATERIALS.

	A	B	C	D	E	F	G	H	I	J	K
	Gross Protein per 100 Grammes.	Available Protein per Cent.	Biological Value of Available Protein.	Available Fat (Gross, less 5 per Cent.)	Available Carbohydrate (Gross, less 5 per Cent.)	Mineral Matter.	Available Calories per 100 Grammes.	Gross Calories per 100 Grammes.	Amount in Grammes to yield 100 Calories.	Gross Calories per Ounce.	Amount in Grammes to yield 1 Gramme Available Protein.
<i>Farinaceous Food—(continued):—</i>											
Cornflour ... ..	0.5	0.4	0.12	—	80.0	0.3	330.0	347.0	30.3	98.5	250.0
Sugar ... ..	—	—	—	—	100.0	—	410.0	432.0	24.4	122.7	—
Chocolate ... ..	7.8	6.0	(3.0)	20.0	69.0	2.2	494.0	526.0	20.2	149.4	16.7
Cocoa (Epps') ... ..	6.7	5.0	(2.5)	15.0	68.0	1.5	439.0	468.0	22.8	132.8	20.0
Native sweetmeat ( <i>halwa</i> ) ... ..	1.3	1.0	0.4	24.0	62.5	0.5	484.0	510.0	20.7	144.8	100.0
Treacle (molasses) ... ..	—	—	—	—	69.0	3.0	283.0	298.0	35.3	84.6	—
Jam or marmalade ... ..	1.0	0.8	(0.4)	0.1	65.0	0.3	271.0	286.0	36.9	81.2	125.0
<i>Dried Fruit:—</i>											
Dates ... ..	2.1	1.9	(0.9)	2.4	71.0	1.5	321.0	339.0	31.2	96.3	52.6
Dates ( <i>agwa</i> ) ... ..	2.1	1.9	(0.9)	0.6	45.0	1.3	197.9	208.7	50.5	59.3	52.6
Apricots ... ..	1.6	1.2	(0.6)	2.1	57.0	2.4	258.0	273.0	38.8	77.5	83.3
Figs ... ..	5.5	4.4	(2.2)	0.9	59.0	2.3	268.0	286.0	37.3	81.2	22.7
Raisins ... ..	2.5	2.0	(1.0)	4.7	70.0	4.1	339.0	358.0	29.5	101.7	50.0
Prunes ... ..	2.4	2.0	(1.0)	0.8	63.0	1.5	274.0	290.0	36.5	82.4	50.0
<i>Fresh Vegetables and Fruit:—</i>											
Potato, with twenty per cent skin ... ..	1.8	1.6	(1.27)	0.1	15.0	1.0	69.0	73.1	144.9	20.8	62.5
Yams ... ..	2.2	1.8	(1.6)	0.5	15.0	1.5	73.5	78.7	136.1	22.4	55.6
Sweet potato ... ..	1.6	1.3	(1.1)	0.5	21.5	0.7	98.1	104.3	101.9	29.6	76.9
Artichoke (tuber) ... ..	2.6	2.1	(1.0)	0.2	16.0	1.0	76.1	81.7	131.4	23.2	47.6
Beetroot ... ..	2.3	1.8	(0.9)	0.1	7.0	1.6	37.0	40.7	270.0	11.6	55.6
Radish ... ..	1.3	1.0	(0.5)	0.1	5.2	1.0	26.4	28.8	379.0	8.2	100.0
Turnip ... ..	0.9	0.7	(0.3)	0.1	1.0	0.3	7.9	9.0	1,266.0	2.6	142.9
Carrot ... ..	0.5	0.4	(0.2)	0.5	3.2	1.5	19.4	20.8	516.0	5.9	250.0



## APPENDIX II.

### DIET TABLES.

#### MINISTRY OF EDUCATION.

COMPONENTS.	DIET I (A). Secondary Schools, Boys. (14 to 19 Years.)				DIET II (A). Primary Schools, Boys. (9-14 Years.)			
	Breakfast.	Dinner.	Supper.	Mean Daily.	Breakfast.	Dinner.	Supper.	Mean Daily.
	1	2	3	4	5	6	7	8
Gross protein...	18.0	36.2	34.8	89.0	15.3	30.8	31.2	78.3
Available protein...	15.0	30.5	29.1	74.6	12.9	25.8	26.1	64.8
Biological value of protein...	10.2	22.1	20.5	53.0	9.1	18.3	19.1	47.0
Fat (gross) ...	15.2	18.4	19.1	52.5	14.2	17.4	18.7	50.3
Carbohydrate (available) ...	108.5	168.0	186.0	462.5	90.5	136.0	153.0	379.5
Mineral salts ...	5.1	6.5	6.6	18.0	4.5	5.0	6.0	15.5
Common salt ...	—	7.0	7.0	14.0	—	5.0	5.0	10.0
Total salts ...	5.1	13.5	13.6	32.0	4.5	10.0	11.0	25.5
Gross calories ...	681.6	1,042.0	1,112.0	2,846.0	585.0	876.0	960.0	2,421.0
Available calories ...	644.5	986.0	1,061.5	2,692.0	555.0	829.0	912.5	2,296.0
Animal protein ...	7.2	13.5	11.6	32.3	6.8	12.2	12.1	31.1
Animal fat ...	11.9	15.6	16.3	43.8	11.6	15.2	16.5	43.3
Cane or other sugar ...	22.7	—	11.0	33.7	21.6	—	10.0	31.6
Total weight, food materials ...	327.0	517.0	590.0	1,434.0	297.0	440.0	504.0	1,241.0
Weight dry nutritive components ...	138.7	217.0	234.0	589.5	117.5	179.2	197.8	494.5
Percentage of protein ...	10.8	14.1	12.6	12.6	11.0	14.4	13.2	13.2
Percentage of fat ...	10.9	8.6	8.2	8.9	12.2	9.7	9.6	10.1
Percentage of carbohydrate ...	78.3	77.3	79.2	78.5	76.8	75.9	77.2	76.7
Nitrogen (available) ...	2.4	4.9	4.5	11.8	2.1	4.2	4.2	10.4
Carbon (available) ...	63.0	97.0	104.0	263.0	54.0	83.0	88.5	223.5
N/C ratio ...	1/26.2	1/19.8	1/23.1	1/22.2	1/25.7	1/19.8	1/20.8	1/21.5

COMPONENTS.	DIET III (A). School of Agriculture, Mushtohor. (18 to 24 Years.)				DIET IV (A). Ecole des Arts et Métiers. (18 to 24 Years.)			
	Breakfast.	Dinner.	Supper.	Mean Daily.	Breakfast.	Dinner.	Supper.	Mean Daily.
	9	10	11	12	13	14	15	16
Gross protein...	39.3	53.4	55.8	148.5	29.0	40.0	42.3	111.0
Available protein...	33.0	44.5	46.7	124.2	21.0	33.0	35.2	89.0
Biological value of protein...	23.0	32.0	31.0	86.0	9.7	23.0	25.0	57.7
Fat (gross) ...	30.7	29.2	31.0	91.0	20.4	20.0	23.4	64.0
Carbohydrate (available) ...	217.0	222.0	227.5	666.0	145.0	198.0	217.0	560.0
Mineral salts ...	6.8	9.0	9.0	25.0	5.4	7.0	7.5	20.0
Common salt...	—	6.0	6.0	12.0	—	6.0	6.0	12.0
Total salts ...	6.8	15.0	15.0	37.0	5.4	13.0	13.5	32.0
Gross calories ...	1,379.0	1,446.0	1,496.0	4,321.0	932.0	1,203.0	1,321.0	3,456.0
Available calories ...	1,324.0	1,365.0	1,418.0	4,108.0	878.0	1,107.0	1,255.0	3,240.0
Animal protein ...	16.4	19.2	20.0	55.6	—	12.8	14.6	27.4
Animal fat ...	28.4	25.3	27.1	80.8	—	16.7	20.2	36.9
Cane or other sugar ...	49.0	—	11.0	60.0	—	—	17.2	17.2
Total weight, food materials ...	726.0	717.0	716.0	2,159.0	337.0	568.0	703.0	1,608.0
Weight dry nutritive components ...	280.7	295.7	305.2	881.5	186.4	251.0	275.6	713.0
Percentage of protein ...	11.8	14.9	15.3	14.3	11.3	13.1	12.8	12.5
Percentage of fat ...	11.0	9.9	10.1	10.5	11.2	7.9	8.4	9.0
Percentage of carbohydrate ...	77.2	76.2	74.6	75.2	77.5	79.0	78.8	78.5
Nitrogen (available) ...	6.3	7.1	7.5	401.0	3.3	5.3	6.0	14.5
Carbon (available) ...	127.5	134.5	139.0	19.9	84.5	111.5	123.0	319.0
N/C ratio ...	1/24.0	1/19.0	1/18.5	1/20.2	1/25.5	1/21.2	1/20.5	1/22.0

**Ministry of Education (continued).**

COMPONENTS.	DIET V.	DIET VI.	DIET VII.	DIET VIII.	DIET IX.
	Sultania Training College. Dinner.	Nasria Training College. Dinner.	Polytechnic School, Giza. Dinner.	Higher School of Commerce. Dinner.	Intermediate School of Commerce. Dinner.
	17	18	19	20	21
Gross protein...	41.9	42.6	39.8	40.7	36.4
Available protein...	34.8	32.9	33.0	33.5	30.4
Biological value of protein...	24.5	20.0	23.0	23.2	22.0
Fat (gross) ...	21.3	18.7	20.7	21.0	20.4
Carbohydrate (available) ...	199.2	216.6	191.7	199.2	168.0
Mineral salts ...	7.3	6.2	6.8	7.0	6.2
Common salt...	7.0	7.0	3.0	7.0	7.0
Total salts ...	14.3	13.2	9.8	14.0	13.2
Gross calories...	1,227.0	1,283.0	1,139.0	1,205.0	1,063.0
Available calories...	1,150.0	1,195.0	1,117.0	1,143.5	1,005.0
Animal protein ...	14.7	6.3	12.8	12.8	12.8
Animal fat ...	18.0	14.7	17.6	17.6	17.6
Cane or other sugar ...	—	—	—	—	—
Total weight, food materials ...	588.5	490.0	599.0	581.0	519.0
Weight dry nutritive components ...	255.3	268.2	245.4	253.7	220.6
Percentage of protein ...	13.7	12.3	13.4	13.2	13.5
Percentage of fat...	8.3	7.0	8.4	8.2	9.2
Percentage of carbohydrate ...	78.0	80.7	78.2	78.8	77.3
Nitrogen (available) ...	5.5	5.2	5.2	5.3	4.9
Carbon (available) ...	114.2	118.0	109.5	113.0	98.5
N/C ratio ...	1/20.7	1/22.5	1/21.0	1/21.3	1/20.0

COMPONENTS.	DIET X (A). Training College for School Mistresses. Girls. (16 to 20 Years.)				DIET XI (A). Secondary and Primary Schools for Girls (9 to 19 Years.)			
	Breakfast.	Dinner.	Supper.	Mean Daily.	Breakfast.	Dinner.	Supper.	Mean Daily.
	22	23	24	25	26	27	28	29
Gross protein ...	13.9	36.0	27.6	77.5	20.0	30.0	31.4	81.4
Available protein ...	11.0	30.8	20.6	62.0	17.4	25.7	27.0	70.1
Biological value of protein ...	6.2	22.0	10.3	38.5	13.6	20.0	21.1	56.7
Fat (gross) ...	7.2	16.8	12.5	36.5	22.8	19.9	21.3	64.0
Carbohydrate (available) ...	91.7	167.6	165.2	424.5	98.9	122.9	139.5	361.3
Mineral salts...	4.3	6.1	4.0	14.4	5.6	5.1	5.5	16.2
Common salt...	—	5.0	5.0	10.0	—	5.0	5.0	10.0
Total salts ...	4.3	11.1	9.0	24.4	5.6	10.1	10.5	26.2
Gross calories ...	516.0	1,025.0	1,040.0	2,482.0	710.0	919.0	921.0	2,489.0
Available calories...	487.5	967.0	878.5	2,333.0	685.8	790.0	880.0	2,357.0
Animal protein ...	3.0	12.9	—	16.0	11.0	12.9	13.7	37.6
Animal fat ...	4.0	13.8	9.3	27.0	19.8	19.7	21.3	60.8
Cane or other sugar ...	17.0	—	—	17.0	38.7	—	10.0	48.7
Total weight, food materials ...	215.0	500.0	342.0	1,057.0	396.0	415.0	504.0	1,315.0
Weight dry nutritive components ...	109.9	215.2	198.3	523.4	139.1	168.5	187.8	495.4
Percentage of protein ...	10.7	14.2	10.4	11.9	12.5	15.3	14.5	14.2
Percentage of fat...	6.5	7.8	6.3	6.4	16.4	11.9	11.4	13.0
Percentage of carbohydrate ...	83.5	78.0	83.3	81.2	71.1	72.8	74.1	72.8
Nitrogen (available) ...	17.5	4.9	3.3	9.9	2.8	4.1	4.3	11.2
Carbon (available) ...	48.1	95.3	86.3	230.0	65.9	77.7	86.1	229.0
N/C ratio ...	1/27.5	1/19.5	1/26.0	1/23.2	1/23.6	1/19.0	1/20.0	1/20.5

**Ministry of Education (continued).**

COMPONENTS.	DIET XII (A). Maktabas attached to Training College (Children).			DIET XIII (A). Mistresses, Girls' Schools.			
	Mean Daily.	Maximum Daily.	Minimum Daily.	Breakfast.	Dinner.	Supper.	Mean Daily.
	30	31	32	33	34	35	36
Gross protein...	17.5	18.4	17.1	22.2	37.5	39.0	98.7
Available protein...	13.6	13.4	13.9	19.6	31.6	32.8	83.4
Biological value of protein...	7.9	6.5	8.7	14.2	23.2	24.2	61.6
Fat (gross) ...	8.4	7.6	8.9	23.0	20.7	23.3	67.0
Carbohydrate (available) ...	85.0	97.6	77.0	113.0	168.0	185.0	466.0
Mineral salts ...	3.2	2.4	3.4	5.9	6.4	6.9	19.2
Common salt...	7.0	7.0	7.0	—	5.0	5.0	10.0
Total salts ...	10.2	9.4	10.4	5.9	11.4	11.9	29.2
Gross calories ...	515.0	566.0	482.5	791.0	1,062.0	1,176.0	3,034.0
Available calories ...	485.0	519.0	457.5	756.0	1,011.0	1,101.0	2,868.0
Animal protein ...	3.1	—	5.1	11.0	14.1	14.9	40.0
Animal fat ...	6.7	5.6	7.4	19.8	18.0	19.6	57.4
Cane or other sugar ...	—	—	—	38.7	—	10.0	48.7
Total weight, food materials ...	262.0	200.0	292.0	428.0	516.5	605.5	1,650.0
Weight dry nutritive components ...	107.0	118.6	100.0	155.0	220.3	241.1	616.4
Percentage of protein ...	12.7	11.5	13.9	12.8	14.3	13.5	13.5
Percentage of fat ...	7.9	6.4	8.9	14.8	9.4	9.7	10.9
Percentage of carbohydrate ...	79.4	82.1	77.2	72.4	76.3	76.8	75.6
Nitrogen (available) ...	2.19	2.15	2.22	3.04	5.04	5.24	13.4
Carbon (available) ...	48.5	51.8	44.8	72.6	100.0	108.7	281.0
N/C ratio ...	1/22.1	1/24.0	1/20.0	1/23.5	1/20.0	1/20.7	1/21.0

COMPONENTS.	DIET XIV (A). School of Domestic Economy. (Girls and Young Women.)			
	Breakfast.	Dinner.	Supper.	Mean Daily.
	37	38	39	40
Gross protein...	14.5	40.0	31.6	86.0
Available protein ...	11.6	34.1	23.4	69.1
Biological value of protein ...	6.8	25.8	12.2	44.8
Fat (gross) ...	6.2	20.8	3.4	30.0
Carbohydrate (available) ...	96.5	160.0	189.0	445.5
Mineral salts ...	4.2	5.0	4.2	13.4
Common salt ...	—	6.0	6.0	12.0
Total salts ...	4.2	11.0	10.2	25.4
Gross calories ...	469.0	1,045.0	974.5	2,488.5
Available calories ...	443.0	979.0	902.0	2,324.0
Animal protein ...	3.6	17.3	—	20.9
Animal fat ...	4.6	18.2	—	22.8
Cane or other sugar ...	—	20.5	10.4	30.9
Total weight, food materials ...	220.0	513.0	365.5	1,098.0
Weight dry nutritive components ...	114.3	215.0	216.0	545.3
Percentage of protein ...	10.4	16.0	10.7	12.6
Percentage of fat ...	5.5	9.8	1.6	5.6
Percentage of carbohydrate ...	84.1	74.2	87.7	81.8
Nitrogen (available) ...	1.9	5.5	3.8	11.2
Carbon (available)...	47.0	97.0	90.0	234.0
N/C ratio ...	1/24.7	1/17.6	1/23.7	1/21.0

Ministry of Education (continued).

COMPONENTS.		Mean Daily Amount in Grammes.*	Gross Protein. Grammes.	Available Protein.	Biological Value of Protein.	Fat.	Available Carbohydrate.	Mineral Matter.
<b>Breakfast :—</b>								
Bread ...	—	156.0	10.5	7.8	3.1	1.5	74.0	1.8
Milk ...	—	100.0	4.16	4.0	4.0	7.9	4.8	0.8
Sugar ...	—	12.0	—	—	—	—	12.0	—
Cheese ...	—	25.0	3.1	3.0	3.0	4.0	—	2.0
Treacle ...	—	8.5	—	—	—	—	5.9	—
Olives ...	—	8.5	0.1	0.07	0.03	1.7	0.6	0.5
Jam ...	—	17.0	0.2	0.13	0.06	—	11.2	—
Tea ...	—	1.0	—	—	—	—	—	—
<b>TOTAL ...</b>	—	<b>327.0</b>	<b>18.0</b>	<b>15.0</b>	<b>10.2</b>	<b>15.1</b>	<b>108.5</b>	<b>5.1</b>
<b>Dinner :—</b>								
Bread ...	—	250.0	16.7	12.5	5.0	2.5	119.0	3.0
Mutton without bone ...	—	75.0	13.5	12.9	12.9	4.5	—	1.4
Semna ...	—	12.0	—	—	—	11.1	—	0.6
Vegetables ...	—	120.0	1.4	1.2	0.6	—	3.6	1.2
Rice ...	—	60.0	4.6	3.9	3.6	0.3	45.6	0.3
Salt ...	—	7.0	—	—	—	—	—	—
Pepper ...	—	0.1	—	—	—	—	—	—
Cumin ...	—	0.1	—	—	—	—	—	—
<b>TOTAL ...</b>	—	<b>517.0</b>	<b>36.2</b>	<b>30.5</b>	<b>22.1</b>	<b>18.4</b>	<b>168.2</b>	<b>6.5</b>
<b>Supper :—</b>								
Bread ...	—	250.0	16.7	12.5	5.0	2.5	119.0	3.0
Mutton ...	—	60.0	10.0	10.3	10.3	3.6	—	1.1
Semna ...	—	12.0	—	—	—	11.1	—	0.6
Vegetables ...	—	120.0	1.4	1.2	0.6	—	3.6	1.2
Rice ...	—	60.0	4.6	3.9	3.6	0.3	45.6	0.3
Milk ...	—	20.0	0.8	0.8	0.8	1.6	1.0	0.1
Sugar ...	—	10.0	—	—	—	—	10.0	—
Fresh fruit ...	—	60.0	0.5	0.4	0.2	—	6.0	0.3
Salt ...	—	7.0	—	—	—	—	—	—
Pepper ...	—	0.1	—	—	—	—	—	—
Cumin ...	—	0.1	—	—	—	—	—	—
<b>TOTAL ...</b>	—	<b>590.0</b>	<b>34.8</b>	<b>29.1</b>	<b>20.5</b>	<b>19.1</b>	<b>186.1</b>	<b>6.6</b>
<b>DAILY TOTAL ...</b>	—	<b>—</b>	<b>89.0</b>	<b>74.6</b>	<b>52.8</b>	<b>52.6</b>	<b>462.8</b>	<b>18.2</b>

\* The figures in this column are the average daily amounts taken on the seven-day total.

Ministry of Education (continued).

COMPONENTS.		Mean Daily Amount in Grammes.	Gross Protein. Grammes.	Available Protein.	Biological Value of Protein.	Fat.	Available Carbohydrate.	Mineral Matter.
<b>DIET TABLE II (A).—PRIMARY SCHOOLS, BOYS (9 TO 14 YEARS).</b>								
<i>Breakfast :—</i>								
Bread ... ..	—	125·0	8·3	6·2	2·5	1·2	59·5	1·5
Milk ... ..	—	100·0	4·1	4·0	4·0	7·9	4·8	0·8
Sugar ... ..	—	12·0	—	—	—	—	12·0	—
Cheese ... ..	—	21·0	2·7	2·6	2·6	3·7	—	1·9
Treacle ... ..	—	7·0	—	—	—	—	4·8	—
Olives ... ..	—	7·0	0·1	—	—	1·4	0·4	0·3
Jam ... ..	—	14·0	0·1	0·1	0·05	—	9·0	—
Tea ... ..	—	1·0	—	—	—	—	—	—
TOTAL ... ..	—	297·0	15·3	12·9	9·1	14·2	90·5	4·5
<i>Dinner :—</i>								
Bread ... ..	—	200·0	13·4	10·0	4·0	2·0	95·0	2·4
Mutton ... ..	—	67·5	12·2	11·5	11·5	4·0	—	1·3
Semna ... ..	—	12·0	—	—	—	11·2	—	—
Vegetables ... ..	—	110·0	1·4	1·1	0·5	—	3·3	1·1
Rice ... ..	—	50·0	3·8	3·2	3·0	0·2	38·0	0·2
Salt ... ..	—	5·0	—	—	—	—	—	—
Pepper ... ..	—	0·1	—	—	—	—	—	—
Cumin ... ..	—	0·1	—	—	—	—	—	—
TOTAL ... ..	—	440·0	30·8	25·8	18·8	17·4	136·3	5·0
<i>Supper :—</i>								
Bread ... ..	—	200·0	13·4	10·0	4·0	2·0	95·0	2·4
Mutton ... ..	—	62·5	11·3	10·6	10·6	3·7	—	1·2
Semna ... ..	—	12·0	—	—	—	11·2	—	—
Vegetables ... ..	—	110·0	1·4	1·1	0·5	—	3·3	1·1
Rice ... ..	—	50·0	3·8	3·2	3·0	0·2	38·0	0·2
Milk ... ..	—	20·0	0·8	0·8	0·8	1·6	1·0	0·2
Sugar ... ..	—	9·0	—	—	—	—	9·0	—
Fruit ... ..	—	60·0	0·5	0·4	0·2	—	6·9	0·3
Salt ... ..	—	5·0	—	—	—	—	—	—
Pepper and cumin ... ..	—	0·1	—	—	—	—	—	—
TOTAL ... ..	—	504·0	31·2	26·1	19·1	18·7	153·2	6·0
MEAN DAILY TOTAL ... ..	—	—	78·3	64·8	47·0	50·3	380·0	16·0

Ministry of Education (continued).

COMPONENTS.		Mean Daily Amount in Grammes.	Gross Protein. Grammes.	Available Protein.	Biological Value of Protein.	Fat.	Available Carbohydrate.	Mineral Matter.
<b>Breakfast :—</b>								
Bread ...	—	333·0	22·3	16·6	6·6	3·3	158·0	4·0
Milk ...	—	300·0	12·4	12·0	12·0	23·7	14·4	2·4
Tea ...	—	1·5	—	—	—	—	—	—
Sugar ...	—	17·0	—	—	—	—	17·0	—
Treacle ...	—	40·0	—	—	—	—	27·6	—
Eggs ...	—	35·0	4·6	4·4	4·4	3·7	—	0·4
<b>TOTAL ...</b>	<b>—</b>	<b>726·5</b>	<b>39·3</b>	<b>33·0</b>	<b>23·0</b>	<b>30·7</b>	<b>217·0</b>	<b>6·8</b>
<b>Dinner :—</b>								
Bread ...	—	333·0	22·3	16·6	6·6	3·3	158·0	4·0
Mutton ...	—	112·5	20·1	19·2	19·2	6·7	—	2·1
Semna ...	—	20·0	—	—	—	18·6	—	0·8
Vegetables ...	—	125·0	1·5	1·2	0·6	0·1	3·7	1·2
Rice or macaroni ...	—	60·0	4·6	3·9	3·6	0·2	45·6	0·2
Lentils ...	—	15·0	4·1	2·9	1·5	0·3	8·2	0·4
Potatoes ...	—	45·0	0·84	0·7	0·5	—	6·6	0·4
Salt ...	—	6·0	—	—	—	—	—	—
Pepper ...	—	0·25	—	—	—	—	—	—
Cumin ...	—	0·37	—	—	—	—	—	—
<b>TOTAL ...</b>	<b>—</b>	<b>717·1</b>	<b>53·4</b>	<b>44·5</b>	<b>32·0</b>	<b>29·2</b>	<b>222·1</b>	<b>9·0</b>
<b>Supper</b>								
Bread ...	—	333·0	22·3	16·6	6·6	3·3	158·0	4·0
Mutton ...	—	112·5	20·2	19·2	19·2	6·7	—	2·1
Semna ...	—	20·0	—	—	—	18·6	—	0·8
Vegetables ...	—	125·0	1·5	1·2	0·6	0·1	3·7	1·2
Macaroni (or rice) ...	—	60·0	6·6	5·9	2·3	0·3	44·4	0·4
Lentils ...	—	15·0	4·1	2·9	1·5	0·3	8·2	0·4
Salt ...	—	6·0	—	—	—	—	—	—
Milk ...	—	21·5	0·9	0·8	0·85	1·8	1·0	0·1
Sugar ...	—	10·0	—	—	—	—	10·0	—
Fruit ...	—	19·0	0·2	0·1	0·05	—	2·2	—
<b>TOTAL ...</b>	<b>—</b>	<b>716·0</b>	<b>55·8</b>	<b>46·7</b>	<b>31·0</b>	<b>31·0</b>	<b>227·5</b>	<b>9·0</b>
<b>MEAN DAILY TOTAL ...</b>	<b>—</b>	<b>—</b>	<b>148·5</b>	<b>124·2</b>	<b>86·0</b>	<b>91·0</b>	<b>666·6</b>	<b>24·8</b>

Ministry of Education (continued).

COMPONENTS.		Mean Daily Amount in Grammes.	Gross Protein. Grammes.	Available Protein.	Biological Value of Protein.	Fat	Available Carbohydrate.	Mineral Matter.
<b>Breakfast :—</b>								
Bread ... ..	—	250·0	16·7	12·5	5·0	2·5	119·0	3·0
Beans ... ..	—	45·0	12·0	8·3	4·6	0·9	24·5	1·3
Oil ... ..	—	12·0	—	—	—	12·0	—	—
Olives ... ..	—	30·0	0·3	0·2	0·1	5·0	1·2	1·1
<b>TOTAL ... ..</b>	—	<b>337·0</b>	<b>29·0</b>	<b>21·0</b>	<b>9·7</b>	<b>20·4</b>	<b>144·7</b>	<b>5·4</b>
<b>Dinner :—</b>								
Bread ... ..	—	300·0	20·1	15·0	6·0	3·0	142·5	3·6
Mutton ... ..	—	75·0	13·75	12·8	12·8	4·5	—	1·4
Semna ... ..	—	13·0	—	—	—	12·2	—	0·5
Rice ... ..	—	60·0	4·6	3·9	3·6	0·24	45·6	0·2
Vegetables ... ..	—	120·0	1·4	1·2	0·6	—	3·6	1·2
Salt ... ..	—	6·0	—	—	—	—	—	—
Pepper and cumin ... ..	—	0·1	—	—	—	—	—	—
<b>TOTAL ... ..</b>	—	<b>568·0</b>	<b>40·0</b>	<b>33·0</b>	<b>23·0</b>	<b>20·0</b>	<b>191·7</b>	<b>7·0</b>
<b>Supper :—</b>								
Bread ... ..	—	300·0	20·1	15·0	6·0	3·0	142·5	3·6
Mutton ... ..	—	75·0	13·75	12·8	12·8	4·5	—	1·4
Semna ... ..	—	13·0	—	—	—	12·2	—	0·5
Rice ... ..	—	60·0	4·6	3·9	3·6	0·24	45·6	0·2
Vegetables ... ..	—	120·0	1·4	1·2	0·6	—	3·6	1·2
Milk ... ..	—	45·0	1·9	1·8	1·8	3·5	2·2	0·3
Sugar ... ..	—	15·0	—	—	—	—	15·0	—
Fruit ... ..	—	75·0	0·6	0·5	0·25	—	8·5	0·3
Salt ... ..	—	6·0	—	—	—	—	—	—
<b>TOTAL ... ..</b>	—	<b>703·0</b>	<b>42·3</b>	<b>35·2</b>	<b>25·0</b>	<b>23·4</b>	<b>217·4</b>	<b>7·5</b>
<b>MEAN DAILY TOTAL ... ..</b>	—	<b>—</b>	<b>111·0</b>	<b>89·0</b>	<b>57·7</b>	<b>63·8</b>	<b>554·0</b>	<b>20·0</b>

Ministry of Education (continued).

COMPONENTS.		Mean Daily Amount in Grammes.	Gross Protein Grammes.	Available Protein.	Biological Value of Protein.	Fat.	Available Carbohydrate.	Mineral Matter
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DIET TABLE V.—SULTANIA TRAINING COLLEGE.

Dinner :—

Bread ... ..	—	312.0	21.0	15.6	6.2	3.1	150.0	3.8
Mutton ... ..	—	82.5	14.9	14.1	14.1	4.9	—	1.6
Semna ... ..	—	14.0	—	—	—	13.0	—	0.5
Vegetables ... ..	—	120.0	1.4	1.2	0.6	—	3.6	1.2
Rice ... ..	—	60.0	4.6	3.9	3.6	0.24	45.6	0.2
Salt ... ..	—	7.0	—	—	—	—	—	—
Pepper and cumin ... ..	—	0.1	—	—	—	—	—	—
TOTAL ... ..	—	588.5	41.9	34.8	24.5	21.3	199.2	7.3

DIET TABLE VI.—NASRIA TRAINING COLLEGE.

Dinner :—

Bread ... ..	—	312.0	21.0	15.6	6.2	3.1	150.0	3.8
Semna ... ..	—	14.0	—	—	—	13.1	—	0.5
Rice ... ..	—	60.0	4.6	3.9	3.6	0.24	45.6	0.2
Meat ... ..	—	33.0	6.6	6.3	6.3	1.6	—	0.4
Vegetables ... ..	—	35.0	0.41	0.3	0.15	—	1.0	0.3
Lentils ... ..	—	36.0	10.0	6.8	3.8	0.7	20.0	1.0
Salt ... ..	—	7.0	—	—	—	—	—	—
Cumin ... ..	—	0.25	—	—	—	—	—	—
Pepper ... ..	—	0.1	—	—	—	—	—	—
TOTAL ... ..	—	490.0	42.6	32.9	20.0	18.7	216.6	6.2

DIET TABLE VII.—POLYTECHNIC SCHOOL, GIZA.

Dinner :—

Bread ... ..	—	300.0	20.1	15.0	6.0	3.0	142.5	3.6
Mutton ... ..	—	75.0	13.7	12.8	12.8	4.5	—	1.4
Semna ... ..	—	14.0	—	—	—	13.0	—	0.4
Vegetables ... ..	—	120.0	1.4	1.2	0.6	—	3.6	1.2
Rice ... ..	—	60.0	4.6	3.9	3.6	0.24	45.6	0.2
Salt ... ..	—	3.0	—	—	—	—	—	—
Pepper and cumin ... ..	—	0.1	—	—	—	—	—	—
TOTAL ... ..	—	599.0	39.8	33.0	23.0	20.7	191.7	6.8

DIET TABLE VIII.—HIGHER SCHOOL OF COMMERCE.

Dinner :—

Bread ... ..	—	312.0	21.0	15.6	6.2	3.1	148.0	3.8
Mutton ... ..	—	75.0	13.7	12.8	12.8	4.5	—	1.4
Semna ... ..	—	14.0	—	—	—	13.0	—	0.4
Vegetables ... ..	—	120.0	1.4	1.2	0.6	—	3.6	1.2
Rice ... ..	—	60.0	4.6	3.9	3.6	0.24	45.6	0.2
Salt ... ..	—	7.0	—	—	—	—	—	—
TOTAL ... ..	—	581.0	40.7	33.5	23.2	21.0	199.2	7.0

**Ministry of Education (continued).**

COMPONENTS.		Mean Daily Amount in Grammes.	Gross Protein. Grammes.	Available Protein.	Biological Value of Protein.	Fat.	Available Carbohydrate.	Mineral Matter.
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**DIET TABLE IX.—INTERMEDIATE SCHOOL OF COMMERCE.**

*Dinner :—*

Bread ... ..	—	250·0	16·7	12·5	5·0	2·5	119·0	3·0
Mutton ... ..	—	75·0	13·7	12·8	12·8	4·5	—	1·4
Semna ... ..	—	14·0	—	—	—	13·1	—	0·4
Vegetables ... ..	—	120·0	1·4	1·2	0·6	—	3·6	1·2
Rice ... ..	—	60·0	4·6	3·9	3·6	0·24	45·6	0·2
Salt ... ..	—	7·0	—	—	—	—	—	—
Pepper and cumin ... ..	—	0·25	—	—	—	—	—	—
<b>TOTAL ... ..</b>	<b>—</b>	<b>519·0</b>	<b>36·4</b>	<b>30·4</b>	<b>22·0</b>	<b>20·4</b>	<b>168·2</b>	<b>6·2</b>

**DIET TABLE X (A).—TRAINING COLLEGE FOR SCHOOL MISTRESSES, GIRLS (16 TO 19 YEARS).**

*Breakfast :—*

Bread ... ..	—	156·0	10·5	7·8	3·1	1·5	74·0	1·8
Cheese ... ..	—	25·0	3·1	3·0	3·0	4·0	—	2·0
Treacle ... ..	—	8·5	—	—	—	—	5·9	—
Olives ... ..	—	8·5	0·1	0·07	0·03	1·7	0·6	0·5
Jam ... ..	—	17·0	0·2	0·13	0·06	—	11·2	—
<b>TOTAL ... ..</b>	<b>—</b>	<b>215·0</b>	<b>13·9</b>	<b>11·0</b>	<b>6·2</b>	<b>7·2</b>	<b>91·7</b>	<b>4·3</b>

*Dinner :—*

Bread ... ..	—	250·0	16·7	12·5	5·0	2·5	119·0	3·0
Mutton ... ..	—	75·0	13·5	12·9	12·9	4·5	—	1·4
Semna ... ..	—	10·0	—	—	—	9·3	—	0·4
Rice ... ..	—	60·0	4·6	3·9	3·6	0·3	45·6	0·3
Vegetables ... ..	—	100·0	1·2	1·0	0·5	0·2	3·0	1·0
Salt ... ..	—	5·0	—	—	—	—	—	—
Pepper and cumin ... ..	—	0·1	—	—	—	—	—	—
<b>TOTAL ... ..</b>	<b>—</b>	<b>500·0</b>	<b>36·0</b>	<b>30·3</b>	<b>22·0</b>	<b>16·8</b>	<b>167·6</b>	<b>6·1</b>

*Supper :—*

Bread ... ..	—	250·0	16·7	12·5	5·0	2·5	119·0	3·0
Semna ... ..	—	10·0	—	—	—	9·3	—	—
Rice ... ..	—	37·0	2·9	2·4	2·2	0·1	28·2	0·1
Lentils ... ..	—	15·0	4·1	2·9	1·5	0·3	8·2	0·4
Beans ... ..	—	14·0	3·6	2·6	1·4	0·3	7·6	—
Potatoes ... ..	—	15·0	0·28	0·2	0·17	—	2·2	0·1
<b>TOTAL ... ..</b>	<b>—</b>	<b>342·0</b>	<b>27·6</b>	<b>20·6</b>	<b>10·3</b>	<b>12·5</b>	<b>165·2</b>	<b>4·0</b>

<b>MEAN DAILY TOTAL ... ..</b>	<b>—</b>	<b>77·5</b>	<b>61·9</b>	<b>38·5</b>	<b>36·5</b>	<b>424·5</b>	<b>14·4</b>
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Ministry of Education (continued).

COMPONENTS.		Mean Daily Amount in Grammes.	Gross Protein. Grammes.	Available Protein.	Biological Value of Protein.	Fat.	Available Carbohydrate.	Mineral Matter.
<i>Breakfast :—</i>								
Bread ... ..	—	125.0	8.3	6.2	2.5	1.25	59.5	1.5
Milk ... ..	—	200.0	8.3	8.0	8.0	15.8	9.6	1.6
Sugar ... ..	—	12.0	—	—	—	—	12.0	—
Cheese ... ..	—	25.0	3.1	3.0	3.0	4.0	—	2.0
Olives ... ..	—	8.5	0.1	0.07	0.03	1.7	0.6	0.5
Treacle ... ..	—	8.5	—	—	—	—	5.9	—
Jam ... ..	—	17.0	0.2	0.13	0.06	—	—	—
TOTAL ... ..	—	396.0	20.0	17.4	13.6	22.8	98.9	5.6
<i>Dinner :—</i>								
Bread ... ..	—	156.0	10.5	7.8	3.1	1.5	74.0	1.8
Mutton ... ..	—	75.0	13.5	12.9	12.9	4.5	—	1.4
Semna ... ..	—	14.0	—	—	—	13.2	—	0.5
Vegetables ... ..	—	110.0	1.4	1.1	0.5	0.2	3.3	1.1
Rice ... ..	—	60.0	4.6	3.9	3.6	0.3	45.6	0.3
Salt ... ..	—	5.0	—	—	—	—	—	—
Pepper and cumin ... ..	—	0.1	—	—	—	—	—	—
TOTAL ... ..	—	415.0	30.0	25.7	20.0	19.7	122.9	5.1
<i>Supper :—</i>								
Bread ... ..	—	156.0	10.5	7.8	3.1	1.5	74.0	1.8
Mutton ... ..	—	75.0	13.5	12.9	12.9	4.5	—	1.4
Semna ... ..	—	14.0	—	—	—	13.2	—	0.5
Vegetables ... ..	—	110.0	1.4	1.1	0.5	0.2	3.3	1.1
Rice ... ..	—	60.0	4.6	3.9	3.6	0.3	45.6	0.3
Sugar ... ..	—	9.0	—	—	—	—	9.0	—
Milk ... ..	—	20.0	0.8	0.8	0.8	1.6	1.0	0.2
Fruit ... ..	—	60.0	0.6	0.5	0.2	—	6.6	—
Salt ... ..	—	5.0	—	—	—	—	—	—
Pepper and cumin ... ..	—	0.1	—	—	—	—	—	—
TOTAL ... ..	—	504.0	31.4	27.0	21.1	21.3	139.5	5.5
MEAN DAILY TOTAL... ..	—	—	81.4	70.1	56.7	64.0	361.3	16.2

Ministry of Education (continued).

COMPONENTS.									Mean Daily Amount in Grammes.	Gross Protein. Grammes.	Available Protein.	Biological Value of Protein.	Fat.	Available Carbohydrate.	Mineral Matter.
Dinner :—															
Mean.															
Bread ...	...	...	...	...	...	...	—	156·0	10·5	7·8	3·1	1·5	74·0	1·8	
Semna ...	...	...	...	...	...	...	—	6·0	—	—	—	5·6	—	0·2	
Salt ...	...	...	...	...	...	...	—	7·0	—	—	—	—	—	—	
Vegetables ...	...	...	...	...	...	...	—	60·0	0·7	0·6	0·3	—	1·8	0·6	
Mutton ...	...	...	...	...	...	...	—	18·0	3·25	3·1	3·1	1·1	—	0·3	
Rice ...	...	...	...	...	...	...	—	5·0	0·38	0·32	0·3	—	3·8	—	
Lentils...	...	...	...	...	...	...	—	10·0	2·7	1·8	1·1	0·2	5·4	0·3	
Salt ...	...	...	...	...	...	...	—	7·0	—	—	—	—	—	—	
TOTAL ...								—	269·0	17·5	13·6	7·9	8·4	85·0	3·2
Maximum. *															
Bread ...	...	...	...	...	...	...	—	156·0	10·5	7·8	3·1	1·5	74·0	1·8	
Semna ...	...	...	...	...	...	...	—	6·0	—	—	—	5·6	—	—	
Lentils...	...	...	...	...	...	...	—	25·0	6·9	4·8	2·6	0·5	13·7	0·6	
Rice ...	...	...	...	...	...	...	—	13·0	1·0	0·8	0·78	—	9·9	—	
Salt ...	...	...	...	...	...	...	—	7·0	—	—	—	—	—	—	
TOTAL ...								—	200·0	18·4	13·4	6·5	7·6	97·6	2·4
Minimum.															
Bread ...	...	...	...	...	...	...	—	156·0	10·5	7·8	3·1	1·5	74·0	1·8	
Semna ...	...	...	...	...	...	...	—	6·0	—	—	—	5·6	—	—	
Vegetables ...	...	...	...	...	...	...	—	100·0	1·2	1·0	0·5	—	3·0	1·0	
Mutton ...	...	...	...	...	...	...	—	30·0	5·4	5·1	5·1	1·8	—	0·6	
Salt ...	...	...	...	...	...	...	—	7·0	—	—	—	—	—	—	
TOTAL ...								—	292·0	17·1	13·9	8·7	8·9	77·0	3·4

\* The components of the midday meal vary on different days. The "maximum" refers to calorie value.

Ministry of Education (continued).

COMPONENTS.										Mean Daily Amount in Grammes.	Gross Protein. Grammes.	Available Protein.	Biological Value of Protein.	Fat.	Available Carbohydrate.	Mineral Matter.
<i>Breakfast :—</i>																
Bread ...	...	...	...	...	...	...	...	...	...	156.0	10.5	7.8	3.1	1.5	74.0	1.8
Milk ...	...	...	...	...	...	...	...	...	...	200.0	8.3	8.0	8.0	15.8	9.6	1.6
Tea ...	...	...	...	...	...	...	...	...	...	1.0	—	—	—	—	—	—
Sugar ...	...	...	...	...	...	...	...	...	...	12.0	—	—	—	—	12.0	—
Cheese ...	...	...	...	...	...	...	...	...	...	25.0	3.1	3.0	3.0	4.0	—	2.0
Treacle ...	...	...	...	...	...	...	...	...	...	8.5	—	—	—	—	5.9	—
Olives ...	...	...	...	...	...	...	...	...	...	8.5	0.1	0.07	0.03	1.7	0.6	0.5
Jam ...	...	...	...	...	...	...	...	...	...	17.0	0.2	0.13	0.06	—	11.2	—
TOTAL ...										428.0	22.2	19.0	14.2	23.0	113.1	5.9
<i>Dinner :—</i>																
Bread ...	...	...	...	...	...	...	...	...	...	250.0	16.7	12.5	5.0	2.5	119.0	3.0
Mutton ...	...	...	...	...	...	...	...	...	...	82.5	14.9	14.1	14.1	4.9	—	1.6
Vegetables ...	...	...	...	...	...	...	...	...	...	110.0	1.3	1.1	0.5	—	3.3	1.1
Rice ...	...	...	...	...	...	...	...	...	...	60.0	4.6	3.9	3.6	0.2	45.6	0.2
Semna ...	...	...	...	...	...	...	...	...	...	14.0	—	—	—	13.1	—	0.5
Salt ...	...	...	...	...	...	...	...	...	...	5.0	—	—	—	—	—	—
Pepper and cumin ...	...	...	...	...	...	...	...	...	...	0.1	—	—	—	—	—	—
TOTAL ...										516.5	37.5	31.6	23.2	20.7	167.9	6.4
<i>Supper :—</i>																
Bread ...	...	...	...	...	...	...	...	...	...	250.0	16.7	12.5	5.0	2.5	119.0	3.0
Mutton ...	...	...	...	...	...	...	...	...	...	82.5	14.9	14.1	14.1	4.9	—	1.6
Vegetables ...	...	...	...	...	...	...	...	...	...	110.0	1.4	1.1	0.5	—	3.3	1.1
Rice ...	...	...	...	...	...	...	...	...	...	60.0	4.6	3.9	3.6	0.2	45.6	0.2
Semna ...	...	...	...	...	...	...	...	...	...	14.0	—	—	—	13.1	—	0.5
Milk ...	...	...	...	...	...	...	...	...	...	20.0	0.8	0.8	0.8	1.6	1.0	0.2
Sugar ...	...	...	...	...	...	...	...	...	...	9.0	—	—	—	—	9.0	—
Fresh fruit ...	...	...	...	...	...	...	...	...	...	60.0	0.5	0.4	0.2	—	6.9	0.3
Salt ...	...	...	...	...	...	...	...	...	...	5.0	—	—	—	—	—	—
Pepper and cumin ...	...	...	...	...	...	...	...	...	...	0.1	—	—	—	—	—	—
TOTAL ...										705.5	39.0	32.8	24.2	23.3	185.0	6.9
MEAN DAILY TOTAL ...										—	98.7	83.4	61.6	67.0	466.0	19.2

Ministry of Education (continued).

COMPONENTS.		Mean Daily Amount in Grammes.	Gross Protein. Grammes.	Available Protein.	Biological Value of Protein.	Fat.	Available Carbohydrate.	Mineral Matter.
<i>Breakfast :—</i>								
Bread ... ..	—	160·0	10·8	8·0	3·2	1·6	76·0	1·8
Treacle ... ..	—	30·0	—	—	—	—	20·5	—
Cheese ... ..	—	30·0	3·7	3·6	3·6	4·6	—	2·4
TOTAL ... ..	—	220·0	14·5	11·6	6·8	6·2	96·5	4·2
<i>Dinner :—</i>								
Bread ... ..	—	50·0	16·7	12·5	5·0	2·5	119·0	3·0
Mutton (without bone) ... ..	—	100·0	18·2	17·3	17·3	6·0	—	1·9
Semna ... ..	—	13·0	—	—	—	12·2	—	—
Rice ... ..	—	50·0	3·8	3·3	3·3	0·1	38·0	0·1
Vegetables (fresh) ... ..	—	100·0	1·2	1·0	0·5	—	3·0	—
Salt ... ..	—	6·0	—	—	—	—	—	—
Pepper ... ..	—	0·1	—	—	—	—	—	—
TOTAL ... ..	—	513·0	40·0	34·1	25·8	20·8	160·0	5·0
<i>Supper :—</i>								
Bread ... ..	—	250·0	16·7	12·5	5·0	2·5	119·0	3·0
Rice ... ..	—	50·0	3·8	3·3	3·0	0·1	38·0	0·1
Lentils ... ..	—	20·0	5·5	3·8	2·1	0·4	10·8	0·5
Beans ... ..	—	20·0	5·4	3·7	2·0	0·4	10·8	0·5
Fresh fruit ... ..	—	17·0	0·18	0·16	0·1	—	1·9	0·1
Sugar ... ..	—	8·5	—	—	—	—	8·5	—
Salt ... ..	—	6·0	—	—	—	—	—	—
Pepper ... ..	—	0·1	—	—	—	—	—	—
TOTAL ... ..	—	365·5	31·6	23·4	12·2	3·4	189·0	4·2
MEAN DAILY TOTAL ... ..	—	—	86·0	69·1	44·8	30·0	445·5	13·4

DEPARTMENT OF PUBLIC HEALTH.

COMPONENTS.	DIET XV (B).	DIET XVI (B).	DIET XVII (A).	DIET XVIII.	DIET XIX (B).	DIET XX (B).
	Hospitals, First and Second Class Patients.	Hospitals, Third Class, Europeans.	Hospitals, Third Class, Egyptians.	Hospitals, Milk Diet.	Hospital Officers.	Pupils, (Qasr el Aini) Women.
	41	42	43	44	45	46
Gross protein...	194.5	129.5	97.5	69.7	144.0	133.5
Available protein ...	179.5	117.0	78.5	60.4	128.5	117.5
Biological value of protein ...	154.0	90.0	53.0	46.7	102.0	91.5
Fat (gross) ...	189.0	119.0	52.0	72.2	141.0	118.0
Carbohydrate (avail.) (gross less 5 per cent)	548.0	470.0	435.0	326.0	522.0	584.0
Mineral salts (of food) ...	29.0	20.3	20.0	13.2	25.0	24.0
Common salt ...	20.0	20.0	20.0	5.0	20.0	20.0
Total salts ...	49.0	40.3	40.0	18.2	45.0	44.0
Gross calories ...	4,950.0	3,750.0	2,800.0	2,377.0	4,250.0	4,125.0
Available calories ...	4,756.0	3,510.0	2,597.0	2,261.0	4,021.0	3,925.0
Animal protein ...	130.0	68.0	28.0	35.7	82.5	68.5
Animal fat ...	177.0	114.5	21.0	67.5	121.5	70.5
Cane or other sugar ...	182.0	74.0	39.6	75.5	163.5	106.0
Total weight, food materials ...	2,993.0	2,070.0	1,280.0	1,315.0	2,415.0	2,165.0
Weight, dry nutritive components ...	916.0	706.0	565.0	458.0	791.0	813.0
Percentage of protein ...	19.5	16.5	13.9	13.1	16.1	14.5
Percentage of fat ...	20.6	16.8	9.2	15.7	17.9	14.5
Percentage of carbohydrate ...	59.9	66.7	76.9	71.2	66.0	71.0
Nitrogen (available) ...	28.7	18.8	12.6	9.7	21.7	18.8
Carbon (available) ...	461.0	340.0	254.5	217.0	387.5	380.0
N/C ratio ...	1/16.1	1/18.0	1/20.2	1/22.3	1/17.8	1/20.2

COMPONENTS.	Ration per Day.*	Mean Daily Amount in Grammes.	Gross Protein. Grammes.	Available Protein.	Biological Value of Protein.	Fat.	Available Carbohydrate.	Mineral Matter.
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DIET TABLE XV (B).—HOSPITALS. FIRST AND SECOND CLASS PATIENTS.

Breakfast, Dinner, and Supper:—

European bread (or native) ...	—	450.0	33.5	27.0	10.8	3.1	225.0	4.5
Beef or mutton or veal (without bone)...	—	233.0	46.6	44.2	44.2	11.5	—	2.7
{ Bacon, or ...	40.0	20.0	2.1	2.0	2.0	12.0	—	0.9
{ Oatmeal ...	50.0	25.0	3.7	3.0	2.0	1.7	16.0	0.5
Milk ...	—	500.0	20.5	20.0	20.0	39.5	24.0	4.0
Green vegetables ...	—	400.0	4.8	4.0	2.0	—	12.0	4.5
Potatoes ...	—	300.0	5.4	4.8	3.7	0.3	45.0	3.0
Rice, or ...	100.0	mean composition.	10.1	7.7	4.3	0.8	58.0	1.0
{ Lentils, beans, haricot beans, flour, macaroni, spaghetti, tapioca, corn- flour, semolina, ground rice ...	80.0							
Fresh butter ...	—							
Semna ...	—	50.0	—	—	—	46.5	—	2.0
Sugar ...	—	100.0	—	—	—	—	100.0	—
Oil ...	—	10.0	—	—	—	10.0	—	—
Vinegar ...	—	10.0	—	—	—	—	—	—

Articles bracketed are alternatives.

\* Shows the amount of any alternative which is issued for one day; where no figure is given the quantity shown in column 2 is issued daily.

Department of Public Health (continued).

COMPONENTS.	Ration per Day.	Mean Daily Amount in Grammes.	Gross Protein. Grammes.	Available Protein.	Biological Value of Protein.	Fat.	Available Carbohydrate.	Mineral Matter.
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DIET TABLE XV (B).—HOSPITALS. FIRST AND SECOND CLASS PATIENTS (continued).

{ Chicken, or... ..	$\frac{1}{2}$	$\frac{1}{2}$	9.3	8.8	8.8	2.1	—	0.9
{ Rabbit, or ... ..	$\frac{1}{2}$	$\frac{1}{2}$	3.7	3.5	3.5	0.1	—	0.1
{ Pigeon ... ..	$\frac{1}{2}$	$\frac{1}{2}$	9.1	8.7	8.7	2.6	—	0.9
Eggs ... ..	3	120.0	15.6	15.0	15.0	12.6	—	1.4
Cheese ... ..	—	30.0	3.7	3.6	3.6	4.8	—	1.8
Jam ... ..	—	45.0	0.4	0.3	0.15	—	29.0	0.2
{ Cocoa, or ... ..	30.0	15.0	1.0	0.9	0.4	2.2	9.6	0.2
{ Tea ... ..	20.0	10.0	—	—	—	—	—	—
Coffee ... ..	—	20.0	—	—	—	—	—	—
Pepper, mustard, sauce ... ..	—	—	—	—	—	—	—	—
Fruit ... ..	—	250.0	2.0	1.7	0.8	0.5	29.0	1.0
Salt ... ..	—	20.0	—	—	—	—	—	—
Fish ... ..	—	150.0	29.7	24.0	24.0	6.0	—	—
TOTAL ... ..	—	2,993.0	192.6	179.6	154.4	194.8	548.0	29.0

DIET TABLE XVI (B).—HOSPITALS. THIRD CLASS, EUROPEANS.

Bread ... ..	—	450.0	33.5	27.0	10.8	3.1	225.0	4.5
Meat (without bone)... ..	—	170.0	34.0	32.7	32.7	8.5	—	2.0
Milk ... ..	—	500.0	20.0	20.0	20.0	39.5	24.0	4.0
Green vegetables ... ..	—	300.0	3.6	3.0	1.5	—	9.0	3.0
Potatoes ... ..	—	200.0	3.6	3.2	2.5	0.2	30.0	2.0
Rice ... ..	—	50.0	3.8	3.2	3.0	0.2	38.0	0.2
Macaroni ... ..	—	100.0	11.0	9.8	3.9	0.5	74.0	0.6
Flour ... ..	—	30.0	3.6	2.9	1.1	0.4	20.0	0.4
Fresh butter ... ..	—	20.0	0.2	0.2	0.2	17.0	0.1	0.6
Semna ... ..	—	40.0	—	—	—	37.0	—	1.6
Sugar ... ..	—	50.0	—	—	—	—	50.0	—
Tea or coffee ... ..	—	20.0	—	—	—	—	—	—
Eggs ... ..	3.0	120.0	15.6	15.0	15.0	12.6	—	1.4
Salt ... ..	—	20.0	—	—	—	—	—	—
TOTAL ... ..	—	2,070.0	129.4	117.0	90.7	119.0	470.0	20.3

DIET TABLE XVII (A).—HOSPITALS. THIRD CLASS, EGYPTIANS.

Breakfast, Dinner, and Supper:—

Bread (native) ... ..	—	600.0	40.2	30.0	12.0	6.0	292.5	7.2
Meat (beef) (without bone) ... ..	—	105.0	21.0	20.0	20.0	5.2	—	1.2
Milk ... ..	—	200.0	8.3	8.0	8.0	15.8	9.6	1.6
Vegetables ... ..	—	150.0	1.8	1.5	0.7	—	4.5	1.5
Rice ... ..	—	75.0	5.8	4.8	4.5	0.3	57.0	0.3
{ Lentils, or ... ..	75.0	37.5	10.3	7.25	4.0	0.7	21.0	1.0
{ Beans ... ..	75.0	37.5	10.0	7.0	3.9	0.7	20.5	1.0
Semna ... ..	—	25.0	—	—	—	23.5	—	1.0
Sugar ... ..	—	30.0	—	—	—	—	30.0	—
Salt ... ..	—	20.0	—	—	—	—	—	—
Pepper... ..	—	0.25	—	—	—	—	—	—
TOTAL ... ..	✓	1,280.0	97.4	78.5	53.0	52.2	435.0	20.0

Articles bracketed are alternatives.

Department of Public Health (continued).

COMPONENTS.	Ration per Day.	Mean Daily Amount In Grammes.	Gross Protein. Grammes.	Available Protein.	Biological Value of Protein.	Fat.	Available. Carbohydrate.	Mineral Matter.
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DIET TABLE XVIII.—HOSPITALS. MILK DIET.

Breakfast, Dinner, and Supper:—

Native bread (wheaten) ... ..	—	450·0	30·2	22·5	9·0	4·5	212·5	5·4
Beef, for soup (without bone) ... ..	—	(70·0)	0·7	0·7	0·7	0·5	—	0·8
Milk ... ..	—	850·0	35·0	34·0	34·0	67·0	40·5	6·8
Sugar ... ..	—	35·0	—	—	—	—	35·0	—
Rice ... ..	—	50·0	3·8	3·2	3·0	0·2	38·0	0·2
Salt ... ..	—	5·0	—	—	—	—	—	—
<b>TOTAL ... ..</b>	<b>—</b>	<b>1,380·0</b>	<b>69·7</b>	<b>60·4</b>	<b>46·7</b>	<b>72·2</b>	<b>326·0</b>	<b>13·2</b>

DIET TABLE XIX (B).—HOSPITALS. OFFICERS.

Breakfast, Dinner, and Supper:—

Bread (native) ... ..	600·0	—	—	—	—	—	—	—
Bread (European) ... ..	450·0	450·0	33·5	27·0	10·8	3·1	225·0	4·5
Beef, mutton, or veal ... ..	220·0	154·0	30·8	29·3	29·3	7·7	—	4·8
Milk ... ..	—	400·0	16·6	16·0	16·0	31·6	19·2	3·2
Vegetables ... ..	—	400·0	4·8	4·0	2·0	—	12·0	4·0
Potatoes ... ..	—	200·0	3·6	3·2	1·6	0·2	30·0	2·0
Rice ... ..	—	50·0	3·8	3·2	3·0	0·2	38·0	0·2
Lentils, or ... ..	50·0	17·0	11·0	8·0	4·1	0·7	30·5	0·9
Beans, or ... ..		17·0						
Macaroni ... ..		17·0						
Flour, or ... ..	30·0	15·0	1·9	1·5	0·6	0·24	22·5	0·25
Cornflour ... ..	30·0	15·0						
Dried fruit (apricots, cherries, or figs) ...	—	50·0	3·5	2·8	1·4	1·5	30·0	1·2
Semna ... ..	—	75·0	—	—	—	71·5	—	3·0
Salt ... ..	—	20·0	—	—	—	—	—	—
Sugar ... ..	—	100·0	—	—	—	—	100·0	—
Oil ... ..	—	10·0	—	—	—	10·0	—	—
Vinegar ... ..	—	10·0	—	—	—	—	—	—
Fish, or ... ..	200·0	50·0	8·2	8·0	8·0	2·0	—	0·5
Chicken, or ... ..	1½	1½	7·0	6·5	6·5	2·0	—	0·7
Pigeon, or ... ..	1	1	5·5	5·1	5·1	0·25	—	0·25
Rabbit ... ..	1½	1½	7·0	6·6	6·6	1·6	—	0·7
Eggs, or ... ..	2	40·0	5·2	5·0	5·0	4·2	—	0·4
Cheese, or ... ..	50·0	17·0	2·2	2·1	2·1	2·7	—	1·7
Tahina ... ..	40·0	13·5	0·2	0·1	—	3·3	8·6	—
Coffee, or ... ..	—	25·0	—	—	—	—	—	—
Tea ... ..	—	7·5	—	—	—	—	—	—
Melon (shemam) ... ..	375·0	—	0·5	0·4	0·2	0·1	0·7	0·1
Water melon (batikh) ... ..	375·0							
Other fruit ... ..	125·0							
<b>TOTAL ... ..</b>	<b>—</b>	<b>2,415·0</b>	<b>144·3</b>	<b>128·6</b>	<b>102·3</b>	<b>143·4</b>	<b>532·8</b>	<b>25·8</b>

Articles bracketed are alternatives.

The above is according to the official ration sheet. The Director, Qasr el 'Aini, informs me that in practice it is not followed completely.

Department of Public Health (continued).

COMPONENTS.	Ration per Day.	Mean Daily Amount in Grammes.	Gross Protein. Grammes.	Available Protein	Biological Value of Protein.	Fat.	Available Carbohydrate.	Mineral Matter.
DIET TABLE XX (B).—PUPILS. QASR EL 'AINI, WOMEN.								
<i>Breakfast, Dinner, and Supper:—</i>								
Bread ... ..	—	843·0	57·0	42·1	16·8	8·4	402·0	10·0
Beef (without bone) ... ..	—	175·0	35·0	33·4	33·4	8·7	—	2·1
Milk ... ..	—	500·0	20·5	20·0	20·0	39·5	24·0	4·0
Vegetables ... ..	—	260·0	2·8	2·6	1·3	—	7·8	2·6
Potatoes ... ..	—	70·0	1·3	1·1	0·9	0·1	10·5	0·7
Rice ... ..	—	50·0	3·8	3·3	3·0	0·1	38·0	0·1
Macaroni ... ..	50·0	14·5	1·6	1·39	0·55	0·1	10·6	0·1
Cornflour ... ..	50·0	14·5	0·06	0·05	0·02	—	10·2	—
Dried fruit ... ..	—	21·5	0·5	0·4	0·2	0·3	13·8	0·5
<i>Semna</i> ... ..	—	30·0	—	—	—	28·0	—	1·2
Sugar ... ..	—	41·4	—	—	—	—	41·4	—
Oil ... ..	—	10·0	—	—	—	10·0	—	—
Eggs ... ..	3	120·0	15·6	15·0	15·0	12·6	—	1·4
<i>Tahina</i> ... ..	—	40·0	0·5	0·4	0·2	10·0	26·0	0·2
Vinegar ... ..	—	24·0	—	—	—	—	—	—
Salt ... ..	—	20·0	—	—	—	—	—	—
TOTAL ... ..	—	2,165·0	138·7	117·6	91·3	117·8	584·2	23·7

### PRISONS DEPARTMENT.

COMPONENTS.	DIET XXI (A).	DIET XXII (A).	DIET XXIII.	DIET XXIV.	DIET XXV.
	Hospitals, Adults. Ordinary Diet.	Guard Company (Tura).	Warders Central Prisons. Dinner.	Warders Central Subordinate. Prisons. Dinner.	Warders Convict Prisons. Dinner.
	47	48	49	50	51
Gross protein ... ..	86.0	115.0	49.3	46.3	51.3
Available protein ... ..	76.0	89.0	31.3	28.8	35.6
Biological value of protein ... ..	50.0	54.0	17.1	13.0	22.5
Fat (gross) ... ..	57.0	34.7	20.3	16.4	18.0
Carbohydrate (available) ... ..	328.0	490.0	218.5	220.0	198.0
Mineral salts ... ..	13.7	16.0	7.9	7.2	7.2
Common salt ... ..	12.5	15.5	6.2	6.2	6.2
Total salts ... ..	26.0	31.5	14.1	13.4	13.4
Gross calories ... ..	2,300.0	2,920.0	1,233.0	1,294.0	1,232.0
Available calories ... ..	2,190.0	2,710.0	1,111.0	1,173.0	1,127.0
Animal protein ... ..	30.4	20.3	3.2	—	10.2
Animal fat ... ..	31.6	24.0	0.6	—	12.0
Cane or other sugar ... ..	18.0	—	—	—	—
Total weight, food materials ...	1,236.0	1,252.0	551.0	528.0	582.4
Weight dry nutritive components	461.0	614.0	270.0	265.0	355.5
Percentage of protein ... ..	16.4	14.5	11.6	10.3	10.0
Percentage of fat ... ..	12.4	5.5	7.6	6.4	5.2
Percentage of carbohydrate ...	71.2	80.0	80.6	83.8	84.8
Nitrogen (available) ... ..	12.2	14.3	5.0	4.6	5.7
Carbon (available)... ..	214.0	269.0	119.5	123.0	111.0
N/C ratio ... ..	1/17.5	1/18.8	1/23.9	1/26.7	1/19.3

COMPONENTS.	DIET XXVI(A).		DIET XXVII (A).	DIET XXVIII.	DIET XXIX.	DIET XXX.	DIET XXXI.
	Boys Reformatory over 13 Years.	Boys Reformatory under 13 Years.	Hospital Pellagrous Patients.	Prisoners. No. III Diet, Hard Labour	Prisoners. No. II Diet, Light Labour	Prisoners. No. I Diet No Labour.	Prisoners. Bread Diet.
	52	53	54	55	56	57	58
Gross protein ... ..	78.5	73.5	101.8	123.5	110.6	95.7	50.9
Available protein ... ..	62.1	58.2	82.7	82.7	69.5	59.5	27.4
Biological value of protein ... ..	32.3	30.8	54.7	48.3	33.5	27.0	8.2
Fat (gross) ... ..	28.8	28.0	59.3	46.6	43.5	31.8	11.7
Carbohydrate (available) ... ..	461.0	424.0	440.0	524.0	528.8	474.0	353.0
Mineral salts ... ..	12.5	11.7	16.5	18.0	17.3	15.1	9.6
Common salt ... ..	12.5	12.5	12.5	12.5	12.5	12.5	12.5
Total salts ... ..	25.0	24.2	29.0	30.5	29.8	27.6	22.1
Gross calories ... ..	2,586.0	2,405.0	2,871.0	3,195.0	3,062.0	2,728.0	1,754.0
Available calories ... ..	2,426.0	2,250.0	2,695.0	2,920.0	2,854.0	2,482.5	1,586.0
Animal protein ... ..	6.0	6.0	29.4	22.5	6.0	—	—
Animal fat ... ..	3.3	3.3	31.6	4.7	1.2	—	—
Cane or other sugar ... ..	11.3	11.3	18.0	—	—	—	—
Total weight, food materials ...	1,058.0	980.0	1,391.0	1,360.6	1,283.0	1,116.0	858.0
Weight, dry nutritive components	552.0	510.0	582.0	653.3	641.8	565.0	392.0
Percentage of protein ... ..	11.2	11.3	14.2	12.6	10.8	10.4	7.0
Percentage of fat ... ..	5.1	5.4	10.2	7.1	6.7	5.6	3.0
Percentage of carbohydrate ...	83.7	83.3	75.6	80.2	82.5	84.0	90.0
Nitrogen (available) ... ..	10.0	9.4	13.3	13.3	11.1	9.5	4.4
Carbon (available)... ..	234.0	216.5	264.0	288.0	280.0	247.3	164.3
N/C ratio ... ..	1/23.4	1/23.9	1/20.0	1/21.6	1/25.2	1/26.4	1/37.2

Prisons Department (continued).

COMPONENTS.		Mean Daily Amount in Grammes.	Gross Protein. Grammes.	Available Protein.	Biological Value of Protein.	Fat.	Available Carbohydrate.	Mineral Matter.
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DIET TABLE XXI.—HOSPITALS. ADULTS' ORDINARY DIET.

Breakfast, Dinner, and Supper :—

Native bread (wheaten) ... ..	—	468·0	31·5	23·5	9·3	4·7	223·0	5·6
Meat (without bone) ... ..	—	94·0	16·9	16·1	16·1	5·6	—	1·8
Oil ... ..	—	18·5	—	—	—	18·5	—	—
Milk ... ..	—	337·0	13·5	13·3	13·3	26·0	16·0	2·7
Rice ... ..	—	62·5	4·8	4·1	3·7	0·2	47·5	0·2
Lentils... ..	—	62·5	17·2	12·0	6·7	1·2	34·0	1·7
Green vegetables ... ..	—	156·0	1·8	1·6	0·8	—	4·6	1·5
Onions... ..	—	37·5	0·45	0·34	0·17	0·67	1·8	0·2
Salt ... ..	—	12·5	—	—	—	—	—	—
TOTAL ... ..	—	1,236·0	86·0	76·0	50·0	57·0	328·4	13·7

DIET TABLE XXII.—GUARD COMPANY. ADULT MEN (ACTIVE WORK).

Breakfast, Dinner, and Supper :—

Native bread (wheaten) ... ..	—	780·0	52·2	39·0	15·6	7·8	370·0	9·3
Meat (without bone)... ..	—	110·0	22·0	20·8	20·8	5·5	—	1·3
Semna... ..	—	18·5	—	—	—	18·5	—	—
Rice ... ..	—	62·5	4·8	4·1	3·7	0·2	47·2	0·2
Lentils... ..	—	62·5	17·2	12·0	6·7	2·2	34·0	1·7
Beans ... ..	—	62·5	16·7	11·7	6·5	1·2	33·6	2·1
Green vegetables or salad ... ..	—	140·0	1·7	1·4	0·7	—	4·2	1·4
Onions... ..	—	15·5	0·2	0·14	0·07	0·26	0·78	0·1
Salt ... ..	—	15·5	—	—	—	—	—	—
TOTAL ... ..	—	1,252·0	114·8	89·0	54·0	34·7	489·8	16·0

DIET TABLE XXIII.—WARDERS, CENTRAL PRISONS.

Dinner :—

Bread, millet ... ..	—	374·0	24·0	12·5	3·7	5·6	166·0	4·8
Meat (without bone)... ..	—	15·6	3·2	3·0	3·0	0·6	—	0·2
Lentils, or ... ..	—	37·5	20·2	14·2	7·8	1·5	40·8	2·2
Beans ... ..	—	37·5						
Rice ... ..	—	15·6	1·2	1·0	1·0	0·05	11·3	0·05
Onions ... ..	—	6·2	0·1	0·1	0·05	0·1	0·3	0·05
Vegetables ... ..	—	50·0	0·6	0·5	0·25	—	0·15	0·5
Oil ... ..	—	12·5	—	—	—	12·5	—	—
Salt ... ..	—	6·2	—	—	—	—	—	—
TOTAL ... ..	—	551·0	49·3	31·3	17·1	20·3	218·5	7·9

Available calories = 1,111

Gross „ = 1,233

Articles bracketed are alternatives.

Prisons Department (continued).

COMPONENTS.		Mean Daily Amount in Grammes.	Gross Protein. Grammes.	Available Protein.	Biological Value of Protein.	Fat.	Available Carbohydrate.	Mineral Matter.
DIET TABLE XXIV.—WARDERS, SUBORDINATE PRISONS.								
<i>Dinner :—</i>								
Bread ... ..	—	358·0	23·5	12·4	3·6	5·4	160·0	4·3
Oil ... ..	—	9·3	—	—	—	9·3	—	—
Rice ... ..	—	23·4	1·9	1·6	1·5	0·1	18·9	0·1
Lentils, or ... ..	—	37·5	20·2	14·2	7·8	1·5	40·8	2·2
Beans ... ..	—	37·5						
Vegetables ... ..	—	50·0	0·6	0·5	0·25	—	0·15	0·5
Onions ... ..	—	6·2	0·1	0·1	0·05	0·1	0·3	0·15
Salt ... ..	—	6·2	—	—	—	—	—	—
TOTAL ... ..		528·0	6·3	28·8	13·0	16·4	220·1	7·2

DIET TABLE XXV.—WARDERS, CONVICT PRISONS.

<i>Dinner :—</i>								
Bread ... ..	—	312·0	20·0	10·6	3·1	4·6	140·0	3·7
Meat ... ..	—	55·0	11·0	10·4	10·4	2·7	—	0·65
Semna or oil ... ..	—	9·2	—	—	—	9·2	—	—
Rice ... ..	—	31·2	2·4	2·0	1·9	0·1	22·6	0·1
Lentils... ..	—	31·2	8·6	6·0	3·4	0·6	17·0	0·8
Beans ... ..	—	31·2	8·4	5·8	3·3	0·6	16·8	1·0
Vegetables ... ..	—	70·0	0·8	0·7	0·35	—	2·1	0·7
Onions... ..	—	7·8	0·1	0·1	0·05	0·13	0·39	0·12
Salt ... ..	—	6·2	—	—	—	—	—	—
TOTAL ... ..		582·4	51·3	35·6	22·5	18·0	198·9	7·1

DIET TABLE XXVI.—BOYS' REFORMATORY, GIZA.

<i>Breakfast, Dinner, and Supper :—</i>								
<i>Boys under 13.</i>								
Bread ... ..	—	702·0	43·8	35·0	14·0	7·4	334·0	8·4
Meat (without bone)... ..	—	20·2	4·0	3·8	3·8	1·0	—	0·2
Semna ... ..	—	15·6	—	—	—	15·6	—	—
Rice ... ..	—	51·3	3·9	3·3	3·1	0·2	38·5	0·2
Lentils... ..	—	40·2	11·2	7·9	4·4	0·8	22·2	1·1
Beans ... ..	—	28·7	7·4	5·2	2·9	0·5	15·0	0·5
Onions... ..	—	12·4	0·13	0·11	0·05	0·22	0·6	0·07
Vegetables ... ..	—	78·0	0·96	0·78	0·4	—	2·2	0·78
Cheese ... ..	—	17·8	2·2	2·14	2·15	2·34	—	0·8
Treacle ... ..	—	16·0	—	—	—	—	11·3	—
Salt ... ..	—	12·4	—	—	—	—	—	—
TOTAL ... ..	—	980·2	73·6	58·2	30·8	28·0	423·8	11·7
<i>Boys over 13.</i>								
Bread (additional to above) ... ..	—	78·0	4·9	3·9	1·5	0·8	37·5	0·8
TOTAL ... ..	—	1,058·2	78·5	62·1	32·0	28·8	461·3	12·5

Articles bracketed are alternatives.

Prisons Department (continued).

COMPONENTS.	Mean Daily Amount in Grammes.	Gross Protein. Grammes.	Available Protein.	Biological Value of Protein.	Fat.	Available Carbohydrate.	Mineral Matter.
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DIET TABLE XXVII.—HOSPITALS, PELLAGROUS PATIENTS. \*

(Hospital Diet with extra half loaf = Diet for Pellagrous Cases, Convalescent.)

Breakfast, Dinner, and Supper :—

Bread (wheaten 2 loaves)...	—	624.0	47.2	35.2	14.0	7.0	334.5	8.4
Mutton (without bone) ...	—	94.0	16.9	16.1	16.1	5.6	—	1.8
Milk (buffalo) ...	—	337.0	13.5	13.3	13.3	26.0	18.0	2.7
Lentils...	—	62.5	17.2	12.0	6.7	1.2	34.0	1.7
Rice ...	—	62.5	4.8	4.1	3.7	0.2	47.0	0.2
Onions ...	—	37.5	0.45	0.34	0.17	0.67	1.8	0.2
Fresh vegetables ...	—	156.0	1.8	1.6	0.8	—	4.6	1.5
Oil ...	—	18.5	—	—	—	18.5	—	—
Salt ...	—	12.5	—	—	—	—	—	12.5
<b>TOTAL ...</b>	<b>—</b>	<b>1,391.0</b>	<b>101.8</b>	<b>82.7</b>	<b>54.7</b>	<b>59.3</b>	<b>440.0</b>	<b>29.0</b>

DIET TABLE XXVIII.—DIET No. III, FOR HARD LABOUR.

Breakfast Dinner, and Supper :—

Millet bread ...	—	936.0	60.0	31.8	9.3	14.0	421.0	11.2
Meat (without bone)...	—	118.5	23.7	22.5	22.5	4.7	—	1.5
{ Lentils, or ...	—	56.2	35.5	24.8	13.7	2.6	71.2	4.0
{ Beans ...	—	75.0						
Rice ...	—	37.4	2.87	2.4	2.2	0.1	28.4	0.1
Onions...	—	12.5	0.2	0.2	0.1	0.2	0.6	0.1
Fresh vegetables ...	—	100.0	1.2	1.0	0.5	—	3.0	1.0
Oil ...	—	25.0	—	—	—	25.0	—	—
Salt ...	—	12.5	—	—	—	—	—	12.5
<b>TOTAL ...</b>	<b>—</b>	<b>1,360.6</b>	<b>123.5</b>	<b>82.7</b>	<b>48.3</b>	<b>46.6</b>	<b>524.0</b>	<b>30.5</b>

DIET TABLE XXIX.—DIET No. II, FOR LIGHT LABOUR.

Breakfast Dinner, and Supper :—

Millet bread ...	—	936.0	60.0	31.8	9.3	14.0	421.0	11.2
Meat (without bone)...	—	31.2	6.3	6.0	6.0	1.2	—	0.3
{ Lentils, or ...	—	75.0	40.5	28.5	15.7	3.0	81.6	4.5
{ Beans ...	—	75.0						
Rice ...	—	31.2	2.4	2.0	1.9	0.1	22.6	0.1
Onions...	—	12.5	0.2	0.2	0.1	0.2	0.6	0.1
Fresh vegetables ...	—	100.0	1.2	1.0	0.5	—	3.0	1.0
Oil ...	—	25.0	—	—	—	25.0	—	—
Salt ...	—	12.5	—	—	—	—	—	12.5
<b>TOTAL ...</b>	<b>—</b>	<b>1,282.9</b>	<b>110.6</b>	<b>69.5</b>	<b>33.5</b>	<b>43.5</b>	<b>528.8</b>	<b>29.8</b>

Bracketed articles are alternatives.

\* This diet is given to pellagra cases not ill enough to be admitted to hospital but segregated in special prison wards.

Prisons Department (continued).

COMPONENTS.		Mean Daily Amount in Grammes.	Gross Protein. Grammes.	Available Protein.	Biological Value of Protein.	Fat.	Available Carbohydrate.	Mineral Matter.
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DIET TABLE XXX.—DIET NO. I, NO LABOUR.

Breakfast, Dinner, and Supper :—

Millet bread ... ..	—	780.0	50.0	26.6	7.8	11.7	351.0	9.3
Oil ... ..	—	18.7	—	—	—	18.7	—	—
Rice ... ..	—	46.8	3.8	3.2	2.9	0.2	37.9	0.2
{ Lentils, or ... ..	—	75.0	40.5	28.5	15.7	3.0	81.6	4.5
{ Beans ... ..	—	75.0						
Onions... ..	—	12.5	0.2	0.2	0.1	0.2	0.6	0.1
Vegetables ... ..	—	100.0	1.2	1.0	0.5	—	3.0	1.0
Salt ... ..	—	12.5	—	—	—	—	—	—
TOTAL ... ..	—	1,116.0	95.7	59.5	27.0	31.8	474.1	15.1

DIET TABLE XXXI.—BREAD DIET.

Breakfast, Dinner, and Supper :—

Bread (millet) ... ..	—	780.0	50.0	26.6	7.8	11.7	351.0	9.3
Vegetables ... ..	—	78.0	0.9	0.8	0.4	—	2.3	0.3
Salt ... ..	—	12.5	—	—	—	—	—	—
TOTAL ... ..	—	858.0	50.9	27.4	8.2	11.7	353.3	9.6



### LUNACY DIVISION.

COMPONENTS.	DIET XXXII (B).	DIET XXXIII.	DIET XXXIV (B).	DIET XXXV.	DIET XXXVI (A).	DIET XXXVII.
	Asylum Officials. Women. Full Diet.	Doctors and Clerks. Partial Diet.	Officials (Doctors etc), Full Diet.	Subordinate Employees. Partial Diet.	Patients. Ordinary Diet, and Attendants.	Patients. Milk Diet.
	59	60	61	62	63	64
Gross protein ... ..	140·0	112·6	149·5	57·0	99·0	72·0
Available protein ... ..	127·0	105·5	138·0	49·5	78·0	62·0
Biological value of protein ... ..	108·0	87·0	112·0	38·8	49·4	49·3
Fat (gross) ... ..	98·5	85·0	111·0	29·5	63·5	72·0
Carbohydrate (available) ... ..	430·0	202·0	469·0	183·5	444·0	348·0
Mineral salts ... ..	22·5	11·6	14·6	13·4	13·8	13·0
Common salt ... ..	15·0	5·0	10·0	10·0	18·0	5·0
Total salts ... ..	37·5	16·6	24·6	23·4	31·8	18·0
Gross calories ... ..	3,320·0	2,140·0	3,650·0	1,301·0	2,910·0	2,480·0
Available calories ... ..	3,200·0	2,061·0	3,528·0	1,231·0	2,720·0	2,360·0
Animal protein ... ..	98·0	75·0	88·6	28·5	22·0	34·7
Animal fat ... ..	93·7	81·5	104·5	26·1	9·2	67·0
Cane or other sugar ... ..	161·0	54·0	77·5	—	45·4	90·0
Total weight, food materials ... ..	2,394·0	1,663·0	2,273·0	857·0	1,345·0	1,471·0
Weight dry nutritive components ... ..	654·9	392·5	718·0	261·5	606·0	482·0
Percentage of protein ... ..	19·3	26·6	19·2	19·1	16·3	12·9
Percentage of fat ... ..	14·9	21·7	15·4	11·3	10·3	15·0
Percentage of carbohydrate ... ..	65·8	51·7	65·4	69·6	73·4	72·0
Nitrogen (available) ... ..	20·3	16·9	22·0	7·9	12·4	9·9
Carbon (available) ... ..	313·0	201·0	340·0	121·0	267·0	226·0
N/C ratio ... ..	1/15·4	1/11·9	1/15·4	1/15·3	1/21·5	1/22·8

COMPONENTS.	Ration per Day.	Mean Daily Amount in Grammes.	Gross Protein. Grammes.	Available Protein.	Biological Value of Protein.	Fat.	Available Carbohydrate.	Mineral Matter.
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\* DIET TABLE XXXII (B).—ASYLUM OFFICIALS, WOMEN (ENGLISH SISTERS).

*Breakfast, Dinner, and Supper :—*

Bread ... ..	—	461·0	32·5	25·0	10·0	4·0	226·5	5·1
Meat (without bone) ... ..	—	230·0	46·0	43·7	43·7	11·5	—	2·7
Chicken ... ..	—	55·5	11·5	11·1	11·1	3·3	—	0·7
<i>Semna</i> ... ..	—	20·0	—	—	—	18·7	—	1·0
Eggs ... ..	3	120·0	15·6	14·9	14·9	12·6	—	1·4
Milk ... ..	—	600·0	25·0	24·0	24·0	47·5	28·5	4·8
Sugar ... ..	—	125·0	—	—	—	—	125·0	—
Potatoes ... ..	—	171·0	3·1	2·74	2·2	0·2	27·2	1·7
Green vegetables or salad ... ..	—	500·0	6·0	5·0	2·5	—	15·0	5·0
Fresh fruit ... ..	—	112·0	0·7	0·6	0·3	0·2	7·6	0·4
<b>TOTAL</b> ... ..	—	2,394·0	140·4	127·0	108·7	98·0	429·8	22·7

\* This diet represents a food allowance given to English sisters in asylums. Its items may be varied at the desire of the recipients provided the cost remains the same. The above was supplied to me as an example of a days' issue and is given as such to show approximately the food value of the rations consumed by this class of official.

Lunacy Division (continued).

COMPONENTS.	Ration per Day	Mean Daily Amount in Grammes.	Gross Protein. Grammes.	Available Protein.	Biological Value of Protein.	Fat.	Available Carbohydrate.	Mineral Matter.
DIET TABLE XXXIII.—DOCTORS AND CLERKS, ETC. (PARTIAL DIET: NOT 24 HOURS ON DUTY).								
Native bread (wheaten) ... ..	—*	(421·0)	28·2	21·0	8·4	4·2	194·0	5·0
European bread (medium quality)...	—	337·0	25·5	20·3	6·7	2·3	168·0	3·4
Meat (without bone)...	—	105·0	19·0	18·0	18·0	6·3	—	2·0
Chicken, pigeon, or rabbit ... ..	—	55·3	23·0	22·0	22·0	4·8	—	1·2
<i>Semna</i> ... ..	—	20·0	—	—	—	18·7	—	—
Eggs ... ..	3	120·0	15·6	14·9	14·9	12·6	—	1·4
Milk ... ..	—	500·0	20·8	20·0	20·0	39·0	24·0	0·4
Sugar ... ..	—	30·0	—	—	—	—	30·0	—
Rice ... ..	—	50·0	3·9	3·3	3·0	0·2	38·0	0·2
Potatoes ... ..	—	75·0	1·4	1·2	0·95	0·07	11·2	0·75
Green vegetables or salad ... ..	—	185·0	2·2	1·8	0·9	—	5·5	1·8
Onions... ..	—	35·0	0·4	3·3	0·17	0·7	1·7	0·2
Fresh fruit ... ..	—	150·0	0·96	0·84	0·4	0·2	13·6	0·5
Salt ... ..	—	5·0	—	—	—	—	—	—
TOTAL ... ..	—	1,715·0	112·6	105·6	87·4	84·9	292·0	16·6

DIET TABLE XXXIV (B).—OFFICIALS, FULL TIME.†

Breakfast, Dinner, and Supper:—

{ Native bread (wheaten), or ... ..	—*	{ 562·0	37·7	28·2	11·2	5·6	267·0	6·7
{ flour ... ..	—	{ 450·0	—	—	—	—	—	—
{ European bread (medium quality)...	—	{ 450·0	33·7	27·0	10·8	3·15	225·0	4·5
Meat (without bone)...	—	185·0	33·3	31·7	31·7	11·2	—	3·5
{ Chicken, or ... ..	1½	{ 55·5	23·0	22·0	22·0	4·8	—	1·2
{ Pigeon... ..	1	{ 57·0	—	—	—	—	—	—
<i>Semna</i> or butter ... ..	—	40·0	—	—	—	37·0	—	—
Eggs ... ..	3	120·0	15·6	14·9	14·9	12·6	—	1·4
Milk ... ..	—	500·0	20·8	20·0	20·0	39·0	24·0	0·4
Sugar ... ..	—	50·0	—	—	—	—	50·0	—
Flour ... ..	—	30·0	3·6	2·9	1·2	0·5	20·5	0·36
Rice ... ..	—	100·0	7·7	6·5	6·0	0·4	76·0	0·4
Potatoes ... ..	—	150·0	2·7	2·4	1·9	0·2	22·5	1·5
Macaroni or other farinaceous foods ...	—	30·0	3·3	2·9	1·2	0·15	22·0	0·24
Green vegetables or salad ... ..	—	300·0	3·6	3·0	1·5	0·6	9·0	0·12
Onions... ..	—	50·0	0·6	0·5	0·2	0·1	2·5	0·3
Fresh fruit ... ..	—	150·0	0·96	0·84	0·4	0·2	13·6	0·5
Chocolate ... ..	—	6·0	0·46	0·36	0·2	1·3	3·7	0·13
TOTAL ... ..	—	2,273·0	149·3	138·0	112·0	111·0	469·0	14·6

DIET TABLE XXXV.—SUBORDINATE EMPLOYEES (PARTIAL DIET: NOT 24 HOURS ON DUTY).

Native bread (wheaten) ... ..	—	281·0	18·8	14·0	5·6	2·8	134·0	3·7
Meat (without bone)...	—	105·0	19·0	18·0	18·0	6·3	—	1·2
<i>Semna</i> ... ..	—	21·0	—	—	—	19·0	—	—
Cheese (local) ... ..	—	50·0	11·0	10·5	10·5	0·8	—	5·0
Rice... ..	—	50·0	3·9	3·6	3·0	0·2	38·0	0·2
Green vegetables or salad ... ..	—	300·0	3·7	3·0	1·5	—	9·0	3·0
Onions... ..	—	50·0	0·6	0·45	0·2	0·9	2·5	0·3
Salt ... ..	—	10·0	—	—	—	—	—	—
TOTAL ... ..	—	857·0	57·0	49·5	38·8	29·7	183·5	13·4

Bracketed articles are alternatives.

\* Alternative not included in estimated total value.

† This diet is for all full time Egyptian asylum officials. It is also the 1st and 2nd class hospital diet. Clerks, store-keepers and *hakimas* receive native bread in place of European, and do not receive chicken or pigeon. The diet for 3rd class European patients is the same without chicken or pigeon. The figure 22 must be deducted from the protein value for these classes.

**Lunacy Division (continued).**

COMPONENTS.	Ration per Day.	Mean Daily Amount in Grammes.	Gross Protein. Grammes.	Available Protein.	Biological Value of Protein.	Fat.	Available Carbohydrate.	Mineral Matter.
<b>DIET TABLE XXXVI (A).— * PATIENTS' ORDINARY DIET.</b>								
<i>Breakfast, Dinner, and Supper :—</i>								
Bread ... ..	—	562·0	37·6	28·0	11·2	5·6	270·0	5·6
Meat (with) bone ... ..	—	150·0	21·0	20·0	20·0	5·2	—	1·3
Vegetables and salad ... ..	—	250·0	3·0	2·5	1·2	—	7·5	3·0
Onions... ..	—	50·0	0·6	0·4	0·2	0·9	2·5	0·5
Rice ... ..	—	50·0	3·8	3·2	3·0	0·2	38·0	0·2
Lentils or beans... ..	—	100·0	27·0	19·0	10·5	2·0	54·0	3·0
Flour ... ..	—	17·0	1·4	1·1	0·5	0·3	11·4	0·2
Wheat... ..	—	21·0	2·5	1·9	0·8	0·35	13·8	0·25
Milk ... ..	—	50·0	2·1	2·0	2·0	4·0	2·4	0·4
Sugar ... ..	—	29·0	—	—	—	—	29·0	—
Treacle ... ..	—	21·0	—	—	—	—	14·0	0·6
Margarine ... ..	—	25·0	—	—	—	25·0	—	—
Oil ... ..	—	20·0	—	—	—	20·0	—	—
Pepper... ..	—	0·25	—	—	—	—	—	—
Salt ... ..	—	18·0	—	—	—	—	—	—
<b>TOTAL</b> ... ..	—	<b>1,345·0</b>	<b>99·0</b>	<b>78·1</b>	<b>49·4</b>	<b>63·5</b>	<b>443·6</b>	<b>13·8</b>

**DIET TABLE XXXVII. PATIENTS' MILK DIET.**

<i>Breakfast, Dinner, and Supper :—</i>								
Bread ... ..	—	421·0	28·2	21·5	8·5	4·2	200·0	5·0
Meat (without bone) for beef tea ... ..	—	70·0	0·7	0·7	0·7	—	—	0·8
Milk ... ..	—	850·0	35·5	34·0	34·0	67·1	40·8	6·8
Sugar ... ..	—	50·0	—	—	—	—	50·0	—
Flour ... ..	—	30·0	3·6	2·9	1·1	0·5	20·2	0·3
Rice ... ..	—	50·0	3·9	3·3	3·0	0·2	37·0	0·2
Salt ... ..	—	5·0	—	—	—	—	—	—
<b>TOTAL</b> ... ..	—	<b>1,471·0</b>	<b>72·0</b>	<b>62·4</b>	<b>47·3</b>	<b>72·0</b>	<b>348·0</b>	<b>13·0</b>

**† FOOD ALLOWANCE (DIRECTOR AND SUB-DIRECTOR).**

European bread (medium quality)... ..	—	500·0						
Chicken ... ..	1	260·0						
Eggs ... ..	8	320·0						
Milk ... ..	—	3,000·0						
Sugar ... ..	—	400·0						
Flour ... ..	—	150·0						
Rice ... ..	—	110·0						
Potatoes ... ..	—	1,000·0						
Macaroni or other farinaceous foods ... ..	—	30·0						
Green vegetables and salad ... ..	—	2,000·0						
Salt ... ..	—	50·0						
<b>TOTAL</b> ... ..	—	<b>7,810·0</b>						

**† FOOD ALLOWANCE (STEWARDS).**

Native bread (wheaten) ... ..	—	1,124·0						
European bread (medium quality)... ..	—	400·0						
Chicken ... ..	1	260·0						
Eggs ... ..	6	240·0						
Milk ... ..	—	1,200·0						
Sugar ... ..	—	250·0						
Green vegetables or salad ... ..	—	1,000·0						
<b>TOTAL</b> ... ..	—	<b>4,474·0</b>						

\* And for attendants. For patients the protein value has recently been raised about 10 grammes by the addition of 45 grammes meat and 50 grammes milk.

† NOTE.—The nutritive value of these two cases is not given; it would amount to 8,500 calories in the first case and 7,000 in the second; it must therefore be assumed that these food allowances are based on the requirements of a family partially supported at Government expense.

# MINISTRY OF WAR.

COMPONENTS.	DIET XXXVIII (A).	DIET XXXIX (A).	DIET XL (A).	DIET XLI.	DIET XLII (A).
	Military Hospitals. Ordinary Diet. Convalescents.	N.C.O.s and Men. Peace Ration.	Officers. Active Service Rations.	N.C.O.s and Men. Active Service Rations.	Military College Cadets.
	65	66	67	68	69
Gross protein ... ..	106·7	107·2	101·3	Same as Peace Ration. With biscuits 624 grammes alternative to Bread.	110·8
Available protein ... ..	81·0	81·3	77·3		90·0
Biological value of protein ... ..	45·8	46·1	44·5		60·4
Fat (gross) ... ..	31·3	31·6	31·1		46·8
Carbohydrate (available) ... ..	492·0	492·0	498·0		526·8
Mineral salts ... ..	14·3	17·0	16·2		16·2
Common salt ... ..	15·5	15·5	15·5		15·5
Total salts ... ..	29·8	32·5	31·7		31·7
Gross calories... ..	2,850·0	* 2,852·0	2,843·0		3,158·0
Available calories ... ..	2,650·0	2,645·0	2,647·0		2,965·0
Animal protein ... ..	12·7	12·7	12·7		31·8
Animal fat ... ..	3·4	3·4	3·4		9·2
Cane or other sugar ... ..	—	—	—		28·7
Total weight, food materials ... ..	1,218·0	1,218·5	1,218·5		1,411·0
Weight dry nutritive components (available)	605·0	605·0	596·4		664·0
Percentage of protein ... ..	13·4	13·5	13·0		13·6
Percentage of fat ... ..	5·1	5·2	5·1		7·0
Percentage of carbohydrate... ..	81·5	81·3	81·9		79·4
Nitrogen (available) ... ..	13·0	13·0	12·8		14·4
Carbon (available)... ..	263·0	263·0	263·0		293·0
N/C ratio ... ..	1/20·0	1/20·0	1/20·2		1/20·3

COMPONENTS.	Mean Daily Amount in Grammes.	Gross Protein Grammes.	Available Protein.	Biological Value of Protein.	Fat.	Available Carbohydrate.	Mineral Matter.

DIET TABLE XXXVIII (A).—MILITARY HOSPITALS. ORDINARY DIET, CONVALESCENTS.

*Breakfast, Dinner, and Supper :—*

Native bread (wheaten) ... ..	—	780·0	52·5	39·0	15·6	7·8	372·0	9·4
Meat (without bone)... ..	—	77·0	13·4	12·7	12·7	3·4	—	0·9
Oil or Army butter ... ..	—	18·5	—	—	—	17·6	—	0·7
Rice ... ..	—	62·5	4·8	4·1	3·6	0·2	47·2	0·2
Lentils... ..	—	62·5	17·2	12·0	6·7	1·2	34·0	1·7
Beans ... ..	—	62·5	16·7	11·7	6·5	1·2	33·6	2·1
Vegetables or salad ... ..	—	140·0	1·9	1·4	0·7	—	4·2	1·4
Onions... ..	—	15·5	0·2	0·14	0·07	0·25	0·78	0·1
Salt ... ..	—	15·6	—	—	—	—	—	—
<b>TOTAL</b> ... ..	—	1,218·5	106·7	81·1	45·8	31·8	491·8	14·3

\* Recent increase of the bread ration has raised the gross calories to 3,192, the available to 2,990.

Ministry of War (continued).

COMPONENTS.		Mean Daily Amount in Grammes.	Gross Protein Grammes.	Available Protein.	Biological Value of Protein.	Fat.	Available Carbohydrate.	Mineral Matter.
DIET TABLE XXXIX (A).—N.C.Os. AND MEN. PEACE RATION.								
<i>Breakfast, Dinner, and Supper :—</i>								
Bread, (wheaten) ... ..	—	780·0	52·5	39·0	15·6	7·8	372·0	9·4
Meat (without bone) ... ..	—	77·0	13·0	12·7	12·7	3·4	—	0·9
Lentils... ..	—	125·0	34·4	24·0	13·4	2·4	68·0	3·4
Rice ... ..	—	62·5	4·3	4·1	3·6	0·2	47·2	0·2
Butter ... ..	—	18·5	—	—	—	17·6	—	0·7
Fresh vegetables ... ..	—	140·0	1·9	1·4	0·7	—	4·2	1·4
Onions... ..	—	15·5	0·2	0·14	0·07	0·25	0·78	0·1
Salt ... ..	—	15·5	—	—	—	—	—	—
TOTAL ... ..	—	1,217·5	107·2	81·3	46·1	31·6	492·2	17·0
Bread. Increase since 1918 ... ..	—	136·0	10·2	7·7	3·1	1·5	72·0	1·5
PRESENT TOTAL ... ..	—	1,353·5	117·4	89·0	49·2	33·1	564·2	18·5

DIET TABLE XL (A).—OFFICERS. ACTIVE SERVICE RATION.

<i>Breakfast, Dinner, and Supper :—</i>								
Bread ... ..	—	780·0	See Peace Ration.					
Lentils... ..	—	93·5	26·1	18·0	10·0	1·8	51·0	2·6
Rice ... ..	—	93·5	7·2	6·1	5·4	0·3	70·0	0·3
Butter ... ..	—	18·5	See Peace Ration.					
Meat (without bone) ... ..	—	77·0						
Fresh vegetables ... ..	—	140·0						
Onions... ..	—	15·5						
Salt ... ..	—	15·5						
TOTAL ... ..	—	1,218·5	101·3	77·3	44·5	31·1	498·0	16·2

DIET TABLE XLII (A).—MILITARY COLLEGE CADETS, (15 TO 20 YEARS).

<i>Breakfast, Dinner, and Supper :—</i>								
Bread ... ..	—	780·0	52·5	39·0	15·6	7·8	372·0	9·4
Meat (without bone) ... ..	—	164·0	32·8	31·2	31·2	8·2	—	1·9
Lentils... ..	—	46·8	12·6	9·5	5·0	0·9	25·5	1·2
Rice ... ..	—	109·2	8·4	7·1	6·6	0·4	86·0	0·4
Butter ... ..	—	31·2	—	—	—	28·2	—	1·2
Vegetables ... ..	—	187·5	2·3	1·9	0·9	—	5·6	1·8
Onions... ..	—	15·5	0·2	0·14	0·07	0·25	0·78	0·1
Macaroni ... ..	—	11·7	1·3	1·1	0·45	0·05	8·2	0·06
Milk ... ..	—	15·5	0·65	0·62	0·62	1·2	0·75	0·1
Sugar ... ..	—	28·0	—	—	—	—	28·0	—
Tea ... ..	—	6·2	—	—	—	—	—	—
Salt ... ..	—	15·5	—	—	—	—	—	—
TOTAL ... ..	—	1,411·2	110·8	90·1	60·4	46·8	526·8	16·2

### QUARANTINE BOARD.

COMPONENTS.	DIET XLIII (A).	DIET XLIV (A).
	Tor Camp Hospital. Ordinary Diet Adults.	Tor Camp Hospital Adults Mixed Diet or Half Milk.
	70	71
Gross protein...	98.4	79.7
Available protein...	77.7	69.3
Biological value of protein...	50.0	56.3
Fat (gross)...	42.5	75.0
Carbohydrate (available)...	433.0	290.0
Mineral salts...	13.2	13.0
Common salt...	20.0	5.0
Total salts...	33.2	18.0
Gross calories...	2,658.0	2,272.0
Available calories...	2,495.0	2,163.0
Animal protein...	22.0	47.3
Animal fat...	9.2	70.5
Cane or other sugar...	32.4	76.0
Total weight, food materials...	1,135.0	1,405.0
Weight dry nutritive components...	553.0	434.1
Percentage of protein...	14.0	16.0
Percentage of fat...	7.7	17.3
Percentage of carbohydrate...	78.3	66.7
Nitrogen (available)...	12.4	11.1
Carbon (available)...	246.0	209.0
N/C ratio...	1/20.0	1/18.8

COMPONENTS.	Mean Daily Amount in Grammes.	Gross Protein. Grammes.	Available Protein.	Biological Value of Protein.	Fat.	Available Carbohydrate.	Mineral Matter.
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DIET TABLE XLIII (A).—TOR CAMP HOSPITAL, ORDINARY DIET, ADULTS.

Native bread (wheaten)...	—	600.0	40.2	30.0	12.0	6.0	285.0	7.2
Meat (without bone)...	—	105.0	21.0	20.0	20.0	5.2	—	1.3
Butter...	—	25.0	—	—	—	25.0	—	—
Milk...	—	50.0	2.1	2.0	2.0	4.0	2.4	0.4
Sugar...	—	30.0	—	—	—	—	30.0	—
Rice...	—	75.0	5.8	4.9	4.5	0.3	57.0	0.3
Lentils, peas, or beans...	—	100.0	27.5	19.3	10.7	2.0	54.4	2.7
Green vegetables or salad...	—	150.0	1.8	1.5	0.7	—	4.5	1.5
Salt...	—	20.0	—	—	—	—	—	—
<b>TOTAL</b> ...	—	1,135.0	98.4	77.7	50.0	42.5	433.0	13.2

DIET TABLE XLIV (A).—TOR CAMP HOSPITAL, ADULTS, MIXED DIET OR HALF MILK.

Native bread (wheaten)...	—	450.0	30.2	22.5	9.0	4.5	214.0	5.4
Meat (beef) (without bone)...	—	70.0	14.0	13.3	13.3	3.5	—	0.8
Milk...	—	850.0	35.5	34.0	34.0	67.1	41.0	6.8
Sugar...	—	35.0	—	—	—	—	35.0	—
Salt...	—	5.0	—	—	—	—	—	—
<b>TOTAL</b> ...	—	1,405.0	79.7	69.8	56.3	75.0	290.0	13.0

# PORTS AND LIGHTHOUSES.

COMPONENTS.	DIET XLV, (A).
	Lighthouse Tender Aida. Men.
	72
Gross protein...	113.0
Available protein ...	86.0
Biological value of protein ...	46.0
Fat (gross) ...	37.2
Carbohydrate (available) ...	542.0
Mineral salts ...	18.0
Common salt ...	15.6
Total salts ...	33.6
Gross calories ...	3,138.0
Available calories ...	2,925.0
Animal protein ...	12.4
Animal fat ...	20.4
Cane or other sugar ...	—
Total weight, food materials ...	1,362.0
Weight dry nutritive components ...	665.0
Percentage of protein ...	12.9
Percentage of fat ...	5.6
Percentage of carbohydrate ...	81.5
Nitrogen (available) ...	13.7
Carbon (available)...	290.0
N/C ratio ...	1/21.2

COMPONENTS.	Mean Daily Amount in Grammes.	Gross Protein. Grammes.	Available Protein.	Biological Value of Protein.	Fat.	Available Carbohydrate.	Mineral Matter.
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DIET TABLE XLV (A).—CREW, LIGHTHOUSE TENDER 'Aida.

Breakfast, Dinner, and Supper:—

( Native bread, or ...	—	936.0	62.7	46.7	18.7	9.3	445.0	11.2
) Biscuits ...	—	624.0	—	—	—	—	—	—
Meat (without bone)...	—	62.0	12.1	11.8	11.8	3.2	—	0.8
Semna ...	—	18.5	—	—	—	17.3	—	0.7
Rice ...	—	31.2	2.4	2.0	1.8	0.1	23.6	0.1
Lentils...	—	62.5	17.2	12.0	6.7	1.2	24.0	1.7
Beans ...	—	62.5	16.7	11.7	6.5	1.2	33.6	2.1
Olives ...	—	31.2	0.3	0.2	0.1	4.9	1.2	1.0
Green vegetables ...	—	156.0	1.8	1.5	0.7	—	4.6	1.5
Salt ...	—	15.6	—	—	—	—	—	—
TOTAL ...	—	1,362.0	113.5	86.0	46.3	37.2	542.0	18.0

Bracketed articles are alternatives.

### FRONTIER DISTRICTS ADMINISTRATION.

COMPONENTS.	DIET XLVI (A).	DIET XLVII *	DIET XLVIII (A).	DIET XLIX.
	Camel Corps.	Camel Corps (New) Scale, January 1918.	Prisoners. 2 Days a Week.	Prisoners. 5 Days a Week.
	73	74	75	76
Gross protein ... ..	109·6	107·0	116·5	110·0
Available protein ... ..	84·0	81·6	85·0	82·0
Biological value of protein ... ..	49·0	38·5	44·7	39·5
Fat (gross) ... ..	33·3	31·0	38·3	51·4
Carbohydrate (available) ... ..	492·0	496·0	593·0	582·0
Mineral salts ... ..	15·9	10·4	12·0	16·0
Common salt ... ..	15·5	15·5	15·5	15·5
Total salts ... ..	31·4	25·9	27·5	31·5
Gross calories ... ..	2,879·0	2,855·0	3,390·0	3,440·0
Available calories ... ..	2,670·0	2,650·0	3,140·0	3,205·0
Animal protein ... ..	15·8	—	—	—
Animal fat ... ..	4·2	—	—	—
Cane or other sugar ... ..	—	—	—	—
Total weight, food materials ... ..	1,224·0	784·0	1,210·0	1,286·0
Weight dry nutritive components ... ..	609·0	609·0	716·0	715·0
Percentage of protein ... ..	13·8	13·4	11·9	11·4
Percentage of fat ... ..	5·5	5·0	5·3	7·1
Percentage of carbohydrate ... ..	80·7	81·6	83·8	81·5
Nitrogen (available) ... ..	13·4	13·1	13·6	13·1
Carbon (available) ... ..	266·0	264·0	311·0	315·0
N/C ratio ... ..	1/20·0	1/20·0	1/22·8	1/24·0

COMPONENTS.	Mean Daily Amount in Grammes.	Gross Protein. Grammes.	Available Protein.	Biological Value of Protein.	Fat.	Available Carbohydrate.	Mineral Matter.
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DIET TABLE XLVI (A).—CAMEL CORPS.

Native bread (wheaten) ... ..	—	780·0	52·5	39·0	15·6	7·8	372·0	9·4
Meat, mutton, beef or fish (without bone) ... ..	—	83·0	16·6	15·8	15·8	4·2	—	1·1
Butter (artificial) ... ..	—	18·5	—	—	—	18·5	—	—
Rice ... ..	—	62·5	4·8	4·1	3·7	0·2	47·2	0·2
\ Lentils ... ..	—	62·5	17·2	12·0	6·7	1·2	34·0	1·7
/ Beans ... ..	—	62·5	16·7	11·7	6·5	1·2	33·6	2·1
Green vegetables ... ..	—	125·0	1·4	1·25	0·6	—	3·7	1·2
Onions ... ..	—	31·2	0·4	0·28	0·14	0·52	1·5	0·2
Salt ... ..	—	15·5	—	—	—	—	—	—
<b>TOTAL</b> ... ..	—	1,224·0	109·6	84·0	49·0	33·3	492·0	15·9

\* NOTE.—Money allowance is given in lieu of meat; the above therefore does not represent the full diet consumed.

Frontier Districts Administration (continued).

COMPONENTS.		Mean Daily Amount in Grammes.	Gross Protein. Grammes.	Available Protein.	Biological Value of Protein.	Fat.	Available Carbohydrate.	Mineral Matter.
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DIET TABLE XLVII.—CAMEL CORPS (NEW SCALE, JUNE 1918).

Breakfast, Dinner, and Supper :—

Semna ... ..	—	18·7	—	—	—	18·7	—	—
Rice ... ..	—	62·5	4·8	4·1	3·7	0·2	47·2	0·2
Lentils... ..	—	125·0	34·4	24·0	13·4	2·4	68·0	3·4
Flour*... ..	—	562·0	67·5	53·5	21·5	9·5	380·0	6·7
Onions... ..	—	15·6	0·2	0·14	0·07	0·26	0·78	0·1
Salt ... ..	—	15·5	—	—	—	—	—	—
TOTAL ... ..	—	784·4	107·0	81·6	38·7	31·0	496·0	10·5

DIET TABLE XLVIII (A).—PRISONERS, ADULT MEN (SATURDAYS AND THURSDAYS).

Breakfast, Dinner, and Supper :—

Bread, or ... ..	—	936·0	62·7	46·7	18·7	9·3	445·0	11·2
Biscuits ... ..	—	750·0	—	—	—	—	—	—
Oil ... ..	—	25·0	—	—	—	25·0	—	—
Rice ... ..	—	62·5	4·8	4·1	3·7	0·2	47·2	0·2
Beans ... ..	—	187·0	49·0	34·2	19·3	3·8	101·0	0·6
Salt ... ..	—	15·5	—	—	—	—	—	—
TOTAL ... ..	—	1210·5	116·5	85·0	41·7	38·3	593·2	12·0

DIET TABLE XLIX.—PRISONERS, ADULT MEN (OTHER FIVE DAYS OF WEEK).

Breakfast, Dinner, and Supper :—

Bread, or ... ..	—	936·0	62·7	46·7	18·7	9·3	445·0	11·2
Biscuits ... ..	—	750·0	—	—	—	—	—	—
Oil ... ..	—	37·5	—	—	—	37·5	—	—
Rice ... ..	—	62·5	4·8	4·1	3·7	0·2	47·2	0·2
Lentils ... ..	—	156·0	41·6	30·2	16·8	3·0	85·0	3·0
Onions... ..	—	94·0	1·2	0·84	0·42	1·5	4·7	0·6
Salt ... ..	—	15·5	—	—	—	—	—	—
TOTAL ... ..	—	1,286·0	110·3	81·8	39·6	51·4	582·0	16·0

Allowance in money given with which meat may be purchased.

\* Flour estimated as best quality.

# MINISTRY OF WAQFS.

COMPONENTS.	DIET L (A).	DIET LI.	DIET LII.			DIET LIII.		
	Hospitals, Ordinary Diet.	Hospitals, Milk Diet.	Tekias, Adults, Mean Daily.	Tekias Adults, Maximum Daily (Tuesdays).	Tekias Adults, Min. Daily (Weds and Fridays).	Tekias, Children, Mean Daily.	Tekias, Children, Maximum (Tuesdays).	Tekias, Child- ren, Minim. (Weds. and Fridays).
	77	78	79	80	81	82	83	84
Gross protein ... ..	83.0	70.3	94.3	103.0	90.6	68.8	76.8	70.0
Available protein ... ..	70.0	60.8	73.5	80.5	69.5	52.0	59.5	53.0
Biological value of protein ... ..	50.2	47.0	41.3	49.4	38.0	27.5	35.0	28.5
Fat (gross) ... ..	85.0	72.2	39.0	42.0	37.5	21.5	26.0	23.5
Carbohydrate (available) ... ..	381.0	294.0	466.0	485.0	433.0	359.0	373.0	343.0
Mineral salts ... ..	21.0	13.6	18.5	20.5	16.0	12.0	14.0	11.7
Common salt ... ..	20.0	—	12.5	12.5	12.5	9.4	9.4	9.4
Total salts ... ..	41.0	13.6	31.0	33.0	28.5	21.4	23.4	21.1
Gross calories ... ..	2,789.0	2,219.0	2,750.0	2,894.0	2,590.0	2,030.0	2,170.0	1,980.0
Available calories ... ..	2,658.0	2,121.0	2,570.0	2,758.0	2,494.0	1,885.0	2,010.0	1,833.0
Animal protein ... ..	34.0	35.0	15.0	22.0	12.5	6.8	13.0	8.2
Animal fat ... ..	48.5	67.5	24.0	31.0	18.0	12.0	18.0	11.0
Cane or other sugar ... ..	49.6	41.0	19.0	27.5	—	11.5	14.0	—
Total weight, food materials ... ..	1,350.0	1,450.0	1,198.0	1,259.0	1,158.0	890.0	939.0	874.0
Weight dry nutritive components ... ..	538.0	427.0	577.4	608.0	560.4	432.5	457.0	420.0
Percentage of protein ... ..	13.0	14.0	12.7	13.2	12.3	12.1	13.1	12.6
Percentage of fat ... ..	16.2	16.9	6.7	6.9	6.7	5.0	5.7	5.6
Percentage of carbohydrate ... ..	70.8	69.1	80.6	79.9	81.0	82.8	81.2	81.8
Nitrogen (available) ... ..	11.2	9.6	11.7	12.8	11.1	8.3	9.5	8.5
Carbon available ... ..	255.0	203.5	254.0	269.5	246.5	187.0	200.0	182.7
N/C ratio ... ..	1/22.7	1/21.2	1/21.7	1/21.0	1/22.2	1/22.5	1/21.0	1/21.5

COMPONENTS	Mean Daily Amount in Grammes.	Gross Protein, Grammes.	Available Protein.	Biological Value of Protein.	Fat.	Available Carbohydrate.	Mineral Salts.

DIET TABLE L (A).—HOSPITALS, ORDINARY DIET.

*Breakfast, Dinner, and Supper :—*

Bread ... ..	—	600.0	40.8	30.0	12.0	6.0	285.0	7.2
Meat (without bone) ... ..	—	70.0	14.0	13.3	13.3	3.5	—	0.9
Rice ... ..	—	50.0	3.8	3.3	3.0	0.2	38.0	0.2
Milk ... ..	—	200.0	8.3	8.0	8.0	15.8	9.6	1.4
<i>Semna</i> ... ..	—	30.0	—	—	—	28.5	—	1.2
Sugar ... ..	—	40.0	—	—	—	—	40.0	—
Oil ... ..	—	30.0	—	—	—	30.0	—	—
Vegetables (fresh) ... ..	—	250.0	3.0	2.5	1.2	—	7.5	2.5
Onions ... ..	—	20.0	0.2	0.2	0.1	0.3	1.0	0.1
Cheese ( <i>haloum</i> ) * ... ..	—	60.0	13.2	12.6	12.6	0.7	—	7.2
Salt ... ..	—	20.0	—	—	—	—	—	—
Pepper ... ..	—	0.3	—	—	—	—	—	—
<b>TOTAL</b> ... ..	—	1,350.0	83.0	70.0	50.2	85.0	381.0	21.0

\* Assumed to be cheap variety (skim milk).

Ministry of Waqfs (continued).

COMPONENTS.		Mean Daily Amount in Grammes.	Gross Protein. Grammes.	Available Protein.	Biological Value of Protein.	Fat.	Available Carbohydrate.	Mineral Matter.
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DIET TABLE LI.—HOSPITALS, MILK DIET.

Breakfast, Dinner, and Supper :—

Bread ... ..	—	450·0	30·0	22·5	9·0	4·5	215·0	5·4
Meat for soup (with bone) ... ..	—	100·0	1·0	1·0	1·0	—	—	1·2
Rice ... ..	—	50·0	3·8	3·3	3·0	0·2	38·0	0·2
Milk ... ..	—	850·0	35·5	34·0	34·0	67·5	41·0	6·8
<b>TOTAL</b> ... ..	—	1,450·0	70·3	60·8	47·0	72·2	294·0	13·6

DIET TABLE LII (A).—TEKIAS, ADULTS.

Mean Daily.

Breakfast, Dinner, and Supper :—

Native bread (wheaten) ... ..	—	780·0	52·5	39·0	15·6	7·8	372·0	9·4
Meat (without bone) ... ..	—	65·5	13·1	12·5	12·5	3·2	—	0·8
Semna or butter ... ..	—	16·8	—	—	—	15·6	—	0·7
Cheese ... ..	—	17·5	2·2	2·1	2·1	2·8	—	1·6
Milk ... ..	—	7·2	0·3	0·29	0·29	0·57	0·34	0·06
Sugar ... ..	—	3·4	—	—	—	—	3·4	—
Rice ... ..	—	34·3	2·65	2·2	2·0	0·1	26·0	0·1
Lentils ... ..	—	78·0	21·5	15·1	8·0	1·6	42·5	2·1
Olives ... ..	—	33·5	0·32	0·22	0·11	6·7	1·7	1·4
Green vegetables or salad ... ..	—	125·0	1·5	1·2	0·6	—	3·7	1·2
Onions ... ..	—	15·6	0·2	0·14	0·07	0·26	0·78	0·1
Treacle ... ..	—	21·8	—	—	—	—	15·2	0·6
Salt ... ..	—	12·5	—	—	—	—	—	—
<b>TOTAL</b> ... ..	—	1,198·0	94·3	73·0	41·3	38·7	465·7	18·0

Maximum (Tuesdays).

Breakfast, Dinner, and Supper :—

Native bread (wheaten) ... ..	—	780·0	52·5	39·0	15·6	7·8	372·0	9·4
Meat (without bone) ... ..	—	65·5	13·1	12·5	12·5	3·2	—	0·8
Semna ... ..	—	15·6	—	—	—	14·6	—	0·6
Cheese ... ..	—	63·0	7·9	7·5	7·5	10·1	—	5·7
Milk ... ..	—	50·0	2·1	2·0	2·0	4·0	2·4	0·4
Sugar ... ..	—	25·0	—	—	—	—	25·0	—
Rice ... ..	—	51·5	4·0	3·2	3·1	0·2	39·0	0·2
Lentils ... ..	—	78·0	21·5	15·1	8·0	1·6	42·5	2·1
Green vegetables or salad ... ..	—	125·0	1·5	1·2	0·6	—	3·7	1·2
Onions ... ..	—	15·6	0·2	0·14	0·07	0·26	0·78	0·1
Salt ... ..	—	12·5	—	—	—	—	—	—
<b>TOTAL</b> ... ..	—	1,259·2	102·8	80·6	49·4	41·8	485·4	20·5

Ministry of Waqfs (continued).

COMPONENTS.		Mean Daily Amount in Grammes.	Gross Protein. Grammes.	Available Protein.	Biological Value of Protein.	Fat.	Available Carbohydrate.	Mineral Matter.
DIET TABLE LII b.—TEKIAS, ADULTS (continued).								
Minimum (Fridays and Wednesdays).								
<i>Breakfast, Dinner, and Supper :—</i>								
Native bread (wheaten) ... ..	—	780·0	52·5	39·0	15·6	7·8	37·2	9·4
Meat (without bone)... ..	—	65·5	13·1	12·5	12·5	3·2	—	0·8
Semna or butter ... ..	—	15·6	—	—	—	14·6	—	0·6
Rice ... ..	—	15·6	1·2	1·0	0·9	—	11·9	—
Lentils... ..	—	78·0	21·5	15·1	8·0	1·6	42·5	2·1
Olives ... ..	—	62·5	0·6	0·4	0·2	10·0	2·5	2·2
Green vegetables or salad ... ..	—	125·0	1·5	1·2	0·6	—	3·7	1·2
Onions... ..	—	15·6	0·2	0·14	0·07	0·26	0·18	0·1
Salt ... ..	—	12·5	—	—	—	—	—	—
TOTAL ... ..	—	1,158·3	90·6	69·3	38·0	37·5	433·4	16·0

DIET TABLE LIII.—TEKIAS, CHILDREN.

Mean Daily.								
<i>Breakfast, Dinner and Supper :—</i>								
Native bread (wheaten) ... ..	—	624·0	42·0	31·2	12·5	6·2	297·0	7·5
Meat (without bone)... ..	—	30·0	6·0	5·7	5·7	1·5	—	0·4
Semna or butter ... ..	—	9·4	—	—	—	8·7	—	0·4
Cheese... ..	—	9·4	1·2	1·1	1·1	1·5	—	0·8
Milk ... ..	—	4·7	0·2	0·2	0·2	0·4	0·2	—
Sugar ... ..	—	1·8	—	—	—	—	1·8	—
Rice ... ..	—	16·8	1·3	1·1	1·0	—	12·8	—
Lentils... ..	—	62·5	17·2	12·0	6·7	1·2	34·0	1·7
Olives or dates ... ..	—	14·1	0·12	0·08	0·04	2·0	0·5	0·4
Green vegetables or salad ... ..	—	78·0	0·9	0·8	0·4	—	2·1	0·8
Onions... ..	—	15·6	0·2	0·14	0·07	0·26	0·78	0·1
Treacle ... ..	—	14·1	—	—	—	—	9·8	—
Salt ... ..	—	9·4	—	—	—	—	—	—
TOTAL ... ..	—	890·4	68·8	52·1	27·7	21·8	359·0	12·0

Maximum (Tuesdays).

<i>Breakfast, Dinner, and Supper :—</i>								
Bread ... ..	—	624·0	42·0	31·2	12·5	6·2	297·0	7·5
Meat ... ..	—	44·0	8·8	8·2	8·2	2·2	—	0·5
Semna ... ..	—	9·4	—	—	—	8·7	—	0·4
Cheese... ..	—	31·2	3·9	3·75	3·75	5·0	—	2·8
Milk ... ..	—	31·2	1·3	1·3	1·3	2·5	1·5	0·25
Sugar ... ..	—	12·5	—	—	—	—	12·5	—
Rice ... ..	—	31·2	2·5	2·2	2·0	0·1	25·0	0·1
Lentils... ..	—	62·5	17·2	12·0	6·7	1·2	34·0	1·7
Onions... ..	—	15·6	0·2	0·14	0·07	0·2	0·78	0·1
Vegetables ... ..	—	78·0	0·9	0·75	0·36	—	2·3	0·3
Salt ... ..	—	9·4	—	—	—	—	—	—
TOTAL ... ..	—	939·6	76·8	59·5	35·0	26·0	373·1	14·0

Ministry of Waqfs (continued).

COMPONENTS.	Ration per Day.	Mean Daily Amount in Grammes.	Gross Protein. Grammes.	Available Protein.	Biological Value of Protein.	Fat.	Available Carbohydrate.	Mineral Matter.
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DIET TABLE LIII.—TEKIAS, CHILDREN (continued).

Minimum (Fridays and Wednesdays).								
<i>Breakfast, Dinner, and Supper:—</i>								
Bread ... ..	—	624·0	42·0	31·2	12·5	6·2	297·0	7·5
Meat ... ..	—	44·0	8·8	8·2	8·2	2·2	—	0·5
Semna ... ..	—	9·4	—	—	—	8·7	—	0·4
Rice ... ..	—	9·4	0·8	0·7	0·65	—	8·0	0·1
Lentils... ..	—	62·5	17·2	12·0	6·7	1·2	34·0	1·7
Olives ... ..	—	31·2	0·3	0·2	0·1	5·0	1·2	1·1
Vegetables ... ..	—	78·0	0·9	0·75	0·36	—	2·3	0·3
Onions... ..	—	15·6	0·2	0·14	0·07	0·2	0·78	0·1
Salt ... ..	—	9·4	—	—	—	—	—	—
TOTAL ... ..	—	874·1	70·2	53·2	28·6	23·5	343·3	11·7

MINISTRY OF JUSTICE.

COMPONENTS.	DIET LIV.		DIET LV.	
	School of Law.		School of Law.	
	Students.	Dinner.	Servants.	Dinner.
	85		86	
Gross protein ... ..	54.2		42.4	
Available protein ... ..	46.0		35.4	
Biological value of protein ... ..	30.0		25.0	
Fat (gross) ... ..	26.2		20.2	
Carbohydrate (available) ... ..	261.0		199.3	
Mineral salts ... ..	9.7		6.0	
Common salt ... ..	8.0		8.0	
Total salts ... ..	17.7		14.0	
Gross calories ... ..	1,589.0		1,219.0	
Available calories ... ..	1,502.0		1,149.0	
Animal protein ... ..	17.3		14.7	
Animal fat ... ..	23.0		16.9	
Cane or other sugar ... ..	39.5		—	
Total weight, food materials ... ..	857.0		583.0	
Weight, dry nutritive components ... ..	333.0		255.0	
Percentage of protein ... ..	13.8		13.9	
Percentage of fat ... ..	7.8		7.9	
Percentage of carbohydrate ... ..	78.4		78.2	
Nitrogen (available) ... ..	7.3		5.7	
Carbon (available) ... ..	148.0		113.5	
N/C ratio ... ..	1/20.2		1/20.0	

COMPONENTS.	Mean Daily Amount in Grammes.	Gross Protein. Grammes.	Available Protein.	Biological Value of Protein.	Fat.	Available Carbohydrate.	Mineral Matter.
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DIET TABLE LIV.—SCHOOL OF LAW, STUDENTS (YOUNG MEN: SEDENTARY).

<i>Dinner :—</i>								
European bread... ..	—	312.0	24.5	18.8	7.2	2.2	156.0	3.1
Meat (without bone) ... ..	—	100.0	18.0	17.1	17.1	6.0	—	1.9
Butter... ..	—	20.0	0.2	0.2	0.2	17.0	0.1	0.6
Sugar ... ..	—	20.0	—	—	—	—	20.0	—
Rice or macaroni ... ..	—	75.0	7.0	6.2	3.7	0.34	56.6	0.4
Green vegetables or salad ... ..	—	300.0	3.6	3.0	1.5	—	9.0	0.3
Dried fruit ... ..	—	30.0	0.9	0.7	0.3	0.75	19.5	0.75
Salt ... ..	—	8.0	—	—	—	—	—	—
TOTAL ... ..	—	857.0	54.2	46.0	30.0	26.2	261.0	9.7

DIET TABLE LV.—SCHOOL OF LAW, SERVANTS (ADULT MEN).

<i>Dinner :—</i>								
Native bread (wheaten) ... ..	—	321.0	21.0	15.6	6.2	3.1	150.0	3.7
Meat (without bone)... ..	—	77.0	15.4	14.7	14.7	3.8	—	0.9
Semna... ..	—	14.0	—	—	—	13.1	—	—
Rice ... ..	—	60.0	4.6	3.9	3.6	0.25	45.7	0.2
Vegetables or salad ... ..	—	120.0	1.9	1.2	0.6	—	3.6	1.2
Salt ... ..	—	8.0	—	—	—	—	—	—
TOTAL ... ..	—	583.0	42.4	35.4	25.0	20.3	199.3	6.0

# MINISTRY OF THE INTERIOR.

COMPONENTS.	DIET LVI (A).		DIET LVII (A).	
	Police School. Cadets. Young Men.		Police School. Servants, Whole Time. Men.	
	87		88	
Gross protein ... ..	154.2		121.0	
Available protein ... ..	128.4		93.0	
Biological value of protein ... ..	85.5		53.0	
Fat (gross) ... ..	102.5		40.0	
Carbohydrate (available) ... ..	629.0		554.0	
Mineral salts ... ..	23.5		19.0	
Common salt ... ..	12.5		12.5	
Total salts ... ..	36.0		31.5	
Gross calories... ..	4,287.0		3,208.0	
Available calories ... ..	4,053.0		3,024.0	
Animal protein ... ..	43.0		17.5	
Animal fat ... ..	85.0		27.8	
Cane or other sugar ... ..	33.5		—	
Total weight, food materials ... ..	1,846.0		1,413.0	
Weight dry nutritive components ... ..	860.0		687.0	
Percentage of protein ... ..	15.0		13.5	
Percentage of fat ... ..	12.0		5.8	
Percentage of carbohydrate ... ..	73.0		80.7	
Nitrogen (available) ... ..	20.4		14.9	
Carbon (available) ... ..	395.0		301.0	
N/C ratio ... ..	1/19.3		1/20.1	

COMPONENTS.	Mean Daily Amount in Grammes.	Gross Protein. Grammes.	Available Protein.	Biological Value of Protein.	Fat.	Available Carbohydrate.	Mineral Matter.
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DIET TABLE LVI (A).—POLICE SCHOOL, CADETS.

Breakfast, Dinner and Supper:—

European bread... ..	—	780.0	58.5	46.8	18.7	5.5	390.0	7.8
Meat (without bone)... ..	—	226.5	39.3	37.4	37.4	9.7	—	2.7
Butter ... ..	—	78.0	0.8	0.8	0.8	66.5	0.4	2.3
Oil ... ..	—	8.7	—	—	—	8.7	—	—
Cheese ... ..	—	31.2	3.9	3.7	3.7	5.0	—	2.8
Milk ... ..	—	47.0	1.9	1.85	1.85	3.7	2.25	0.37
Sugar ... ..	—	31.2	—	—	—	—	31.2	—
Flour ... ..	—	4.3	0.5	0.48	0.16	0.07	2.6	0.05
Rice ... ..	—	125.0	9.7	8.2	7.5	0.5	95.0	0.5
Lentils... ..	—	78.0	21.5	15.1	8.3	1.5	42.5	2.1
Beans ... ..	—	39.0	10.4	7.2	4.0	0.7	21.0	1.3
Macaroni ... ..	—	31.2	3.4	3.0	1.2	0.15	23.5	0.37
Green vegetables ... ..	—	342.0	4.0	3.4	1.7	—	10.0	3.4
Onions ... ..	—	31.2	0.38	0.28	0.14	0.57	1.6	0.2
Salt ... ..	—	12.5	—	—	—	—	—	—
Tea ... ..	—	1.5	—	—	—	—	—	—
<b>TOTAL</b> ... ..	—	1,846.0	154.2	128.4	85.5	102.5	629.0	23.6

Ministry of the Interior (continued).

COMPONENTS.		Mean Daily Amount in Grammes.	Gross Protein. Grammes.	Available Protein.	Biological Value of Protein.	Fat.	Available Carbohydrate.	Mineral Matter.
DIET TABLE LVII (A).—POLICE SCHOOL, SERVANTS (LIGHT LABOUR).								
<i>Breakfast, Dinner, and Supper :—</i>								
Native bread (wheaten) ... ..	—	936·0	62·7	46·7	18·7	9·3	445·0	11·2
Meat (without bone)... ..	—	92·0	18·4	17·5	17·5	4·6	—	1·2
<i>Semna</i> ... ..	—	25·0	—	—	—	23·2	—	1·0
Rice ... ..	—	47·0	3·6	3·0	2·7	0·15	35·5	0·2
Lentils... ..	—	62·5	17·2	12·0	6·9	1·2	34·0	1·7
Beans ... ..	—	62·5	16·7	11·7	6·5	1·2	33·6	2·1
Green vegetables or salad ... ..	—	172·0	2·0	1·7	0·8	—	5·1	1·7
Onions... ..	—	15·6	0·3	0·21	0·1	0·42	1·2	0·1
Salt ... ..	—	12·5	—	—	—	—	—	—
TOTAL .. ..	—	1,413·0	120·0	93·0	53·0	40·0	554·4	19·0

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