File: 598-1

Title: FOOD VALUES

Origin: Cabanatuan Prisoner of War Camp, P. I.

Date:

Authenticity:

Sources: Prepared by: A. J. Hermano, Food Chemist, Bureau of Science.

Extracted by: _____ Date: _____ Microfilmed: _____ Date: _____

SCREENED (NO PAPER)

AMERIC PRISONERS CAMP NUMBER 1
ANATUAN - P.I.

ITAL - GROUP IV

| | | |
|---|---|---|
| TOTAL STRENGTH | | 2402 |
| TABLE I | REGULAR MENU | 298 |
| " II | WORK DETAIL | 130 |
| " III | SICK PRISONERS | 1574 |
| " IV | SERIOUS SICK | 400 |

TABLE I — REGULAR MENU

| NOON | EVENING | MORNING |
|---|---|---|
| RICE<br>CORN BEEF<br>OLEO<br>SALT<br>SUGAR<br>MUNGO BEANS | RICE<br>MEAT<br>MEAT-VEGETABLE<br>OLEO<br>SALT<br>SUGAR<br>CORN STARCH<br>COCOA | RICE<br>OLEO<br>SALT<br>SUGAR |

ITEMS USED IN MENU

| ITEM OF FOOD | GM/MAN | FOOD ANALYSIS | GM/MAN | CAL/GM. |
|---|---|---|---|---|
| RICE | 405. | | | |
| MEAT | 146 | | | |
| CORN BEEF | 73.5 | PROTEIN | 99.7 | 398.8 |
| MEAT-VEGETABLES (CAN) | 64.2 | FAT | 64.8 | 583.2 |
| OLEO | 22.0 | CARBOHYDRATE | 396.6 | 1586.4 |
| SALT | 34.0 | TOTAL CALORIES | | 2568.4 |
| SUGAR | 37.0 | | | |
| CORNSTARCH | 9.0 | | | |
| COCOA | 4.0 | | | |
| MUNGO BEANS | 42.3 | | | |

ADDITIONAL ITEMS FOR WORK DETAIL. STRENGTH 130

TABLE II

| | | |
|---|---|---|
| RICE<br>MEAT<br>CORNSTARCH | RICE<br>MEAT | RICE |

ITEMS USED IN MENU

| | | | | |
|---|---|---|---|---|
| RICE<br>MEAT<br>CORNSTARCH. | 182 | PROTEIN<br>FAT<br>CARBOHYDRATE<br>TOTAL CALORIES | 19.3<br>8.5<br>80.8 | 77.2<br>76.5<br>323.2<br>476.9 |

REMARKS - RECOMMENDATIONS
REMARKS.

SICK PRISONERS — STRENGTH. 1574

TABLE III

| NOON | EVENING | MORNING |
|---|---|---|
| RICE<br>MEAT<br>MEAT-VEGETABLES (CAN)<br>OLEO<br>SALT<br>SUGAR<br>CORN STARCH<br>RAISINS<br>COCOA<br>OKRA<br>TEA | RICE<br>MEAT<br>CORN BEEF<br>MEAT-VEGETABLE<br>OLEO<br>SALT<br>SUGAR<br>CORNSTARCH<br>DRIED FRUIT<br>CHICKEN<br>TEA | RICE<br>CORN BEEF<br>OLEO<br>SALT<br>SUGAR<br>CORN STARCH<br>DRIED FRUIT<br>COCOA<br>TEA |

ITEMS USED IN MENU

| ITEM OF FOOD | GM/MAN | FOOD ANALYSIS | GM/MAN | CAL/GM. |
|---|---|---|---|---|
| RICE | 480.0 | | | |
| MEAT | 149.0 | PROTEIN | 100.4 | 401.6 |
| MEAT-VEGETABLE (CAN) | 47.6 | FAT | 73.6 | 662.2 |
| CORN BEEF | 102.5 | CARBOHYDRATE | 476.1 | 1906.4 |
| OLEO | 22.0 | | | |
| SALT | 29.0 | TOTAL CALORIES | | 2974.2 |
| SUGAR | 69.6 | | | |
| CORN STARCH | 16.5 | | | |
| DRIED FRUITS | 22.0 | | | |
| RAISINS | 10.0 | | | |
| COCOA | 2.9 | | | |
| CHICKENS | 8.8 | | | |
| OKRA | 4.3 | | | |
| TEA | .8 | | | |

SERIOUS SICK. — STRENGTH. 400

TABLE IV

| NOON | EVENING | MORNING |
|---|---|---|
| RICE<br>MEAT<br>MEAT VEGETABLES<br>OLEO<br>SALT<br>SUGAR<br>CORNSTARCH<br>DRIED FRUITS<br>RAISINS<br>COCOA<br>CHICKENS<br>OKRA<br>TEA | RICE<br>MEAT<br>CORN BEEF<br>MEAT - VEGETABLES<br>OLEO<br>SALT<br>SUGAR<br>CORN STARCH<br>DRIED FRUITS<br>CHICKEN<br>TEA | RICE<br>CORN BEEF<br>OLEO<br>SALT<br>SUGAR<br>CORN STARCH<br>DRIED FRUITS<br>COCOA<br>TEA<br>EGGS. |

ITEMS USED IN MENU

| ITEM OF FOOD | GM/MAN | FOOD ANALYSIS | GM/MAN | CAL/GM. |
|---|---|---|---|---|
| RICE | 480.0 | | | |
| MEAT | 149.0 | PROTEIN | 107. | 428.0 |
| MEAT-VEGETABLES | 47.6 | FAT | 81.9 | 737.1 |
| CORN BEEF | 102.5 | CARBOHYDRATES | 476.1 | 1904.4 |
| OLEO | 22.0 | TOTAL CALORIES | | 3069.5 |
| SALT | 29.0 | | | |
| SUGAR | 64.6 | | | |
| CORN STARCH | 16.5 | | | |
| DRIED FRUIT | 22.0 | | | |
| RAISINS | 10.0 | | | |
| COCOA | 2.9 | | | |
| CHICKENS | 8.8 | | | |
| OKRA | 4.9 | | | |
| TEA | .8 | | | |
| EGGS | 44.6 | | | |

ENGINEERS CAMP NUMBER ONE 1-28-

CABANATUAN, P.I.

Total strength - - - 2399
Table I Regular menu
" II Work detail
" III Sick prisoners
" IV Serious sick

## HOSPITAL GROUP IV

### TABLE I

Regular Menu | Strength 297

| NOON | EVENING | MORNING |
|---|---|---|
| RICE | RICE | RICE |
| SUGAR | SUGAR | SUGAR |
| SALT | SALT | SALT |
| PURICO | PURICO | PURICO |
| CORN BEEF | MEAT | |
| GREENS | TOMATOES | |
| | COCOA | |
| | CORN STARCH | |

### ITEMS USED IN MENU:

| ITEM OF FOOD: | GM/MAN |
|---|---|
| RICE | 501.0 |
| MEAT | 137.5 |
| CORN BEEF | 54.5 |
| PURICO | 18.5 |
| SALT | 8.2 |
| SUGAR | 58.9 |
| CORN STARCH | 6.0 |
| COCOA | 9.0 |
| TOMATOES | 139.7 |
| SQUASH. | 123.5 |

FOOD ANALYSIS:

| | GM/MAN | CAL/GM |
|---|---|---|
| PROTEIN | 80.5 | 322. |
| FAT | 49.9 | 449. |
| CARBOHYDRATE | 477.9 | 1910. |
| TOTAL CALORIES | | 2681.0 |

### TABLE II ADDITIONAL ITEMS FOR WORK DETAIL / Strength: 130

| NOON | EVENING | MORNING |
|---|---|---|
| RICE | RICE. | |
| TOMATOES | TOMATOES | |
| SQUASH | SQUASH | |
| CORN STARCH | CORN STARCH | |

### ITEMS USED IN MENU:

| ITEM OF FOOD | GM/MAN |
|---|---|
| RICE | 182 |
| CORN STARCH | 18 |
| TOMATOES | 50 |
| SQUASH. | 40 |

FOOD ANALYSIS

| | | |
|---|---|---|
| - Protein | 13.8 | 55.2 |
| - Fat | 2.8 | 25.2 |
| Carbohydrate | 164.6 | 658.0 |
| Total Calories | | 938.4 |

VITAMIN A
B1
B2
C
D

REMARKS: Recommendation by Surgeon:
Remarks:

TABLE III — SICK PRISONERS — STRENGTH 157

| NOON | EVENING | MORNING |
|---|---|---|
| RICE | RICE | RICE |
| SALT | SALT | SALT |
| SUGAR | SUGAR | SUGAR |
| PURICO | PURICO | PURICO |
| MEAT | MEAT | CORN-BEEF |
| TOMATOES | | CORN STARCH |
| CHICKEN | TOMATOES | TEA |
| SQUASH | CORNSTARCH | COCOA |
| | COCOA | |
| | RAISINS | |
| | CHICKEN | |

ITEMS USED IN MENU:

| ITEM OF FOOD: | GM/MAN |
|---|---|
| RICE | 527.0 |
| MEAT | 201.2 |
| CORNBEEF | 50.3 |
| PURICO | 25.4 |
| SALT | 15.4 |
| SUGAR | 84.6 |
| CORNSTARCH | 80.0 |
| COCOA | 4.9 |
| CHICKENS | 15.3 |
| TOMATOES | 188.0 |
| RAISINS | 3.5 |
| TEA | .6 |
| SQUASH | 276.0 |

| FOOD ANALYSIS: | GM/MAN | CAL/GM |
|---|---|---|
| PROTEIN | 98.8 | 395.2 |
| FAT | 70.5 | 634.5 |
| CARBOHYDRATE | 606.7 | 2426.8 |
| TOTAL CALORIES | | 3446.5 |

TABLE IV: SERIOUS SICK: — STRENGTH 400

| NOON | EVENING | MORNING |
|---|---|---|
| RICE | RICE | RICE |
| MEAT | MEAT | CORN-BEEF |
| PURICO | | PURICO |
| SALT | PURICO | SALT |
| SUGAR | SALT | SUGAR |
| TOMATOES | SUGAR | CORN STARCH |
| CHICKEN | CORNSTARCH | COCOA |
| SQUASH | COCOA | TEA |
| | RAISINS | EGGS. |
| | TOMATOES | |
| | CHICKEN | |



ITEMS USED IN MENU

| ITEM OF FOOD | GM/MAN |
|---|---|
| RICE | 527.0 |
| MEAT | 201.2 |
| CORN-BEEF | 50.3 |
| PURICO | 25.4 |
| SALT | 15.4 |
| SUGAR | 84.6 |
| CORNSTARCH | 80.0 |
| COCOA | 4.9 |
| RAISINS | 3.5 |
| CHICKEN | 15.3 |
| EGGS | 40. |
| TEA | .6 |
| SQUASH | 276.0 |

| FOOD ANALYSIS | GM/MAN | CAL/GM |
|---|---|---|
| PROTEIN | 104.5 | 418.0 |
| FAT | 76.9 | 712.1 |
| CARBOHYDRATE | 606.7 | 2426.8 |
| TOTAL CALORIES | | 3556.9 |

AMERICAN PRISONERS CAMP NUMBER 1.
CABANATUAN - P.I.

TOTAL STRENGTH. 2476
TABLE I REGULAR MENU 296
.. II WORK DETAL 132
.. III SICK PRISONERS 1670
.. IV SERIOUS SICK. 400

...L - GROUP IV.

## REGULAR MENU

...E I

| ...ON | GM/MN | EVENING ITEM | GM | MORNING ITEM | GM |
|---|---|---|---|---|---|
| ...M | 125. | RICE | 125. | RICE | 100.5 |
| | 15. | MEAT | 100.5 | PURICO | 7.7 |
| | 23. | PURICO | 152 | SALT | 4.5 |
| | 30.4 | SALT | 39 | SUGAR | 45.0 |
| ...BEEF | 61.7 | SUGAR | 49.5 | | |
| ...O | 114 | COCOA | 13.5 | | |
| ...TOES | 70 | GOURDS | 114. | | |
| ...T-VEGETABLES | 109.5 | TOMATOES | 70 | | |
| ...SERVED | | OKRA | 18.2 | | |

### ITEMS USED IN MENU

| ...F FOOD | GM/MAN | FOOD ANALYSIS | GM/MAN | CAL/GM | |
|---|---|---|---|---|---|
| ...ICE ← | 350.5 | | | | 559 |
| ...URICO ← | 37.9 | PROTEIN | 71.6 | 286. | |
| ...ALT ← | 57.5 | FAT | 71.0 | 639. | |
| ...UGAR ← | 115.5 | CARBOHYDRATE | 421.5 | 1652. | 1729 |
| ...ORN BEEF ← | 51.7 | | | | 56 |
| ...OURDS ← | 228.0 | | | 2577 | |
| ...OMATO ← | 140.0 | TOTAL CAL. | | | |
| ...EATVEGETA ← | 109.5 | | | | |
| ...OCOA ← | 13.5 | | | | |
| ...KRA ← | 18.2 | | | | |
| ...EAT ← | 100.5 | | | | |

...E II ADDITIONAL ITEMS FOR WORK DETAIL

| ...ON FOOD | GM | EVENING | GM | MORNING | GM |
|---|---|---|---|---|---|
| ...ICE | 459.0 | | | | |
| ...EAT | 29.0 | PROT | | | |
| ...URICO | 14.9 | FATS | | | |
| ...LT | 30.3 | CARBOHYDRATE | | | |
| ...RNSTARCH | 22.3 | | | | |
| ...RN BEEF | 139.5 | TOTAL CAL | | | |
| ...URDS | 478.0 | | | | |
| ...MATOES | 179.5 | | | | |
| ...NGO-BEAN | 123.4 | 4.4 MEAT | | | |
| ...RA | 20.4 | < 8.7 VEG. | | | |
| ...AT-VEG | 13. | | | | |
| ...ED-FRUIT | 55.5 | | | | |
| ...AR | 17. | | | | |
| ...OA | 5.5 | | | | |

### ITEMS USED IN MENU

| ...F FOOD | GM | FOOD ANALYSIS | GM/MAN | CAL/GM |
|---|---|---|---|---|
| ...CE | 139.0 | | | |
| ...EAT | 73.0 | PROTEIN | | |
| ...RNSTARCH | 12.3 | FAT | | |
| ...URDS | 108.0 | CARBOHYDRATE | | |
| ...MATOES | 50.0 | TOTAL CAL. | | |
| ...NGO-BEAN | 25.0 | | | |
| ...RA | 5.0 | | | |

REMARKS - RECOMMENDATIONS BY SURGEON

## SICK PRISONERS

TABLE III — STRENGTH

| NOON ITEM | GM | EVENING ITEM | GM | MORNING ITEM | GM |
|---|---|---|---|---|---|
| 1 RICE | 198.8 | | 221.0 | | 170.0 |
| 2 MEAT | 35.9 | | 158.0 | | 1.7 |
| 5 PURICO | 5.1 | | 7.9 | | 15.5 |
| 6 SALT | 7.1 | | 7.7 | | 7.3 |
| 12 CORNSTARCH | 5.0 | | 20.0 | | 52.5 |
| 9 CORN BEEF | 60.4 | | 21.6 | | |
| 10 GOURDS | 124.0 | | 259.0 | | |
| 9 TOMATOES | 98.0 | | 81.5 | | |
| 8 BEANS-MUNGO | 22.4 | | 105.0 | | |
| 11 OKRA | 13.0 | 4.4 | 7.4 | | 6.9 |
| 4 MEAT VEG | 13. | 8.7 | — | | 60.0 |
| 13 DRIED FRUIT | 48.6 | ITEMS USED IN MENU | 17.1 | | 2.9 |
| 7 SUGAR | | | .6 | | |
| 14 COCOA | | | | | |

| ITEM OF FOOD | GM/MAN | ITEM ANALYSIS | GM/MAN | CAL/GM |
|---|---|---|---|---|
| RICE | 589.8 | | | |
| MEAT | 148.9 | | | |
| PURICO | 14.7 | PROTEIN | 139.7 | 558. |
| SALT | 20.3 | FAT | 84.0 | 756. |
| CORNSTARCH | 22.3 | CARBOHYDRATE | 720.6 | 2882 |
| CORN BEEF | 138.5 | TOTAL CALORIES | | 4196 |
| GOURDS | 278.0 | | | |
| TOMATOES | 179.5 | | | |
| MUNGO-BEAN | 123.4 | | | |
| OKRA | 30.4 | | | |
| MEAT-VEG | 130 | 4.4 / 8.7 | | |
| DRIED FRUIT | 55.5 | | | |
| SUGAR | 77.0 | | | |
| COCOA | 3.5 | | | |

## SERIOUS SICK

TABLE IV — STRENGTH

| NOON | GM/M | EVENING | GM | MORNING | GM/M |
|---|---|---|---|---|---|
| RICE | 359.8 | | | | |
| MEAT | 173.9 | | | | |
| PURICO | | | | | |
| SALT | | | | | |
| CORN STRCH | | | | | |
| CORN BEEF | | | | | |
| GOURDS | | | | | |
| TOMATOES | | | | EGGS | 1.04 |
| MUNGO BEANS | | | | | |
| OKRA | .4 | | | | |
| MEAT-VEG. | | | | | |
| DRIED-FRUIT | | | | | |
| SUGAR | | | | | |
| COCOA | | | | | |

### ITEMS USED IN MENU

| ITEM OF FOOD | GM/MAN | ITEM ANALYSIS | GM/MAN | CAL/GM |
|---|---|---|---|---|
| EGGS | 44 | PROTEIN | .96 | 24 |
| | | FAT | .96 | 54 |
| | | CARBOHYDRATE | — | |
| | | TOTAL CALORIES | | 78 |

AMERICAN PRISONERS CAMP NUMBER 1 — 1-14-43
CABANATUAN - P. I

| | |
|---|---|
| TOTAL STRENGTH | 2399 |
| TABLE I REGULAR MENU | 298 |
| " II WORK DETAIL | 130 |
| " III SICK PRISONERS | 1571 |
| " IV SERIOUS SICK | 400 |

## HOSPITAL - GROUP IV

### TABLE I — REGULAR MENU — STRENGTH 298

| NOON | EVENING | MORNING |
|---|---|---|
| RICE | RICE | RICE |
| MEAT | MEAT | PURICO |
| CORN BEEF | PURICO | SALT |
| PURICO | SALT | SUGAR |
| SALT | SUGAR | DRIED FRUIT |
| CORN STARCH | CORN STARCH | |
| COCOA | CAMOTES | |
| CHICKENS | | |
| TOMATOES | | |
| GREEN BEANS | | |
| CAMOTES | | |
| GREENS | | |

ITEMS USED IN MENU

| ITEM OF FOOD | GM/MAN |
|---|---|
| RICE | 335.0 |
| MEAT | 141.0 |
| CORN BEEF | 54.0 |
| PURICO | 20.2 |
| SALT | 268.3 |
| SUGAR | 5.3 |
| CORN STARCH | 14.1 |
| COCOA | 196.3 (196.3) |
| RAISINS | 45.3 |
| TEA | 37.6 |
| TOMATOES | 60.4 |
| GREENS | 275.0 |
| GREEN BEANS | 107.0 |

| FOOD ANALYSIS | GM/MAN | CAL/GM |
|---|---|---|
| PROTEIN | 87.8 | 351.2 |
| FAT | 55.2 | 496.8 |
| CARBOHYDRATES | 582.0 | 2328.0 |
| TOTAL CALORIES | | 3176.0 |

ADDITIONAL ITEMS FOR WORK DETAIL — STRENGTH 130

### TABLE II

| NOON | EVENING | MORNING |
|---|---|---|
| RICE | RICE | RICE |
| MEAT | MEAT | CORN BEEF |
| CORN BEEF | CORN BEEF | PURICO |
| PURICO | PURICO | SALT |
| SALT | SALT | SUGAR |
| CORN STARCH | SUGAR | COCOA |
| SUGAR | CORN STARCH | TEA |
| CHICKENS | COCOA | |
| TOMATOES | RAISINS | |
| GREEN BEANS | TEA | |
| CAMOTES | TOMATOES | |
| GREENS | GREENS | |

ITEMS USED IN MENU

| ITEM OF FOOD | GM/MAN |
|---|---|
| RICE | |
| MEAT | |
| CORN BEEF | |
| PURICO | |
| SALT | |
| SUGAR | |
| CORN STARCH | |
| RAISINS | |
| COCOA | |
| CHICKENS | |
| CAMOTES | |
| TOMATOES | |
| GREENS | |
| GREEN BEANS | |

| FOOD ANALYSIS | GM/MAN | CAL/GM |
|---|---|---|
| PROTEIN | 308.5 | 1234.0 |
| FAT | 111.0 | 999.0 |
| CARBOHYDRATE | 1105.0 | 4420.0 |
| TOTAL CALORIES | | 6653.0 |

REMARKS - RECOMMENDATION BY SURGEON

REMARKS.

### SICK PRISONERS — TABLE III — STRENGTH

| NOON | EVENING | MORNING |
|---|---|---|
| RICE | RICE | RICE |
| MEAT | MEAT | CORN BEEF |
| CORN BEEF | CORN BEEF | PURICO |
| PURICO | PURICO | SALT |
| SALT | SALT | SUGAR |
| CORN STARCH | SUGAR | COCOA |
| COCOA | CORN STARCH | TEA |
| CHICKENS | COCOA | |
| TOMATOES | RAISINS | |
| GREEN BEANS | TEA | |
| CAMOTES | TOMATOES | |
| GREENS | GREENS | |

ITEMS USED IN MENU

| ITEM OF FOOD | GM/MAN |
|---|---|
| RICE | 335 - 558.0 |
| MEAT | 141 - 224.0 |
| CORN BEEF | 111.0 |
| PURICO | 28.6 |
| SALT | 19.7 |
| SUGAR | 373.5 |
| CORN STARCH | 39.3 |
| RAISINS | 0.03 |
| COCOA | 7.9 |
| CHICKEN | 15.3 |
| CAMOTES | 427.0 |
| TOMATOES | 122.2 |
| GREENS | 421.0 |
| GREEN BEANS | 350.0 |
| TEA | 0.5 |

| FOOD ANALYSIS | GM/MAN | CAL/GM |
|---|---|---|
| PROTEIN | 281.1 | 1124.4 |
| FAT | 99.6 | 896.4 |
| CARBOHYDRATES | 940.0 | 3760.0 |
| TOTAL CALORIES | | 5780.4 |
| | | 3400.0 |

### SERIOUS SICK — TABLE IV — STRENGTH 400

| NOON | EVENING | MORNING |
|---|---|---|
| RICE | RICE | RICE |
| MEAT | MEAT | CORN BEEF |
| CORN BEEF | CORN BEEF | PURICO |
| PURICO | PURICO | SALT |
| SALT | SALT | SUGAR |
| GREEN BEANS | SUGAR | COCOA |
| CORN STARCH | CORN STARCH | TEA |
| RAISINS | COCOA | EGGS |
| COCOA | RAISINS | |
| CHICKENS | TEA | |
| CAMOTES | TOMATOES | |
| TOMATOES | GREENS | |
| GREENS | | |

ITEMS USED IN MENU

| ITEM OF FOOD | GM/MAN |
|---|---|
| RICE | 558.0 |
| MEAT | 224.0 |
| CORN BEEF | 111.0 |
| PURICO | 28.6 |
| SALT | 19.5 |
| SUGAR | 373.5 |
| CORN STARCH | 39.3 |
| RAISINS | 0.03 |
| COCOA | 7.9 |
| CHICKENS | 15.3 |
| CAMOTES | 427.0 |
| TOMATOES | 122.2 |
| GREENS | 421.0 |
| GREEN BEANS | 350.0 |
| TEA | 0.5 |
| EGGS | |

| FOOD ANALYSIS | GM/MAN | CAL/GM |
|---|---|---|
| PROTEIN | 286.8 | 1147.2 |
| FAT | 106.0 | 954.0 |
| CARBOHYDRATES | 940.0 | 3760.0 |
| TOTAL CALORIES | | 5861.2 |

# AMERICAN PRISONER'S CAMP NUMBER ONE:

CABANATUAN, P.I.

Total Strength — 2399
Table I Regular menu
" II Work detail
" III Sick prisoners
" IV Serious sick

AL GROUP IV

LE I: Regular Menu /Strength 299

| NOON | EVENING | MORNING: |
|---|---|---|
| D RICE<br>ROAST<br>ABLE SOUP<br>ATE PUDDING<br>OFFEE<br>D GREENS | STEAMED RICE<br>FRICASSED MEAT<br>COCOA<br>CHOCOLATE CANDY<br>BAKED CAMOTES | LUGAO<br>CORN BEEF<br>COCOA<br>SUGAR<br>TEA |

ITEMS USED IN MENU:

| F FOOD | GM/MAN | FOOD ANALYSIS: | GM/MAN | CAL/GM | |
|---|---|---|---|---|---|
| | 501.0 | PROTEIN | 72.7 | 290.8 | 299 K. Meat |
| | 165.0 | | 69.0 | 621.0 | |
| | 18.1 | FAT | | | |
| & VEG | 35.0 | CARBOHYDRATE | 522.1 | 2088.4 | |
| EEF | 28.4 | | | | |
| | 43.5 | TOTAL CALORIES | | 3000.2 | |
| | 102.6 | | | | |
| | 14.6 | | | | |
| | 1.9 | | | | |
| TARCH | 100.0 | | | | |
| NS | 70.0 | | | | |
| GE | 100.0 | | | | |
| | | | | | |

ADDITIONAL ITEMS FOR WORK DETAIL EACH NIGHT - 138

ITEMS USED IN MENU:

| M OF FOOD | GM/MAN | FOOD ANALYSIS | GM/MAN | CAL/GM. |
|---|---|---|---|---|
| E | 182.0 | PROTEIN | 28.9 | 115.6 |
| T | 70.0 | FAT | 13.8 | 124.2 |
| STARCH | 18.0 | CARBOHYDRATE | 188.4 | 753.6 |
| NS | 50.0 | | | |
| AGE | 10.0 | TOTAL CALORIES | | 993.4 |
| A | 10.0 | | | |
| TES | 30.0 | | | |

REMARKS: Recommendation by Surgeon:

Remarks:



TABLE

| NOON | EVENING | M |
|---|---|---|
| STEAMED RICE<br>MEAT ROAST<br>VEGETABLE SOUP<br>CHOCOLATE PUDDING<br>RICE COFFEE<br>STEAMED GREENS | STEAMED RICE<br>FRICASSED MEAT<br>CHICKEN SOUP<br>COCOA<br>CHOCOLATE CANDY<br>BAKED CAMOTES | LUGAO<br>CORN BEEF<br>COCOA<br>SUGAR<br>TEA |

ITEMS USED IN MENU:

| ITEM OF FOOD | GM/MAN | FOOD ANALYSIS: | GM/MAN | CAL/GM |
|---|---|---|---|---|
| RICE | 501.0 | PROTEIN | 84.1 | 336.4 |
| MEAT | 215.0 | FAT | 76.4 | 687.6 |
| MEAT & VEG. | 18.1 | CARBOHYDRATE | 546.5 | 2186.0 |
| CORN BEEF | 35.0 | | | |
| PURICO | 28.4 | | | |
| SALT | 43.5 | | | 3210.0 |
| SUGAR | 102.6 | TOTAL CALORIES | | |
| CHICKENS | 15.2 | | | |
| CORN STARCH | 44.6 | | | |
| COCOA | 1.9 | | | |
| GREENS | 15.0 | | | |
| CABBAGE | 30.0 | | | |
| PAPAYA | 20.0 | | | |
| CAMOTES | 200.0 | | | |

SERIOUS SICK: STRENGTH 400

TABLE IV

| | |
|---|---|
| MILK | EGGNOG |

ITEMS USED IN MENU:

| ITEM OF FOOD | GM/MAN | FOOD ANALYSIS | GM/MAN | CAL/GM |
|---|---|---|---|---|
| EGG | 41.5 | PROTEIN | 17.2 | 68.8 |
| MILK | 136.8 | FAT | 18.7 | 168.3 |
| | | CARBOHYDRATE | 77.5 | 310.0 |
| | | | | 547.1 |
| | | TOTAL CALORIES | | |

# FOOD VALUES

by

*A. J. HERMANO*
*Food Chemist, Bureau of Science, Manila*

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# FOOD VALUES [1]

By A. J. Hermano
Food Chemist, Bureau of Science, Manila

## INTRODUCTION

A balanced diet, according to our present knowledge of nutrition, should contain sufficient organic nutrients, vitamins, mineral salts, and roughage.

The organic nutrients are of three classes: proteins, fats, and carbohydrates. Each food constituent has its own function to perform: as, for example, fats, carbohydrates, and proteins furnish the heat that is necessary to maintain a constant normal body temperature of 37° C., to furnish strength and energy for walking, talking and other forms of exertion, and for the proper functioning and movement of the various organs. Another use of organic nutrients is to supply building materials to replace the wear and tear on body tissues during infancy, youth and maturity. The essential building material of the animal or human body is protein. Inasmuch as the body cannot build protein from other materials, such as fats and carbohydrates, but only from protein, this latter substance is a very essential food material.

## ESSENTIAL FOOD CONSTITUENTS

The proteins are very complex organic compounds of different compositions and properties. There are several kinds of proteins, and Tables 1 to 10, and Table 12 show their abundance in many animal and vegetable products. Each protein contains a number of different amino acids. There are 18 amino acids that are commonly found in food and body protein. In general, animal proteins are much more like those of the human body than are plant proteins, and some plant proteins seem to entirely lack or contain very little of some of the essential amino acids. Such proteins are very poor material for the manufacture of human proteins. The chief sources of proteins include the lean of all kinds of meat (beef, pork, chicken, etc.), lentils, peas, mungo, soy beans, peanuts, and many other nuts.

Soy beans are exceptional among plants in that they have a very high percentage of protein, 40 percent, and the protein is much more like animal protein than most plant proteins. Soy beans can, therefore, be used in

[1] Received for publication January 19, 1932.

substitution for meat as a source of protein. Soy-bean protein when supplied as 17 per cent of the total diet is sufficient to maintain normal growth without the addition of any other protein. Rice is not only difficient in protein, but such protein as it has is of poor quality. However, a diet consisting of four parts rice and one part soy beans will furnish sufficient protein for health. A milk containing sufficient protein for health can be made from soy beans. This milk can be used in place of cow's milk for infant feeding. For a discussion of the properties of soy beans and methods of preparing them see Bureau of Science Popular Bulletin 13.

Fats and carbohydrates are used not only to produce energy but also to replace tissue. A portion of the protein consumed can also be used for the production of energy. Fats and carbohydrates can replace each other to some extent and similarly protein can replace a limited amount of either.

Fat includes all edible oils and fats, which form a definite group of chemical compounds. Fats and oils exist either in a solid or a liquid state and each has its own characteristic properties. The chief edible oils and fats are lard, meat fat, butter, margarine, coconut oil, peanut oil, olive oil, cottonseed oil, pili-nut oil, and the oil of most other nuts.

The carbohydrates include the sugars, the starches, and similar substances that are converted into simple sugars by the digestive system. Crude fiber or roughage, abundant in most vegetables and many fruits, is an indigestible carbohydrate. Foods that supply carbohydrates abundantly are rice, maize, wheat flour, sugar (refined and centrifugal), candy, honey, starches, camote, camoteng kahoy, potato, gabi, ubi, bananas, etc.

Mineral salts which are found in bones, teeth, and other tissues and which regular some fine adjustments of the human machine, are an important part of the diet. The mineral elements commonly found in the body are calcium, sodium, potassium, magnesium, iron, phosphorus, sulphur, chlorine, iodine, and flourine. The foods that may supply the above elements are table salt, milk, eggs, meat, fish, brains, beans, cereals, drinking water, mineral water, fruits, and most vegetables, especially leafy ones, such as: spinach, pechay, kangkong, cabbage, alugbati, malungay, bread fruit, etc.



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Roughage is generally understood to be the indigestible carbohydrates, mostly cellulose, in foods. It is also called crude fiber and is left unchanged by the digestive juice.

Roughage stimulates the contractions of the muscular wall of the digestive organs and counteracts a tendency to constipation. It also increases the bulk of the faeces and reduces the danger of the accumulation of gases by its absorbing property, and divides the food so that it may be more readily acted upon by the digestive enzymes.

There is comparatively little roughage in concentrated foods such as rice, flour, corn, potatoes, etc. A considerable amount of it is found in most fruits and vegetables, particularly leafy vegetables, such as batao, camansi, habichuelas in pods, sitao, mungo, cabbage, kangkong, paco, alugbati, malungay, pasao, colitis, and camote leaves.

*VITAMINS*

*In addition to the organic nutrients, mineral, and roughage, mentioned above, the human body also requires vitamins. There are eight classes of vitamins and five* of them, called *A, B, C, D, and G, have been clearly* distinguished. *Vitamins* are substances that exert a normalizing influence upon nutrition, growth and maintenance. All are necessary for the normal growth and functioning of the body. The continued absence from the diet of any of them results sooner or later in a definite diseased condition, the symptoms of which enable us to state definitely what vitamin is lacking.

Vitamins are present in various natural foodstuffs *in different concentrations.* A variety of foods containing a sufficient amount of the different classes of vitamins will insure the human body protection from deficiency diseases.

A sufficient amount of vitamin A in the diet is essential for normal growth during infancy and youth, and for maintaining well-being at all ages; it also decreases susceptibility to bacterial infection. Vitamin A is obtainable from liver and body fat (fish, birds, and mammals), egg yolk, milk, cheese, butter, cream, tomatoes, carrots, papaya, avocado, libato, squash, lettuce, spinach, water cress, etc.



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Vitamin B is necessary for normal growth during infancy and youth and for maintaining well-being in adults. Serious deficiency in vitamin B results in the disease known as beriberi. Polished rice is very deficient in vitamin B and so beriberi is a very common disease among people who eat a diet composed largely of polished rice. Vitamin B is soluble in water and is destroyed by alkalies and, therefore, the use of soda in the cooking of green vegetables destroys vitamin B. Vitamin B is obtainable from rice polishings (darak) and its extract, from unpolished rice, yeast, wheat, wheat germ, maize, mungo, peas, lentils, peanuts, egg yolk, liver, heart, brain, kidney, meat, camote leaves, alugbati, sitao, cabbage, okra, lettuce, spianch, tomatoes, pineapples, prunes, oranges, bananas, avocado, etc.

Vitamin C is a water-soluble substance, also called antiscorbutic vitamin. *It is necessary to the normal functioning of the body. It is not unduly sensitive to heat except in the presence of oxygen, or when baking soda is added to the preparation. Cooking vegetables rich in Vitamin C should be carried out in the absence of air, as far as possible, because the vitamin is largely destroyed by oxidation when heated in the presence of oxygen.* Vitamin C is obtainable from oranges, lemons, naranjitas, limes, calamansi, dayap, tomatoes, spinach, alugbati, lettuce, cabbage, green peas, water cress, sprouted mungo (togi), sprouted peas, green onions, etc. The citrus fruits (oranges, lemons, etc.) and tomatoes are particularly valuable sources of vitamin C as they can be eaten raw, with no danger of vitamin loss by oxidation.

Vitamin D, or the anti-ricketic vitamin, is soluble in fat and not in water. Its presence in sufficient quantity in the diet promotes proper assimilation of *calcium and phosphorus* for a normal calcification of the bones and teeth. It prevents the development of rikets. Among natural foods, the oil and liver of cod and other fish, egg yolk, and fish roe are properly the richest sources of vitamin D. Irradiated or activated ergosterol "Radiostol" is a vitamin D preparation. Exposure of the body to sunlight has the same effect as vitamin D in the diet.

Vitamin G is a water-soluble and heat-stable vitamin. It is necessary for normal growth during infancy and youth and for maintaining well-being in maturity. Vitamin G is obtainable from the lean of meat of mammals and fowls,

rice polishings (darak), yeast, wheat germ, fish, cheese, eggs, beans, etc.

Due to the lack of feeding experiments for vitamins in the Philippines, data reported by Sybil L. Smith in Circular No. 84, United States Department of Agriculture, have been included in the tables of this bulletin.

## FOOD REQUIREMENTS

Eating a variety of foods will not always insure us a balanced or complete diet unless we know their nutritional values. Nutritive values of food are determined by both chemical analysis and feeding experiments. The results of these analyses for many common foods are given in Tables 1 to 12.

A balanced diet has already been discussed in the first part of this paper; it should contain organic nutrients (proteins, fats, and carbohydrates), vitamins, mineral salts, and roughage. These questions always arise: What should we have for breakfast, dinner, and supper? How much of each food should we eat?

The questions are very difficult to answer definitely. They involve various factors, such as individual peculiarities, habits, and customs, money to buy varied foods of quality, and availability of the right kinds of food during scarcity or abundance. Taste and digestibility should also be considered.

Energy or fuel value of food is calculated in arbitrary units called calories. According to Rubner, the fuel values of food constituents are as follows:

| | | | |
|---|---|---|---|
| One gram of protein | equals | 4.1 calories | (4) |
| One gram of fats | " | 9.3 " | (9) |
| One gram of carbohydrates | " | 4.1 " | (4) |

The number of calories that a person requires varies with the activity of the individual. It is estimated that an average adult Filipino should eat enough food to furnish 2,500 to 3,000 calories daily.

General opinion seems to agree that protein should supply 15 per cent or more of the daily calories and that 85 per cent may come from fats and carbohydrates. The proportion of the latter two nutrients as sources of energy

is rather arbitrary. If the amount of fat is reduced, the consumption of carbohydrates should be increased.

As an illustration of the calculation of the calorific values of various nutrients we may use a mixture of 530 grams of rice and 132 grams of soy beans, which contains 90 grams of proteins, 34 grams of fat, and 452 grams of carbohydrates. The calculation is given in Table A.

TABLE A.- *Calorific Value of Nutrients*

| *Nature of nutrient.* | *Amount of nutrients in grams.* | | *Calorific value of one gram nutrient* | *Calories in nutrient* |
|---|---|---|---|---|
| *Proteins* | *90* | *X* | *4.1* | *369.* |
| Fats | *34* | *X* | *9.1* | *316.2* |
| Carbohydrates | 452 | X | 4.1 | 1,853.2 |
| Total calories | | | | 2,538.4 |

This calculation shows that a mixture of four parts of rice and one part of soy beans gives a balanced ratio of proteins, fats, and carbohydrates, and that 662 grams of rice and soy-bean mixture will give the daily calories required.

Other illustrations of balanced rations are given in Tables B and C.



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TABLE B. - Energy value of one day's ration.

| Article of food | Amount of foodstuffs eaten per day | Organic nutrients | | | Energy value. |
|---|---|---|---|---|---|
| | | Proteins | Fats | Carbohydrates | |
| | Grams | Grams | Grams | Grams | Calories |
| Tuyo (herring) | 35 | 10.21 | 2.52 | ----- | 65.29 |
| Chicken (edible portion) | 200 | 43.50 | 5.00 | ----- | 228.80 |
| Rice | 700 | 49.35 | 9.80 | 554.12 | 2,565.37 |
| Malungay leaves (fresh) | 200 | 14.60 | 2.20 | 22.08 | 161.24 |
| Bananas | 200 | 2.61 | 1.16 | 49.94 | 226.24 |
| Total | 1,335 | 120.27 | 20.68 | 626.14 | 3,247.54 |

TABLE B. - Energy value of one day's ration.

| Article of food | Amount of food-stuffs eaten per day | Organic nutrients | | | Energy value. |
|---|---|---|---|---|---|
| | | Proteins | Fats | Carbohy-drates | |
| | Grams | Grams | Grams | Grams | Calories |
| Tuyo (herring) | 35 | 10.21 | 2.52 | ----- | 65.29 |
| Sapsap (slipmouth) fresh | 250 | 48.07 | 1.35 | ----- | 210.64 |
| Rice | 700 | 49.35 | 9.80 | 554.12 | 2,565.37 |
| Camote leaves (fresh) | 300 | 5.86 | 0.84 | 25.23 | 135.36 |
| Bananas | 200 | 2.61 | 1.16 | 49.94 | 226.24 |
| Total | 1,485 | 116.12 | 15.67 | 629.29 | 3,203.30 |

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In tables B and C the energy derived from protein is 15.03 and 14.86 per cent respectively. Tables B and C are very low in fat.

How much of each vitamin do we need to eat? There is no definite answer to this question as there are no accurate quantitative methods for determining vitamin content of foods. In the columns of vitamins given in Tables 1 to 10, and Table 12, taken mostly from tables by Sybil L. Smith, United States Department of Agriculture, the following symbols are used.

' indicates that the food contains the vitamin.

'' indicates that the food is a good source of the vitamin

''' indicates that food is an excellent source of the vitamin

\- indicates that the food contains no appreciable amount of the vitamin

--- indicates that the evidence is lacking or appears insufficient.

The analytical data given in Tables 1 to 12 were compiled mostly from the results of analyses in the foods laboratory, Bureau of Science, with the addition of some data from publications as noted in the tables.

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"A SQUARE MEAL"

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Proteins. Fats and Oils. Carbohydrates.

Foods supplying proteins:
Meat, fish, shrimps, beans, lentils, cheese, nuts, peas, fowls, etc.

Foods supplying fats and oils:
Lard, butter, milk, cheese, body fats of mammals, fishes and fowls, fish liver, coconut, peanut, olive, other nuts, etc.

Foods supplying carbohydrates:
Starch, sugar, rice, maize, wheat, potato, camote, candy, honey, gabi, ubi, camoteng cahoy, etc.

MINERAL SALTS

Foods supplying inorganic substances:

Chlorine and sodium in sodium chloride (asin), water, etc.; calcium in milk, lima beans (patani), peas, eggs, repollo, water, etc.; phosphorus in brains, bone marrow, meat, beans, nuts, legumes, etc.; iron in beans, peas, raisins, meat, spinach, alugbati, whole wheat, eggs, water, etc.; magnesium in meat, heart, brain, vegetables, fruits, water.; iodine in salt water foods, fish, shrimps, alimasag, shellfish, water, vegetables and fruits near the sea shore; potassium in cereals, meats, vegetables, etc., sulphur in eggs, liver, meat, mineral water, etc.; fluorine in cereals; copper, silicon, zinc, aluminum, etc.

VITAMINS A, B, C, D, & G

Foods supplying vitamins A and D:

Milk, butter, cheese, egg yolk, fish liver, avocado, carrot, lechuga, spinach, alugbati, squash, pineapple, orange, cod-liver oil, etc.

Foods supplying vitamins B or $B_1$:

Egg yolk, liver, heart, kidney, brain, meat, tikitiki and its extract, unpolished rice, whole wheat, maize, mungo, beans, yeast, camote leaves, alugbati, sitao, banana, papaya, repollo, orange, pineapple, etc.

1/19/43 HOSPITAL WTS. DAILY RATION DIST. Ba

MESS COUNT 1/19/43 = 2394

| ITEM | MESS #1 | | MESS #2 | | MESS #3 | MESS #4 | | MESS #5 | | | OTHER | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | GD | PD | GD | PD | GD | GD | PD | GD | PD | SP | | |
| RICE | 200 | | 200 | | 100 | 250 | | 250 | | | 900.0 | 1600 |
| MEAT | 75.5 | 15 | 68.5 | 11 | 41 | 79.5 | 16 | 75.5 | 15 | | 356.0 | 397 |
| PORICO | 11.33 | | 10.33 | | 6 | 12 | | 11.33 | | | 45.0 | 57 |
| SALT | 7.75 | | 7.75 | | 4.75 | 8.75 | | 7.75 | | | 31.0 | 35.75 |
| SUGAR | 94.75 | | 85.50 | | 51.50 | 99.50 | | 94.75 | | | 374.50 | 479 |
| CORNSTARCH | 64 | | | | | | | | | | 64.0 | 64 |
| CHICKENS | | 4.5 | | 3.5 | | | 4.75 | | 5.5 | | 17.5 | 18.5 |
| MILK | | | | | | | | | | | WELFARE 49 | 49 |
| EGGS | | | | | | | | | | 16 | (COUNT-386) | 16 |
| CANNED | 150 | | 130 | | 59 | 159 | | 152 | | | 591.0 | 650 |
| TOMATOES | 54 | | 42 | | 30 | 60 | | 54 | | | 210.0 | 240 |
| GREENS | 140 | 38 | 136 | 24 | 80 | 148 | 49 | 149 | 47 | | 746.0 | 836 |

QUARTERMASTER SAMPLE WEIGHTS

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RICE | 200 | | 200 | | 100 | 250 | | 250 | | | 900.0 | 1000 |
| MEAT | 75.5 | 15 | 68.5 | 11 | 41 | 79.5 | 16 | 75.5 | 15 | | 356.0 | 397.5 |
| PORICO | 11.33 | | 10.33 | | 6 | 12 | | 11.33 | | | 45.0 | 51 |
| SALT | 7.75 | | 7.75 | | 4.75 | 8.75 | | 7.75 | | | 31.0 | 35.75 |
| SUGAR | 94.75 | | 85.50 | | 51.50 | 99.50 | | 94.75 | | | 373.5 | 465 |
| CORNSTARCH | 64 | | | | | | | | | | 64.0 | 64 |
| CHICKENS | 6 | | 5 | | | 6 | | 7 | | | 24.0 | |
| MILK | | | | | | | | | | | WELFARE 49 | 49 |
| EGGS | | | | | | | | | | 16 | (COUNT-386) | 16 |
| CANNED | 192 | | 167 | | 82 | 203 | | 196 | | | 758.0 | 840 |
| TOMATOES | 58 | | 49 | | 32 | 64 | | 58 | | | 229.0 | 261 |
| GREENS | | | | | | | | | | | 0 | |

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# DAILY RATION DISTRIBUTION

| ITEM | MESS #1 | | MESS #2 | | MESS #3 | MESS #4 | | MESS #5 | | | OTHE | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | GD | PD | GD | PD | GD | GD | PD | GD | PD | SP | | |
| RICE | 200 | | 200 | | 150 | 250 | | 200 | | | | 1000 |
| MEAT | 76 | 15 | 68.50 | 11 | 41.50 | 79 | 16 | 76 | 15 | | | 398 |
| PORCO | 10 | | 9 | | 5.5 | 10.5 | | 10 | | | | 45 |
| SALT | 6.75 | | 5.50 | | 3.75 | 6.50 | | 6.75 | | | | 27.25 |
| SUGAR | 32.50 | | 24.75 | | 17.50 | 33.75 | | 32.50 | | | | 145.50 |
| CORN STARCH | | | | | | 64 | | 64 | | | | 128 |
| CHICKENS | | 5.5 | | 4 | | | 4 | | 4 | | | 17.5 |
| EGGS | | | | | | | | | | 16.6 | (COUNT 398) | 16.6 |
| MILK | | | | | | | | | | | WELFARE 32.7 | 32.7 |
| CORN | 22 | | 20 | | 13 | 24 | | 22 | | | | 101 |
| TOMATOES | 66 | | 63 | | 36 | 69 | | 66 | | | | 300 |
| SQUASH | 63 | 42 | 56 | 29 | 34 | 64 | 45 | 63 | 44 | | | 440 |
| | | | | | | | | | | | | |

## QUARTERMASTER WEIGHTS

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RICE | 200 | | 200 | | 150 | 250 | | 200 | | | | 1000 |
| MEAT | 75 | 15 | 62.50 | 11 | 40.50 | 78 | 16 | 75 | 15 | | | 393 |
| PORCO | 10 | | 9 | | 5.5 | 10.5 | | 10 | | | | 45 |
| SALT | 6.25 | | 5.50 | | 3.75 | 6.50 | | 6.25 | | | | 27.75 |
| SUGAR | 32.50 | | 24.75 | | 17.50 | 33.75 | | 32.50 | | | | 145.50 |
| CORN STARCH | | | | | | 64 | | 64 | | | | 128 |
| CHICKENS | | 7 | | 5 | | | 6 | | 6 | | | 24 |
| EGGS | | | | | | | | | | 16.6 | (COUNT 398) | 16.6 |
| MILK EVAP | | | | | | | | | | | WELFARE 32.7 | 32.7 |
| CORN | 34 | | 30 | | 18 | 35 | | 34 | | | | 151 |
| TOMATOES | 77 | | 69 | | 41 | 80 | | 77 | | | | 344 |
| SQUASH | 68 | 42 | 61 | 29 | 37 | 71 | 45 | 68 | 44 | | | 465 |
| | 1 | 1 | 2 | 2 | 3 | 4 | 4 | 5 | 5 | 5 | | |



CAPT. M.A.C., SUBSISTENCE OFFICER

| | #1 | #4 | #5 | H2O % | ASH % | P % | F % | FIBER % | C | CAL/GM | TOTAL CAL. | A | B+G | C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Rice | 520 | 520 | | 11.24 | .76 | 7.05 | 1.40 | .39 | 79.16 | 3592 | 1869. | - | - | - |
| Meat | ~~121.8~~ | 152.2 | | | | 13.90 | 14.7 | | | 1.980 | 300. | ' | ' | -' |
| Oil | ~~18.7~~ | 17.1 | | .01 | — | — | 99.88 | — | — | 2,030 | 34.9 | - | - | — |
| Sugar (cane) | ~~51.8~~ | 56.8 | | 2.9 | | | | | 97.1 | 3.981 | R25.4 | — | — | — |
| Lard | ~~19.6~~ | 19.8 | | | | | | | | | — | — | — | — |
| M. Beans | ~~47.1~~ | 58.0 | | 14.70 | 3.01 | 20.44 | .93 | 4.36 | 56.56 | 3,250 | 185.5 | ' | " | - |
| C. Mojado | 32.3 | 19.0 | 1400 MEM | ~~12.60~~ | ~~.60~~ | ~~9.10~~ | ~~1.30~~ | ~~.90~~ | ~~78.4~~ 90.0 | 3,650 3720 | 71.3 | | | |
| Milk | | | 975 | 70.31 | 1.72 | 9.35 | 8.80 | — | 9.82 | 1,604 | 156.2 | " | " | - |
| Eggs | | | 37.5 | 68.27 | .85 | 14.41 | 15.98 | — | — | 3076 | 77.6 | " | " | ---- |
| Chicken | | | 14.4 | 63.70 | 1.00 | 19.30 | 16.30 | — | - | 2320 | 33.7 | — | — | — |
| Pechi | ~~33.4~~ | | | ~~72.97~~ | ~~1.26~~ | ~~1.00~~ | ~~.34~~ | ~~.79~~ | ~~3.64~~ | ~~220~~ | — | — | — | — |
| Melons | ~~12.6~~ | 2.9 | | 46.00 | .92 | 3.1 | — | — | — | — | — | | | |
| Greens | ~~90.5~~ 90.5 | 139.0 | | 92.30 | 2.10 | 2.10 | .30 | — | 3.20 | .240 | 33.4 | " | " | " |
| Dandy (Spring) | ~~63.6~~ | 15.8 | | 94.58 | .28 | .63 | .13 | .13 | .25 | .210 | 3.3 | — | — | — |
| St. Beans | ~~6.5~~ | 5.0 | | | | 1.10 | .50 | — | 14.20 | .640 | 9.2 | + | ++ | — |
| Okra | ~~4.6~~ | | | ~~86.11~~ | ~~.71~~ | ~~2.11~~ | ~~.69~~ | ~~2.37~~ | ~~5.45~~ | ~~.347~~ | | — | " | — |
| Tomatoes | ~~104.5~~ | 107.0 | | 94.32 | .62 | .99 | .23 | .64 | 3.20 | .190 | 21.5 | " | " | " |
| Bananas | ~~100.6~~ | 81.2 | | 84.47 | .38 | .82 | .12 | .28 | 13.93 | .620 | 50.5 | — | — | — |
| Tomates | ~~139.7~~ | 139.2 | | 68.87 | 1.00 | .86 | .52 | .88 | 27.87 | 1230 | 171.5 | " | " | " |
| Turnips | ~~16.1~~ | ~~14.2~~ | | | | | | | | | | | | |
| Squash (with guard) | ~~4.3~~ | 9.2 | | 95.90 | .37 | .11 | .46 | .54 | 2.56 | .154 | 1.4 | — | — | — |
| Lg-Plank | ~~60.5~~ | 18.5 | | 90.98 | .54 | 1.07 | .45 | .82 | 6.14 | .337 | 6.2 | -' | ' | — |
| Lg Beans (String Beans) | ~~13.6~~ | ~~15.8~~ | | | | | | | | | | | | |
| Cabbage | ~~8.5~~ | 4.6 | | 91.86 | .79 | 2.03 | .28 | .91 | 4.13 | .279 | 1.2 | ' | " | "' |
| Papaya | ~~1.5~~ | 1.6 | | 88.27 | .88 | .75 | .20 | 1.17 | 8.73 | .410 | 6.5 | " | ' | "' |
| | ~~6.483~~ | 423.0 | | | | | | | | | 2982.3 | | | |
| | | | | | | | | | | | 267.5 | | | |
| Bananas | | | | 71.72 | .95 | 1.31 | .58 | .47 | 24.97 | 1,130 | | | | |
| 1 | | | | | | | | | | | 2714.8 | | | |

3/21/43

# Hospital Daily Ration Report

Bango

| | M-1 | | M-2 | | M-3 | M-4 | | M-5 | | | Day | Week | Month | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | GD | PD | GD | PD | GD | GD | PD | GD | PD | SP | | | | |
| Rice | 250 | | 212.50 | | 162.50 | 237.50 | | 337.50 | | | ✓ | | | 507. |
| Meat | 74.10 | 11 | 65.10 | 8 | 49.60 | 73.10 | 11 | 100.10 | 15 | | ✓ | | | |
| Oil | 8 | | 7 | | 6 | 8 | | 11 | | | ✓ | | | |
| Sugar | 21.25 | | 19 | | 14.75 | 21.5 | | 29.5 | | | ✓ | | | |
| Salt | 6.75 | | 6.25 | | 4.75 | 7 | | 9.25 | | | ✓ | | | |
| Tea | .48 | | .42 | | .33 | 48 | | 66 | | | ✓ | | | |
| M Beans | 25 | | 22 | | 17 | 30 | | 40 | | | ✓ | | | |
| Dried Eggs | 3 | | 3 | | 2 | 3 | | 4 | | | ✓ | | | |
| Greens | 40 | | 36 | | 28 | 40 | | 56 | | | ✓ | | | |
| Tomatoes | 6 | | 6 | | 5 | 6 | | 9 | | | ✓ | | | |
| C-Starch | | | 64 | | | | | 64 | | | ✓ | | | |
| Chicken Eggs | | | | | | | | | | 15 | ✓ | | | E o S P. 20 Cans additional — 116 total |
| Milk | | | | | | | | | | 47. | ✓ | | | |
| Chickens | 6 | | 4 | | | 6 | | 8 | | | ✓ | | | |

3/21
485
418
327
481
663

2374
727
total
1647

1200
447
407
40
106
34
2.37
142
15
200
32
128
15
47.
24.



Capt Mess
Subsistence

201-McPhee, John Henry
Enl-AG-p

1st Ind.

HEADQUARTERS PHILIPPINE DEPARTMENT, Manila, P. I., November 21, 1941.
To: CG, Fort William McKinley, P. I.

For reply direct to writer.

By command of Lieutenant General MacARTHUR:

H. F. BISHOP,
1st Lieut. A. G. D.,
Asst. Adjutant General.





201-McPhee, John Henry
Enl-AG-vg

2nd Ind.

Hq Ft Wm McKinley, PI, November 24, 1941. To: Surgeon, Sta. Hosp.



E. S. T.

3/7/43

# Hospital Daily Ration Report

Bango Caruso

| | Mess 1 | | Mess 2 | | Mess 3 | Mess 4 | | Mess 5 | | | Day | Week | Month | Remarks | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | GD | PD | GD | PD | GD | GD | PD | GD | PD | SP | | | | | | |
| Rice | 237.5 | | 225 | | 175 | 262.25 | | 350 | | | ✓ | | | 528 | 1252 2092 | 2347 752 Total |
| Meat | 52.25 | | 52.25 | | 39 | 58.25 | | 79.25 | | | ✓ | | | 843 | 281 808 | 16.15 |
| Sid | 8 | | 8 | | 6 | 8 | | 11 | | | ✓ | | | 17.6 | 41 | |
| Bacon | 21.5 | | 21. | | 16 | 23.5 | | 31 | | | ✓ | | | 71.2 | 113 | |
| Salt | 7.5 | | 7 | | 6. | 8. | | 10.5 | | | ✓ | | | 21.8 | 37 | |
| Sea. | .43 | | .44 | | .33 | .49 | | .65 | | | ✓ | | | 1.0 | 2.34 | |
| M Beans | 27 | | 27 | | 20 | 30 | | 40 | | | ✓ | | | 60.7 | 144 | |
| Eggs | | | | | | | | | | 15 | ✓ | | | 37.5 | 15 | |
| Chickens | 11 | 11 | | 9 | | | 12 | | 16 | | 2 | | | 14.8 | 34 48 | |
| Milk | | | | | | | | | | 39 | ✓ | | | 97.5 | 39 | |

2-day Evap

| 6 | 7 | 8 |
|---|---|---|
| 450 | 437 | 436 |
| 447 | 460 | 439 |
| 334 | 330 | 330 |
| 497 | 488 | 495 |
| 645 | 657 | 654 |



Lt Col Thos
Capt. M.A.C.
Subsistence

201-Brock, Clyde I. (Enl) 2nd Ind JWD/mgr

HEADQUARTERS STERNBERG GENERAL HOSPITAL, Manila, P. I., March 12, 1941.
To: The Surgeon, Philippine Department, Manila, P. I.

Approved.

For the Commanding Officer:

James W Duckworth
JAMES W. DUCKWORTH,
Lt Colonel, Medical Corps,
Adjutant.

Rec'd Dept. Surg. Off., HPD. MAR 13 1941

220.22 3rd Ind. HCH/pek.

HQ PHILIPPINE DEPARTMENT, Office of the Surgeon, Manila, P. I., March 13, 1941. - To: The Commanding Officer, Sternberg GH, Manila, P. I.

Approved.

For the Surgeon:

Harry C. Hoffmeyer
HARRY C. HOFFMEYER,
Captain, Med Adm C,
Assistant.

HOSPITAL

1/18/43 HOSPITAL WEIGHT.
DAILY RATION DISTRIBUTION. BANGO COUNT 1/17/43 = 2402

| ITEM | MESS #1 | | MESS #2 | | MESS #3 | MESS #4 | | MESS #5 | | OTHER | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|
| RICE | 200 | | 100 | | 50 | 150 | | 250 | | | 750 |
| MEAT | 80.5 | 15 | 73 | 11 | 44 | 86 | 16 | 81.5 | 15 | | 422 |
| PURICO | 10 | | 9 | | 5.5 | 10.4 | | 10.1 | | | 45 |
| SALT | 10 | | 9 | | 5.5 | 10.95 | | 10.25 | | | 45.5 |
| SUGAR | 30.25 | | 27.50 | | 16.50 | 32.50 | | 30.50 | | | 137.25 |
| CORN STARCH | | | 64 | | 64 | | | | | | 128. |
| STRING BEANS | 1.5 | | 1.5 | | 1 | 1.5 | | 1.5 | | | 7 |
| CHICKENS | 4.5 ✓ | | | 3.5 | | | 5.5 | | 5 | | 18 |
| EGGS | | | | | | | | | | 16.6 | 16.6 |
| MILK | | | | | | | | | | WELFARE | 32.7 |

Roy Alton
CAPT., M.A.C., SUBSISTENCE Officer

QUARTERMASTER

| ITEM | 1/18/43 MESS #1 | | Q.M. WEIGHT MESS #2 | | HOSPITAL DAILY RATION DISTRIBUTION MESS #3 | MESS #4 | | MESS #5 | | OTHER | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|
| RICE | 200 | | 100 | | 50 | 150 | | 250 | | | 750 |
| MEAT | 79.5 | 15 | 72 | 11 | 43 | 85 | 16 | 80 | 15 | | 417 |
| PURICO | 10 | | 9 | | 5.5 | 10.4 | | 12.1 | | | 45 |
| SALT | 10 | | 9 | | 5.5 | 10.75 | | 10.25 | | No Weights Given by Q.M. | 45.5 |
| SUGAR | 30.25 | | 27.50 | | 16.50 | 32.50 | | 30.50 | | | 137.5 |
| CORN STARCH | | | 64 | | 64 | | | | | | 128 |
| STRING BEANS | 1.5 | | 1.5 | | 1 | 1.5 | | 1.5 | | (No Wt. Given) | 7 |
| CHICKENS | 6.6 ✓ | | | 5 | | | 7.7 | | | 6.6 | 25.9 |
| EGGS | | | | | | | | | | 16.6 (No Wt. Given) | 16.6 |
| MILK | | | | | | | | | | WELFARE | 32.7 |



5 5
50 140

Roy Alton

カバナツアン俘虜収容所
THE CONCENTRATION CAMP AT CABANATUAN

# 俘虜身分調書
# PRISONER'S IDENTIFICATION CARD

| | | |
|---|---|---|
| 1 | 姓名<br>Name | 年齢<br>Age |
| | TURNER, Cooper Ross | |
| 2 | 所属別<br>Name of Organization | |
| | United States Army. | |
| | 階級<br>(a) Present Rank | |
| | STAFF SERGEANT. | |
| 3 | 所属部隊名<br>Name of Division | |
| | 20th Pursuit Squadron AIR Corps. | |
| 4 | 應役當時現役ナリシヤ又ハ豫備役ナリシヤ<br>Reserve or active when called to the colors | |
| | Active. | |
| 5 | 應役種別<br>Kind of call | |
| | Regular | |
| 6 | 俘虜トナリタル地名<br>Place where captured | |
| | Bataan | |
| 7 | 特技<br>Specialized work | |
| | Airplane Mechanic | |
| 8 | 家族現住所<br>Address of family | |
| | Hamlin, New York, United States | |
| 9 | 摘要<br>Remarks | |
| | Married. No children. Permanent Home Address - Same as above. | |
| 10. | Date of entering Service - January 29, 1941 | |
| 11. | State of Present Health - Poor | |
| 12. | Relatives - Father (2) Sisters (2) Brothers | |
| 13. | Education - 8 yrs. High School, 6 mo. Technical School | |
| 14. | Remarks - None | |

DECLASSIFIED
Authority NND 883078

April 6, 1943

Dear Peg, Judy, Mother, Dad and Grandparents,

We are just about to make a trip from the Prison Camp here in Cabanatuan P. I. to ?----- but we think it is Japan from what we can gather. The rumors have it that we will go to Shikuku 20 miles south of Kobe or Manchuko.

Up to this point I have been darn fortunate because most of the time with the exception of only two weeks in August of 1942 (where I had "Yellow Jonga") my health has been perfect and I haven't undergone any bad treatment. I have felt good and hope things will continue as they have and we will be home soon.

Colonel Warner, Peg, who I am giving this letter to, was my Regimental Commander during the war and had been with me up to this date. He was just like a father to me and I mean he is really a swell person to know. He has helped me in many ways and was darn swell to me.

There are 1000 men leaving on this detail 25 Majors and Lt. Colonels, (Including Major Chandler 26th Cavalry who we knew at Stotsenburg, Peg) 200 Captains and Lts, 775 Enlisted Men. There have been many rumors as to where we are going but from what news we can obtain from our American Hdqts, Japanese Hdqts and the Japanese themselves we are definitely going to Japan. Some say Manchucho some say Korea and others say Formosa. One of the larger Prison camps is on the Island of Shokuku (Zentugi) which is 20 miles south of Kobe, which we in turn may land.

We have had some pretty interesting experiences which I will write or tell you about at the earliest possible time. The first part of these camps has been a nightmare to most of us but ever since Xmas of 1942 things have been darn good in comparison of what they could have been. In the first part of the camp I was fortunate enough to be able to Chaffeur a Japanese Military Police Captain(in charge of the Military Police in the Northern Luzon Sector) who treated me darn swell. It was just prior to this time that I had "Yellow Jonga" and this trip really put me back on my feet.

Colonel Warner who is remaining here will write all of you a lette if he gets the chance before I do giving you information about me prior to this time. I have left with him my Pay Table up to this time, my Insurance Data and all my personal belongings (hat) that I had here in

the islands which he can help you with if necessary.

General McArthurs Headquarters cited me for a Distinguished Service Cross, for the "Tuquegarao Airport raid" which I planned and participated in. Also Colonel Warner cited me for a Distinguished Service Medal for my activity in Nothern Luzon.

I'm not going to put any particulars in this letter because at a later date I can give you those or Colonel Warner will.

I have been thinking of all of you consistanly and I plan on being with you just as soon as possible. I am darn anxious to see Judy and I hope the good Lord will allow me to at the earliest possible date.

Colonel Warner will have this and if it is at all possible he will notify you I know.

All my love

Warren

P.S. Don't worry I'll be home.

*CERTIFIED TRUE COPY:*

A. G. RASMUSSON
1st Lt. AGD





Written by CAPT WARREN A. MINTON, O-36225

substitution for meat as a source of protein. Soy-bean protein when supplied as 17 per cent of the total diet is sufficient to maintain normal growth without the addition of any other protein. Rice is not only difficient in protein, but such protein as it has is of poor quality. However, a diet consisting of four parts rice and one part soy beans will furnish sufficient protein for health. A milk containing sufficient protein for health can be made from soy beans. This milk can be used in place of cow's milk for infant feeding. For a discussion of the properties of soy beans and methods of preparing them see Bureau of Science Popular Bulletin 13.

Fats and carbohydrates are used not only to produce energy but also to replace tissue. A portion of the protein consumed can also be used for the production of energy. Fats and carbohydrates can replace each other to some extent and similarly protein can replace a limited amount of either.

Fat includes all edible oils and fats, which form a definite group of chemical compounds. Fats and oils exist either in a solid or a liquid state and each has its own characteristic properties. The chief edible oils and fats are lard, meat fat, butter, margarine, coconut oil, peanut oil, olive oil, cottonseed oil, pili-nut oil, and the oil of most other nuts.

The carbohydrates include the sugars, the starches, and similar substances that are converted into simple sugars by the digestive system. Crude fiber or roughage, abundant in most vegetables and many fruits, is an indigestible carbohydrate. Foods that supply carbohydrates abundantly are rice, maize, wheat flour, sugar (refined and centrifugal), candy, honey, starches, camote, camoteng kahoy, potato, gabi, ubi, bananas, etc.

Mineral salts which are found in bones, teeth, and other tissues and which regular some fine adjustments of the human machine, are an important part of the diet. The mineral elements commonly found in the body are calcium, sodium, potassium, magnesium, iron, phosphorus, sulphur, chlorine, iodine, and flourine. The foods that may supply the above elements are table salt, milk, eggs, meat, fish, brains, beans, cereals, drinking water, mineral water, fruits, and most vegetables, especially leafy ones, such as: spinach, pechay, kangkong, cabbage, alugbati, malungay, bread fruit, etc.



0 - 9 30

Roughage is generally understood to be the indigestible carbohydrates, mostly cellulose, in foods. It is also called crude fiber and is left unchanged by the digestive juice.

Roughage stimulates the contractions of the muscular wall of the digestive organs and counteracts a tendency to constipation. It also increases the bulk of the faeces and reduces the danger of the accumulation of gases by its absorbing property, and divides the food so that it may be more readily acted upon by the digestive enzymes.

There is comparatively little roughage in concentrated foods such as rice, flour, corn, potatoes, etc. A considerable amount of it is found in most fruits and vegetables, particularly leafy vegetables, such as batao, camansi, habichuelas in pods, sitao, mungo, cabbage, kangkong, paco, alugbati, malungay, pasao, colitis, and camote leaves.

## VITAMINS

In addition to the organic nutrients, mineral, and roughage, mentioned above, the human body also requires vitamins. There are eight classes of vitamins and five of them, called A, B, C, D, and G, have been clearly distinguished. Vitamins are substances that exert a normalizing influence upon nutrition, growth and maintenance. All are necessary for the normal growth and functioning of the body. The continued absence from the diet of any of them results sooner or later in a definite diseased condition, the symptoms of which enable us to state definitely what vitamin is lacking.

Vitamins are present in various natural foodstuffs in different concentrations. A variety of foods containing a sufficient amount of the different classes of vitamins will insure the human body protection from deficiency diseases.

A sufficient amount of vitamin A in the diet is essential for normal growth during infancy and youth, and for maintaining well-being at all ages; it also decreases susceptibility to bacterial infection. Vitamin A is obtainable from liver and body fat (fish, birds, and mammals), egg yolk, milk, cheese, butter, cream, tomatoes, carrots, papaya, avocado, libato, squash, lettuce, spinach, water cress, etc.



W 3 1 E

Vitamin B is necessary for normal growth during infancy and youth and for maintaining well-being in adults. Serious deficiency in vitamin B results in the disease known as beriberi. Polished rice is very deficient in vitamin B and so beriberi is a very common disease among people who eat a diet composed largely of polished rice. Vitamin B is soluble in water and is destroyed by alkalies and, therefore, the use of soda in the cooking of green vegetables destroys vitamin B. Vitamin B is obtainable from rice polishings (darak) and its extract, from unpolished rice, yeast, wheat, wheat germ, maize, mungo, peas, lentils, peanuts, egg yolk, liver, heart, brain, kidney, meat, camote leaves, alugbati, sitao, cabbage, okra, lettuce, spianch, tomatoes, pineapples, prunes, oranges, bananas, avocado, etc.

Vitamin C is a water-soluble substance, also called antiscorbutic vitamin. It is necessary to the normal functioning of the body. It is not unduly sensitive to heat except in the presence of oxygen, or when baking soda is added to the preparation. Cooking vegetables rich in Vitamin C should be carried out in the absence of air, as far as possible, because the vitamin is largely destroyed by oxidation when heated in the presence of oxygen. Vitamin C is obtainable from oranges, lemons, naranjitas, limes, calamansi, dayap, tomatoes, spinach, alugbati, lettuce, cabbage, green peas, water cress, sprouted mungo (togi), sprouted peas, green onions, etc. The citrus fruits (oranges, lemons, etc.) and tomatoes are particula valuable sources of vitamin C as they can be eaten raw, with no danger of vitamin loss by oxidation.

Vitamin D, or the anti-ricketic vitamin, is soluble in fat and not in water. Its presence in sufficient quantity in the diet promotes proper assimilation of calcium and phosphorus for a normal calcification of the bones and teeth. It prevents the development of rikets. Among natural foods, the oil and liver of cod and other fish, egg yolk, and fish roe are properly the richest sources of vitamin D. Irradiated or activated ergosterol "Radiostol" is a vitamin D preparation. Exposure of the body to sunlight has the same effect as vitamin D in the diet.

Vitamin G is a water-soluble and heat-stable vitamin. It is necessary for normal growth during infancy and youth and for maintaining well-being in maturity. Vitamin G is obtainable from the lean of meat of mammals and fowls,

rice polishings (darak), yeast, wheat germ, fish, cheese, eggs, beans, etc.

Due to the lack of feeding experiments for vitamins in the Philippines, data reported by Sybil L. Smith in Circular No. 84, United States Department of Agriculture, have been included in the tables of this bulletin.

## FOOD REQUIREMENTS

Eating a variety of foods will not always insure us a balanced or complete diet unless we know their nutritional values. Nutritive values of food are determined by both chemical analysis and feeding experiments. The results of these analyses for many common foods are given in Tables 1 to 12.

A balanced diet has already been discussed in the first part of this paper; it should contain organic nutrients (proteins, fats, and carbohydrates), vitamins, mineral salts, and roughage. These questions always arise: What should we have for breakfast, dinner, and supper? How much of each food should we eat?

The questions are very difficult to answer definitely. They involve various factors, such as individual peculiarities, habits, and customs, money to buy varied foods of quality, and availability of the right kinds of food during scarcity or abundance. Taste and digestibility should also be considered.

Energy or fuel value of food is calculated in arbitrary units called calories. According to Rubner, the fuel values of food constituents are as follows:

| | | | |
|---|---|---|---|
| One gram of protein | equals | 4.1 | calories |
| One gram of fats | " | 9.3 | " |
| One gram of carbohydrates | " | 4.1 | " |

The number of calories that a person requires varies with the activity of the individual. It is estimated that an average adult Filipino should eat enough food to furnish 2,500 to 3,000 calories daily.

General opinion seems to agree that protein should supply 15 per cent or more of the daily calories and that 85 per cent may come from fats and carbohydrates. The proportion of the latter two nutrients as sources of energy

is rather arbitrary. If the amount of fat is reduced, the consumption of carbohydrates should be increased.

As an illustration of the calculation of the calorific values of various nutrients we may use a mixture of 530 grams of rice and 132 grams of soy beans, which contains 90 grams of proteins, 34 grams of fat, and 452 grams of carbohydrates. The calculation is given in Table A.

TABLE A.- Calorific Value of Nutrients

| Nature of nutrient. | Amount of nutrients in grams. | | Calorific value of one gram nutrient | Calories in nutrient |
|---|---|---|---|---|
| Proteins | 90 | X | 4.1 | 369. |
| Fats | 34 | X | 9.1 | 316.2 |
| Carbohydrates | 452 | X | 4.1 | 1,853.2 |
| Total calories | | | | 2,538.4 |

This calculation shows that a mixture of four parts of rice and one part of soy beans gives a balanced ratio of proteins, fats, and carbohydrates, and that 662 grams of rice and soy-bean mixture will give the daily calories required.

Other illustrations of balanced rations are given in Tables B and C.

TABLE B. - Energy value of one day's ration.

| Article of food | Amount of food-stuffs eaten per day | Organic nutrients | | | Energy value. |
|---|---|---|---|---|---|
| | | Proteins | Fats | Carbohydrates | |
| | Grams | Grams | Grams | Grams | Calories |
| Tuyo (herring) | 35 | 10.21 | 2.52 | ----- | 65.29 |
| Chicken (edible portion) | 200 | 43.50 | 5.00 | ----- | 228.80 |
| Rice | 700 | 49.35 | 9.80 | 554.12 | 2,565.37 |
| Malungay leaves (fresh) | 200 | 14.60 | 2.20 | 22.08 | 161.24 |
| Bananas | 200 | 2.61 | 1.16 | 49.94 | 226.24 |
| Total | 1,335 | 120.27 | 20.68 | 626.14 | 3,247.54 |

TABLE B. - Energy value of one day's ration.

| Article of food | Amount of food-stuffs eaten per day | Organic nutrients | | | Energy value. |
|---|---|---|---|---|---|
| | | Proteins | Fats | Carbohydrates | |
| | Grams | Grams | Grams | Grams | Calories |
| Tuyo (herring) | 35 | 10.21 | 2.52 | ----- | 65.29 |
| Sapsap (slipmouth) fresh | 250 | 48.07 | 1.35 | ----- | 210.64 |
| Rice | 700 | 49.35 | 9.80 | 554.12 | 2,565.37 |
| Camote leaves (fresh) | 300 | 5.88 | 0.84 | 25.23 | 135.36 |
| Bananas | 200 | 2.61 | 1.16 | 49.94 | 226.24 |
| Total | 1,485 | 116.12 | 15.67 | 629.29 | 3,203.30 |

In tables B and C the energy derived from protein is 15.03 and 14.86 per cent respectively. Tables B and C are very low in fat.

How much of each vitamin do we need to eat? There is no definite answer to this question as there are no accurate quantitative methods for determining vitamin content of foods. In the columns of vitamins given in Tables 1 to 10, and Table 12, taken mostly from tables by Sybil L. Smith, United States Department of Agriculture, the following symbols are used.

' indicates that the food contains the vitamin.

'' indicates that the food is a good source of the vitamin

''' indicates that food is an excellent source of the vitamin

- indicates that the food contains no appreciable amount of the vitamin

--- indicates that the evidence is lacking or appears insufficient.

The analytical data given in Tables 1 to 12 were compiled mostly from the results of analyses in the foods laboratory, Bureau of Science, with the addition of some data from publications as noted in the tables.

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"A SQUARE MEAL"

---

Proteins. Fats and Oils. Carbohydrates.

Foods supplying proteins:
Meat, fish, shrimps, beans, lentils, cheese, nuts, peas, fowls, etc.

Foods supplying fats and oils:
Lard, butter, milk, cheese, body fats of mammals, fishes and fowls, fish liver, coconut, peanut, olive, other nuts, etc.

Foods supplying carbohydrates:
Starch, sugar, rice, maize, wheat, potato, camote, candy, honey, gabi, ubi, camoteng cahoy, etc.

MINERAL SALTS

Foods supplying inorganic substances:

Chlorine and sodium in sodium chloride (asin), water, etc.; calcium in milk, lima beans (patani), peas, eggs, repollo, water, etc.; phosphorus in brains, bone marrow, meat, beans, nuts, legumes, etc.; iron in beans, peas, raisins, meat, spinach, alugbati, whole wheat, eggs, water, etc.; magnesium in meat, heart, brain, vegetables, fruits, water.; iodine in salt water foods, fish, shrimps, alimasag, shellfish, water, vegetables and fruits near the sea shore; potassium in cereals, meats, vegetables, etc., sulphur in eggs, liver, meat, mineral water, etc.; fluorine in cereals; copper, silicon, zinc, aluminum, etc.

VITAMINS A, B, C, D, & G

Foods supplying vitamins A and D:

Milk, butter, cheese, egg yolk, fish liver, avocado, carrot, lechuga, spinach, alugbati, squash, pineapple, orange, cod-liver oil, etc.

Foods supplying vitamins B or $B_1$:

Egg yolk, liver, heart, kidney, brain, meat, tikitiki and its extract, unpolished rice, whole wheat, maize, mungo, beans, yeast, camote leaves, alugbati, sitao, banana, papaya, repollo, orange, pineapple, etc.

EXTRACT

"Essentials of Nutrition" by Henry C. Sherman and Caroline Sherman Lanford
Columbia University

Table 27. Estimated Approximate Averages for some of the mineral elements and Vitamin value of foods:

Amounts, in the terms shown at the heads of the respective columns, per 100 grams edible portion

| Food | Calcium | Phosphorus | Iron | Ascorbic Acid (Vitamin C) | Thiamin (Vitamin B1) | Riboflavin (Vitamin G) | Vitamin A Value |
|---|---|---|---|---|---|---|---|
| | gram | gram | gram | milligrams | micrograms | micrograms | International Units |
| Almonds | .252 | .451 | 1.0039 | - | 120-240 | | 580 |
| Apple (s) | .007 | .012 | .00056 | 5-8 | 20-55 | | 40-100 |
| baked | .007 | .015 | .0005 | 1-2 | (20) | | (60) |
| pie | .009 | .026 | .0004 | (1) | (20) | | (60) |
| sauce | .005 | .009 | .0002 | 3-4 | (20) | | (60) |
| Apricots, dried | .065 | .120 | .0076 | 2-12 | 60-120 | 240-300 | 6,000-15,000 |
| dried, stewed | (.02) | (.03) | (.002) | | (15-30) | (40-50) | (1,500-3,000) |
| fresh | .013 | .024 | .0006 | 1-3.5 | 25-35 | 105 | 3,000-8,000 |
| Artichoke, French | .040 | .094 | .00095 | 9 | + | | 150-300 |
| Asparagus | .021 | .040 | .0010 | 15-40 | 150-180 | ++ | 300-700 |
| Avocado | .045 | .044 | .0063 | 2-8 | 100-200 | 140 | 110 |

N.B. (1) Where a range is given this is not the extreme range of reported data: it is an attempt to suggest reasonable boundaires for the zone within which the average may be expected to fall when adequately established. Caution should be exercised in accepting as representative or standard or average, a figure outside of the range. In lack of other guide, it may be well in calculations to use a value near the middle of the range when the food is eaten raw; and the minimum of the range when the food is cooked.

(2) Data enclosed in parentheses are based on evidence less direct than in the majority of cases.

(3) A dash(-) means that the amount present, if any, is probably negligible.

(4) A plus mark (+) means present in significant amount, but not measured as to quantity (++ and +++ indicate more).

(5) A blank space means that satisfactory data were not at hand when the table was made. This may be because of lack of chemical laboratory determinations of the element, or the vitamin value in the particular food; or because proportions used in cookery or adopted in servings are largely matters of local, or of changing custom.

(6) In this table, the printing of a single figure for any given vitamin value implies that not enough cases have been reported to justify an estimate of range.

Table 27 (continued)

| Food | Calcium | Phosphorus | Iron | Ascorbic Acid (Vitamin C) | Thiamin (Vitamin B1) | Riboflavin (Vitamin G) | Vitamin A Value |
|---|---|---|---|---|---|---|---|
| | gram | gram | gram | milligrams | micrograms | micrograms | International Units |
| Bacon, broiled | .015 | .248 | .0055 | - | (100) | 105 | |
| uncooked | .006 | .108 | .0015 | - | (100) | 75-125 | |
| Banana(s) | .008 | .028 | .00064 | 7-8 | 50-100 | 45-80 | 160-400 |
| Barley, entire | .051 | .400 | .00475 | - | 400-500 | + | 71 |
| pearled | .020 | .181 | (.002) | - | (180) | | |
| Beans, baked | .062 | .185 | .0020 | - | 152 | + | 40-70 |
| dried | .148 | .463 | .0105 | - | 315-510 | + | |
| Lima, dried | .028 | .155 | .0024 | 15-35 | 250-350 | 790 | + |
| Lima, fresh | .028 | .586 | .0097 | - | 450-600 | 250 | + |
| snap or string | .055 | .050 | .00116 | 10-20 | 55-95 | 65-150 | 600-1,800 |
| Beef, corned, canned | .013 | .119 | .0098 | - | + | ++ | |
| dried | .018 | .326 | .0045 | - | + | ++ | |
| lean muscle | .015 | .204 | .0030 | - | 110-210 | 180-260 | 10-50 |
| Beet greens | .094 | .040 | .00324 | 55 | | 625 | ++ |
| Beets | .028 | .042 | .00085 | 3-5 | 25-95 | 125 | 100 |
| Biscuit, baking powder | .062 | .097 | .00055 | - | 7-10 | 65 | |
| Blackberries | .017 | .019 | .0009 | 4-10 | 25 | | 80-300 |
| Blueberries | .025 | .020 | .0009 | 3 | 45 | 15 | 20-80 |
| Bluefish | .021 | .224 | .0011 | - | + | + | |

TABLE 27 (continued

| Food | Calcium | Phosphorus | Iron | Ascorbic Acid (Vitamin C) | Thiamin (Vitamin B) | Riboflavin (Vitamin G) | Vitamin A Value |
|---|---|---|---|---|---|---|---|
| | gram | gram | gram | milligrams | micrograms | micrograms | International Units |
| Bologna | .003 | .060 | .0028 | - | + | + | + |
| Bran | .113 | .893 | .0168 | - | 234-700 | + | + |
| Brazil nuts | .183 | .602 | .0028 | | ++, | | + |
| Bread, Boston brown | .129 | .185 | .0030 | - | 135-170 | 70 | |
| rye | .024 | .148 | .0016 | - | 90-190 | + | |
| Wheat, white | .031 | .097 | .0008 | - | 55-85 | 40-100 | |
| White raisin | .053 | .088 | .0008 | - | (80+ | 45 | |
| Whole wheat | (.05) | (.15) | (.002) | - | 240-400 | 100 | |
| Whole wheat, raisin | .055 | .154 | .0019 | - | (300) | (100) | 88 |
| Broccoli | .140 | .068 | .00137 | 50-130 | 80-100 | 200-500 | 3,000-9,000 |
| Brussels sprouts | .027 | .121 | .00117 | 13-50 | 171 | + | 300-500 |
| Buns | .016 | .079 | .0007 | - | | | |
| Butter | .016 | .017 | .0002 | - | - | - | 3,500-5,000 |
| Buttermilk | .105 | .097 | .003 | 1-2 | 15-50 | 80 | |
| Cabbage, headed | .048 | .034 | .00043 | 30-40 | 70-140 | 65-135 | 30-80 |
| loose leaf | .429 | .072 | .0018 | | | | 880 |
| Cantaloupe | .016 | .015 | .00059 | 26-34 | 50-65 | 75 | 400-2,400 |
| Carrots | .045 | .041 | .00064 | 3-5 | 60-140 | 75-125 | 2,200-4,000 |
| Cashew nuts | .048 | .480 | | - | + | | |
| Cauliflower | .022 | .060 | .00094 | 48-94 | 130-200 | 150-220 | 35-60 |
| Celery stalk | .078 | .046 | .00062 | 6-8 | 20-50 | 30-55 | 5-50 |
| Chard | .100 | .050 | .00309 | 10-20 | | + | 13000-27000 |
| Cheese, Cheddar type | .930 | .701 | .0013 | - | 40-50 | 450-600 | 2,000-4,000 |
| cottage, skim | .082 | .263 | | | + | | 60-80 |
| cream | (.36) | (.26) | (.0005) | | 15-20 | 100-120 | ++ |
| Parmesan | (1.35) | (1.00) | (.002) | - | 22-30 | 450-600 | 1,200-1,500 |
| Roquefort | (.75) | (.6) | (.002) | - | + | (+) | (+) |
| Swiss | (.08) | (.8) | (.008) | - | 30 | 450-600 | (+) |
| Cherries, canned | (.01) | (.02) | (.0005) | 8 | | | |
| fresh | .019 | .030 | .0004 | 8-10 | 51 | | + |
| Chestnuts | .032 | .094 | .0007 | - | 170-280 | | |
| Chicken | .013 | .252 | .0032 | - | 90-380 | 100-200 | + |
| Chocolate | .091 | .453 | .0027 | - | 75 | | |
| Clams, long | .123 | .105 | .0041 | | + | (15) | 10-30 |
| round | .095 | .095 | .0044 | | + | (15) | 10-30 |

(+) A plus mark (+) means present in significant amount, but not measured as to quantity (++ and +++ indicate more).

' Data for "Greens" (Table 18) used for Chard, Dandelion, Escarole, Kale, Mustard greens, Spinach, and Turnip tops.

'' The relatively few data for Cheddar type, Parmesan, and Swiss cheeses are here averaged together, as to riboflavin content.

Table 27 (continued)

| Food | Calcium | Phosphorus | Iron | Ascorbic Acid (Vitamin C) | Thiamin ($B_1$) | Riboflavin (Vitamin G) | Vitamin A Value |
|---|---|---|---|---|---|---|---|
| | gram | gram | gram | milligrams | micrograms | micrograms | International Units |
| Cocoa, beverage' | .124 | .110 | .0003 | 1 | 40-60 | (200) | (200) |
| Coconut, dried | .059 | .155 | (.005) | - | (100-200) | ++ | |
| fresh | .024 | .074 | .0018 | | 70-100 | ++ | |
| Coconut custard pie | (.08) | (.10) | (.001) | 0.5 | 30 | 155 | + |
| Cod | (.01 | (.185) | (.003) | - | 27-120 | + | 11 |
| Cole slaw | (.04) | (.03) | (.0004) | 2-20 | 57 | + | |
| Collards | .202 | .074 | .00166 | 30-70 | 150-250 | 250 | 2,000-6,000 |
| Corn, canned | (.007) | (.10) | (.0004) | 6 | (100) | | '' |
| maize, dry | .029 | .281 | .00364 | - | 200-300 | + | '' |





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TABLE 27 (Continued)

| Food | Calcium | Phosphorus | Iron | Ascorbic Acid (Vitamin C) | Thiamin (Vitamin $B_1$) | Riboflavin (Vitamin G) | Vitamin A Value |
|---|---|---|---|---|---|---|---|
| | gram | gram | gram | milligrams | micrograms | micrograms | International Units |
| Corn meal | .016 | .152 | .0009 | - | 50-300 | 80 | ?! |
| Corn, sweet | .006 | .105 | .00047 | 8-11 | 120-150 | + | '' |
| sweet, dried | .021 | .376 | .0029 | | (+) | + | '' |
| Cornflakes | (.014) | (.114) | (.0027) | - | | | - |
| Corn syrup, dark | (.06) | (.01) | (.0014) | - | | | - |
| light | (.01) | - | (.0003) | - | - | | - |
| Crabmeat | (.016) | (.18) | (.001) | - | + | | |

(4) A plus mark (+) means present in significant amount, but not measured as to quantity (++ and +++ indicate more).

' Data for "Greens" (Table 18) used for Chard, Dandelion, Escarole, Kale, Mustard greens, Spinach, and Turnip tops.

'' Made with milk

''' Significant vitamin A values in the yellow, but not in the white varieties. Yellow corn meal reported to have 700-750 International Units per 100 grams

TABLE 27 (continued)

| Food | Calcium | Phosphorus | Iron | Ascorbic Acid (Vitamin C) | Thiamin (Vitamin B1) | Riboflavin (Vitamin G) | Vitamin A Value |
|---|---|---|---|---|---|---|---|
| | gram | gram | gram | milligrams | micrograms | micrograms | International Units |
| Crackers, graham | (.02) | (.20) | (.002) | - | + | | |
| white | (.02) | (.10) | (.002) | - | | | |
| Cranberries | .013 | .011 | .00044 | 10-13 | | | 10-20 |
| Cranberry sauce | (.017) | (.01) | (.0004) | (5-10) | | | (10-20) |
| Cream, thick (40% fat) | (.09) | (.07) | (.0001) | 1-1.5 | (25-35) | (120-180) | 2,000-2500 |
| thin (18.5% fat) | (.10) | (.09) | (.0002) | 1-2 | (30-40) | (150-200) | 1,000-1500 |
| Cucumbers | .006 | .018 | .00033 | 2-13 | 90 | 150 | 15-50 |
| Currants, dried | .082 | .195 | .0040 | - | | | |
| fresh, red | .026 | .038 | .00063 | 15-20 | | | |
| Custard pie, see Coconut | | | | | | | |
| Dandelion | .084 | .055 | .00305 | 5-40 | 156-225 | | 13000-27000' |
| Dates, dried | .070 | .056 | .00356 | - | 60-100 | | 60-300 |
| Eggplant | .011 | .031 | .0005 | 1-9 | 40-100 | | 20-100 |
| Eggs | .063 | .224 | .00313 | - | 140-160 | 280-420 | 1000-2000 |
| Egg white | .013 | .015 | .0001 | - | trace | 150-300 | trace |
| Egg yolk | .135 | .593 | .0086 | - | 350-440 | 380-750 | 2500-5000 |
| Endive | .104 | .039 | .00123 | 10-14 | 99 | 235 | |
| Escarole | .029 | .027 | .00153 | 6-10 | | 75-400 | 13000-27000' |
| Figs, dried | .161 | .116 | .00287 | - | 80-180 | 85-125 | 50-90 |
| fresh | .053 | .056 | (.0009) | 2 | 80-100 | 82 | 60-90 |
| Flounder (sole) | (.037) | (.16) | (.001) | - | + | | |
| Flour, rye | .018 | .289 | .0013 | - | 165-220 | 60 | |
| white | .015 | .101 | .0010 | - | 60-100 | 40 | - |
| whole wheat | .035 | .306 | .0035 | - | 330-500 | 100-200 | |
| Frankforters | (.01) | (.22) | (.0025) | - | + | + | |
| Fudge | (.04) | (.06) | (.0004) | - | - | - | |
| Gooseberries | .035 | .031 | .0005 | 25 | | | |
| Grapefruit (or juice) | .021 | .020 | .0003 | 38-41 | 50-100 | 20-100 | 21 |
| Grape juice | .011 | .010 | .0003 | | (30-60) | | |
| Grapes | .019 | .055 | .0007 | 2-3 | 30-60 | | 20-60 |
| Guavas | (.02) | (.02) | (.0003) | 60-100 | 40-55 | 88 | 200 |
| Haddock | (.018) | (.20) | (.001) | - | + | + | 7 |
| Halibut | (.01) | (.20) | (.001) | - | 84-180 | + | |
| Ham, lean | (.02) | (.24) | (.003) | - | 600-1428 | 200-300 | |
| Hazelnuts | .287 | .354 | .0041 | - | 300-500 | | 440 |
| Herring, fresh | (.02) | (.22) | (.001) | - | + | | |
| smoked | (.04) | (.44) | (.002) | - | + | | |

(4) A plus mark (+) means present in significant amount, but not measured as to quantity (++ and +++ indicate more).

' Data for "Greens" (Table 18) used for Chard, Dandelion, Escarole, Kale, Mustard greens, Spinach, and Turnip tops.

TABLE 27 (Continued)

| Food | Calcium | Phosphorus | Iron | Ascorbic Acid (Vitamin C) | Thiamin (Vitamin $B_1$) | Riboflavin (Vitamin G) | Vitamin A Value |
|---|---|---|---|---|---|---|---|
| | Gram | Gram | gram | milligrams | micrograms | micrograms | International Units |
| Hominy | .011 | .070 | (.0009) | - | | | |
| cooked | (.002) | (.015) | (.0002) | - | | | |
| Honey | .005 | .018 | .0007 | | | | |
| Huckleberries, See Blueberries | | | | | | | |
| Ice Cream'' | (.08) | (.06) | (.002) | 1 | (10) | 55 | (600) |
| Kale | .181 | .067 | .00254 | 50-100 | 120-190 | 400-600 | 13000-27000' |
| Kidney | (.01) | (.18) | (.004) | - | 400-500 | 1700-2200 | 500-1000 |
| Kohlrabi | .078 | .057 | .0007 | 40-80 | 40-70 | | |
| Lamb, chop | (.01) | (.22) | (.005) | - | 200-300 | 280 | |
| leg of | .011 | .207 | .0015 | - | | | |
| Leeks | .058 | .056 | .0007 | 10-20 | 96 | | |
| Lemon (or juice) | .022 | .011 | .0006 | 52-80 | 30-90 | | |
| Lentils, dry | .102 | .383 | .0086 | - | 300-600 | 190 | |
| Lettuce, headed | .017 | .040 | .0005 | 6-21 | 50-125 | 100-240 | ( 70-700 |
| loose leaf | .069 | .028 | .0015 | | | | (700-7000 |
| Liver | .011 | .368 | .0082 | + | 300-420 | 1800-2600 | 5000-10000 |
| Lobster | (.06) | (.28) | (.001) | | | | |

(4) A plus mark (+) means present in significant amount, but not measured as to quantity (++ and +++ indicate more).

' Data for "Greens" (Table 18) used for Chard, Dandelion, Escarole, Kale, Mustard greens, Spinach, and Turnip tops.

'' May vary between the values here given and those of the fruits which it may contain.

TABLE 27 (Continued)

| Food | Calcium | Phosphorus | Iron | Ascorbic Acid (Vitamin C) | Thiamin (Vitamin $B_1$) | Riboflavin (Vitamin G) | Vitamin A Value |
|---|---|---|---|---|---|---|---|
| | gram | gram | gram | milligrams | micrograms | micrograms | International Units |
| Loganberries | .035 | .022 | .0014 | + | + | | |
| Macaroni, cooked | .004 | .024 | .0002 | - | (5-10) | | |
| dry | .022 | .144 | .0012 | - | 25-50 | | |
| *Mackerel* | .011 | .273 | (.001) | - | + | | |
| *Mangoes* | .005 | .018 | .0003 | +++ | 40-100 | 200-260 | 1000-2000 |
| *Maple syrup* | .107 | .013 | (.003) | - | - | | - |
| *Mayonnaise* | .016 | .031 | (.004) | | | 55 | |
| *Milk, cow's* | .116 | .093 | .0002 | 2.1-2.2 | 40-65 | 195-240 | 160-2255 |
| evaporated | (.24) | (.20) | (.0004 | | 50-80 | 330 | 300-450 |
| dry skim | (1.18) | (.95) | (.002) | | 375 | +++ | |
| dry whole | (.94) | (.74) | (.0016) | | 315 | 1300-1900 | 1300-1800 |
| malted | .357 | .345 | .0021 | | 340 | 500 | ++ |
| Molasses' | .258 | .050 | .0073 | - | - | - | - |
| Muffins (made with egg) | (.08) | (.11) | (.001) | - | 15-20 | 115 | (250) |
| whole wheat | (.11) | (.15) | (.003) | - | 90-120 | 75 | (80) |
| Mushrooms | .014 | .098 | .0007 | 3-6 | 100-200 | | - |
| Muskmelon | .016 | .015 | .00039 | 26-34 | 50-65 | 75 | 200-2400 |

(4) A plus mark (+) means present in significant amount, but not measured as to quantity (++ and +++ indicate more).

' Data here given are genuine (sugar-house) molasses, the mother liquor from the crystallization of raw cane sugar; not to be confused with "syrups".

TABLE 27 (continued)

| Food | Calcium | Phosphorus | Iron | Ascorbic Acid (Vitamin C) | Thiamin (Vitamin $B_1$) | Riboflavin (Vitamin G) | Vitamin A Value |
|---|---|---|---|---|---|---|---|
| | gram | gram | gram | milligrams | micrograms | micrograms | International Units |
| Mustard greens | .221 | .066 | .005 | | 138 | 375 | 13000-27000 |
| Mutton | (.014) | (.216) | (.002) | - | 200-300 | (280) | |
| Nectarines | .005 | .022 | .0005 | | | | 1000-2000 |
| Oatmeal (dry) | .065 | .387 | .0048 | - | 345-770 | (200) | |
| cooked | (.012) | (.07) | (.0009) | - | 50-135 | (30) | |
| Okra | .075 | .053 | .0006 | 10 | 126 | | 300-600 |
| Oleomargarine | (.02) | (.02) | (.0002) | - | - | - | |
| Olive oil | - | - | - | - | - | - | 20-30 |
| Olives, green | .122 | .014 | .0029 | | 8 | | 388 |
| ripe | .122 | .014 | .0029 | | (8) | | 346 |
| Onions | .041 | .047 | .00048 | 7-11 | 25-100 | 28-62 | "negligible) |
| Orange (or juice) | .024 | .018 | .0004 | 52-56 | 75-145 | 28-90 | 50-400 |
| Oysters | .056 | .150 | .0058 | 3 | 200-300 | | 150-300 |
| Papayas | .018 | .015 | .0003 | 33-55 | 15-30 | 83 | 2000-3000 |
| Parsnips | .060 | .076 | .00077 | | 120-190 | | |
| Peaches, canned | .009 | .013 | .0002 | 3-5 | | | |
| dried | .060 | .119 | .006 | | | 150-250 | 1500-6000 |
| fresh, white | .010 | .019 | .00033 | 7-10 | 20-70 | 45 | 0-100 |
| fresh, yellow | | | | - | | | 1000-2000 |
| Peanut(s), roasted | .067 | .395 | .0020 | - | 500-600 | 200-500 | 360 |
| Peanut butter | (.057) | (.395) | (.0020) | | | | |
| Pears, canned | .009 | .018 | .0002 | | (30) | | |
| fresh | .015 | .016 | .00032 | 3-5 | 30-95 | 20-150 | 10-15 |
| Pea Soup | (.092) | (.083) | (.0008) | 0-1 | 10-15 | 100-200 | 300-400 |
| Peas, canned, drained | .016 | .106 | .0013 | | | | |
| canned, including liquor | .014 | .070 | .0011 | 2-10 | | 80-200 | + |
| dried | .077 | .411 | .0057 | | 200-300 | | |
| fresh, green | .023 | .127 | .00207 | | 300-620 | 250-380 | + |
| Pecans | .089 | .335 | .0026 | 15-25 | 270-495 | 250 | 1000-1300 |
| Peppers, Green | .012 | .028 | .00040 | - | 150-250 | | 100-200 |
| Persimmons | .022 | .021 | .00027 | 90-150 | 20-30 | | ++ |
| Pineapple, canned | .005 | .009 | .0003 | | | | |
| fresh | .008 | .011 | .00037 | 10 | 65 | 20-30 | 20-30 |
| Pineapple juice, canned | (.01) | (.01) | (.0001) | 13-25 | 80-125 | 50-80 | 40-60 |
| Plums | .020 | .027 | .00056 | 5-10 | 50-100 | 20-30 | 40-60 |
| Pork, lean | .006 | .108 | .0015 | 4-7 | 48-200 | | |
| lean, cooked | (.016) | (.32) | (.005) | - | 700-1400 | 225-255 | |
| Pork liver | .011 | .368 | .0082 | - | 300-900 | (200) | |
| Pork sausage | (.002) | (.027) | (.001) | | (500) | 2300 | (8000) |
| Potatoes | .013 | .053 | .00102 | | ++ | | |
| Prunes, dried | .056 | .085 | .00285 | 7-15 | 95-165 | 40-80 | 30-50 |
| dried, stewed | (.02) | (.03) | (.001) | 0-8 | 175-225 | 50-650 | 400-2400 |
| Pumpkin | .023 | .046 | .00093 | (0-2) | (60-80) | (20-200) | (100-800) |
| Pumpkin pie | (.06) | (.09) | (.001) | 5 | | 100 | ++ |
| Radishes | .031 | .031 | .00065 | | 35-45 | 100-120 | 300-400 |
| Raisins | .060 | .132 | .00299 | 12-20 | 50-100 | | "negligible" |
| Raspberries | .024 | .027 | .00088 | - | 100-200 | 125 | 10-100 |
| Raspberry juice | .024 | .012 | (.0008) | 8-15 | 25 | | 130 |
| Rhubarb | .044 | .018 | .00056 | (8-15) | | | |
| Rice, entire | .065 | .336 | .0020 | 12-24 | 25 | | 100 |
| white | .011 | .099 | .0009 | - | 240-300 | | 50-100 |
| white, cooked | (.003) | (.025) | (.0003) | - | 30-40 | | - |
| Rutabaga, See Turnip | | | | - | | | - |
| Salmon, fresh | .013 | .242 | (.001) | - | + | + | 20-600 |
| canned | .067 | .286 | .0013 | - | + | 200 | 20-600 |
| Sardines, canned | .035 | .365 | .0018 | - | 90 | | |
| Sauerkraut | .039 | .009 | .0033 | 0-10 | 30 | | 25 |
| Scallops, steamed | .117 | .040 | .003 | - | + | | |
| Shad | (.02) | (.20) | (.001) | - | + | | |
| Shad roe | .023 | .242 | .0012 | - | 200-300 | | 2000-3000 |
| Shredded wheat | .041 | .324 | .0045 | - | + | + | |
| Shrimp | .094 | .172 | .0014 | - | 90 | | |



(4) A plus mark(+) means present in significant amount, but not measured as to quantity (++ and +++ indicate more.)

' Data for "Greens" (Table 18) used for Chard, Dandelion, Escarole, Kale, Mustard greens, Spinach, and Turnip tops.

TABLE 27 (continued)

| Food | Calcium | Phosphorus | Iron | Ascorbic Acid (Vitamin C) | Thiamin (Vitamin $B_1$) | Riboflavin (Vitamin G) | Vitamin A Value |
|---|---|---|---|---|---|---|---|
| | gram | gram | gram | milligrams | micrograms | micrograms | International Units |
| Smelts | .014 | .202 | .001 | - | + | | |
| Spinach | .078 | .046 | .00255 | 15-50 | 95-155 | 250-400 | 13000-27000' |
| Squab | .012 | .202 | .0028 | - | + | | |
| Squash, white flesh | .018 | .015 | .00035 | 3 | 42 | 81 | 200-400 |
| yellow flesh | .019 | .028 | .00055 | 3 | 48 | 81 | 2000-4000 |
| Strawberries | .034 | .028 | .00068 | 25-50 | 25 | | 60-90 |
| Sturgeon | .059 | .264 | .002 | - | + | | |
| Sugar | - | - | - | - | - | - | - |
| Sweetpotato | .020 | .045 | .00077 | 7-15 | 90-135 | 80-100 | 1000-5000 |
| Tangerines | .041 | .018 | .0003 | 25-50 | 120 | | 350 |
| Tapioca | .016 | .006 | .0016 | - | - | | |
| Tomato(es) | .007 | .021 | (.0004) | 21-24 | 70-115 | 37-63 | 500-1200 |
| juice | .007 | .015 | (.0004) | | | | |
| ketchup | .012 | .018 | .0008 | | + | + | - |
| soup, cream | (.09) | (.09) | (.0008) | 10-15 | 40-50 | 100-150 | 400-600 |
| Tongue | .030 | .119 | .0069 | - | + | + | |
| Trout, raw | .018 | .202 | .001 | - | 87 | | |
| steamed | .057 | .268 | .001 | - | 87 | | |
| Tunafish | .034 | .290 | .0014 | - | + | | |
| Turkey, dark meat | .023 | .422 | .0059 | - | + | | |
| light meat | .021 | .374 | .0052 | - | + | | |
| Turnip(s) | .056 | .047 | .00052 | 20-30 | 65-95 | 50-100 | 10-20 |
| Turnip greens | .346 | .049 | .00348 | 20-60 | 135-180 | 750 | 13000-27000' |
| Veal cutlet, broiled | .014 | .229 | .0030 | - | (150) | + | |
| leg, lean | .014 | .229 | .0026 | - | (150) | 375 | |
| Vegetable soup, thick. | .018 | .026 | .0005 | 1-3 | 5-10 | 30-40 | 150-250 |
| Vinegar (cider) | .016 | .013 | (.0003) | | | | |
| Walnuts | .089 | .358 | .0021 | - | 300-600 | | 100-150 |
| Watercress | .157 | .046 | .00297 | 43-66 | 100-150 | 150-300 | 800-3000 |
| Watermelon | .007 | .013 | .00025 | 6-8 | 30-40 | 30-40 | 50-100 |
| Wheat, entire | .053 | .374 | .0050 | - | 800-860 | 100-320 | 29-35 |
| Wheat, germ | .071 | (1.0) | (.007) | - | 2000-4000 | 600-800 | |
| Wine | .009 | .015 | (.0003) | | | | |
| Yeast, baker's cake | | | | - | 270-700 | 600-3000 | |
| Baker's dried | | | | - | 1000-3000 | 2000-4000 | |
| Brewer's dried | | | | - | 5000-8000 | 2500-4700 | |

(4) A plus mark (+) means present in significant amount, but not measured as to quantity (++ and +++ indicate more.)

! Data for "Greens" (Table 18) used for Chard, Dandelion, Escarole, Kale, Mustard greens, Spinach, and Turnip tops.

TABLE I - Vegetables and vegetable products

(Analyses by the Bureau of Science, except as noted. Vitamin content mostly from Smith, United States Department of Agriculture)

| Sample | Edible portion | | | | | | Fuel value per kilo | Vitamins | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Moisture | Ash | Proteins | Fat | Crude Fiber | Carbohydrate | | A | B & G | C |
| | Per cent | Per cent | Per cent | Per cent | Per cent | Per cent | Calories | | | |
| **A. Flowers** | | | | | | | | | | |
| Banana (puso) | 92.67 | 0.02 | 1.99 | 0.31 | 0.66 | 3.35 | 227 | ---- | ---- | ---- |
| Calabasa (squash) | 91.63 | 1.08 | 2.70 | 0.58 | ------ | 4.54 | 350 | ---- | ---- | ---- |
| Caturay | 91.02 | 0.53 | 1.22 | 0.36 | ------ | 6.87 | 365 | ---- | ---- | ---- |
| Kakauati (gliricida sepium) | 85.46 | 1.04 | 3.67 | 1.47 | 2.42 | 5.94 | 55 | ---- | ---- | ---- |
| **B. Fruits & vegetables** | | | | | | | | | | |
| Amargoso (ampalaya | 92.73 | 0.68 | 1.26 | 0.03 | 0.12 | 5.18 | 266 | ---- | ---- | ---- |
| Batao (batao) | 87.56 | 0.95 | 3.32 | 0.25 | 1.73 | 6.19 | 413 | ---- | ---- | ---- |
| Bottle gourd (opo) | 95.44 | 0.37 | 0.50 | 0.09 | 0.26 | 3.34 | 166 | ---- | ---- | ---- |
| Breadfruit (camansi) | 89.16 | 0.88 | 2.24 | 0.55 | 1.09 | 6.08 | 400 | ---- | " | ---- |
| Chayote (Sechium edule) | 93.28 | 0.23 | 0.64 | 0.24 | 0.36 | 5.25 | 264 | " | ---- | ---- |
| Chick pea | 13.63 | 2.86 | 19.90 | 5.38 | 2.26 | 55.93 | 3,610 | " | " | ---- |
| Chili: | | | | | | | | | | |
| Sweet (American pepper) | 92.24 | 0.51 | 0.64 | 0.49 | 1.73 | 4.39 | 251 | " | " | " |
| Large Philippine | 91.61 | 0.57 | 1.29 | 0.49 | 2.10 | 3.94 | 260 | " | " | " |
| Labuyo | 78.40 | 1.66 | 0.58 | 2.89 | 5.42 | 11.05 | 745 | ---- | ---- | ---- |
| Ciguidilla (Winged bean) | 91.58 | 0.77 | 2.94 | 0.27 | 1.21 | 3.80 | 280 | ---- | ---- | ---- |
| Common bean (habichuelas) | 15.07 | 3.80 | 18.09 | 1.70 | 4.28 | 57.07 | 3,240 | ---- | " | ---- |
| Condol (wax gourd) | 95.90 | 0.37 | 0.17 | 0.46 | 0.54 | 2.56 | 154 | ---- | ---- | ---- |
| Cowpea (sitao | 86.75 | 0.90 | 2.65 | 0.18 | 2.03 | 7.49 | 452 | ---- | ---- | ---- |
| Cucumber (pepino) | 94.14 | 0.46 | 0.52 | 0.19 | 0.30 | 2.39 | 137 | -to | ' | '' |
| Egg plant (talong) | 90.98 | 0.54 | 1.07 | 0.45 | 0.82 | 6.14 | 337 | -to' | ' | ---- |
| Iba | 89.63 | 0.84 | 0.90 | 0.76 | 0.58 | 7.29 | 406 | ---- | ---- | ---- |
| Kayam | 48.59 | 1.77 | 5.60 | 1.75 | 0.76 | 41.53 | 2,095 | ---- | ---- | ---- |
| Lima bean (patani) | 65.50 | 1.84 | 7.30 | 1.26 | 0.77 | 23.37 | 1,374 | " | ''' | ---- |
| Malungay | 88.24 | 0.94 | 7.29 | 0.16 | 0.76 | 2.61 | 320 | ---- | ---- | ---- |
| Mongo seed: Cowpea seed | 9.21 | 4.23 | 18.30 | 0.88 | 4.89 | 62.49 | 3,394 | ' | " | - |
| Japanese mongo | 14.70 | 3.01 | 20.44 | 0.93 | 4.36 | 56.56 | 3,250 | ' | " | - |
| Sprouted (togue) | 92.85 | 0.41 | 2.38 | 0.45 | 0.69 | 3.82 | 300 | ' | " | ''' |
| Okra | 88.11 | 0.71 | 2.17 | 0.69 | 2.37 | 5.95 | 397 | ---- | " | ---- |
| Palak-palak: | | | | | | | | | | |
| Laman, Palaquin sp.[a] | 25.30 | 4.51 | 4.38 | 2.69 | 5.55 | 57.57 | 2,790 | ---- | ---- | ---- |
| Seeds[a] | 20.99 | 1.93 | 0.13 | 3.49 | 30.69 | 42.77 | 2,080 | ---- | ---- | ---- |
| Papaya | 93.98 | 0.41 | 1.09 | 0.17 | 0.65 | 3.70 | 210 | ---- | ---- | ---- |
| Squash (calabasa( | 87.20 | 1.01 | 1.33 | 0.43 | 0.70 | 9.33 | 477 | " | ---- | ---- |
| Sponge gourd | 94.58 | 0.28 | 0.63 | 0.13 | 0.13 | 0.25 | 210 | ---- | ---- | ---- |
| Sugar pea (guisantes) | 85.08 | 0.72 | 3.88 | 0.26 | 1.35 | 8.71 | 540 | " | " | " |
| Tomato: | | | | | | | | | | |
| Camatis | 94.32 | 0.62 | 0.99 | 0.23 | 0.64 | 3.20 | 190 | " | " | " |
| Wild (camatis na ligao) | 90.59 | 1.03 | 1.79 | 0.19 | 2.38 | 4.05 | 260 | ---- | ---- | ---- |
| **C. Leaves.** | | | | | | | | | | |
| Alugbati (libato, B. rubra): | | | | | | | | | | |
| Green | 91.20 | 1.18 | 2.10 | 0.37 | 1.29 | 3.86 | 271 | " | " | ---- |
| Purple | 93.86 | 1.51 | 1.44 | 0.38 | 0.42 | 2.39 | 187 | " | " | ---- |
| Amargoso (ampalaya) | 81.94 | 2.06 | 2.30 | 0.13 | 0.75 | 16.82 | 796 | ---- | ---- | ---- |
| Balayba (sintas sintasan)[a] | 15.95 | 21.03 | 14.81 | 3.72 | 11.47 | 33.02 | 2,310 | ---- | ---- | ---- |
| Balunsay[a] | 89.23 | 1.67 | 3.22 | 0.52 | 1.47 | 3.89 | 340 | ---- | ---- | ---- |
| Cabbage (repollo) | 91.86 | 0.79 | 2.03 | 0.28 | 0.91 | 4.13 | 279 | ' | " | ''' |
| Camote (sweet potato) | 84.81 | 1.84 | 1.96 | 0.28 | 2.70 | 8.41 | 450 | ---- | " | ' |
| Canoong | 89.70 | 1.67 | 4.25 | 0.04 | 0.70 | 3.64 | 330 | ---- | ---- | ' |
| Cassava (Manihot utilissima) | 82.48 | 1.16 | 2.32 | 1.52 | 2.44 | 10.08 | 649 | " | ---- | ---- |
| Celery (kinchay) | 92.72 | 1.56 | 1.65 | 0.32 | .86 | 2.89 | 220 | -to' | " | ---- |
| Chaya | 90.67 | 0.75 | 6.02 | 0.49 | 1.49 | 0.58 | 308 | ---- | ---- | ---- |
| Chinese mustard | 91.30 | 1.10 | 2.06 | 0.31 | 0.80 | 4.43 | 300 | ---- | ---- | ---- |

[a] Santos and Adriano, The Chemical Composition of Philippine Food Materials

TABLE I - Vegetables and vegetable products - Continued

| Sample | Edible portion | | | | | | Fuel value per kilo | Vitamins | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Moisture | Ash | Proteins | Fat | Crude fiber | Carbohydrate | | A | B & G | C |
| | Per cent | Per cent | Per cent | Per cent | Per cent | Per cent | | | | |
| C. Leaves (continued) | | | | | | | | | | |
| Colitis (Haum, Amaranthus (tricolor): Red | 86.80 | 2.19 | 2.63 | 1.01 | 1.69 | 5.68 | 422 | ---- | ---- | ---- |
| Green | 86.38 | 2.22 | 3.52 | 0.39 | 1.79 | 5.70 | 403 | ---- | ---- | ---- |
| Intermediate | 86.58 | 2.32 | 3.53 | 0.64 | 1.71 | 5.22 | 407 | ---- | ---- | ---- |
| Coriander (unsuy) | 90.82 | 1.38 | 2.17 | 0.41 | 0.79 | 4.43 | 308 | ---- | ---- | ---- |
| Cowpea (sitao) | 85.88 | 1.58 | 4.07 | 0.40 | 1.90 | 6.17 | 460 | " | " | ---- |
| Escarola | 93.25 | 0.94 | 1.62 | 0.23 | 0.95 | 3.01 | 210 | ' | ---- | ' |
| Garlic (bawang) | 88.01 | 1.03 | 2.20 | 0.32 | 1.17 | 7.27 | 420 | ---- | ---- | ---- |
| Himbabao, male[a] | 15.31 | 8.49 | 26.69 | 5.19 | 10.42 | 33.99 | 2,960 | ---- | ---- | ---- |
| Kalunay | 83.35 | 2.44 | 3.98 | 1.71 | 1.53 | 6.99 | 591 | ---- | ---- | ---- |
| Kulasiman[a] | 93.06 | 2.14 | 1.69 | 0.15 | 0.62 | 2.34 | 180 | ---- | ---- | ---- |
| Leek (chuchay) | 91.92 | 0.92 | 1.85 | 0.55 | 1.10 | 5.66 | 280 | ---- | ---- | ---- |
| Lettuce | 80.50 | 0.80 | 1.00 | .20 | ----- | 2.50 | 158 | ''' | '' | ''' |
| Maluco | 81.38 | 3.16 | 4.50 | 0.57 | 2.00 | 8.39 | 581 | ---- | ---- | ---- |
| Malungay: Fresh. | 76.67 | 2.14 | 7.30 | 1.10 | 1.75 | 11.04 | 854 | ---- | ---- | ---- |
| Air-dry[a] | 17.98 | 7.66 | 18.13 | 1.74 | 12.37 | 42.12 | 2,630 | ---- | ---- | ---- |
| Oroy | 77.83 | 1.34 | 1.40 | 0.13 | ----- | 12.67 | 574 | ---- | ---- | ---- |
| Paco (fern) | 90.38 | 1.14 | 3.11 | 0.28 | 1.23 | 3.86 | 310 | ---- | ---- | ---- |
| Parsley (peregil) | 85.70 | 2.75 | 3.82 | 1.39 | 1.52 | 4.82 | 480 | ---- | " | ---- |
| Papait[a] | 10.79 | 17.45 | 17.85 | 2.40 | 14.97 | 36.54 | 2,450 | ---- | ---- | ---- |
| Pasao | 80.61 | 2.77 | 5.07 | 0.44 | 1.81 | 9.30 | 630 | ---- | ---- | ---- |
| Pechay | 92.97 | 1.26 | 1.00 | 0.34 | 0.79 | 3.64 | 220 | ---- | ---- | ---- |
| Pepper (sili) | 84.63 | 2.25 | 5.48 | 0.70 | 0.34 | 6.60 | 560 | " | " | ---- |
| Pigweed (culitis) | 83.35 | 2.44 | 3.98 | 1.71 | 1.53 | 6.99 | 608 | ---- | ---- | ---- |
| Ragra gotirit (Algae)[a] | 7.98 | 27.41 | 15.54 | 1.66 | 10.97 | 36.44 | 2,290 | ---- | ---- | ---- |
| Spinach | 92.30 | 2.10 | 2.10 | 0.30 | ----- | 3.20 | 240 | ''' | '' | ''' |
| Squash (calabasa) | 89.45 | 1.87 | 4.07 | 0.34 | 1.16 | 3.11 | 330 | ---- | ---- | ---- |
| Talinum | 91.26 | 1.56 | 1.23 | 0.45 | 0.80 | 4.70 | 277 | ---- | ---- | ---- |
| Uray babae[a] | 78.89 | 3.55 | 6.24 | 0.78 | 1.47 | 9.07 | 700 | ---- | ---- | ---- |
| Water cress, air-dry | 12.29 | 15.00 | 27.65 | 3.11 | 10.16 | 31.80 | 2,726 | ''' | ' | ''' |
| Young onions (sibuyas) | 89.14 | 0.74 | 1.27 | 0.34 | 1.80 | 6.71 | 360 | ---- | ---- | ---- |
| D. LEGUMES AND THEIR PRODUCTS | | | | | | | | | | |
| Balungay[a] | 13.86 | 3.42 | 9.50 | 4.37 | 3.74 | 65.11 | 3,470 | ---- | ---- | ---- |
| Beans[a] | 14.49 | 3.36 | 20.40 | 2.45 | 2.42 | 56.79 | 3,400 | ' | " | ---- |
| Lima (black patani)[a] | 13.82 | 3.66 | 7.87 | 4.43 | 4.03 | 66.19 | 3,450 | ---- | ---- | ---- |
| Phaseolus calcaratus[a] | 10.29 | 4.33 | 11.38 | 1.06 | 5.53 | 67.41 | 3,330 | ---- | ---- | ---- |
| Phaseolus cathyroides | 15.51 | 6.48 | 1.34 | 1.29 | 33.28 | 42.10 | 1,901 | ---- | ---- | ---- |
| Phaseolus lunatus[a] | 15.85 | 3.65 | 14.84 | 1.30 | ----- | ----- | ----- | ---- | ---- | ---- |
| Soy | 4.95 | 5.25 | 39.08 | 20.07 | 5.69 | 24.96 | 4,492 | " | " | ---- |
| Soy, sapal[a] | 82.32 | 0.62 | 6.39 | 1.94 | 4.72 | 4.01 | 610 | ---- | ---- | ---- |
| Soy, residue after second drawing of toyo[a] | 64.31 | 13.76 | 7.56 | 8.68 | 1.95 | 3.74 | 1,270 | ---- | ---- | ---- |
| Centrosoma plumeri[a] | 19.50 | 4.42 | 44.88 | 0.70 | ---- | 30.50 | 3,160 | ---- | ---- | ---- |
| Calamismis[a] | 9.68 | ---- | 15.05 | 5.60 | ---- | 40.75 | ----- | ---- | ---- | ---- |
| Cowpea seeds | 14.11 | 4.30 | 18.52 | 2.24 | 4.46 | 56.37 | 3,280 | " | " | ---- |
| Geering's cheese (taohu) | 76.15 | 2.21 | 13.15 | 7.09 | ---- | 1.40 | 1,260 | ---- | ---- | ---- |
| Habichuelas[a] | 12.82 | 3.51 | 21.06 | 0.55 | 2.92 | 59.14 | 3,340 | ' | " | ---- |
| Ipil-ipil seeds | 11.93 | 3.46 | 31.13 | 0.04 | 14.75 | 30.69 | 2,540 | ---- | ---- | ---- |
| Kadios | 11.60 | 3.70 | 19.38 | 1.44 | 5.40 | 58.48 | 3,243 | ' | " | - |
| Kagi Seeds[a] | 13.59 | 3.57 | 7.03 | 3.18 | 5.36 | 67.27 | 3,340 | ---- | ---- | ---- |
| Kayam | 48.59 | 1.77 | 5.60 | 1.75 | 0.76 | 41.53 | 2,041 | ---- | ---- | ---- |
| Konigtofu | 84.31 | 1.08 | 7.41 | 5.25 | ---- | 1.95 | 870 | ---- | ---- | ---- |
| Mulluga opositifolia(papait) | 10.36 | 19.29 | 11.94 | 2.49 | 30.41 | 25.51 | 1,770 | ---- | ---- | ---- |
| Mungo: Pods[a] | 82.01 | 1.07 | 2.96 | 1.19 | 3.62 | 9.15 | 620 | ' | " | ---- |
| Seeds[a] | 9.98 | 3.56 | 24.28 | 1.15 | 3.59 | 57.44 | 3,457 | ' | " | - |
| Paayap pods[a] | 87.07 | 0.54 | 2.77 | 0.40 | 2.51 | 6.71 | 430 | ---- | ---- | ---- |
| Peanut: kernel | 8.01 | 2.78 | 32.12 | 44.05 | 2.54 | 10.50 | 5,844 | ' | " | ---- |
| meal | ----- | ----- | 26.68 | 8.55 | 21.48 | ---- | ---- | ---- | ---- | ---- |
| Pigeonpea | 12.20 | 4.65 | 24.38 | 1.75 | ----- | ---- | ---- | ---- | ---- | ---- |
| Soy-bean: Cheese | 83.35 | 0.57 | 11.25 | 4.33 | ----- | ---- | ---- | ---- | ---- | ---- |
| Pressed cake (tokua) | 72.10 | 1.27 | 17.56 | 10.99 | ----- | ---- | ---- | ---- | ---- | ---- |
| Tahuri: Liquid | 57.86 | ----- | 9.56 | 2.09 | ----- | ---- | ---- | ---- | ---- | ---- |
| Solid | 55.76 | ----- | 14.56 | 7.12 | ----- | ---- | ---- | ---- | ---- | ---- |
| Toyo | 47.62 | 22.45 | 5.58 | ---- | ----- | ---- | ---- | ---- | ---- | ---- |

TABLE I - Vegetables and vegetable products - Continued

| Sample | Edible portion | | | | | | Fuel value per kilo | Vitamins | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Moisture | Ash | Proteins | Fat | Crude fiber | Carbohydrate | | A | B & G | C |
| E. Roots, Tubers, etc. | Per cent | Per cent | Per cent | Per cent | Per cent | Per cent | | | | |
| Camote (sweet potato) | 68.87 | 1.00 | 0.86 | 0.52 | 0.88 | 27.87 | 1,230 | '' | '' | '' |
| Carrot | 86.36 | 0.80 | 2.26 | 0.23 | 1.27 | 9.08 | 490 | ''' | '' | '' |
| Cassava (camoteng cahoy) | 67.97 | 2.69 | 1.00 | 0.17 | 1.70 | 26.47 | 1,140 | ---- | ---- | ---- |
| Chinese radish (rabano) | 94.14 | 0.69 | 0.82 | 0.16 | 0.55 | 3.64 | 197 | ---- | ---- | ---- |
| Palauan | 62.61 | 1.05 | 0.81 | 0.09 | 1.57 | 33.87 | 1,430 | ---- | ---- | ---- |
| Pungapong | 74.81 | 0.73 | 5.10 | 0.38 | 0.61 | 18.37 | 1,000 | ---- | ---- | ---- |
| Pulao | 53.95 | 1.13 | 5.87 | 1.06 | 1.55 | 36.44 | 1,833 | ---- | ---- | ---- |
| Taro (gabi) | 63.21 | 1.01 | 1.29 | 0.39 | 1.59 | 32.51 | 1,420 | ---- | ---- | ---- |
| Yam: Ubi | 63.70 | 1.45 | 2.86 | 0.05 | 1.03 | 30.91 | 1,390 | ---- | ---- | ---- |
| Bean (sinkamas) | 84.47 | 0.38 | 0.82 | 0.12 | 0.28 | 13.93 | 620 | ---- | ---- | ---- |
| Tugi | 67.49 | 1.07 | 1.50 | 0.19 | 0.95 | 28.80 | 1,260 | ---- | ---- | ---- |
| F. Shoots | | | | | | | | | | |
| Asparagus, canned | 94.00 | 0.70 | 1.80 | 0.29 | 0.80 | 3.30 | 227 | '' | ---- | ---- |
| Bamboo (labong) | 92.77 | 0.55 | 1.76 | 0.51 | 0.17 | 4.24 | 290 | ---- | - | ---- |

TABLE 2 - Fruits and fruit products

(Analyses by the Bureau of Science, except as noted. Vitamin content mostly from Smith, United States Department of Agriculture.)

| Sample | Waste or refuse | Edible portion | | | | | | Fuel value per kilo | Vitamins | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Moisture | Ash | Proteins | Fat | Crude fiber | Carbohydrates | | A | B & G | C |
| | | Per cent | Per cent | Per cent | Per cent | Per cent | Per cent | Calories | | | |
| Anona | ---- | 71.48 | 0.75 | 1.07 | 0.45 | 0.05 | 26.20 | 1,159 | - | ---- | ---- |
| Apples (imported) | | 84.60 | 0.30 | 0.40 | 0.50 | 1.20 | 14.20 | 640 | " | " | " |
| Artocarpus elastica | | 84.11 | 0.63 | 1.62 | 0.37 | 0.92 | 12.35 | 933 | ---- | ---- | ---- |
| Artocarpus odoratissima | | 84.23 | 0.51 | 1.47 | 0.23 | 0.77 | 12.79 | 630 | ---- | ---- | ---- |
| Ates | 41.77 | 76.18 | 0.73 | 1.67 | 1.10 | 1.16 | 19.16 | 960 | ---- | ---- | ---- |
| Avocado: Cardinal | | 88.71 | 0.63 | 0.98 | 5.26 | 1.34 | 5.08 | 552 | " | " | ---- |
| Commodore | | 84.35 | 0.81 | 0.64 | 8.13 | 1.21 | 3.07 | 908 | " | " | ---- |
| Pollach | | 84.25 | 0.98 | 0.81 | 7.46 | 1.33 | 5.25 | 941 | " | " | ---- |
| Wester | | 84.24 | 0.85 | 1.02 | 7.67 | 1.27 | 4.95 | 958 | " | " | ---- |
| Alegre | 24.20 | 85.48 | 0.63 | 1.23 | 5.46 | 1.32 | 5.94 | 801 | " | " | ---- |
| Balimbing | | 93.91 | 0.42 | 0.24 | 0.74 | 0.61 | 4.08 | 250 | ---- | ---- | ---- |
| Banana: Variety | 34.08 | 71.72 | 0.95 | 1.31 | 0.58 | 0.47 | 24.97 | 1,130 | "to" | | |
| Gensombaba | 41.00 | 66.84 | 0.74 | 1.27 | 0.53 | 0.41 | 30.21 | 1,356 | ---- | ---- | ---- |
| Indeep | 49.00 | 69.85 | 0.89 | 1.03 | 0.34 | 0.32 | 27.59 | 1,218 | ---- | ---- | ---- |
| Inaldaba | ---- | 64.30 | 1.05 | 1.44 | 0.57 | 0.48 | 32.16 | 1,430 | ---- | ---- | ---- |
| Katali | ---- | 68.24 | 0.81 | 0.89 | 0.35 | 0.41 | 29.30 | 1,287 | ---- | ---- | ---- |
| Payyang | ---- | 68.70 | 0.72 | 1.53 | 0.64 | ---- | 28.41 | 1.287 | ---- | ---- | ---- |
| Petri | ---- | 73.82 | 0.65 | 1.02 | 0.43 | 0.30 | 24.78 | 1,069 | ---- | ---- | ---- |
| Pinfita | ---- | 63.66 | 0.94 | 1.11 | 0.85 | ---- | 23.44 | 1,496 | ---- | ---- | ---- |
| Pink (Guam) | ---- | 73.80 | 0.92 | 1.72 | 0.14 | ---- | 23.42 | 1,044 | ---- | ---- | ---- |
| San Juan | ---- | 64.48 | 0.52 | 0.93 | 2.31 | 0.52 | 31.24 | 1,041 | ---- | ---- | ---- |
| Sinamba | ---- | 67.10 | 0.78 | 1.78 | 0.58 | ---- | 29.76 | 1,410 | ---- | ---- | ---- |
| Sinangli | ---- | 72.42 | 0.74 | 1.40 | 1.04 | ---- | 24.40 | 1,155 | ---- | ---- | ---- |
| Toybok | ---- | 70.89 | 0.83 | 1.04 | 0.25 | 0.26 | 26.83 | 1,173 | ---- | ---- | ---- |
| Bignay | [illegible] | | | | | | | | | | |
| Bika | 23.95 | 89.05 | 0.31 | 1.61 | 1.17 | 0.21 | 7.65 | 4,885 | ---- | ---- | ---- |
| Bilimbi | ---- | 90.6 | 0.511 | 0.84 | ---- | ---- | ---- | ---- | ---- | ---- | ---- |
| Calumpit[c] | 37.50 | 21.23 | 5.23 | 4.13 | 5.35 | 6.89 | 57.17 | 3,010 | ---- | ---- | ---- |
| Camanchili[c] | 47.47 | 78.28 | 0.47 | 2.47 | 0.34 | 1.30 | 17.14 | 840 | ---- | ---- | ---- |
| Caimito | 13.10 | 88.53 | 0.39 | 2.34 | 1.38 | 0.86 | 6.50 | 392 | ---- | ---- | ---- |
| Camias | ---- | 94.78 | 0.38 | 0.68 | 1.39 | 0.61 | 2.16 | 250 | ---- | ---- | ---- |
| Cantaloupe | 25.00 | 94.80 | 0.52 | 0.24 | ---- | ---- | 2.76 | ---- | " | " | " |
| Carambola: Sweet | ---- | 91.78 | 0.42 | 0.72 | 0.75 | 1.23 | 5.10 | 231 | ---- | ---- | ---- |
| Sour | ---- | 90.60 | 0.51 | 0.84 | ---- | ---- | 2.88 | ---- | ---- | ---- | ---- |
| Carissa carandas | ---- | 83.73 | 0.85 | 1.16 | 2.24 | 1.15 | 10.87 | 729 | ---- | ---- | ---- |
| Casoy | 10.00 | 86.00 | 0.37 | 0.71 | ---- | ---- | ---- | ---- | ---- | ---- | ---- |
| Cattley: Red | 1.40 | 81.73 | 0.74 | 1.03 | 0.55 | 6.14 | ---- | ---- | ---- | ---- | ---- |
| Yellow | 1.99 | 79.92 | 0.63 | ---- | 0.42 | 5.87 | ---- | ---- | ---- | ---- | ---- |
| Catmon | 62.00 | 91.90 | 0.30 | 0.25 | ---- | ---- | ---- | ---- | ---- | ---- | ---- |
| Ceriman | 26.12 | 77.88 | 0.85 | 0.57 | 1.81 | 0.57 | 16.64 | 737 | ---- | ---- | ---- |
| Chayote | ---- | 87.79 | 0.39 | 1.37 | 0.67 | 0.86 | 8.92 | 471 | ---- | ---- | ---- |
| Cherimoya | 15.77 | 66.19 | 0.67 | 1.84 | 0.14 | 4.29 | 18.47 | 822 | ---- | ---- | ---- |
| Chico | 15.00 | 72.50 | 0.53 | 0.51 | ---- | ---- | ---- | ---- | " | ---- | " |
| Chico mamey | 34.97 | 70.27 | 0.82 | 1.09 | ---- | ---- | ---- | ---- | ---- | ---- | ---- |
| Ciruelas | 42.55 | 76.60 | 0.90 | 0.63 | 0.09 | 0.62 | 21.16 | 900 | ---- | ---- | ---- |
| Condol | 10.00 | 95.00 | 0.40 | 0.69 | ---- | ---- | ---- | ---- | ---- | ---- | ---- |
| Cubilita blancoi | ---- | 60.49 | 1.20 | 3.31 | 4.42 | 2.48 | 28.10 | 1,800 | ---- | ---- | ---- |
| Cyndra, C. betacea | ---- | 84.41 | 0.93 | 1.09 | 0.34 | 1.97 | 11.26 | 538 | ---- | ---- | ---- |
| Datiles | 20.00 | 75.40 | 0.80 | 1.98 | ---- | ---- | ---- | ---- | ---- | ---- | ---- |
| Duhat | 25.00 | 80.80 | 0.70 | 0.81 | 0.85 | 0.61 | 16.23 | 777 | ' | - | ---- |
| Durian | 70.00 | 55.50 | 1.24 | 2.31 | ---- | ---- | 24.65 | ---- | ---- | ---- | ---- |
| Eugenia polycephaloides | ---- | 87.25 | 0.41 | 0.78 | 1.51 | 1.56 | 3.59 | 487 | ---- | ---- | ---- |
| Genipa | 30.00 | ---- | 0.20 | 0.51 | ---- | ---- | 15.51 | ---- | ---- | ---- | ---- |
| Genetum indicum | ---- | 45.06 | 1.35 | 3.96 | 0.12 | 1.14 | 48.37 | 2,203 | ---- | ---- | ---- |
| Guama | ---- | 84.82 | 0.53 | 0.72 | 0.36 | ---- | 13.57 | 648 | ---- | ---- | ---- |
| Guava | ---- | 81.65 | 0.73 | 0.95 | 0.07 | 6.84 | 9.75 | 450 | ---- | ---- | " |
| Guayabano(guanabano) | 31.00 | 77.40 | 0.85 | 0.38 | ---- | ---- | ---- | ---- | ---- | ---- | ---- |
| Hevi | ---- | 59.65 | 0.65 | 0.80 | 1.79 | 3.60 | 33.51 | 1,573 | ---- | ---- | ---- |
| Hondapara | ---- | 90.35 | 0.47 | Trace | 1.01 | ---- | ---- | ---- | ---- | ---- | ---- |
| Iba | ---- | 89.63 | 0.84 | 0.90 | 0.76 | 0.58 | 7.29 | 406 | ---- | ---- | ---- |

TABLE 2 - Fruits and fruit products (continued)

| Sample | Waste or refuse | Edible portion: Moisture | Ash | Protein | Fat | Crude fiber | Carbohydrate | Fuel value per kilo | Vitamins: A | B & G | C |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Icaco | ----- | 87.17 | 0.58 | 0.57 | 0.48 | 0.58 | 6.62 | 330 | ---- | ---- | ---- |
| Jack-fruit | ----- | 65.60 | 1.23 | 0.42 | ---- | ---- | 22.45 | ---- | " | ---- | ---- |
| Jack-fruit-pulp | ----- | 81.01 | ---- | 1.44 | 0.45 | ---- | 15.15 | 704 | " | ---- | ---- |
| Kalamondin (kalamansi) whole fruit | ----- | 87.12 | 0.54 | 0.86 | 2.41 | ---- | 3.27 | 380 | " | " | " |
| Kalamondin pulp | 22.00 | 85.76 | 0.68 | 1.40 | ---- | ---- | 0.41 | ---- | ---- | ---- | ---- |
| Kalapi: Sweet | ----- | 78.46 | 1.33 | 1.16 | 0.41 | 0.42 | 18.22 | 872 | ---- | ---- | ---- |
| Sour | ----- | 82.75 | 0.83 | 0.86 | 0.36 | 0.45 | 14.75 | 705 | ---- | ---- | ---- |
| Kambog | ----- | 93.39 | 0.34 | 0.53 | 0.11 | 0.32 | 5.31 | 261 | ---- | ---- | ---- |
| Karanda | ----- | 83.17 | 0.78 | 0.66 | 4.63 | 1.81 | 7.86 | 753 | ---- | ---- | ---- |
| Ketembilla | ----- | 89.81 | 0.63 | 0.17 | 3.89 | 0.23 | 5.27 | 564 | ---- | ---- | ---- |
| Lacuma nervosa | ----- | 62.19 | 0.11 | 1.14 | 1.18 | 1.29 | 34.09 | 1,607 | ---- | ---- | ---- |
| Lanzones[c] | 40.87 | 86.70 | 0.65 | 0.76 | 0.14 | 0.44 | 11.31 | 510 | ---- | ---- | ---- |
| Lemon | ----- | 89.30 | 0.50 | 1.00 | 0.70 | 1.10 | 7.40 | 398 | " | " | - |
| Lilikoi | ----- | 86.51 | 0.67 | 0.81 | 0.70 | ---- | 8.08 | 418 | ---- | ---- | ---- |
| Lime: Everglade | ----- | 90.27 | ---- | ---- | ---- | ---- | 0.21[b] | 6.64 | ---- | ---- | " |
| Tahiti | ----- | 91.53 | ---- | ---- | ---- | ---- | [a]0.69[b] | 6.84 | ---- | ---- | " |
| Trinidad | ----- | 90.19 | ---- | ---- | ---- | ---- | [a]0.06[b] | 7.15 | ---- | ---- | " |
| Limoncito | 20.00 | 80.80 | 1.05 | 1.40 | ---- | ---- | 4.90 | ---- | ---- | ---- | " |
| Lipoti | ----- | 85.13 | 0.72 | 0.54 | 2.12 | 2.24 | 0.81 | 483 | ---- | ---- | ---- |
| Lichi (dried) | 41.60 | 17.90 | 1.50 | 2.90 | 0.20 | ---- | 77.50 | 3,234 | ---- | ---- | ---- |
| Longan | 41.48 | 82.39 | ---- | 1.41 | 0.45 | 0.63 | 8.34 | 430 | ---- | ---- | ---- |
| Loquat (Thales) | 30.00 | 89.00 | 0.29 | 0.35 | 0.06 | 0.30 | 999 | 419 | ---- | ---- | ---- |
| Mabolo: Valeska | ----- | 83.02 | 0.43 | 2.79 | 0.22 | 1.78 | 11.78 | 618 | ---- | -to' | ---- |
| Seedless | ----- | 71.95 | 0.86 | 0.25 | 0.25 | 1.73 | 24.01 | 1,043 | ---- | ---- | ---- |
| Makopa | 10.00 | 91.40 | 0.27 | 0.50 | ----- | ----- | ----- | ----- | ---- | ---- | ---- |
| Malipi | 8.35 | 92.10 | 0.62 | 0.21 | ----- | ----- | 2.44 | ----- | ---- | ---- | ---- |
| Maney | 39.30 | 85.88 | 0.30 | 0.48 | ----- | ----- | 9.41 | ----- | ---- | ---- | ---- |
| Mandarin, pulp | ----- | 87.93 | 0.52 | 1.08 | ----- | ----- | 8.71 | ----- | ---- | ---- | ---- |
| Mango: fresh ripe[c] | 26.28 | 82.08 | 0.39 | 3.45 | 0.99 | 0.42 | 12.67 | 750 | " | ---- | ---- |
| fresh green[c] | 24.51 | 87.33 | 0.38 | 0.69 | 0.08 | 0.93 | 10.59 | 470 | " | ---- | ---- |
| Unidentified | ----- | 79.74 | 0.50 | 0.33 | 0.31 | 0.48 | 18.34 | 814 | " | ---- | ---- |
| Carabao, ripe | 27.00 | 82.80 | 0.45 | 0.22 | ----- | ----- | 12.79 | ----- | " | ---- | ---- |
| Carabao, green | 30.00 | 86.30 | 0.25 | 0.38 | ----- | ----- | ----- | ----- | " | ---- | ---- |
| Pico | 27.00 | 76.40 | 0.40 | 0.75 | ----- | ----- | 17.66 | ----- | " | ---- | ---- |
| Pahutan | 40.00 | 74.30 | 0.53 | 1.12 | ----- | ----- | 16.76 | ----- | " | ---- | ---- |
| Amini | ----- | 79.72 | 0.42 | 0.83 | 0.25 | 0.61 | 17.21 | 798 | " | ---- | ---- |
| Sufaida, ripe | ----- | 81.05 | 0.51 | 0.16 | 0.39 | ----- | 17.89 | 776 | " | ---- | ---- |
| Mangosteen | 69.00 | 80.20 | 0.23 | 0.50 | ----- | ----- | 16.82 | ----- | - | ---- | ---- |
| Maron | ----- | 84.48 | 0.74 | 0.33 | 1.46 | 1.86 | 11.03 | 584 | ---- | ---- | ---- |
| Matasano | ----- | 72.64 | 0.44 | 0.64 | 0.46 | 1.26 | 24.56 | 1,049 | ---- | ---- | ---- |
| Lunao | ----- | 42.50 | 1.87 | 7.17 | 0.055 | 0.79 | 37.12 | 2,220 | ---- | -to' | ---- |
| Mombin | 52.59 | 88.53 | 0.65 | 1.37 | 0.56 | 1.16 | 9.41 | 481 | ---- | ---- | ---- |
| Momordica cochinchinensis | 92.6 | 0.41 | 0.87 | 0.48 | 0.94 | 4.70 | 312 | ---- | ---- | ---- | ---- |
| Muti(Solanum nigrum) | ----- | 86.02 | 1.19 | 2.51 | 0.56 | 4.15 | 557 | 383 | ---- | ---- | ---- |
| Naranjita pulp | ----- | 87.30 | 1.36 | 1.19 | ----- | ----- | ----- | ----- | " | " | "" |
| Nephelium mutabile | ----- | 84.54 | 0.45 | 0.82 | 0.55 | 0.14 | 12.86 | 618 | ---- | ---- | ---- |
| Papache | ----- | 71.20 | 0.80 | 1.53 | 0.55 | 0.95 | 24.97 | 1,138 | ---- | ---- | ---- |
| Papaya | 32.84 | 88.27 | 0.88 | 0.75 | 0.20 | 1.17 | 8.73 | 410 | " | " | "" |
| Perunkila | ----- | 83.24 | 0.66 | 0.39 | 2.57 | 0.62 | 12.52 | 745 | ---- | ---- | ---- |
| Persimmon | ----- | 66.10 | 0.90 | 0.80 | 0.70 | 1.80 | 29.79 | 1,282 | ---- | ---- | " |
| Phalsa | ----- | 81.13 | 1.24 | 1.58 | 1.82 | 1.77 | 12.46 | 724 | ---- | ---- | ---- |
| Pineapple: Native | 25.56 | 83.24 | 0.59 | 0.43 | 0.28 | 0.45 | 15.01 | 659 | " | " | "" |
| Hawaiian | ----- | 89.30 | 0.30 | 0.40 | 0.30 | 0.4 | 9.70 | 400 | " | " | "" |
| Pitanga | 15.62 | 90.70 | 0.34 | 1.01 | 0.66 | 0.54 | 6.06 | 341 | ---- | ---- | ---- |
| Poha | ----- | 82.24 | 0.82 | 2.00 | 0.29 | 3.82 | 7.74 | 415 | ---- | ---- | ---- |
| Pomegranate: | | | | | | | | | | | |
| Whole fruit | 43.94 | 73.67 | 0.59 | 1.48 | 0.47 | 5.29 | 12.21 | 589 | ---- | ---- | ---- |
| Pulp | 53.12 | 82.48 | 0.73 | 0.52 | 0.30 | 0.32 | 16.07 | 690 | ---- | ---- | ---- |
| Pomelo | 39.00 | 87.70 | 0.63 | 0.66 | ----- | ----- | ----- | ----- | ---- | ---- | ---- |
| Purslane | ----- | 93.14 | 1.52 | 1.02 | 0.50 | ----- | ----- | ----- | ---- | ---- | ---- |
| Rimas | ----- | 89.16 | 0.88 | 2.24 | 0.55 | 1.09 | 6.08 | 400 | ---- | " | ---- |
| Rukam | ----- | 76.93 | 0.77 | 11.72 | 1.26 | 3.71 | 15.61 | 828 | ---- | ---- | ---- |

TABLE 2 - Fruits and fruit products (continued)

| Sample | Waste: or refuse | Edible portion: Moisture | Ash | Proteins | Fat | Crude fiber | Carbohydrate | Fuel value per kilo | Vitamins: A | B & G | C |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sandia | 49.00 | 91.30 | 0.18 | 0.60 | ----- | ----- | 5.98 | ----- | ---- | ---- | ---- |
| Santol | 34.34 | 85.07 | 0.88 | 0.89 | 1.43 | 2.30 | 11.43 | 640 | ---- | " | ---- |
| Serali | ----- | 66.42 | 1.09 | 0.69 | 1.67 | ----- | 768 | ----- | ---- | ---- | ---- |
| Strawberry | ----- | 90.40 | 0.60 | 1.00 | 0.60 | 1.40 | 6.00 | 333 | " | " | "" |
| Sugar apple | 44.27 | 75.18 | 0.67 | 1.53 | 0.54 | 1.22 | 18.15 | 835 | ---- | ---- | ---- |
| Tamarind: Ripe | 50.00 | 17.80 | 3.16 | 3.00 | ----- | ----- | 41.11 | ----- | ---- | ---- | ---- |
| Green | None | 78.15 | 1.08 | 2.31 | 0.93 | 5.77 | 14.19 | 760 | ---- | ---- | ---- |
| Tersana | 26.13 | 91.39 | 0.13 | 0.21 | 0.03 | 0.56 | 6.68 | 286 | ---- | ---- | ---- |
| Tibig | None | 77.64 | 1.02 | 1.42 | 0.75 | ----- | 11.94 | 601 | ---- | ---- | ---- |
| Tomato, Camatis | ----- | ----- | ----- | ----- | ----- | ----- | ----- | ----- | " | " | "" |
| Tungulu | 21.88 | 78.45 | 0.43 | 0.56 | 1.03 | 0.91 | 12.00 | 594 | ---- | ---- | ---- |
| Vilatti | ----- | 70.81 | 1.58 | 2.93 | 3.04 | 10.50 | 11.14 | 859 | ---- | ---- | ---- |
| Yambo. | 37.06 | 84.15 | 0.29 | 0.79 | 0.18 | 0.98 | 11.73 | 517 | ---- | ---- | ---- |
| Zapote (D.ebenaster) | ----- | 81.54 | 0.49 | 1.15 | 0.26 | 0.43 | 16.13 | 733 | ---- | ---- | ---- |

a-Sugar b-Citric acid, percent. c-Santos and Collado, The Chem. Com. of P.I. Food Materials

TABLE 3.....Grain products

(Analyses by the Bureau of Science, except as noted. Vitamin content mostly from Smith, United States Department of Agriculture)

| Sample | Waste or refuse | Edible portion: Moisture | Ash | Proteins | Fat | Crude fiber | Carbohydrate | Fuel value per kilo | Vitamin A | Vitamin B & G | Vitamin C |
|---|---|---|---|---|---|---|---|---|---|---|---|
| A. Grains & Meals | | Per cent | Per cent | Per cent | Per cent | Per cent | Per cent | Calories | | | |
| Adlay (a) | | 12.27 | 0.67 | 9.11 | 0.45 | 0.34 | 77.16 | 3,580 | | | |
| Barley meal & flour (b) | | 11.0 | 2.6 | 10.5 | 2.2 | 6.5 | 72.8 | 3,640 | | | |
| Binlid (a) | | 12.23 | 8.74 | 5.70 | 1.08 | 13.03 | 58.22 | 2,720 | | | |
| Buckwheat flour (b) | | 13.6 | 0.9 | 6.4 | 1.2 | 0.4 | 77.9 | 3,600 | | | |
| Corn (maize): Native | | 10.93 | 1.36 | 9.88 | 4.17 | | 77.95 | 3,743 | | | |
| Flour (b) | | 12.6 | 0.6 | 7.1 | 1.3 | 0.9 | 78.4 | 3,650 | | | - |
| Meal unbolted (b) | | 10.3 | 1.2 | 7.5 | 4.2 | | 65.9 | 3,430 | | | |
| On Cob (a) | 57.28 | 68.43 | 0.86 | 4.81 | 0.79 | 1.51 | 23.60 | 1,240 | | | |
| Pop (b) | | 4.3 | 1.3 | 10.7 | 5.0 | 1.4 | 78.7 | 4,160 | | | |
| Oat meal (a) | | 7.3 | 1.9 | 16.1 | 7.2 | 0.6 | 67.5 | 3,660 | -to- | | - |
| Rice: Palay (a) | 27.13 | 12.63 | 1.45 | 7.56 | 1.79 | 0.93 | 75.64 | 3,580 | | | |
| Bigas na patay (a) | | 13.63 | 0.91 | 9.34 | 0.60 | 0.38 | 75.14 | 3,520 | | | |
| Rough | | 16.27 | 5.66 | 5.25 | 3.21 | 8.60 | 61.01 | 3,020 | | | |
| Rough (a) (initiew) | | 11.84 | 6.25 | 5.97 | 1.37 | 9.49 | 65.08 | 3,040 | | | |
| Powdered (a) | | 12.86 | 1.09 | 8.97 | 0.93 | 1.35 | 74.80 | 3,520 | | | |
| Polished | | 11.24 | 0.76 | 7.05 | 1.40 | 0.39 | 79.16 | 3,592 | - | - | - |
| Unpolished | | 12.26 | 1.45 | 7.93 | 2.03 | ---- | 74.98 | 3,588 | | | |
| *Pinipig glutinous, inilangilang variety* | | 13.29 | 0.94 | 9.28 | 1.20 | ---- | ---- | ---- | | | |
| Glutinous, pinalapa, pinipig | | 14.41 | 0.92 | 8.89 | 1.59 | ---- | ---- | ---- | | | |
| Polishings, "Hambas" | | 8.69 | 12.51 | 14.44 | 13.94 | 9.77 | 40.65 | ---- | | | |
| Polishings, extract | | 29.63 | 3.54 | 7.56 | ---- | ---- | ---- | ---- | | | |
| Rolled oats (a) | | 7.7 | 2.1 | 16.7 | 7.3 | 1.3 | 66.2 | 4,110 | | | |
| Rye flour (b) | | 12.9 | 0.7 | 6.8 | 0.9 | 0.4 | 78.7 | 3,620 | | | |
| Wheat (a) | 62.57 | 77.84 | 3.66 | 8.57 | 4.30 | ---- | 5.85 | 980 | | | - |
| Wheat flour: grade not stated | | 10.62 | 1.82 | 12.23 | 1.77 | ---- | 71.18 | 3,584 | - | -to- | - |
| Gluten (b) | | 12.0 | 0.9 | 14.2 | 1.80 | 0.6 | 71.1 | 3,700 | | | |
| Graham (a) | | 11.3 | 1.8 | 13.3 | 2.2 | 1.9 | 71.4 | 3,710 | | | - |
| Patent roller process, high grade | | 13.3 | .4 | 11.00 | 0.9 | 0.3 | 74.4 | 3,610 | | | |
| B. Alimentary Pastes | | | | | | | | | | | |
| Bihon | | 16.18 | 0.22 | 9.34 | 1.84 | | 72.42 | 3,523 | | | |
| Macaroni (b) | | 10.3 | 1.3 | 13.4 | 0.9 | | 74.1 | 3,700 | | | |
| Mique | | 16.74 | 2.47 | 7.88 | 1.63 | | 71.26 | 3,397 | | | |
| Misua | | 16.36 | 4.73 | 11.20 | 2.07 | | 65.44 | 3,334 | | | |
| Noodles (b) | | 10.7 | 1.0 | 11.7 | 1.0 | 0.4 | 75.6 | 3,700 | | | |
| Spaghetti (b) | | 10.6 | 0.6 | 12.1 | 0.4 | 0.4 | 76.3 | 3,680 | | | |
| Vermicelli (b) | | 11.0 | 4.1 | 10.9 | 2.0 | | 72.0 | 3,610 | | | |
| C. Wheat preparations, Breakfast foods (b) | | | | | | | | | | | |
| Farina | | 10.9 | 0.4 | 11.0 | 1.4 | 0.4 | 76.3 | 3,740 | | | |
| Flaked | | 8.7 | 2.2 | 13.4 | 1.4 | 1.8 | 74.3 | 3,750 | | | |
| Germ | | 10.4 | 1.1 | 10.5 | 2.0 | 0.9 | 76.0 | 3,760 | | | |
| Gluten | | 8.9 | 1.2 | 13.6 | 1.7 | 1.3 | 74.6 | 3,810 | | | - |
| Shredded | | 8.1 | 2.1 | 10.5 | 1.4 | 1.7 | 77.9 | 3,770 | | | |
| Bread: Brown | | 43.6 | 2.1 | 5.4 | 1.8 | ---- | 47.1 | 2,330 | | | |
| Corn | | 38.9 | 2.2 | 7.9 | 4.7 | ---- | 46.3 | 2,670 | | | |
| Rye | | 35.7 | 1.5 | 9.0 | 0.6 | 0.5 | 53.2 | 2,620 | | | |
| Wheat, buns | | 29.0 | 0.9 | 6.3 | 6.5 | 0.4 | 57.3 | 3,230 | | | |
| Gluten bread | | 38.2 | 1.3 | 9.3 | 1.4 | ---- | 49.8 | 2,570 | | | |
| Graham bread | | 35.7 | 1.5 | 8.9 | 1.8 | 1.1 | 52.1 | 2,680 | | | |
| Do (c) | | 39.02 | 0.86 | 11.39 | 2.55 | ---- | 46.18 | 2,598 | | | |
| Rolls | | 25.2 | 1.0 | 9.7 | 4.2 | 0.3 | 59.9 | 3,260 | | | |

TABLE 3 .....Grain prducts (continued)

| Sample | Waste: or refuse | Edible portions: Moisture | Ash | Proteins | Fat | Crude fiber | Carbohydrate | Fuel value per kilo | Vitamins: A | B & G | C |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Per cent | Per cent | Per cent | Per cent | Per cent | Per cent | Calories | | | |
| C. Wheat preparation: Breadkfast foods(b) (continued) | | | | | | | | | | | |
| White bread | ----- | 35.6 | 1.2 | 9.3 | 1.2 | 0.5 | 52.7 | 2,670 | ---- | ' | ---- |
| Whole wheat bread | ----- | 38.4 | 1.3 | 8.7 | 0.9 | 1.2 | 49.7 | 2,530 | ' | '' | ---- |
| "Zwie back" | ----- | 5.8 | 1.0 | 9.8 | 9.9 | ----- | 73.5 | 4, 370 | ---- | ---- | ---- |
| Cream Crackers | ----- | 6.8 | 1.7 | 9.7 | 12.1 | 0.6 | 69.7 | 4,420 | ---- | ---- | ---- |
| Graham crackers | ----- | 5.4 | 1.4 | 10.0 | 9.4 | 1.5 | 73.8 | 4,340 | ---- | ---- | ---- |
| Oat meal crackers | ----- | 6.3 | 1.8 | 11.8 | 11.1 | 1.9 | 69.0 | 4,370 | ---- | ---- | ---- |
| Oyster crackers | ----- | 4.8 | 2.9 | 11.3 | 10.5 | 0.2 | 70.5 | 4,360 | ---- | ---- | ---- |
| Saltines | ----- | 5.6 | 2.6 | 10.6 | 12.7 | 0.5 | 68.5 | 4,450 | ---- | ---- | ---- |
| Soda crackers | ----- | 5.9 | 2.1 | 9.8 | 9.1 | 0.3 | 73.1 | 4,270 | ---- | ---- | ---- |
| Water crackers | ----- | 6.4 | 1.2 | 11.7 | 5.0 | 0.4 | 75.7 | 4,070 | ---- | ---- | ---- |
| Baker's cake | ----- | 31.4 | 0.8 | 6.3 | 4.6 | ----- | 56.9 | 3,040 | ---- | ---- | ---- |
| Chocolate layer cake | ----- | 20.5 | 1.1 | 6.2 | 8.1 | ----- | 64.1 | 3,660 | ---- | ---- | ---- |
| Coffee cake | ----- | 21.3 | 0.9 | 7.1 | 7.5 | 0.4 | 63.2 | 3,610 | ---- | ---- | ---- |
| Cup cake | ----- | 15.6 | 1.0 | 5.9 | 9.0 | 0.3 | 68.5 | 3,920 | ---- | ---- | ---- |
| Fruit cake | ----- | 17.3 | 1.8 | 5.9 | 10.9 | ----- | 64.1 | 3,910 | ---- | ---- | ---- |
| Ginger bread | ----- | 18.8 | 2.9 | 5.8 | 9.0 | 0.9 | 63.5 | 3,710 | ---- | ---- | ---- |
| Sponge cake | ----- | 15.5 | 1.8 | 6.3 | 10.7 | ----- | 65.9 | 3,980 | ---- | ---- | ---- |
| Molasses cookies | ----- | 16.2 | 2.2 | 7.2 | 8.7 | ----- | 75.7 | 4,240 | ---- | ---- | ---- |
| Fig bars | ----- | 16.3 | 2.6 | 6.5 | 8.6 | 1.7 | 69.8 | 3,680 | ---- | ---- | ---- |
| Ginger snaps | ----- | 6.3 | 2.6 | 6.5 | 8.6 | 0.7 | 76.0 | 4,210 | ---- | ---- | ---- |
| Lady fingers. | ----- | 15.0 | 0.6 | 8.8 | 5.0 | 0.2 | 70.6 | 3,740 | ---- | ---- | ---- |
| Wafers: Miscellaneous | ----- | 6.6 | 1.6 | 8.7 | 8.6 | 0.4 | 74.5 | 4,240 | ---- | ---- | ---- |
| Vanilla | ----- | 6.7 | 1.1 | 6.6 | 14.0 | 0.3 | 71.5 | 4,540 | ---- | ---- | ---- |
| Doughnuts | ----- | 18.3 | 0.9 | 7.6 | 21.0 | 0.7 | 53.1 | 4,440 | ---- | ---- | ---- |
| Pie: Apple | ----- | 42.5 | 1.8 | 3.1 | 9.8 | ----- | 42.8 | 2,820 | ---- | ---- | ---- |
| Cream | ----- | 32.0 | 1.0 | 4.4 | 11.4 | ----- | 51.2 | 3,360 | ---- | ---- | ---- |
| Custard | ----- | 62.4 | 1.0 | 4.2 | 6.3 | ----- | 26.1 | 1,840 | ---- | ---- | ---- |
| Lemon | ----- | 47.4 | 1.5 | 3.6 | 10.1 | ----- | 37.4 | 2,640 | ---- | ---- | ---- |
| Mince | ----- | 41.3 | 2.5 | 5.8 | 12.3 | ----- | 38.1 | 2,980 | ---- | ---- | ---- |
| Raisin. | ----- | 37.0 | 1.5 | 3.0 | 11.3 | ----- | 47.2 | 3,130 | ---- | ---- | ---- |
| Squash. | ----- | 64.2 | 1.3 | 4.4 | 8.4 | ----- | 21.7 | 1,860 | ---- | ---- | ---- |
| Pudding: Rice custard | ---- | 59.4 | 0.6 | 4.0 | 4.6 | ----- | 31.4 | 1,830 | ---- | ---- | ---- |
| Tapioca | ----- | 64.5 | 0.8 | 3.3 | 3.2 | ----- | 28.2 | 1,600 | ---- | ---- | ---- |

(a) Santos and Adriano. The Chemical Composition of Philippine Food Materials.
(b) Atwater and Bryant, Composition of Amer. Food Material. U. S. Dept. of Agr. Bul. 28.
(c) Sample purchased from Sanitary Bakery, Manila.

TABLE 4. - Milk and Its Products

(Analyses by the Bureau of Science, excepted as noted. Vitamin content mostly from Smith. United States Department of Agriculture. Varieties of cheese by Doane and Lawson, United States Department of Agriculture.)

| Sample | Edible portion | | | | | | Fuel value | Vitamins | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Moisture | Ash | Proteins | Fat | Crude fiber | Carbohydrate | per kilo | A | B & G | C |
| | Per cent | Per cent | Per cent | Per cent | Per cent | Per cent | Calories | | | |
| A. Milk, Fresh. | | | | | | | | | | |
| Cow | 87.74 | 0.64 | 3.18 | 3.79 | ----- | 4.65 | 674 | ''' | '' | '' |
| Carabao | 79.68 | 0.83 | 5.38 | 9.51 | ----- | 4.60 | 1,294 | ---- | ---- | ---- |
| Goat. | 86.69 | 0.60 | 3.35 | 5.02 | ----- | 4.34 | 782 | ''' | '' | '' |
| Indian Buffalo. | 82.83 | 0.64 | 4.13 | 6.15 | ----- | 6.25 | 998 | ---- | ---- | ---- |
| B. Sterilized Natural Canned Milk | | | | | | | | | | |
| "Milkmaid" | 87.51 | 0.73 | 3.14 | 3.52 | ----- | 5.10 | 665 | ''' | '' | '' |
| "Bernese Alps" | 87.48 | 0.68 | 3.22 | 3.70 | ----- | 4.92 | 678 | ''' | '' | '' |
| "Anglo Swiss" | 87.50 | 0.61 | 3.07 | 3.35 | ----- | 5.47 | 662 | ''' | '' | '' |
| "Bebe" | 87.76 | 0.70 | 3.08 | 3.34 | ----- | 5.12 | 647 | ''' | '' | '' |
| "Hollandia" | 87.53 | 0.72 | 3.16 | 3.52 | ----- | 5.07 | 665 | ''' | '' | '' |
| "Bear" small can | 87.08 | 0.76 | 3.39 | 3.70 | ----- | 5.07 | 691 | ''' | '' | '' |
| "Danish Dairy Milk Co." | 87.59 | 0.69 | 3.15 | 3.52 | ----- | 5.05 | 664 | ''' | '' | '' |
| "Bear" large can | 87.18 | 0.76 | 3.66 | 3.70 | ----- | 4.70 | 687 | ''' | '' | '' |
| "Lion" Menzi & Co.. | 88.57 | 0.73 | 2.94 | 4.24 | ----- | 4.24 | 689 | ''' | '' | '' |
| "Hum" | 87.81 | 0.75 | 3.39 | 3.52 | ----- | 4.53 | 652 | ''' | '' | '' |
| "Delicia" | 87.66 | 0.61 | 3.34 | 4.05 | ----- | 4.33 | 692 | ''' | '' | '' |
| "Reconstituted milk" | 87.13 | 0.78 | 3.14 | 3.61 | ----- | 5.34 | 683 | ''' | '' | ---- |
| C. Evaporated canned milk | | | | | | | | | | |
| "Alpine" | 73.99 | 1.47 | 6.38 | 7.92 | ----- | 10.24 | 1,418 | ''' | '' | '' |
| "Armour" | 69.71 | 1.49 | 7.12 | 8.10 | ----- | 13.58 | 1,602 | ''' | '' | '' |
| "Carnation" | 73.68 | 1.12 | 6.09 | 8.10 | ----- | 11.01 | 1,454 | ''' | '' | '' |
| "Milkmaid" | 70.31 | 1.72 | 9.35 | 8.80 | ----- | 9.82 | 1,604 | ''' | '' | '' |
| "Merry" | 75.08 | 0.06 | ---- | 7.20 | ----- | ---- | ----- | ''' | '' | '' |
| "Forget-me-not" | 73.60 | 1.35 | 6.69 | 8.10 | ----- | 10.26 | 1,448 | ''' | '' | '' |
| "Pet" | 71.60 | 1.67 | 7.25 | 8.80 | ----- | 10.68 | 1,554 | ''' | '' | '' |
| "Veribest" | 73.13 | ---- | ---- | 8.45 | ----- | ----- | ----- | ''' | '' | '' |
| "Meiji" | 77.12 | 1.40 | 5.06 | 6.87 | ----- | 9.55 | 1,238 | ''' | '' | '' |
| D. Sweetened Condensed Canned Milk | | | | | | | | | | |
| "Carnation" | 25.15 | 1.58 | 8.30 | 8.80 | ----- | 56.17 | 3,462 | ''' | '' | '' |
| "Merry" | 25.52 | 1.84 | 6.45 | 10.08 | ----- | 56.11 | 3,502 | ''' | '' | '' |
| "Leche Danesa" | 22.75 | 1.70 | 8.75 | 7.05 | ----- | 59.75 | 3,464 | ''' | '' | '' |
| "Gold Lines" | 23.25 | 1.69 | 9.07 | 9.18 | ----- | 56.56 | 3,545 | ''' | '' | '' |
| "Dragon" | 20.74 | 2.06 | 9.91 | 9.09 | ----- | 58.20 | 3,638 | ''' | '' | '' |
| "Bear" | 23.64 | 1.71 | 9.09 | 9.18 | ----- | 56.38 | 3,538 | ''' | '' | '' |
| "Star" | 19.85 | 1.30 | 7.68 | 9.00 | ----- | 62.17 | 3,701 | ''' | '' | '' |
| "Brums" | 20.24 | 1.67 | 8.51 | 7.11 | ----- | 62.47 | 3,571 | ''' | '' | '' |
| "Milkmaid" | 21.47 | 1.58 | 7.08 | 7.92 | ----- | 61.95 | 3,567 | ''' | '' | '' |
| "Queen" | 22.05 | 2.28 | 9.66 | 10.80 | ----- | 55.20 | 3,664 | ''' | '' | '' |
| "Armour" | 20.81 | 1.31 | 8.44 | 8.10 | ----- | 61.34 | 3,614 | ''' | '' | '' |
| "Diploma" | 26.75 | 1.60 | 7.76 | 9.25 | ----- | 54.64 | 3,419 | ''' | '' | '' |
| "My Boy" | 22.55 | 1.49 | 8.44 | 8.91 | ----- | 58.61 | 3,578 | ''' | '' | '' |
| "Milkland" | 25.06 | 1.51 | 8.08 | 9.56 | ----- | 55.99 | 3,497 | ''' | '' | '' |
| E. - Dried Milk (Powdered) | | | | | | | | | | |
| Klim whole milk | 1.00 | 5.45 | 26.64 | 27.56 | ----- | 39.35 | 5,269 | ''' | '' | '' |
| "Triangle Danish full cream | 0.14 | 5.46 | 24.38 | 30.00 | ----- | 40.02 | 5,430 | ''' | '' | '' |
| "Lactogen" | 7.22 | 5.20 | 10.28 | 24.40 | ----- | 52.96 | 4,822 | ''' | '' | '' |
| "Morinaga's" | 3.26 | 5.92 | 23.79 | 16.38 | ----- | 50.65 | 4,575 | ''' | '' | '' |





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Table 4 - Milk and Its Products (continued)

| Sample | Edible Portion | | | | | | Fuel value per kilo | Vitamins | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Moisture | Ash | Proteins | Fat | Crude fiber | Carbohydrate | | A | B & G | C |
| | Per cent | Per cent | Per cent | Per cent | Per cent | Percent | Calories | | | |
| F. Dried Butter Milk | | | | | | | | | | |
| "Eledon acid butter milk" | 2.25 | 4.71 | 21.81 | 18.35 | Lactic acid 4.05 | 58.83 | 5,013 | | | to |
| G. Butter | | | | | | | | | | |
| Butter | 12.01 | 3.22 | 1.02 | 83.75 | ----- | ----- | 7,830 | | ----- | ----- |
| Oleomargarine | 11.43 | 2.08 | 0.46 | 85.47 | ----- | 0.56 | 7,990 | | - | - |
| H. Cream | | | | | | | | | | |
| Cream Milk "Nestles" | 67.15 | 5.10 | 3.13 | 27.60 | ----- | ----- | ----- | | | to |
| "Keep Sweat cream milk" | 68.73 | ---- | 3.94 | 25.20 | ----- | ----- | ----- | | | to |
| "Bear" | 57.52 | 0.42 | 2.09 | 37.61 | ----- | 2.36 | ----- | | | to |
| "Lion" | 64.65 | 0.35 | 2.05 | 32.40 | ----- | 0.55 | ----- | | | to |
| "Valkyrie" | 63.04 | 0.68 | 2.80 | 30.60 | ----- | 2.88 | ----- | | | to |
| I. Cheese | | | | | | | | | | |
| *Cebu* | *46.16* | *4.33* | *23.26* | *23.25* | ----- | *3.00* | *3,240* | ---- | ---- | ---- |
| *Santa Cruz* | *51.83* | *4.52* | ----- | *29.10* | ----- | ---- | ----- | ---- | ---- | ---- |
| *Meycauayan* | *61.69* | *2.93* | *11.79* | *20.50* | ----- | *3.09* | *2,520* | ---- | ---- | ---- |
| *"FLAMINGO" Cheese variety (a)* | | | | | | | | | | |
| Camombert | 47.88 | 4.11 | 22.21 | 26.32 | ----- | ----- | ----- | ---- | ---- | ---- |
| Cheddar (American) | 36.84 | 5.61 | 23.72 | 33.83 | ----- | ----- | ------ | to | ---- | ---- |
| Cheddar skimmed | 57.04 | 3.76 | 32.09 | 4.88 | ----- | ----- | ----- | ---- | ---- | ---- |
| Cheddar partly skimmed | 38.91 | 3.74 | 35.38 | 18.16 | ----- | ----- | ----- | ---- | ---- | ---- |
| Club | [illegible] | | | | | | | | | |
| Cottage | 69.82 | 1.91 | 23.26 | 1.03 | ----- | ----- | ----- | ---- | ---- | ---- |
| Cream, English | 36.49 | 0.82 | 5.25 | 56.08 | ----- | 1.27 | ----- | ---- | ---- | ---- |
| Cream, French Demisel | 42.74 | 1.88 | 14.49 | 39.88 | ----- | ----- | ----- | ---- | ---- | ---- |
| Danish export | 45.99 | 3.63 | 30.01 | 13.41 | ----- | 5.10 | ----- | ---- | ---- | ---- |
| Edam | 51.66 | 6.04 | 26.82 | 11.85 | ----- | ----- | ----- | ---- | ---- | ---- |
| Gorgonzola | 33.72 | 3.52 | 28.39 | 33.60 | ----- | ----- | ----- | ---- | ---- | ---- |
| Edam (American) | 38.07 | 6.19 | 30.89 | 22.65 | ----- | ----- | ----- | ---- | ---- | ---- |
| Gouda | 54.79 | 5.52 | 25.94 | 9.02 | ----- | ----- | ----- | ---- | ---- | ---- |
| Gouda, American | 38.11 | 6.07 | 29.58 | 24.50 | ----- | ----- | ----- | ---- | ---- | ---- |
| Gruyere | 29.99 | 3.96 | 33.03 | 28.19 | ----- | 4.82 | ----- | ---- | ---- | ---- |
| Limburg: American | 35.64 | 5.98 | 28.53 | 29.82 | ----- | ----- | ----- | '' | ---- | ---- |
| Imported | 54.74 | 5.17 | 21.27 | 19.61 | ----- | ----- | ----- | '' | ---- | ---- |
| Munster (American) | 40.60 | 4.63 | 22.20 | 31.00 | ----- | ----- | ----- | ---- | ---- | ---- |
| Newchatel | 52.05 | 4.97 | 19.33 | 23.51 | ----- | ----- | ----- | ---- | ---- | ---- |
| Pimento (Cheddar) | 48.01 | 1.91 | 16.01 | 32.25 | ----- | ----- | ----- | ---- | ---- | ---- |
| Roquefort | 38.69 | 6.14 | 21.39 | 32.31 | ----- | ----- | ----- | ---- | ---- | ---- |
| Stibon | 33.57 | 3.00 | 28.96 | 31.19 | ----- | ----- | ----- | ---- | ---- | ---- |
| Swiss: American | 34.28 | 4.16 | 27.55 | 32.60 | ----- | ----- | ----- | ---- | ---- | ---- |
| Imported | 33.91 | 4.16 | 29.22 | 30.61 | ----- | ----- | ----- | to | ---- | ---- |
| Swedish | 34.66 | 3.82 | 23.72 | 32.54 | ----- | 5.02 | ----- | to | ---- | ---- |
| Vendome | 48.69 | 4.43 | 27.97 | 20.90 | ----- | ----- | ----- | ---- | ---- | ---- |
| Vorarlberg | 42.99 | 4.94 | 31.19 | 17.02 | ----- | 3.72 | ----- | ---- | ---- | ---- |
| Vogurt (American) | 47.90 | 2.01 | 17.52 | 30.22 | ----- | ----- | ----- | ---- | ---- | ---- |
| J. Ice Cream | | | | | | | | | | |
| Ice cream | 64.92 | 0.68 | 5.33 | 8.45 | ----- | 20.62 | 1,849 | | '' | ---- |
| Sherbet with milk | 69.99 | 0.60 | 3.09 | 3.52 | ----- | 22.80 | 1,388 | '' | '' | ---- |
| Ice cream powder | 9.71 | 1.91 | 0.88 | 0.46 | ----- | 87.04 | 3,647 | ---- | ---- | ---- |

(a) Varieties of cheese: Descriptions and analyses by Doane and Lawson. United States Department of Agriculture. Bulletin 608.

TABLE 5 - Meat and the Principal Meat Products

(Analyses, except of eggs, from Atwater and Bryant, United States Department of Agriculture
Vitamin content mostly from smith. U. S. Department Agr.)

| Sample | Waste or refuse | Edible portion | | | | | | Fuel value per kilo | Vitamins | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Moisture | Ash | Proteins | Fat | Crude Fiber | Carbohydate | | A | B & G | C |
| A. Beef, Fresh (a) | | Per cent | Per cent | Per cent | Per cent | Per cent | Per cent | Calories | | | |
| Brisket | ----- | 54.6 | 0.9 | 15.8 | 28.5 | ----- | ----- | 2,810 | | | |
| Chuck: Rib | 19.5 | 62.7 | 1.0 | 18.5 | 18.00 | ----- | ----- | 2,870 | | | |
| Shoulder | 15.5 | 68.3 | 0.9 | 19.6 | 11.9 | ----- | ----- | 1, 920 | | | |
| Flank: Fat | ----- | 54.2 | 0.8 | 17.1 | 28.4 | ----- | ----- | 3,360 | | | |
| Loin: Lean | 13.1 | 67.0 | 1.0 | 19.7 | 19.3 | ----- | ----- | 2,000 | | | |
| Boneless strip | ----- | 66.3 | 0.8 | 17.8 | 16.7 | ----- | ----- | 2,300 | | | |
| Porterhouse steak | ----- | 52.4 | 0.8 | 19.1 | 17.9 | ----- | ----- | 2,460 | | | |
| Sirloin Steak | ----- | 54.0 | 0.9 | 16.5 | 16.1 | ----- | ----- | 2,180 | | | |
| Neck, medium | ----- | 63.4 | 0.9 | 20.1 | 16.5 | ----- | ----- | 2,370 | | | |
| Ribs, lean | 22.6 | 67.9 | 1.0 | 19.6 | 12.0 | ----- | ----- | 1,930 | | | |
| Rib rolls | ----- | 69.0 | 1.0 | 20.2 | 10.5 | ----- | ----- | 1,820 | | | |
| Round, lean | 8.1 | 70.0 | 1.1 | 21.3 | 7.9 | ----- | ----- | 1,620 | | | |
| Rump: Lean | 14.0 | 65.7 | 1.0 | 20.9 | 13.7 | ----- | ----- | 2,140 | | | |
| Medium | 20.7 | 56.7 | 0.9 | 17.4 | 25.5 | ----- | ----- | 3,110 | | | |
| Shank: Fore, lean | ----- | 71.5 | 1.0 | 22.0 | 6.1 | ----- | ----- | 1,470 | | | |
| Fore, medium | ----- | 67.9 | 0.9 | 20.4 | 11.6 | ----- | ----- | 1,930 | | | |
| Hind, lean | ----- | 72.5 | 1.0 | 21.9 | 5.4 | ----- | ----- | 1,410 | | | |
| Hind, medium | ----- | 67.8 | 0.9 | 20.9 | 11.5 | ----- | ----- | 1,930 | | | |
| Shoulder and clod | ----- | 73.1 | 1.1 | 20.4 | 5.4 | ----- | ----- | 1,340 | | | |
| Fore quarter, lean. | ----- | 68.6 | 0.8 | 18.9 | 12.2 | ----- | ----- | 1,920 | | | |
| Hind quarter, lean. | ----- | 6613 | 1.0 | 20.0 | 13.4 | ----- | ----- | 2,070 | | | |
| Sides, lean | ----- | 67.2 | 0.9 | 19.3 | 13.2 | ----- | ----- | 2,030 | | | |
| Beef organs (a) | | | | | | | | | | | |
| Brain | ----- | 80.6 | 1.1 | 8.8 | 9.3 | ----- | ----- | 1,230 | | | |
| Heart | ----- | 62.6 | 1.0 | 16.0 | 20.4 | ----- | ----- | 2,570 | ----- | ----- | ----- |
| Kidney | ----- | 76.7 | 1.2 | 16.6 | 4.8 | ----- | 0.4 | 1,150 | ----- | ----- | ----- |
| Liver | ----- | 71.2 | 1.6 | 20.4 | 4.5 | ----- | 1.7 | 1,340 | '' to '' | | ----- |
| Lungs | ----- | 79.7 | 1.0 | 16.4 | 3.2 | ----- | ----- | 970 | ----- | ----- | ----- |
| Marrow | ----- | 3.3 | 1.3 | 2.2 | 92.8 | ----- | ----- | 8,780 | ----- | ----- | ----- |
| Sweet bread | ----- | 70.9 | 1.6 | 16.8 | 12.1 | ----- | ----- | 1.830 | ----- | ----- | ----- |
| Suet | ----- | 13.7 | 0.3 | 4.7 | 81.8 | ----- | ----- | 7,860 | ----- | ----- | ----- |
| Tongue | ----- | 70.8 | 1.0 | 18.9 | 9.2 | ----- | ----- | 1,640 | ----- | ----- | ----- |
| Beef, canned, corned, pickled and dried (a) | | | | | | | | | | | |
| Boiled beef, canned | ----- | 51.8 | 1.3 | 25.5 | 22.5 | ----- | ----- | 3,160 | ----- | ----- | ----- |
| Corned beef, canned | ----- | 51.8 | 4.0 | 26.3 | 18.7 | ----- | ----- | 2,840 | ----- | ----- | ----- |
| Dried beef, canned | ----- | 44.8 | 11.2 | 39.2 | 5.4 | ----- | ----- | 2,130 | ----- | ----- | ----- |
| Tongue, ground, canned | ----- | 49.9 | 4.0 | 21.1 | 25.1 | ----- | ----- | 3,230 | ----- | ----- | ----- |
| Corned beef | ----- | 49.2 | 4.6 | 14.3 | 23.8 | ----- | ----- | 2,820 | ----- | ----- | ----- |
| Tongue, pickled | ----- | 62.3 | 4.7 | 12.8 | 20.5 | ----- | ----- | 2,450 | ----- | ----- | ----- |
| Dried, salted, and smoked beef | ----- | 54.3 | 9.1 | 30.0 | 6.5 | ----- | 0.4 | 1,460 | ----- | ----- | ----- |
| B. Veal, Fresh (a): | | | | | | | | | | | |
| Breast, lean | ----- | 70.3 | 1.0 | 21.2 | 8.0 | ----- | ----- | 1,620 | -to- | | ----- |
| Chuck, medium fat | ~~18.9~~ | 73.3 | 1.0 | 19.7 | 6.5 | ----- | ----- | 1,420 | -to- | | ----- |
| Flank | ----- | 66.9 | 1.0 | 20.1 | 12.7 | ----- | ----- | 2,020 | -to- | | ----- |
| Leg: Medium fat | 14.2 | 70.0 | 1.2 | 20.2 | 9.0 | ----- | ----- | 1,616 | -to- | | ----- |
| Cutlet | ----- | 70.7 | 1.1 | 20.3 | 7.7 | ----- | ----- | 1,560 | -to- | | ----- |
| Loin, medium fat | 16.5 | 69.0 | 1.0 | 19.9 | 10.8 | ----- | ----- | 1,830 | -to- | | ----- |
| Neck | ----- | 72.6 | 1.0 | 20.3 | 6.9 | ----- | ----- | 1,480 | -to- | | ----- |
| Rib, medium fat | 25.3 | 72.7 | 1.1 | 20.7 | 6.1 | ----- | ----- | 1,420 | -to- | | ----- |
| Rump | ----- | 43.7 | 0.8 | 13.8 | 11.3 | ----- | ----- | 1,630 | -to- | | ----- |
| Shank: Fore | ----- | 74.0 | 1.0 | 20.7 | 5.2 | ----- | ----- | 1,340 | -to- | | ----- |
| Hind | ----- | 74.5 | 1.0 | 20.7 | 4.6 | ----- | ----- | 1,280 | -to- | | ----- |
| Shoulder and flank. | ----- | 65.2 | 1.1 | 14.4 | 19.7 | ----- | ----- | 2,180 | -to- | | ----- |



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TABLE 5 - Meat and the principal meat products -continued

| Sample | Waste: or refuse | Edible Portion: Moisture | Ash | Proteins | Fat | Crude fiber | Carbohydrate | Fuel value per kilo | Vitamins: A | B & G | C |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Per cent | Per cent | Per cent | Per cent | Per cent | Per cent | Calories | | | |
| B. Veal, Fresh (a) (continued) | | | | | | | | | | | |
| Forequarter | ----- | 71.7 | 0.9 | 20.0 | 8.0 | ----- | ----- | 1,570 | | | |
| Hindquarter | ----- | 70.9 | 1.0 | 20.7 | 8.3 | ----- | ----- | 1,630 | | | |
| Veal Organs (a) | | | | | | | | | | | |
| Heart | ----- | 73.2 | 1.0 | 16.8 | 9.6 | ----- | ----- | 1,600 | ---- | ---- | ---- |
| Kidney | ----- | 75.8 | 1.3 | 16.9 | 6.4 | ----- | ----- | 1,300 | ---- | ---- | ---- |
| Liver | ----- | 73.0 | 1.3 | 19.0 | 5.3 | ----- | ----- | 1,270 | "to" | " | ---- |
| Lungs | ----- | 76.8 | 1.1 | 17.1 | 5. | ----- | ----- | 1,170 | ---- | ---- | ---- |
| C. Lambs, Fresh (a) | | | | | | | | | | | |
| Breast or chuck | ----- | 45.5 | 0.8 | 15.4 | 19.1 | ----- | ----- | 2,420 | -to' | ' | ---- |
| Leg, hind | ----- | 63.9 | 1.1 | 19.2 | 16.5 | ----- | ----- | 2,340 | -to' | ' | ---- |
| Loin | ----- | 53.1 | 1.0 | 18.7 | 28.3 | ----- | ----- | 3,420 | -to' | ' | ---- |
| Neck | ----- | 56.7 | 1.0 | 17.7 | 24.8 | ----- | ----- | 3,050 | -to' | ' | ---- |
| Shoulder | ----- | 51.8 | 1.0 | 18.1 | 29.7 | ----- | ----- | 3,530 | -to' | ' | ---- |
| Forequarter | ----- | 55.1 | 1.0 | 18.3 | 25.8 | ----- | ----- | 3,170 | -to' | ' | ---- |
| Hindquarter | ----- | 60.9 | 1.0 | 18.6 | 19.1 | ----- | ----- | 2,600 | -to' | ' | ---- |
| Side without tallow | | | | | | | | | | | |
| lamb, cooked | ----- | 58.2 | 1.1 | 17.6 | 23.1 | ----- | ----- | 2,880 | -to' | ' | ---- |
| Chop, broiled | ----- | 47.6 | 1.3 | 21.7 | 29.9 | ----- | ----- | 3,700 | -to' | ' | ---- |
| Leg, roast | ----- | 67.1 | 0.8 | 19.7 | 12.7 | ----- | ----- | 2,000 | -to' | ' | ---- |
| Lamb, canned | | | | | | | | | | | |
| Tongue, spiced and cooked | ----- | 67.4 | 0.5 | 13.9 | 17.8 | ----- | ----- | 2,240 | ---- | ---- | ---- |
| D. Mutton, Fresh (a) | | | | | | | | | | | |
| Chuck, medium fat | 21.3 | 50.9 | 0.6 | 15.1 | 33.6 | ----- | ----- | 3,770 | -to' | ' | ---- |
| Flank, medium fat | 9.9 | 46.2 | 0.7 | 15.2 | 38.3 | ----- | ----- | 4,220 | -to' | ' | ---- |
| Leg, hind medium fat | 18.4 | 62.8 | 1.0 | 18.5 | 18.0 | ----- | ----- | 2,450 | -to' | ' | ---- |
| Loin, medium fat | 16.0 | 50.2 | 0.8 | 16.0 | 33.1 | ----- | ----- | 3,760 | -to' | ' | ---- |
| Neck, medium fat. | ----- | 58.1 | 1.0 | 16.9 | 24.6 | ----- | ----- | 3,010 | -to' | ' | ---- |
| Shoulder, medium fat | ----- | 61.9 | 0.9 | 17.7 | 19.9 | ----- | ----- | 2,600 | -to' | ' | ---- |
| Forequarter | ----- | 52.9 | 0.9 | 15.6 | 30.9 | ----- | ----- | 3,540 | -to' | ' | ---- |
| Hindquarter | ----- | 54.8 | 0.8 | 16.7 | 28.1 | ----- | ----- | 3,320 | -to' | ' | ---- |
| Side | ----- | 54.2 | 0.9 | 16.3 | 28.9 | ----- | ----- | 3,370 | -to' | ' | ---- |
| Mutton, cooked (a) | | | | | | | | | | | |
| Leg, roast | ----- | 50.9 | 1.2 | 25.0 | 22.6 | ----- | ----- | 3,150 | -to' | ' | ---- |
| Mutton, Organs (a) | | | | | | | | | | | |
| Heart | ----- | 69.5 | 0.9 | 16.9 | 12.6 | ----- | ----- | 1,870 | ---- | ---- | ---- |
| Kidney | ----- | 3.4 | 0.1 | 1.8 | 95.4 | ----- | ----- | 9,020 | ---- | ---- | ---- |
| Liver | ----- | 61.2 | 1.7 | 23.1 | 9.0 | ----- | 5.0 | 2,010 | "to" | " | ---- |
| Lungs | ----- | 75.9 | 1.2 | 20.2 | 2.8 | ----- | ----- | 1,100 | ---- | ---- | ---- |
| Mutton, canned (a) | | | | | | | | | | | |
| Corned | ----- | 45.8 | 4.2 | 28.8 | 22.8 | ----- | ----- | 3,330 | ---- | ---- | ---- |
| Tongue | ----- | 47.6 | 4.8 | 24.4 | 24.0 | ----- | ----- | 3,250 | ---- | ---- | ---- |
| E. Pork, fresh. | | | | | | | | | | | |
| Chuck, ribs and shoulder | ----- | 51.1 | 0.9 | 17.3 | 31.1 | ----- | ----- | 3,630 | -to' | " | ---- |
| Flank, fresh. | ----- | 59.0 | 1.0 | 18.5 | 22.2 | ----- | ----- | 2,860 | -to' | " | ---- |
| Ham, medium | 0.9 | 53.9 | 0.6 | 15.3 | 28.9 | ----- | ----- | 3,340 | -to' | " | ---- |

TABLE 5 - Meat and the principal meat products - continued

| Sample | Waste: or refuse: Per cent | Edible Portion: Moisture: Per cent | Ash: Per cent | Proteins: Per cent | Fat: Per cent | Crude fiber: Per cent | Carbohydrate: Per cent | Fuel value per kilo: Calories | Vitamins: A | B & G | C |
|---|---|---|---|---|---|---|---|---|---|---|---|
| E. Pork, fresh (continued) | | | | | | | | | | | |
| Head | ----- | 45.3 | 0.7 | 13.4 | 41.3 | ----- | ----- | 4,420 | -to'- | '' | ----- |
| Loin: Chops | 23.5 | 52.0 | 1.0 | 16.6 | 30.1 | ----- | ----- | 3,510 | -to'- | '' | ----- |
| Tenderloin | ----- | 66.5 | 1.0 | 18.9 | 13.0 | ----- | ----- | 2,000 | -to'- | '' | ----- |
| Middle cuts | ----- | 48.2 | 0.7 | 15.7 | 36.3 | ----- | ----- | 4,050 | -to'- | '' | ----- |
| Shoulder | 12.4 | 51.2 | 0.8 | 13.3 | 34.2 | ----- | ----- | 3,750 | -to'- | '' | ----- |
| Side | ----- | 29.4 | 0.4 | 9.4 | 61.7 | ----- | ----- | 6,170 | -to'- | '' | ----- |
| Clear backs | ----- | 25.1 | 0.4 | 6.4 | 67.6 | ----- | ----- | 6,600 | -to'- | '' | ----- |
| Clear bellies | ----- | 31.4 | 0.4 | 6.9 | 60.4 | ----- | ----- | 5,940 | -to'- | '' | ----- |
| Feet | ----- | 55.4 | 0.8 | 15.8 | 26.3 | ----- | ----- | 3,130 | -to'- | '' | ----- |
| Tails | ----- | 17.4 | 0.3 | 4.8 | 77.1 | ----- | ----- | 7,420 | -to'- | '' | ----- |
| Trimmings | ----- | 25.3 | 0.3 | 5.4 | 70.2 | ----- | ----- | 6,800 | -to'- | '' | ----- |
| Pork, organs (a) | | | | | | | | | | | |
| Brain | ----- | 75.8 | 1.6 | 11.7 | 10.3 | ----- | ----- | 1,450 | ' | '' | ----- |
| Heart | ----- | 75.6 | 1.0 | 17.1 | 6.3 | ----- | ----- | 1,300 | ' | '' | ----- |
| Kidney | ----- | 77.8 | 1.2 | 15.5 | 4.8 | ----- | ----- | 1,080 | '' | '' | ----- |
| Liver | ----- | 71.4 | 1.4 | 21.3 | 4.5 | ----- | 1.4 | 1,360 | ----- | '' | ----- |
| Lungs | ----- | 83.3 | 0.9 | 11.9 | 4.0 | ----- | ----- | 860 | ----- | ----- | ----- |
| Marrow | ----- | 14.6 | ----- | 2.3 | 81.2 | ----- | ----- | 7,710 | ----- | ----- | ----- |
| Skin | ----- | 46.3 | 0.6 | 26.4 | 22.7 | ----- | ----- | 3,220 | ----- | ----- | ----- |
| Pork, Pickled, Salted and smoked | | | | | | | | | | | |
| Ham: Smoked | ----- | 40.3 | 4.8 | 16.3 | 38.8 | ----- | ----- | 4,310 | -to' | '' | - |
| Boneless, raw | ----- | 50.1 | 6.0 | 14.9 | 28.5 | ----- | ----- | 3,280 | -to' | '' | - |
| Shoulder, smoked | ----- | 45.0 | 6.7 | 15.9 | 32.5 | ----- | ----- | 3,700 | -to' | '' | ----- |
| Tongue, pickled | ----- | 58.6 | 3.6 | 17.7 | 19.8 | ----- | ----- | 2,580 | ----- | ----- | ----- |
| Pigs feet, pickled | ----- | 68.2 | 0.9 | 16.3 | 14.8 | ----- | ----- | 2,060 | ----- | ----- | ----- |
| Dry salted backs | ----- | 17.3 | 2.8 | 7.7 | 72.7 | ----- | ----- | 7,130 | ----- | ----- | ----- |
| Dry salted bellies | ----- | 17.7 | 3.4 | 8.4 | 72.2 | ----- | ----- | 7,110 | ----- | ----- | ----- |
| Salted pork | ----- | 19.9 | 5.7 | 8.4 | 67.1 | ----- | ----- | 6,830 | ----- | ----- | ----- |
| Bacon, smoked | ----- | 18.8 | 4.4 | 9.9 | 67.4 | ----- | ----- | 6,730 | ----- | ----- | ----- |
| Pork, Canned (a) | | | | | | | | | | | |
| Ham, deviled | ----- | 44.1 | 3.3 | 19.0 | 34.1 | ----- | ----- | 3,970 | -to'! | '' | ----- |
| F. Sausages (a) | | | | | | | | | | | |
| Bologna | ----- | 60.0 | 3.7 | 13.7 | 17.6 | ----- | ----- | 2,430 | ----- | ----- | ----- |
| Frankfort | ----- | 57.2 | 3.4 | 19.6 | 18.6 | ----- | 1.1 | 2,600 | ----- | ----- | ----- |
| Holsteiner | ----- | 25.1 | 4.2 | 23.7 | 36.5 | ----- | 3.3 | 4,740 | ----- | ----- | ----- |
| Pork | ----- | 29.8 | 2.2 | 13.0 | 44.2 | ----- | 1.1 | 4,675 | ----- | ----- | ----- |
| Pork sausage meat | ----- | 46.2 | 3.4 | 17.4 | 32.5 | ----- | ----- | 3,760 | ----- | ----- | ----- |
| Pork and beef | ----- | 55.4 | 1.0 | 19.4 | 24.1 | ----- | ----- | 3,060 | ----- | ----- | ----- |
| Salami | ----- | 30.5 | 7.0 | 24.1 | 39.0 | ----- | ----- | 4,730 | ----- | ----- | ----- |
| Tongue | ----- | 46.4 | 5.2 | 20.1 | 33.1 | ----- | ----- | 3,930 | ----- | ----- | ----- |
| Weinerworst | ----- | 43.9 | 4.4 | 28.0 | 22.1 | 1.6 | ----- | 3,300 | ----- | ----- | ----- |
| G. Poultry and Game Fresh(a) | | | | | | | | | | | |
| Chicken broilers | 41.6 | 74.8 | 1.1 | 21.5 | 2.5 | ----- | ----- | 1,120 | ----- | ----- | ----- |
| Fowls | 25.9 | 65.7 | 1.0 | 19.3 | 16.3 | ----- | ----- | 2,320 | ----- | ----- | ----- |
| Turkey | 22.7 | 55.5 | 1.0 | 21.1 | 22.9 | ----- | ----- | 3,020 | ----- | ----- | ----- |
| Goose | 17.6 | 38.5 | 0.7 | 13.4 | 2918 | ----- | ----- | 5,560 | ----- | ----- | ----- |

(a) Atwater and Bryant, Composition of American Food Materials, United States Department of Agriculture, Bull. 28.

TABLE 5 - Meat and the principal meat products - continued

| Sample | Waste or refuse | Edible Portion: Moisture | Ash | Proteins | Fat | Crude fiber | Carb-ohydrate | Fuel value per kilo Calories | Vitamins: A | B & G | C |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Per cent | Per cent | Per cent | Per cent | Per cent | Per cent | | | | | |
| G. Poultry and Games Fres (a) - continued | | | | | | | | | | | |
| Chicken: Gizzard | ----- | 72.5 | 1.4 | 24.7 | 1.4 | ----- | ----- | 1,150 | ---- | ---- | ---- |
| Heart | ----- | 72.0 | 1.4 | 20.7 | 5.5 | ----- | ----- | 1,360 | ---- | ---- | ---- |
| Liver | ----- | 69.3 | 1.7 | 22.4 | 4.2 | ----- | ----- | 1,420 | ---- | ---- | ---- |
| Goose: Gizzard | ----- | 73.8 | 1.0 | 19.6 | 5.8 | ----- | ----- | 1,350 | ---- | ---- | ---- |
| Liver | ----- | 62.6 | 1.2 | 16.6 | 15.9 | ----- | ----- | 2,330 | ---- | ---- | ---- |
| Turkey: Gizzard | ----- | 62.7 | 1.1 | 20.5 | 14.5 | ----- | 1.2 | 2,250 | ---- | ---- | ---- |
| Heart | ----- | 68.6 | 1.0 | 16.8 | 13.2 | ----- | ----- | 1,930 | ---- | ---- | ---- |
| Liver | ----- | 69.6 | 1.7 | 22.9 | 5.2 | ----- | 0.6 | 1,450 | ---- | ---- | ---- |
| H. Eggs (Local) | | | | | | | | | | | |
| Duck's egg: Fresh | ----- | 72.88 | 0.98 | 13.4 | 13.92 | ----- | ----- | 1,829 | " | ---- | ---- |
| Hard boild | ----- | 71.36 | 1.30 | 13.59 | 14.12 | ----- | ----- | 1,870 | ---- | ---- | ---- |
| Raw balot | ----- | 7176 | 0.99 | 12.69 | 14.23 | ----- | ----- | 1,964 | ---- | ---- | ---- |
| Boiled balot | ----- | 70.40 | 0.97 | 15.63 | 12.84 | ----- | ----- | 1,834 | ---- | ---- | ---- |
| Albumin | ----- | 87.00 | 0.80 | 11.10 | 0.03 | ----- | 1.07 | 500 | - | - | ---- |
| Yolk | ----- | 45.80 | 1.20 | 16.00 | 35.20 | ----- | 1.80 | 4,000 | " | " | ---- |
| Chicken's eggs: Hen | ----- | 68.27 | 0.85 | 14.41 | 15.98 | ----- | ----- | 2,076 | " | "to" | ---- |
| Albumin | ----- | 85.61 | 0.67 | 12.77 | 0.25 | ----- | 0.70 | 580 | - | - | ---- |
| Yolk | ----- | 50.93 | 1.02 | 16.05 | 31.70 | ----- | 0.30 | 3,320 | " | " | ---- |
| Preserved, China | ----- | 68.79 | 3.83 | 13.27 | 8.65 | ----- | 5.46 | 1.570 | " | ---- | ---- |

(a) Atwater and Bryant, Compostion of American Food Materials, United States Department of Agriculture, Bull. 28

TABLE - 6 - Fish, shellfish, crustaceans, and their products

| Sample | Waste or refuse | Edible portion | | | | | | Fuel value per kilo calories | Vitamins | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Moisture per cent | Ash per cent | Proteins per cent | Fat per cent | Crude fiber per cent | Carbohydrates per cent | | A | B & G | C |
| **A. Fresh Fish** | | | | | | | | | | | |
| Abo (bacoco,porgy(. | 53.6 | 77.37 | 1.39 | 19.87 | 0.63 | ----- | 0.74 | 904 | ---- | ---- | ---- |
| Apahap (bolga,sea bass | 33.00 | 74.81 | 1.45 | 20.77 | 1.94 | ----- | 1.03 | 895 | ---- | ---- | ---- |
| Aso-os (asohos) . . | 52.65 | 73.82 | 1.26 | 18.59 | 5.67 | ----- | 0.66 | 1,316 | ---- | ---- | ---- |
| Ayugin (grunt(a) . | 47.14 | 79.76 | 1.56 | 18.62 | 0.69 | .02 | ----- | 830 | ---- | ---- | ---- |
| Banak(balanak,mullet) | 55.5 | 74.78 | 1.23 | 20.68 | 4.23 | ----- | ----- | 1,240 | ---- | ---- | ---- |
| Bañgos(milkfish). . | 29.44 | 73.80 | 1.29 | 19.24 | 5.57 | ----- | 0.10 | 1,311 | ---- | ---- | ---- |
| Barracuda: Babayo . | 32.12 | 77.29 | 1.42 | 20.09 | 0.77 | ----- | 0.43 | 913 | ---- | ---- | ---- |
| Young. | 40.60 | 78.56 | 1.26 | 18.74 | 0.34 | ----- | 1.26 | 845 | ---- | ---- | ---- |
| Bia (bagtis,goby) . | 50.50 | 81.03 | 0.95 | 17.59 | 0.11 | ----- | 0.32 | 744 | ---- | ---- | ---- |
| Bidbid(awa,tea-pounder) | 44.43 | 79.15 | 1.41 | 19.37 | 0.29 | ----- | 1.41 | 821 | ---- | ---- | ---- |
| Bisogu (grunt) . . | 61.42 | 79.64 | 0.98 | 18.83 | 0.59 | ----- | ----- | 827 | ---- | ---- | ---- |
| Biyang pute (a) . . | 42.90 | 79.36 | 1.46 | 17.13 | 2.17 | ----- | ----- | 900 | ---- | ---- | ---- |
| Buan-buan (tarpoa). | 55.92 | 22.79 | 1.13 | 20.16 | 1.70 | ----- | ----- | 842 | ---- | ---- | ---- |
| Buguing(halfbeak)(a) | 39.56 | 77.41 | 1.38 | 20.56 | 1.24 | ----- | ----- | 960 | ---- | ---- | ---- |
| Canduli(catfish). . | 53.08 | 81.09 | 1.04 | 17.16 | 0.16 | ----- | 0.55 | 741 | ---- | ---- | ---- |
| Dalag(haluan,murrel) | 15.00 | 80.10 | 0.99 | 16.95 | 0.48 | ----- | 1.48 | 800 | ---- | ---- | ---- |
| Dalagang bukid(caesio) | 47.18 | 75.12 | 1.32 | 20.96 | 2.86 | ----- | ----- | 1,125 | ---- | ---- | ---- |
| Dapa(palad,flunder) | 48.00 | 76.81 | 1.16 | 19.98 | 0.97 | ----- | 1.08 | 886 | ---- | ---- | ---- |
| Dilis(anchovy). . . | ----- | 81.01 | 2.24 | 15.66 | 0.78 | ----- | 0.51 | 727 | ---- | ---- | ---- |
| Espada (a). . . . . | ----- | 37.96 | 23.63 | 33.69 | 4.28 | ----- | ----- | 1,780 | ---- | ---- | ---- |
| Fish-liver oils . . | ----- | ----- | ----- | ----- | ----- | ----- | ----- | ??? | ---- | ---- | ---- |
| Hasa-hasa(club mackerel) | 46.71 | 73.85 | 1.05 | 22.83 | 1.95 | ----- | 0.32 | 1,130 | ---- | ---- | ---- |
| Hito(catfish) . . . | 43.49 | 76.34 | 1.16 | 17.66 | 4.75 | ----- | 0.09 | 1,170 | ---- | ---- | ---- |
| Kabasi(basling shad) | 52.94 | 77.03 | 1.66 | 19.36 | 1.67 | ----- | 0.28 | 960 | ---- | ---- | ---- |
| Kalaso(liazard fish) | 38.36 | 79.17 | 0.45 | 20.83 | 19.40 | ----- | 1.50 | 857 | ---- | ---- | ---- |
| Kassisung(leather jacket). . . | 47.97 | 77.65 | 1.52 | 20.28 | 0.07 | ----- | 0.48 | 857 | ---- | ---- | ---- |
| Kitang(spade fish). | 53.15 | 72.24 | 1.08 | 20.11 | 6.57 | ----- | ----- | 1,435 | ---- | ---- | ---- |
| Kulisik(snapper)(a) | 51.19 | 76.55 | 1.57 | 18.02 | 4.68 | ----- | ---- | 1,170 | ---- | ---- | ---- |
| Kulisig(nemipterus)(a) | 54.54 | 78.43 | 1.87 | 17.62 | 1.88 | ----- | 0.07 | 900 | ---- | ---- | ---- |
| Labahita (surgeon fish, samaral) | 23.95 | 74.35 | 1.37 | 19.19 | 3.75 | ----- | 1.34 | 1,190 | ---- | ---- | ---- |
| Lapo-lapo(grouper). | ----- | 76.33 | 1.72 | 20.22 | 0.69 | ----- | 1.04 | 938 | ---- | ---- | ---- |
| Liwalo(climbingperch) | 64.07 | 78.62 | 1.09 | 18.69 | 1.60 | ----- | ----- | 764 | ---- | ---- | ---- |
| Malabanos(moray) . | ----- | 77.71 | 3.35 | 19.08 | 1.28 | ----- | ----- | 901 | ---- | ---- | ---- |
| Malakapas(pampano). | 58.51 | 75.48 | 1.31 | 21.01 | 2.02 | ----- | 0.18 | 1,056 | ---- | ---- | ---- |
| Malapito (pampano). | 47.04 | 76.00 | 1.37 | 20.18 | 2.17 | ----- | 0.28 | 1,040 | ---- | ---- | ---- |
| Malasugui (Bicol swordfish) | 45.21 | 77.52 | 1.40 | 20.30 | 0.10 | ----- | 0.68 | 869 | ---- | ---- | ---- |
| Mamali (threadfin). | 47.98 | 78.15 | 1.28 | 21.85 | 19.12 | ----- | 1.04 | 864 | ---- | ---- | ---- |
| Mayamaya: | | | | | | | | | | | |
| Gray snapper . . | 41.67 | 78.26 | 1.22 | 17.62 | 1.57 | ----- | 1.33 | 923 | ---- | ---- | ---- |
| Red snapper . . | ----- | 72.72 | 1.18 | 18.14 | 7.42 | ----- | 0.24 | 1,455 | ---- | ---- | ---- |
| Striped snapper. | 60.85 | 78.75 | 1.21 | 20.42 | 0.65 | ----- | ---- | 898 | ---- | ---- | ---- |
| Mayang (a). . . . . | 53.71 | 79.69 | 1.23 | 19.44 | 1.60 | ----- | ---- | 950 | ---- | ---- | ---- |
| Molmol(parrot fish) | 52.38 | 75.76 | 2.05 | 24.24 | 20.95 | ----- | 1.46 | 1,047 | ---- | ---- | ---- |
| Palos(ogdok,marine sil)[a] . . | 49.41 | 80.28 | 1.61 | 17.78 | 0.54 | ----- | ----- | 780 | ---- | ---- | ---- |
| Sapsap (slipmouth). | 58.20 | 79.09 | 1.28 | 19.23 | 0.54 | ----- | ----- | 838 | ---- | ---- | ---- |
| Siliñasi (herring). | ----- | 74.36 | 3.66 | 19.13 | 2.63 | ----- | 0.22 | 1,038 | ---- | ---- | ---- |
| Siriu(Ilocano billfish) . | 44.23 | 78.00 | 1.38 | 20.58 | 0.32 | ----- | ----- | 873 | ---- | ---- | ---- |
| Sunog (fathead) . . | 59.84 | 79.19 | 1.12 | 19.96 | 0.18 | ----- | ----- | 835 | ---- | ---- | ---- |
| Talakitok(cavalla). | 47.35 | 76.86 | 1.29 | 21.44 | 0.66 | ----- | ----- | 940 | ---- | ---- | ---- |
| Talangtalang(jackfish) . | 50.10 | 77.15 | 1.35 | 20.90 | 0.21 | ----- | 0.39 | 892 | ---- | ---- | ---- |
| Talilong(young mullet) | 70.00 | 77.20 | 1.23 | 20.15 | 2.65 | ----- | ----- | 1,030 | ---- | ---- | ---- |

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TABLE - 6 - Fish, shellfish, crustaceans and their Products

| Sample | Waste or refuse | Edible portion: Moisture | Ash | Proteins | Fat | Crude fiber | Carbohydrates | Fuel value per kilo | Vitamins: A | B & G | C |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Per cent | Per cent | Per cent | Per cent | Per cent | Per cent | Calories | | | |
| **A. Fish, Fresh -continued** | | | | | | | | | | | |
| Tamban (herring) | 71.40 | 79.16 | 1.01 | 19.12 | 2.70 | ----- | ----- | 1,035 | ---- | ---- | ---- |
| Taguingui (kingfish) | ----- | 75.66 | 1.32 | 20.36 | 2.67 | ----- | ----- | 1,083 | ---- | ---- | ---- |
| Tinikan (a) | 55.44 | 75.19 | 1.97 | 18.56 | 5.11 | ----- | ----- | 1,240 | ---- | ---- | ---- |
| Tulingan (tuna) | 44.07 | 72.91 | 1.22 | 23.91 | 1.77 | ----- | 0.19 | 1,153 | ---- | ---- | ---- |
| Tulis (herring) | ----- | 77.31 | 1.45 | 18.91 | 1.25 | ----- | 1.08 | 936 | ---- | ---- | ---- |
| Tunsoy (herring) | ----- | 71.32 | 2.07 | 20.39 | 3.58 | ----- | 2.74 | 1,281 | ---- | ---- | ---- |
| **B. Salted, dried and smoked fish** | | | | | | | | | | | |
| Bago-ong (small fish) | ----- | 57.70 | 24.98 | 13.44 | 1.25 | ----- | 2.63 | 775 | ---- | ---- | ---- |
| Bangos (milkfish) | ----- | 64.94 | 1.59 | 30.29 | 3.84 | ----- | ----- | 1,599 | ---- | ---- | ---- |
| Canduli (a) | ----- | 9.59 | 5.43 | 76.31 | 8.13 | 0.24 | 0.30 | 530 | ---- | ---- | ---- |
| Dilis (anchovy) dried | ----- | 20.69 | 8.42 | 67.48 | 3.30 | ----- | ----- | 3,074 | ---- | ---- | ---- |
| Patis, fish (sauce) | ----- | 67.85 | 23.04 | 4.51 | 3.27 | ----- | ----- | 489 | ---- | ---- | ---- |
| Sapsap (slipmouth) | ----- | 41.39 | 10.52 | 45.64 | 2.46 | ----- | ----- | 2,100 | ---- | ---- | ---- |
| Talilong (young mullet) | ---- | 44.49 | 12.20 | 37.44 | 6.24 | ----- | ----- | 2,115 | ---- | ---- | ---- |
| Tinapa (herring) | ----- | 36.05 | 7.04 | 53.31 | 3.60 | ----- | ----- | 2,520 | ---- | ---- | ---- |
| Toyo: Goatfish | ----- | 42.63 | 12.39 | 40.74 | 4.09 | ----- | ----- | 2,050 | ---- | ---- | ---- |
| Herring | ----- | 44.91 | 16.24 | 30.63 | 7.57 | ----- | ----- | 1,596 | ---- | ---- | ---- |
| Swordfish | ----- | 37.96 | 23.53 | 33.69 | 4.28 | ----- | ----- | 1,779 | ---- | ---- | ---- |
| **C. Crustaceans and their products** | | | | | | | | | | | |
| Alamang: Bagoong | ----- | 67.87 | 14.30 | 15.63 | 2.22 | ----- | ----- | 847 | ---- | ---- | ---- |
| Pressed | ----- | 69.08 | 15.20 | 10.44 | 1.15 | ----- | ----- | 540 | ---- | ---- | ---- |
| Alimango (crab) | 51.37 | 80.07 | 2.49 | 12.79 | 5.04 | ----- | ----- | 993 | ---- | ---- | ---- |
| Alimasag | 42.55 | 82.82 | 2.35 | 10.26 | 2.47 | ----- | ----- | 650 | ---- | ---- | ---- |
| Heko (precipitate of salted shrimps) | ----- | 64.37 | 20.70 | 12.38 | 0.90 | ----- | ----- | 591 | ---- | ---- | ---- |
| Hipon: | | | | | | | | | | | |
| Shrimp, salt water | 37.42 | 72.03 | 2.55 | 21.18 | 3.53 | ----- | 0.71 | 1,230 | | ---- | ---- |
| fresh water | 39.65 | 77.91 | 2.31 | 8.26 | 0.33 | ----- | 11.09 | 820 | ---- | ---- | ---- |
| Dried | ----- | 14.55 | 19.73 | 55.61 | 2.61 | 4.24 | 3.26 | 2,660 | ---- | ---- | ---- |
| Patis (patis hipon) | ----- | 58.38 | 26.14 | 12.45 | 1.13 | ----- | 1.90 | 693 | ---- | ---- | ---- |
| Talangka (small crab) | 79.90 | 61.02 | 1.38 | 15.81 | 12.50 | ----- | 9.29 | 2,192 | ---- | ---- | ---- |
| Ulang (lobster) | 39.55 | 75.48 | 1.43 | 21.64 | 0.64 | ----- | 0.81 | 980 | ---- | ---- | ---- |
| **D. Shellfish and Mollusks, Salt and Fresh Water.** | | | | | | | | | | | |
| Balay | ----- | 86.28 | 1.08 | 9.02 | 1.16 | ----- | 2.46 | 579 | ---- | ---- | ---- |
| Balakwit (a) | 89.02 | 72.46 | 5.16 | 4.78 | 1.55 | 16.05 | ----- | 1,000 | ---- | ---- | ---- |
| Barong (a) | 60.58 | 80.89 | 3.92 | 11.32 | 0.77 | ----- | 3.10 | 660 | ---- | ---- | ---- |
| Bebe (a) | 55.30 | 78.14 | 0.55 | 7.58 | 2.29 | ----- | 11.44 | 990 | ---- | ---- | ---- |
| Bigatan (a) | 68.02 | 79.61 | 1.37 | 13.00 | 3.24 | ----- | 2.78 | 950 | ---- | ---- | ---- |
| Binga (a) | 28.97 | 80.15 | 1.67 | 8.75 | 2.42 | ----- | 7.01 | 870 | ---- | ---- | ---- |
| Bitubituin (a) | 61.56 | 73.20 | 4.56 | 9.21 | 0.38 | ----- | 12.66 | 930 | ---- | ---- | ---- |
| Bototoy (a) | 76.69 | 82.55 | 1.45 | 8.15 | 0.84 | ----- | 7.00 | 700 | ---- | ---- | ---- |
| Butil | ----- | 85.53 | 1.96 | 7.75 | 1.31 | ----- | 3.45 | 578 | ---- | ---- | ---- |
| Caligay (batad) (a) | 60.01 | 77.86 | 4.23 | 4.21 | 0.62 | ----- | 13.08 | 770 | ---- | ---- | ---- |
| Camut-pusa (a) | 8199 | 85.79 | 2.43 | 5.43 | 0.85 | ----- | 5.50 | 530 | ---- | ---- | ---- |
| Capios (a) | 48.02 | 77.70 | 1.70 | 19.44 | 1.08 | ----- | 0.08 | 900 | ---- | ---- | ---- |
| Cohol | ----- | 80.37 | 2.05 | 9.41 | 3.92 | ----- | 4.25 | 925 | ---- | ---- | ---- |





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TABLE 6 - Fish, shellfish, crustaceans, and their products - continued

| Sample | Waste: or refuse | Edible Portion: Moisture | Ash | Proteins | Fat | Crude Fiber | Carbohydrate | Fuel value per kilo | Vitamins: A | B & G | C |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Per cent | Per cent | Per cent | Per cent | Per cent | Per cent | Calories | | | |
| D. Shellfish and mollusks, etc. (continued) | | | | | | | | | | | |
| Donax (species) | ----- | 85.59 | 2.27 | 7.99 | 0.86 | ----- | 3.29 | 542 | ---- | ---- | ---- |
| Halaan I. | ----- | 85.09 | 1.99 | 8.61 | 0.85 | ----- | 3.46 | 574 | ---- | ---- | ---- |
| Halaan II | ----- | 87.43 | 1.80 | 6.74 | 0.60 | ----- | 3.43 | 473 | ---- | ---- | ---- |
| Halaan babaye | ----- | 91.12 | 1.67 | 4.20 | 0.53 | ----- | 2.58 | 327 | ---- | ---- | ---- |
| Halaan III | ----- | 88.54 | 2.89 | 6.40 | 1.02 | ----- | 1.15 | 404 | ---- | ---- | ---- |
| Halaan IV | ----- | 90.92 | 2.96 | 4.71 | 0.47 | ----- | 0.94 | 275 | ---- | ---- | ---- |
| Litoz (a) | 67.05 | 80.51 | 1.37 | 10.66 | 0.58 | ----- | 6.88 | 770 | ---- | ---- | ---- |
| Paros | ----- | 88.82 | 2.30 | 7.45 | 0.60 | ----- | 0.83 | 387 | ---- | ---- | ---- |
| Manlit (a) | 88.72 | 80.51 | 2.77 | 11.91 | 0.52 | ----- | 4.74 | 730 | ---- | ---- | ---- |
| Patanang (a) | 77.54 | 79.58 | 1.87 | 17.07 | 0.77 | ----- | 0.71 | 800 | ---- | ---- | ---- |
| Punao (a) | 64.29 | 84.23 | 1.70 | 6.16 | 2.34 | ----- | 5.57 | 700 | ---- | ---- | ---- |
| Pusit (squid, locos) | 1.84 | 76.46 | 1.63 | 18.39 | 0.52 | ----- | 3.00 | 802 | ---- | ---- | ---- |
| Sulib (a) | 43.74 | 87.78 | 1.33 | 4.21 | 0.84 | ----- | 5.84 | 490 | ---- | ---- | ---- |
| Suso | ----- | 76.52 | 3.63 | 8.95 | 0.70 | ----- | 10.20 | 850 | ---- | ---- | ---- |
| Susong dagat (a) | 79.64 | 80.42 | 6.80 | 8.47 | 0.61 | ----- | 3.70 | 560 | ---- | ---- | ---- |
| Susong Tabang (a) | 70.95 | 79.33 | 4.62 | 10.81 | 0.83 | ----- | 4.41 | 700 | ---- | ---- | ---- |
| Taktakin (a) | 65.01 | 79.33 | 2.64 | 15.48 | 2.14 | ----- | 0.41 | 850 | ---- | ---- | ---- |
| Talaba (oyster) | ----- | 92.06 | 2.02 | 4.14 | 0.52 | ----- | 1.26 | 269 | '' | '' | ' |
| Talitapong (a) | 67.73 | 73.54 | 2.50 | 8.53 | 0.56 | ----- | 14.87 | 1,010 | ---- | ---- | ---- |
| Tapalang (a) | 33.44 | 84.56 | 2.26 | 8.20 | 0.76 | ----- | 4.22 | 580 | ---- | ---- | ---- |
| Tahong (a) | 52.90 | 86.85 | 2.07 | 4.37 | 0.83 | ----- | 5.88 | 500 | ---- | ---- | ---- |
| Tibangos (a) | 62.51 | 84.40 | 1.80 | 6.42 | 2.12 | ----- | 5.26 | 680 | ---- | ---- | ---- |
| Tulla | ----- | 81.18 | 0.72 | 6.70 | 2.07 | ----- | 9.33 | 850 | ---- | ---- | ---- |

(a) Santos and Collado. The Chemical Composition of Philippine Food Materials

TABLE 7 - Sugars and Related Substances

(Analyses by the Bureau of Science.)

| Sugar & Sugar product | Edible Portion: Moisture | Ash | Proteins | Fat | Crude Fiber | Carbohydrates | Fuel value per kilo |
|---|---|---|---|---|---|---|---|
| | Per cent | Percent | Per cent | Percent | Percent | Per cent | Calories |
| Candy | ----- | ----- | ----- | ----- | ----- | 96.0 | 3,960 |
| Honey | 18.2 | 0.2 | 0.4 | ----- | ----- | 81.2 | 3,370 |
| Rice sirup | ----- | ----- | ----- | ----- | ----- | 31.51 | ----- |
| Starch: | | | | | | | |
| Arrowroot | 2.3 | 0.2 | ----- | ----- | ----- | 91.5 | 4,030 |
| Cora | ----- | ----- | ----- | ----- | ----- | 90.0 | 3,720 |
| Tapioca | 11.4 | 0.1 | 0.4 | 0.1 | 0.1 | 88.0 | 3,660 |
| Refined sugar | ----- | ----- | ----- | ----- | ----- | 99.8 Sucrose | 4,097 |
| Molasses | 16.21 | 5.10 | 2.61 | None | None | 76.08 | ----- |
| Sugar: | | | | | | | |
| Granulated | ----- | ----- | ----- | ----- | ----- | 100.0 | 4,130 |
| Maple | ----- | ----- | ----- | ----- | ----- | 82.8 | 3,395 |
| Powdered | ----- | ----- | ----- | ----- | ----- | 100.0 | 4,130 |
| Syrup, maple | ----- | ----- | ----- | ----- | ----- | 76.8 | ----- |

TABLE 8 - Beverages: Fresh and sweet fruit juices

(Analyses by the Bureau of Science)

| Sample | Edible portion | | | | | | Fuel value per kilo | Vitamins | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Moisture | Ash | Proteins | Fat | Crude fiber | Carbohydrates | | A | B & G | C |
| | Per cent | Per cent | Per cent | Per cent | Per cent | Per cent | Calories | | | |
| Cajel | 83.92 | 0.31 | 0.22 | ----- | ----- | 4.89 | 209 | " | " | "" |
| Calamansi | 89.14 | 0.40 | 0.68 | ----- | ----- | 9.78 | 430 | " | " | "" |
| Calamansi, sterilized and stored for 8 months | 91.17 | 0.54 | 0.36 | ----- | ----- | 7.93 | 340 | ' | ' | ' |
| Calamundia | 85.76 | 1.68 | 1.40 | ----- | ----- | 12.16 | 560 | ' | ' | ' |
| California orange | 88.60 | ---- | ---- | ----- | ----- | 11.40 | 470 | " | " | "" |
| Cocolait, a coconut product | 89.43 | 0.44 | 1.27 | 5.15 | ----- | 3.71 | ---- | - | ' | ---- |
| Duhat | 79.22 | 0.64 | 0.27 | ----- | ----- | 17.87 | ---- | ---- | - | ---- |
| Kalip | 45.00 | 0.39 | 0.33 | ----- | ----- | 2.41 | ---- | ---- | ---- | ---- |
| Lemon | ----- | ----- | ----- | ----- | (a)7.50 | 12.20 | ---- | ' | " | "" |
| Lime | 91.26 | 0.36 | 0.47 | ----- | ----- | ----- | ----- | - | ' | "" |
| Mandarin | 90.94 | 0.44 | 0.48 | ----- | (a)0.59 | 8.22 | ---- | " | " | "" |
| Naranjita | 89.10 | 0.56 | 0.51 | ----- | ----- | 10.03 | 430 | ' | " | "" |
| Pineapple | ----- | ---- | ---- | ----- | ----- | 9.40 | ---- | " | " | "" |

(a) Citric acid

TABLE 9 - Fermented Beverages (Analyses by the Bureau of Science)

| Sample | Moisture | Ash | Alcohol by- | | Proteins | Glycerine | Sugars | Fusel oil; per 100 liters absolute alcohol |
|---|---|---|---|---|---|---|---|---|
| | | | Volume | Weight | | | | |
| | Per cent | Per cent | Per cent | Per cent | Per cent | Per cent | Per cent | Grams |
| Tinto dulce, imitation | 89.67 | 0.15 | 13.24 | 10.69 | Trace | ----- | 8.33 | ----- |
| Natural sweet wine, imported | 82.97 | 0.14 | 14.96 | 12.00 | 0.13 | 0.3 | 15.31 | ----- |
| Tinto seco, imitation | 98.8 | 0.11 | 13.26 | 10.67 | None | ----- | 0.13 | ----- |
| Tinto seco "Valdepeñas" | 97.76 | 0.29 | 13.42 | 10.83 | 0.09 | ----- | 0.07 | ----- |
| Vino Arroz | 93.96 | 0.493 | 32.84 | 26.62 | ---- | ----- | 4.15 | ----- |
| Vino de coco | 98.30 | 0.014 | 50.14 | 41.00 | ---- | ----- | 1.56 | 28.08 |
| Vino de nipa | 99.947 | 0.16 | 38.04 | 26.76 | ---- | ----- | ---- | ----- |
| Vino blanco, uvas | 97.93 | 0.116 | 12.80 | 10.26 | ---- | ----- | 0.74 | ----- |
| Tinto de misa | 97.79 | 0.087 | 14.36 | 11.52 | ---- | ----- | 0.69 | ----- |
| Anisado | 99.29 | 0.02 | 33.60 | 27.24 | ---- | ----- | 24.45 | 66.75 |
| Anis del Mono | 89.02 | 0.03 | 37.16 | 30.16 | ---- | ----- | 5.13 | ----- |
| Jerez, imitation | 94.55 | 0.03 | 11.70 | 9.36 | ---- | ----- | 17.02 | ----- |
| Jerez, imported | 83.14 | 0.31 | 17.60 | 14.14 | ---- | ----- | 6.05 | ----- |
| Carabanchel, imitation | 93.75 | 0.06 | 30.42 | 24.62 | ---- | ----- | 15.19 | ----- |
| Vermouth, imitation | 84.64 | 0.162 | 14.84 | 11.90 | ---- | ----- | ----- | 139.90 |
| Ginebra, local made | 99.58 | 0.07 | 42.78 | 34.84 | ---- | ----- | ----- | ----- |
| Moscatel wine, imported | 80.47 | 0.31 | 24.10 | 19.42 | 0.31 | 1.08 | 16.78 | ----- |
| Spanish claret, imported | 97.11 | 0.40 | 13.72 | 11.00 | 0.18 | 0.61 | 0.45 | ----- |
| Jerez moscatel, imported | 82.14 | 0.31 | 17.60 | 14.14 | 0.17 | 0.45 | 17.01 | ----- |
| Spanish "Port" imported | 87.18 | 0.28 | 20.60 | 16.58 | 0.17 | 0.62 | 11.33 | ----- |
| Sake, Japanese rice wine | 85.46 | 0.04 | 18.90 | 15.20 | 1.49 | 0.81 | 1.86 | ----- |
| Cherry brandy, imported | 67.15 | 0.16 | 25.16 | 20.30 | 0.36 | 0.36 | 27.98 | ----- |
| Coñac, imitation | 99.00 | 0.13 | 35.40 | 28.72 | ---- | ----- | 0.80 | 89.50 |
| Whisky, imitation | 98.65 | 0.02 | 44.12 | 35.92 | ---- | ----- | 1.17 | 72.94 |
| Whisky, imported | 99.64 | 0.003 | 39.36 | 32.00 | ---- | ----- | ----- | 162.0 |

TABLE 10 - Cacao, Coffee, Tea, and Their Products

(analyses by the Bureau of Science. Vitamin content from Smith, United States Department of Agriculture)

| Sample | Edible portion | | | | | | Fuel value per kilo | Vitamins | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Moisture | Ash | Proteins | Fat | Crude fiber | Carbohydrate | | A | B & G | C |
| A. Cacao and its products | per cent | Per cent | Per cent | Per cent | Per cent | Per cent | Calories | | | |
| Cacao | ----- | 4.33 | 12.27 | 49.17 | ----- | 20.47 | 5,920 | - | ----- | ----- |
| Chocolate (Chinese) | 2.17 | ----- | 6.94 | 2.10 | 1.29 | ----- | ----- | " | ----- | ----- |
| Chocolate (Native factory) | 2.40 | 2.50 | 10.40 | 24.27 | 2.20 | 59.23 | ----- | " | " | ----- |
| Chocolate (Sweetened) | 4.62 | 2.42 | 14.75 | 22.16 | 1.94 | 54.10 | 4,880 | " | " | ----- |
| Chocolate (Sweetened): | | | | | | | | | | |
| (Class A) | 1.85 | 3.16 | 13.61 | 35.98 | ----- | 45.40 | ----- | " | " | ----- |
| (Class B) | 2.03 | 3.58 | 17.40 | 39.50 | ----- | 37.49 | ----- | " | " | ----- |
| Chocolate (U. S. Army) | 1.38 | 2.82 | 5.88 | 34.60 | 1.53 | 53.79 | 5,660 | ----- | ----- | ----- |
| B. Coffee | | | | | | | | | | |
| Coffee, pure (raw) | 11.47 | 3.45 | 1.38 | 11.32 | 14.76 | 42.38 | ----- | ----- | ----- | ----- |
| Coffee, pure (roasted) | 2.04 | 4.50 | 16.87 | 13.05 | 17.18 | 46.36 | 3,806 | ----- | ----- | ----- |
| C. Tea | | | | | | | | | | |
| Tea | 10.58 | 5.94 | 22.01 | ----- | ----- | ----- | (a)1.55 | ----- | ----- | ----- |
| Tea, wild | 15.65 | 7.35 | 4.17 | ----- | ----- | ----- | (a)0.93 | ----- | ----- | ----- |
| do | 27.00 | 7.35 | 3.18 | ----- | ----- | ----- | (a)0.82 | ----- | ----- | ----- |
| Oolong | 5.89 | 5.81 | ----- | ----- | ----- | ----- | (a)2.32 | ----- | ----- | ----- |
| Ceylon | 6.31 | 5.22 | ----- | ----- | ----- | ----- | (a)2.68 | ----- | ----- | ----- |
| Japan, Green | ----- | 4.92 | 37.44 | 5.52 | 10.06 | ----- | (a)3.20 | ----- | ----- | -to- |
| Japan, Black | ----- | 4.93 | 38.88 | 5.82 | 10.07 | ----- | (a)3.30 | ----- | ----- | ----- |

(a) Per cent dried

TABLE 11 - Condiments, spices, pickles, etc.

(Analyses by the Bureau of Science, except as noted. Vitamin content from Smith, United States Dept. of Agriculture)

| Sample | Edible Portion | | | | | | Fuel value per kilo | Vitamins | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Moisture | Ash | Protein | Fat | Crude fiber | Carbohydrate | | A | B & G | C |
| | Per cent | Per cent | Per cent | Per cent | Per cent | Per cent | Calories | | | |
| Catsup, Tomato (a) | 82.8 | 3.2 | 1.5 | 0.2 | ---- | 12.3 | 380 | " | " | "' |
| Dilao (turmeric) | 92.24 | 0.53 | 0.68 | 1.71 | 1.14 | 3.7 | 338 | ----- | ----- | ----- |
| Garlic | 67.07 | 1.28 | 3.26 | 0.12 | 0.82 | 27.45 | 1,270 | ----- | ----- | ----- |
| Ginger | 92.71 | 0.83 | 1.06 | 0.68 | 0.95 | 3.77 | 261 | ----- | ----- | ----- |
| Olives: Green (a) | 58.00 | 1.7 | 1.1 | 27.6 | ---- | 11.6 | 3,110 | ----- | ----- | ----- |
| Ripe | 64.70 | 5.4 | 1.7 | 25.0 | ---- | 4.3 | 2,670 | ----- | ----- | ----- |
| Peppers: Dried Green (a) | 5.00 | 8.0 | 15.5 | 8.5 | ---- | 63.0 | 4,040 | ----- | ----- | ----- |
| Red chili (a) | 5.30 | 7.6 | 9.4 | 7.7 | ---- | 70.0 | 4,000 | ----- | ----- | ----- |
| Pickles: Cucumber (a) | 92.90 | 3.6 | 0.5 | 0.3 | ---- | 2.7 | 150 | ----- | ----- | ----- |
| Mixed (a) | 93.80 | 0.7 | 1.1 | 0.4 | ---- | 4.0 | 240 | ----- | ----- | ----- |
| Spiced (a) | 77.10 | 1.7 | 0.4 | 0.1 | ---- | 20.7 | 870 | ----- | ----- | ----- |
| Pimenton: "El Torro" | 7.61 | 8.13 | 12.66 | 2.19 | ---- | ---- | ---- | ----- | ----- | ----- |
| No mark | 8.00 | 7.84 | 13.76 | 2.30 | ---- | ---- | ---- | ----- | ----- | ----- |
| Substitute | ----- | 1.62 | 11.21 | 12.34 | ---- | ---- | ---- | ----- | ----- | ----- |
| Shallot (onions) | 83.14 | 0.85 | 2.24 | 0.37 | ---- | 2.67 | 233 | -to- | " | "' |

(a) Atwater and Bryant, Composition of American Food Materials

TABLE 12 - Vinegar

(Analyses by the Bureau of Science.)

| Sample | Edible Portion | | | | | |
|---|---|---|---|---|---|---|
| | Moisture | Ash | Proteins | Fat | Total acidity | Carbohydrates |
| | Per cent | Per cent | Per cent | Per cent | Per cent | Per cent |
| Suka "Ilocos" | 97.25 | 0.89 | ----- | ----- | 7.42 | ----- |
| Suka "Nipa" | 98.57 | 0.35 | ----- | ----- | 4.08 | ----- |
| Cider vinegar | 97.42 | 0.40 | ----- | ----- | 4.98 | ----- |
| Molasses vinegar | 97.10 | 0.58 | ----- | ----- | 4.65 | ----- |
| Vineger, imitation | 98.79 | 0.20 | ----- | ----- | 4.01 | ----- |

TABLE 13 - Miscellaneous Materials

(analyses by the Bureau of Science, except as noted. Vitamin content mostly from Smith, United States Department of Agriculture)

| Sample | Edible Portion | | | | | | Fuel value per kilo | Vitamin | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Moisture | Ash | Proteins | Fat | Crude fiber | Carbohydrate | | A | B & G | C |
| | Per cent | Per cent | Per cent | Per cent | Per cent | Per cent | Calories | | | |
| Aletas de tiburon(sharkfins) | 76.54 | 0.52 | 13.24 | Trace | ----- | 9.70 | 940 | ----- | ----- | ----- |
| "Ankoria" baby food | 1.08 | 2.99 | 14.47 | 26.31 | ----- | 55.15 | 4,707 | ----- | ----- | ----- |
| Apulid seed (a) | 47.49 | 1.33 | 2.68 | 1.62 | 1.06 | 45.82 | 2,140 | ----- | ----- | ----- |
| Arrow-root (airdry) (a) | 8.52 | 4.58 | 4.79 | 0.68 | 1.77 | 79.66 | 3,530 | ----- | ----- | ----- |
| Bicho-bicho (a) | 27.32 | 1.18 | 8.79 | 7.71 | 0.22 | 54.48 | 3,510 | ----- | ----- | ----- |
| Bird's nest: Brown | 5.60 | 8.50 | 60.78 | 0.49 | 0.67 | 24.12 | 3,524 | ----- | ----- | ----- |
| White | 6.84 | 5.34 | 58.48 | 0.45 | 0.56 | 28.36 | 3,601 | ----- | ----- | ----- |
| Brazil nut | 4.74 | 3.25 | 14.85 | 67.46 | 2.84 | 6.86 | 7,165 | ----- | ----- | ----- |
| Bucayo (a) | 8.42 | 0.70 | 0.85 | 6.40 | 5.21 | 78.42 | 3,850 | ----- | ----- | ----- |
| Chestnut | 55.02 | 1.31 | 2.51 | 1.07 | 0.84 | 41.25 | 1,893 | ----- | ----- | ----- |
| Coconut milk (gata) (a) | 58.80 | 1.40 | 3.62 | 34.75 | None | 1.52 | 3,440 | - | ----- | ----- |
| Copra cake | 4.81 | 1.54 | 6.23 | 64.79 | 4.96 | 17.67 | 7,014 | ----- | ----- | ----- |
| Dasheen | 74.37 | 1.22 | 1.21 | 0.14 | 0.73 | 22.33 | 980 | ----- | to | ----- |
| Deer meat (tapang usa) (a) | 28.78 | 18.58 | 48.41 | 1.97 | 0.48 | 1.78 | 2,240 | ----- | ----- | ----- |
| "Eatan" Albumen Extract | 33.44 | 2.48 | 32.07 | 2.36 | ----- | ----- | ----- | ----- | ----- | ----- |
| Edible cana-cana (a) | 76.77 | 1.50 | 1.28 | 0.52 | 7.17 | 12.76 | 620 | ----- | ----- | ----- |
| Filbert nut | 4.26 | 2.49 | 12.33 | 69.43 | 2.48 | ----- | ----- | ----- | ----- | ----- |
| Gabi: | | | | | | | | | | |
| Leaves (a) | 86.33 | 2.17 | 3.28 | 0.58 | 1.99 | 5.66 | 420 | ----- | ----- | ----- |
| Leaves and petioles (a) | 92.39 | 1.30 | 1.44 | 0.62 | 1.16 | 3.09 | 240 | ----- | ----- | ----- |
| Petioles (a) | 95.35 | 1.14 | 0.31 | 0.43 | 0.68 | 2.09 | 140 | ----- | ----- | ----- |
| Powdered, air-dry (a) | 5.69 | 4.81 | 7.57 | 0.74 | 1.71 | 79.48 | 3,640 | ----- | ----- | ----- |
| Gulaman dagat | 17.80 | 3.45 | 4.22 | 1.14 | ----- | 73.39 | 3,290 | ----- | ----- | ----- |
| Herlan | 2.24 | 3.15 | 10.44 | 2.36 | ----- | ----- | ----- | ----- | ----- | ----- |
| Hoppers (luction) (a) | 75.95 | 1.88 | 10.33 | 0.69 | 3.29 | 7.86 | 8.10 | ----- | ----- | ----- |
| Jelly gulaman dagat | 99.37 | 0.04 | 0.04 | 0.10 | 0.10 | ----- | 310 | ----- | ----- | ----- |
| Kanari nut | 3.76 | 3.58 | 19.57 | 72.84 | 0.18 | 0.07 | 7,579 | to | ----- | ----- |
| Launa-an tree fruit or chocolate | 0.87 | 4.00 | 14.70 | 22.26 | ----- | ----- | ----- | ----- | ----- | ----- |
| Locust | 59.61 | 1.79 | 7.89 | 7.81 | ----- | ----- | ----- | ----- | ----- | ----- |
| "Mariposa" lard | 0.01 | ----- | ----- | 99.88 | ----- | ----- | 9,288 | ----- | ----- | ----- |
| Name (powdered, air-dry)(a) | 11.48 | 0.50 | 3.53 | 0.80 | 2.43 | 81.26 | 3,550 | ----- | ----- | ----- |
| Nata: Pineapple juice (a) | 90.07 | 0.60 | 0.67 | 0.37 | 1.23 | 7.06 | 385 | ----- | ----- | ----- |
| Sugar-cane juice(a) | 98.77 | 0.02 | ----- | ----- | 1.25 | ----- | ----- | ----- | ----- | ----- |
| "Nescao" | 1.32 | 3.19 | 10.75 | 6.86 | ----- | 77.88 | 4,271 | ----- | ----- | ----- |
| Pongapong stem | 94.62 | 0.72 | 0.31 | 0.23 | 1.05 | 3.07 | 1.60 | ----- | ----- | ----- |
| "Purico" | 0.01 | ----- | ----- | 99.88 | ----- | ----- | 9,288 | ----- | ----- | ----- |
| Putong pute (a) | 49.42 | 0.54 | 2.54 | 1.34 | 0.23 | 45.95 | 2,110 | ----- | ----- | ----- |
| Puto seco (a) | 7.23 | 0.42 | 5.72 | 1.24 | 0.42 | 84.97 | 3,830 | ----- | ----- | ----- |

(a) The chemical composition of Philippine Food materials reported by Santos & Collado.

TABLE - 13 - Miscellaneous Materials - (continued)

| Sample | Edible Portion | | | | | | Fuel value per kilo | Vitamin | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Moisture | Ash | Proteins | Fat | Crude fiber | Carbohydrate | | A | B & G | C |
| | per cent | per cent | per cent | per cent | per cent | per cent | Calories | | | |
| Satsaron (a) | 12.96 | 1.03 | 41.22 | 22.01 | 0.58 | 22.20 | 4,650 | | | |
| Sausage | 47.20 | 2.15 | 8.61 | 31.48 | ----- | ----- | ----- | ' | '' | |
| Seaweed (a) | 7.59 | 12.24 | 6.81 | 1.19 | 7.54 | 64.19 | 3,020 | | | |
| Seaweed asagan (a) | 33.44 | 24.89 | 5.01 | 1.29 | 5.13 | 30.24 | 1,570 | | | |
| Sesame (liñga) | ----- | ----- | ----- | 47.32 | ----- | ----- | ----- | - | | |
| Squid (pusit) dried | 19.80 | 6.00 | 62.12 | 4.50 | ----- | 7.58 | 3,276 | | | |
| "Toddy" | 1.33 | 2.83 | 20.94 | 5.25 | ----- | ----- | ----- | | | |
| "Virol" | 20.18 | 1.70 | 3.28 | 11.61 | ----- | 63.23 | 3,800 | | | |
| Vitaliment" | 9.71 | 0.75 | 11.27 | 0.64 | ----- | 77.65 | 3,704 | | | |
| Wheat flour: | | | | | | | | | | |
| "Knighthood" | 10.18 | 0.43 | 8.15 | ----- | ----- | ----- | ----- | - | to' | - |
| "Chariot" | 8.98 | 0.41 | 7.83 | ----- | ----- | ----- | ----- | - | to' | ----- |
| "Bird & Rising Sun" | 10.04 | 0.54 | 8.02 | ----- | ----- | ----- | ----- | - | to' | ----- |
| "El Campeon" | 11.53 | 0.46 | 8.24 | ----- | ----- | ----- | ----- | - | to' | ----- |
| "Golden Crescent" | 8.96 | 0.51 | 7.98 | ----- | ----- | ----- | ----- | - | to' | ----- |
| White luna (a) | 77.84 | 3.66 | 8.37 | 4.30 | ----- | 5.83 | 980 | | | |



(a) The chemical compostion of Philippine Food materials reported by Santos & Collado.