

In the same way, all forms of fat are grouped, and an average factor employed in calculating their calorific values ;while the various starches and sugars are classified together as Carbohydrates, and a common factor used.

Rubner, already quoted, used the following factors :—

For Proteids.....	4.1
“ Fats.....	9.3
“ Carbohydrates.....	4.1

These numbers were derived from experiments with dogs fed on meat, starch, sugar, etc. ; and more recent work has demonstrated that Rubner's factors do not allow for so much loss in digestion as has been found to occur with men living on an ordinary mixed diet.

SHERMAN (Chemistry of Food and Nutrition, p. 128) uses the factors 4, 9 and 4, for protein, fat and carbohydrates respectively ; and it is quite probable that these factors more nearly represent the true energy values, when we regard human digestion. In this report I have however retained Rubner's factors, for the reason that they have been extensively used in work already published by this, and by other laboratories. Furthermore, they do not greatly differ from Sherman's factors ; and anyone wishing to compare results by the latter may multiply the given calorie value by the factor 0.983 for proteids and carbohydrates; and 0.968 for fats.

In calculating carbohydrate values I have omitted "Crude Fibre." This term applies to matters insoluble in boiling sulphuric acid (1.25 per cent. strength) or in boiling caustic soda (1.25 p. c.). However the facts of availability as food, for such material, may be in the case of the Ruminantia, it is inconceivable that crude fibre can possess any food value for man. The amount of crude fibre in most of these breakfast foods is so small that the inclusion of crude fibre with the digestible carbohydrates would be of trifling moment, but for the fact that a small number of these foods contain added fibre to such amount as would give them an undeservedly high apparent food value were it reckoned as starch or sugar, which are actually digestible.