

The above figures clearly show that there are wide differences in the solubility of the dry matter and in the quantity of alcohol precipitate (dextrin) and reducing substances (sugars) in the foods examined. The percentage amount of the solids of the farinas, wheat germ, and granulated oatmeals dissolved is about equal, while the partial cooking to which the rolled oats and wheat were incidentally subjected in the process of manufacture, has not been sufficient to materially increase the solubility of these foods. Or, if, as some contend, diastase is present in very small quantities in raw grain, possibly the solubility of the uncooked foods has been influenced by enzymic action.

Among the foods sold as being cooked sufficiently to be ready to serve, it will be observed that there are wide differences in the per cent. of solids soluble in water. This indicates that some were much more thoroughly cooked than others. It is also evident that the cooking has not resulted in the formation of any appreciable amount of sugar. The Malt Breakfast Food, which was malted but not cooked, shows a considerable amount of sugar, showing that the process was continued far enough to cause a large portion of the solids to pass through the dextrin into the sugar. It is, of course, possible, that sugar was added, but no effort was made to ascertain this point. It may be stated, however, that there was evidence that the food was really malted.

Among the malted and cooked foods there are also wide differences in the percentage amount of soluble matter. It must be remembered that the amount of malt used and the length of time it is allowed to act must influence the quantity of the starch rendered soluble and also the amount of sugar formed. Some of these foods do not contain as much soluble matter as the foods that were cooked only. The same foods have no more, or very little more, sugar than the uncooked foods, which would indicate that very little change due to malting had really taken place. Certainly there is very little to show that some of these foods have been any more than cooked, and, it will be shown later, that the cooking, as measured by the solubility of the carbohydrates, has not been as thorough as is commonly practiced in preparing the ordinary farinas and oatmeals for the table. Further, it is apparent that the predigestion has not affected the solubility of the proteids, for the water extract of these malted or "predigested" foods contains no more of these valuable food constituents than that obtained from the cooked foods. This is as expected, for the malting process can affect the carbohydrates only and has no influence on the other constituents of the food.

It is quite conceivable that in the preparation of different lots of the same brand of food, the manufacturer may consciously or unconsciously have allowed the malting process to proceed further with some than with others, or the cooking may have been more thorough. Any such differences in treatment would cause variation in solubility between the different lots or batches, so that one package of a food may not be as soluble