

# THE USES OF MILK POWDER

## EACH PRODUCT IN DETAIL.

Whole milk powder has all of the fat of the milk in it. Separated milk powder has very little fat in it and cream powder has approximately 72 per cent. of fat in it. Modified milk powder and sweet whey powder are simply obtained by modifying the proportions of the different dry ingredients of milk to produce the desired food for the particular purpose for which it is intended.

Whole milk powder is produced for use as the milk in milk chocolate in confectionery and to a limited extent in biscuit manufacturing and in creamery and dairy work. Until a satisfactory milk powder was produced liquid milk or condensed milk had to be employed. The chief trouble with these two forms of milk is the presence of water. The confectioner and baker spends more time in his work getting rid of water by cooking or baking than he does at anything else. Give him his milk without water and you have solved his most serious problem if he is a milk user and if his product cannot be produced without milk.

## WHOLEMILK POWDER.

The straight whole milk without the water produces the original liquid whole milk again when it is mixed in the proportions of 7 lbs. of water to 1 lb. whole milk powder.

## ROLLER PROCESS.

Referring to the roller process milk powder, practically the only use for the roller process powder, which is a whole milk powder that is not soluble, is for milk chocolate manufacturing. Milk chocolate production does not require a milk that has to be absolutely soluble in water. It is used with cocoa butter and sugar in machines that grind all the ingredients together which produce the finished milk chocolate.

## SPRAY PROCESS VS. ROLLER PROCESS.

It is natural to question why some use the soluble whole milk powder, and some the roller process whole milk powder. This brings up a technical point which can be dealt with here perhaps to best advantage. In spraying or atomizing whole milk in the spray process used to produce soluble milk powder the butterfat particles of the milk that goes through the roller process is not atomized so that the butterfat in the resulting milk powder is in large bits or globules. To put it roughly the butterfat is more in "chunks" although of course only in very small pieces. As the production of milk chocolate is a question of grinding and rubbing different ingredients together it has been found when spray milk powder is used that it takes more cocoa butter to work out the butterfat from the milk powder because the fat particles are so finely divided. The operation, therefore, of making milk chocolate with spray milk powder is a longer operation and more cocoa butter is required to get the desired result. Roller process milk powder with the larger fat globules incorporates more readily with the other milk chocolate ingredients requiring a shorter operation and less cocoa butter. The finished milk chocolate made with sprayed milk powder is a finer grained product because all of the solids of the milk completely dissolve in the process of making milk chocolate. As the milk solids in the roller process powder will not dissolve completely there is, therefore, a certain roughness to the texture of milk chocolate made with roller process powder. Those desiring to produce the finest quality of milk chocolate prefer the spray process milk powder to the roller process powder for the reasons given