

parts fat, 10 parts albuminoids, and 2 parts ash. If 1 part of this be taken and 9 parts of water, we have a mixture resembling the average analysis of mother's milk in all but the fat. Let 1 in 9 be the average dilution, slightly more for a young infant, and less for an older child. If you add to this, 3j of cream for each 3j of the diluted mixture, you bring up the per centage of fat to the requisite amount.

One conclusion then is that condensed milk properly prepared and sterilized is a very fair food for infants. It is not so desirable as cow's milk for reasons mentioned before, but often owing to idiosyncrasy when cow's milk will not agree, condensed milk will. In fact, it will sometimes agree when nothing else will.

Next, *the prepared foods*—these are advertised so extensively and so persistently that notice must be taken of them, even though if their merits be considered they are *beneath* notice. They are articles of commerce, and no matter how carefully made at first, in the race for money the original composition is soon forgotten or neglected in the effort to produce a cheaper article. Allow me to name the list that I found in a neighboring drug store—first Nestlé's, then Mellin's, Ridge's, Imperial Granum, Lactated, Carnrick & Reid's Lacta-preparata, Carnrick & Reid's Royal Food, Martin's Concentrated Cardinal Food, Revalenta Arabica, Neave's, Hugo Henschel's, Eupoptica, Papoma, and there are dozens more which are not in the Canadian market. A chemical examination of the contents of tins by experts, reveals the following interesting facts, which are true of all the varieties:—

1st. There is a lack of uniformity between the productions of different years, and in the contents of the tins produced in the same year. This is a dangerous fact, for we do not know what we are giving. It is not what might be expected in an article so highly praised, so well medaled and intended for so important a purpose.

2nd. They advertise that there is no starch—but examination reveals a superabundance of starch in the majority of the tins. The manufacturers claim that the starch is converted into dextrine and sugar under a pressure of 100 atmospheres by overheated steam. Dr. Rotch has found that, after diluting the food as directed, there is

still $3\frac{1}{2}$ parts out of $8\frac{1}{2}$ of solids of unaltered starch.

3rd. Ephraim Cutter, M.D., for Gaillard's *Medical Journal*, some years ago examined microscopically all the infant foods in the market. He found in Ridge's, for instance, beard of wheat, wheat starch mass, starch bundles apparently of maize, caked mass of starch grains and granules. In many cases the cell membranes were not equally crushed, and in many cases not crushed at all. McDonagh states that the fragments of the microscopical elements exhibit the appearance of mechanical destruction and not that brought about by heat.

4th. All the foods contain abundance of starch except Mellin's, in which it is converted into glucose. Even in some of the tins of this food there is a trace of starch, while the per centages of the other ingredients are not what they should be.

Let us now compare a chemical analysis of Nestlé's food prepared according to the directions on the tins, with the accepted analysis of mother's milk:

Mother's Milk.	Reaction.	Nestlé's Food. 1 in 10 of water. Neutral.
Alkaline		
None . . .	Starch . . .	3.65%
3% to 4% . .	Fat . . .	.17%
1 to 2% . .	Albuminoids . .	.75%
6 to 7% . .	Sugar . . .	3.54%
.1 to .2% . .	Ash . . .	.14%

That is, the food is defective in fat, sugar, albuminoids, and contains almost 50% of the whole amount of solids in starch, which an infant under seven months of age has no power to digest.

I have stated that Mellin's food contains no starch. Let us examine that and endeavor to ascertain its suitability for a child's food. It is prepared as follows:

Food	3 parts.
Milk	48 "
Water	48 "

Of this there are 8.26 parts of solids.

Comparative analysis as follows:

Mother's Milk.	Reaction.	Mellin's Food. Neutral.
Alkaline.		
None . . .	Starch . .	Usually none
3% to 4% . .	Fat . . .	2.004%
1% to 2% . .	Albuminoids . .	2.17%
6% to 7% . .	Sugar . . .	3.69%
.1% to .2% . .	Ash . . .	.40%