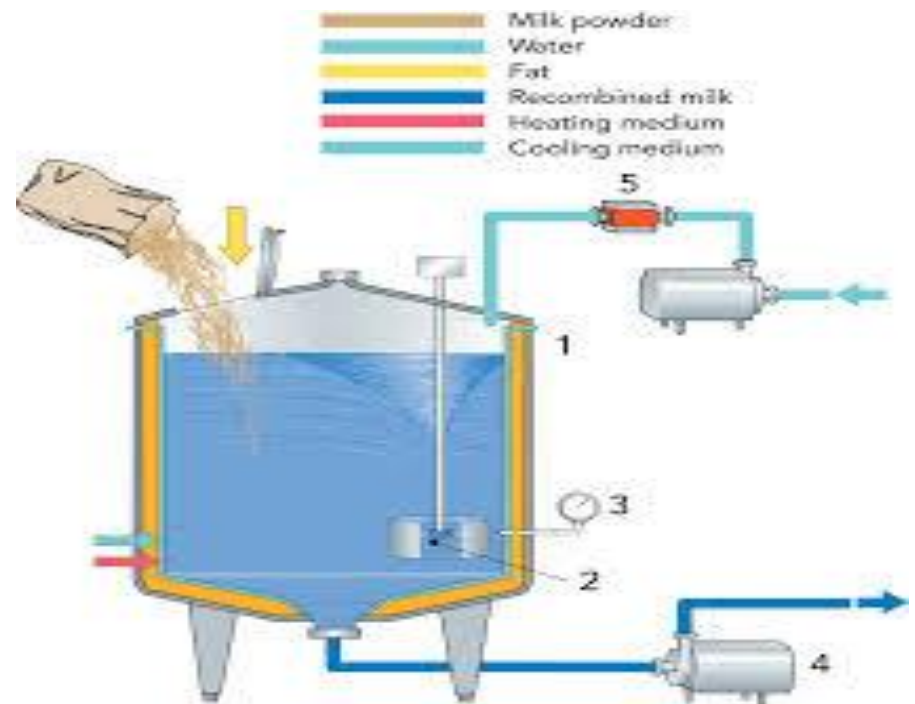


# Mixing rates of formula and raw feed

- \* Mixing of the mechanical effects, generally be accompanied by changes in the level and stability of dispersed fat's phase.

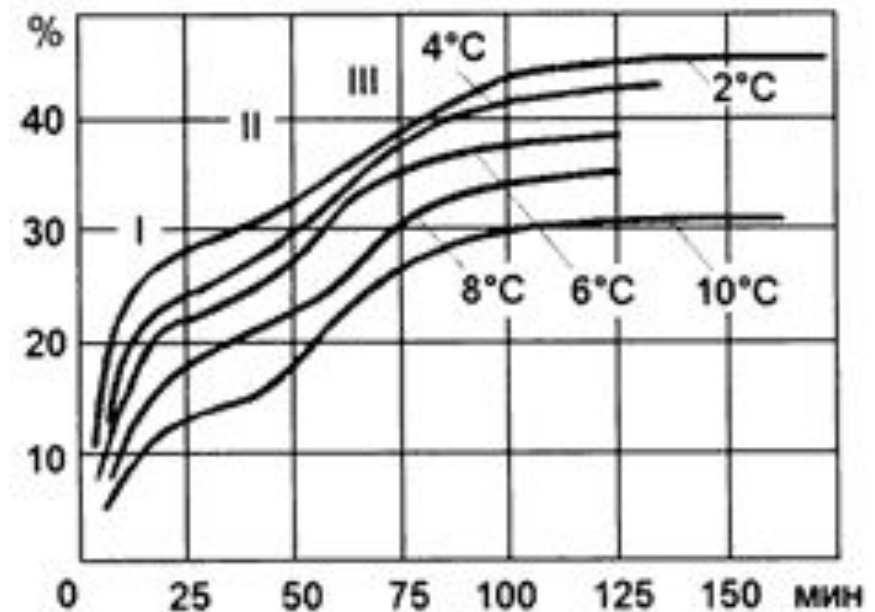


- \* In 1936 V.N. Sirick and M.M Kazanskyi drew attention to the mixing factor in the first and found that agitation cooled down to 2-8° C the milk for 3-5 minutes is equivalent to their prolonged maturation at the same temperature for 16-18 h. Stirring cream accelerates the cooling process 3 times, the degree of curing is increased by 6-10%. The lower the cooling temperature, the more the degree of mixing promotes curing and before equilibrium is established between the liquid and the solidified fat.

Table of contents of the glycerides in milk fat (in %) ,depending on age and the presence of mixing.

Milk fat content, %	Cooling temperature, °C	Cooling time at 40°C , min	Excerpt, min				
			0	5	15	25	35
Mixing							
33,4	4	8	48,7	44,6	45,5	47,7	50,3
58,5	4	16	34,8	35,3	38,1	40,7	43,2
31,5	8	4	33,0	35,6	37,4	41,3	47,0
57,0	8	15	12,6	19,7	21,9	24,5	26,4
Without mixing							
33,4	4	20	36,4	39,4	41,6	44,3	47,3
63,0	4	40	7,0	18,6	27,4	28,6	29,0
33,0	8	15	27,8	28,6	31,0	33,6	36,0
56,0	8	30	12,6	19,9	23,3	25,4	26,0

- \* Especially , effective mixing during the formation of seed crystals, the crystallization mass when there glycerides with an average stirring rate is increased to 2 times, and takes 10-16 minutes.



- \* Stirring mixers milk ( on cooling 5°C and stored in tanks) didn't significantly affect the stability and dispersion of the fat's phase. However, the repeated mixing milk during extended storage facilitates the transition part of the phospholipids of membranes of the fat globules in the plasma and reduce fat emulsion stability. So destabilized fat content in raw milk to be processed, as rule, is 1,1 ... 2,5% of the total fat content, while fresh milk it only 0,3 ... 0,7% .