

It thus appears that 45 samples, or 35 per cent of the collection, contain above 15 per cent of milk fat; 57 samples, or 44 per cent of the collection, contain above 10 per cent of fat; while 27 samples, or 21 per cent, of the collection contain not more than 10 per cent of fat.

The United States standard for milk fat in ice cream is 14 per cent, and appears to be a reasonable one so far as my investigation goes. Of the present collection, 65 samples or more than 50 per cent meet this standard. Of 80 samples reported in 1908, (See Bull. No. 162) 50 per cent reached the standard for fat just referred to.

I have recently (See Bull. 189) recommended a standard of 18 per cent for cream. The use of cream of this description, together with sugar and such other ingredients as may be permissible in ice cream, as flavours and stiffeners, will, I am given to understand, result in a product containing about 14 to 15 per cent of milk fat. Where fruit or nuts are used to give flavours, the fat content will be slightly reduced, and I think that, in ice cream of this character, it may be reasonable to require 12 per cent of milk fat. Such ice creams, as a condition of their securing the advantage of lowered fat content, should be sold as 'true fruit,' or as 'nut' ice creams.

In the absence of any legal definition of ice cream, it is impossible to designate any of the samples herein reported as adulterated, in regard to their fat content; but I have described those which contain not more than 10 per cent of fat, as of 'poor quality,' and those containing not more than 6 per cent fat as of "very poor quality"; while numbers 39519, 36787, 36791, 36792, 36795 and 36796, which contain no more fat than is usually found in ordinary milk, are certainly not entitled to the name cream at all.

It is quite certain that the public expects ice cream to possess a flavour which may be given to it either by the actual addition of fruit or nuts, or cocoa, &c., or by the use of a fruit extract or essence, natural or artificial. So long as this flavour is not injurious to health, there can be no more objection to its employment in ice cream, than in candy or other food. When added as real fruit, the water contained in the fruit reduces the fat percentage in the finished article, and for this reason I have recommended that a minimum of 12 per cent fat be accepted for ice cream, acknowledged to be made with actual fruit, or with nuts.

The question of dyes in ice cream must be decided upon the same lines as are considered in dyed candies, preserves, &c. So long as the dye used is harmless to the health, in the proportions employed, there would seem to be no objection to its use. I am not yet in a position, to give a list of dye-stuffs, which can be authoritatively recommended for the purpose. Where true fruit, cocoa or nuts are employed as flavours, no dye stuff would seem to be needed. It is claimed that certain aniline colours are now obtainable of such high degree of purity as to make their use safe in foods. The subject is under investigation.

It was formerly usual for the purveyors of ice cream to manufacture the article themselves. At the present time it is quite a usual thing for ice cream to be sold many hundreds of miles from the place of its production. This is an innovation which is indubitably to the advantage of the public, since it permits the furnishing of a desirable article of food to persons living in localities where cream is scarce or unknown. Section 24 (a) of the Adulteration Act (R.S. 1906, Chap. 133) expressly provides that 'no food or drug shall be deemed adulterated, when any matter or ingredient, not injurious to health, has been added to the food or drug, in case such matter or ingredient is required for the production or preparation thereof, as an article of commerce, in a state fit for carriage or consumption, if the same has not been fraudulently added to such food or drug, for the purpose of increasing the bulk, weight or measure thereof, or to conceal its inferior quality, and each package, roll, parcel or vessel containing such article of food or drug, manufactured, sold or exposed for sale, is distinctly labelled as a mixture in conspicuous characters, forming an inseparable part of a general label thereon, bearing the name and address of the manufacturer.'

Shippers of ice cream find it advantageous, if not absolutely necessary, to add to the article a so-called 'thickener' or 'stiffener,' which is usually gelatine but may be gum tragacanth, or other gum or even gelatinized corn starch. If these thickeners, or certain of them, could be recognized as essential ingredients of ice cream, and incorpor-