even when the fat content is above 14 per cent. The stiffeners most in vogue are gelatin, gelatinized starch and sucrate of lime. The last has not been found in any of the samples here reported.

By the use of a stiffener, it is possible to use a proportionately poor cream, and yet produce an ice cream of apparent good quality. On this account, rather than because of any unwholesomeness in the thickener itself the employment of such thickeners must be regarded as questionable.

The present investigation shows gelatine to be used in 73 of the samples examined, while 27 contain starch. In some cases the starch is present in traces only, and may be due to the freezing apparatus, or other container, having previously been used for a starch-containing product.

Only one sample contained nuts. Most of the samples were uncoloured; and of those which were coloured, only two were dyed by coaltar products; (35154 and 35158). The remainder were coloured by true fruit juices.

A propos of coaltar dyes in ice cream, I may mention a case recently brought to my notice by Dr. G. P. Girdwood of Montreal, in which a consumer of artificially coloured (so called strawberry) ice cream, was seriously affected, the symptoms of poisoning persisting for several days. That these dyes are excreted by the kidneys was evidenced by the passing of blood-coloured urine; while the diuretic effect was apparent in the abnormal stimulation of the kidneys. An examination of the dye used convinced me that it is *Ponceau 2 R.* (Sodium Xylidine, Azo-2-Naphtol 3-6 disulphonate,) a colour much used for imitating strawberry, and imported into Canada as "Strawberry Red."

Meyer (Jour. Am. Chem. Soc. 1907, p. 892) examined this, and some other anilin colours, by experimenting upon dogs, and found that the first dog succumbed to doses of 16 grams of Ponceau 2 R. on the seventh day. Another dog took as much as 60 grams which he vomited, but continued to take 5 grams doses for twenty days with no ill effects.

These immense doses would indicate that the very minute amounts employed in foods can hardly be considered toxic. Most of the colouring matter was voided in the faeces, but enough of it passed through the kidneys to give a blood red colour to the urine.

Individuals are often so constituted as to be specially susceptible to the action of certain drugs, which most of us may take with apparent impunity. This brings up the whole question of artificial colours in foods, which has been treated more fully in Bull. 83, p. 14. The subject requires fuller investigation than it has yet received.

Of the 80 samples of ice cream received in such condition as to make possible the determination of their fat content, 40 samples contained above 14 per cent, and 40 others contained less than that amount. Of these last, 12 samples contained less than 10 per cent.

I do not feel justified in drawing any general conclusions from the data herein contained; but would respectfully ask that it be published as Bulletin No. 162, as a first contribution to the study of Ice Cream in Canada. An early opportunity will be taken for further investigation of the subject.

I have the honour to be, sir,
Your obedient servant,

A. McGILL,
Chief Analyst.