grains may be observed in water independently of sewage or industrial pollution on the one hand, and of errors in manipulation on the other.

Bacterial Analysis.—The opinion entertained by chemists of the Montreal water supply, at the time when this examination was undertaken, is fairly well expressed in Bulletin No. 15 of the Inland Revenue Department at Ottawa, which in referring to the relatively high proportion of organic matter, speaks of it as "capable of sustaining and nourishing, to a much greater degree than in most water supplies, those minute organisms which, while in most cases harmless, are closely related to others known as disease germs. A water so largely impregnated with organic matter, as that of the Ottawa, would become a very efficient nidus for the propagation of morbific bacteria were such organism to find an entrance to it."\*

It may be stated in a general way that a pure water should not habitually contain large numbers of bacteria. Although no hard and fast rule can be set, Miquel's scale fairly expresses our present ideas upon the relation of the number of bacteria to the purity of water :

Exceptionally pure	water	contain	s 0	to	10	per g	.c.	• .
Very pure	**	""	10	to	100		50	4
Pure	44	**	100	to	1,000	· ·	· "	
Poor	**	""	1,000	to	10,000	1 i i i		
Impure	**	**	10,000	to	100,000		11	
Very impure	"	44 <u> </u>	100,000 :	aņ	d over.		. 11	1

The number of bacteria in filtered water should not, according to Koch, habitually exceed 100 per c.c.

I was agreeably surprised to find that the Montreal water, instead of teeming with bacteria, was conspicuously free from them, as compared with other bodies of running water, so that whatever might be the nature of the organic matter present it did not appear to be specially favourable to bacterial growth.

The following table shows the average number of bacteria found in some well known surface waters, most of which are

<sup>\*</sup> McGill, Bulletin No. 15. Department of Inland Revenue, Ottawa.