

	NITROGEN PER MILLION PARTS, AS .		
	Ammonia, Free, &c.	Albuminoid Ammonia.	Nitrates and Nitrites.
Inland Revenue Department, bulletin 5, page 8, No. 16.....	0.033	0.305	11.967
Inland Revenue Department, bulletin 5, page 8, No. 17.....	0.090	0.165	15.909
Inland Revenue Department, bulletin 13, page 6, No. 6761.....	0.000	0.148	27.357
Inland Revenue Department, bulletin 13, page 15, No. 43.....	trace.	0.050	39.000

In order to guard against miscomprehension I must mention here that nitrates although fairly stable compounds, are not absolutely such ; but may, under certain conditions, be again resolved into ammonia or nitrogen.

10. I have already referred to the universal employment of common salt as a condiment and preservative ; a fact which accounts for its presence in sewage, and makes a search for it in water analysis a very important step in the examination. The readiness with which minute traces of kitchen salt can be recognized will be evident to you from this experiment. When nitrate of silver solution is added to this solution of chromate of potash, a few drops of this weak solution is sufficient to produce a decidedly reddish tint, due to the bright red chromate of silver formed in the re-action, the particles being suspended through the water in the tube. I will now repeat the experiment, taking the precaution to add a very small amount of common salt to the chromate solution, before adding the silver, drop by drop, for a very long time without producing any red colour in the liquid : in fact, no chromate of silver will be permanently formed until enough silver has been added to decompose the common salt present. On this principle is based a method by which we can detect less than 1 part of salt in 1 million parts of water. Wherever sewage is present chlorides will be found. In the four wells whose nitrates indicated past sewage contamination, the chlorine in chlorides was found to be 148, 134, 65 and 143 parts per million respectively. A large number of good wells whose analyses