

Analysis of City Artesian Well Water.

Prof. W. W. Daniells, chief chemist at the state university, has just completed an analysis of the water from the city artesian well, which is to supply the Madison water works. The analysis is as follows, the composition being expressed in grains per United States gallon—a comparative statement of the composition of the Bethesda spring at Waukesha, being also given:

	City Well.	Bethesda.
Potassium sulphate	0.237	0.454
Sodium sulphate	0.256	0.542
Sodium phosphate	trace	trace
Bi-carbonate of soda	1.094	1.256
Bi-carbonate of lime	15.734	17.022
Bi-carbonate of magnesia	12.984	12.388
Bi-carbonate of iron	0.214	0.047
Sequel-oxide of aluminum	trace	0.122
Silica	0.414	0.741
Sodium chloride	0.222	1.100
Organic matter	1.483
Total solid contents per gallon..	20.755	25.710

It will be seen that our city water is better in several respects than the Bethesda, but generally does not vary greatly from it.

The relative hardness of the city artesian well water and the water of the lakes, is as follows: Lake water, 10.2; city well water, 7.3. It will therefore be seen that the lake water is forty per cent. harder than the city well water. Experiments were made, regarding the effect of the well water on metal pipe: After standing thirty days in contact with a clean piece of lead, there was no indication of lead in the water; galvanized iron pipe under precisely similar conditions gave a trace of zinc in the solution. From this it will be seen that, unlike the water in many cities, ours does not affect lead pipe and therefore no harmful result can happen from the use of that metal; on the other hand, galvanized iron might produce slightly deleterious effects.

The city can heartily congratulate itself in having such pure, soft and in every way admirable water, as is to be distributed by the water-works system; it is as good for drinking as Bethesda mineral water and thoroughly adapted for all domestic purposes.