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The Sioux City Water Supply II

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and which crystallized readily at room temperature. This is undoubtedly the best and cheapest method that has yet been used for the preparation of phenyl ether.

“The preparation, properties, and products of the destructive distillation of aluminum phenolate” are now being investigated in company with an advanced student in the chemical laboratory of Morningside College, and will be published as a separate paper at some future date.

THE SIOUX CITY WATER SUPPLY. II.

BY ALFRED N. COOK AND W. J. MORGAN.

It is designed to continue the examination of Sioux City waters each year for a series of years, and thereby collect valuable data which may be of service in the future. It is yet too soon to draw many general conclusions with sufficient certainty. It will be observed by comparison with last year's results that the analyses of the city water resulted much better this year. The albuminoids ammonia and nitrates have been very much reduced, and the free ammonia entirely disappeared.

The analysis of the Missouri river water suffers by comparison with that of last year, but the specimen was taken near the Floyd monument, which is below the city. The specimen of last year was taken at the combination bridge and was consequently not contaminated with Sioux City sewage.

The specimen from the Sioux river was taken at the boat landing, Riverside park.

The results here given are the average of two or more duplicates. The figures indicate parts per million. All analyses were made in May or the first part of June, 1902.

	City water.	I. N. Stone's well.	Missouri river.	Sioux river.	Manufactured ice.	Sioux river ice.
Total solids	505	450	562	526	94.	110.
Loss on ignition		90			6.	20
Chlorides	11.06	6.4	20.	6.47	7.3	4.5
Nitrogen as nitrates . . . . .	.66	2.	.03	.07	.02	.01
Nitrogen as nitrites	None.	.011	None.	.0544	None.	None.
Nitrogen as free ammonia	None.	.00144	.009	.045	.039	.027
Nitrogen as albuminoid ammonia . . . . .	.00054	.075	.171	.615	.01	.29
Oxygen consuming power . . . . .	.1	.5	8.5	2.4	1.5	1 2

THE TOLEDO LOBE OF IOWAN DRIFT.

BY T. E. SAVAGE.

The southern margin of the main Iowan drift sheet extends in a sinuous line across the central portion of Tama county. From this border a tongue-shaped lobe, having an average width of about six miles, extends southward for a distance of eight or nine miles reaching one mile below the city of Toledo and within two miles of the Iowa river. This extension I have called the Toledo lobe of Iowan drift. It is bordered on the west from the point where it leaves the main Iowan drift sheet, about the middle of the south half of section 14 of Carlton township, down to near the middle of section 21 of Toledo township, by the hills which form the west bank of the valley of Deer creek. From the latter point the irregular ridges which mark the margin of the lobe trend to the southeast for one-half mile, and then eastward, continuing in an undulating line near the north side of sections 27, 26, and 25, of the township of Tama. They enter Otter Creek township not far from the southwest corner of sec-