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Abstract

Samples were taken from 70 springs in Gallaorol district, Jizzakh region of Uzbekistan, and their physical properties (smell, color level, turbidity, precipitation, clarity) were checked in the water laboratory.

Keywords: Physical properties of spring water, Jizzakh, Gallaorol, spring waters, smell, color level, turbidity, precipitation, clarity.

Introduction

Water is the only unrepeatable natural compound for mankind, and it cannot be found in a chemically pure by nature. Various chemical elements in its composition are simple or complex compounds, and due to this feature, it is considered a natural solvent [1]. Due to the place of water in interlayer depths and its geographical location, water has different chemical properties and composition [2]. The properties of water are closely related to its composition. These features are provided by the sum of its biological, chemical and physical factors. Physical properties of water include color, turbidity, clarity, temperature, smell, and taste [3]. The degree of color of water depends on the amount of mixture of organic and mineral substances present in it. These compounds are mainly hummus compounds, and these compounds are leached from the soil by water, giving the water different colors, for example, yellow, yellow-brown, and brown [4].

Clarity and turbidity of water is determined depending on the level of light transmission [5]. If the amount of mineral and organic substances in the water is high, such water will have a cloudy appearance. The smell of spring water is determined by the presence, lack or abundance of organic and other chemical compounds in it [6, 7].

Material and Methods

The research object is springs in Gallaorol district of Jizzakh region. Water samples were collected from 70 springs and tested in the laboratory (Jizzakh Regional Sanitary and Epidemiological Center water laboratory). The degree of color of the water was determined by comparison with distilled water.

Results and Discussion

Below are the physical properties of water samples collected from 70 springs - odor, color level, turbidity, sedimentation, clarity (table 1).

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	Table 1. Physical properties of spring waters							
№	Spring number	Odor (Intensity Score)	Color level	Cloudy, sediment	Clarity (cm)			
1	Nº 1	0	0	0	20			
2	Nº 2	0	0	0	20			
3	Nº 3	0	0	0	20			
4	Nº 4	0	0	0	20			
5	Nº 5	0	0	0	20			
6	<u>№</u> 6	0	0	0	20			
7	Nº 7	0	0	0	20			
8	Nº 8	0	0	0	20			
9	Nº 9	0	0	0	20			
10	№ 10	0	0	0	20			
11	№ 11	0	0	0	20			
12	№ 12	0	0	0	20			
13	№ 13	0	0	0	20			
14	№ 14	0	0	0	20			
15	№ 15	0	0	0	20			
16	№ 16	2,1	10,0	There is turbidity and	40			
				precipitation				
17	№ 17	0	0	0	20			
18	№ 18	0	0	0	20			
19	№ 19	0	0	0	20			
20	№ 20	0	0	0	20			
21	№ 21	0	0	0	20			
22	№ 22	0	0	0	20			
23	№ 23	0	0	0	20			
24	№ 24	0	0	0	20			
25	№ 25	0	0	0	20			
26	№ 26	0	0	0	20			
27	Nº 27	0	0	0	20			
28	№ 28	0	0	0	20			
29	№ 29	0	0	0	20			
30	№ 30	0	0	0	20			
31	№ 31	0	0	0	20			
32	№ 32	0	0	0	20			
33	Nº 33	0	0	0	20			
34	Nº 34	0	0	0	20			
35	№ 35	0	0	0	20			
36	№ 36	0	0	0	20			
37	№ 37	0	0	0	20			
38	№ 38	0	0	0	20			
39	№ 39	0	0	0	20			
40	№ 40	0	0	0	20			
41	№ 41	0	0	0	20			
42	№ 42	0	0	0	20			
43	№ 43	0	0	0	20			
44	№ 44	0	0	0	20			
45	№ 45	0	0	0	20			
46	№ 46	0	0	0	20			

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	47	№ 47	0	0	0	20
	48	№ 48	0	0	0	20
•	49	№ 49	0	0	0	20
	50	№ 50	0	0	0	20
	51	№ 51	0	0	0	20
	52	№ 52	0	0	0	20
	53	№ 53	0	0	0	20
	54	№ 54	0	0	0	20
	55	№ 55	0	0	0	20
	56	№ 56	0	0	0	20
	57	№ 57	0	0	0	20
	58	№ 58	0	0	0	20
	59	№ 59	0	0	0	20
	60	№ 60	0	0	0	20
	61	№ 61	0	0	0	20
	62	№ 62	0	0	0	20
	63	№ 63	0	0	0	20
	64	№ 64	0	0	0	20
	65	№ 65	0	0	0	20
	66	№ 66	0	0	0	20
	67	№ 67	0	0	0,03	20
	68	№ 68	0	0	0,03	20
	69	№ 69	0	0	0,03	20
	70	<u>№</u> 70	0	0	0,03	20

The odor indicator of spring water is in the standard requirements, i.e. "0", and the color level is "0", as well as turbidity, the presence of sediment is "0", the clarity level of water samples is 20 cm. The physical characteristics of the spring waters meet the requirements of the republican standard, but only spring No. 16 does not meet these requirements, that is, the odor indicator is 2.1 points, the color level is 10.0, there is turbidity and sediment, and the clarity level is 20.0.

Conclusion

The physical characteristics of spring waters meet the drinking and household water requirements of Uzbekistan, with the exception of spring No. 16.

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