

## INTRODUCTION

The problem of water supply affects millions of people worldwide, more than one hundred million people in Europe. Approximately 80 % of fresh water in Europe originates from underground water and rivers, which is why these sources are particularly threatened by climate change, pollution, and overexploitation of water resources. Water sampling was conducted in the city of Virovitica and surrounding settlements (Podgorje, Đurađ, Lozan and Špišić Bukovica) at different locations over a period of 2 days.

## EXPERIMENTAL PART

According to the Ordinance on compliance parameters, methods of analysis, monitoring and safety plans for water for human consumption and the way of keeping a register of legal entities that perform public water supply activities, the parameters of the healthiness of water for human consumption (microbiological, chemical), indicators (chemical, microbiological) are precisely prescribed. and parameters of radioactive substances.

Table 1. Physical indicators of samples

Samples	Temperature (°C)	pH value	Turbidity (NTU)	Free chlorine (mg Cl <sub>2</sub> /L)	Conductivity (µS/cm)
VT-1	9,60	7,61	0,59	0,06	544
VT-2	11,30	7,65	0,36	0,01	518
VT-3	12,20	7,69	0,53	0,04	525
VT-4	9,10	7,74	0,53	0,06	513
VT-5	11,10	7,62	0,31	0,18	506
VT-6	7,90	7,54	0,52	0,09	519
VT-7	8,00	7,52	0,52	0,01	497
VT-8	9,60	7,44	0,76	0,08	503
VT-9	13,60	7,40	0,50	0,02	490
VT-10	9,40	7,55	0,36	0,11	514



Figure 1. Detection of total coliforms and *E.coli* in water samples

Table 2. Chemical indicators of samples

Samples	Ammonia (mg NH <sub>4</sub> <sup>+</sup> /L)	Iron (µg/L)	Manganese (µg/L)	Chlorides (mg/L)	Nitrites (mg NO <sub>2</sub> <sup>-</sup> /L)	Nitrates (mgNO <sub>3</sub> <sup>-</sup> /L)
VT-1	0,01	20,0	5,98	14,04	0,0	1,64
VT-2	0,01	1,0	8,64	14,35	0,0	1,73
VT-3	0,01	19,0	8,28	14,95	0,0	1,64
VT-4	0,01	9,0	9,37	14,86	0,0	1,73
VT-5	0,01	8,0	6,49	14,05	0,0	1,68
VT-6	0,01	14,0	5,17	13,19	0,0	1,64
VT-7	0,01	76,0	11,63	14,14	0,0	1,73
VT-8	0,01	38,0	9,06	14,86	0,0	1,64
VT-9	0,01	0,0	4,68	14,21	0,0	1,59
VT-10	0,01	6,0	6,27	16,01	0,0	1,51

## CONCLUSION

The analyzed samples of water from the water supply system of Virovitica and its surroundings, based on microbiological, physical and chemical indicators of the quality of drinking water, comply with the Ordinance on conformity parameters, methods of analysis, monitoring and safety plans for water for human consumption.