



Thermomineral salt water of Tuzla (Tuzla Municipality)

Salt waters in Tuzla area, proven in springs and wells in Neogene sediments, are sedimentogene - relict and less of meteoric origin (Miošić, Samardžić, 2016). Pumped waters from wells have high mineralization up to 320 g/l and a temperature 20-27°C. Type of water is Cl-Na.

Salt thermomineral water of Tuzla was used by pumping salt solutions from deep wells (pumping thermomineral groundwater from deep wells began in 1880 during the period of Austro-Hungarian rule in Bosnia and Herzegovina) in area Trnovac-Hukalo as uncontrolled leaching of salt layers, salt is extracted from the solution and uses as a basic raw material in the chemical industry and as common salt. Before of construction of well in Tuzla and Gornja Tuzla exist thermomineral springs.

Increase of karstification of dissolved salt deposits caused subsidence of Tuzla town, which lies on the salt layers.

See also

[Geomanifestations on the territory of Tetima \(Tuzla Municipality\)](#), photo of [consequences of overexploitation of salt brines in Tuzla](#) and [GeoConnect^{3d} blog post](#)

Generalities

The rock salt deposit Tuzla was formed within Miocene sediments (according to numerous earlier researchers it is Upper Burdigalian and Helvetian, while geologists of recent times the deposit classify as Carpathian or Lower Badenian) where clay marls are dominate, but in some places it is dolomitic and bituminous marls. Gypsum and anhydrite also follow salt layers (Fig. 2). Within this rock complex, which is called the "trakasta serija" (or "salt formation" according to Hrvatović, 2006), five layers of salt are distinguished by depth; they are separated by marls. Tortonian "Schlir" (marls, sandstones and conglomerates) and alluvial sediments occur in the roof of the

"trakasta serija", while the bottom sediments represent "red series" with red sandstones, conglomerates, clays and marls (Lower Miocene).

The depth to the salt body and the thickness of the layers varies spatially; the depth to the salt is 150 to 500 m from the surface of the terrain, while the thickness of the salt layers is 20-100 m, where the thickest layers are in the central part of the syncline (Jovanović and Vujović M 1976).

Anomalies

High groundwater mineralization (up to 320 g/l).

Data

Source of data: Miošić et al. (2010).

FZZG_factsheetTuzla	Well depth (m)	Temperature of water (°C)	Q _{pump} (l/s)	Total mineralisation (g/l)	Type of water	Aquifer
Well Tr-155 Trnovac	450	20	3,4	320	Na-Cl	Sediments of salt formation (Lower Baden)
Well no.22		27	8	267	Na-Cl	Sediments of salt formation (Lower Baden)

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Cite this source

Samardžić, N., 2021. Thermomineral salt water of Tuzla (Tuzla Municipality) [Fact sheet]. Geological Survey of Federation of Bosnia and Herzegovina-Sarajevo (FZZG).

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Date: 02/22/2021