

WATER QUALITY INVESTIGATION OF DUG WELLS IN VISNYESZÉPLAK AND GYŰRŰFŰ ECO-VILLAGES

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Nowadays, the good quality of subsurface water is crucial all over the world, including Hungary. In areas, where no running water is available and the inhabitants use dug wells for water for their everyday life, paying attention to water quality is extremely important. Visnyeszéplak and Gyűrűfű are such areas. These are the two oldest eco-villages in Hungary, where the inhabitants apply nature-friendly farming. Both research areas are located in South-West Hungary, in South-Zselic micro-region, as part of the settlement of Visnye and Ibafa. Approximately 180 people (35 families) live in Visnyeszéplak and 30 people (10 families) in Gyűrűfű. In Visnyeszéplak most families have dug wells (all in all 33), but in Gyűrűfű there are only 4 dug wells. Between October 2020 and November 2021, a total of 34 dug wells (Visnyeszéplak: 30; Gyűrűfű:4) were examined 7 times, based on 8 parameters (temperature, pH, dissolved oxygen, conductivity, nitrite, nitrate, ammonium, phosphate). The measurements were performed on site, using by a photometer, pH meter, dissolved oxygen meter, conductivity meter and temperature meter. The last two measurements were carried out within the ÚNKP grant agreement. From the results, nitrate, nitrite and ammonium values were analyzed for this conference. We used the 201/2001. (X. 25.) on the quality requirements of drinking water and the order of control for the determination of the limit values. Based on this, 47% of the wells in Visnyeszéplak are above the limit value in terms of nitrate, while in the case of Gyűrűfű it is 25%. In the case of nitrite, on the other hand, the values did not exceed the limit value in Gyűrűfű and values above the limit were measured only 4 times in Visnyeszéplak, too. In the case of ammonium, 27% of the wells in Visnyeszéplak were above the limit value on average, and in Gyűrűfű 25%.