WATER COLUMN PROPERTIES of LAKE ERÇEK; EASTERN ANATOLIA (TURKEY)

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Lake Erçek is located to eastern part of Lake Van. Because it is located in a closed basin and the rock types of the drainage area, the water is soda like Lake Van. The area of the lake is about 106 km2, the maximum depth is 30 meters and the average depth is 18.45 meters.

The study is carried out within the scope of international cooperation projects between TÜBİTAK and RFBR (Russia) with the number of the project is 114Y825. In the study, CTD measurements were made to determine the physical properties of Lake Erçek from the water column. At the same time, water samples was taken every 5 meters to determine the chemical properties of the water and the chemical analyzes of the samples were analyzed from the anion cation and transferred to the piper diagram.

According to the first findings, Lake Erçek has the surface temperature of 170C and epilimnion layer is between surface to 20 meters, thermocline layer is located between 20-22 m and the hypolimnion layer starts 22 meters and finished with the base of the lake. The salinity rate of the lake is 15 ppt and the dissolved oxygen ratio is between 98% and 18%. The pH of the lake water is 9.7, the amount of dissolved substance and the conductivity are very high. Lake water is very rich of Na and Cl. All chemical data is transferred also to the graphs.