Leaching Dynamic of Arsenic from Sulphide ores and their Snuffs

Nunu Labartkava
ekolab@yandex.ru
Department of Chemistry, The Chair of Physical and Analytical Chemistry, Iv. Javakhishvili Tbilisi State University, Chavchavadze Av. 3, Tbilisi

Annotation

Among the priority elements that pollutes environment very important one is arsenic. Importance of arsenic is due to its and its compounds toxicity and diversifying the ways of its migration and transformation.

In the second half of the twentieth century, arsenic was extensively used in medicine and technology. In Georgia, there were working two factories that were processing arsenic ores: Uravi (Upper Racha, Ambrolauri district) and Tsana (Lower Svaneti, Lentekhi District). But since science and technology has developed, importance of using arsenic significantly reduced. However, the sulphide ores and wastes of manufacturing still remain as local, but very important source of pollution.

In the gorge of riv. Lukhuni, on the territory of sulphide ore's factory, there is left nearly 65-70 thousand tons of waste, containing approximately 1500 tons of arsenic and 400 tons of antimony. These wastes flow into river Lukhuni and present one of the permanent sources of pollution.

For quantitative assessment of the source of pollution we studied arsenic's leaching dynamic and impact of the factors influencing the process. We also studied content of normalized elements in sewage waters.