

*Zhovinsky E.Ya., Kryuchenko N.O., Zhuk O.A.* **Rare elements in weathering crusts of Brusilovsky suture zone of Ukrainian shield.** Principles have been found out of the distribution of rare elements in the gold mineralization in the weathering crusts of crystalline rocks within Brusilovsky suture zone of the Ukrainian shield. It has been discovered that the highest concentration of chemical elements, including gold, is typical for hydromica-clay zone of weathering crust. It has been shown that arsenic is an indicator of the zones of tectonic disturbances, with which the gold ore occurrence (gold mineralization) is associated. Correlation has been found between the contents of Au in weathering crusts and mobile forms of Y, Yb (ppb) in surface deposits (sediments) which allows recommending conventional multiplicative factor  $k = Y(n \times 10^4) / Yb(n \times 10^2)$  when searching for gold ore occurrences.

*Key words:* rare elements, weathering crusts, Brusilovsky suture zone, gold mineralization.