## Summary

### *INTRODUCTION*

The history of foundation of the famous Czech spa city Karlovy Vary goes back to 1350. The curative effects of Karlovy Vary thermal waters were widely used for balneological cures since the 16$^{th}$ century. Increased radioactivity of Karlovy Vary waters has been known for a long time. Mache and Meyer realized the first measurement in 1905. Present contribution is focused on state of radioactive equilibrium of Karlovy Vary hot springs.

Mineral waters of Karlovy Vary area are sulphate – bicarbonate waters (TDS about 6 g $l^{-1}$) with high concentrations of dissolved $CO_2$. During the process of water up-welling (evasion) $CO_2$ liberating can in some cases (e.g. "Hot spring") represent up to 75 % of the spring's total volume production. The temperature (range from 10 °C up to 73 °C) depends on the particular springs' distance from the main fault zone. The thermal springs are connected with the long-term aragonite sinter banks formation (Vylita et al. 2007).