

Physicochemical Properties and Healing Qualities of the Mineral Waters in Bulgaria

*Tatyana Angelova, MD, *Maria Stoicheva, Tzvetelina Kaneva, MD

Bulgarian Union of Balneology and Spa Tourism

**National Specialized Hospital for physical therapy and rehabilitation*

Abstract

Bulgaria is a small country located in the central part of the Balkans. In its territory there are over 130 mineral water sources with various physicochemical content, and approx. 600 working water sources with total water flow of approx. 4000 l/sec. There are cold mineral waters with the temperature below 20°C and hot mineral waters with the temperature over 40°C. Warm and hot waters prevail. In the southwestern part of the country there is the only geyser in Continental Europe – Sapareva Banya town with the water temperature of 103°C. The total mineral water mineralization is between 120 mg/l in Knyazhevo district, Sofia and over 300 000 mg/l near the salt mines in Mirovo village, Varna. The mineralization of 80% of the mineral waters is below 1 g/l. They are rich in hydrocarbonate, sulphate, sodium, calcium, magnesium and silicon ions. The most widespread healing gases are hydrogen sulfide and radon. Bulgarian mineral waters have good organoleptic properties and are suitable for bottling. They have a deep origin and therefore they are not influenced by the anthropogenic pollutants and changing weather conditions.

Over the years, a number of clinical experimental researches have been conducted on the effect of some mineral waters in diseases of different organs and systems. There are preventive and healing methods with very good therapeutic effect incorporated into the clinical practice of the specialized health institutions for rehabilitation.