

## SUMMARY

Bohemian garnets have been known as a jewellery stone for many centuries. There is still a lot of interest in them, however, the reserves in traditional locations are getting smaller. That is why search for alternative source of similar garnets in gem quality started. Shavaryn Tsaram deposit in Mongolia is considered as one of the potential sources.

Pyrope samples from eight Bohemian localities of two areas (České středohoří [The Central Bohemian Uplands] and Podkrkonoší [The Giant Mountains]) and from Shavaryn Tsaram deposit in Mongolia were analysed using electron microprobe, LA-ICP-MS, ICP-OES, Mössbauer spectroscopy and x-ray powder diffraction. The data were compared with the conclusion that the Mongolian garnets from Shavaryn Tsaram deposit are so different from the Bohemian ones that it will not be possible to use them as a gem material of similar qualities.

Bohemian garnet can be characterised as a red garnet with refraction index 1.747 (+/- 0.001) with dominant pyrope component of the average composition  $\text{Py}_{78}\text{Alm}_{17}\text{Gr}_5$  and  $\text{Cr}_2\text{O}_3$  content above 1 wt.%.

The data were also evaluated from two classification schemes point of view. The schemes by Schulze (2003) and Grütter (2004) are used in determining source materials and in diamond prospection. According to them source rocks of Bohemian garnets from both areas correspond to lherzolite and supposedly will not be accompanied by diamonds. On the other hand, Mongolian garnets from Shavaryn Tsaram deposit are derived from eclogites and can be accompanied by diamonds.