

## **Selected parameters of validation of AmpFI STR MiniFiler™ kit used in forensic genetics**

### **Summary**

The aim of the presented research was to evaluate AmpFI STR MiniFiler™ kit from Applied Biosystems from the point of its reliability, limitations and usefulness in forensic genetics. Amplification products were detected in fluorescence-based automated genetic analyzer, whereas alleles were defined on the basis of the size of the internal standard. During the validation, the following parameters were determined: detection threshold and threshold determination, linearity and measuring range and sensitivity of the method. The reliable results were obtained in the range of concentrations from 2.00 ng to 0.03125 ng of template DNA in the sample. The method has a high detection rate of alleles, also in the range of 0.0625 ng to 2.0 ng of template DNA were full DNA profile. The case of “drop out” of individual alleles and the entire system for the content of 0.03125 ng of template DNA in the sample were observed. Mini Kit Filer is suitable for pure research profiles or mixtures. To a lesser extent it is suitable for the trace analysis of contact because of its high sensitivity.

**KEY WORDS:** limit of detection, limit of quantification, minimum peak height