

The invention relates to a method for measuring a melt cooling curve and/or a heating curve for a melt sample with the aid of an optical fibre, wherein the immersion end of an optical fibre provided at least partially with a free surface at a certain distance is encompassed with a theoretically heat-resistant reception space of the sample. Said immersion end of the optical fibre is immersed into the melt, thereby forming a sample in the sample reception space which is afterwards removed together with the sample and optical fibre from a molten metal and afterwards, the sample cooling curve of the sample and/or the temperature profile during heating are measured after the sample prehardening with the aid of a signal which is received by said optical fibre and transmitted to a measuring device. A corresponding measuring device and the use thereof are also disclosed.