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Tests of thermal expansion of glass waste

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In the context of testing the quality of waste glass was to determine the coefficient of thermal expansion glass, which is made from mixed glass shard (shards of automotive glass and different colored glasses). The testing laboratory was used dilatometer Linseis LV 75PT, which is equipped with two chambers, low temperature (temperatures from -180 ° C to 500 ° C) and high temperature (1000 ° C). For the actual measurement was used for low-temperature chamber. The temperature range was from -20 to 100 ° C, with a temperature increase of 1 ° C / min.

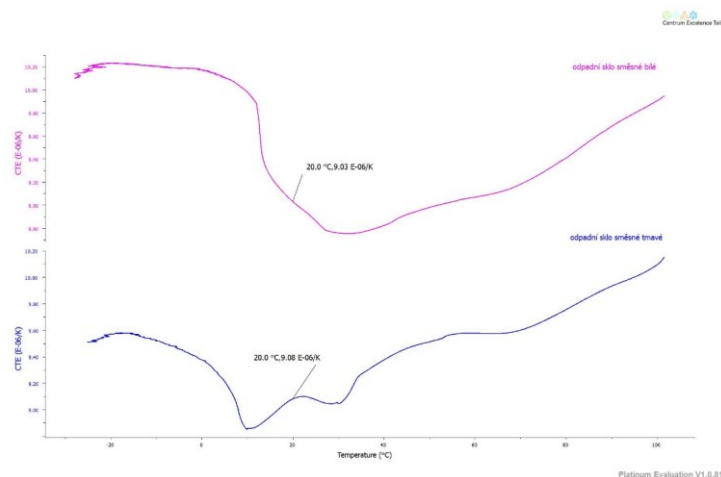


Figure 1 : Coefficient of linear thermal expansion of glass samples

Course of linear thermal expansion was affected by the amount of impurities in the glass, which have different properties and contributes to the overall properties of the test material. Value thermal expansion temperature is around $9 \cdot 10^{-6} \text{ K}^{-1}$, which corresponds to a spreadsheet values for flat glass used in construction.

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