

QUARTZ GLASS CRUCIBLE AND PROCESS FOR PRODUCING THE SAME



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Abstract

In order to provide a quartz glass crucible distinguished by high purity, high opacity and/or low transmissibility in the IR spectrum, it is proposed on the basis of a known quartz glass crucible of opaque quartz glass with a crucible body symmetrical in relation to a rotational axis, an outer zone (3) of opaque quartz glass transitioning radially toward the inside into an inner zone (2) of transparent quartz glass and with a density of at least 2.15 g/cm^3 , that according to the invention, the crucible body (1) be made of a synthetic SiO_2 granulate with a specific BET surface ranging from $0.5 \text{ m}^2/\text{g}$ to $40 \text{ m}^2/\text{g}$, a tamped volume of at least 0.8 g/cm^3 and produced from at least partially porous agglomerates of SiO_2 primary particles. A process for producing a quartz glass crucible of this kind is distinguished according to the invention in that for the production of the crucible a SiO_2 granulate is used which was formed from at least partially porous agglomerates of synthetically manufactured SiO_2 primary particles and that it has a specific BET surface ranging from $0.5 \text{ m}^2/\text{g}$ to $40 \text{ m}^2/\text{g}$ and a tamped volume of at least 0.8 g/cm^3 , the heating effected in such a way that a vitrification front advances from the inside outward while an inner zone (4) of transparent quartz glass is being formed.

(Fig. 1)