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Summary

In a known method for the cleaning of SiO_2 grain, a fill of particles in a reactor having a vertically oriented center axis will be heated and simultaneously exposed to a treatment gas which is passed at a specified flow velocity from the bottom to the top through the reactor and the fill. To provide on this basis an improved cleaning method and a suitable simple device for it, it is proposed according to the invention and with regard to the cleaning method that a chloric treatment gas will be used which is set to a treatment temperature of at least $1,000^\circ\text{C}$ in the area of the fill, and that the flow velocity is set to at least 10 cm/s. With regard to the device according to the invention for the implementation of the method according to the invention, a gas shower is provided for the gas inlet, the gas shower comprising below the fill a multitude of nozzle openings distributed laterally to the center axis, for introduction of the treatment gas into the fill. The SiO_2 grain of naturally occurring raw material and cleaned according to the invention is characterized by an iron content of less than 20 ppb by weight, preferably less than 5 ppb; a manganese content of less than 30 ppb by weight, preferably 5 ppb; a lithium content of less than 50 ppb, preferably 5 ppb; as well as chromium, copper and nickel each with less than 20 ppb by weight, preferably 1 ppb.