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**Abstract**

The effect of prolonged milling on quartz has been investigated by conventional ball milling. The milling efficiency was enhanced by a proper selection of grinding media (alumina), ball containing fraction, initial particle size and amount of quartz being ground. The milling was carried out in 72 h cycles (total milling time 360 h) under constant operational mill speed of 130 rpm. The effect of milling time on particle size, morphology, purity, and microstructure of quartz was examined. Results indicate that particle size reduced by more than 96%. It is also found that lattice strain and dislocation density increased while crystallite size decreased substantially as a function of milling time. The change in particle shape from elongated flake to spherical along with relative size determine the shape of particle size distribution curve, uniformity of lattice strain and extent of alumina contamination. The alumina contamination reported

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