

X-rays emitted from fractured sugar candy show the logarithmic Gaussian

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X-rays are emitted when mechanical stress is applied to sugar candies [1-3]. In the present study, a crystal sugar was arranged between copper rods in a vacuum, and crushed by dropping a weight from different height. SDD was used as a detector, and measurements were repeated 6 times. The number of crystal sugar fragments was also examined by counting them. Figure 1 shows that a peak was observable around 5 keV in the measured X-ray spectrum. The spectrum and the size of fractured crystal sugars had the logarithmic Gaussian distribution.

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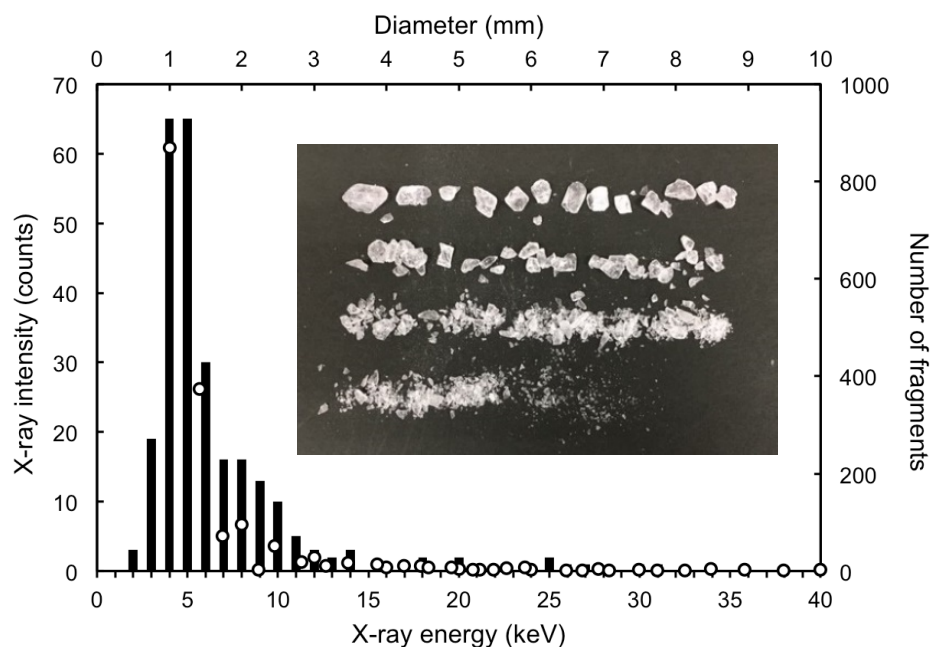


Fig.1. X-ray spectrum (bar) and the size distribution (open circle) of fractured crystal sugars.