



30 μm

selfFrag Lab - the first commercial laboratory equipment for selective fragmentation.

Very short pulsed HV-discharges applied to solids under water cause the material to disaggregate along grain boundaries, inclusions or inhomogeneities. The highly selective fragmentation process of selfFrag Lab liberates morphologically intact minerals while minimizing the production of undesired fines.

Structural Geology

***Micro-textures in Carbonate Mylonites
(Doldhorn-nappe, Helvetic Alps, Switzerland)***

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Issue / Purpose of Study:

Disintegration of ultra-fine grained polymineralic rocks for structural and geochemical investigations.

Rock features:

Ultra-fine grained carbonate mylonite, particle size < 10 μm . Main constituents are calcite and mica (sericite). The former carbonate rock experienced strong deformation (shear strain up to 10.000) under elevated T conditions (350°C).

Results / Findings:

To investigate single grain surfaces deformed under high stress conditions the rock was fragmented with selfFrag Lab. Polygonal idiomorphic calcite grains and sheet silicate platelets were completely liberated.

Conclusion:

- ***selfFrag Lab induces very good liberation of ultra-fine mineral phases with clean and intact mineral surfaces. This enables 3-D investigation of grain surfaces with respect to grain growth/deformation.***
- ***selfFrag Lab is able to split up minerals along interphase boundaries.***
- ***Selective fragmentation of ultra-fine grained rocks enables better investigation of single phases (e.g. structural analysis of calcite grains and dating of mica phase).***



More detailed information is available at www.selfrag.com.

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