$CaSO_4$; Fe_2O; $CaCO_3$ 混合物

行　　业：	Chemistry
进料尺寸：	< 3mm
最终精度：	unknown
样 品 量：	< 1g
研磨建议：	Without having the proper information's about what amount should be ground to which fineness, we can just guess and will recommend using a Mini-Mill PULVERISETTE 23 for grinding your kind of sample. If zirconium oxide abrasion can be tolerated, we recommend using a small bowl volume (10ml) with 10mm balls for grinding.

MINI-MILL PULVERISETTE 23

speed: 50 Hz

10 ml grinding bowl made of zirconium oxide (ZrO_2)

+ 3x 10 mm ZrO_2 balls

Feed quantity:	0,1 g
Feed Size:	< 3 mm (flat flake)
Additive:	30s + 1ml water
Grinding time:	3 min
Final fineness:	< 50 µm
Comments:	Within the first 30s of grinding, the sample starts sticking to bowl and balls.. This uses to happen after the majority of particles reached a fineness of < 20-30µm.

Interacting forces between fine ground particles will become bigger as their own g-force. Therefore, particles will stick to each other and just become compressed by the used grinding balls. These clusters of particles also contain bigger particles which will not be ground any further too.

For a better endfineness, only a grinding in suspension (e.g. with solvents or water) is necessary. For this, we added 1ml of water after 30s of dry grinding and proceeded grinding.

After totally 3 minutes, the fineness has been checked by optical microscopy. A high amount of particles < 10µm has been observed. No piece > 50µm has been detected.

We aborted grinding after 3 minutes and packed the sample. If a higher endfineness might be requested, a longer grinding time is still possible. Also a change of ball diameter will be beneficial for achieving finer results.