

Activity - 16

**Topic:** Classification of Mills.

**Table 1: Mechanism of Size Reduction-Methodology**

Methods	Examples	Approx. particle size (µm)
Cutting	1. Scissors 2. Shears Cutter Mill	100-80,000
Compression	1. Roller Mill 2. Pestle-Mortar	50-10,000
Impact	1. Hammer Mill 2. Disintegrator	50-8000
Attrition	1. Colloidal Mill 2. Roller Mill	1-50
Combined Impact and Attrition	1. Ball Mill 2. Fluid Energy Mill	1-2000

**Table 2: Classification and Characteristic of Size Reduction Equipments**

Equipments	Techniques	Uses
Cutter Mill	Cutting Machine	
Impact Mill (Hammer Mill) Rolling Compression (Roller Mill) Attrition Mill Tumbling Mill	Grinders	Used for almost all the drugs Soft materials Used for almost all the drugs Brittle drugs ----- do -----
Fluid Energy Mill	Ultra Fine Grinders	Moderately hard and friable materials
Edge Runner Mill End Runner Mill	Crushers	Soft materials

**Pestle-Mortar**

**Hammer Mill**

**Disintegrator**

**Roller Mill**

**Ball Mill**

**Fluid Energy Mill**