OPTION

Angle of repose measurement unit

Compressibility measurement unit

Compressibility measurement unit

1 Angle of repose measurement unit

: It is possible to measure angle of repose with installing the angle of repose measurement unit.
The precision of reading is 1, and the table dimension is 80mm.
※The small angle of repose shows that the fluidity is good.

2 3 Compressibility measurement unit

: it is possible to measure compressibility (loose bulk density, hardened bulk density)

【Detail】
Compressibility measurement cell 100cc, Cell holder for measuring compressibility,
Cell cap for measuring compressibility, Cell cap cover for measuring condensation,
Cell cap flange for measuring compressibility.

Compressibility

{(hardened bulk density – loose bulk density)} ×100

Compressibility is suitablest to judge the fluidity of powders. It is possible to measure easily.
※ the high compressibility shows that the fluidity is bad.

※ This equipment is for normal powders, but not for dangerous substance (toxic material, explosive substance).
In the case of using for dangerous substance, please install the necessary measures.

※ In the case of using this equipment in overseas, it is necessary to issue country name, company name, end user and end use. Please contact the person in charge for details.

※ The specification would be changed without notice.

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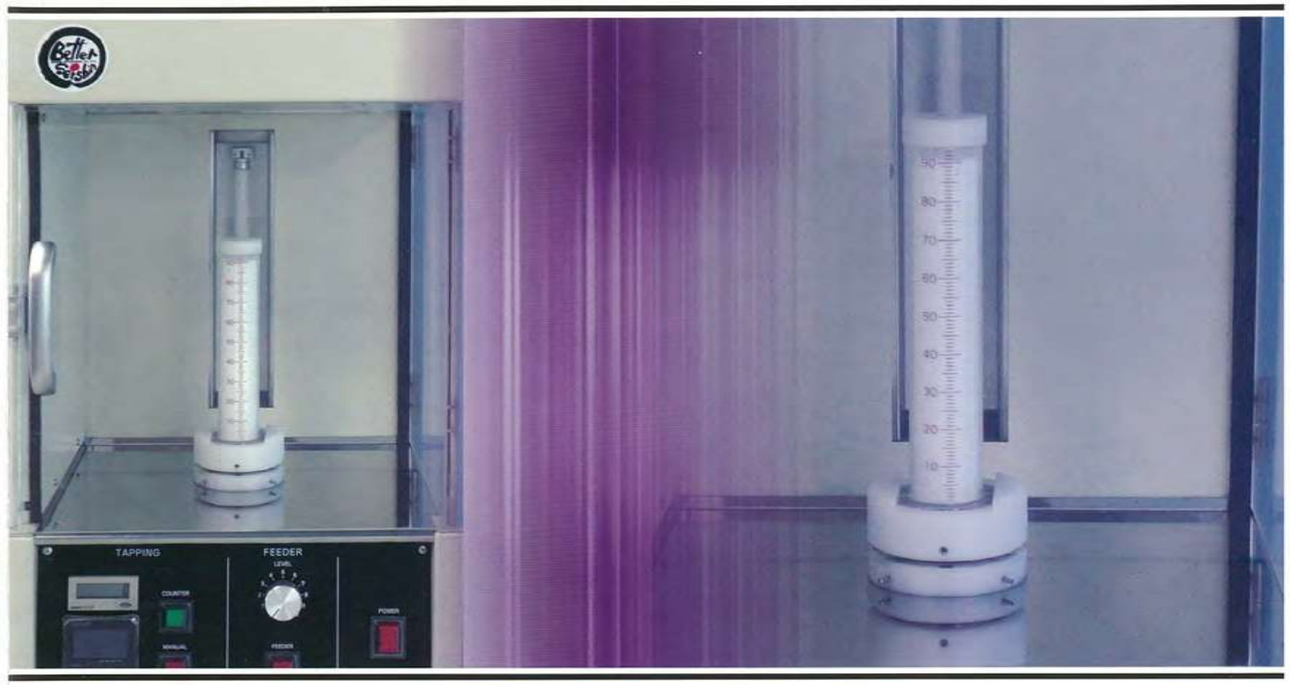
inquiry...

Tap Densty Analyzer TAP DENSER

KYT-5000

Tapping density measuring instrument
KYT-5000



For the persons who treat thepowders.

The repeatability and controllability of this equipment are excellent.

SEISHIN ENTERPRISE CO., LTD.

Powder property measuring equipment

TAP DENSER　KYT-5000

This equipment can measure the fluidity, adhesion and tap density by compressing the sylinder that filled with sample with tapping. There are also option for measuring angle of repose and compressibility (loose bulk density, hardened bulk density)

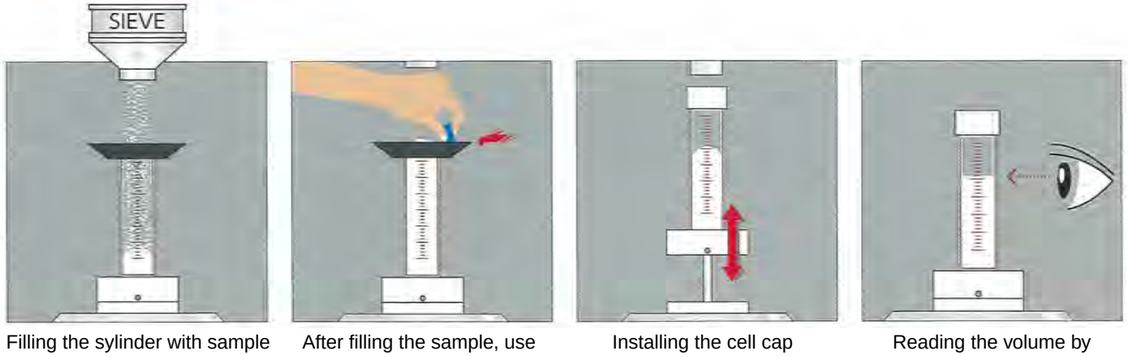
Features

- The repeatability is good.
- It is easy to clean.
- It is possible to measure a small amount of sample by changing the cell.
- The sample will not scatter with acrylic door.
- The scattering of initial filling is small.
- It is possible to change the tapping stroke.
- It is possible to control the number of tapping

Tap density

Tap density is apparent density when powders are gently filled in a container and then close filled by Tapping to break voids among particles. For example, apparent densities are different between the states where powders are simply accumulated by their own weight and flowing in a device or the sates that powders are just filled and in a long-time transportation. This is because that there are a lot voids in the filled layers when powders are just filled. But the voids are broken by vibration or impact during transportation and the powders are close packed. Therefore, measurement of tapping density can get the data about change in fluidity, degree of volume reduction, porosity, etc.

Tap density measurement



Filling the sylinder with sample from the above sieve.

After filling the sample, use leveling plate to level off.

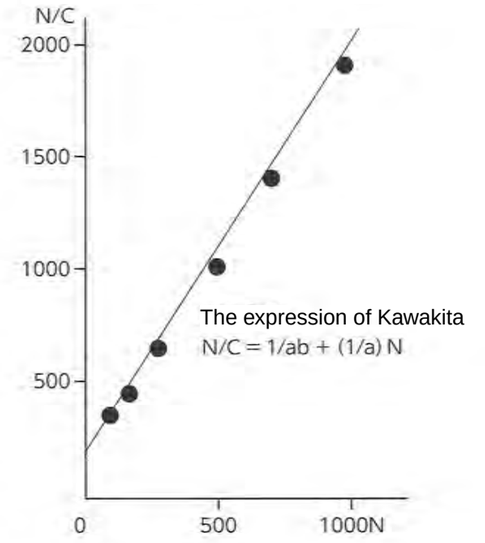
Installing the cell cap for tapping.

Reading the volume by eyesight.

・Tapping density data sheet

Sample Name		Calcium carbonate	
True density : D		2.7	
Particle size D50 : d		7 μm	
Tapping hight : H		40mm	
Cylinder volume : V		200cc	
Sieve		710 μm	
N	Vt	C	N/C
100	123	0.385	260
200	110	0.450	444
300	102	0.490	612
500	95	0.525	952
700	93	0.535	1308
1000	90	0.550	1818
1500	90		
W		131.7	
ρ		0.659	
1/ab		78	
1/a		1.787	
1/b		43.649	
a		0.560	
b		0.023	
ρ∞		1.463	
Σ0		0.750	
Σ∞		0.458	

・Change of the bulk density by number of tapping



● The expression of Kawakita

N/C=1/ab+(1/a) N

Fluid index(a) is small ➡ Fluidity is good

Adhesive index(1/b) is small ➡ Adhesion is weak

N : Number of tapping
C : Change of the bulk density=(V_0-V_t)/V_0
V_0 : Initial capacity
V_t : Capacity at the time of the tapping
1/b: Adhesive index
a : Fluid index

W : Sample weight
ρ_0 : Bulk density
ρ_∞: Tapping density
Σ_0 : Initial porosity
Σ_∞: Last porosity

Equipment specification

Power	AC100V(50/60Hz)
Dimension	W310, D368, H594mm
Weight	About 40kg
Number of tapping	9999 times max
Tapping stroke	Choice of 50, 40, 30, 20, 10mm
Tapping speed	Choice of 3, 2, 1 times/sec
Consumption current	Rated 3A
Method of powder charge	Electromagnetic vibration type
Rotation speed display	Digital counter