

Application Note

/// Tube Mill: grinding granules and tablets

PRODUCT

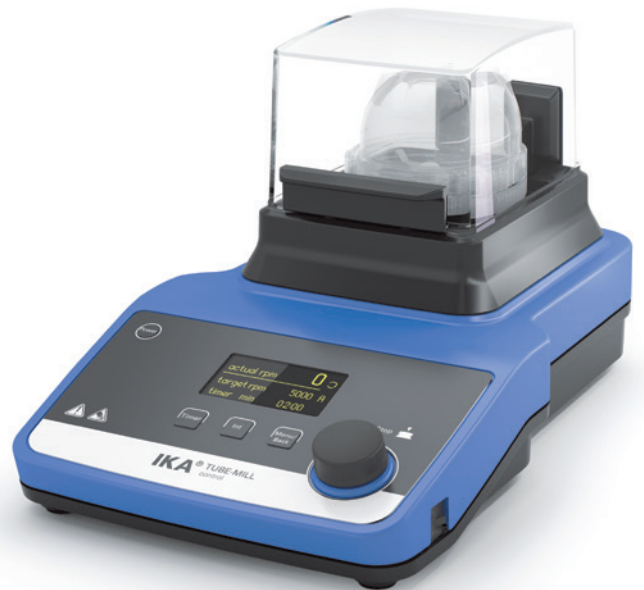
Tube Mill control (000418000)

INDUSTRY

Chemical, pharmaceutical

TASK / SUMMARY

The customer's requirement was to grind tablets and granules while achieving the best grinding result with the lowest possible sample quantity.



TEST SET-UP / SETTINGS

Sample quantity tablets	Speed	Time 1	Time 2
1 tablet	25.000 rpm	30 s	60 s
5 tablets			
10 tablets			
Sample quantity granules	Speed	Time 1	Time 2
1 g	25.000 rpm	30 s	60 s
5 g			
10 g			



SAMPLE QUANTITY

Sample 1: Granules 1
Sample 2: Placebo 1
Sample 3: Placebo 2
Sample 4: Placebo 3

REMARK

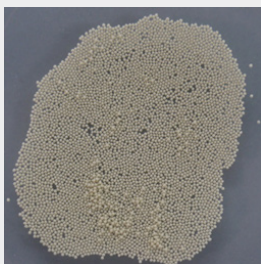
When grinding granules, the grinding period should be as short as possible as the generated heat that results from a longer grinding period makes it stick together again.

RESULT

Different results were achieved depending on the composition of the tablets (see photo documentation). Generally, the grinding results of the smallest quantities (1 tablet or 1 g of granules) were insufficient. However, the grinding results with a quantity of 5 tablets or 5 g of granules were satisfactory.

SAMPLE 1: GRANULES 1

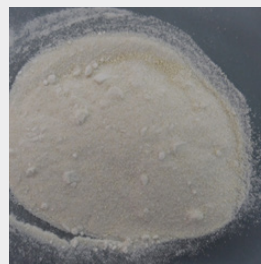
Original granules



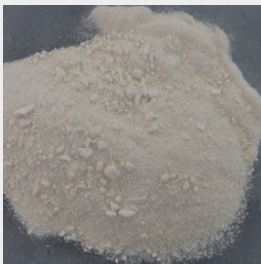
1 g | 25.000 rpm | 30 sec



5 g | 25.000 rpm | 30 sec



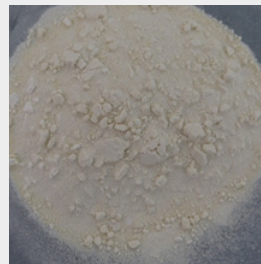
5 g | 25.000 rpm | 60 sec



10 g | 25.000 rpm | 30 sec

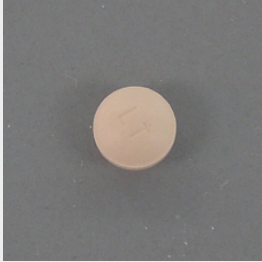


10 g | 25.000 rpm | 60 sec



SAMPLE 2: PLACEBO 1

Original tablet



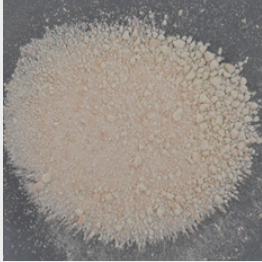
1 tablet | 25.000 rpm | 30 sec



5 tablets | 25.000 rpm | 30 sec



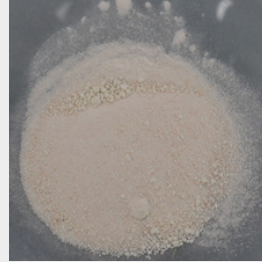
10 tablets | 25.000 rpm | 30 sec



10 tablets | 25.000 rpm | 60 sec



20 tablets | 25.000 rpm | 30 sec



SAMPLE 3: PLACEBO 2

Original tablet



1 tablet | 25.000 rpm | 30 sec



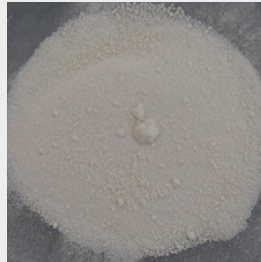
5 tablets | 25.000 rpm | 30 sec



5 tablets | 25.000 rpm | 60 sec

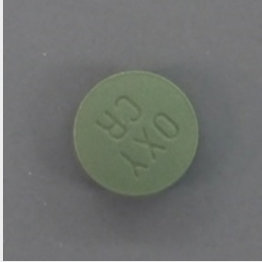


10 tablets | 25.000 rpm | 60 sec

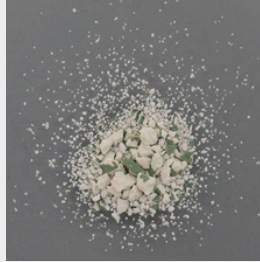


SAMPLE 4: PLACEBO 3

Original tablet



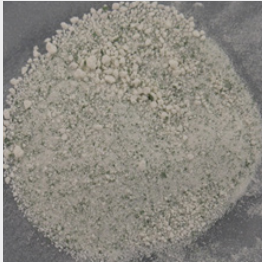
1 tablet | 25.000 rpm | 30 sec



1 tablet | 25.000 rpm | 60 sec



5 tablets | 25.000 rpm | 60 sec



10 tablets | 25.000 rpm | 60 sec

