

NETZSCH-Feinmahltechnik GmbH  
Sedanstraße 70  
D-95100 Selb  
Tel.: + 49 9287 797-0  
Fax: + 49 9287 797 149  
[info.nft@netsch.com](mailto:info.nft@netsch.com)  
[www.netsch-grinding.com](http://www.netsch-grinding.com)

## Nanonization of Active Pharmaceutical Ingredients (Part 1)

The comminution or desagglomeration of active pharmaceutical ingredients (API) is called micronization. Nanonization is a term for reducing particle size to the nanometer range and brings about several advantages. It further increases the surface area of API's which could result in enhanced solubility and drug bioavailability. Reducing the particle size of an API possessing poor solubility characteristics can lead to higher specific surface area, thereby increasing bioavailability and dissolution rate. Due to the increased bioavailability a lower amount of API is required which in turn leads to a more cost-efficient product with less risks and side effects for the patient.

NETZSCH is an international, successful family-owned German company.

The business unit Grinding & Dispersing offers equipment for all process engineering tasks in the fields mixing, dispersing, deaeration, wet- and dry grinding and classifying.

Based on comprehensive experience with GMP-conform production of pharmaceutical products all sizes of NETZSCH machines ranging from small laboratory- to production-size machines excel by the following specific features:

- All product wetted parts are manufactured and certified according to FDA standards.
- Material-, production- and calibration certificates are supplied together with the machine.
- Optional sterilization in place (SIP).
- All direct and indirect product-wetted surfaces are made of stainless steel
- Optional data recording and formulation management.
- Password protection operator management providing different levels of security.
- Laboratory mills can be used with variable grinding chamber sizes
- Variable ZrO<sub>2</sub>, stainless steel 316 or nylon grinding chamber designs on offer
- Splash-proof machine stand
- Comprehensive testing and qualification documentation including FAT, IOQ, FRS, SDS.
- Production of GMP compliant machines in the USA.
- Trainings and seminars.



**Error! Reference source not found.** shows a medium-size laboratory mill *DELTA VITA*<sup>®</sup> 600