Nanomilling to Prepare Small Particle Size Drug Particles

Low dissolution rate and solubility seriously affect the bioavailability and efficacy of the drug, and are the primary factors that cause the drug development candidate compound to fail to become a drug. It is found through research that when the particle size is reduced to a certain extent (100~200 nm), its dissolution rate and solubility will increase significantly. Nanomilling method is an effective, repeatable and scalable method, which can effectively improve the bioavailability and efficacy of drugs.

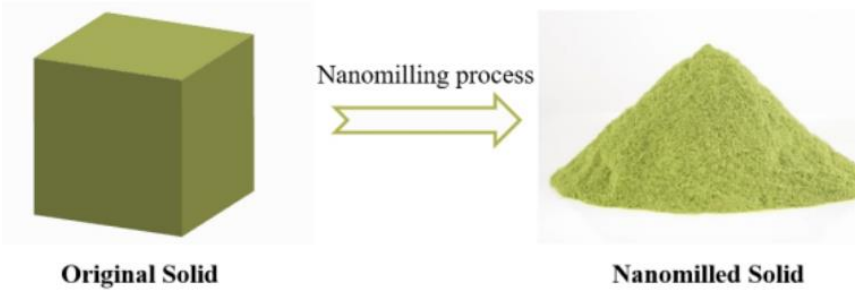

Fig .1 Nanomilling process from original solid to nanomilled solid

CD Formulation has professional experience and technical personnel in the development of nanoparticle suspensions. Thanks to the very complete experimental equipment, we can perform nanomilling under aseptic conditions. If you choose to advance your nanomilling project, we have the personnel, facilities and equipment to produce clinical and commercial scale nanomilling formulations. If you have an insoluble API, please contact us

below to learn how nanomilling can help solve your formulation challenges and let us move your product from concept to commercialization.

Our Services

As a qualified pharmaceutical preparation R&D supplier, our team has very professional pharmacy and related professionals. Our laboratory equipment meets the requirements of drug development. At the same time, we have a laboratory that provides a sterile environment to facilitate the nanomilling of drugs. Our nanomilling is mainly divided into the following steps:

- Develop a profile of the target product and screen your API to use GRAS approved excipients for nanomilling.
- Provide particle size distribution and short-term stability data for each formulation.
- Determine promising formulas and provide materials for animal pK research.

Why Choose Nanomilling?

Nanomilling is a proven, commercially validated process that can be used to formulate almost all poorly water-soluble APIs. The key to nanomilling is to reduce the particle size, which increases the surface area of the API and improves the dissolution rate. Compared with other solubilization methods, nanomilling has key advantages, including:

High API concentration

5-40+% API (w/w)

No irritating organic solvents or extreme pH values

Most nanomilling suspensions are water-based.

Reproducibility

Once the nanomilling process is optimized, the particle size distribution varies little between batches.

Easy to scale up

Commercial nanomilling equipment adopts recycling process, which can increase batch size without changing process variables.

The Advantages of Our Services

- Our professional team can help you test the drug very quickly.
- Laboratories and equipment are prepared to a high standard.
- Compared with other companies, choose us is a good deal.
- Rich experience, can deal with problems quickly.
- Our analysis is repeated, the data is reliable.

Source: https://www.formulationbio.com/nanomilling-to-prepare-small-particle-size-drug-particles-services.html