Peira.

Scientific Instruments

Peira NanoSizer

PROBLEM

Many new active pharmaceutical compounds are not easily dissoluble but when grinded to sizes in the nanorange those substances become soluble. In the pharmaceutical research new molecules can often only be synthesized in very small quantities at a relatively high cost. Also more and more researchers want to start early with preclinical testing of newly found promising compounds. In this context it is of the utmost importance that the nanonisation process produces as little waste as possible and does not create a bottleneck in the development plan, throughput times are key.

Most existing wet media mills are used to mill or grind relatively large quantities of materials. Today no high throughput nanonisation platform is available that allows to grind small quantities as small as 0,25 grams to a size less than 0,5 micron to about 0,05 micron in terms of average diameter in about 60 minutes.

SOLUTION

The NanoSizer is a high throughput platform consisting of 10 individual small scale media mills assembled in one platform operating in parallel. Individually driven micro motors agitate a rotor in commercially available glass vials filled with the dispersion containing attrition milling media and the product to be milled.

Milling speeds and duration time can be set per individual vial in order to search for the optimal process. A specific designed sealing ring on the shaft of the rotor assures no leakage or loss of material whilst not creating contamination of the dispersion. Special attention has been given to the mechanical design of rotors, shaft and holders in order to allow easy maintenance and cleaning of the apparatus.

This platform enhances the performance of the research lab significantly.

TECHNICAL DATA

Dimensions (LxWxH):	400 x 810 x 500 mm
Weight:	40 kg
Power:	300 W
Volts:	230VAC
CE:	The NanoSizer fully complies with all CE and EMC equipment guidelines relative to mechanical and electrical safety and electromagnetic compatibility.