

EKATO NANOMIX

High-pressure homogenizer:

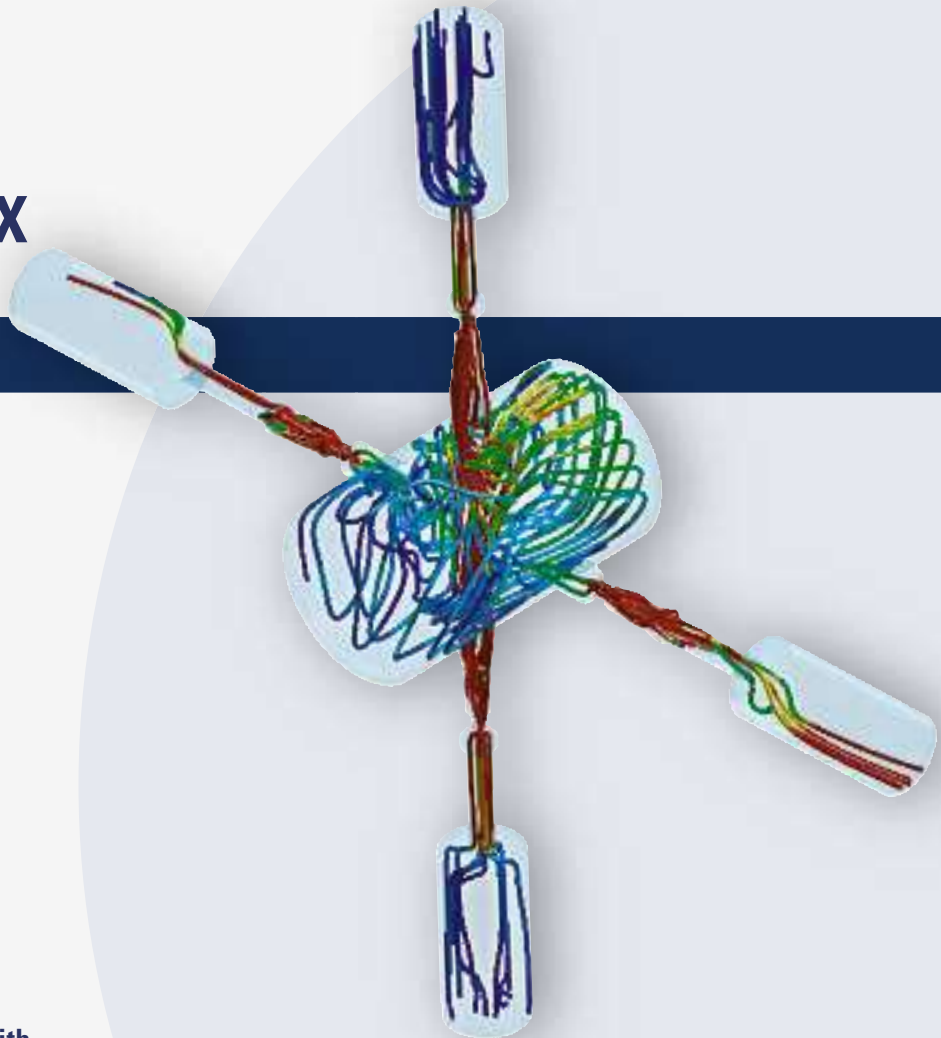
EKATO NANOMIX

For pharmaceuticals and cosmetics, functional foods, beverages and fine chemicals

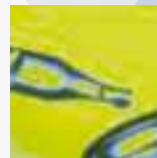
- Nano scaled active agents
- Creams, ointments, lotions
- Micro encapsulation
- Liposome suspensions
- Cell disruption, cell suspensions
- Dispersion of nano-particles
- Nano-particles from melts
- Perfumes
- Parenteralia

High-pressure homogenization of liquids or solids to below 100 nm, with numerous advantages:

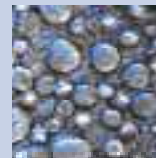
- Reduced wear and tear due to nozzle system's special geometry
- Operating pressure up to 1,500 bar (typically 500 – 800 bar)
- Designed for controlled cavitation effects
- Immediate cooling after the disruption area minimizes coalescence
- Inline application for existing installations
- Fully scalable from 500 ml/h to 10 m³/h and more
- cGMP design for full CIP / SIP
- Applicable over a wide range of viscosities



Injectables



Macro-emulsion



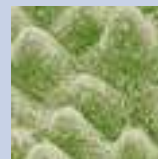
Flavours



Liposomes



Vitamines

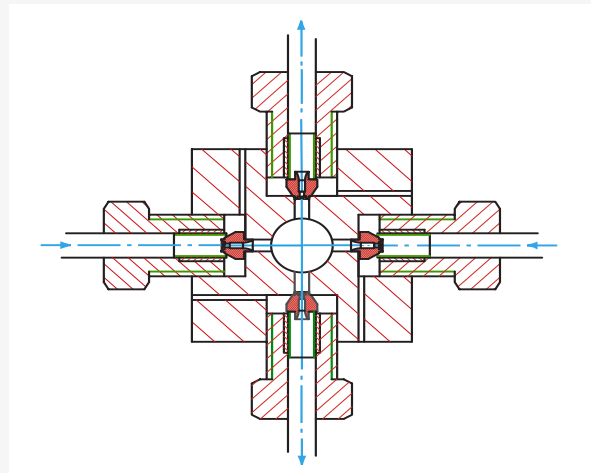


Nano Particles

EKATO NANOMIX

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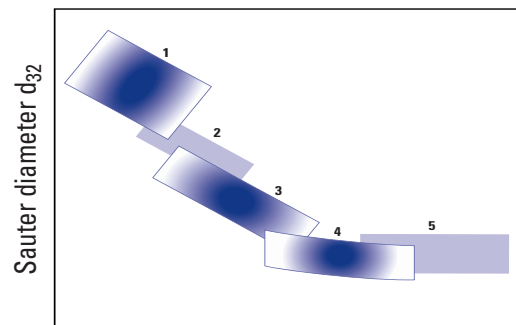
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Advantages of nano-scaled products:

- Products with transparent appearance
- Better long-term stability
- Higher bioavailability
- Transdermal penetration

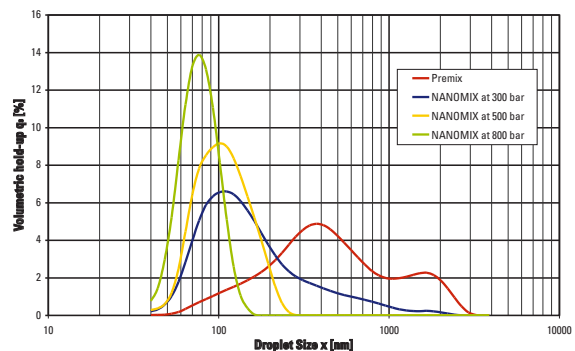


Nanomix laboratory and pilot plant



energy density E_v

1. Impeller, 2. Normal rotor-stator homogenizers, 3. High shear homogenizers, 4. NANOMIX, 5. High pressure nanosizer



Nanomix laboratory and pilot plants

NANOMIX laboratory and pilot scale units with operating pressures up to 1,500 bar/22,000 psi are available for running client trials at our laboratory, or at the client's facilities. The lab scale model is powered by compressed air and is fully ATEX compliant. Minimum product volume is around 20 ml and maximum flow rate is 2 l/h.

A particle size analyser is available in the EKATO laboratory, which can measure size distributions in the range 40 nm to 2000 nm.

The NANOMIX runs in series with a conventional mixing device (e.g. EKATO UNIMIX SRC 100). Single passes or continuous reblending are possible.

Emulsions and suspensions (e.g. injectables) can be homogenized, as well as products with a high viscosity such as ointments.