



---

**Micronizing**  
**Milling**  
**Cryogenic milling**

---

**Mixing**  
**Coating with oil**

---

**Sieving**  
**Packing and assembling**

# **ACU – Your expert for high-quality micronization**



Separately enclosed production facilities for your product safety



## About ACU

**For more than 20 years ACU has specialized in Contract Micronizing and Contract Milling. With our plant technology of consistently high standard and expertise we produce high-quality fine powders for our clients. Milling and micronization of products and compound mixtures is our daily business. What can we do for you?**

Due to our variety of plants and plant sizes we are an efficient and competent partner for milling solids from pilot projects up to the realization of bulk orders. Of course, we also meet your demands if individual solutions are required. For us there is no standard production as there is no standard customer. Our plant technologies can be modified to match your individual production needs. If additional investments are required, the ACU team will work closely with you to provide a solution. Our flexibility and growth strategy is an essential component for a long-term collaboration with you.

**Try us!**

**What makes ACU special**

- Unique quality concept for fine millings according to HACCP and GMP guidelines
- Micronization of high-quality technical products to an exceptionally high standard
- Uncompromising plant technology and production concept for maximum quality and cleanliness requirements
- Experience in the field of contract processing and toll grinding for more than 20 years
- Consistent customer focus with a highly specialized team



Several methods for determining the particle sizes are available



## Range of services

### Contract manufacturing in the fields of

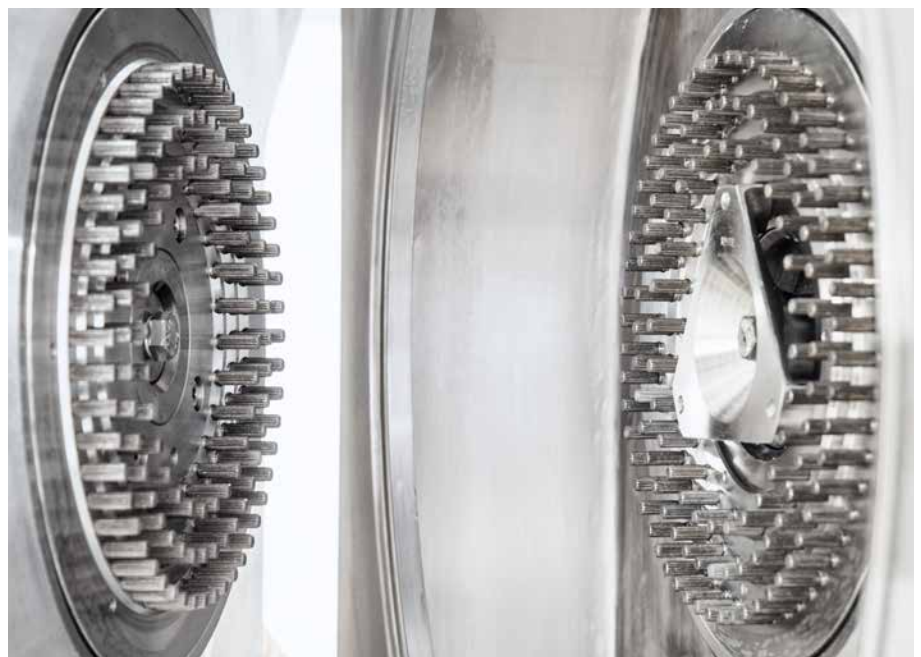
- Micronizing, milling, cryogenic milling and mixing
- Sieving and homogenizing
- Assembling (repackaging, secondary packaging, small packages)
- Bench scale tests, laboratory tests
- Individual solutions (from new product development to production)

### We process for you products in the fields of

- Pharma, e.g. additives and excipients
- Food, e.g. preservatives, spices, minerals, salts, dried fruits
- Feed, e.g. amino acids, feed additives, salts, vitamins
- Cosmetics, e.g. color pigments, herbal substances
- Chemical industry, e.g. waxes, specialty chemicals, plastics (automotive industry), building chemicals, catalysts, dyes

### Our plant technology

- Our plants from leading manufacturers are made of stainless steel and comply with the high HACCP-standards. Production and filling activities are isolated and for added protection include locked rooms to ensure ultimate cleanliness and avoid cross-contamination.
- Pulverizing mills, e.g. fluidised bed opposed jet mills in different sizes, classifier mill, pin mill, cryogenic mill
- Mixers, sieving plants
- HACCP-compliant filling and dosing machine





## Analytics

**We offer different methods to determine particle sizes.**

- Sieving analyses
- Particle size analysis with laser diffraction (Sympatec Helos BF, 0,1 to 875  $\mu\text{m}$ )

**In cooperation with our customers we can customize analytical needs.**

- Density determination (bulk density, tapped density)
- HPLC analyses (Jasco HPLC UV/ VIS)  
We carry out HPLC analyses with UV/ VIS detection (normal phases and reversed phases).
- Titrations and incinerations



Listen to your needs

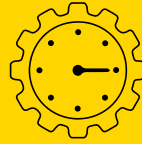
1



Customer dialogue and feasibility check

2

- Recording of your requirements and special product properties
  - Quantity
  - Technical and Material Safety Data Sheet
  - Mohs-hardness
  - Particle size of raw material and finished good
  - Packaging



Proposal production processes

3

- Selection of a suitable type of mill
- Determination of process chain, e.g. mixing, milling, packing



Operating trial

4

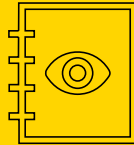
- Milling in testing environment, e.g. small fluidised bed opposed jet mill, laboratory mixer
- Examining the results with you
  - Particle size
  - Packing



Upscaling of production processes

5

- Elaboration of quality concept
- Determination of quality parameters
- Sampling
- Specific processing instructions



Auditing by customer

6

- Audit by your quality team
- Determination of deviations
- Timetable for implementation of your quality requirements



Validation

7

- Process validation with realistic campaign quantities



Mutual contract generation

8

- Non-disclosure agreement
- Quality system
- EHS



Micronization

9

- Milling
- Mixing
- Packing



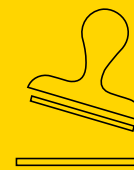
Quality control by ACU

10



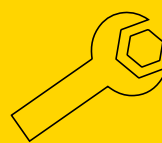
Sampling

11



Creation of quality records according to your requirements

12



Quality and After Sales Service

14



Delivery

13

- Coordination of goods' availability with you
- Transport documents / Delivery note

## How we manage your project

**In close collaboration with you we will develop the specific solution for your production process.**

Your needs and production requirements are unique and important. Every client project starts with an in depth discussion to understand your expectations and requirements. We then develop the tailored processes to meet your individual requirements. Our aim is to always establish a long-term and trustful partnership with you as our satisfied customer!





## Outsourcing

### The key to greater flexibility, efficiency and cost reduction

A collaboration with ACU is recommended if you

- are looking for a specialist in micronization in the fields of Pharma, Food, Feed, Cosmetics or high-quality technical products
- are dealing with capacity shortfalls
- have reached technically orientated limits with your own plants
- are faced with investment vs. outsourcing decisions
- want to make product specific changes without additional capital expenditures (e.g. change of particle size distribution of a product)
- want your activities to be concentrated on selling

**ACU – your trusted partner for your production process!**

#### ACU PHARMA und CHEMIE GmbH

Am tiefen Graben 6

DE-99510 Apolda

Phone: +49 (3644) 5058-0

Fax: +49 (3644) 5058-99

Web: [www.acu-pharma.com](http://www.acu-pharma.com)

E-mail: [info@acu-pharma.com](mailto:info@acu-pharma.com)