

# Grinding spices

**Kräuter Mix** employs two different processes to turn spices and other plant-based raw materials into powdered products depending on product properties and customer requirements – inert grinding and cold grinding.

**G**rinding spices and other natural products is one of the most challenging tasks for mechanical comminution technology. Materials that start out as larger pieces are processed into a powder or grainy end product. Each grinding process is different and depends on the various properties of the products and the customer specifications. Products may vary in terms of their hardness, size, oil content, sheer strength and toughness. These properties determine which grinding process is used. Essential oil content, in particular, plays a key role in this. This determines the subsequent market value of the product, as well as its aromatic intensity in its end use as a food product or herbal medicine.

The temperature during the grinding process is a key factor in determining the quality. Because the essential oils, which give the natural product its distinctive flavour or active ingredient, are slightly volatile, the substances should not be heated too strongly in the grinder. This is the only way to ensure that the ingredients and characteristic properties, such as the components that give off the spiciness or seasoning qualities, remain consistent and effective. This is why spices such as pepper, coriander, nutmeg, ginger and other roots must be ground very gently. One tried and tested method is cold grinding with nitrogen.

## Grinding processes

Kräuter Mix is a manufacturer of high-quality air-dried herbs, vegetables and spices in a wide variety of processed and refined forms. Among the extensive product range of 650 raw materials, pepper, cardamom, nutmeg, allspice, turmeric, cloves and mace feature among the most important spices.

The German company has five state-of-the-art, high-performance manufacturing plants for powder production that are



Kräuter Mix products can be found in herbal and fruit tea blends as well as spice creations.

constructed in very different ways. Two of these are for inert grinding, two for cold grinding and one can carry out both processes. In order to set the various grain sizes of the ground product, the plants use a number of different sifters. These can produce grains of between 0.2 and 1mm, depending on what the customer needs. Kräuter Mix also provides these two grinding processes as contract services.

Before the actual grinding – and this applies to both inert and cold grinding – the product undergoes a multi-step mechanical cleaning process in the production facilities. Magnets remove iron components, heavy material separators remove roots and minerals such as soil and stones, and detectors identify magnetic and non-magnetic metal.

Since 1919, the family business now owner-managed by the third and fourth generations has built a reputation for great health and taste. One of the leading manufacturing and trading companies with 500 employees and most recently annual

sales of €140m, Kräuter Mix buys raw materials in 70 countries around the globe and sells the products to 2,000 customers worldwide. Customers include both industrial and resale companies in the food, phytopharmaceuticals, tea, extracts, spirits and pet food sectors.

## Extensive product range

Many of the natural products produced at Kräuter Mix, which are also available in organic quality, can be found in herbal and fruit tea blends, spice creations and ready-made meals from well-known brands. Long-standing customers include corporations and companies such as Unilever, Nestlé, Frutarom, Mondelez, Kotanyi, Van Hees, Twinings and Kneipp. As demand is constantly increasing, the supplier company, which has been certified several times for its quality and sustainability, has grown steadily. Customers will find a comprehensive range of air-dried botanical raw materials: dried vegetables, dried mushrooms, culinary herbs, spices, superfoods, herbal source materials, phytopharmaceutical active ingredients, medicinal herbs as well as medicinal, herbal and fruit teas. These are available as individual ingredients or as blends as well as in various sizes cut, ground, rubbed, coarsely chopped, as whole goods, in slices, strips and cubes or as granules.

In the spacious production halls, the air-dried raw materials are not only ground on a total of 34 machines, but also cleaned, visually sorted, cut, mixed, pelletised, refined in specific ways, and packaged. The high-performance, proven and innovative machines run around the clock in three-shift operation and process around 29,000 metric tonnes annually. The overriding principle for operations is to maintain the quality of the natural products and maximise their safety. ●

[www.kraeuter-mix.de](http://www.kraeuter-mix.de)