CANNABIS & HEMP
PROCESSING SAMPLE PREPARATION & AUTOMATION
HOW WOULD THESE INSTRUMENTS HELP OUR BUSINESS?

FOR THE GROWER/PROCESSOR
- Time savings; operational cost reduction
- Greater product consistency; batch to batch reproducibility
- Improve extraction yield & quality
- Easy to clean & validate

FOR THE ANALYTICAL TESTING LABORATORY
- Affordable, effective options for CryoMilling of infused samples
- High-throughput solvent extractions
PULVERISERTE 19
PRECISION CUTTING MILL

APPLICATIONS
- Optimize particle size & distribution for CO2 or EtOH extraction yield
- Create material for premium pre-rolls
- Homogenize isolates

PERFORMANCE ADVANTAGES
- Variable-speed motor 300-3000rpm
- Designed with GLP/GMP processes in mind
- Adjustable, controllable particle size output with tight particle size distribution
- Reproducible performance regardless of end user
- High-throughput, continuous processing 1-5+ lbs. per-minute avg.*
- Dust-free, easy to clean - stainless steel product contact surfaces
- Cyclone sample collection system provides heat mitigation and prevents resin build up.
  - Heat Mitigation - Maintain chemical profile & product integrity

FAQS
Are Cannabinoid & Terpenes Preserved?
- Yes. As a continuous milling systems (vs. a closed batch system like a blender or wire trimmer), the P-19 Cutting Mill does not exert any heat load on Cannabis material. The precision cutting mechanisms ensure rapid particle size reduction with minimum exposure to physical damage.

How Fast Can I Grind?
- ≥ 1-5+ lbs. per-minute dried flowers avg.*
- Individual performance may vary based on moisture content, nature of starting material, and desired final particle size.

PROCESSING CONSIDERATION

|—including hand grinder, blender, leaf cutter, hammer mill| FRITSCH CUTTING MILL |
|---|---|---|---|---|---|---|
|Adjustable, controllable particle size output| Some| No| No| Some| YES |
|High-throughput ≥ 1-5+ lbs. per-minute avg.*| No| No| Yes| Some| YES |
|Reproducible results, regardless of end user| No| No| No| Yes| YES |
|Easy to clean; prevent cross-contamination| No| Yes| No| No| YES |
|Heat mitigation| Yes| No| Some| No| YES |
|Process control automation| No| No| No| Some| YES |

*Dependant on physical properties of material.

PULVERISERTE 22 NANOtec
LASER PARTICLE SIZER
Determine particle size distribution of milled Cannabis, or CBD isolate. Measuring range from 10 nanometers to 2 mm.

PULVERISERTE 28
DYNAMIC IMAGE ANALYSIS
Determine particle size distribution and particle shapes. Measuring range from 20µm to 20mm.
- Process optimization
- Formulation
- R&D

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PARTICLE CHARACTERIZATION

CYROMILLING - INFUSED SAMPLES

PULVERISERTE 11
KNIFE MILL
- Create uniform powder from various edibles samples. Capacity of 300+ g per sample, depending on material.
- Embritle edibles and samples directly in liquid nitrogen, and create homogenous powder (representative sampling) in minutes.
- Edibles & samples up to 300+ g, depending on matrix
- Flower/leaf samples from 2 g to 30+ g — using single-use grinding vessels in 10 ml or 100 ml volume
- Create & save SOP’s

*Dependant on physical properties of material.
PARTNERS. COLLABORATORS. FAMILY.

What happens when you combine a century of engineering excellence, a 10,000+ year old medicinal plant, a 4th generation family business, and a collaborative industry that is growing like a weed?

THE PRECISION STANDARD FOR BIOMASS MILLING

YOU ASKED. WE LISTENED. TOGETHER, WE CREATED A BEAST.

The NEXT Generation PULVERISETTE 19.