VERDER

CARBOLITE ELTRA QATM Retsch MICROTRAC ERWEKA



FOOD & BEVERAGE

APPLICATION SOLUTIONS FOR COFFEE, CHOCOLATE,
DAIRY, MEAT, FRUIT, AND MORE

ENABLING PROGRESS

VERDER



COFFEE & CHOCOLATE



DAIRY & BEVERAGES



FRUITS, VEGETABLES & PLANT-BASED PRODUCTS



MEAT, CEREALS & PROTEIN-RICH FOODS

DISCOVER MORE

PARTICLE CHARACTERIZATION

- **Particle size and shape analysis** of coffee and cocoa with Dynamic Image Analysis or Laser Diffraction
- **Density and porosity** measurement to assess the roasting process and chocolate structure
- **Stability analysis** of emulsified chocolate systems as ganache
- **Comparative studies** for grinding and brewing optimization across coffee types

- **Stability testing** of milk, juices, and emulsions with static multiple light scattering
- **Particle size analysis** of milk powder to evaluate solubility and flow behaviour
- Measurement of **creaming and ring formation** in concentrated beverages

- **Stability analysis of fruit juices** and plant-based beverages
- Particle size and distribution evaluation for **texture and mouthfeel optimization**
- **Protein solubility** and emulsion stability studies in plant-based formulations

- **Particle sze and shape analysis** for texture and consistency optimization.
- **Density and porosity evaluation** in sausages, meatballs, and cereal-based products
- **Structural analysis** for moisture retention and cooking performance



MILLING & SIEVING

- **Grinding roasted coffee beans** with rotor mills for precise particle control
- **Homogenization of cocoa nibs** and chocolate liquor with mortar grinders
- **Cryogenic milling of coffee and cocoa** to preserve volatile aromas

- **Homogenization of cheese, butter, and dairy ingredients** using knife mills
- Sample preparation for powdered milk and yogurt analysis
- **Cryogenic grinding of sticky or fatty dairy** samples for consistent results

- Milling and **homogenization of fibrous, moist, or sticky plant materials**
- Sample preparation of **cereals and legumes for mycotoxin detection**
- Sieving and particle separation for flours and derived products

- **Cryogenic grinding of meat** to preserve volatile compounds and prevent heat damage
- **Milling and sieving of cereals** for uniform particle distribution
- Sample preparation for **nutritional and compositional testing**



ELEMENTAL ANALYSIS

- **Protein and nitrogen determination** in coffee and cocoa using the Dumas method
- **Moisture and ash content** analysis for quality and shelf-life control
- **Carbon, hydrogen and sulfur** analysis for compositional studies

- **Protein, nitrogen and carbon determination in milk** and dairy using the Dumas method
- **Moisture and ash content** analysis for compositional control
- **Combined thermogravimetric and combustion analysis** for fat quantification

- **Nitrogen and carbon** determination in **cereals, fruits, and plant-based foods**
- Moisture and ash content **measurement for labeling and formulation accuracy**
- **Rapid Dumas analysis** for organic and natural samples

- **Protein and nitrogen analysis** in meat and cereals using the Dumas method
- **Carbon, sulfur and hydrogen** determination for nutritional assessment
- **Rapid moisture and ash analysis** for quality control



HEAT TREATMENT

- **Ashing of coffee and cocoa** for mineral residue and contaminant assessment
- Controlled **heat treatment for pyrolysis** and pre-conditioning
- **High-temperature oxidation** for sample standardization

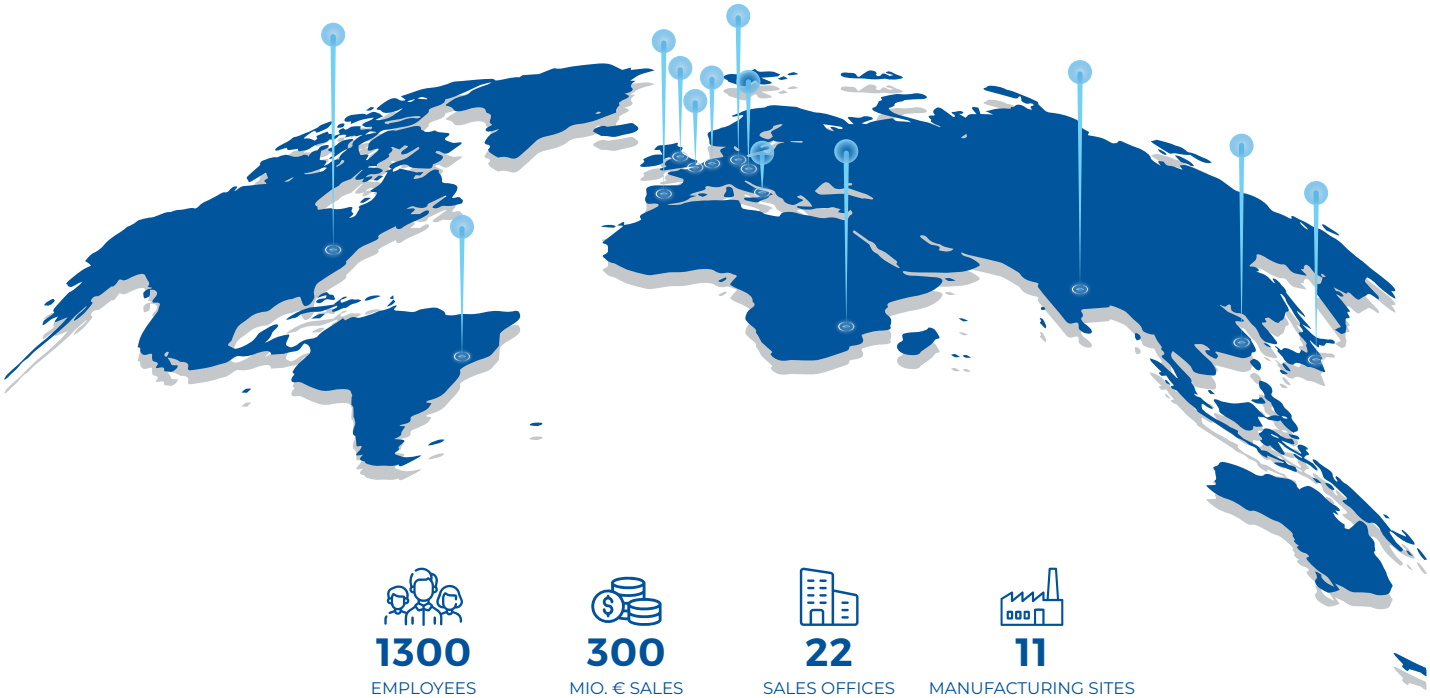
- Thermogravimetric determination of **moisture and fat content**
- **Ashing and LOI studies** for mineral quantification and validation
- **Controlled drying** for process standardization

- **Ashing of plant-based materials** for mineral content determination
- **Pyrolysis and oxidation analysis** for sugar and fiber evaluation
- **Thermal processing** for stable matrix preparation

- **Ashing of meat** and cereals for mineral and inorganic residue determination
- **Controlled combustion** for purity and contamination analysis
- **LOI and moisture loss studies** for production monitoring



ENABLING PROGRESS



1300
EMPLOYEES

300
MIO. € SALES

22
SALES OFFICES

11
MANUFACTURING SITES

VERDER

GLOBAL REACH, LOCAL EXPERTISE

CARBOLITE
HEAT TREATMENT

ELTRA
ELEMENTAL ANALYSIS

QATM
MATERIALOGRAPHY & HARDNESS TESTING

Retsch
MILLING & SIEVING

MICROTRAC
PARTICLE CHARACTERIZATION

ERWEKA
PHARMACEUTICAL TESTING

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