

Infrastructure of Food Packaging Laboratory



Packaging machinery

- Vacuum chamber machine with pressure-controlled evacuation and gassing processes
- Semi-automatic tray sealers for MAP packages and vacuum skin packages
- Horizontal form fill seal machine with gas flushing and ethanol spraying unit
- Thermoforming packaging machine for soft and rigid films
- Ultrasonic sealing machine for sealing of aroma protection and overpressure valves
- Can seaming machine

Material coating

- Automatic lab coater
- Plasma coating plant (Chemical vapor deposition, CVD)

Packaging analyses

- Permeation analyzer for oxygen and water vapor (barrier measurements)
- Oxygen and carbon dioxide measuring devices for headspace gas analyses
- Device for determining the effective opening forces of packages
- Torque tester for determining the opening torque of screw caps as well as mechanical properties of packaging films
- Leak test station for packages

Processing and storage

- Several constant climatic chambers for product storage at defined temperature, humidity and illumination
- Temperature and humidity loggers
- Various food processing machinery (autoclave, steamer, etc.)

Analytical Competencies

- Headspace analyses: Oxygen and carbon dioxide composition, oxygen content (non-destructive), relative humidity in headspace
- Microbiological analyses: Bacteria, mould, food spoilage and pathogenic germs
- Chemical analyses: Oxidation, vitamin content, pH, acidity level, enzymatic analyses
- Physical analyses: Texture analysis, rheological investigations, colour analysis, water activity
- Sensory analyses: Sensory tests, consumer panels, specialist panels