

Texture Analyzer

TVT 6700



Compression



Cutting



Compression-extrusion



Tensile Strength

Texture Analysis Made Easy

Texture Analyzer TVT 6700

Evaluation of texture is often based on sensory evaluation and experience. The TVT 6700 texture analyzer is rapid, objective and more sensitive and reproducible than subjective sensory judgement. The TVT 6700 applies controlled conditions of stress or strain to food and other samples to measure a complete texture profile. It accurately measures compressive and tensile force and position over time using standard test modes including single and multiple cycle compression, tensile strength, compress-and-hold, extend-and-hold, fracturability and springback to describe product texture. Data is captured as a graph and stored in a tabular data base for analysis and export to spreadsheet programs. The TVT 6700 texture analyser is user-friendly, efficient and versatile, with rigs and probes to quantify textural properties of a range of food products and materials.

Features and Benefits

Simple: A single model suits the needs of the food industry.

User friendly: Easy to use, standard test routines and starter methods in software.

Objective: Sensitive, accurate and reproducible complete texture profiles.

Powerful software: Comparison graph overlay, customizable analysis and report options, automated statistical calculations, flexible data export to spreadsheet programs, graph export.

Rugged: Robust design suits laboratory and production environments.

Versatile: Standard and custom tests for hardness/firmness/softness, fracturability (brittleness), cohesiveness, adhesiveness/stickiness, springiness (elasticity), chewiness, gumminess, stringiness/shortness.

Cost Efficient: Reduce the need for sensory panels.

Applications

Quality control of raw materials, in-process and finished products; formulation and process development; evaluate ingredient and processing changes; monitor changes during storage and transport; imitate chewing and consumer handling.

Accessories

Cylinder probes: Compression, adhesiveness, puncture of solid foods (bread, cake, cookies, breakfast cereals, candy, marshmallows, beans, fruits, vegetables, eggs, cheese, meat).

Compression plates: Compression-extrusion testing of viscous liquids (yoghurt, custards, puddings), irregular shaped products (pasta), gels, fats, fresh & processed beans, fruits, vegetables.

Spherical probes: Compression and penetration of soft products (fish, butter, solid fats).

Conical probes: Compression and penetration of plastic and soft products (spreading of butter).

Knife blades, wires, break probes: Cutting force (shear) and hardness of solid foods (meat, sausage, flat bread, spaghetti, noodles, vegetables) and bending-snapping (cookies, potato chips, fruits, vegetables).

Clamps, roller grips: Tensile strength, stickiness and adhesion (processed meats, dough, cheese, noodles). Also for packaging and packaging materials.

Technical Specifications

Max Product Height: 300 mm

Dimensions (HxWxD), Net Weight: 64x34x44 cm, 24 kg

Load Cells/Force Range: $\pm 2.5, 5, 10, 15, 20, 30, 50, 100$ kg

Force Resolution: 1 gf (grams-force)

Force Accuracy: $<0.025\% C_n^*$

Speed Range: 0.1-30 mm/sec

Speed Accuracy: 0.03% at 5 mm/sec

Position Accuracy: ± 0.02 mm

Precision (RSD_{r}):** $\leq 0.5\%$

Power Requirements: 110-240 V, 50 - 60 Hz

Computer Requirements: PC with Windows XP, Vista or Win7 operating system, DirectX 8 compatible 3D Graphics card, 1 RS 232 com port, 1 USB com port, 1.6 GHz CPU, 512 Mb RAM, hard disk space for data files (>100 Mb recommended).

* Total combined error (C_n) = Maximum output deviation between the calibration curve and the ideal straight line calibration, % full scale

** Relative Standard Deviation within-instrument repeatability