

CT3™ Texture Analyzer

compression and tension testing for rapid QC analysis

An extensive history and customer input have contributed to the development of the most powerful, low cost, stand-alone Texture Analyzer ever produced. With six test modes (plus calibration check) and a wide choice of accessories, no other texture analyzer has ever done so much without requiring a computer and software!

Standard Test Modes

Normal Test:

a single compression cycle

Hold Time Test:

compress and hold

Cycle Count Test:

compress multiple times

Bloom Test:

gelatin bloom strength test

TPA Test:

texture profile analysis

Tension Test:

tensile testing

Surimi Test:

gel strength

Static Load Test:

calibration check

Texture Loader Software

allows up to ten custom tests and ability to lock parameters

Compression distance

up to 10cm, can accommodate sample up to 22.5cm, almost 9 inches tall. Probe shaft is 8cm from back wall.

Choice of Load Cells

7 measurement ranges up to 50kg

Choice of Base Tables

allows for larger samples and more accessory choices



CT3 with Fixture Base Table and Cylindrical Probe in compression mode

What's Included?

Instrument with choice of load cell
Texture Loader Software
USB Cable

What else do I need?

Rotary Base or Fixture Base Table (see below)
At least one probe or test fixture

Optional Accessories

The CT3 has a wide variety of probes, fixtures and jigs which enable it to be very versatile. Brookfield can also custom design a fixture and probe for most applications.

TexturePro CT Software TA-CT-PRO-AY
Temperature Probe DVP-94Y
Bubble Level TA-LVL
Calibration Weight Set
Gelatin Bath System for gel conditioning
Bloom Jar - industry approved TA-GBB-2



TA-RT-KIT
Rotary Base Table



TA-BT-KIT
Fixture Base Table

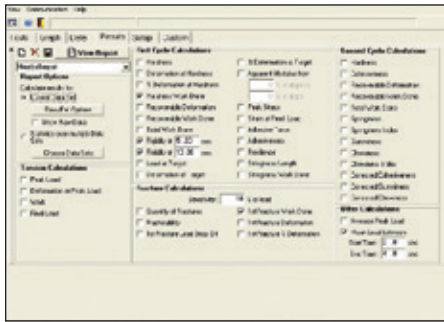
TexturePro CT Software Optional

COLLECT DATA AND PERFORM DETAILED DATA ANALYSIS WITH REAL-TIME GRAPHIC PLOTTING.

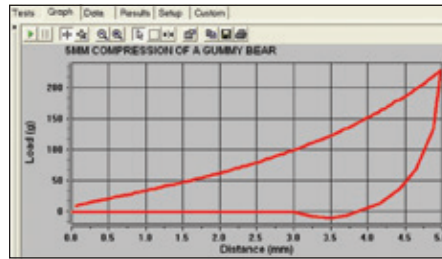
While the CT3 can perform many tests in stand alone mode, use of TexturePro CT Software permits creation of multiple tests and automatic execution without operator involvement.

Easily create custom reports and graphs right from the menu screen.

- Sample identification set-up screen helps new operators quickly get started; test fields outline a variety of parameters
- Intuitive set up for test methods and database file structures in a single window
- Data is captured as a graph and stored in tabular database format
- Advanced data analysis with built-in parameter calculations such as springiness, chewiness, hardness and much more!



Sample Test Set-up



On Screen Live Force Deformation Curve



Tension Mode

provides tensile testing capability



TA-CW-1500C

Calibration Weight Set contains a combination of certified weights which may be used to confirm the calibration and linearity of each specific load cell.

MODEL	Load Range / Resolution*
CT3-100	0-100g/0.01g
CT3-1000	0-1000g/0.10g
CT3-1500	0-1500g/0.20g
CT3-4500	0-4500g/0.50g
CT3-10kg	1-10000g/1.0g
CT3-25kg	1-25000g/2.0g
CT3-50kg	2-50000g/5.0g

g = grams kg = kilograms *Accuracy = $\pm 0.5\%$ Full Scale Range (FSR)

ALL CT3 MODEL SPECIFICATIONS	
Speed:	
Range	0.01-0.1mm/s (increments 0.01mm/s) 0.1 - 10mm/s (increments 0.1mm/s)
Accuracy	$\pm 0.1\%$ of setspeed
Position:	
Range	0-101.6mm
Resolution	0.1mm*
Accuracy	0.1mm

mm = millimeter s = seconds

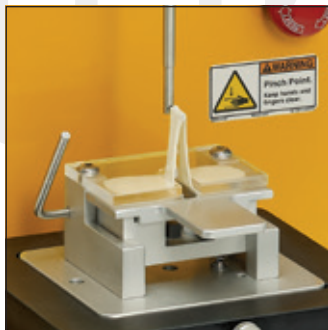
*Resolution 0.01mm when used with TexturePro CT Software

CT3 Accessories

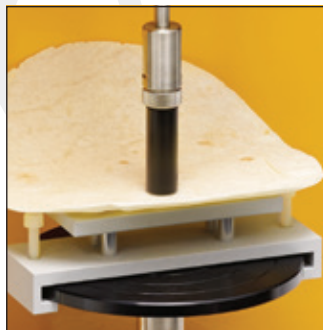
FOR A WIDE RANGE OF TESTS.

While many CT3 accessories have multiple applications, some are particularly useful for specific industries. The following color coded icons are used here to identify these industries.

- F** FOODS
- C** COSMETICS
- P** PHARMACEUTICALS
- M** MATERIALS & PACKAGING
- D** DEVICES - MECHANICAL



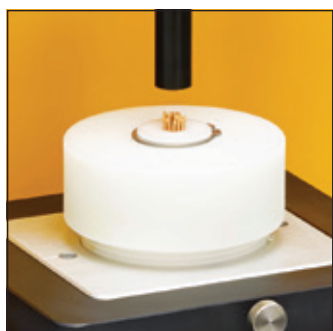
TA-KF F
Kieffer Dough and Gluten Extensibility Fixture quantifies maximum force and distance needed to break sample. Fixture Base Table required.



TA-JPA F M
Junior Punch Fixture is for punching through flat samples; 12.7mm max. diameter probe. Hole in fixture is 14mm. Rotary Base Table required.



TA-TPB F
Three Point Bend Fixture is used with TA7 blade from general probe kit. Fixture Base Table required. Small scale version TA-JTPB is available.



TA-DSJ F
Dough Stickiness Fixture is standard test for measuring dough stickiness; important for processing raw dough. Fixture Base Table required.



TA-DE F
Dough Extensibility Fixture for holding sheet of raw dough or flat bread to measure breaking point of stretched sample. Fixture Base Table required.



TA-CTP F
Compression Top Plate for applying uniform compression forces on samples up to 4x6 inches (10x15cm) Fixture Base Table required.



TA-VBJ F
Volodkevich Bite Jaws for testing bite force of meat products using shear cutting-test. Fixture Base Table required.



TA-PTF F M
Pizza Tensile Fixture quantifies cooked pizza firmness by measuring the tensile force and deformation distance to break sample.



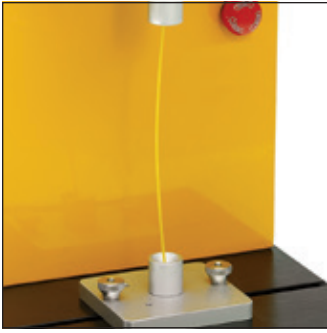
TA-FMBRA F
Standard dough pot set for preparing dough samples and measuring dough firmness.



TA-AACC36 F
AACC spec probe for measuring bread firmness and performing texture profile analysis (TPA). Fixture Base Table required.



TA-SBA F
Shear Blade for products where a cutting-shear test is meaningful: meat, fish, sausage, etc. Fixture Base Table required.



TA-SFF ⓘ

Spaghetti Flexure Fixture quantifies flexure characteristics of uncooked spaghetti and other dry pastas.



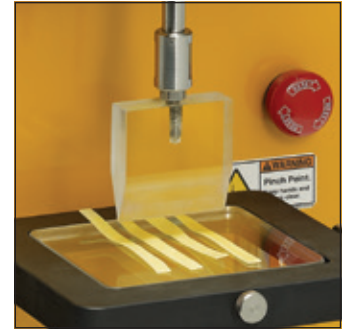
TA-OC ⓘ

Ottawa Cell for extruding assorted soft samples, like pasta or diced fruit and vegetables. Fixture Base Table required.



TA-PFS ⓘ

Pasta Firmness and Stickiness Fixture measures the firmness and stickiness of uncooked pasta. Fixture Base Table required.



TA-PFS-C ⓘ

Pasta Firmness and Stickiness Fixture measures pasta and like products. Fixture Base Table required.



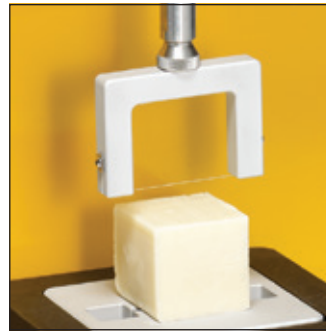
TA-KSC ⓘ

Kramer Shear Cell for shear-cutting and extrusion test on small fruits and vegetables such as grapes, figs, corn and beans. Fixture Base Table required.



TA-CSF ⓘ

Circular Support Fixture provides support for round samples and retains any potential fluid expressed during the test. Fixture Base Table required.



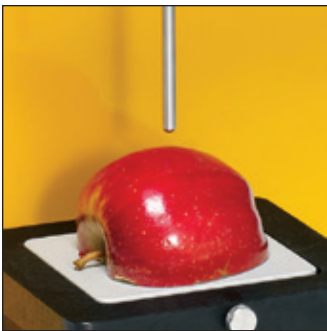
TA-WSP ⓘ

Wire Shear Plate cuts through the sample. Good for products with significant stickiness like cheese and butter. Fixture Base Table required.



TA-CEF ⓘ

Cheese Extensibility Fixture measures the extensibility of molten cheese sample to breaking point.



TA-MTP ⓘ

Magness-Taylor Probes for puncture test to measure hardness of fresh fruit and vegetables. Fixture Base Table required.



TA-10 ⓘ

GMIA & GME probe and spec Bloom bottle TA-GBB-2 sold in package of twelve bottles.



TA-MCF ⓘ

The Multiple Chip Fixture is used for testing the penetration or firmness of multiple chips / french fries. Fixture Base Table required.



TA-CJ ⓘ

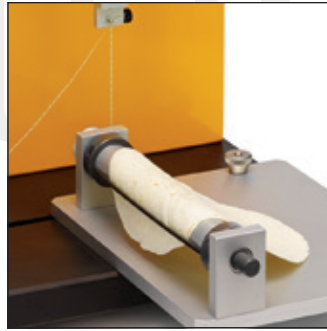
Confectionary Fixture for holding candies and similar products for penetration testing. Fixture Base Table required.

CT3 Accessories

FOR A WIDE RANGE OF TESTS.

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TA-TRF **F**

Tortilla Roll Up Fixture evaluates changes in corn tortilla texture per AACC technical paper by measuring the force to roll up a tortilla.



TA-CKA **F**

Craft Knife Adapter cuts cleanly into and through material with minimum deformation of the sample.



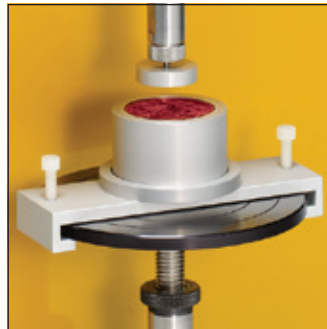
TA-52 MOHRS

Shear Blade used for cutting tests, especially meat, poultry, fish or similar products. Fixture or rotary base table recommended.



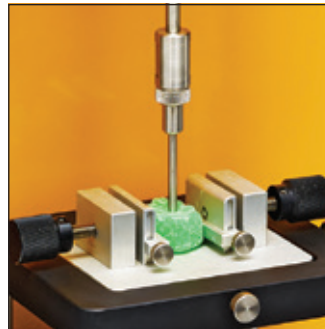
TA-MP **F M**

Mesh Probe quantifies the consistency of products such as mayonnaise and yogurt.



TA-BEC **F M**

Back Extrusion Cell for measuring consistency of applesauce, pudding, yogurt and similar products. Rotary Base Table required.



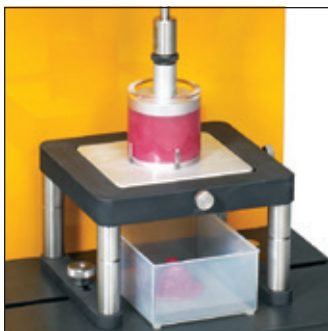
TA-AVJ **F M**

Adjustable Vice Fixture for holding small samples for puncture test. Good for jelly beans, gum drops, etc. Rotary Base Table required.



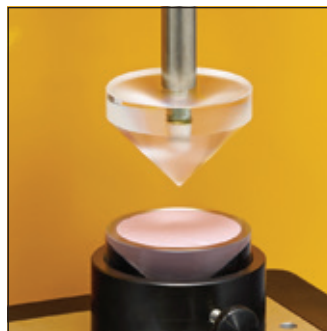
TA-JMPA **F P**

Multiple Probe Assembly consisting of nine 3mm probes and base plate designed to hold nine small samples of irregular geometry. Base Table required.



TA-DEC **F C P**

Dual Extrusion Cell for either forward or back extrusion of fruit puree, pudding, yogurt or similar products. Fixture Base Table required.



TA-STF **C P F**

Spread Test Fixture quantifies the spread force of a material. Comes with 1 male cone probe, 5 five samples cups and 1 sample cup holder. Base Table required.



TA-HCF **C**

Hair Combability Fixture measures the effect of hair dye, shampoos and conditioners on the combability of hair.



TA-EP **C M**

Eye Pencil Test Fixture measures hardness of cosmetic pencil tips for eye- or lip-lining products and can also be used for artistic type pencil tips. Fixture Base Table required.



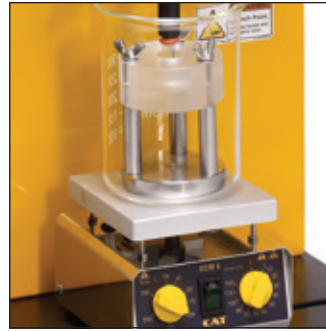
TA-LC C

Lipstick Cantilever Test Fixture allows imitative tests on lipstick and similar products to quantify strength of product. Fixture Base Table required.



TA-TEF C P

Tube Extrusion Fixture measures the force needed to squeeze cream or paste out of a tube. Base Table required.



TA-MA P

Muco Adhesion Test Fixture Simulates body/temperature conditions and force needed to pull a tablet away from a mucosal surface.



TA-RT P

Raft Tester measures alginate Raft Strength by pulling wire raft hook out of the sample material.



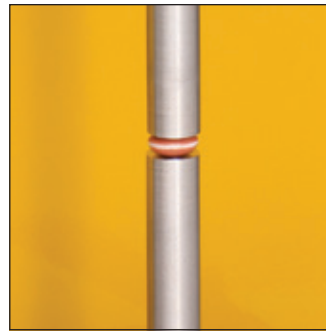
TA-MDI P

Metered Dose Inhaler Fixture measures the push-button force to actuate the inhaler. Fixture Base Table required.



TA-STJ P

Syringe Test Fixture for measuring the force required to push or pull syringe plunger. Important to all syringe markets. Base Table required.



TA-TCA P

Tablet Coating Adhesion Fixture measures the adhesion force of a tablet coating to a tablet. Fixture Base Table required.



TA-BLS P

Bi-Layer Shear Fixture measures shear strength by cutting a two-part tablet or capsule using a guillotine blade. Fixture Base Table required.



TA-BPS P

Blister Pack Support Fixture is used to measure the force required to remove the tablet from its blister pack. Fixture Base Table required.



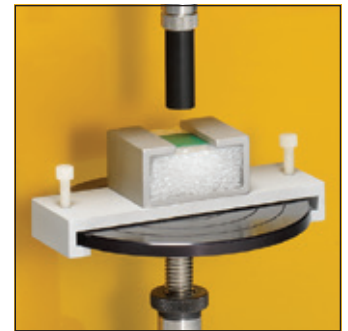
TA-CLT P

Capsule Loop Tensile Test Fixture is used to measure the force required to split one half of a hard gel capsule. Fixture Base Table required.



TA-DGF M P D

Dual Grip Fixture for tensile testing of thin films or integrity of seals for packaging.



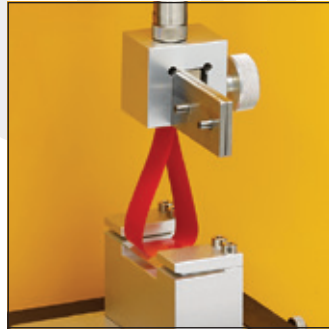
TA-ATT M P

Adhesive Tack Tester for measuring stickiness of pressure sensitive adhesive materials such as tape. Rotary Base Table required.



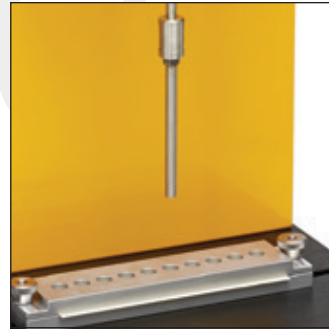
TA-FSF M P

Film Support Fixture for puncture test to measure strength of fine films. Fixture Base Table required.



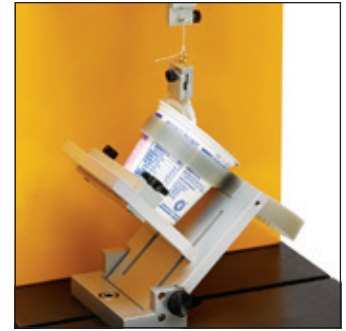
TA-LTT M

Loop Tack Test measures the adhesive strength of pressure sensitive tape and stickers according to ASTM D6195.



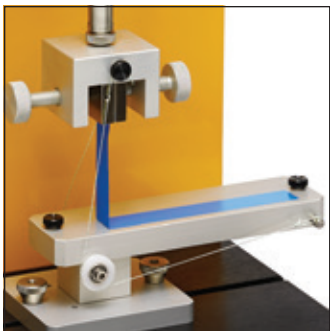
TA-TSF M

Tape Stickiness Fixture measures adhesive force to pull tape off of a surface. Multiple tape samples can be tested simultaneously for average value.



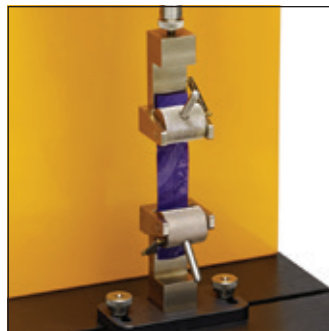
TA-GPJ M

General Peeling Jig measures the adhesive strength needed to remove the lid from a sealed container at 0°, 45°, and 90° angles.



TA-PF90 M

90° Peel Fixture measures the adhesive strength to pull a tape off of a rigid surface using force at a 90° angle.



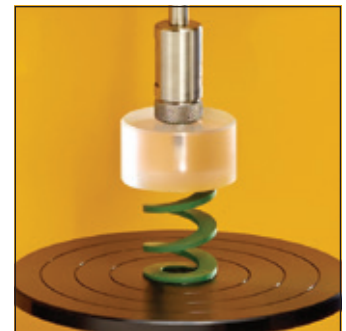
TA-RCA M D

Roller Cam Accessory grips measure the tensile strength and tear characteristics of material such as polymer films.



TA-SFJ M D

Sliding Friction Jig measures the coefficient of friction for packaging materials according to ASTM D1894.



TA-11 D

Cylindrical probe TA-11 is used to measure the force vs. distance in mechanical springs. TA-11: included in TA-P-KIT2 or as a standalone part.



The Brookfield Texture Analysis Lab

TEXTURE ANALYSIS TESTING SERVICES

A variety of texture analysis testing services can be performed at all Brookfield locations (USA, UK, Germany, China and India). Most services are performed free-of-charge.

TEST AND RECOMMEND

A simple evaluation designed to help determine the appropriate CT3 equipment for your application.

SAMPLE PROFILING

Analysis testing to determine specific properties of your sample.

DISPUTE RESOLUTION

Analysis testing for mediating a resolution between producers and/or suppliers in cases where each has different results for the same material.

MULTIPLE SAMPLE TEST

Expands the capability of your laboratory by utilizing Brookfield's services to accomplish testing work on a timely basis.



TA-P-KIT2 F C P M D

Standard Probe Kit

Variety of probes:
cylindrical (8), cone (3),
ball (2), needle (1), knife-edge (1)
and wire cutting (1)

Complies with BS and AACC.



TA-P-KIT3 F

Curd Probe Kit

one each of:
5 mm (TA46), 8 mm (TA47)
& 10 mm (TA48)

Also available:

A variety of cylindrical, cone, ball, needle, knife-edge, and wire cutting probes are also available.

Brookfield can also make custom fixtures and probes for a variety of applications. Please contact Brookfield or an authorized dealer to discuss solutions to your texture and materials testing challenges.

TEXTURE APPLICATIONS

The CT3 Texture Analyzer is used to test many different types of materials. General categories are identified and examples from each are presented.



TA-HCF
Hair Combability
Fixture

COSMETICS

Measure the effect of shampoos and conditioners on the combability of hair. Lipstick firmness is confirmed with a bending test. Extrusion cell characterizes physical consistency of cosmetic creams.

SOME RECOMMENDED CT3 ACCESSORIES

TA-DEC TA-EP TA-HCF TA-LC TA-TEF



TA-NTF
Noodle Tensile
Fixture

FOODS

Evaluate noodle quality by stretching it with tension test. Snap test on cracker gives clear indication of freshness. Two-cycle compression test on bread slice quantifies firmness and springiness.

SOME RECOMMENDED CT3 ACCESSORIES

TA-DE TA-DSJ TA-FMBRA TA-JPA
TA-KF TA-MP TA-PFS TA-PFS-C
TA-PTF TA-SBA TA-SFF TA-TPB
TA-VBJ TA-WSP *and many more*



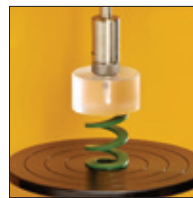
TA-10
GMIA & GME
probe and spec
Bloom bottle

GELATIN

Universal method for establishing the value of gelatin is via the Bloom Test which measures the physical strength of the sample using a cylinder probe.

RECOMMENDED CT3 ACCESSORY

TA-10



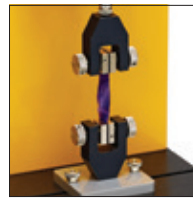
TA-11
Spring Rate Test
measures force vs
distance of springs

MECHANICAL DEVICES

The CT3 has been extensively tested with various mechanical components. We have solutions for o-ring force vs. compression distance, key pad button actuation force, crimping force test for wire in clamps, life cycle testing for switches and actuators and much more. Call us for details.

RECOMMENDED CT3 ACCESSORY

TA-11 TA-DGF TA-RCA TA-SFJ TA-P-KIT2



TA-DGF
Dual Grip Fixture

PACKAGING

Tensile test on package seals determines how hard it will be to rip open. The force required to remove capsules from blister packaging is measured with a finger probe in compression.

SOME RECOMMENDED CT3 ACCESSORIES

TA-ATT TA-AVJ TA-BEC TA-DGA TA-FSF
TA-GPJ TA-JPA TA-LTT TA-PF90 TA-PTF
TA-SFJ TA-TSF



TA-TEF
Tube Extrusion Fixture

PERSONAL CARE PRODUCTS

The squeezing force to extrude creams and pastes is quantified using a support fixture to hold the tube in place while pressing down with a finger-shaped blade.

RECOMMENDED CT3 ACCESSORY

TA-TEF



TA-BLS
Bilayer Shear
Test Fixture

PHARMACEUTICALS

Measure shear strength of two-part tablet or capsule using guillotine blade. Burst strength of capsule shell is quantified using tension test to rip the capsule apart. Adhesive property of tablet coating is determined with tension test.

SOME RECOMMENDED CT3 ACCESSORIES

TA-BPS TA-DEC TA-FSF TA-MA TA-MDI
TA-RH TA-STF TA-STJ TA-TCA TA-TEF