

Food Texture Terminology

Developed by TIC Gums, this collection of sensory terms provides a common language for developers to assess the textural components of food and beverages which enables clarity of communication during the product development process. Our group of trained R&D scientists, known as the Gum Gurus®, will work with you to interpret this information and recommend the best texture solutions. To have TIC Gums help you incorporate the right texture into your formulation development, call +1 (410) 273-7300 or chat online at www.ticgums.com/chat.



Attribute	Description	Examples (low/high)	Solid, Semi-solid, Liquid	Visual, Mechanical, Oral
Adhesiveness (First Bite/ Chew)	Degree to which sample sticks to mouth surfaces or teeth.	uncooked carrot vs soft caramel candy	Solid	Oral
Adhesiveness (Manipulation)	Degree to which sample sticks to mouth surfaces or teeth.	water dessert gel vs peanut butter	Semi-solid	Oral
Adhesiveness (Mechanical)	Degree to which the product sticks to fingers.	water dessert gel vs peanut butter	Semi-solid	Mechanical
Aeration	The amount of air bubbles which remain trapped in a product.	water vs whipped egg whites	Solid, Semi-solid, Liquid	Visual
Amount of Foam	An assessment of the volume of foam, generally on the surface of the product.	water vs fresh-poured beer	Semi-solid, Liquid	Visual
Astringent (Chemical)	The feeling on the tongue or other skin surfaces of the oral cavity described as puckering/dry and associated with tannins or alum.	yellow American cheese vs strong brewed tea	Solid, Semi-solid, Liquid	Oral
Awareness of Particulates (Breakdown)	Amount of grainy, gritty, or lumpy particles or other inclusions in the mass.	strained bananas baby food vs cream of wheat cereal	Semi-solid	Oral
Awareness of Particulates (Mastication)	The amount of particles (grit, grainy, seeds, skins) perceived in the mass.	chocolate truffle center vs chewy granola bar with chocolate chips	Solid	Oral
Carbonation (Oral)	Degree to which the sample is bubbly, tingling, biting, effervescent, or fizzing in the mouth. The integrated effect of bubbles felt on mouth or nasal surfaces (feel, size, & amount).	water vs seltzer water	Liquid	Oral
Chroma/ Brightness	The purity or brightness of the color.	iced tea drink mix vs cherry dessert gelatin	Solid, Semi-solid, Liquid	Visual
Cohesiveness (First Bite/ Chew)	Degree to which sample deforms rather than crumbles, breaks, or ruptures.	corn muffin vs chewing gum	Solid	Oral
Cohesiveness (Liquid)	The degree to which sample holds together rather than rolls off the tongue and mixes with saliva.	water vs cream of coconut	Liquid	Oral
Cohesiveness (Semi-solid)	Degree to which sample deforms and conforms to the palate rather than shears.	water gelatin dessert vs cream cheese (block)	Semi-solid	Oral
Cohesiveness of Mass (Chewdown)	Degree to which bolus sample holds together in a mass during chewdown.	shoestring licorice vs fig cookie bar	Solid	Oral
Color Intensity	The intensity or strength of the color from light to dark.	light cream vs dark chocolate	Solid, Semi-solid, Liquid	Visual
Cooling (Chemical)	The cool sensation in the mouth or nose produced by substances such as menthol and mints.	saltine cracker vs menthol eucalyptus cough drop	Solid, Semi-solid, Liquid	Oral
Degree of Salivation	The degree to which the sample makes the mouth water/ salivate.	saltine cracker vs lemon slice	Solid, Semi-solid	Oral
Denseness Solid (First Bite/Chew)	The compactness of the cross section of the sample.	whipped topping vs fruit jellies	Solid	Oral
Denseness Semi-Solid (Compression)	The compactness of the cross section of the sample.	whipped topping vs creamy peanut butter	Semi-solid	Oral
Denseness Solid (Visual & Mechanical)	The visual compactness of the cross section of the sample.	meringue cookie vs soft caramel candy	Solid	Visual and Mechanical
Degree of Dissolving (Chewdown)	Amount of sample that dissolves rather than cracking or breaking apart.	vegetable shortening vs cotton candy	Solid, Semi-solid	Oral
Firmness (Mechanical)	The force required to compress the sample between the thumb and index finger.	aerosol whipped topping vs cream cheese (block)	Semi-solid	Mechanical
Firmness (Semi-solid) (First Compression)	The force required to compress the sample between tongue and palate.	aerosol whipped topping vs cream cheese (block)	Semi-solid	Oral
Fracturability (Oral)	The force with which the sample ruptures when placing the sample between the molars and biting down at an even rate.	corn muffin vs hard boiled (glass) candy	Solid	Oral
Fracturability (Mechanical)	The force with which the sample ruptures when breaking.	corn muffin vs hard boiled (glass) candy	Solid	Mechanical
Geometric Characteristic (Descriptor for Roughness of Mass, Surface Roughness, Particle Amount, Awareness of Particulates)	The type of particles on the surface, or throughout, as related to particle shape and orientation. [NOT A SCALE]; chalky, coarse, gritty, grainy	water vs toothpaste (gritty)	Solid, Semi-solid, Liquid	Visual, Oral
Hardness (First Bite/Chew)	Force to attain a given deformation, usually force to bite completely through sample with incisors or molars.	cream cheese vs. hard boiled (glass) candy	Solid	Oral
Heat (Chemical)	The burning sensation in the mouth caused by certain substances, such as red or black pepper; mild heat or warmth is caused by some brown spices.	saltine cracker vs cayenne pepper	Solid, Semi-solid, Liquid	Oral
Heaviness	The weight of the sample on the tongue.	water vs sweetened condensed milk	Liquid	Oral
Integrity of Cut	Degree to which the cross-section in container remains clearly defined after removing a portion of the sample with a spoon.	cooked oatmeal vs water dessert gel	Solid, Semi-solid	Mechanical
Jiggle	Degree of gelatin-like movement on the spoon when moving horizontally (tap side of spoon).	peanut butter vs water dessert gel	Solid, Semi-solid	Mechanical
Lip Tackiness/Stickness	The degree to which the lips stick together.	water vs sweetened condensed milk	Semi-solid, Liquid	Oral
Manual Oiliness	The amount of oil perceived on the surface of the thumb and forefinger.	panned chewing gum vs kettle potato chips	Solid	Mechanical
Mixes with Saliva (Manipulation)	The degree to which the liquid mixes with the saliva.	sugar-free syrup vs water	Liquid	Oral
Moistness of Mass (Chewdown)	Amount of moisture, oiliness, wetness perceived in the mass at bolus.	saltine cracker vs water dessert gel	Solid	Oral
Moisture Absorption (Chewdown)	Amount of saliva absorbed by sample during chew down perceived as the degree of change in mouth moistness.	shoe string licorice vs pound cake	Solid, Semi-solid	Oral
Moisture Release/Juiciness (First Bite/Chew)	The amount of wetness/juiciness released from the sample.	banana vs watermelon	Solid	Oral
Mouth Clearing (Residual)	The speed with which the sample clears from the mouth after swallowing or expectorating.	creamy peanut butter vs water	Solid, Semi-solid, Liquid	Oral

Attribute	Description	Examples (low/high)	Solid, Semi-solid, Liquid	Visual, Mechanical, Oral
Mouth Coating (Residual)	Degree to which mouth surfaces are coated after swallowing or expectorating.	water dessert gel vs creamy peanut butter	Solid, Semi-solid, Liquid	Oral
Noise (Chewdown)	The loudness of the sample during chewdown.	sliced white bread vs tortilla chips	Solid	Oral, Aural
Noise (Mechanical)	The loudness of the sample during breaking.	white bread vs tortilla chips	Solid	Mechanical, Aural
Opacity	The degree to which light is blocked from passing through the sample.	water dessert gel vs soft caramel candy	Solid, Semi-solid, Liquid	Visual
Particle Amount	The amount of perceivable particles in the sample.	pineapple juice vs vegetable juice (visual), high pulp orange juice (oral)	Semi-solid (Visual), Liquid (Visual, oral)	Visual, Oral
Particle Size	The size of the particles in the sample.	corn starch vs large pearl tapioca pudding	Solid, Semi-solid, Liquid	Visual, Oral
Peaking	The degree to which product creates stiff peaks.	cooked oatmeal vs uncooked meringue	Semi-solid, Liquid	Mechanical
Rate of Melt (Mastication)	The speed with which the sample melts during mastication or manipulation. The rate at which the sample changes from a solid to a liquid.	high gum ice cream vs soft serve ice cream	Solid, Semi-solid	Oral
Resistance to Flow	The amount of force necessary to begin flow.	apple juice vs mayonnaise	Semi-solid, Liquid	Mechanical
Roughness of Mass (Breakdown)	The amount of roughness in the mass (can be further described as grittiness, graininess, coarseness, lumpiness, etc.).	pudding vs Irish oatmeal	Semi-solid	Oral
Roughness of Mass (Chewdown)	The amount of roughness on the surface of the mass (can be further described as grittiness, graininess, coarseness, lumpiness, etc.).	pound cake vs fresh carrot	Solid	Oral
Saliva Thickening	The degree to which saliva thickens in reaction to the sample during manipulation.	water vs heavy cream	Semi-solid, Liquid	Oral
Sheen/ Shine	The degree to which light is reflected off the surface of the sample.	sugar-free hot cocoa mix vs vegetable oil	Solid, Semi-solid, Liquid	Visual
Slipperiness (Breakdown)	Ease to slide tongue over product.	hummus vs spreadable margarine	Semi-solid	Oral
Slipperiness (Manipulation)	Ease to slide product over lips.	water vs starch-free shelf stable creamy Italian salad dressing	Liquid	Oral
Spreadable	Ease with which the sample can be evenly spread across another surface.	nougat vs spreadable margarine	Semi-solid	Mechanical
Springiness (Partial Compression)	The amount the sample returns to its original shape.	cream cheese (block) vs water dessert gel	Solid, Semi-solid	Oral
Springiness During Chew	The degree of resilience in the mass during chew.	cream cheese (block) vs canned baby clams	Solid, Semi-solid	Oral
Springiness/Return Distance	Degree to which the sample recovers after force is removed.	store bought brownie vs store bought pound cake	Solid	Mechanical
Stringiness	Degree of stringiness when pouring off a teaspoon.	water vs caramel sauce	Liquid, Semi-solid	Mechanical, Visual
Surface Chipping	The overall amount of small pieces fractured off the product.	licorice vs hard boiled (glass) candy	Solid	Visual
Surface Cracking/Breaking	The overall amount of cracking/breaking on the surface of the product.	water dessert gel vs pumpkin pie	Semi-solid, Solid	Visual
Surface Film	The degree to which a film is perceived on the surface of the sample.	whipped topping vs cooked pudding	Semi-solid, Liquid	Visual, Mechanical
Surface Graininess (Semi-solid)	The amount of particles perceived on the surface.	spreadable margarine vs ricotta cheese	Semi-solid	Visual, Mechanical
Surface Roughness (Solid)	The amount of particles perceived in the surface.	water dessert gel vs thin crisp rye wafer	Solid	Visual, Mechanical
Surface Wetting	Degree with which sample spreads out and visually adheres to surface of container.	water vs corn syrup	Liquid	Mechanical
Tensile Strength	The force required to stretch or pull a sample until it breaks.	corn muffin vs formed beef jerky stick	Solid	Mechanical
Tongue Burn (Chemical)	The warming/burning sensation on the tongue.	water vs vinegar	Solid, Semi-solid, Liquid	Oral
Toothpull (First Bite/Chew)	The force required to pull molars apart.	hot dog vs molded starch gel candy	Solid	Oral
Toothstick/Toothpack (Residual)	Degree to which product sticks to surface of teeth.	fresh carrot vs molded starch gel candy	Solid	Oral
Uniformity of Bite/Chew	The evenness of force required to bite or chew completely through sample using the molars.	shredded wheat vs soft caramel candy	Solid	Oral
Uniformity of Color (Visual)	The evenness of distribution of the color, not blotchy.	coarse ground black pepper vs whole milk	Solid, Semi-solid, Liquid	Visual
Uniformity of Shape	The degree to which the sample product pieces are the same shape or the degree to which the shape of the sample is symmetrical.	kettle cooked potato chips vs dehydrated potato crisps	Solid	Visual
Viscosity (Initial)	Rate of flow per unit force: the force to draw between lips from spoon, and the rate of flow across tongue.	water vs sweetened condensed milk	Liquid	Oral
Viscosity (Mechanical)	Visible thickness upon swirling 3 times in the sample cup.	water vs sweetened condensed milk	Liquid	Visual, Mechanical
Visual Separation/ Visual Liquid	The amount of visual liquid perceived on the top or around the sample; amount of visual liquid separation.	mayonnaise vs fruit on the bottom yogurt	Semi-solid, Liquid	Visual
Wetness	The degree to which the sample appears and feels wet.	saltine cracker vs fresh tomato slice	Solid, Semi-solid	Visual, Mechanical

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