



The Texture Revolution™ Lexicon

The Texture Revolution includes a more powerful way of articulating texture to help you to plan and describe the attributes that can give your food products improved consumer acceptance. Based on food sensory evaluations, these terms allow far greater precision to describe the many textural attributes of foods.

Texture Attributes and Definitions

Adhesiveness	Tendency to stick to lips, tongue, mouth, or spoon but not necessarily to itself	Mouth drying	Tendency to absorb moisture from the mouth
Aeration (mechanical)	Appearance of incorporated air	Mouth roughness	Sensation of particles carried in liquid
Aeration (oral)	Feel bubbles breaking, collapsing of product	Oral thickness	Resistance to manipulation by the tongue
Astringency	Mouth puckering, palate drying	Particulates	Type, size, nature of particles suspended in product
Bite/Chew	Evenness of sensation during manipulation	Peak	When a spoonful is removed from container the peak or mound is left behind
Brittleness	Tendency to fracture/break with little application of force	Pulpiness	Feeling or presence of fruit flesh
Carbonation (oral)	Sense of gas release in mouth, effervescence, burning sensation in nasal passages	Rate of breakdown	Rate at which product dissolves, disperses, or collapses in mouth
Carbonation (visual)	Appearance of dissolved gas	Rate of salivation	Rate at which a food/liquid makes mouth water
Chipping	Noticeable small pieces that fractured off of a product	Roughness of mass	Tendency to be abrasive inside of mouth
Clarity	Allows light through without distortion	Saliva thickening	Tendency to increase thickness of saliva
Cohesiveness (mechanical)	Sticks to itself but not necessarily to other things	Sheeting	Sense of layering removed from mass with each manipulation
Cohesiveness (oral)	Slightly gelled feeling, maintains form	Short	Tendency to leave little material on bottom of spoon while lifting, lack of stringing, lack of peak
Color	Intensity of color value, brilliance	Slipperiness (mechanical)	Ease with which the sample glides between finger and thumb
Cracking	Noticeable surface disruption prior to manipulation	Slipperiness (oral)	Ease with which tongue, sample, and roof of mouth glide relative to each other.
Crumbly	Loose particles as a result of manipulation	Sound	Noise product makes during manipulation
Crunch	Sound modifier; integrated term (hard, dense, sound)	Spoonable	Cut through and holds separate shapes
Denseness	Sense of heaviness, weight on tongue, typically associated with high solids	Spreadable	Ease with which the sample can be evenly spread across another surface
Dissolvability	Rate at which product dissolves, disperses, or collapses in mouth	Spreading roughness	Surface irregularity of sample when spread across another surface
Elasticity	Returns to original shape, stretchiness, tendency to act like a rubberband after manipulation	Suction resistance	Ease or difficulty of pulling the liquid through a straw or through the lips
External layer	Tendency to have an outer skin or shell as part of finished product	Surface film	Appearance of layer on surface
Firmness	Resistance to deformation	Surface irregularity	Lack of smoothness when viewed from a predefined distance
Flowability	Tendency to behave like a liquid, ease at which a liquid pours from its container or flows from spoon	Surface liquid	Surface appears wet, not loose liquid
Fracturability	Tendency to crack during manipulation	Surface residue	Leaves film on fingers after manipulation
Friability	Tendency to shatter into lots of little pieces	Surface roughness	Textural variations on surface that gives appearance of roughness
Gel	Tendency to exist as a self supporting structure	Surface wetting	Ease with which sample spreads out and covers surface of package or utensil. A material with high surface tension
Gloss	Reflection of light, shine	Temperature	Sensation of heating or cooling in the mouth during manipulation not associated with actual temperature
Hardness	Resistance to strain when force applied	Tensile strength	Tendency to resist breaking
Inclusions	Distinct second phase is present	Thickness	Resistance to manipulation
Internal irregularity	Irregularity that can be seen within a translucent product or after a product has been manipulated or disrupted	Throat temperature effect	Temperature sensation as the material is moving down your throat
Jiggle	Tendency to change shape under manipulation without permanent deformation	Tongue burn	Residual burning sensation on the tongue
Lip tackiness	Tendency for lips to stick together	Tooth coating	Tendency to leave film on teeth that is hard to remove
Loose liquid	Syneresis, pooled liquid	Tooth etch	Sensation that a sample is drying the surface of teeth
Margin irregularity	Shape uniformity, product outline	Tooth pack	Tendency to fill crevices of molars and not clear mouth after swallowing
Mixes with saliva	Ease at which the product combines with saliva	Tooth stick	Tendency to adhere to teeth and not release
Moistness of mass	Inherent moisture	Translucency	Allow light through with or without distortion
Moisture absorption	Moistness from mixing with saliva	Uniformity	Homogenous throughout product
Moisture release	Tendency to release product moisture in mouth	Visual brightness	The ability to reflect light from a surface
Moisture retention	Cues that imply moistness	Yield stress	Initial resistance to flow, eventually gives way
Mouth clearing	How quickly product disappears from mouth during swallowing; length of time residual material remains after swallowing		
Mouth coating	Tendency to cover and form film on inside of mouth		

Solid Systems

VISUAL		MECHANICAL		ORAL	
Attribute	Examples	Attribute	Examples	Attribute	Examples
Aeration	Bread vs hard cheese	Adhesiveness	Caramel vs marshmallow	Adhesiveness	Marshmallow vs cooked beans
Chipping	Hard boiled candy vs licorice	Aeration	Bread vs nuts	Bite/chew	Pastilles vs carrot
Clarity	Pretzel vs clear hard boiled candy	Cohesiveness	Marshmallow vs cake	Cohesiveness	Cooked rice vs cooked beans
Color	Jelly bean vs ice cube	Crumbly	Cake vs soft caramel	Crunch	Peanut brittle vs licorice
Cracking	Hard pretzel vs marshmallow	Elasticity	Taffy vs pretzel	Denseness	Meat vs marshmallow
External layer	Hot dog vs soft caramel	Fracturability	Hard boiled candy vs beef jerky	Dissolvability	Cotton candy vs bread
Gloss	Puffed rice vs pretzels	Friability	Uncooked pasta vs banana	Elasticity	Gummy bears vs jelly beans
Inclusions/Size of inclusions	Chocolate chip cookies vs sugar cookies	Hardness	Marshmallow vs hard boiled candy	Hardness	Chocolate bar vs fudge
Internal irregularity	Hard boiled candy vs gummy bears	Moisture retention	Soft baked cookies vs soda cracker	Mixes with saliva	Hotdog vs hotdog bun
Margin irregularity	Regular potato chips vs fabricated potato chips	Slipperiness	Cooked pasta noodle vs corn flake	Moistness of mass	Cake vs bread
Particulates	Chocolate chip cookies vs hard boiled candy	Sound	Sliced white bread vs french baguette	Moisture absorption	Bread vs potato chip
Surface irregularity	Oatmeal raisin cookie vs vanilla wafer	Surface irregularity	Stick butter vs stick bread	Moisture release	Hotdog vs hotdog bun
		Surface residue	Corn chips vs panned confection	Mouth clearing	Marshmallow vs cookie
		Surface roughness	Seasoned fried nuts vs hard panned chewing gum	Mouth coating	Marshmallow vs licorice
		Tensile strength	Licorice vs hotdog bun	Mouth drying	Hard pretzels vs cake
				Particulates	Granola bar vs bread
				Rate of breakdown	Cotton candy vs bread
				Rate of salivation	Hard panned chewing gum vs seasoned nuts
				Roughness of mass	Granola bar vs fig bar
				Slipperiness	Multi-layer hard panned sugar tablet vs pretzel
				Tongue burn	Candy coated fruit chew vs marshmallow
				Tooth pack	Dry cereal vs hotdog
				Tooth stick	Taffy vs marshmallow

Liquid Systems

VISUAL		MECHANICAL		ORAL	
Attribute	Examples	Attribute	Examples	Attribute	Examples
Aeration	Milkshake vs still water	Adhesiveness	Honey vs water	Aeration	Protein shake vs cappuccino
Carbonation	Tonic water vs seltzer	Cohesiveness	Milkshake vs apple juice	Astringency	High tannin red wine vs water
Clarity	Water vs skim milk	Elasticity	Table syrup vs maple syrup	Carbonation	Champagne vs cola vs still water
Color	Orange soda vs cola	Flowability	Honey vs water	Cohesiveness	Table syrup vs maple syrup
Gloss	Cola vs milkshake	Peak	Honey vs milk	Denseness	Apple juice vs water
Surface film	Cream soup vs broth	Surface wetting	Water vs oil	Lip tackiness	Maple syrup vs water
Surface roughness	Water vs milkshake	Yield stress	Ketchup vs mustard	Mixes with saliva	Salad dressing vs water
Translucency	Whole milk vs skim milk			Mouth clearing	Cream vs skim milk
Uniformity	Egg drop soup vs water			Mouth coating	Cream vs skim milk
				Mouth drying	Whey proteins
				Mouth roughness	Milkshake vs milk
				Oral thickness	Apple juice vs water
				Particulates	Chocolate milk vs milk
				Rate of salivation	Lemonade vs milk
				Saliva thickening	Milk vs water
				Slipperiness	Whole milk vs water
				Suction resistance	Milkshake vs cola
				Temperature	Sports drinks vs water
				Throat temperature	Milkshake vs water
				Tongue burn	Cola vs water
				Tooth coating	Milk vs water
				Tooth etch	Cola vs milk

Semi-Solid Systems

VISUAL		MECHANICAL		ORAL	
Attribute	Examples	Attribute	Examples	Attribute	Examples
Aeration	Mousse vs peanut butter	Adhesiveness	Peanut butter vs margarine	Adhesiveness	Marshmallow topping vs water dessert gels
Clarity	Water dessert gels vs marshmallow fluff	Friability	Uncooked pasta vs banana	Aeration	Marshmallow topping vs peanut butter
Color	Types of vanilla ice cream	Cohesiveness	Chunky applesauce vs non-chunky applesauce	Astringency	Raspberry/lemon sorbet vs ice cream
Cracking	Pudding vs apple sauce	Crumbly	Tofu vs whipped topping	Brittleness	Flan vs pudding
Gloss	Tomato paste vs jelly	Denseness	Peanut butter vs mayonnaise	Cohesiveness	Cream cheese vs sorbet
Loose liquid	Applesauce vs mashed potatoes	Elasticity	Taffy vs water dessert gel	Denseness	Applesauce vs water dessert gel
Particulates	Cottage cheese vs pudding	Firmness	Peanut butter vs mayonnaise	Elasticity	Chewing gum vs pudding
Pulpiness	Fruit jam vs jelly	Flowability	Water vs honey	Firm	Peanut butter vs pudding
Surface irregularity	Soft cheese vs hummus	Fracturability	Water dessert gel vs yogurt	Gel	Cream cheese vs applesauce
Surface liquid	Water dessert gel vs peanut butter	Gel	Jelly vs sherbet	Mixes with saliva	Cream cheese vs pudding
Visual brightness	Jam vs dry oatmeal	Jiggle	Water dessert gel vs hazelnut chocolate spread	Mouth clearing	Water dessert gel vs peanut butter
		Peak	RTU icing vs applesauce	Mouth drying	Soft peanut butter vs ice cream
		Short	Yogurt vs cheese spread	Mouth coating	Soft cheese spread vs sorbet
		Slipperiness	Mayonnaise vs peanut butter	Particulates	Preserves vs jelly
		Spoonable	Brick butter vs oatmeal	Rate of breakdown	Peanut butter vs water dessert gel
		Spreadable	Spreads vs nougat	Rate of salivation	Yogurt vs jelly
		Spreading roughness	Ricotta cheese vs cream cheese	Roughness of mass	Applesauce vs jelly
		Thickness	Pudding vs peanut butter	Saliva thickening	Ice cream vs water dessert gel
				Sheeting	Peanut butter vs cream cheese
				Slipperiness	Marshmallow topping vs applesauce
				Yield stress	Flan vs pudding
				Temperature	Ice cream vs oatmeal
				Thickness	Cream cheese vs yogurt
				Tooth etch	Icing vs pudding
				Tooth pack	Soft caramel vs jelly



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