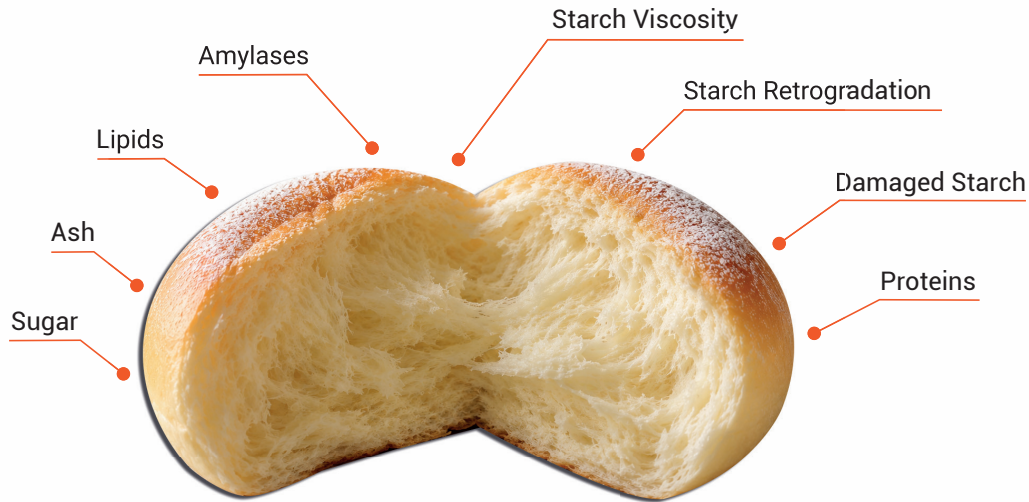


Why Springiness Matters



• **Texture & Mouthfeel:** Springiness gives baked goods a light, airy, and elastic texture. A crumb that springs back creates a soft yet resilient and enjoyable bite.

• **Volume & Rise:** A springy crumb signals proper rise and good gas retention. It contributes to a light, well-aerated structure.

• **Gluten Development:** Springiness reflects a well-developed gluten network that traps gas and creates an elastic structure, contributing to a light, airy texture. It indicates proper mixing and dough handling.

• **Moisture Retention:** Springiness helps retain moisture within the crumb. This keeps products soft and delays drying.

• **Structural Integrity & Handling:** Springiness helps products maintain their shape during slicing and handling. It ensures the crumb recovers after compression, preventing collapse or crumbling.


• **Freshness Indicator:** Springiness is a key sign of freshness and proper leavening. Loss of elasticity indicates staling and moisture loss.


• **Authenticity & Quality:** Springiness is a key attribute of many high-quality baked products. It reflects proper formulation, fermentation, and processing, and signals craftsmanship.

• **Consumer Satisfaction:** Springiness enhances pleasure through elasticity and resilience. Lack of it leads to dense, dry, and less appealing products.

Key Flour Components Affecting Springiness

Key Flour Components	Contribution to Springiness	Mechanisms
Proteins	26%	Protein properties are critical for springiness. Elasticity is generally recognized as a key factor.
Starch Viscosity	26%	Proper gelatinization creates a cohesive, springy texture. Incomplete gelatinization can lead to dense or rubbery products.
Amylase (Enzyme Activity)	23%	Balanced activity ensures even gas production and distribution, supporting a uniform, elastic crumb.
Ash Content (Minerals)	9%	Lower ash flours generally produce better springiness than whole wheat flours.
Damaged Starch	7%	Moderate levels improve hydration and dough cohesion, supporting springiness. Excess causes overhydration, weakening structure and creating gummy textures.
Lipids	7%	Lipids help maintain gluten network integrity and dough structure, supporting the product's ability to recover after compression.
Sugar	2%	Sugars soften gluten, creating a tender, elastic crumb that complements springiness.

 Consistent Impact Across Most Products

 Impact Varies Significantly by Product Type

How Flour Components Impact Springiness of Different Products ?

Springiness	Starch Viscosity	Damaged Starch	Proteins	Amylase (Enzymatic Activity)	Ash Content (Minerals)	Sugar	Lipids
Pan Bread	3	1	3	3	1		1
Baguette	3	1	3	3	1		1
Hamburger Bun	3	1	3	3	1	1	2
Sponge Cake	3	2	3	2	1	1	
Croissant	3	2	3	2	1	1	
Steamed Buns	3	2	3	2	1		

3: Strong Impact

2: Average Impact

1: Low Impact

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Connecting Flour Components With Bakery Product Excellence.

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KPM Equipment for Monitoring These Key Flour Components



SpectraStar



Alveograph



Mixolab



SDmatic



Rheo F4