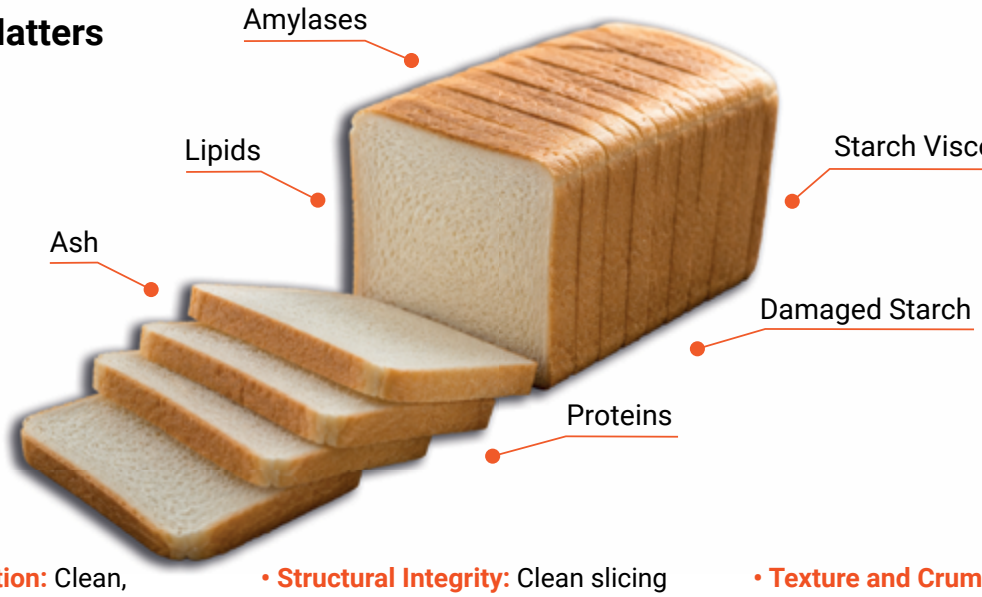
KPM

UNDERSTANDING WHAT IMPACTS SLICING OF BAKED PRODUCTS

Back to Flour Series

Why Slicing Matters



• **Ease of Consumption:** Clean, smooth slices make products easy to eat without falling apart, and give consistent serving sizes for sandwiches, toast, or cake layers.

• **Visual Appeal and Presentation:** Neat slices signal quality and attention to detail, while uneven or messy slices make a product look less professional or poorly made.

• **Versatility in Recipes:** Clean-slicing products go further. Well-cut bread becomes sandwiches, toast, or croutons, while a cleanly sliced cake can be layered, portioned, or arranged for presentation. Poor slicing limits these options..

• **Structural Integrity:** Clean slicing shows the product has the right structure, with enough elasticity, moisture, fat, and gluten balance to hold together when cut. If a product is difficult to cut, this may indicate that it was overcooked or undercooked, or that it was not handled properly.

• **Freshness and Shelf Life:** Slicing without falling apart can indicate freshness, since stale or dried-out products tend to crumble or tear when cut.

• **Handling During Production:** Easy-slicing products speed up packaging and distribution, ensuring consistent workflow and output in large-scale bakeries and foodservice operations.

• **Texture and Crumb Structure:** A balanced gluten network and moisture level give a crumb soft yet firm enough to slice cleanly, reflecting overall product quality.

• **Portion Control and Consistency:** Uniform slices ensure consistent portion sizes, which supports satisfaction and cost control.

• **Consumer Satisfaction:** Products that slice cleanly are seen as higher quality.

Key Flour Components Affecting Slicing

Key Flour Components	Contribution to Slicing	Mechanisms
Starch Viscosity	25%	Undamaged starch absorbs water during mixing and gelatinises during baking, creating a soft yet cohesive crumb that slices cleanly without crumbling.
Proteins	21%	High protein gives a stronger dough and a resilient product that slices neatly, while low protein gives a weaker, crumbly structure.
Amylase (Enzymatic Activity)	21%	Excessive activity gives an overly tender crumb that tears when sliced, while insufficient activity leaves a coarse, dry crumb that crumbles.
Damaged Starch	17%	High damage raises hydration and gives gummy, dense crumbs that resist slicing; low damage gives a drier crumb that may crumble when cut.
Ash Content (Minerals)	8%	Higher ash content gives a denser, more irregular crumb that can reduce slicing quality, while lower ash gives a lighter, more uniform crumb.
Lipids	8%	Fat interacts with gluten and starch for a tender, cohesive crumb, and proper incorporation makes it soft yet sturdy enough to resist crumbling.

Consistent Impact Across Most Products Impact Varies Significantly by Product Type

How Flour Components Impact Slicing of Different Products ?

Slicing	Starch Viscosity	Damaged Starch	Proteins	Amylase (Enzymatic Activity)	Ash Content (Minerals)	Lipids
Pan Bread	3	2	3	3	1	1
Hamburger Bun	3	2	2	2	1	1

3: Strong Impact 2: Average Impact 1: Low Impact

Explore the Back to Flour Series
Connecting Flour Components With Bakery Product Excellence.
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KPM Equipment for Monitoring These Key Flour Components


SpectraStar


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Rheo F4