



BAKERY



# MAKING BAKERY EXTRAORDINARY

## Create that Perfect Texture with Tate & Lyle

Moist cakes. Flaky pastries. Soft biscuits. Chewy biscuits. Whatever sensory experience you wish to deliver or challenge you need to master, Tate & Lyle makes it easy to create the texture that appeals to your consumers. When it comes to formulating extraordinary baked goods, texture is one of the delivery mechanisms for taste. In fact, texture may even sway consumers' perception of calories when comparing different food textures.

Tate & Lyle's food starches are derived from a variety of botanical food sources and are available in native, modified, cook-up, instant and clean-label varieties. Our diverse portfolio provides options from basic thickening to highly-unique functionalities relevant to the bakery category. Also, if you need assistance, we offer experienced application guidance to help you achieve your goals.

# Bakery

Our starches are used to retain moisture and extend shelf-life of cakes, muffins and pastries. They aid in suspending fruit solids in fillings, controlling biscuits spread during baking, and improving the texture of biscuits. Functionality provided by our starches can give your products a real competitive advantage.

FUNCTIONALITY	STARCH		MODIFIED STARCH		BENEFITS
	Instant	Cook-Up	Instant		
Build batter viscosity			GEL DURA-JEL™ MIRA-CLEER® 787 REDISOL® TENDER-JEL®		Builds batter viscosity and allows for easy deposit. <i>e.g. Muffins, cakes and brownies</i>
Moisture management and structure development			GEL DURA-JEL™ REDISOL® TENDER-JEL®		Provides uniform cell structure and aids with shelf-life extension. <i>e.g. Muffins and biscuits</i>
Uniform shape and consistency	MIRA-GEL® X-PAND'R® SC X-PAND'R® 612				Controls spread and reduces dough stickiness. <i>e.g. Biscuits</i>
Fat mimetic, reduced fat formulas	CLARIA® MIRA-GEL®	STA-SLIM® 143 STA-SLIM® 151	STA-SLIM® 142 STA-SLIM® 150		Provides texture and moisture control in low fat systems. <i>e.g. Cakes, biscuits</i>
Freeze-thaw stability			GEL DURA-JEL™ MIRA-THIK® TENDER-JEL®		Consistent texture after frozen storage. <i>e.g. Frozen baked goods</i>
Fillings at intermediate pasting temperatures		LO-TEMP®			Offers ease of handling and controls boil out during baking.
Icing spreadability and smooth texture	CLARIA® MIRA-GEL®		MIRA-THIK® SOFT-SET®		Improves moisture retention and reduces surface cracking.
Adhesion and film formation		TAPIOCA DEXTRIN	NUHESIVE MAX®		Seals dough layers and serves as adhesive for toppings. <i>e.g. Eggwash replacement</i>

Starch source: CORN | TAPIOCA | POTATO

## Viscosity Development

- **Batter Viscosity** – Our bake-stable starches resist thinning during baking, controlling the spread of batter to maintain uniform shape and consistent size. They can also add viscosity in batter to suspend particles and ensure even distribution in baked goods, enabling higher manufacturing speeds to optimise production time.
- **Hydration** – High-solid fillings require a starch that can fully hydrate and thicken with limited water. Speciality instant and low-pasting-temperature starches can be used to obtain full viscosity during baking, enabling the use of high-quality, stable fillings in toaster pastries, cookies or other baked goods.

## Texture Development

- **Structure** – Starches control and enhance aeration, providing crumb structure and texture formation in baked goods. In gluten-free bakery products, starch is essential to maintain this structure for optimal mouthfeel.
- **Smooth and creamy icings, frostings and glazes** – Granular instant starches are widely used in icing and frosting to control moisture and provide a creamy texture with a proper set. Whether improving spreading characteristics, providing definition in decorator's gel, or stability in frozen icing to reduce weeping and cracking upon thawing, granular instant starches are the key to solving the toughest challenges of today's formulators.

- **Fat Reduction** – Starches can enhance the moist and creamy texture of a wide range of fat-reduced cakes, muffins and pastries, while maintaining the high-quality, indulgent mouthfeel of the full-fat varieties.

## Process Functionality

- **Bake stability** – Starches can prevent fillings from boiling out in biscuits and pastries.
- **Moisture management** – Starches absorb and maintain moisture during baking to help deliver the ultimate desired texture, whether moist, chewy or somewhere in between.
- **Process requirements** – Whether you are creating artisan-baked goods or conventional production-line manufactured goods, Tate & Lyle can help evaluate the right functionality for optimal performance in your unique process.

## Finished Product Stabilisation

- **Moisture retention** – Starch holds and maintains moisture in the baked goods to extend the shelf life of the product and improve the cost structure for in-store and food service operations.

- **Freeze-thaw stability** – In frozen dough or pre-baked-frozen baked goods, starch controls or stabilises moisture and structure, enabling the final thawed or baked product to have the same high quality as the fresh-baked product. The ultimate appeal, of course, is to consumers for whom taste is the most critical factor in purchasing baked goods. This is why mastering starches is critical in every effort to increase brand appeal and open up other distribution channels within retail and food service.

## Clean Label

Enjoy a clean-label claim and great taste, too, with CLARIA® Functional Clean-Label Starches, which label simply as "starch", "corn starch" or "tapioca starch"\* yet perform similarly to modified food starches. The CLARIA® line offers a clean, neutral taste and colour comparable to modified food starches and is versatile across a broad range of applications and sophisticated processes.

The information contained should not be construed as recommending the use of Tate & Lyle's product in violation of any patent, or as warranties (expressed or implied) of non-infringement or its fitness for any particular purpose. Prospective purchasers are advised to conduct their own tests, studies and review of the intellectual property and regulatory space to determine the fitness of Tate & Lyle products for their particular purposes, product claims or specific applications.

**TATE & LYLE**

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## ABOUT TATE & LYLE

Tate & Lyle is a global provider of ingredients and solutions to the food, beverage and other industries, with operations in over 30 locations worldwide.

[tateandlyle.com](http://tateandlyle.com)