sugar in baking

https://www.agoramores.com/food/baking/sugar-in-baking

Tags: food · baking

Related

baking

- flour
- bread
- flatbreads
- laminated dough
- Cream Cheese Frosting
- baking

food

- recipes
- eating
- bread recipes
- cooking oils
- cuisines
- cucumber tea sandwiches

Sugar in Baking

Sugar sweetens last. Before that it holds water, which keeps a crumb soft for days; it feeds yeast; it lowers the temperature at which a surface browns; and in a creamed batter its crystals cut air into the fat. Removing it from a recipe changes far more than the taste, which is why sugar substitution is the hardest swap in baking.

Part of Baking.

What sugar does besides sweeten

- **Hygroscopy** — holds moisture, extends shelf life, and softens crumb
- **Browning** — caramelisation and the Maillard reaction, and why a sugar-rich dough colours long before it is cooked through
- **Aeration** — creaming sugar into solid fat, the mechanical leavening step behind most butter cakes; see cakes and yeast and leavening
- **Fermentation** — a food source for yeast, up to the point where the osmotic pressure starts working against it; see baking fats on enrichment

- **Spread** — in cookies, sugar melts and the dough flows; the ratio of sugar to flour and fat is most of what decides thick versus thin. The working threshold that page uses: below about 0.8 sugar to flour by weight a dough holds its shape with no chilling at all, and above about 1.1 it needs cold, a hotter oven, or more flour to stop it running.

Forms

- Granulated, caster, and the effect of crystal size on creaming
- Brown sugar and the molasses in it — an acid, so it interacts with baking soda; see yeast and leavening
- Icing sugar and its cornstarch
- Liquid sugars: honey, maple, molasses, malt. Each brings water, so a formula written for granulated needs adjusting; see baker's percentages
- Diastatic malt as a browning and yeast-activity aid in bread

Where it comes from

sugar production carries the site's pages on the production side.

Reducing or replacing it

Sugar alternatives behave very differently from each other in an oven — some brown, some do not; some carry bulk, some are used in milligram quantities and leave a hole in the recipe where the bulk was. Any substitution needs testing rather than a conversion chart.

- Bulk sweeteners versus high-intensity sweeteners
- What is lost when sugar is cut: moisture, browning, spread, keeping quality
- Dietary context — see eating restriction, healthy eating, and nutrition and supplements

Related

cakes · cookies · baking fats · flour · no-bake desserts · Baked goods · chocolate chip cookies — the brown-to-white sugar ratio worked through on one recipe