

cookie chemistry

<p>baking soda</p> <ul style="list-style-type: none"> • sodium bicarbonate • ~4x more effective than baking powder • b.soda can be substituted with b.powder...but will need 2-3x the amount 	<ul style="list-style-type: none"> • must have an acidic component in recipe with baking soda for it to activate (vinegar, citrus) • alkalinity of b.soda causes browning & adds color to baked goods 	<ul style="list-style-type: none"> • reduces the acidity of the batter... which raises the setting temperature • ↑ baking soda = ↓ acid • ↓ acid = ↑ set temp. • delay set = thin cookie • ↑ b.soda = thin cookie
<p>baking powder</p> <ul style="list-style-type: none"> • sodium bicarbonate + acid (usually cream of tartar) 	<ul style="list-style-type: none"> • for taller & cakey cookies, add 1 tsp baking powder while keeping the baking soda 	<ul style="list-style-type: none"> • increases acidity... which quickens coagulation. • ↑ b.powder = ↑ acid • ↑ acid = faster coagulation • quicker = less spreading • b.powder = thicker cookie
<p>salt</p>	<ul style="list-style-type: none"> • brings out the sweetness 	<ul style="list-style-type: none"> • salt only affects flavor
<p>sugar</p>	<ul style="list-style-type: none"> • higher white to brown sugar ratios produce a crispy crunchy cookie • higher brown to white sugar ratios produce a soft and chewy cookie 	<ul style="list-style-type: none"> • ↑ white sugar = crispy • ↑ brown sugar = chewy • coconut sugar = chewy • dark brown = more chewy
<p>eggs</p>	<ul style="list-style-type: none"> • eggs bind • eggs puff baked goods • egg whites dry out baked goods • egg yolks add fat & richness 	<ul style="list-style-type: none"> • ↑ egg = taller cookie • egg white = crunchy • egg yolk = extra chewy
<p>butter/fat</p> <ul style="list-style-type: none"> • butter - sharp melting point • conversion from solid to liquid occurs at low temps, resulting in spreading prior to setting 	<ul style="list-style-type: none"> • butter spreads • shortening stays puffy • melted butter = chewier • creamed butter = cakelike 	<ul style="list-style-type: none"> • ↑ fat = flat & crispy • ↓ fat = puffy/cakey
<p>chillin' → (of your cookie dough)</p>	<ul style="list-style-type: none"> • chilling allows liquids to hydrate the flour evenly • chilling decreases the stickiness, making dough firm/easier to work with 	<ul style="list-style-type: none"> • chilled = ↓ spread in oven • super chilled = super thick!