



High Altitude Baking

General Baking Must-Do's

- ⇒ Be accurate and measure everything! (Professional baking is done by weight. Absolutely everything is weighed, even water).
- ⇒ Ingredients should be at room temperature.
- ⇒ Add eggs one at a time.
- ⇒ “Creaming” butter and sugar takes about 3 minutes in the mixer. Do not over-mix.

Why is altitude so difficult?

The boiling point of water depends on atmospheric pressure, which changes with an increase in altitude. Water boils almost 2° lower per 1,000 feet in altitude. At sea level, the boiling point of water is 212°F. Here in Evergreen at 7,000 feet, the boiling point is reduced to 198°F. This is why it takes your pasta longer to cook: it's cooking at a lower temperature. Lower atmospheric pressure wreaks havoc on baking in a few different ways.

High-Altitude Tips:

Leaveners are agents that cause batter or dough to rise. They can be mechanical (steam), organic (yeast, eggs), and chemical (baking soda, baking powder). It is important to manage leaveners in high-altitude baking.

- ⇒ When using chemical leaveners, reduce the amount. (See chart on page 2). Since there is less pressure at altitude, the product will rise (and then fall) too fast with higher amounts of leaveners.

Liquifiers (sugar, milk, cream, water, juice, alcohol) are basic baking ingredients that should also be managed at high-altitude. Again, the lower boiling point means that liquifiers take longer to boil.

- ⇒ Reduce sugar by about 25%. Sugar is a liquefier.

Structural ingredients (flour, eggs) also provide texture and in most instances, nutrition. The structure has a harder time setting at the lower boiling point.

- ⇒ Increase the flour by 1-3 tablespoons per cup along with 1-3 tablespoons water to balance it. Flour is used to set the structure. (Again, see chart page 2)
- ⇒ Increase the oven temperature by about 10° – 15°. The higher temp encourages the structure to set faster. Your item is less likely to fall before the solid foundation is set to hold it.

General recipe adjustments: Adapted from www.Highaltitudebaking.com

Ingredient	3,000 ft	5,000 ft	7,000 ft	10,000 ft
Flour <i>Increase each cup by:</i>	0 - 1 Tbsp	2 Tbsp	3 – 4 Tbsp	2 – 4 Tbsp
Baking powder or baking soda <i>Decrease each tsp by:</i>	0 - 1/8 tsp	1/4 tsp	1/4 – 1/2 tsp	1/2 - 2/3 tsp
Sugar <i>Decrease each cup by:</i>	0 - 1 Tbsp	1 – 2 Tbsp	2 – 4 Tbsp	3 – 4 Tbsp
Fats <i>Not generally necessary to change Decrease each cup by:</i>	0	0	0	1 – 2 Tbsp

Resources: www.highaltitudebaking.com
 Joy of Cooking by Irma Rombauer and Marion Rombauer Becker
 Peg or Alex at Blue Spruce Market
 Pie In the Sky: Successful Baking at High Altitudes by Susan G. Purdy