## Overview:

## The Basic Situation:

Higher altitude $=$ thinner air $=$ less air pressure.

## What it Means

- Water will boil at a lower temperature (each 500 -ft increase in altitude causes a drop of about $1^{\circ}$ in the boiling point). For example, at 7,500 feet the boiling point will be $198^{\circ}$. Since it will not be as hot as it is at lower altitudes, you will have to boil it longer to achieve the same affect.
- Baked goods that include yeast or baking powder will rise faster which may sound like a good thing, but it isn't because they will dry out.


## What to Do

- Boil things longer if you are at an elevation of 5000 feet or more.
- Oven temperatures are NOT affected by altitude, so it is sometimes necessary to adjust the suggested oven temperature. For batters and doughs, you should increase the temperature by 15-25 degrees Fahrenheit if you are at an elevation of 3500 feet or more.
- Adjust ingredients that cause your baked goods to rise. See table below for guidelines.
- Use extra-large eggs or increase the number of large eggs used.
- If possible, use smaller pans; they work better at high altitudes.
- Increase liquids (including that used in rice, soups and vegetables) slightly to allow for longer cooking times.


## Altitude Adjustments for Baked Products

At higher altitudes, adjustments in ingredient proportions in baked products such as cakes need to be made. Using the same amount of baking powder as appropriate at sea level will cause baked products to rise too much. This over-expansion of cells will result in their collapse and the cake will fall. For altitudes under 3000 feet, adjustments are not necessary. At altitudes up to 5000 feet, sometimes the only requirement needed is to switch from cake flour to all purpose flour since it will provide more structure.

| Adjustment | $\mathbf{3 0 0 0}$ feet | 5000 feet | 7000 feet |
| :--- | :---: | :---: | :---: |
| Decrease baking powder <br> for each teaspoon measured, decrease by: | $1 / 8 \mathrm{tsp}$ | $1 / 8-1 / 4 \mathrm{tsp}$ | $1 / 4 \mathrm{tsp}$ |
| Decrease sugar <br> for each cup measured, decrease by: | $0-1 \mathrm{Tbs}$ | $0-2 \mathrm{Tbs}$ | $1-3 \mathrm{Tbs}$ |
| Increase liquid <br> for each cup measured, add: | $1-2 \mathrm{Tbs}$ | $2-4$ Tbs | $3-4$ Tbs |

Yeast breads rise more quickly at high altitudes, so be sure to watch your dough carefully and judge the rise time by the change in the dough's bulk, not by the amount of time it takes. When the volume has doubled in size, bake it. Bread machines however go by time not volume, therefore you may need to reduce the amount of yeast. If the bread is hitting the lid of your bread machine, try decreasing the yeast by $1 / 2$ tsp.

