

Bakery Problem Solving

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My cakes don't rise! My batter is gummy and collapsing! Did you know that variables such as oven temperature, ingredient scaling, and the order you mix ingredients can all affect your product's outcome? When bakers have concerns with their bakery mixes or their scratch formulas there is almost always a simple solution to the problem.

There are ways to methodically recognize what's going wrong so you can make the necessary corrections. The most difficult part of figuring out what the problem might be is determining where to start looking.

Many situations can be resolved by following your specific scratch directions or by following the directions on the bag or box from your mix or base manufacturer. Most bag or box directions include information about recommended mix times, batter or dough temperatures, baking times and temperatures and the weight of mix, water and other ingredients that may need to be added at the bowl.

Whether creating a cake with a mix or forming dough from scratch, there are a number of factors that could affect your product's desired outcome.

Mix time – Mix times can be extremely critical, making following the manufacturer's recommendations vital to achieving the optimum baked product. Problems can arise from over- and under-mixing. Over-mixing can over-aerate and weaken the structure. Under-mixing results in under-aeration, which can leave a much tighter crumb.

Baking temperatures and times –Oven temperatures that are too high will tend to burn your product externally while leaving the interior raw or under-baked. This can result in gumminess or collapsing of the finished product. Oven temperatures that are too low will cause the product to dry out resulting in a shorter shelf life of the finished baked product. To remedy these common issues, make sure you check your oven temperatures and have your ovens calibrated about once every year.

Also, pay special attention to the manufacturer's recommended bake times and temperatures and you'll produce high quality baked goods your customers will return for again and again.

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Ingredient weight – No two people measure ingredients the same way, which makes weighing ingredients the best way to achieve consistent results. Measuring by volume (i.e. cups, scoops, etc) leaves room for error and inaccuracies. For example, one person may measure a specific ingredient by over-filling a cup while another person may level the cup with a spatula, plus measuring liquids accurately requires you to look at the measuring vessel at eye level.

Weighing all ingredients, including water, is the most accurate method of producing consistent finished baked products on a daily basis. You choose whether you want to use pounds and ounces or kilos and grams. Either way will give you excellent results but, weighing your ingredients will always be more accurate than using measuring cups and teaspoons.

Dough Temperature – Dough temperatures are critical and can affect aeration potential and leavening action. Use a dough thermometer to check your batter or dough temperatures at the completion of the mixing cycle. Readjust your water temperature either up or down to bring the finished dough or batter temperature back into spec. Be aware that tap water temperatures fluctuate as the ground water temperatures change with the seasons.

In yeast raised dough systems, dough that is too warm or too cold will not ferment properly. When cold, the dough will tend to be bland due to lack of fermentation and when hot it may taste and smell sour and bitter due to excess fermentation. Cold dough will tend to slack out and spread whereas hot dough will tend to rise very quickly and gas out. Cold dough will also tend to be darker than normal after baking, (less fermentation so more residual sugars for color) and the hot dough will tend to be more on the pale side, (more fermentation burning off sugar so less color).

Yeast levels – Double check your yeast level and be certain that your yeast is within the manufacturer's recommended shelf life. If you're using a different variety of yeast, (compressed versus dry) be sure that you've made the proper conversion and that you've added the additional water amount if going from compressed yeast to dry yeast. If you have questions, contact your yeast manufacturer.

Water levels - If your dough is very wet or soft, try decreasing the water level. If the dough is too stiff and difficult to work with you can increase the water level making it more manageable. In most cases the water level in your dough will be listed as a "variable" so you can make minor adjustments at the bowl.

If you are making a scratch formula and you've gone through all of the above steps to try and solve your issue and still haven't resolved it, you may want to adjust the ingredients in your formula. When doing this, only change one ingredient or process parameter at a time. Changing more than one variable at a time can cause more problems because you're never certain which ingredient or process helped correct the issue.

If you're using a mix and can't solve your issue, call your manufacturer's representative. Although it may seem like a low priority task, one of the most important things you can do is to track every mix or product that comes into your bakery. Start a tracking sheet that includes the mix, base, or ingredient name, date of arrival, manufacturer's product code, manufacturer's batch code and any other pertinent information that might be unique to the product. If you do have an issue with a product, you will have the information available for the manufacturer.

Remember, not every instance will require you to look at all of these suggestions but it may narrow down the issue and help you solve your dilemma more rapidly, saving you valuable ingredients and, most importantly, time.