



Bakeries & Foodservice

Technical Training Manual



Baker's Plus® Cake Mix



Bakers Plus® Cake Mix

Handling Instructions

Preparation:

- Adjust water temperature to produce a batter temperature of 72°-74°F.
- Use the Water Calculation chart in this manual to calculate temperature/ Or follow the water temperature guide on back of the package.

Mix:

- Mixing is the most critical step in the process of cake production.
- Bakers Plus® is designed for a 3 stage mix process.
- This assures the proper mixing of all ingredients to produce the absolute best cake possible.

Large Batch

- (4 speed mixer, 80 qt bowl)
- Cake mix: 50 lbs
- Water: 33 lbs
- Vegetable Oil: 6 lbs

Stage 1:

- Add Mix to bowl.
- Slowly add 12 lbs of water over 1 minute period (2nd speed).
- Mix additional 2 minutes in low speed (2nd).

Stage 2:

- Add 11 lbs of water slowly over 1 minute period.
- Scrape bowl very well.
- Mix additional 2 minutes in 3rd speed.

Stage 3:

- Add 10 lbs of water and 6 lbs of oil slowly over 1 minute period.
- Scrape bowl very well.
- Mix an additional 2 minutes in 2nd speed.

Note: It is **very important** to scrape down the bowl in between stages. This will help with proper mixing of all ingredients and achieves the nice tight cell structure!



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Specific Gravity:

Specific Gravity is the ratio between a given volume of cake batter and the weight of the same volume of water. It tells us how much air has been incorporated into the batter. Achieve a specific gravity between .80% and .90%

Bake:

| | Conventional Oven | Rack Oven | Convection Oven |
|------------------------|-------------------|---------------|-----------------|
| Temperature: | 360°F | 330°F | 300°F |
| Bake Time: 8" | 25-28 minutes | 22-25 minutes | 22-25 minutes |
| Bake Time: Full Sheets | 35-40 minute | 45-50 minutes | 40-45 minutes |

- For rack oven baking you may reduce the vegetable oil by 50% to prevent excessive shrinkage.
- Touch top of cake to check bake.
- Remove from oven when the top is resilient to the touch and springs back.
- Cool at least 30 minutes before de-panning.

Trouble Shooting:

Please refer to chart attached for troubleshooting hints.

Attributes:

- Superior moist cake
- Nice tight cell structure
- Excellent shelf life
- Tolerant to freezing
- "The Benchmark Mix in the Industry"



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Formula to Achieve Proper Temperature of Bakers Plus® Cake Mix

1. Add

| | |
|---------------------------------|-------|
| Temperature of Room | _____ |
| Temperature of Cake Mix | _____ |
| Friction Factor (2 – 5 degrees) | _____ |
| Total | _____ |

2. Multiply

| | |
|--------------------------------|-------|
| Desired Batter Temperature x 3 | _____ |
|--------------------------------|-------|

3. Subtract

| | |
|------------------------------|---------|
| Total from point 2 | _____ |
| Minus the Total from point 1 | - _____ |

4. Answer

Equals _____

Temperature of water required to achieve proper batter temperature

Example:

| | |
|-----------------|-----|
| Temp of room | 78 |
| Temp of mix | 76 |
| Friction (est.) | 4 |
| Total | 158 |

Desired Temperature (75) x 3 = 225

Difference: Subtract 158 from 225 = 67

Use 67° water temperature when mixing batter. This will achieve a 75°F batter.



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Bakers Plus® Cake Mix Water Temperatures

Water Temperature Chart for 74°F Batter

| | | TEMPERATURE OF MIX (°F) | | | | | | | | | | | |
|--------------------------|----|-------------------------|----|----|----|----|----|----|----|----|-----|-----|-----|
| | | 90 | 86 | 82 | 78 | 74 | 70 | 66 | 62 | 58 | 54 | 50 | 46 |
| TEMPERATURE OF ROOM (°F) | 90 | 42 | 46 | 50 | 54 | 58 | 62 | 66 | 70 | 74 | 78 | 82 | 86 |
| | 88 | 44 | 48 | 52 | 56 | 60 | 64 | 68 | 72 | 76 | 80 | 84 | 88 |
| | 86 | 46 | 50 | 54 | 58 | 62 | 66 | 70 | 74 | 78 | 82 | 86 | 90 |
| | 84 | 48 | 52 | 56 | 60 | 64 | 68 | 72 | 76 | 80 | 84 | 88 | 92 |
| | 82 | 50 | 54 | 58 | 62 | 66 | 70 | 74 | 78 | 82 | 86 | 90 | 94 |
| | 80 | 52 | 56 | 60 | 64 | 68 | 72 | 76 | 80 | 84 | 88 | 92 | 96 |
| | 78 | 54 | 58 | 62 | 66 | 70 | 74 | 78 | 82 | 86 | 90 | 94 | 98 |
| | 76 | 56 | 60 | 64 | 68 | 72 | 76 | 80 | 84 | 88 | 92 | 96 | 100 |
| | 74 | 58 | 62 | 66 | 70 | 74 | 78 | 82 | 86 | 90 | 94 | 98 | 102 |
| | 72 | 60 | 64 | 68 | 72 | 76 | 80 | 84 | 88 | 92 | 96 | 100 | 104 |
| | 70 | 62 | 66 | 70 | 74 | 78 | 82 | 86 | 90 | 94 | 98 | 102 | 106 |
| | 68 | 64 | 68 | 72 | 76 | 80 | 84 | 88 | 92 | 96 | 100 | 104 | 108 |
| | 66 | 66 | 70 | 74 | 78 | 82 | 86 | 90 | 94 | 98 | 102 | 106 | 110 |

EXAMPLE: To achieve a 74°F Batter Temperature, if Room Temperature is 76°F and Mix Temperature is 74°F, follow their respective rows across and down the chart until they meet. This will indicate the temperature of water to use...in this example 72°F. Ice water may be used where necessary.



Bakers Plus® Cake Mix Troubleshooting Chart

| PROBLEM | CAUSE | Too much water | Not enough water | Batter temp too high | Under-mixed | Over-mixed | Under-sealed | Oven temp too high | Oven temp too low | Over-sealed | Bake time too short | Covering before cooled | Pans too deep | Opening oven door | Bake time too long | Warped pans or oven shelves | Variation in pans | Pans too close together | Over-greased pans | Excessive bottom heat | Improper mixing | Too much floor time | Not covered properly after baking |
|---------------------------|-------|----------------|------------------|----------------------|-------------|------------|--------------|--------------------|-------------------|-------------|---------------------|------------------------|---------------|-------------------|--------------------|-----------------------------|-------------------|-------------------------|-------------------|-----------------------|-----------------|---------------------|-----------------------------------|
| Low volume | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Fallen cake/poor symmetry | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Sticky top crust | | ● | | | | | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Pale top crust | | ● | | | | | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Cracked top crust | | ● | | | | | ● | ● | | | | | ● | | ● | | | ● | ● | | ● | ● | ● |
| Peaked cakes | | ● | | | ● | | ● | | | | | | | | ● | | | ● | | | ● | ● | ● |
| Uneven cakes | | ● | | | | | | | | | | | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Uneven baking | | | | | | | | | | | | | | ● | | ● | ● | ● | ● | ● | ● | ● | ● |
| Shrinkage | | ● | | | ● | ● | ● | | | | | | ● | ● | | | ● | ● | ● | ● | ● | ● | ● |
| Soggy/doughy | | ● | | | | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Tunnels and holes | | ● | ● | ● | | | ● | | | | | | | | | | | ● | ● | ● | ● | ● | ● |
| Dry, crumbly | | ● | | | | | ● | | | | | | ● | ● | | | | | | | | | ● |
| Uneven grain | | | ● | ● | | | ● | ● | | | | | | | | | | | ● | ● | ● | ● | ● |
| Hard edges | | | | | | | ● | | | | | | ● | | | | | ● | | | | | |

● = Angel Food, Creme Cakes, Layer and Sheet Cakes
 □ = Brownies



Cakes Made With Pillsbury® Bakers Plus® Cake Mix

Bakers Plus Spice Cake

Small Batch

| | 1st Stage |
|------------|-----------------------------|
| 10 lbs | Bakers Plus Yellow Cake Mix |
| 2 lbs 4 oz | Water |
| | 2nd Stage |
| 2 lbs 3 oz | Water |
| | 3rd Stage |
| 2 lbs | Water |
| 9½ oz | Vegetable Oil |
| 2 oz | Spice Mix |

Large Batch

| |
|-------------|
| 50 lbs |
| 12 lbs 4 oz |
| |
| 11 lbs |
| |
| 10 lbs |
| 3 lbs |
| 10 oz |

Spice Blend Mix

Small Batch

| | |
|-------|---------------|
| 10 oz | Cinnamon |
| 2 oz | Ground Cloves |
| 2 oz | Nutmeg |
| 2 oz | Ginger |
| 2 oz | All Spice |

Large Batch

| |
|-----------|
| 1 lb 4 oz |
| 4 oz |
| 4 oz |
| 4 oz |
| 4 oz |

- Place all spices in a plastic bag and shake until mixed
- 2 oz of spice mix to 20# of batter



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Bakers Plus® Cake Mix

Product Variations

Bakers Plus Apple & Spice Cake

Small Batch

| | | |
|------------|-----------------------------|--|
| | 1st Stage | |
| 10 lbs | Bakers Plus Yellow Cake Mix | |
| 2 lbs 7 oz | Water | |
| | 2nd Stage | |
| 2 lbs 3 oz | Apple Sauce | |
| | 3rd Stage | |
| 2 lbs | Water | |
| 9½ oz | Vegetable Oil | |
| 1½ oz | Spice Mix | |

Large Batch

50 lbs
12 lbs 4 oz

11 lbs

10 lbs
3 lbs
7½ oz

Bakers Plus Carrot Cake

Small Batch

| | | |
|------------|-----------------------------|--|
| | 1st Stage | |
| 10 lbs | Bakers Plus Yellow Cake Mix | |
| 2 lbs 7 oz | Water | |
| | 2nd Stage | |
| 2 lbs | Water | |
| | 3rd Stage | |
| 2 lbs | Water | |
| 9½ oz | Vegetable Oil | |
| 1 lb 12 oz | Ground Carrots | |
| 12 oz | Ground Walnuts | |
| 1 oz | Spice Mix | |

Large Batch

50 lbs
12 lbs 4 oz

10 lbs

10 lbs
3 lbs
8 lbs 12 oz
3 lbs 12 oz
5 oz



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Bakers Plus® Cake Mix

Product Variations

Bakers Plus Piña Colada Cake

Small Batch

10 lbs

2 lbs 7 oz

1st Stage

Bakers Plus Yellow Cake Mix

Water

2nd Stage

2 lbs 3 oz

Water

3rd Stage

2 lbs

9½ oz

1 oz

2 oz

Crushed Pineapple

Vegetable Oil

Rum Flavor

Pineapple Concentrate

Large Batch

50 lbs

12 lbs 4 oz

11 lbs

10 lbs

3 lbs

5 oz

10 oz

Bakers Plus Banana Walnut Cake

Small Batch

10 lbs

2 lbs 7 oz

1st Stage

Bakers Plus Yellow Cake Mix

Water

2nd Stage

2 lbs 3 oz

Water

3rd Stage

2 lbs

9½ oz

9 oz

3 oz

Ripe Bananas

Vegetable Oil

Chopped Walnuts

Banana Icing Fruit

Large Batch

50 lbs

12 lbs 4 oz

11 lbs

10 lbs

3 lbs

3 lbs

15 oz



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Bakers Plus® Cake Mix

Product Variations

Bakers Plus Cherry Cake

Small Batch

| | |
|------------|-----------------------------|
| | 1st Stage |
| 10 lbs | Bakers Plus Yellow Cake Mix |
| 2 lbs 7 oz | Water |
| | 2nd Stage |
| 2 lbs 3 oz | Water |
| | 3rd Stage |
| 2 lbs | Water |
| 9½ oz | Vegetable Oil |
| 1 lb | Cherry Icing Fruit |

Large Batch

| |
|-------------|
| 50 lbs |
| 12 lbs 4 oz |
| 11 lbs |
| 10 lbs |
| 6 lbs |
| 5 lbs |

Bakers Plus Orange Cake

Small Batch

| | |
|------------|-----------------------------|
| | 1st Stage |
| 10 lbs | Bakers Plus Yellow Cake Mix |
| 2 lbs 7 oz | Water |
| | 2nd Stage |
| 2 lbs 3 oz | Water |
| | 3rd Stage |
| 2 lbs | Water |
| 9½ oz | Vegetable Oil |
| 1 lbs | Orange Icing Fruit |

Large Batch

| |
|-------------|
| 50 lbs |
| 12 lbs 4 oz |
| 11 lbs |
| 10 lbs |
| 6 lbs |
| 5 lbs |



Bakers Plus® Cake Mix

Product Variations

Bakers Plus French Apple Cake

Small Batch

10 lbs
2 lbs 7 oz

1st Stage

Bakers Plus Yellow Cake Mix
Water

2nd Stage

2 lbs 3 oz

Water

3rd Stage

2 lbs
9½ oz
2 oz
1 lb
1 lb
1 lb

Water
Vegetable Oil
Spice Mix
Apples Water pack
Raisins (soaked & drained)
Chopped Walnuts

Large Batch

50 lbs
12 lbs 4 oz

1 lbs

10 lbs
6 lbs
10 oz
5 lbs
5 lbs

Bakers Plus Red Velvet Cake

Small Batch

5 lbs
5 lbs
2 lbs
¼ oz

1st Stage

Bakers Plus Yellow Cake Mix
Bakers Plus Devils Food Cake Mix
Buttermilk
Red color

2nd Stage

2 lbs 3 oz

Water

3rd Stage

2 lbs
9½ oz

Water
Vegetable Oil

Large Batch

25 lbs
25 lbs
12 lbs 4 oz
1 oz

11 lbs

10 lbs
6 lbs



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