



CAKE DONUT

TECHNICAL TRAINING MANUAL



TM

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VARIETIES



Plain
Cake



Devil's
Food
Cake



Sour
Cream



VARIETIES

PILLSBURY™ SIMPLE MIX



Banana Nut

Cake Donut Mix	1 bag
Banana Fruit blend	16 oz
Chopped Walnuts	12 oz
Water	2 qrts

Option: Omit nuts in batter and use as topping

Apple Cider

Cake Donut Mix	1 bag
Cinnamon	1 oz
Apple Cider	1 qrt
Water	1 qrt

Option: Use Apple Juice in place of water

Pumpkin

Cake Donut Mix	1 bag
Pumpkin	20 oz
Pumpkin Pie Spice	2 oz
Water	3 lb 3 oz

Note: If pumpkin has low moisture content or very solid, do not reduce water.

Peanut Butter

Cake Donut Mix	1 bag
Peanut Butter	16 oz
Chopped Peanuts (optional)	8 oz
Water	2 qrts

Louisiana Crunch

Cake Donut Mix	1 bag
Coconut Emulsion	6 oz
Toasted Coconut	4 oz
Water	2 qrts

Maple Nut

Cake Donut Mix	1 bag
Maple Flavor	4 oz
Granulated Peanuts	14 oz
Water	2 qrts

Option: Omit nuts in batter and use as topping

Apple Spice

Cake Donut Mix	1 bag
Apple Sauce	12 oz
Cinnamon	1 oz
Water	3 lb 4 oz

Gingerbread

Cake Donut Mix	1 bag
Ginger	1 oz
Ground Cloves	$\frac{3}{4}$ oz
Water	2 qrts

Any Flavor (Cherry, Orange, etc.)

Cake Donut Mix	1 bag
Fruit blend	16 oz
Water	2 qrts

Orange/Pineapple

Cake Donut Mix	1 bag
Orange Fruit blend	4 oz
Pineapple Fruit blend	12 oz
Water	2 qrts

HANDLING INSTRUCTIONS

PILLSBURY™ CAKE DONUT MIX



Remember the 4 steps in producing Cake Donuts

1. Scaling of ingredients (mix & water)
2. Mixing
3. Aging of dough (floor time)
4. Cutting & Frying

Step 1 – Scaling of ingredients (mix & water)

Scaling of ingredients involves weighing water and prepared cake donut mix. The temperature of the water becomes most important in the finished product. The addition of water to the mix is most significant in that it dissolves the soluble materials, hydrates the dry materials and starts the leavening action in the dough.

Step 2 – Mixing

Water should always be put into the bowl first followed by the mix. This will give more uniform mixing results and prevent dry portions of mix in the bottom of the bowl.

Step 3 – Aging of dough (floor time)

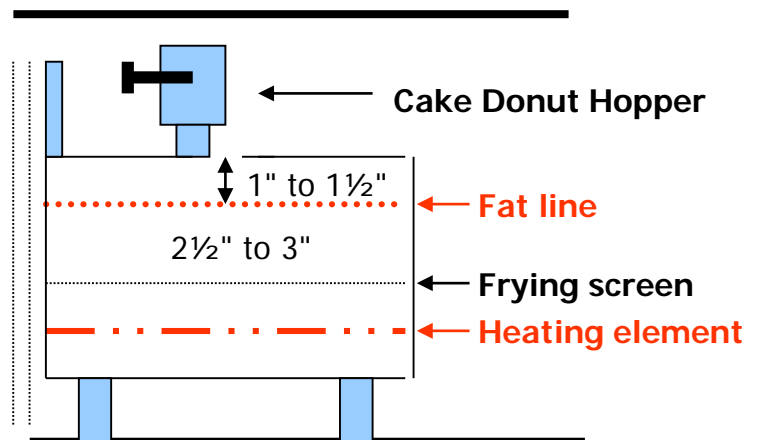
Floor time is extremely important – 10-15 minute floor time. At the completion of mixing, the hydration process continues at a relatively rapid rate for a period of time. During this period, the dough stiffens and changes as the dry ingredients in the mix absorb the water. After a short period of time, this rate will slow down, become stable and remain uniform during the cutting and frying period.

NOTE: Mixing should be carefully scheduled so that only enough dough is produced that can be fried off in a 30-minute period.

Step 4 – Cutting & Frying

Frying temperature should be 375°F. After floor time, deposit dough into cake donut hopper. Always crank out several donuts to evenly fill the sleeve and cutter before depositing into fryer. Donuts should be dropped into fryer in an even manner starting top left working to the right at an even pace. Be very careful not to drop one onto another, keeping even spacing. When turning donut, be extremely careful so sticks do not poke the donut – carefully place stick over the side and push down. The donut will turn easier and maintain its shape with lighter pressure. Fry time should be 50-60 seconds.

Donut Fryer - Profile View



WATER TEMPERATURE CHART



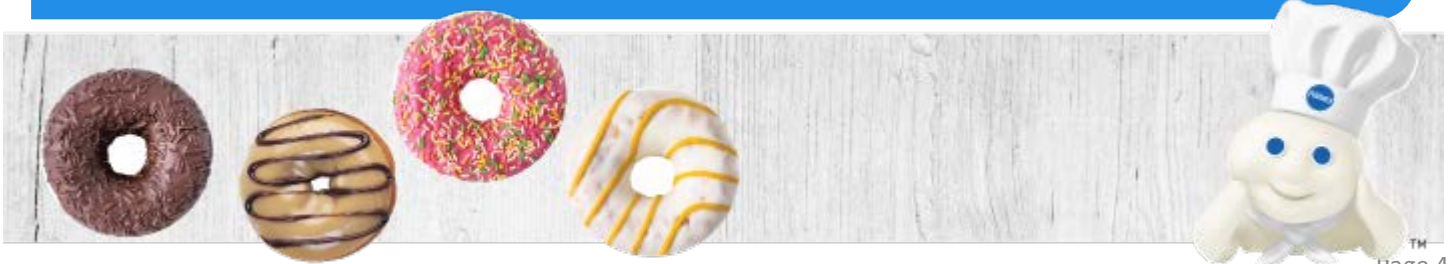
Water Temperature Chart for 74°F Batter

Temperature of Mix (Deg. F)

	90	86	82	78	74	70	66	62	58	54	50	46
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

Temperature of Room (Deg. F)

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.



FORMULA

ACHIEVE PROPER TEMPERATURE



Add

Temperature of Room	78
Temperature of Cake Donut Mix	76
Friction Factor (friction factor 2 – 5 degrees)	2
Total	156

Multiply

Desired Batter Temperature x 3 74 x 3 = 222

Subtract

Total from point 1	156
Total from point 2	222
Answer – Temperature of water required to achieve proper batter temperature	66
Equals	

With the example data entered you would use 66 °F water temp when mixing batter – this will achieve a 74 °F batter.



WATER TEMPERATURE CHART

SOUR CRÈME CAKE DONUT MIX



Water Temperature Chart for 68°F Batter

Temperature of Mix (Deg. F)

	90	86	82	78	74	70	66	62	58	54	50	46
90	26	30	34	38	42	46	50	54	58	62	66	70
88	28	32	36	40	44	48	52	56	60	64	68	72
86	30	34	38	42	46	50	54	58	62	66	70	74
84	32	36	40	44	48	52	56	60	64	68	72	76
82	34	38	42	46	50	54	58	62	66	70	74	78
80	36	40	44	48	52	56	60	64	68	72	76	80
78	38	42	46	50	54	58	62	66	70	74	78	82
76	40	44	48	52	56	60	64	68	72	76	80	84
74	42	46	50	54	58	62	66	70	74	78	82	86
72	44	48	52	56	60	64	68	72	76	80	84	88
70	46	50	54	58	62	66	70	74	78	82	86	90
68	48	52	56	60	64	68	72	76	80	84	88	92
66	50	54	58	62	66	70	74	78	82	86	90	94

Temperature of Room (Deg. F)

EXAMPLE: To achieve a 68°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 56°F). Ice water may be used where necessary.



DO'S & DON'TS FOR BETTER CAKE DONUTS



Keep these tips in mind when making Cake Donuts. It will help you maintain top quality results.

Do

1. Keep donut machine in good clean condition.
2. Keep cutter level about 1 to 1½" above fat.
3. Keep sediment screen 2½ to 3" below fat line.
4. Maintain proper frying temperature.
5. Follow mixing instructions carefully.
6. Check frying fat temperature with a high heat thermometer at least once a week.

Don't

1. Keep donut machine in good clean condition.
2. Keep cutter level about 1 to 1½" above fat.
3. Keep sediment screen 2½ to 3" below fat line.
4. Maintain proper frying temperature.
5. Follow mixing instructions carefully.
6. Check frying fat temperature with a high heat thermometer at least once a week.

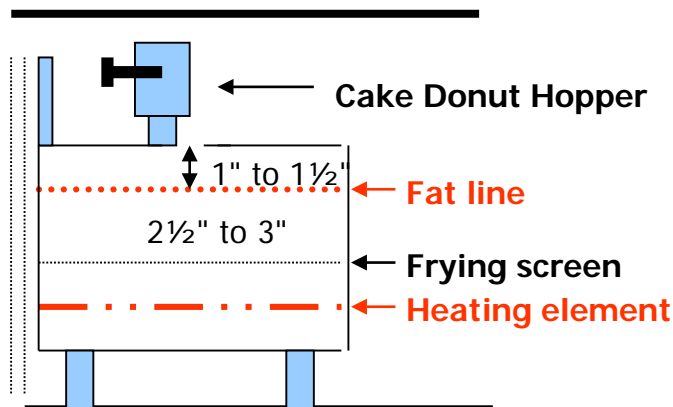
Dropping Donuts into the Fryer

- The distance between the donut cutter and the grease/fat line should be 1" to 1½".
 - If the distance between the cutter and grease/fat line is too great, the donut will "ring out" or have a large hole.
 - If there is not enough distance between the cutter and the grease/fat level, the donuts will be misshapen.
 - The distance between the the grease/fat line and the frying screen should be 2½" to 3".
 - If there is too much grease/fat in the fryer, the donuts will turn or flip over on the way up creating a large hole in the center (no star) and the crust will crack like a old fashioned donut.
- Option: Reduce dropping distance by adding additional screens.

Note: Make the donut frying process easier by following these steps:

1. Fry cake donuts first.
2. Fill fryer and then fry cake donut holes.
3. Refill fryer and fry yeast raised donuts.

Donut Fryer - Profile View



TROUBLESHOOTING GUIDE



PROBLEM	Mixer Speed Too Fast	Dough Too Hot	Dough Too Cold	Turned Too Soon	Old Shortening	Insufficient Cutter Overlap	Over-Mixing of Dough	Cutter Size Too Small	Under-Mixing of Dough	New Shortening	Dough Too Old	Frying Temp. Too High	Frying Temp. Too Low	Cutter in Poor Condition	Dough Too Stiff	Dough Too Soft	Frying Time Excessive
Toughness							X			X		X				X	
Excessive Fat Absorption			X		X				X				X			X	X
Lack of Expansion	X	X	X				X			X	X	X		X	X		
Excessive Expansion																	X
Knotty Donuts	X	X	X				X					X				X	
Fat Absorption Too Low	X			X			X			X		X			X		
Poor Break (in Frying)	X	X	X		X	X	X					X		X	X	X	
"Balling Up" of Donuts	X		X	X	X	X		X				X					
Tight, Ringy Donuts	X	X			X		X			X	X	X		X	X	X	
Cracking on Bottom		X	X	X			X		X	X			X		X		
Cracking Inside Ring	X		X		X	X			X				X		X		
Rough Crust		X	X		X				X		X	X			X		X
Excessive Spread													X			X	

