Pillsbury™

YEAST RAISED DONUT

TECHNICAL TRAINING MANUAL

™

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HANDLING INSTRUCTIONS

PILLSBURY™ YEAST RAISED DONUT MIX

Scaling

Scale yeast raised mix, water and yeast. Be sure to weigh the water and adjust the water temperature to achieve an 80˚F dough temperature (follow the water temperature guide in manual).

Mixing

(on a 4 speed mixer) Mix in low speed (2nd) 1 minute, mix medium speed (3rd) 8 – 11 minutes or until full development, where the dough has completely cleaned up from the bowl. Dough will be pliable and smooth.

	lbs – oz
Mix	50 – 0
Water (45%)	22 – 8
Compressed Yeast (4%)	2 – 0
Instant Yeast (1 – 2%)	0 - 12

Rest Time

Allow dough to sit in covered bowl at room temperature for 45 minutes to 1 hour to ferment. Then take dough to bench and cut into 5-10lb pieces and loaf up. Allow for dough to rest and additional 10-15 minutes before cutting.

Cutting

Spread sheet dough out and cut into desired products. It is best to remold scrap for cutting cinnamon rolls, swirl products and use second cut dough for fritters.

Proofing

Give donuts ¾ proof, approximately 30 – 40 minutes with just enough moisture to prevent crusting, allow donuts to dry 5 – 10 minutes before frying. Proof box temperature 90˚F, humidity 70%.

Frying

Fry yeast raised donuts at 375˚F for 50 – 55 seconds per side for most items. Fritters, Danish and croissants will take longer per side (75 – 90 seconds).

- Glaze donuts hot
- Sugar donuts 15 minutes out of the fryer
- Ice donuts 30 minutes out of fryer
- Powder donuts when cooled

Finishing

As desired or follow the suggested Finishing Tips in manual. Be creative, the more festive and appealing the donuts look, the better they will sell.

HANDLING INSTRUCTIONS

PILLSBURY™ YEAST RAISED DONUT MIX

Continued…

Bakers Compressed Yeast

70% moisture (30% yeast solids)
Stored temperature 35°-45°F for best activity
Storage stability – 3-4 weeks maximum
Usage level – 1% to 10% (based on weight of flour)

Instant Active Dry Yeast

Special strain of yeast
4-5% moisture (95% yeast solids)
Dry mixed into doughs
Vacuum packed
Stored temperature – room temperature
Storage stability – up to one year
Usage level – 33% - 40% of the amount of compressed yeast

Proper storage & handling for compressed yeast:

Do:

Optimum refrigeration control settings - 34° - 38° temperature
Provide good air circulation in cooler – use fans
Space yeast cartons on shelves so yeast can "breathe"
Use oldest yeast first – F.I.F.O. "First in first out"
Remove yeast from cooler shortly before using, do not let sit out at room temperature
Keep yeast in wrapper and unopened until ready to use

Don't:

Open cooler door unnecessarily and don't store warm ingredients or products in yeast cooler
Never store yeast cartons or bags directly on cooler floors or in contact with walls
Don't stack in tight patterns that do not allow cool air to circulate around cartons
Don't mix new and old shipments, mark boxes so they can be used in order
Don't remove more than a one hour supply from cooler at any one time
Don't leave portion of yeast in opened bag. Roll down to yeast level and exclude air
Don't expect great results from yeast that was poorly handled in the shop!

WATER TEMPERATURE CHART

Made with Instant Yeast
Water Temperature Chart for 86°F Dough

Temperature of Mix (Deg. F)

Temperature of Room (Deg. F)

	90	86	82	78	74	70	66	62	58	54
90	48	52	56	60	64	68	72	76	80	84
88	50	54	58	62	66	70	74	78	82	86
86	52	56	60	64	68	72	76	80	84	88
84	54	58	62	66	70	74	78	82	86	90
82	56	60	64	68	72	76	80	84	88	92
80	58	62	66	70	74	78	82	86	90	94
78	60	64	68	72	76	80	84	88	92	96
76	62	66	70	74	78	82	86	90	94	98
74	64	68	72	76	80	84	88	92	96	100
72	66	70	74	78	82	86	90	94	98	102
70	68	72	76	80	84	88	92	96	100	104
68	70	74	78	82	86	90	94	98	102	106

This chart was developed by using the following formula:

1) Multiply desired dough temperature by 3 (86˚F x 3 = 258˚F)
2) Subtract from the above figure the following variables

Three times desired dough temperature
-Degrees Room Temperature
-Degrees Mix Temperature
-Degrees Friction (Heat Developed by Mixing)

=Degrees Desired Water Temperature

Note

*If your desired dough temperature or friction is different from this example, use the above formula for a more accurate Water Temperature guide.
**Friction can vary from 20 to 45 degrees, depending on mixer type, mixer speed and/or dough size.

General Rule: It takes 3 degrees of water temperature to change dough temperature 1 degree.

EXAMPLE

258 Three time desired dough temperature
-76˚F Room Temperature
-70˚F Mix Temperature
-30˚F Friction (Heat Developed by Mixing)

82˚F Desired Water Temperature

TROUBLESHOOTING GUIDE

PILLSBURY™ YEAST RAISED DONUT MIX

Excess Shortening Absorption

Frying temperature too low – Use deep fat thermometer to check temperature against the dial setting.

Proof box too wet or dry – Maintain proper humidity, moisture and temperature levels in proof box.

Over proofing – Proof at proper temperature, humidity and time as outlined in the handling instructions section. Use timer.

Wrong type of shortening used – Use only pure vegetable frying shortening.

Poor Volume

Under proofing – Proof at proper temperature, humidity and time as outlined in the handling instructions section. Use timer.

Incomplete thawing – Thaw completely, internal temperature must be 55°- 60° before going into proof box.

Proof box too dry – Maintain proper humidity, moisture and temperature levels in proof box.

Proof box temperature too high – Check dial setting against hygrometer, make necessary adjustments.

Toughness

Under proofing – Proof at proper temperature, humidity and time as outlined in the handling instructions section. Use timer.

Proof box too wet – Maintain proper humidity, moisture and temperature levels in proof box.

Frying temperature too high – Use deep fat frying thermometer to check temperature against dial settings, adjust as necessary.

Crust Too Dark

Frying temperature too high – Use deep fat frying thermometer to check temperature against dial settings. Adjust as necessary.

Under proofing – Proof at proper temperature, humidity and time as outlined in the handling instructions section. Use timer.

Frying shortening bad – Filter shortening often, recommended at least 2 times per week. Use a pH test kit to test the condition of shortening.

Donuts Collapse or Shrink

Frying temperature too low – Use deep fat frying thermometer to check temperature against dial settings. Adjust as necessary.

Over proofing – Proof at proper temperature, humidity and time as outlined in the handling instructions section. Use timer.

Crust to Light

Frying temperature too low – Use deep fat frying thermometer to check temperature against dial settings. Adjust as necessary.

Over proofing – Proof at proper temperature, humidity and time as outlined in the handling instructions section. Use timer.

Left out of proof box too long before frying – Do not leave exposed to dry air too long before frying. When donut is dry to the touch, it is ready to fry.

Blistering

Proof box too wet – Maintain proper humidity, moisture and temperature levels in proof box.

Under proofing – Proof at proper temperature, humidity and time as outlined in the handling instructions section. Use timer.

Frying temperature too low – Use deep fat frying thermometer to check temperature against dial settings. Adjust as necessary.

COMMONLY ASKED QUESTIONS

PILLSBURY™ YEAST RAISED DONUT MIX

1. What is the correct dough temperature?

   About 82˚F is best for a small dough. For large doughs and/or a warm shop, use about 80˚F to 82˚F (Does not apply if donuts are processed on Doco-type equipment).

2. What happens if the dough is too warm?

   The dough will ferment too fast; it will tend to over-proof. Result is crippled donuts which my take up too much fat. The grain and texture will not be up to standard.

3. What happens if the dough is too cold?

   The dough will ferment too slowly; it can produce underproofed products which do not have desired expansion and proper grain and texture.

4. How is yeast added to the dough?

   Dissolve the yeast in a small amount of water at about 80˚F. Crumble it directly into the mixing bowl. Do not use ice water or water above 90˚F in temperature.

5. Should any ingredients other than water and yeast be added the the mixed and bases?

   Pillsbury Yeast Raised donut Mixes are balanced formulas, containing all ingredients. Simply add water and yeast. Yeast Raised Basses also require the addition of flour per directions on bags.

6. How should dough be mixed by machine?

   Place mix in a machine bowl, Add yeast dissolved in a little water at about 80˚F. Add remaining water. Mix until dough is smooth, pliable and dry to the feel. When fully mixed, the dough should come away cleanly from the side of the mixing bowl.

7. Is it necessary to change this procedure for large batches?

   Under some conditions, it may be desirable to mix slightly longer to obtain a smooth and elastic dough. However, mixing is not critical as long as the dough is incorporated thoroughly and mixed to a reasonable smoothness and elasticity.

8. How is dough mixed by hand?

   Place about three-fourths of the mix in large bowl. Pour in yeast solution and water at the proper temperature. Mix until dough is smooth and free from lumps. Add the remaining mix and work to a smooth dough. Do not fear overmixing. Experience will enable you to meet your local temperature conditions.

9. How should the dough be fermented?

   The dough may be fermented in the mixing bowl (or machine bowl), if a regular dough room or trough is not available. Be sure to protect dough from drafts. Use a constant temperature room at 80˚F to 85˚F. with sufficient humidity to prevent crusting of the doughs.

10. What are the characteristics of a properly fermented dough?

    The dough should be fermented until it is between two and three times its original bulk. The exact time may be between 1 to 1 ½ hours, depending on the shop routine and shop conditions. Usually the dough will recede when slight pressure is applied to the top center area of the dough.