

# Brioche with Lactose and Whey



## INGREDIENTS

	Grams	Bakers (%)	Usage Levels (%)
Flour, bread (high gluten; 11.5 to 15% gluten)	454.0	100.00	35.997
<b>Butter, unsalted</b>	<b>181.0</b>	<b>30.00</b>	<b>14.351</b>
Dried fruit <sup>1</sup>	136.0	30.00	10.783
Egg	130.0	28.60	10.310
Water	125.0	27.50	9.911
Sourdough starter (optional but suggested)	113.0	25.00	8.959
Sugar <sup>2</sup>	45.0	10.00	3.568
<b>Skimmed milk powder</b>	<b>22.6</b>	<b>4.97</b>	<b>1.792</b>
<b>Lactose</b>	<b>22.6</b>	<b>4.97</b>	<b>1.792</b>
<b>Whey protein concentrate, 34% protein (WPC 34)</b>	<b>18.5</b>	<b>4.00</b>	<b>1.467</b>
Yeast (SAF gold, sugar sensitive)	9.0	2.00	0.713
Salt	4.5	1.40	0.357
Lemon peel/orange peel, grated or dry <sup>3</sup>	2 pinches	2 pinches	2 pinches
<b>Total</b>			<b>100.00</b>

<sup>1</sup> Golden raisins and/or cranberries or candied citrus peel or a combination of two or all three.

<sup>2</sup> Sugar can be increased up to 16% for a slightly sweeter taste without adverse effect.

<sup>3</sup> Use fresh grated peel if a longer fermentation is desired such as overnight. Use dry peel if the brioche is to be made and baked within one day.

## NUTRITIONAL CONTENT

Per 100g	
<b>Calories</b>	330kcal
<b>Total Fat</b>	13g
Saturated Fat	8g
Trans Fat	0g
Cholesterol	75mg
<b>Total Carbohydrates</b>	45g
Dietary Fiber	2g
Sugars	14g
<b>Protein</b>	8g
Calcium	60mg
Magnesium	20mg
Phosphorus	104mg
Potassium	190mg
Sodium	180mg
Iron	1mg
Vitamin A	429IU
Vitamin C	1mg

## PREPARATION

- Mix butter until semi-smooth, refrigerate until use.**
- Mix skimmed milk powder, starter, if used, and sugar together until dissolved, set aside.**
- Mix all ingredients except salt, dried fruit (if used) and butter for 3 minutes.**
- Add butter and dried fruit (if used) all at once. Mix 1 minute.**
- Add salt, mix 4 minutes, continue mixing on medium or high speed until the bottom of the bowl is visible. Do not under or over mix.**
- Pull dough from bowl; scrape down sides for any remnants. Round dough, place in plastic bag, let rest at room temperature for 45 minutes.**


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## PREPARATION

(continues)

7. **Flatten dough out to 25mm (1") in thickness and refrigerate for up to 24 hours.**
8. **When well chilled and stiff, place in traditional brioche cups that have been well prepared with oil or butter or in a silform brioche molded sheet. Scale dough to fill cups (3/4 full) for each tin size.**
9. **Mold brioche into desired shapes.**
10. **Proof brioche with 85% humidity, which can be achieved by placing a pan of hot water in an enclosed space with the brioche. Brioche dough, with a high egg percentage, should be 3/4 proofed, to obtain the maximum oven spring.**
11. **Egg wash\* the tops of each brioche carefully making sure that the egg wash does not drip down into the cup.**
12. **Just before putting brioche into the oven quickly re-egg wash just the brioche heads for an additional intense shine.**
13. **Bake brioche in 160°-165°C (320°-330°F) oven, until golden brown. If the brioche is browning too rapidly turn the oven down to 148°C (300°F). If making large brioche, tenting with aluminum foil may be necessary to deter over browning.**
14. **Check brioche for 82°C (180°F) internal temperature, do not exceed by more than 3 degrees or a thicker than desired crust will form and the higher internal temperature will shorten the product's shelf life.**
15. **Un-mold brioche immediately after removing from oven if using conventional tins. If flexible baking molds were used, allow 5 minutes resting time, before de-panning.**
16. **Package brioche at room temperature.**

*\*Egg wash is a whole egg whipped until smooth; apply with a pastry brush.*

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This formula serves as a reference. Product developers are encouraged to modify the formula to meet manufacturing and finished product specification needs. Developed by the International School of Baking. ©2014 U.S. Dairy Export Council.