

Challah Bread



INGREDIENTS

	Control		WPC 80		Whey Permeate	
	Grams	Usage Level (%)	Grams	Usage Level (%)	Grams	Usage Level (%)
Flour	454	59.74	454	62.02	454	58.21
Water (1) (quantity varies)	225	29.61	205	28.01	225	28.85
Egg, yolk	50	6.58	-	-	50	6.41
Whey permeate	-	-	-	-	40	5.13
Water (2)	-	-	28	3.83	-	-
Honey	20	2.63	20	2.73	-	-
Whey protein concentrate, 80% protein (WPC 80)*	-	-	14	1.91	-	-
Salt	7	0.92	7	0.96	7	0.90
Yeast	4	0.53	4	0.55	4	0.51
Egg, for egg wash	as needed	as needed	as needed	as needed	as needed	as needed
Food color, yellow	-	-	several drops	several drops	-	-
Total		100.00		100.00		100.00

*Hydrate WPC 80 by mixing the powder with 1/4 of water (2) and letting hydrate 15 minutes.


PREPARATION

1. Place all ingredients except water (1) and egg wash in a mixing bowl. Mix on low speed. Add sufficient water (1) to produce a soft dough, mix until combined, and then mix on medium speed until developed ("makes the window").
2. Form challah loaves, brush with beaten egg and bake on greased parchment-lined pan at 177°C (350°F) until center reaches 96°C (205°F).

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NUTRITIONAL CONTENT

Per 100g	Control	WPC 80	Whey Permeate
Calories	270kcal	270kcal	250kcal
Total Fat	3g	1.5g	3g
Saturated Fat	1g	0g	1g
Trans Fat	0g	0g	0g
Cholesterol	90mg	0mg	85mg
Total Carbohydrates	51g	52g	51g
Dietary Fiber	2g	2g	2g
Sugars	2g	3g	0g
Protein	9g	10g	9g
Calcium	21mg	28mg	20mg
Magnesium	18mg	21mg	21mg
Phosphorus	100mg	78mg	17mg
Potassium	85mg	90mg	95mg
Sodium	400mg	410mg	380mg
Iron	1mg	1mg	1mg
Vitamin A	107IU	4IU	101IU
Vitamin C	0mg	0mg	0mg

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