

You will make 500 cupcakes with each recipe. For each type of cupcake, how many batches do you need to make? (Round to the nearest whole number.)

Chocolate Cupcakes 500 cupcakes ÷ 16 cupcakes per batch = 31.25 batches or 32 batches

Salted Caramel Cupcakes 500 cupcakes ÷ 24 cupcakes per batch = 20.83 batches or 21 batches

Lemon Cupcakes 500 cupcakes ÷ 30 cupcakes per batch = 16.67 batches or 17 batches

Buttercream Frosting 1,000 cupcakes ÷ 12 cupcakes per batch of frosting = 83 1/3 batches or 84 batches

Caramel Frosting 500 cupcakes ÷ 24 cupcakes per batch of frosting = 20.83 batches or 21 batches. For each recipe, determine the total amount of each ingredient you will need to make all of the batches of cupcakes. Show your work in the spaces provided. Write your final answer in the Table of Ingredients.

Chocolate Cupcakes

1¹/₂ cups all-purpose flour $1\frac{1}{2}$ cups x 32 = 481 cup granulated sugar 1 cup x 32 = 32 cups1 tsp baking soda 1 tsp x 32 = 32 tsp1 tsp salt 1 tsp x 32 = 32 tsp1/2 cup cocoa powder $\frac{1}{2}$ cups x 32 = 16 cups 1/2 cup vegetable oil $\frac{1}{2}$ cups x 32 = 16 cups 1 cup milk 1 cup x 32 = 32 cups1 tsp vanilla extract 1 tsp x 32 = 32 tsp1 tbsp vinegar 1 tbsp x 32 = 32 tbsp

Salted Caramel Cupcakes

3 cups all-purpose flour 3 cups x 21 = 63 cups of flour

$4\frac{1}{2}$ tsp baking powder $4\frac{1}{2}$ tsp x 21 = $94\frac{1}{2}$ tsp of baking powder

1½ tsp salt 1½ tsp x 21 = 31½ tsp

1 cup butter 1 cup x 21 = 21 cups

2 cups granulated sugar 2 cups x 21 = 42 cups of sugar

4 eggs 4 eggs x 21 = 84 eggs

1 cup + 2 tbsp buttermilk 1 cup x 21 = 21 cups of butter milk; 2 tbsp x 21 = 42 tbsp

2 tsp vanilla extract 2 tsp x 21 = 42 tsp

Lemon Cupcakes

3 cups all-purpose flour 3 cups x 17 = 51 cups of flour

2 tsp salt 2 tsp x 17 = 34 tsp of salt

 $4\frac{1}{2}$ tsp baking powder $4\frac{1}{2} \times 17 = 76\frac{1}{2}$ tsp of baking powder

1 cup unsalted butter at room temperature 1 cup of butter x 17 = 17 cups

2 cups granulated sugar 2 cups of sugar x 17 = 34 cups of sugar

4 eggs, at room temperature 4 eggs x 17 = 68 eggs

1 tsp vanilla extract 1 tsp x 17 = 17 tsp of vanilla

2 tbsp lemon zest 2 tbsp x 17 = 34 tbsp lemon zest

1 cup milk 1 cup x 17 = 17 cups

 $2\frac{1}{2}$ tbsp fresh lemon juice $2\frac{1}{2} \times 17 = 42\frac{1}{2}$ tbsp fresh lemon juice

Buttercream Frosting

1 cup butter, softened (do not melt) 1 cup x 84 = 84 cups

4 cups confectioner's sugar 4 cups x 84 = 336 cups

1 tbsp vanilla 1 tbsp x 84 = 84 tbsp

3 tbsp milk 3 tbsp x 84 = 252 tbsp

Caramel Frosting

 $\frac{1}{4}$ cup granulated sugar $\frac{1}{4}$ cup x 21 = 5 $\frac{1}{4}$ cups

2 tbsp water 2 tbsp x 21 = 42 tbsp

1/4 cup heavy cream 1/4 cup x 21 = 51/4 cups

1 tsp vanilla extract 1 tsp x 21 = 21 tsp

3⁄4 cup butter (at room temperature) 3⁄4 cup x 21 = 153⁄4 cups

1 cup confectioner's sugar 1 cup x 21 = 21 cups Find the total amount of each ingredient and write the totals in the Table of Ingredients.

Ingredient	Chocolate Cupcakes	Salted Caramel Cupcakes	Lemon Cupcakes	Buttercream Frosting	Caramel Frosting	Total
Baking powder		94½ tsp	76½ tsp			171 tsp
Baking soda	32 tsp					32 tsp
Butter		21 cups		84 cups	15¾ cups	120¾ cups
Butter (unsalted)			17 cups			17 cups
Buttermilk		21 cups, 42 tbsp				21 cups, 42 tsp
Cocoa powder	16 cups					16 cups
Confectioner's sugar				336 cups	21 cups	357 cups
Eggs		84	68			152
Flour	48 cups	63 cups	51 cups			162 cups

Table of Ingredients

Ingredient						
	Chocolate Cupcakes	Salted Caramel Cupcakes	Lemon Cupcakes	Buttercream Frosting	Caramel Frosting	Total
Granulated sugar	32 cups	42 cups	34 cups		5¼ cups	113¼ cups
Heavy cream					5¼ cups	5¼ cups
Lemon juice			42½ tbsp			42½ tbsp
Lemon zest			34 tbsp			34 tbsp
Milk	32 cups		17 cups	252 tbsp		49 cups, 252 tbsp
Salt	32 tsp	31½ tsp	34 tsp			97½ tsp
Vegetable oil	16 cups					16 cups
Vanilla extract	32 tsp	42 tsp	17 tsp	84 tbsp	21 tsp	112 tsp, 84 tbsp
Vinegar	32 tbsp					32 tbsp
Water					42 tbsp	42 tbsp