



*Orley Booklet*

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FOR INDUSTRIAL CAKE  
MANUFACTURING

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# *Baking problems* SOLVED BY ORLEY SOLUTIONS

## CUP CAKE

- Batter viscosity is important to cupcake production as it will directly affect its baking performance and final appearance. A fluid batter would cause the product to have a flatter top, while a viscous batter would have greater tolerance and result in a rounder top. Extremely thick and highly viscous batters result in cracked peaks and underbaked cakes.
- Due to their small size, cupcakes require shorter bake time and lower temperatures than regular size layer cakes.
- Higher temperatures may cause the outside to set too quickly, leaving the inside under baked, or may result in cracks and leaks forming on the surface.
- Lower temperatures may result in flat top cakes. It is important to balance baking time and temperature to create the characteristic domed top associated with cupcakes.
- The ratio of batter to pan size also plays an important role in determining the appearance of the product. Using a higher ratio can result in larger size cupcakes
- The cupcakes are often filled and/or glazed after baking and cooling to increase variety in the product.

**Large-scale bakeries using continuous mixing may need to introduce formula modifications such as substituting butter/shortening and eggs with emulsifiers/butter flavorings and egg replacers, respectively to help manage cost.**



## CRAFT BAKERY

**Issue** Long mixing time of 8-10 min

when working with powder mixes.



### Solution

By adding **Gel-Soft 60** or **Gel-Soft Special** the mixing time can be reduced from 8 min to 3 min.

High costs because a cake mix is used.



By using **Gel-Soft 60** or **Gel-Soft Special** the recipe can be easily made from scratch which lowers the ingredient costs. A standard cupcake recipe can be found below.

### CUPCAKE – A typical craft recipe

Ingredients	%	Method
Cake flour	27.33	All-in method. Slow speed for 2 min, then fast speed for 2 min.  Whipping volume [g/L] 800-850. Scale 40-50 g and bake at 180 °C for approx. 25 min.
Sugar	23.33	
Salt	0.27	
Baking powder	1	
Skimmed milk powder	1	
Eggs	18.67	
Water	6.67	
Butter/vegetable oil	20	
<b>Gel-Soft 60</b>	0.67	
<b>OrleyFlave Vanilla</b>	1.07	

# INDUSTRY

**Issue** High costs due to a

high egg content.



**Solution**

By adding **Gel-Soft 60** or **Gel-Soft Special**, the egg content can be reduced up to 25%.

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Not enough aeration.



By adding 1% **Gel-Soft 60** or **Gel-Soft Special** the aeration can be significantly improved.

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The sponge cake is not soft or fresh enough.



By adding **Baksoft Cake** or **Baksoft Cake Special** the sponge cake becomes softer and will stay fresh for much longer.

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The crumb texture is coarse and not fine or uniform enough as it is desired for a cupcake.



By replacing a part of the flour with starch and by reducing the mixing speed and time to avoid gluten development the texture can be optimized.

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The sponge cake exhibits an undesired chemical taste.



By adding 1,5-2% **Orleyflave Vanilla** the chemical taste can be masked and the sorbates and citric acid can be reduced.

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The surface is cracked.



By adjusting the oven profile towards lower temperature and/or by decreasing the density of the cake batter with addition of **Gel-Soft 60** or **Gel-Soft Special**.

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The surface is too dark/brown.



By reducing the oven temperature and increasing the density of the cake batter.

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The cupcake is fragile when releasing from the baking trays.



By adding gums the breakage can be reduced. Further, the fat/oil content can be reduced.

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The shelf life (mould free days) is too short.



By adding freshness enhancer from Aromatic which act as liquid preservatives the shelf life can be extended. Recommended product: **A2000 Lemon, Extender 360, Orleyflave Vanilla**. When using these products, a pH adjustment towards a lower value is necessary as the products themselves increase the pH.

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## CUPCAKE VANILLA – A typical industrial recipe

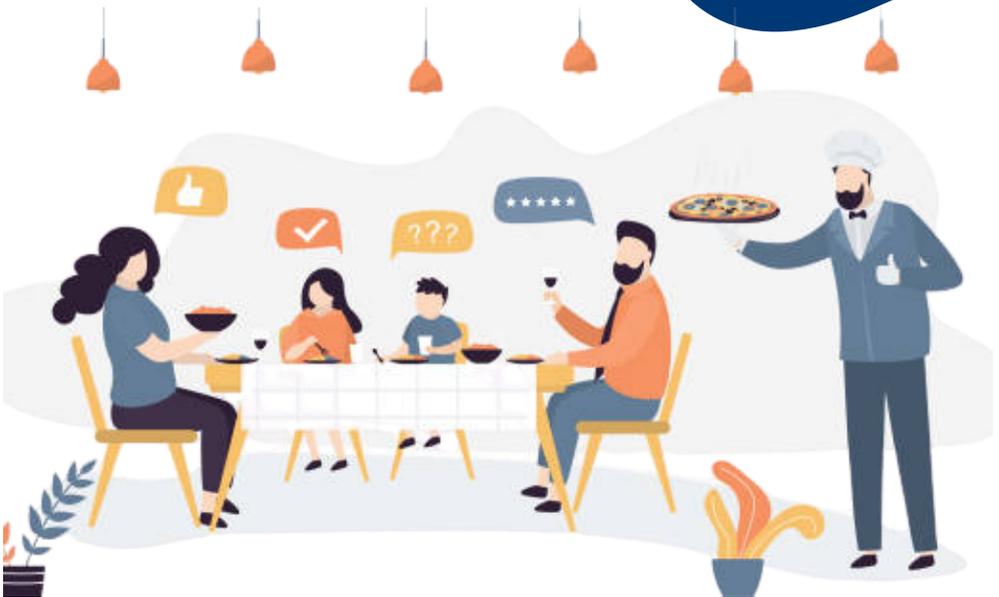
Ingredients	%	Method
Eggs	16.98	Mix all ingredients except oil, baking flour and whey powder – for 4 min at medium speed.
Water	4.99	
Citric acid	0.13	Add oil – mix for 1 min at slow speed.
Glycerol	1.00	
<b><u>Extender 360</u></b>	1.00	Add flour, baking powder and whey powder.
Sorbitol	1.4	
Oil	17.98	Mix for 2 min at medium speed.
Sugar	21.68	
Invert sugar	0.3	Specific gravity: 0.76-0.84
<b><u>Orleyflave Vanilla</u></b>	1.2	
<b><u>Gel-Soft 60</u></b>	1.00	Baking temperature: Convection oven 170 °C Deck oven 210-200 °C
Salt	0.3	
Xanthan gum	0.1	Baking time: 18-23 min.
Whey powder	3.00	
Baking powder	0.5	Shelf life: 6 months.
Cake flour	26.96	
<b><u>Baksoft Cake</u></b>	1.5	



# YOU GET ACCESS TO A WHOLE TEAM THAT WILL SUPPORT YOU WITH:

- Technical solution and product advising.
- Implementation on-set.
- Fine-tuning of ingredients and recipes.
- Ideas and inspiration for applications and recipes.
- Unique product development together with your team for your unique needs if needed.
- Support and guidance

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