



Module 6 - Section 1 - Making Royal Icing

Objective: Create and colour three different royal icing consistencies.

In completing each section the user will be able to:

- Identify food hygiene risks when making royal icing
- Identify a range of three royal icing consistencies
- Prepare royal icing for use on cakes, for piping and simple flooded decorations
- Remove air bubbles from royal icing mix
- Store prepared royal icing correctly
- Add colour to royal icing

Assessment criteria:

1. Knowledge and understanding of good food hygiene practices
2. Identify a range of three royal icing consistencies
3. Identify the three key ingredients for making royal icing
4. Understand how to store prepared royal icing correctly
5. Understand how to remove air bubbles from royal icing
6. Create coloured royal icing

You will Need:

The tools and ingredients listed below are for the entire module.

TOOLS

- Metal side scraper
- Metal ruler
- Large palette knife
- Chef's knife
- Small cranked palette knife
- Large rolling pin
- Cake smoothers

Piping Nozzles (PME)

- Supatube Star Piping nozzle Tip No.6
- Supatube writer nozzle Tip No.1.5
- Supatube writer nozzle Tip No.2

Paint brushes

- No.0
- No.1
- No.2

Other

- Stand Mixer and bowl
- Beater (K beater if you have one)
- Sieve
- Turntable
- Spoon
- Spritzer with water
- Measuring spoons

INGREDIENTS

- 8" Round 2.5" deep Fruit cake
- 1kg Marzipan
- 1 Jar Apricot jam (sieved)
- 1kg Icing sugar (powdered sugar) - extra 240g if in a humid environment
- 6 Fresh medium egg whites (180g)
- Royal icing pre-mix
- Glycerine

Cake drums

- 2x 12" round cake drums
- 12" square cake drum

Food colourings (Magic colours airbrush)

- Pink

Dusts

- Pink
- Sky blue

Other - edible

- 0.5 teaspoon of clear vinegar or lemon juice (sieved if fresh lemon)
- Icing sugar shaker
- White vegetable fat (Trex or Crisco)

Other - non-edible

- Poly pocket or cellophane
- Kitchen roll (paper towels)
- Clingfilm or Saran wrap
- Grease proof paper
- Pale blue ribbon
- Glue stick
- Till roll (to measure and mark the circumference of the cake)
- Masking tape (for run-outs)

Method:

Stiff peak from scratch

- Ensure workspace, tools and equipment have been thoroughly cleaned
- Add the icing (powdered) sugar, egg whites and vinegar/lemon juice to a mixing bowl
- Gently mix the ingredients by hand using the mixer beater
- Mix on a slow speed for 5-6 mins
- Once a stiff peak has been achieved store at room temperature under a damp tea towel

Supporting Notes:

Royal icing is a very traditional way of decorating cakes. Royal icing dates back to at least 1770. It is thought that that style of icing received its 'royal' prefix after being used as the decoration on Queen Victoria and Prince Albert's wedding cake. It has been the decoration on most wedding cakes until sugarpaste/fondant designs started appearing in the late 20th Century. Royal iced wedding cakes are perhaps less popular now, but they still hold high status and have an air of grandeur.

There are royal icing pre-mixes available for those short on time, but in this lesson we will address both making from scratch and using the pre-mix.

As with all cake decorating or food preparation, hygiene must remain uppermost in the cake decorator's mind. It is especially important to ensure that all surfaces, especially the mixer and beater, are completely clean and free from bacteria or any fats. Fats will break the royal icing structure down, so it is more important than ever to ensure that the workspace and equipment is thoroughly cleaned.

Royal icing is traditionally prepared with raw egg whites, which have a slight chance of transmitting salmonella poisoning. However, abiding by standard food hygiene regulations will eliminate those risks. When using eggs, make sure that they have been pasteurised (the eggs will have a quality stamp). If quality assured eggs are not available, then it is recommended that a dry egg substitute is used. Dry egg substitutes include merriwhite, egg albumin or meringue powder, however the meringue powder is not as strong as the other two.

There are three main types of royal icing consistency:

- Stiff peak - first coat when covering a cake
- Soft peak - second coat when covering a cake, piping dots
- Run-out - mainly for flood outs, cookies and small decorations

Making royal icing from scratch requires the icing (powdered) sugar to be sieved to remove any lumps and bumps. Cane sugar will give the finest icing (powdered) sugar and as Paul mentions in the video, Tate & Lyle is his preferred brand. Choose an icing sugar with very little caking agent in it (less than 5 %) and only calcium phosphate. Any other caking agent is maize based and not so good for making royal icing. Add the 1kg of icing sugar to 180g of egg whites, adding half a teaspoon of white vinegar or sieved lemon juice. The acid from the vinegar or lemon juice, helps to denature the proteins, which allows them to relax, allowing the strands to bind together with greater strength. It helps prevent cracking and there is no taste at all from the vinegar or lemon juice.

Stiff peak

Before starting, slowly massage the ingredients together, by gently paddling the mixer by hand, until the icing sugar and egg whites are mixed. The aim is to prevent a powder puff when the mixer is switched on. Mix the ingredients together with a beater on a slow speed,

which avoids too much air getting into the mix. Air in the mix can create air locks, which will break the royal icing thread. This is the last thing a cake decorator wants when piping. Mix for around 5-6 mins, until the royal icing forms a stiff peak. Be careful not to overmix or the royal icing will start to break down and lose its structure. A stiff peak is checked by adding royal icing to a pallet knife. The structure should stay in place when turning the pallet knife upside down.

The recipe used here is by Eddie Spence MBE. However, as Paul explained in the video, due to the humidity, after 5 minutes he spotted that the mix wasn't working as it was too runny. If that happens, scrape down the mixing bowl to ensure that no icing sugar pockets have been left and that all the icing sugar has been mixed through. If no sizable pockets of icing sugar were discovered, add two tablespoons of icing (powdered) sugar then mix for 2 minutes, then check again. Paul's royal icing failed the stiff peak test, so he added a further 4 tablespoons of icing sugar and mixed again for 2 minutes, which gave the stiff peak consistency.

Storing royal icing properly is very important, otherwise it will lose all its properties. Remove the royal icing from the mixing bowl, being sure to scrape down the sides. Place in a storage bowl ensuring that it is completely flat, then cover with clingfilm (saran wrap) allowing the clingfilm to touch the royal icing, then a further layer of clingfilm on top of that. Place a damp tea towel on top to ensure that the royal icing does not dry out. This will keep for 3-5 days at room temperature, so no need to refrigerate, unless you live in the extremest of hot temperatures.

Royal icing is also available as a pre-mix. This is quicker to prepare and comes at a lower food hygiene risk, however the highest hygiene standards must be adhered to at all times. The pre-mix will require the mix to be sieved into the mixing bowl. Adding about half the recommended water, start to mix on a slow speed. It is important to ensure that a stiff peak is achieved, so just keep mixing a little water at a time after that, until the desired consistency is achieved.

Soft peak

Soft peak consistency is achieved by mixing a little water (boiled and cooled) to the stiff peak royal icing consistency. This is best added via short spray spurts using a spritzer bottle. Add a little at a time, mixing through, then checking. The soft peak consistency is achieved when the royal icing stays firm at the base, but the peak starts to fall over.

Run-out

Run-out consistency is achieved by adding more water again. Add a little at a time, checking at each stage until the consistency is achieved. Paul's test is to draw a small knife or palette knife through the royal icing. The run-out consistency is achieved when the line created fills itself over after 15 seconds.

When mixing royal icing there is always a chance of air getting into the mix, which can cause piping breaks. To remove the air, place a damp tea towel on the work surface then bang the royal icing bowl firmly. Leave for 30-60 mins allowing the air bubbles to rise to the top. Burst the air bubbles then gently stir to remove the bumps.

Colouring

There are generally four types of colouring available in sugarcraft:

- Pro gels
- Pastes
- Liquid colours
- Petal dusts
- Lustre dusts

Pro gel and Pastes

When colouring royal icing, it is important to remember the properties and desired consistency. Pro gels and pastes may contain glycerine, which attracts moisture, which will affect the royal icing structure, making it unable to set. Although some brands now state that they do not contain glycerine, it would be worth testing well in advance of needing the royal icing to decorate a cake. It is also worth bearing in mind that royal icing shades will dry a different shade than the wet mix. Always worth drying out a batch well in advance to be sure that you have confidence in your colours and shading.

Liquid

Liquid colours are best to achieve a more dense colour. However, there is always a risk that when adding liquid to royal icing that it will affect the consistency. It's a balance between getting the darker tone and watering down the royal icing.

Petal dust

Petal dusts are ideal for colouring royal icing. Petal dust will have little impact on the consistency or structure. Add a little at a time to get the desired colour and with so many colours available there are no shortage of options.

Lustre dusts

The metallic colour of the lustre dust won't come out when mixed with the royal icing. However, lustre dusts will form some excellent tones. To achieve a metallic effect, it is better to create a base layer of coloured royal icing by mixing in some of the metallic dust. Create a metallic paint by mixing the lustre dust with a little 96% alcohol. Paint the lustre dust on top of the dried base layer of coloured royal icing to achieve the metallic effect.