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> KiwiCo Science of Cooking: Ice Cream Kit User Manual (Model SICE-F2454)

KiwiCo SICE-F2454

KiwiCo Science of Cooking: Ice Cream Kit

Model: SICE-F2454 | Brand: KiwiCo

INTRODUCTION

This kit provides a hands-on experience to explore the science behind making delicious ice cream and sorbet. Designed for ages 5+, it combines fun cooking activities with educational chemistry principles. Discover how ingredients interact and transform to create frozen treats, fostering exploratory skills and an understanding of kitchen chemistry.



Image: Two children enjoying scooping homemade ice cream from the kit.

WHAT'S INCLUDED IN YOUR KIT

Your KiwiCo Science of Cooking: Ice Cream kit contains the following components:

- Scoop
- Whisk
- Large Can
- Small Cans (2)
- Clear Jar
- Towel
- Large Measuring Cup
- Small Measuring Cup
- Lab Notebook
- Ice Cream Recipes Booklet



Image: All the essential kitchen tools provided in the kit.

GETTING STARTED & SETUP

Before you begin, ensure you have all the components listed above. You will also need common kitchen ingredients such as milk, cream, sugar, ice, and rock salt, as specified in the recipe booklet. Prepare your workspace by clearing a clean, flat surface. Have your ingredients measured and ready according to your chosen recipe.

Your browser does not support the video tag.

Video: This video demonstrates the unboxing of the KiwiCo Science of Cooking: Ice Cream kit, showcasing the various components and how they fit together for the ice cream making process.

OPERATING INSTRUCTIONS: MAKING ICE CREAM

1. **Prepare the Mixture:** Follow the recipe in your instruction booklet to combine your liquid ingredients (milk, cream, sugar, flavorings) in one of the small metal cans. Use the whisk to mix thoroughly.
2. **Assemble the Shaker:** Place the small metal can containing your ice cream mixture inside the larger clear jar.
3. **Add Ice and Salt:** Fill the space around the small metal can in the clear jar with ice. Add rock salt over the ice. The salt lowers the freezing point of the ice, allowing it to absorb more heat from the ice cream mixture, making it freeze faster.
4. **Shake and Freeze:** Securely close the lid of the clear jar. Wrap the towel around the jar to protect your hands from the cold. Shake the jar vigorously for the time specified in your recipe (typically 10-15 minutes).
5. **Check Consistency:** Periodically open the jar to check the consistency of your ice cream. It should be firm but still soft enough to scoop.
6. **Serve and Enjoy:** Once the desired consistency is reached, remove the small can, scoop out your homemade ice cream, and enjoy!



Delicious hands-on kitchen chemistry



Image: A child actively shaking the ice cream maker jar.

3 Easy-to-follow recipes for lemon sorbet, vanilla, and chocolate ice cream



Image: Freshly made chocolate ice cream being scooped from the container.

OPERATING INSTRUCTIONS: MAKING SORBET

The kit also includes recipes for making sorbet. The process is similar to ice cream but uses fruit juice or pureed fruit instead of dairy.

1. **Prepare Fruit Mixture:** Combine your chosen fruit juice or pureed fruit with sugar and water as directed in the sorbet recipe.
2. **Assemble and Shake:** Place the fruit mixture in a small metal can, then inside the clear jar with ice and rock salt, similar to the ice cream process.
3. **Shake and Freeze:** Shake the jar until the sorbet reaches a slushy or frozen consistency.
4. **Serve and Enjoy:** Scoop and serve your refreshing homemade sorbet.

Includes a 54-page recipe book filled with recipes and experiments



Image: The recipe book displaying instructions for making lemon sorbet.

SCIENCE BEHIND THE FUN

This kit is designed to teach fundamental chemistry principles through cooking.

Ice Crystals and Freezing Point Depression

When you add salt to ice, it lowers the freezing point of the water. This phenomenon, called freezing point depression, allows the ice-salt mixture to get much colder than regular ice. This extra cold environment is crucial for freezing your ice cream mixture quickly.

The Role of Butterfat and Air

In ice cream, butterfat and air are key to achieving a creamy texture. As you shake the mixture, air is incorporated, and the fat molecules help create a smooth, rich consistency by preventing large ice crystals from forming.

Stabilizers

Some recipes might introduce stabilizers, which are ingredients that help maintain the texture and prevent ice cream from becoming too icy over time.

Your browser does not support the video tag.

Video: This video provides a brief overview of the KiwiCo Science of Cooking: Ice Cream kit, highlighting the fun and educational aspects of making ice cream and sorbet through kitchen chemistry.

RECIPES AND EXPERIMENTS

The included 54-page recipe book is filled with various recipes and experiments. It guides you through making vanilla ice cream, lemon sorbet, and chocolate ice cream. Use the "Lab Notes" notebook to record your observations, experiment with different ingredients, and customize your creations.



Image: The detailed recipe book for various ice cream and sorbet creations.



Image: The 'Lab Notes' notebook for documenting experiments and results.

CARE AND MAINTENANCE

After each use, thoroughly wash all components with warm, soapy water. Rinse well and allow to air dry completely before storing. The metal cans and plastic jar are reusable. Ensure they are clean and dry to prevent any residue buildup. Store the kit components in a cool, dry place.

TROUBLESHOOTING TIPS

Ice Cream Not Freezing?

- Ensure you used enough ice and rock salt. The salt is crucial for lowering the temperature.
- Shake vigorously and continuously for the recommended time.

- Check that the inner can is properly sealed to prevent the ice-salt mixture from contaminating your ice cream.

Ice Cream Too Icy?

- This can happen if not enough air was incorporated or if the mixture froze too slowly. Try shaking more vigorously next time.
- Ensure your dairy ingredients have sufficient fat content for creaminess.

PRODUCT SPECIFICATIONS

Feature	Detail
Brand	KiwiCo
Model Number	SICE-F2454
Age Range	5-12 years
Educational Objective	Exploratory Skills, Kitchen Chemistry
Material Type	Plastic, Steel
Item Dimensions	11 x 8 x 6.1 inches
Item Weight	0.99 Kilograms
Included Components	Scoop, whisk, large can, small cans, clear jar, towel, large measuring cups, small measuring cup, lab notebook, ice cream recipes booklet

IMPORTANT SAFETY INFORMATION

- **Adult Supervision Recommended:** Always ensure an adult supervises children during all steps of the ice cream making process, especially when handling ice and rock salt.
- **Food Safety:** Use fresh ingredients and follow all food safety guidelines. Wash hands thoroughly before and after handling food.
- **Allergens:** Be aware of potential food allergens in your chosen ingredients.
- **Not for Consumption:** The ice-salt mixture is not for consumption.
- **Choking Hazard:** Small parts may be a choking hazard for young children.