

# SPARKLE FORMATIONS

## CRYSTAL UNICORNS

AGES 8+

**WARNING**— This set contains chemicals that may be harmful if misused. Read cautions on individual containers carefully. Not to be used by children except under adult supervision.



## SAFETY RULES

- Read these instructions before use, follow them and keep them for reference.
- Keep young children and animals away from the experimental area.
- Store this experimental set and the final crystal(s) out of reach of children under 8 years of age.
- Clean all equipment after use.
- Ensure that all empty containers and/or non-reclosable packaging are disposed of properly.
- Wash hands after carrying out experiments.
- Do not eat or drink in the experimental area.
- Do not allow chemicals to come into contact with the eyes or mouth.
- Do not apply any substances or solutions to the body.
- Do not grow crystals where food or drink is handled or in bedrooms.
- Do not use any equipment which has not been supplied with the set or recommended in the instructions for use.
- Take care while handling hot water and hot solutions.
- Ensure that during growing of the crystal the container with the liquid is out of reach of children under 8 years of age.
- Make sure that all containers are fully closed and properly stored after use.

## WARNING

- Not suitable for children under 8 years. For use under adult supervision.
- Contains some chemicals which present a hazard to health.
- Read the instructions before use, follow them and keep them for reference.
- Do not allow chemicals to come into contact with any part of the body, particularly the mouth and eyes.
- Keep small children and animals away from experiments.
- Keep the experimental set out of reach of children under 8 years of age.

## INGREDIENTS

### Ammonium dihydrogen phosphate (NH<sub>4</sub>H<sub>2</sub>PO<sub>4</sub>)

CAS No.:7722-76-1, EINECS No.:2317645  
Synonym : MAP CAS No.:7722-76-1, EINECS No.:2317645 pH, 4.2 in 0.2M solution

### Food colouring :

(1) Synonyms: Food Blue # 2, FD&C Blue # 1  
CAS No.: 3844-45-9, EINECS No.:223-339-8  
Molecular Formula : C<sub>37</sub>H<sub>34</sub>N<sub>2</sub>Na<sub>2</sub>O<sub>9</sub>S<sub>3</sub>  
Chemical Name: Disodium a-[4-(N-Ethyl-3-Sulfonato Benzy1 Amino)Phenyl]-a-[4-(N-ethyl-3-Sulfonato Benzylamino Cyclohexa-2, 5-Dienylidene)] Toluene-2-Sulfonate

(2) Synonyms: Acid Yellow 23, Food Yellow 4  
CAS No.: 1934-21-0, EINECS No.:217-699-5  
Molecular Formula : C<sub>16</sub>H<sub>9</sub>N<sub>4</sub>Na<sub>3</sub>O<sub>9</sub>S<sub>2</sub>  
Chemical Name: Tri-sodium 5-hydroxy-1-(4-Sulfonato phenyl-4-(4-Sulfonato phenylazo)pyrazole-3-carboxylate

(3) Synonyms: Food Red # 7, New Coccine  
CAS No.: 2611-82-7, EINECS No.:220-036-2  
Molecular Formula : C<sub>20</sub>H<sub>11</sub>N<sub>2</sub>Na<sub>3</sub>O<sub>10</sub>S<sub>3</sub>  
Chemical Name: Trisodium-2-hydroxy-1-(4-Sulfonato-1-Naphthylazo) naphthalene-6, 8-Disulfonate

## STAGES OF CRYSTALLIZATION

There are three major stages in which crystallization happens.

1. **Saturation of the Solution** - solution is saturated when no more chemical will dissolve.
2. **Nucleation** - during this stage in the initial formation of crystals begins.
3. **Crystal Growth** - the stage in which crystals begin to form as you grow your crystal unicorn.

## BEFORE USE PLEASE NOTE THE FOLLOWING

- The crystals normally grow to their full length in 24 hours. Crystal size and length will vary with changes in temperature and humidity.
- When the project is complete, pour the liquid solution down the drain and throw the container in the trash.
- This is a one-time-use project.
- Wash your hands after use.

## STEP BY STEP GUIDE

### CONTENTS LIST

- 3 Packs of Crystal Powder • Growing Container
- 3 Stirring Sticks • 3 Unicorn Figurines • Instruction Manual

### DIRECTIONS

Step 1



Pour one color packet of chemical powder into the growing container.

Step 2



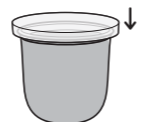
Pour boiling water into the growing container. Leave approximately a 3/4" of space at the top of the growing container.

Step 3



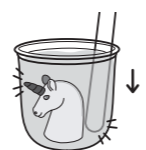
Use the stirring stick to stir in powder until it dissolves. Stir as quickly as you can without splashing the liquid.

Step 4



Place the lid on the growing container. Leave the container to cool for 30 minutes.

Step 5



Remove the lid and carefully place unicorn inside the growing container. Use the stir stick to position the unicorn as shown with the unicorn horn touching the container wall.

Step 6



Replace the lid on the growing container and leave the unicorn untouched for 24 hours to grow. Do not move or shake the growing container.

Step 7



Remove the lid after 24 hours. Pour out the remaining liquid and remove the unicorn from the growing container. You may carefully pour some hot water along the side of the growing container to help loosen the unicorn.



Clean off your unicorn by carefully rubbing away unwanted crystals with a damp paper towel.

Clean out the growing container with hot water and repeat the steps for each unicorn.



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