



Designer: Daisy Pan Date: Nov. 06, 2017

Item No.: G7334.Guide

Desc.: -

Size: 21x28.5cm

CRYSTAL GROWING KIT

WARNINGS:

- 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 old.

A. ADVICE FOR SUPERVISING ADULTS:

Read and follow these instructions, the safety rules and the first aid information, and keep them for reference. The incorrect use of chemicals can cause injury and damage to health. Only carry out those experiments which are listed in the instructions. This experimental set is for use only by children over 8 years. Because children's abilities vary so much, even within age groups, supervising adults should exercise discretion as to which experiments are suitable and safe for them. The instructions should enable supervisors to assess any experiment to establish its suitability for a particular child. The supervising adult should discuss the warnings and safety information with the child or children before commencing the experiments. The area surrounding the experiment should be kept clear of any obstructions and away from the storage of food. It should be well lit and ventilated and close to a water supply. A solid table with a heat resistant top should be provided. Substances in non-reclosable packaging should be used up (completely) during the course of one experiment, i.e. after opening the package.

B. 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 crystals 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 put the materials into the mouth. Do not breathe dust or powder. 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 with 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.

What is a Crystal?

A crystal is a solid that is made up of small, regular 3D shapes. The chemical bonds of a crystal are very ordered and join together at regular angles. Examples of everyday materials you encounter as crystals are table salt, sugar, and snow. Many gemstones are crystals including quartz and diamond. Crystals grow in seven shapes, called crystal system. The shapes of crystals vary, but all of them have been classified into one of the seven categories.

THE CRYSTAL SYSTEMS



CUBIC



TETRAGONAL



HEXAGONAL



RHOMBOHEDRAL



ORTHORHOMBIC



MONOCLINIC



TRICLINIC

Now Get Your Kit to See What Shape of Crystal You Grow!

Grow six different amazing large crystals clusters. Try to learn about the amazing facts about them and how they form!

KIT INCLUDES:

- Plastic Container
- Crystal Powder
- Muddler
- Seed Crystal
- 230 ml Boiling Water Needed
- Safety Goggle Needed

CONTENTS WITH FIRST AID INFORMATION:

Yellow: Ingredients: Ammonium dihydrogen orthophosphate (CAS# 7722-76-1), Calcium sulfate dihydrate (CAS# 10101-41-4), CI 19140 Pigment (CAS# 1934-21-0).

Green: Ingredients: Ammonium dihydrogen orthophosphate (CAS# 7722-76-1), Calcium sulfate dihydrate (CAS# 10101-41-4), CI 74260 Pigment (CAS# 85256-45-7).

Red: Ingredients: Ammonium dihydrogen orthophosphate (CAS# 7722-76-1), Calcium sulfate dihydrate (CAS# 10101-41-4), CI 45430 Pigment (CAS# 16423-68-0).

Blue: Ingredients: Ammonium dihydrogen orthophosphate (CAS# 7722-76-1), Calcium sulfate dihydrate (CAS# 10101-41-4), CI 42090 Pigment (CAS# 3844-45-9).

Purple: Ingredients: Ammonium dihydrogen orthophosphate (CAS# 7722-76-1), Calcium sulfate dihydrate (CAS# 10101-41-4), CI 16185 Pigment (CAS# 915-67-3).

White: Ingredients: Ammonium dihydrogen orthophosphate (CAS# 7722-76-1), Calcium sulfate dihydrate (CAS# 10101-41-4).

First aid information:

In case of eye contact: wash out eye with plenty of water, holding eye open if necessary. Seek immediate medical advice. If swallowed: wash out mouth with water, drink some fresh water. Do not induce vomiting. Seek immediate medical advice. In case of inhalation: remove person to fresh air. In case of skin contact and burns: wash affected area with plenty of water for at least 10 minutes. In case of doubt, seek medical advice without delay. Take the chemical and its container with you. In case of injury always seek medical advice.

INSTRUCTIONS FOR USE:

1. Fill the container with 230ml boiling water
2. Add the crystal powder and stir until well mixed.
3. Wait for the solution to cool down to approximately 40°C and then place the seed crystal on the bottom of the container.
NOTE: do not put the lid on the container!
4. The crystals grow best in a dust-free area at a temperature around 20°C. Leave the crystals undisturbed for at least 48 hours. (Out of reach of children)
5. When the crystals are large enough, rinse shortly with water. If you rinse too long, the crystals will break down again.
6. Dry on a suitable surface (for example paper towels) to prevent stains.

Wash hands after use!

Dispose of materials according to your country's health and safety, and environmental regulations. Ensure that all empty containers and non-reclosable packaging are disposed of properly.

WHAT HAPPEN

When you add the powder to hot water, it breaks up into tiny particles in water which is far small to see. The liquid is so called saturated solution, because if you stir in more powder, no more will dissolve. When the water cools, it can't keep all particles dissolved and some begin to join together in an organized way. That makes the crystals you see, with straight edges and flat faces.