



Alum Crystals Overnight

Our Warning! We have not tested every formulation that we list. This list is strictly for informational purposes and a guideline to various detergent, cosmetic and coating formulations. This information is provided without warranty of any kind or fitness for a particular use or purpose. You are encouraged to conduct your own tests. Read all labels and MSDS Sheets.

Recipe adapted from:

Exploring Crystals, James Berry, Crowwell-Collier Press,
London, 1969

Ingredients:

- 6 tablespoons alum
- 1 Jar or deep dish
- 1 Water

Directions:

Heat the water in the saucepan until it comes to boil, then dump in the alum. Let the water boil another minute or two to dissolve the alum, then pour it into the mason jar or deep dish, having heated both the mason jar or dish with hot water to prevent cracking. Put the jar or dish in a quiet place and let it stand overnight, covered with cellophane or aluminum foil to prevent dust from settling on the solution. As the solution cools, it becomes heavily supersaturated. Consequently, the alum molecules are so crammed together that they form into large crystals within ten to twenty hours. Since alum is a mineral that forms crystals easily, the chances of large specimens growing overnight are increased. However, these crystals grow too quickly to be perfectly shaped. In fact, in many cases you may get a solid, polycrystalline mass on the bottom of the jar or dish. The glistening sides and sharp angles of the crystalline masses of alum will give you an idea of what a well shaped crystal will look like, and will demonstrate how solids form from supersaturated solutions. This project may not work every time. Sometimes dust particles fall into the solution, or specks of alum from your hands. These contaminants serve as nuclei for many small crystals instead of a few large ones. If you do not find any large crystalline mass the first time, repeat the project. Filter the solution in the jar or dish as you pour it into the saucepan. The alum in the jar or dish can be scraped out for reuse. Wash the jar or dish thoroughly in hot water before using it again.