白水里长出我的第一颗晶体

10月18日，星期六，晴。今天上午，我在厨房的窗台上做成了一个明矾结晶实验。说是做成，其实中间失败了一整回。

起因是周五晚上，我在网上看到有人把一杯清水养出了透明的晶体。我来了兴致，翻出去年科学节剩下的半袋明矾，决定自己试试。我先查了做法：热水溶解明矾，配成浓溶液，放一夜等它结晶。步骤看起来简单，我照着烧了半杯开水，加明矾，加到搅拌不动为止，然后把杯子坐在桌上，等奇迹发生。

下午两点，我跑去看：杯底干干净净，只有几粒细得看不清的白渣。我按网上说的又添了一勺明矾，挪到阳台，心里还替自己找好了说法，也许它长得慢。第二天早上再看，杯底还是那层白渣，连一颗像样的晶体都没有。我在日记本上写下：第一次，失败。

我不甘心，晚上又去查资料，这回查得细。原来问题出在两个地方：降温太快，杯子太满太晃，溶液里没有晶种，析出来的东西就没有地方落脚。我把要点记在纸条上：饱和、静置、慢凉、要有种子。

周日下午我重做。重新配了饱和溶液，这次不图快，让它在桌上自己凉到室温，再从第一次的白渣里挑出最大的一粒当种子，用头发丝拴住，吊在杯子正中。杯子外裹了一圈毛巾，塞在桌子底下不被人碰的位置。我给它定了闹钟，十二小时不许偷看。

周一下午去看，那颗种子真的长大了，黄豆大小，棱角清清楚楚，对着光能看见里面一层一层的影子。我举着杯子转了三圈，比上周任何一次都开心。

这个周末我哪儿也没去。可我想，第一次那杯失败的水并没有白倒，它把种子留给了我。成功不是把方法换掉，而是把方法里差的那几个细节找回来。

My First Crystal Grown in a Cup of Water

October 18, Saturday, sunny. This morning I grew my first alum crystal on the kitchen windowsill. Grew is a generous word, because it failed once before it worked.

It started on Friday night, when I watched someone online keep a cup of clear water until it sprouted a transparent crystal. I dug out the half bag of alum left from last year's science festival and decided to try. I looked up the method: dissolve alum in hot water into a strong solution, wait overnight for crystals. It looked simple. I boiled half a kettle, added alum until it refused to stir in any more, sat the cup on the table, and waited for magic.

At two in the afternoon I checked: the bottom of the cup was clean except a few specks of white dust. I added another spoon of alum as the video suggested, moved the cup to the balcony, and made excuses for myself, maybe it grows slowly. Next morning, still only white dust, not one decent crystal. I wrote in my diary: attempt one,

failed.

Unconvinced, I went back to research that night, and read carefully this time. The problems were cooling too fast, a full and wobbly cup, and no seed crystal for the dissolved alum to settle onto. I wrote the key points on a slip of paper: saturated, still, slow cooling, and a seed.

On Sunday afternoon I started over. I mixed a fresh saturated solution, let it cool to room temperature by itself, fished out the largest grain of white dust from the first cup as a seed, tied it to a strand of my own hair, and hung it in the middle of the cup. I wrapped the cup in a towel and tucked it under the table where nobody would bump it, then set an alarm: no peeking for twelve hours.

When I looked on Monday afternoon, the seed had grown to the size of a soybean, its edges sharp and clear, with layers visible inside when held to the light. I turned the cup around three times, happier than all of last week put together.

I went nowhere this weekend. But I think the failed cup was not wasted, because it left me the seed. Success is not about swapping the method for a new one; it is about finding the few details the first method was missing.