

How to make CDS (chlorine dioxide solution) at Home

As long as you have the relatively small and easy to acquire elements, making your own CDS is really not that hard.



Here are pictures of my first CDS maker version with a 5 liter jar with a stainless steel bale fastener I got off ebay for about \$20 U.S. I made two batches, one with about 45 ml MMS, one with about 90. I used 1 liter of distilled water each time. The first batch was easier to handle (less liquid in the wine glass than you see here) and yielded CDS at about 1000 ppm according to test strips. The second batch just didn't go as smoothly and yielded only 1200 ppm with about twice as much activated material. I don't seem to be getting yields as high of a

strength in ppm as Charlotte (forum user CLO2) does with her smaller jars... (note: this text is OLD info, the recipe below is what I use now...

First pic is at start of activation, second about 8 hours later.

https://www.amazon.com/Bormioli-Rocco-Round-Clear-169-Ounce/dp/B00IIVXZZK/ref=sr_1_3?ie=UTF8&qid=1518643780&sr=8-3&keywords=fido+jar+5+liter

<https://www.everythingkitchens.com/bormioli-rocco-fido-round-clear-jar-5l-149270m02321877.html>

In order to measure the strength of your CDS, you will need test strips for chlorine dioxide strength in water, otherwise you'll be guessing (which is probably fine too...) – These are the ones I use (below). I dilute approx. 2 ml of CDS 10:1 with water (2 ml CDS with 18 ml water). The strips only measure up to 500 parts per million (PPM), and, hopefully yours will be much stronger. I generally get over 5000 ppm strength now, using the silicon-rubber gaskets I make (link to source below)

https://www.amazon.com/LaMotte-Insta-Test-3002-Chlorine-0-500ppm/dp/B00EA9D39M/ref=sr_1_2?s=industrial&ie=UTF8&qid=1518644087&sr=1-2&keywords=chlorine+dioxide+test+strips

My current recipe for making 4 ea. 1 pt. jars of CDS at over 5000 parts per million:

First glass of liquid:

80% Sodium Chlorite powder or flakes (standard commercial strength): 90 grams -
Water (purity not crucial): 120 grams (approx. 1/2 cup).

Mix together. You can warm the water a little to help Sodium Chlorite dissolve, but then chill it in the refrigerator (EXTREMELY important to keep the activation reaction from “exploding” chlorine dioxide gas into your space).

Second glass (put in a tall glass like the one in the photo below – this is what I now use instead of the wine glass in the photos of the glass in the jar) - 50% by weight citric acid solution: 170 grams (chill) (with an 85g packet of citric acid, add to 1/4 c + 2 tbsp water for a workable amount)

Put into 5 liter jar: 1500 grams (cc’s) of distilled water. I replaced the commercial gasket that came with my (old wire-bale) jar with a hand made gasket of 1/8” thick silicon rubber (see:

https://www.amazon.com/Silicone-Durometer-Smooth-Backing-Thickness/dp/B01J1K9SDY/ref=sr_1_3?ie=UTF8&qid=1522551441&sr=8-3&keywords=silicone+rubber+sheet+1%2F8) – which doesn’t get hardened by the chlorine dioxide gas.



Then, put the glass of chilled citric acid solution next to the jar, and slowly pour the chilled sodium chlorite solution into it, and CAREFULLY lower the glass into the big jar and seal the lid. Wait 24 hours until the chlorine dioxide has transferred into the distilled water. Take the glass CAREFULLY out of the jar and dispose of the contents containing the residue of the sodium chlorite and citric acid. To the jar add: 500 grams more distilled water. At this point you would test the solution for its strength.

Because chlorine dioxide test strips only test up to 500 parts per million (ppm) you will need to do a careful

proportional dilution of the CDS for testing. I do this using a large syringe to measure water and CDS by cubic centimeters (cc’s).



Pour the CDS carefully into 4 pint jars. The one shown in the photo here has a polypropylene lid with a polyethylene liner so it’s as inert as possible to the corrosive effects of the chlorine dioxide.

Of course, you may want to adapt this for smaller batches. You will need to solve the problems around what size jars and glasses you want to use.

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Update: I now use a 1 gallon jar that I ordered from Uline supplies, that also has a polypropylene lid, because I

1 gallon jar w/ 20 oz glass I use to activate MMS

increasingly had problems with the seal on the Bormioli Rocco jars.

PDF doc with more info: http://www.mmsinfo.org/infosheets/cds_making_shot_glass_method.pdf

You can also get chlorine dioxide test strips online from Grainger.com :

<https://www.grainger.com/product/LAMOTTE-Test-Strip-50-PK-Testing-Parameter-4EVX3>

tip: you can cut them in half lengthwise to get more tests from your strips.

If you have have questions feel free to email me at: brtanner@brucetanner.info