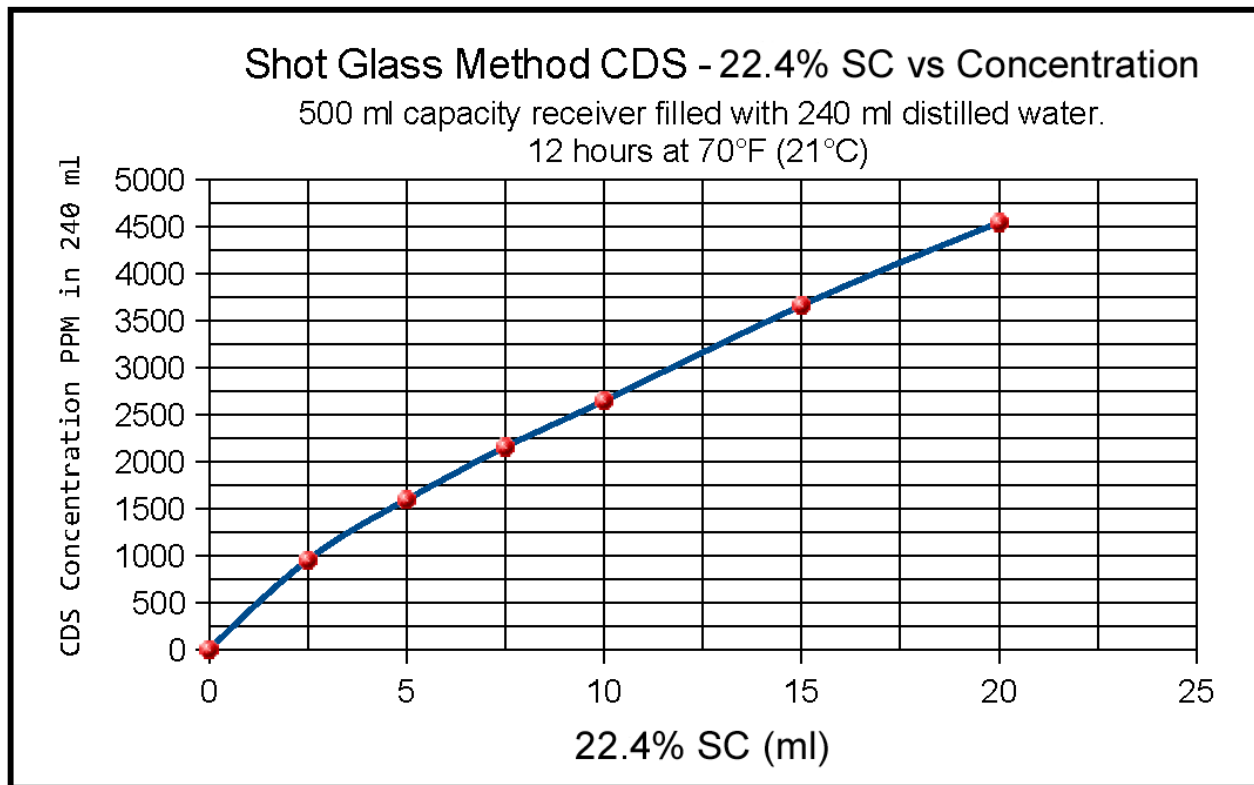


Overnight CDS Method Travel Kit

CDS Chart - Protocol 101 - 3000 ppm

A 500 milliliter capacity Ball glass canning jar with a Ball storage lid is filled with 240 ml of distilled water. The goal is to produce 3000 ppm Chlorine Dioxide Solution after processing 12+ hours at 70°F (21°C). The glass votive candle holder reactor is 46 mm inside diameter.



How to use the chart

This chart is designed to help you make 3000 ppm CDS. The goal is to make 240 ml (8 fl oz US) of 3000 ppm CDS. Follow right across the chart on the 3000 ppm line until it intersects the blue line. Then follow straight down to the bottom of the chart where you will see that about 12 ml of 22.4% Sodium Chlorite Solution (MMS = SC) will make 3000 ppm CDS after 12+ hours of processing.

240 ml of 3000 ppm CDS will contain 720 mg of ClO_2 . (Dose [mg] = Volume [liters] x Concentration [ppm]) so 0.240 Liter x 3000 ppm = 720 mg ClO_2 . 1ml CDS = 3mg ClO_2 .

Note that CDS is 100% Chlorine Dioxide (ClO_2) and will not increase in strength in a stomach as will MMS and CDH. Both MMS and CDH contain un-reacted SC, and ClO_2 will increase in a stomach due to digestive acids. (MMS ~7x more, CDH 2x more ClO_2)

The glass receiver is a Ball 500 ml (one pint/16 fl oz US) canning jar. The jar lid for the receiver is a Ball wide-mouth plastic storage lid plus an optional silicone sealing ring.



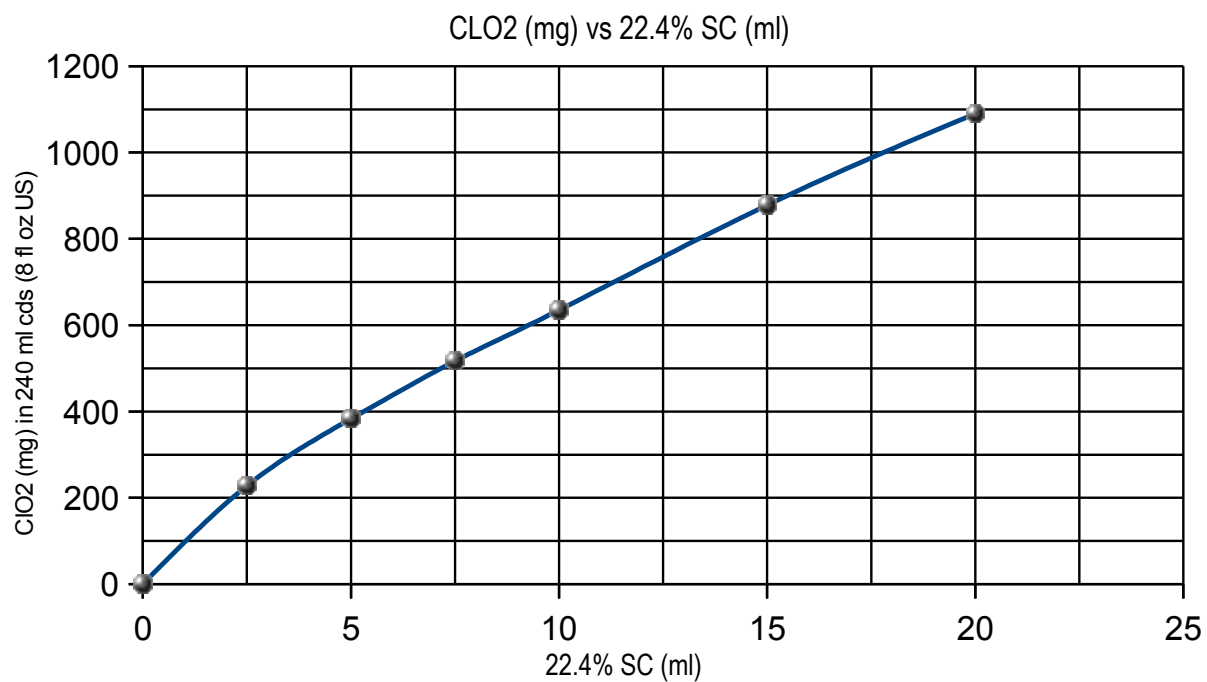
240 ml 3800 ppm, 900 mg CLO₂ CDS in a 500 ml capacity container.

Syringes available at farm stores or online.

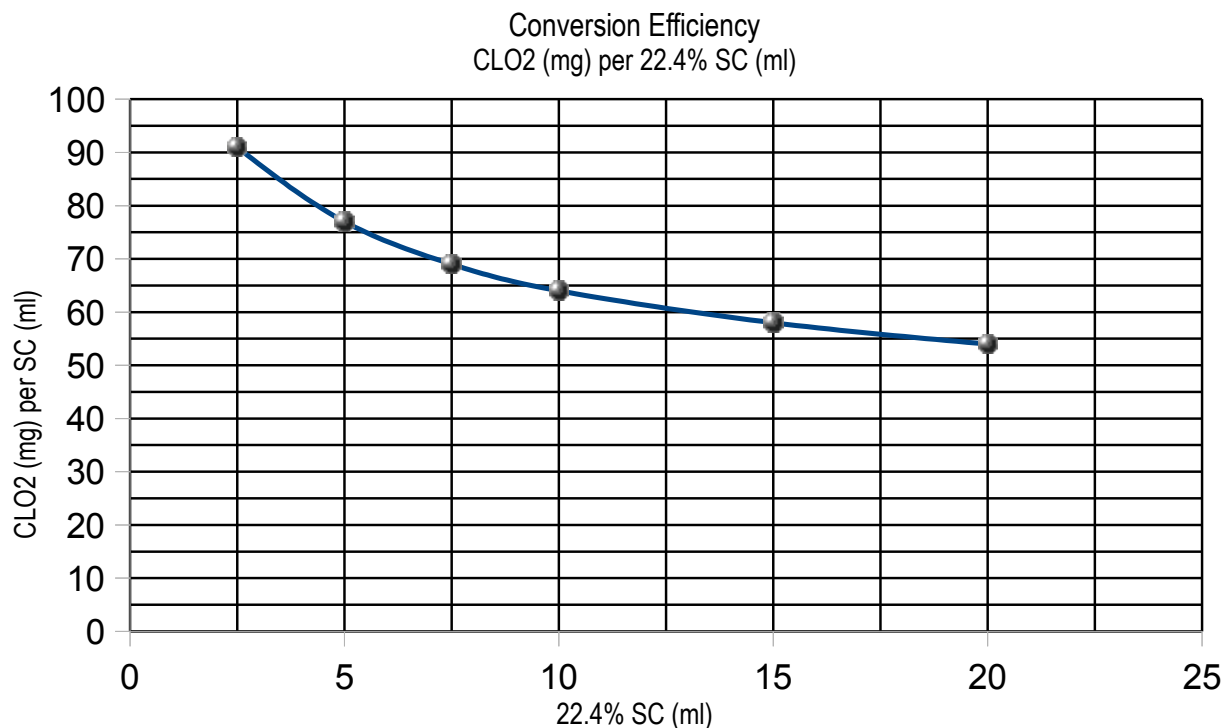


A glass votive candle holder 2" in diameter x 2.5" high was used for the reactor and has an inside diameter of 46mm. I found all three items at a local hardware store.

60mg of CLO₂ for each 1ml of 22.4% Sodium Chlorite (MMS = SC) used was generated with this set of equipment when 3000 ppm CDS was made. (The mg/ml number is just a way to compare different equipment setups for efficiency) See the following charts.



The chart above shows how much ClO₂ (mg) is generated when different amounts of SC (MMS) are used to make CDS.



This chart shows the conversion efficiency of SC (MMS) into ClO₂ when different amounts of SC are used to make CDS. The efficiency is higher when lower amounts of SC are used. The 0-100 scale on the left side of the chart could be used as a percentage scale of 0-100%.

Protocol 101 - CDS Daily Dosing Chart

Stock CDS ↓ ppm	Basic Daily ↓ Dose	CDS daily dose as per Protocol 101 (12 February 2013)			
		2 x ↓	3 x ↓	4 x ↓	5 x ↓
500	60 ml	120 ml	180 ml	240 ml	300 ml
1000	30	60	90	120	150
1500	20	40	60	80	100
2000	15	30	45	60	75
2500	12	24	36	48	60
3000	10	20	30	40	50
3500	8.6	17	26	34	43
4000	7.5	15	23	30	38
4500	6.7	13.5	20	27	33.5
5000	6.0	12	18	24	30
5500	5.5	11	16.5	22	27.5
6000	5.0	10	15	20	25
12000	2.5	5.0	7.5	10	12.5
mg ClO₂ →	30	60	90	120	150

dose = concentration x volume concentration = dose / volume volume = dose / concentration

Basic daily dose: Add 10 ml (2 US Tsp) of 3000 ppm CDS to 1 liter (34 fl oz) of water per day. Use one part every consecutive hour, 8 to 12 times per day until finished. With severe, life-threatening illness, you may slowly raise up the dose to a maximum of 50 ml of 3000 ppm CDS per day. Lower the dosage if nausea or discomfort occurs. See chart for different CDS concentrations.

dose = mg ClO₂ concentration = ppm volume = liters (1 liter 3000 ppm cds = 3000 mg ClO₂)

Note that each column of CDS daily doses measured in ml, has the same amount of ClO₂ for each amount in that column, because the CDS volumes vary by the stock CDS concentrations. In other words, if you have 3000 ppm stock CDS solution, each 10 ml contains 30 mg ClO₂ & if you have a 1500 ppm stock CDS solution, 20 ml contains 30 mg of ClO₂. It is more accurate to say how much ClO₂ you are using for daily doses, instead of describing the volume & ppm of the solution. Any of the amounts of CDS in each column will provide the same amount of ClO₂ which varies by the stock solution concentration. So, if you are on Protocol 1000, you would use the column marked '5X Basic Daily Dose' because that is approximately equivalent to eight MMS1 Protocol 1000 3 drop daily doses & contains a total of 20mg of ClO₂ per hourly dose or ~161 mg ClO₂ per day.

If you use an eight fluid ounce glass **baby bottle** for your daily dosing, you probably use 1 fl oz of the solution every consecutive hour. Following Protocol 101, you would add 10 ml of 3000 ppm CDS to the bottle and top up with water to the 8 fl oz mark. Then, you would pour out 1 fl oz of the baby bottle solution each hour and mix it in any quantity of water. You would be getting 3.75 mg of ClO₂/dose for a total of 30 mg of ClO₂ per day. If on P1000 add 50ml CDS to bottle.

Note that dosing amounts have been increased. Start low as noted above but you can take much more than previously thought.
<http://g2cforum.org/index.php/list/approved-mms-protocols/25593-protocol-101-sacramental-cds-protocol#30542>
<http://g2cforum.org/index.php/list/cds-chlorine-dioxide-solution/16372-math-of-cds?start=9#27093>
http://www.mmsinfo.org/infosheets/how_to_use_cdh_and_cds_with_mms_protocols.pdf

NOTES

The Overnight CDS Method using this set of equipment offers these features:

1. Portable. Much smaller than other equipments I have used.
2. Easy to use a syringe to pull out doses. Can easily reach to the bottom of the receiver due to the wide mouth and shallow depth of the receiver container.
3. Efficient even for such small containers. The Overnight CDS Method is a closed system, so little ClO₂ gas leaks out compared to the two bottles, transfer tube, and heating method where the receiver container is open and gas leaks out. The shape of this receiver is almost a cube which allows for a high distilled water surface area, compared to the receiver solution volume, which is important in achieving high conversion efficiency. The reactor also has a large solution surface area in comparison with the surface area of the receiver solution.
4. Safe. No problems have yet to be reported for the Overnight CDS Method whereas there have been a number of explosions reported for the two bottles, transfer tube, and heating method. It happened to me! No heating of the MMS solution means low pressure will be created when the ClO₂ gas is generated. And, high heat can cause some components of citric acid to end up in the CDS which won't happen when using the Overnight CDS Method. No exhaust fan is needed because this method is a closed system and the only time gas can escape is when the process is finished and the reactor is taken out of the receiver container. That only takes a few seconds, so little ClO₂ gas escapes. Remember to keep MMS & CDS out of direct sunlight and CDS in the fridge. Cooling down the CDS in a fridge before opening the container will help reduce the loss of ClO₂ gas.
5. Versatile. This set of equipment allows the receiver container to be used for making CDS as well as becoming the storage container, too. After making a batch of CDS, just remove the reactor, put the cap on and refrigerate the container of CDS.

6. Procedure to make 3000 ppm CDS: **UPDATED**

A. Fill the receiver with 240 ml (8 fl oz US) of distilled water.

B. Put 12 ml of 22.4% SC (MMS) followed by 12 ml of 10% HCL (preferred) or 50% citric acid in the reactor container. Swirl and put inside the receiver. Tighten lid & keep in a dark place.

C. After 12+ hours, put in fridge 2 hours to cool down to below 50°F (10°C), remove the reactor and safely discard the solution. Refrigerate the CDS in small mouth bottles to help keep the ClO₂ gas in solution when the bottles are opened. A higher ClO₂ concentration can be made by adding fresh reactor ingredients and infuse into the same CDS again. Repeat until desired ppm is reached. Keep in a fridge and out of sunlight.



20 ml of 22.4% SC & 20 ml of 50% citric acid

7. A new lid sealing ring made from silicone is now available that should ensure an even more airtight seal to keep the chlorine dioxide gas inside the glass jar. Here is one location where the rings can be found:

http://www.amazon.com/gp/product/B00B3L8PA2/ref=oh_details_o01_s00_i00?ie=UTF8&psc=1

This silicone ring can be added to the white lid by pressing it firmly inside the lid. It should stay in place when the lid is removed. Be sure not to over-tighten the lid if using the silicone ring or ClO₂ gas may leak out.

8. 12 ml of 4% HCL will produce about 2500 ppm. Using a larger quantity of 4% HCL actually results in less ClO₂ concentration (ppm). http://www.mmsinfo.org/infosheets/CDS-how_to_make_3000_ppm_using_4pc_HCL.pdf