## **Liposomal Vitamin C**

This approach is valid for making any liposome. This particular Vitamin C Ascorbate recipe is a compilation of several methods, combined and adjusted for simplicity.

## What you'll need:

- Pharmaceutical grade vitamin C
- Non GMO granular lecithin
- Distilled water
- A blender
- A two (or more) liter Ultrasonic cleaner
- A two quart (or larger) glass storage jar
- 1. Pour 4 cups of gently warmed (95 105 degrees maximum) distilled water into a blender. Add 3/4 cup (be generous here up to one cup is ok) of granular soy lecithin gently packed into cup and blend for about 2 minutes.

Let stand for at least two minutes.

Now, blend again for 2 minutes. At the conclusion there should be no lecithin granules visible. If you see granules, blend again. Set this smooth lecithin mixture aside for the moment. This will make the work of the ultrasonic cleaner easier and more effective.

- 2. Dissolve 4 level Tablespoons of pharmaceutical grade vitamin C powder in 8 oz. of distilled water. A 16 oz. or larger screw lid jar is recommended here, so you can shake this mixture vigorously. (I find that blending the mixture works better, and will allow you to dissolve more vitamin C). While there should not be a lot of undissolved powder at the bottom of the water mixture, a little is OK. It will be mixed by the actions of the cleaner below.
- 4. Pour the Lecithin solution into ultrasonic cleaner bowl with the Vitamin C mixture and stir the contents together.
- 5. Turn the ultrasonic cleaner on (set for 8 minute cycle) and using a plastic spoon (leaving the top of the cleaner opened), slowly stir the contents. Stir again about every 1 to 2 minutes.

Note: Some cleaners will automatically, self-stop after about 8 minutes. Just re-start to continue. Repeat once for at least 2 eight minute runs. By that time the entire solution should be blended into a creamy appearing mixture. The solution should now be well formed.

You can raise the level of encapsulation slightly by adding an additional ultrasonic cycle if desired.

To make the mixture much more palatable, add 1 level TSP or less (sweeten to taste) of

powdered stevia and approximately 1 tsp of apricot or other extract. Do this AFTER you have run the ultrasonic cleaner, so the stevia and flavoring do not become encapsulated with the vitamin C.

This protocol furnishes at least 48 grams (48,000mg.) of Vitamin C Ascorbate. At 90% plus encapsulation efficiency of this process, 43,200 mg would be of the liposomal type. This solution will keep, acceptably, at room temperature for 3 days or more. Refrigerated, it will keep much longer.

Note: you can play with the vitamin C and lecithin amounts a bit. Increasing both can raise the strength – and efficacy of your solution to some degree. Too much lecithin and your solution will not make use of the extra lecithin. The extra lecithin will separate to the bottom of your container. Too much vitamin C, and the liquid will not dissolve all of it. You'll see the powder settle out to the bottom of your container. While this can be wasteful of your ingredients, it doesn't ruin the solution.

**Important:** Vitamin C is very safe. Even when given in very high doses it has almost no side effects other than transitory hypoglycemia in some cases, and minor dehydration (Levy 2012). The only caveat is that prior to its use, a simple blood test must be done to make sure that the patient is not one of those rare individuals who lack glucose-6-phosphate-dehydrogenase, an enzyme needed to utilize Vitamin C safely. Concerns about Vitamin C causing kidney stones have proven to be false, although it is still contraindicated in cases of iron overload (hemachromatosis) (Levy 2002).