

**SUGGESTED FORMULA****Doxycycline 10mg/mL Oral Suspension**

Version number: 1.0

Volume: 120 mL

*Doxycycline Hyclate, USP	1.2gm
*Calcium Hydroxide, USP(CA150)	0.252gm
Glycerin, Natural, USP (G1016)	30mL
Polysorbate 20, NF(PO132)	0.15mL
Sodium Metabisulfate, Granular, NF(SO182)	0.12gm
Carboxymethyl Cellulose Sodium, Medium Viscosity, USP(CA192)	0.6gm
Sorbitol Solution 70% (w/w) (SO220)	48mL
Liquid Flavor of choice (optional)	3.6mL
Purified Water, USP (W1014)	Q.S.120mL

*Before starting compound it is necessary to account for the activity (Assay) of the Doxycycline Hyclate. Once you have the desired weight of Doxycycline Hyclate you will need to adjust the Calcium Hydroxide calculation. To do this you can use this calculation: Doxycycline Weight (in Grams) times 0.21

SUGGESTED COMPOUNDING PROCEDURES

1. Calculate the required quantity of each ingredient for the amount to be prepared
2. Accurately weigh and/or measure all ingredients
3. Calibrate a beaker large enough to hold the entire preparation with a stir bar
4. In a beaker mix Glycerin with Sorbitol 70% solution
5. Dissolve Sodium Metabisulfite in Step#4 while mixing
6. Using a mortar and pestle, add Doxycycline Hyclate and add enough Purified Water to dissolve the Doxycycline. (Approximately 5mL for each gram of Doxycycline)
7. Add Calcium Hydroxide to Step#6 and mix with pestle until mixture thickens up and has a creamy consistency.
8. Add Polysorbate 20 to Step#7 while mixing, then add Purified Water in small increments while mixing. Use an amount of Purified Water that is approximately 17% of the final volume. Check the pH with a pH meter, it should be close to 7 (6.8-8)
9. Add Step#8 to Step#5 and mix well
10. Rinse the mortar and pestle with 3mL of Purified Water and combine the liquid in Step#8. Do this a total of three times.

11. Add flavor and mix well
12. Disperse Carboxymethylcellulose Sodium in Step#10 through a strainer (or sieve) and mix until homogenous.
13. Check the pH of Step#12 with a pH meter. If necessary adjust the pH to 6.5-8
14. Bring Step#13 to volume with Purified water and mix well
15. Suggested Quality Assessments – follow pharmacy SOPs:
 - a. Weight to Volume calculation
 - b. Color
 - c. Pourability
 - d. Settling
 - e. Resuspendability

Store in air tight amber plastic containers

Store Refrigerated

No claims are made as to the safety or efficacy of this preparation. This formulation is provided solely at the unsolicited request of the pharmacist.

Beyond-Use Dates of preparations are conservative estimates by the formulator using reference books, peer-reviewed literature, and intended duration of therapy, formulation from commercially available products, organoleptic observations and current USP guidelines. Compounders may have stability studies performed by a reputable laboratory if they wish to extend the Beyond-Use Date. It is recommended that you follow USP <795> recommendations for potency testing.

Beyond-Use Date should be assigned based on the current USP <795> Standards

Precautions should be taken to prevent cross-contamination and exposure of ingredients to the compounder and contamination of the preparation by the compounder. Wear appropriate protective equipment. Use safety enclosures (hoods) when weighing and mixing.

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