

* Emergency Extemporaneous Preparation of Oral Suspension from Tamiflu Capsules*

This article responds to your request for information on the emergency extemporaneous preparation of oral suspension from Tamiflu® (oseltamivir) capsules.

Tamiflu formulation recommendation

Tamiflu powder for oral suspension (6 mg/mL) is indicated for use in

- pediatric patients
- adult patients who have difficulty swallowing capsules, or
- patients in need of lower doses.

Compounding oral suspension

Oral suspension may be compounded from Tamiflu capsules in emergency situations if directed by the healthcare provider. The instructions below provide guidance on how to prepare a 6 mg/mL oral suspension for a 5-day course based on

- the patient weight
- various Tamiflu capsule strengths, and
- the amount of water containing 0.05% w/v sodium benzoate.¹

Purpose of sodium benzoate

Sodium benzoate acts as a preservative for the oral suspension.

Instructions for preparing the oral suspension:

1. Transfer the contents of the appropriate number of Tamiflu capsules into the bottle (Table 1).
2. Add the appropriate volume of water with sodium benzoate solution (Table 1).
3. Close the bottle with the cap and shake for 2 minutes.
4. Pull an ancillary label on the bottle indicating "Shake gently before use".
5. Place an appropriate expiration date label according to the storage conditions.
6. Instruct the parent or caregiver to discard any remaining solution after the patient has completed the full course of therapy.

Table 1. Number of capsules and amount of vehicle needed to prepare the total volume of 6 mg/mL suspension

Body weight	Total volume	Required number of Tamiflu capsules (mg of oseltamivir)	Required volume
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(kg) of suspension to be prepared		75 mg	45 mg	30 mg	of water containing 0.05% w/v sodium benzoate
up to 5 kg	25mL	2 capsules (150 mg)	--*	5 capsules (150 mg)	24.5 mL
>5 to 6 kg	30 mL	--*	4 capsules (180 mg)	6 capsules (180 mg)	29.5 mL
>6 to 15 kg	50 mL	4 capsules (300 mg)	--*	10 capsules (300 mg)	49.5 mL
>15 to 23 kg	75 mL	6 capsules (450 mg)	10 capsules (450 mg)	15 capsules (450 mg)	74 mL
>23 to 40 kg	100 mL	8 capsules (600 mg)	--*	20 capsules (600 mg)	98.5 mL
>40 kg	125 mL	10 capsules (750 mg)	--*	--*	123.5 mL

*We have no data on mixing capsule at this strength to obtain the target concentration since whole numbers of capsules cannot be used to achieve the target concentration. Please use an alternate capsule strength.

Storage of compounded oral suspension

Room temperature storage conditions

The compounded oral suspension is stable for 3 weeks, or 21 days, when stored at room temperature.¹ Do not store above 25°C.

Refrigerated storage conditions

The compounded oral suspension is stable for 6 weeks when stored at 2°C to 8°C.¹

Other external stability studies

Other external studies have evaluated the preparation and stability of Tamiflu in various extemporaneous liquid preparations.^{2,3}

References

1. Roche Internal Regulatory Document. (Accessed on 11Jul2023).
2. Ford SPBB, Kloesel LRBF, Grabenstein JRP. Stability of oseltamivir in various extemporaneous liquid preparations. Int J Pharm Compd 11:162-74. <https://www.ncbi.nlm.nih.gov/pubmed/23974623>

3. Winiarski A, Infeld M, Tscherne R, et al. Preparation and stability of extemporaneous oral liquid formulations of oseltamivir using commercially available capsules. *J Am Pharm Assoc* (2007) 47:747-55.
<https://www.ncbi.nlm.nih.gov/pubmed/18032138>