

25% SODIUM THIOSULPHATE IN THE TOPICAL TREATMENT OF CALCIPHYLAXIS

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WHAT WAS DONE?

A 25% sodium thiosulphate ointment (ST25%) requested by the Nephrology Department as an off-label use for the topical treatment of calciphylaxis in a patient who was unable to use intravenous sodium thiosulphate (ST) due to haemodynamic instability.

WHY WAS IT DONE?

Calciphylaxis

- A vascular disorder characterised by the accumulation of calcium in the small blood vessels of the skin and adipose tissue.
- Imbalance in calcium metabolism which causes calcium deposit in the arterioles favouring thrombosis in the residual lumen of these vessels.
- Painful skin lesions → ulcers

HOW WAS IT DONE?

- Online literature search of databases related to raw materials and excipients, experience of use with formulas prepared by other hospitals as well as articles related to calciphylaxis.
- For the production and quality control, the Standard Operating Procedure (SOP) for ointments described in the National Formulary was followed.
- To establish the risk level of the preparation and the expiry date, a risk matrix was used according to the Guide to Good Pharmacy Preparation Practice (GBPP).

WHAT WAS ACHIEVED?

It was decided to make a **ST25% ointment**

► Composition

Composition for 100 g		
Active ingredient	ST	25 g
Humectant, cosolvent	Glycerine	10 g
	Pure lanolin	32.5 g
Vehicles	White filmy petrolatum	32.5 g

► Production

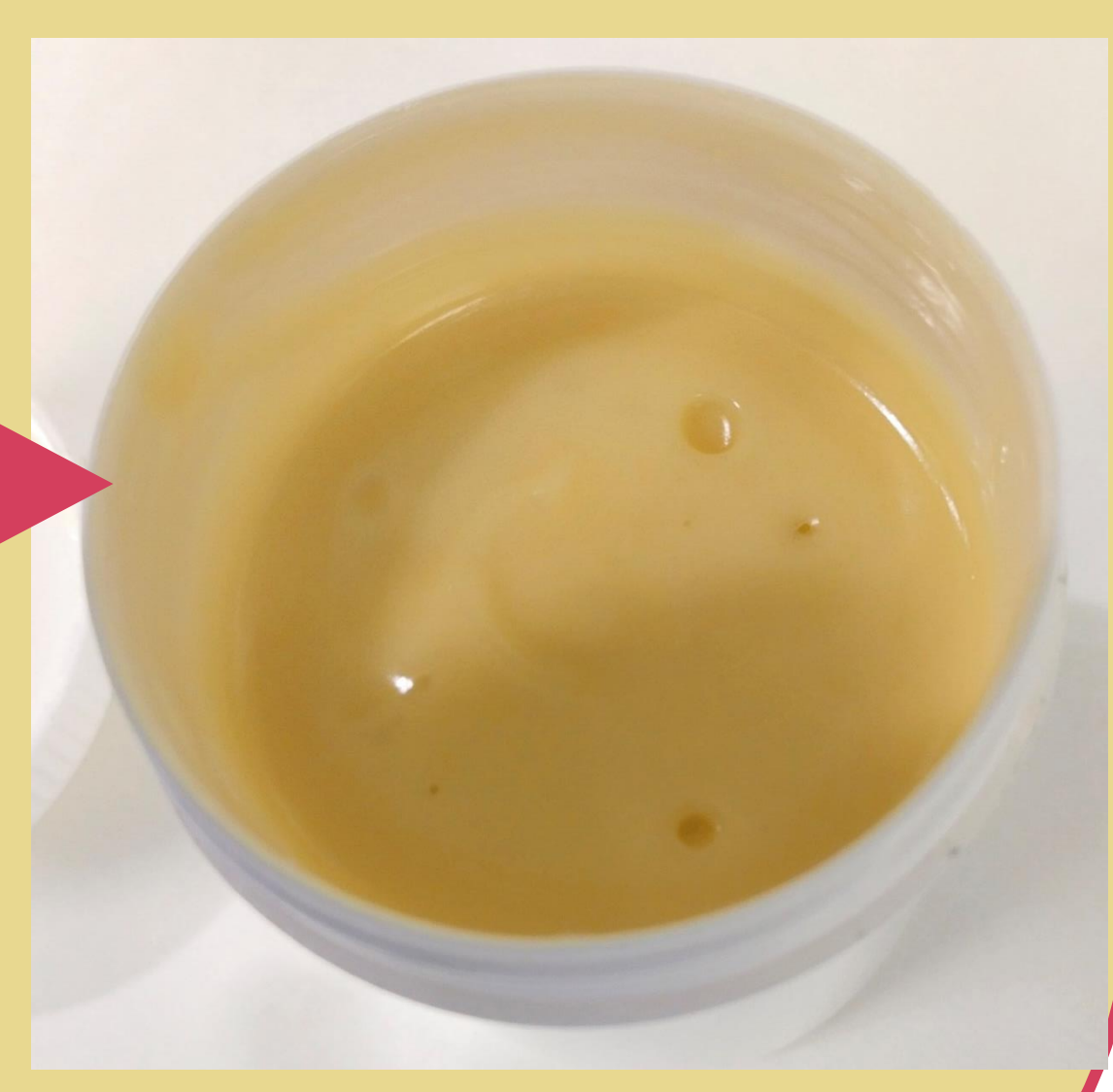
ST pulverisation in a mortar

Gradual addition of glycerine

Uniform paste without crystals

Mix of lanolin and filmy petrolatum in an emulsifier

Mix



► Expiry date: 30 days after opening

► Risk level: low

WHAT IS NEXT?

Calciphylaxis could be treated after intolerance to intravenous sodium thiosulphate by developing an ointment. The pharmacist through magistral formulation can provide pharmaceutical alternatives in situations where the use of commercially available medicines is not possible.

