

## Formulation Record

Name: Nomland's Lotion  
Strength: see below  
Dosage Form: Solution  
Route of Administration: Topical

Date of Last Review or Revision: 09/17/00

Person Completing Last Review or Revision: RPS

### Formula:

Ingredient	Quantity	Physical Description	Solubility	Therapeutic Activity
Resorcinol USP	3.0 g	white crystalline powder	1 g/0.9 ml water or alcohol	antipruritic, keratolytic
Sodium Borate (borax) NF	1.3 g	white crystalline powder	1 g/16 ml water; 1 g/1 ml glycerin	astringent
Glycerin USP	5.0 ml	clear, very viscous liquid	miscible with water	emollient, humectant
Starch NF	6.25 g	white powder	insoluble in water, insoluble in alcohol	absorbent
Calamine USP	6.25 g	pink powder	insoluble in water, insoluble in alcohol	astringent
Isopropyl Alcohol 70%	qs 100.0 ml	clear liquid	NA	solvent

### Example Calculations:

Least Weighable Quantity (LWQ) on Class A Prescription Balance is 120 mg. All quantities can be weighed.

Make sure borax (sodium borate decahydrate) is used, NOT anhydrous sodium borate.

### Equipment Required:

- Class A prescription balance meeting USP specifications
- mortar and pestle
- rubber spatula
- adapta-cap bottle - glycerin (viscous liquid)

### Method of Preparation:

1. Using the prescription balance, weigh the powders. Mark each weigh boat with the drug name.
2. Put calamine and starch in a mortar. Wet powders with glycerin using trituration to form a smooth paste. If needed, add a portion of the isopropyl alcohol.
3. Add the resorcinol to the mortar and triturate the mixture to a smooth paste.
4. Add the sodium borate to the mortar and triturate the mixture to a smooth paste.
5. Add isopropyl alcohol until the mixture becomes pourable. Pour into a calibrated bottle. (NOTE: the bottle should be calibrated with isopropyl alcohol, not water. After the calibration is done, keep the isopropyl alcohol in a beaker to compound the prescription.)
6. Rinse the mortar with portions of isopropyl alcohol. Use a RUBBER spatula to scap the sides of the mortar.
7. Bring the lotion to final volume with isopropyl alcohol.

### Description of Finished Product:

Pink lotion with slight aromatic aroma.

### Quality Control Procedures:

Product should be well mixed.

**Packaging Container:**

4 oz. plastic prescription bottle or squeeze bottle with tight closure.

**Storage Requirements:**

Resorcinol turns pink when exposed to light or air, or with contact with iron (Merck Index). Must be protected from light. NOTE: Calamine is Zn oxide with 0.5% ferric oxide.

Borax efflorescences in dry air forming a powder coating on the crystal (Merck Index).

Store at room temperature.

**Beyond-Use Date Assignment:**

USP Guidelines:

Aqueous solutions:

When prepared from ingredients in solid form, the beyond-use date should be not later than 14 days when stored at cold temperature.

Glycerin has some preservation properties. It will preserve "free water" equal to its volume.

Isopropyl alcohol 70%: "All concentrations greater than 70% are effective skin disinfectants. It will not destroy the spores of organisms such as *Clostridium tetani*, *Clostridium welchii*, or *Bacillus anthracis*. (Remington's 19<sup>th</sup> Edition, 1995)

Shake Well Before Using  
For External Use Only

**Source of Recipe:**

Apothecary Products, Inc., TSN 021

Supporting web page: <http://www.unc.edu/courses/phar0511/>, then select Pharmaceutical Solutions II: Nonaqueous

**Literature Information:**

*Merck Index, 9<sup>th</sup> Edition, 1976*

*Remington's 19<sup>th</sup> Edition, 1995*

Dobell's Solution is used as a non-irritating wash for mucous membranes:

1.5 g sodium borate

1.5 g sodium bicarbonate

0.3 ml liquid phenol

3.5 ml glycerin

qs 100 ml with water