

### Practice 12.8.

*Cold Cream* (USP 21 – NF 16)  
*Unguentum Leniens*

Spermaceti	125 g
White wax	120 g
Mineral oil	560 g
Sodium borate	5 g
Purified water	190 ml

Cut the spermaceti and the white wax to small pieces, melt them using water bath with the mineral oil, and continue heating until the temperature of the mixing reaches 70-72°C. Dissolve sodium borate in the purified water, warmed to 70-72°C and gradually add the warm solution to the melted mixture, stirring rapidly and continuously until it has congealed.

1. Write the Latin names of the ingredients in this formulation.
2. Describe the role of each item in the formulation.
3. What type of ointment is Cold cream? For what purpose is it used?

### Practice 12.11.

**Naproxen Gel**

Naproxen	10.0 g*
Carbopol 934	1.0 g
Triethanolamine	3.5 g
Isopropyl alcohol	20.0 g
Glycerine	7.0 g
Purified water	q.s. 100.0 g

\* *equivalent amount of naproxen sodium is used instead of naproxen.*

Carbopol 934 and glycerine are mixed, this mixture is homogenized by adding 50 ml of water. When a homogeneous appearance is obtained, some amount of water mixed with propylene glycol is added. After the naproxen sodium is dissolved in the required amount of water, the above mixture is added. triethanolamine is then dissolved in water and it is added the above mixture drop by drop. Stir until the gelation procedure is completed. The required weight is completed by water.

Questions:

1. What is the intended purpose of this formulation?
2. What kind of gel is this formulation?

**Study 12.13.**

Precipitated sulphur	1 g
Ichtyol	1 g
Juniper tar	10 g
Wool fat	10 g
Petrolatum	10 g

**Practice 12.14.**

	%
Sodium alginate	1.0
Cetyl alcohol	0.5
Triethanolamine	0.5
Glycerin	7.0
Stearic acid	5.0
Purified water	86.0

## 16.7. Shampoos

Shampoos are cleaning products that are applied to hair and skin with hair without any damage. Clear liquid; matt liquid, cream, aerosol, powder or dry shampoo formulations may be prepared.

### Practice 16.30.

#### Liquid Clear Shampoo

Sodium lauryl ether sulphate (30%)	35.00 g
Comperlan KD *	1.50 g
Sodium chloride	2.00 g
Citric acid	0.40 g
Sorbic acid (or formalin)	0.10 g
Protector	q.s.
Paint (FDC Yellow No: 5)	q.s.
Perfume	q.s.
Purified water	q.s. 100.00 ml

\* Coconut diethanolamide

The surface active ingredients are weighed and mixed thoroughly with a stick. In another beaker, sodium chloride, citric acid and sorbic acid are dissolved in 20 ml of water. This solution is added with stirring to the previous beaker and they are all stirred in the hot water bath homogenously. The whole mass is completed by adding hot water and 100 ml shampoo formulation can be obtained.

#### Questions:

1. Write down the intended purpose of each ingredients in this formulation.
2. Measure the pH of the shampoo. you are preparing. What is the limitation for the pH value of a good shampoo? Explain the importance of pH value?

**Practice 12.6.**

Rivanol Ointment

Rivanol		1.0 g
Petrolatum		
Wool fat	/ āā.	100.0 g
Purified water		20.0 g

The required amount of rivanol is dissolved in water. Wool fat is placed in glass mortar and the rivanol solution is added drop by drop. It is mixed with pestle until no aqueous solution remains. then petrolatum is added and mixed thoroughly.