



PHAR 632:
Alligation Calculation Questions

1. A surgeon needs 15 mL of diluted solution of H_2O_2 1:40 v/v.
How many mL of water and 20% H_2O_2 should be used?
2. How many milliliters of a 1:100 (w/v) stock solution should be used to make 2 liters of a 1:500 (w/v) solution?
3. How much water should be added to 1000 ml of 90% (v/v) alcohol to make 40 % (v/v) alcohol?
4. What is the percentage of zinc oxide in an ointment prepared by mixing 10 g of 1.0% ointment, 25 g of 2.0% ointment and 5.0 g of 0.5% ointment?
- 5- What is the final concentration of an alcohol mixture made by combining 50 mL of alcohol 70% and 60 mL of alcohol 95%?
- 6- A pharmacist wants to prepare 200 mL of ammonia solution, 10% w/v. How many milliliters of strong ammonia solution (28.5% w/w, specific gravity = 0.9) should be used?
- 7- In what proportion should alcohols of 90% and 40 % strength be mixed to make 70% alcohols?
- 8- In what proportion should 10% benzocaine ointment be mixed with an ointment base to produce a 5 % benzocaine ointment?
- 9- How many milliliters of 50% (w/v) dextrose solution and how many milliliters of 5% (w/v) dextrose solution are required to prepare 4500 ml of a 10% (w/v) solution?
- 10-How many grams of 5 % cream should be mixed with 100 g of 1.5% cream to make a 2% cream?
- 11-How many grams of drug should be added to 100 g of 10% drug ointment to prepare an ointment containing 20% of drug?
- 12-How many grams of drug should be added to 400 g of 20% drug ointment to prepare an ointment containing 25% of drug?
- 13-Calculate the final solution ratio strength, if 250 ml of a 1:800(v/v) solution are diluted to 1000 ml.
- 14-How many milliliters of water should be added to 50 ml of a 25% (w/v) stock solution of sodium chloride to prepare 0.9 % (w/v) sodium chloride solution?
- 15-How many ml of water should be added to 1.5 liter of 1:3000(w/v) solutions to make a 1:4000 (w/v) solution?

16-What is the ratio of alcohol 30% : alcohol 70% needed to prepare alcohol 60%?

17- A prescriber ordered 50 mL 30 microgram/ mL elixir for a patient, you decided to compound it using 0.05 mg/ mL elixir and nonmedicated elixir (10% alcohol). How much of each of the medicated and nonmedicated elixirs would you use?

18-How many mL of syrup 80% w/v sucrose should be mixed with 300 mL of syrup 50% w/v sucrose to prepare 70% w/v syrup ?

19-Calculate the percentage alcohol in the following

Rx

Coal tar solution 70 ml (85% alcohol)

Glycerin 150 mL

Alcohol 550 ml (Alcohol USP)

Boric acid solution qsad 1000 L

20-Rx

Belladonna tincture 20 mL (67% alcohol)

Elixir phenobarbital 70 mL (15% alcohol)

Alcohol USP qs

Simple Syrup qs ad 180 mL

How much alcohol is needed, so the final solution has 20% alcohol?

21-If 80 grams of 1% hydrocortisone cream is mixed with 100 grams of 2.5% hydrocortisone cream, what is the % of hydrocortisone in final cream?

22-Rx

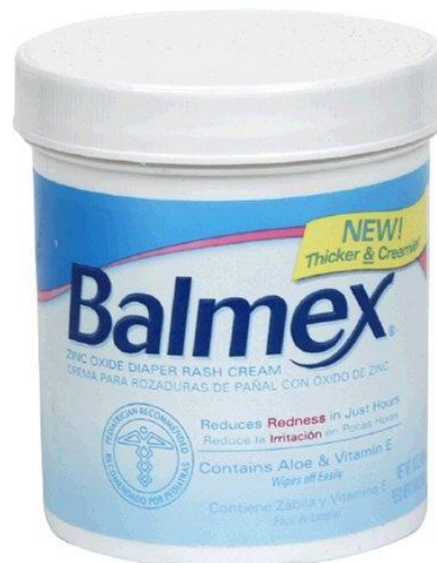
Hydrocortisone 0.1%

Zinc oxide 5%

Hydrophilic Base qsad 100 gram

Dispense 30 g

How would you prepare this prescription using the following creams?



11% ZnO

23-In what proportion should you mix the following 2 products to prepare hydrocortisone 0.6%

