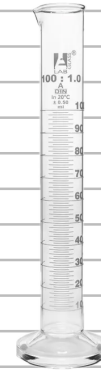


exp 5 : preparation of the primary emulsion

بنحضر جدول
عمل آسان:

1) بنجیل



و بنحط Mo
(mineral oil)

Formula 1



بدنا لفظ
emulsion

و هذا مفيد بالعملة
ممكن تخلي الدواء طعمه افضل

2) زياده الاستقرار للدواء

بالنابيه .

3) تقوى نوا الامينات الدواء



رج يكون مضمون



صمغ عربي

2) بنون Acacia



بنوزنه و بنحط بدمون

3) بنحط D.W ماء مقطر بار
وصه ثانيه من نفس هذ البرك

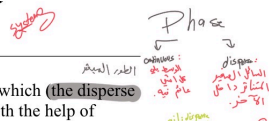


Emulsion



Emulsion:

is a dispersion system consisting of two immiscible liquids, one of which (the disperse phase) is distributed throughout the other (the continuous phase) with the help of emulsifying agents.



يمكن تمييز
emulsion

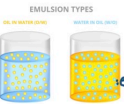
Pharmaceutical emulsions are prepared for:
Oral, external, parenteral and ophthalmic use as liquids or semisolids.

Emulsions are generally divided into two types:

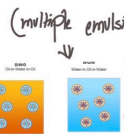
- (1) Oil in water (o/w)
- (2) Water in oil (w/o)
- (3) Also there is a third type called multiple emulsion

which available both as w/o/w or o/w/o.

The factors affecting the type of emulsion produced include the relative proportion of the two phases present and the type of emulsifying agent selected.



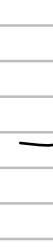
multiple emulsion



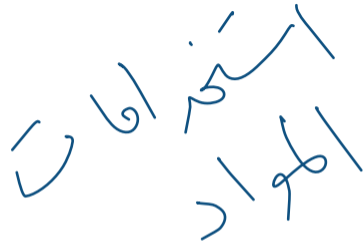
Emulsions are prepared by dry gum method, wet gum method, or Forbes (bottle) method.

Differences between O/W and W/O emulsions

4) بنحط syrup بار
اي جها ا صفر.



5) بنحط Vanillin
سكرل بار
Vanillin



- (1) **Mineral oil:** laxative
- (2) **Acacia :** emulsifying agent (gum).
- (3) **Syrup :** sweetening agent
- (4) **vanillin :** flavoring agent.
- (5) **Alcohol:** preservative.
- (6) **Water:** aqueous phase, vehicle.

Formula(1)

R_x 60 ml mineral oil emulsion(wet Gum) U.S.P.1980

Ingredients	Master formula	Scaled formula
Mineral oil(M.O.)	500ml	30 ml
Acacia	125gm	7,5 gm
Vanillin alcohol mixture	60 ml	3.6 ml
Syrup	100ml	6 ml
Water qs	q.s.1000ml	q.s. 60 ml

Write calculations

ہی کم برنا
زہیف من اطباء
صنہ جہ لانی

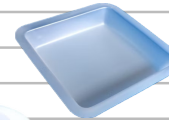
Get: Is a transparent, translucent, non-greasy, semisolid preparation, applied externally.

- Gels are considered colloidal dispersion because they contain particles of colloidal dimension (1 micron -100 microns)
- They are composed of small inorganic particles or large organic molecules in which the particles restrict movement of the dispersing medium by forming an interlacing three dimensional network of particles or solvated macromolecules
- Gels are made by using substances called gelling agent
- Gelling agent undergo extensive unfolding and enlargement when dissolved or dispersed in the dispersing medium
- This unfolding increases the viscosity of the dispersing medium and also restricts its movement
- Gels are useful as liquid formulations in oral, ophthalmic, nasal, topical, vaginal, and rectal administration
- By weight, gels are mostly liquid, yet they behave like solids due to a three-dimensional network within the liquid.
- It is the unfolding within the fluid that gives a gel its structure (hardness) and contributes to the adhesive stick.

Formula 2 : Gels

① نظف الأوعية كلهم

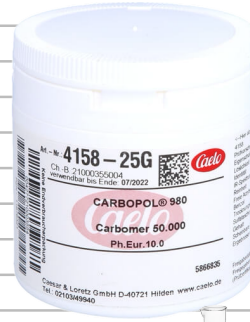
② نوزن clindamycin (مضاد حيوي)



و بنظفه بالحدث

بالاختير يكون لون أبيض مائل للأصفر

③ نوزن Carbomer



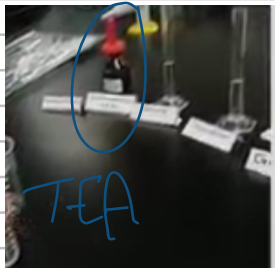
و بنظفه بالحدث



وهي يكون

④ بنظفه كحول (Isopropanol) بال

⑤ بنظفه glycerol بال ، واه تانيه صيغاً .



و بالاختير صيغ

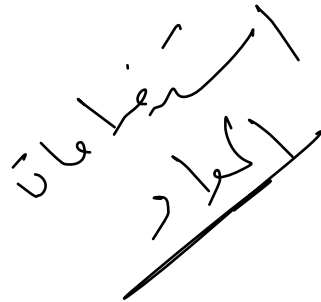


⑥ TEA (triethanol amine) 10 drops ، 2 drops ، 8 drops

و اه تانيه

⑦ D.W بنظفه بال





- (1) **Clindamycin:** antibacterial,
- (2) **Glycerin :** Humectant (emollient)
- (3) **Isopropanol:** preservative, co solvent, cleansing agent (organic solvent dissolve waxy layer on skin).
- (4) **Carbomer:** gelling agent, acidic and should be neutralized by a base (i.e. TEA)
- (5) **Triethanolamine (TEA):** neutralizing agent
- (6) **Water:** vehicle

Formula (2):**Rx. 25 gm Clindamycin Gel**

هذا الطابقي
حصره
عبد لاني

Ingredients	Master formula	Scaled formula
Clindamycin	1 gm	0.25 gm
Glycerol	20 gm	5 gm
Isopropyl alcohol	20 ml	5 ml
Carbomer	0.8gm	0.2 gm
Triethanolamine(TEA)	0.8 ml	(5 ml) 4 drops
Water	q.s. 100gm	q.s. 25 gm

الترابو



1) D.W. بلي جهازان بنظف و small beaker

2) بنظف على ال D.W مادة ال clindamycin بلي وزناها بنظف فيج بار ال glass rod

3) هلا بنظف على الخلاء بلي قبل (D.W + clindamycin) بنظف عليها شوي شوي carbomer بلي وزناها بنظف فيج

4) بنظف على Isopropyl بنظف فيج

5) بنظف على glycerin بنظف فيج

6) بنظف فيج Beaker مبرد و بنظف فيه D.W جمع من بنظف بار cylinder مبرد بنظف TEA بنظف

7) بنظف على ال beaker الليم بلي فيه كلش بنظف شوي شوي (water/TEA)

بنظف فيج و صيغ بار هنا اقل <= صيغ خالصا