

SUBJECT: PHARMACEUTICS I

PRACTICAL MANUAL BOOK

**LAB MANUAL
PHARMACEUTICS I
(B. Pharm 1ST SEM)**

IQ City Institute of Pharmaceutical Sciences

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EXPERIMENT – 1

PREPARATION OF SIMPLE SYRUP

Aim: To prepare and submit 30 ml of Simple Syrup IP.

Reference:

Mehta R.M., Dispensing Pharmacy, Vallabh Prakashan, New Delhi, 2017; 155 – 156.

Requirements:

Apparatus Required:

Mortar & pestle, weigh balance, measuring cylinder, glass rod, spatula, beaker, stirrer etc.

Chemical Required:

Sucrose and purified water.

Principle:

Syrups are sweetened, viscous, concentrated solutions of sucrose or other sugars in water or any other suitable aqueous vehicles. These are further classified into 2 classes.

1. Simple flavored syrups
2. Medicated syrups

Simple flavor syrups:

Do not contain any medicament or drug. These syrups are used as a vehicle for other Liquid preparation to mask the disagreeable taste of drug.

Medicated syrups:

These contain some medicinal substance along with their other additives. Sucrose concentration in simple syrup is a 66.7 % w/w.

Formula:

Sl. No.	Ingredients	Official formula	Required quantities
1	Sucrose	667gm	
2	Purified water, quantity sufficient to produce (q. s)	1000ml	30ml

Calculations:

Procedure:

Add water to sucrose in a beaker and heat on water bath until sucrose dissolves add sufficient boiling water to produce the final volume. Filter hot syrup through cotton wool. cool the syrup and preservatives may be added for stability. Add more purified water to make up the required volume. Filter and transfer in a suitable container.

Category:

Sweetening agent, vehicle

Use:

Simple Syrups are used as vehicles for drugs such as antibiotics, Antihistaminic, antitussives and vitamins.

Storage:

Stored in a well closed container at a temperature not exceeding 25°C.

Label:

SIMPLE SYRUP IP 30ml		
Composition: Sucrose Purified water	BATCH NO.	MFG. DATE:
	MFG. LIC. NO.:	EXPIRY DATE:
Category: Sweetening agent, vehicle		
FOR INTERNAL USE ONLY.		
Use: Simple Syrups are used as vehicles for drugs such as antibiotics, Antihistaminic, antitussives and vitamins.		
Storage: Stored in a well closed container dark in a cool place and temperature not exceeding 25°C		
MFG. BY: ABCD	Batch:	Roll No.:

Report:

EXPERIMENT – 2

PREPARATION OF AQUEOUS IODINE SOLUTION

Aim: To prepare and submit 30ml of aqueous iodine solution.

Reference:

Gupta A.K., Jain V.K., Pharmaceutics-I Practical Note Book, CBS Publishers & Distributors Pvt.Ltd.2020; 15

Requirements:

Apparatus Required:

Mortar & pestle, weigh balance, measuring cylinder, glass rod, spatula, beaker, funnel etc.

Chemical Required:

Iodine, potassium iodide and purified water

Principle:

In pharmaceutical practice solution are defined as liquid preparation containing one or more chemical substances usually dissolved in water. Aqueous iodine solution is also known as Lugol's Solution and contain 5% w/v of iodine and 10% w/v of potassium iodide.

Formula:

Sl. No.	Ingredients	Official formula	Required quantities
1	Iodine	50gm	
2	Potassium iodide	100gm	
3	Purified water	1000ml	30ml

Calculation:

Procedure:

Dissolve potassium iodide and iodine in a purified water. Shake well till it dissolve. Then add sufficient purified water to make up the required volume. Filter and transfer in a suitable container.

Use: Antiseptic

Storage: Well closed container made up of iodine resistant material.

Dose: 0.3 to 2ml.

Label:

AQUEOUS IODINE SOLUTION 30ml		
Composition: Iodine Potassium iodide Purified water	BATCH NO.:	MFG. DATE:
Category: Antiseptic	MFG. LIC NO.:	EXPIRY DATE:
FOR EXTERNAL USE ONLY		
Use: It is used as an antiseptic		
Storage: Stored in a well closed container at a temperature not exceeding 25 ⁰ C		
MFG BY: ABCD	Batch:	Roll No.:

Report:

EXPERIMENT – 3

PREPARATION OF CALAMINE LOTION

Aim: To prepare and submit 30ml of Calamine lotion.

Reference:

Mehta R.M., Dispensing Pharmacy, Vallabh Prakashan, New Delhi, 2017; 165 -166

Requirements:

Apparatus Required:

Mortar & pestle, weigh balance, measuring cylinder, glass rod, spatula, beaker, funnel etc.

Chemical Required:

Calamine, Zinc oxide, Bentonite, Glycerin, sodium citrate, Liquefied phenol, rose water, Purified water.

Principle:

It is a suspension containing in-diffusible Solids for external use. Here we use bentonite as a suspending agent, dispersion of bentonite is observed if it is mixed intimately with insoluble medicament i.e. calamine. Zinc oxide used here acts as astringent & protective agent. Sodium citrate causes partial deflocculation of calamine and transfers bentonite from gel to solid form in its absence. Hence it is thicker & difficult to pour from bottle.

Formula:

Sl. No.	Ingredients	Official formula	Required quantities
1	Calamine	150gm	
2	Zinc oxide	50gm	
3	Bentonite	15gm	
4	Glycerine	5ml	
5	Sodium citrate	5ml	
6	Liquefied phenol	50ml	
7	Rose water	1000ml	30ml

Calculation:

Procedure:

- Mix the weighed amounts of Calamine, ZnO, Bentonite in a mortar & pestle.
- Triturate with a solution of sodium citrate in 5 ml of water.
- Add required amounts of liquefied phenol & Glycerine.
- Mix well, to this add more of vehicle to produce required volume, mix thoroughly so as to get uniform preparation. Filter and transfer in a suitable container.

Directions:

Shake well before use. To be applied 2-3 times a day.

Uses:

- This is used as astringent.
- Used as soothing agent and gives relief from itching and pain during skin diseases and infections.
- It is also used in ring worm infections.

Storage: Stored in a well closed container dark in a cool place at a temperature not exceeding 25°C.

Label:

CALAMINE LOTION		
30ml		
Composition: Calamine Zinc oxide Bentonite Glycerine Sodium citrate Liquefied phenol Rose water	BATCH NO. MFG. DATE: MFG. LIC. NO.: EXPIRY DATE:	
Category: Astringent		
FOR EXTERNAL USE ONLY		
Use: This is used as astringent		
Storage: Stored in a well closed container dark in a cool place and temperature not exceeding 25°C		
MFG BY: ABCD	Batch:	Roll No.:

Report:

EXPERIMENT – 4

PREPARATION OF SULPHUR OINTMENT

Aim: To prepare and submit 100gm of Sulphur ointment I.P.

Reference:

- ✓ Mehta R.M., Dispensing Pharmacy, Vallabh Prakashan, New Delhi, 2017; 238
- ✓ Pharmacopoeia of India.

Requirements:

Apparatus Required:

Mortar & pestle, weigh balance, measuring cylinder, glass rod, spatula, beaker, ointments slab etc.

Chemical Required:

Sublimed Sulphur, wool fat, hard paraffin, white soft paraffin, Cetostearyl alcohol.

Principle:

Ointments are semisolid preparation meant for external application to the skin or mucous membrane. They usually contain medicament or medicaments which are dissolved or dispersed or suspended or emulsified as an antiseptic, antifungal agents and Sulphur ointment used to treat different skin infections.

Formula:

Preparation of simple ointment base:

Sl. No.	Ingredients	Official formula	Required quantities
1	Wool fat	5gm	
2	Hard paraffin	5gm	
3	Ceto stearyl alcohol	5gm	
4	White soft paraffin	85gm	100gm

Sl. No.	Ingredients	Official formula	Required quantities
1	Sublimed Sulphur	10gm	
2	Simple ointment	90gm	100gm

Calculation:

Procedure:

Preparation of simple ointment:

- ✓ Required quantity of hard paraffin and Cetostearyl alcohol.
- ✓ Wool fat and white soft paraffin were incorporated and stirred until all ingredients were melted.
- ✓ The mixture was stirred thoroughly until cooled.

Preparation of Sulphur ointment:

Sublimed Sulphur was triturated and finely shifted through sieve no.85. Required quantity of Sulphur was taken on ointment base and mix small amount of ointment of simple ointment was gradually added until homogeneous mass was obtained.

Direction: Apply as directed.

Use:

- ✓ This are used to treat acne Sulfur ointment.
- ✓ This are used to treat seborrheic dermatitis and scabies.

Storage: Keep in well closed container and cool place.

SULPHUR OINTMENT I.P 100gm		
Compositions: Wool fat Hard paraffin Cetostearyl alcohol White soft paraffin	BATCH NO.	MFG. DATE:
	MFG. LIC. NO.:	EXPIRY DATE:
Category: Acne		
FOR EXTERNAL USE ONLY.		
Use: This are used to treat acne Sulphur ointment and also used to treat seborrheric dermatitis and scabies.		
Storage: Stored in a well closed container dark and cool place and temperature not exceeding 25 ⁰ C		
MFG BY: ABCD	Batch:	Roll No.:

Label:

Report:

EXPERIMENT – 5

PREPARATION OF MAGNESIUM HYDROXIDE MIXTURE

Aim: To prepare and submit 20ml of Magnesium Hydroxide mixture.

Reference:

- Mehta R.M., Dispensing Pharmacy, Vallabh Prakashan, New Delhi, 2017; 150-151.
- Subrahmanyam C.V.S., Thimmasetty J.J, Prabhushankar G.L., Laboratory manual of Pharmaceutics. Vallabh Publication, Delhi, 2019; 47-48.

Requirements:

Apparatus Required:

Mortar & pestle, weigh balance, measuring cylinder, glass rod, spatula, beaker, funnel etc.

Chemical Required:

Magnesium sulphate, sodium hydroxide, light magnesium oxide and purified water.

Principle:

It is aqueous of colloidal dispersion of magnesium hydroxide. It is prepared by precipitation method and hydration method or both. It is not excessively thick or thin but holds design viscosity, it has two actions in low dose (1 -4ml) it acts as an antacid, while in higher dose (8–10ml) it acts as a laxative.

Reaction:



Formula:

Sl. No.	Ingredients	Official formula	Required quantities
1	Magnesium sulfate	47.5gm	
2	Sodium hydroxide	50.5gm	
3	Light magnesium oxide	15gm	
4	Purified water	1000ml	20ml

Calculation:

Procedure:

- ✓ Dissolve sodium hydroxide in sufficient purified water contained in a beaker.
- ✓ Triturate Magnesium oxide in a mortar with the solution of hydroxide to form a smooth cream.
- ✓ Dissolve magnesium sulphate in sufficient water in a separate beaker.
- ✓ Add cream to the solution of magnesium sulphate with constant stirring. This mixture is set-aside for 48 hrs.
- ✓ After 48 hrs pour off the supernatant liquid.
Add hot purified water to the precipitate of magnesium hydroxide to wash the sulphate ions from precipitate.
- ✓ Transfer the washed precipitate to the suitable container and label it.

Dose: 1 to 4ml as antacid, 8 to 10ml as laxative.

Storage: Stored in an air tight container in a cool place.

Direction: Shake well before use

Label:

MAGNESIUM HYDROXIDE MIXTURE		
20ml		
Composition: Magnesium sulfate Sodium hydroxide Light magnesium oxide Purified water	BATCH NO.	MFG. DATE:
	MFG. LIC. NO.:	EXPIRY DATE:
Category: Laxative.		
FOR INTERNAL USE ONLY		
Use: Laxative & Antacid		
Storage: Stored in a well closed container dark in a cool place and temperature not exceeding 25 ⁰ C		
MFG BY: ABCD	Batch:	Roll No.:

Report:

EXPERIMENT – 6

PREPARATION OF TURPENTINE LINIMENT

Aim: To prepare and submit 30ml of Turpentine Liniment.

Reference:

Mehta R.M., Dispensing Pharmacy, Vallabh Prakashan, New Delhi, 2017;164 -165

Requirements:

Apparatus Required:

Mortar & pestle, weigh balance, measuring cylinder, glass rod, spatula, beaker, funnel etc.

Chemical Required:

Soft soap, camphor, turpentine oil, purified water.

Principle:

Liniments are solution or suspensions or emulsion intended for external application. They are generally applied with massage. Liniment of turpentine is used externally in a patient suffering from arthralgia, myalgia, fibrositis, and sprain.

Formula:

Sl. No.	Ingredients	Official formula	Required quantities
1	Soft soap	9gm	
2	Camphor	5gm	
3	Turpentine oil	69gm	
4	Purified water	1000ml	30ml

Calculation:

Procedure:

- ✓ Take the required quantity of soft soap in the mortar and add water in thrice the quantity as soft soap.
- ✓ Triturate to make a soapy solution.
- ✓ Take the required quantity of oil of turpentine in a dry measure glass and dissolve camphor in it.
- ✓ Add this solution drop by drop in the mortar and triturate continuously and rapidly till the primary emulsion is formed.
- ✓ Add a small quantity of water and transfer it to the previously calibrated round vertically ribbed and blue and amber colored bottle.
- ✓ Adjust to the required volume by adding water, attach the cork and label it.

Use:

Liniment of turpentine is used externally in a patient suffering from arthralgia, myalgia, fibrositis, and sprain.

Storage:

It should be store in a well closed container dark in a cool place.

Label:

TURPENTINE LINIMENT		
30ml		
Composition: Soft soap Camphor Turpentine oil Purified water	BATCH NO.	MFG. DATE:
	MFG. LIC. NO.:	EXPIRY DATE:
Category: Arthralgia		
FOR EXTERNAL USE ONLY.		
Use: Liniment of turpentine is used externally in a patient suffering from arthralgia, myalgia, fibrositis, and sprain.		
Storage: Stored in a well closed container dark in a cool place and temperature not exceeding 25°C		
MFG BY: ABCD	Batch:	Roll No.

Report:

EXPERIMENT – 7

PREPARATION OF EFFERVESCENT GRANULES

Aim: To prepare and submit 10gm of Effervescent granules.

Reference:

- ✓ Mehta R.M., Dispensing Pharmacy, Vallabh Prakashan, New Delhi, 2017; 127
- ✓ Subrahmanyam C.V.S., Thimmasetty. J, Prabhushankar G.L., Laboratory manual of Pharmaceutics. Vallabh Publication, Delhi, 2019; 88

Requirements:

Apparatus Required:

Mortar & pestle, weigh balance sieve shaker, China dish etc.

Chemical Required:

Sodium phosphate, sodium bicarbonate, tartaric acid.

Principle:

Effervescent preparation provides effervescence of CO₂ gas when added to water by a chemical reaction between alkali metal carbonates or bicarbonates with tartaric acid or citric acid. This preparation is intended to be dissolved in water before it is being taken orally. The CO₂ gas is released as a result of acid-base reaction. The preparation is advised to be taken while effervescence.

Formula:

Sl. No.	Ingredients	Official formula	Required quantities
1	Sodium phosphate	0.9gm	
2	Sodium bicarbonate	2.1gm	
3	Tartaric acid	1.1gm	
4	Citric acid	0.7gm	10gm

Calculation:

Procedure:

- ✓ Citric acid is mixed with sodium phosphate and tartaric acid.
- ✓ Add sodium bicarbonate to the above mixture and mix it gently.
- ✓ The final powdered mixture is placed in a China dish previously heated on water bath.
- ✓ Stir the mixture with the help of a spatula constantly still it becomes damp mass.
- ✓ Pass damp mass through sieve number 8.
- ✓ Dry granules at a room temperature not exceeding 54⁰C.
- ✓ Pass dry granules through appropriate sieve.
- ✓ Pack dry uniform sized granules in a wide mouthed bottle.

Dose: Each 5g contains sodium phosphate 1g.

Storage: Stored in air tight container in a cool place,

Use: Saline purgative and mild diuretic.

Label:

EFFERVESCENT GRANULES		
10gm		
Composition: Sodium phosphate Sodium bicarbonate Tartaric acid Citric acid	BATCH NO.	MFG. DATE:
	MFG. LIC. NO.:	EXPIRY DATE:
Category: Saline purgative and Mild diuretic		
FOR INTERNAL USE ONLY.		
Use: Saline purgative and Mild diuretic		
Storage: Stored in a well closed air tight container in a cool place and temperature not exceeding 25°C		
MFG BY: ABCD	Batch:	Roll No.:

Report:

EXPERIMENT – 8

PREPARATION OF DUSTING POWDER

Aim: To prepare and submit 30gm of Dusting powder.

Reference:

- ✓ Mehta R.M., Dispensing Pharmacy, Vallabh Prakashan, New Delhi, 2017; 115

Requirements:

Apparatus Required: Mortar & pestle, weigh balance, sieve shaker etc.

Chemical Required: Purified talc, starch, zinc oxide

Principle:

Dusting powders are usually mixtures of two or more substances in fine powder intended for external use. Starch possess binding as well as good flow property which helps the powder to flow easily, spread uniformly and cling to the skin on application. Talc is natural mineral substance zinc oxide is protectant.

Formula:

Sl. No.	Ingredients	Official formula	Required quantities
1	Purified talc	1gm	
2	Starch	0.5gm	
3	Zinc oxide	0.5gm	30gm

Calculation:

Procedure:

- ✓ Weigh the required quantity of purified talc and zinc oxide.
- ✓ Mix zinc oxide with starch and incorporate purified talc.
- ✓ Mix thoroughly and pass the mixed powder through a sieve no.120 to remove gritty particles.
- ✓ After sieving whole of the powder must be again slightly mixed.
- ✓ Pack the powder to protect it from air, moisture and contamination.

Storage: Store in a well closed container and should be kept in a cool place.

Category: Antiseptic dusting powder.

Caution: Do not apply on raw (or) weeping surface.

Direction: For external use only.

Use: Antiseptic.

Label:

DUSTING POWDER		
30gm		
Composition: Purified talc Starch Zinc oxide	BATCH NO.	MFG. DATE:
Category: Antiseptic	MFG. LIC. NO.:	EXPIRY DATE:
FOR EXTERNAL USE ONLY.		
Use: Antiseptic		
Storage: Store in a well closed container and should be kept in a cool place.		
MFG BY: ABCD	Batch:	Roll No.:

Report:

EXPERIMENT – 9

PREPARATION OF PIPERAZINE CITRATE ELIXIR

Aim: To prepare and submit 20ml of Piperazine citrate elixir.

Reference:

Mehta R.M., Dispensing Pharmacy, Vallabh Prakashan, New Delhi, 2017; 158 - 160

Requirements:

Apparatus Required:

Mortar & pestle, weigh balance, measuring cylinder, glass rod, spatula, beaker etc.

Chemical Required:

Piperazine citrate, chloroform spirit, glycerin, orange oil, syrup, purified water.

Principle:

Piperazine Citrate Elixir is mainly an anthelmintic. This kind of drug works to paralyze parasites that may invade the host body and cause diseases. It therefore helps to remove the parasites and thus inhibit the spread of disease in the body. The medicine is used to treat ascariasis, enterobiasis, also called common pinworms. The drug immobilizes the parasitic worms first, which are later passed out of the body through stool. This drug can only be obtained with a proper prescription by your doctor and is not available over the counter. The medicine is available in the form a tablet or as syrup.

Formula:

Sl. No.	Ingredients	Official Formula	Required quantities
1	Piperazine citrate	180gm	
2	Chloroform spirit	0.5ml	
3	Glycerine	100ml	
4	Orange oil	0.25ml	
5	Syrup	500ml	
6	Purified water	1000ml	20ml

Calculation:

Procedure:

Dissolve piperazine citrate in part of water. Then mix with agitation orange oil, glycerin, syrup in chloroform spirit and pour in watery solution of piperazine citrate. Adjust the volume with sufficient purified water. Filter and transfer in a suitable container.

Storage:

Stored in a well closed container at a temperature not exceeding 25⁰C.

Use:

It is used as anthelmintic which is used in the treatment of worm infections.

Label:

PIPERAZINE CITRATE ELIXIR		
20ml		
Composition: Piperazine citrate Chloroform spirit Glycerin Orange oil Syrup Purified water	BATCH NO.	MFG. DATE:
Category: Anthelmintic	MFG. LIC. NO.:	EXPIRY DATE:
FOR INTERNAL USE ONLY.		
Use: It is used as an anti-helminthics are used in the treatment of worm infections.		
Storage: Stored in a well closed container dark in a cool place and temperature not exceeding 25°C		
MFG BY: ABCD	Batch:	Roll No.:

Report:

EXPERIMENT – 10

PREPARATION OF IODINE THROAT PAINT

Aim: To prepare and submit 30ml of Iodine Throat Paint (Mandles Paint)

Reference:

1. Mehta R.M., Dispensing Pharmacy, Vallabh Prakashan, New Delhi, 2017; 169 - 170
2. Pharmacopoeia of India.

Requirements:

Apparatus Required:

Mortar & pestle, weigh balance, measuring cylinder, glass rod, spatula, beaker, funnel etc.

Chemical Required:

Potassium Iodide, Iodine, alcohol, purified water, peppermint oil, Glycerin.

Principle:

Mandles throat paint is the solution of iodine in glycerin. Iodine and potassium iodide form complexes such as KI, KII, KII₂, KII₃. These poly iodides are more soluble in solvents like water, glycerin and hydro alcoholic mixture. These poly iodides, because of high solubility keeps iodine in solution. Glycerin is used as a vehicle in preparation to get a prolonged contact of medicament to the infected surfaces because of its high viscosity. Peppermint oil is used as flavor the throat paint and to keep it in solution little alcohol is added.

Formula :

Sl. No.	Ingredients	Official formula	Required quantities
1	Potassium iodide	5gm	
2	Iodine	10.5gm	
3	Alcohol 90%	40ml	
4	Water	25ml	
5	Peppermint oil	4ml	
6	Glycerine q.s	1000ml	30ml

Calculation:**Procedure:**

Accurately weighed of potassium iodide was accurately dissolved in water and iodine was added to it. The solution was stirred until iodine completely dissolves, then peppermint oil was added to alcohol in another container. Both the solutions were mixed well make up to volume with glycerin then the throat pain was transferred to a clean wide mouth container.

Use: Mandl's paint is a throat paint used in the treatment of sore throat

Storage: Stored in a cool place in a well closed container.

Category: Throat paint.

Special instruction: Shake well before use

Label:

IODINE THROAT PAINT (MANDLES PAINT)		
30ml		
Composition: Potasium iodide Iodine Alcohol 90% Water Peppermint oil Glycerine	BATCH NO.	MFG. DATE:
	MFG. LIC. NO.:	EXPIRY DATE:
Category: Throat paint.		
FOR INTERNAL USE ONLY.		
Use: Mandl's Paint is a throat paint used in the treatment of sore throat		
Storage: Stored in a well closed container at a temperature not exceeding 25 ⁰ C		
MFG BY: ABCD	Batch:	Roll No.:

Report:

EXPERIMENT – 11

PREPARATION OF ORS POWDER

Aim: To prepare and submit 20gm of ORS powder (WHO)

Reference:

1. Mehta R.M., Dispensing Pharmacy, Vallabh Prakashan, New Delhi, 2017; 123
2. Subrahmanyam C.V.S., Thimmasetty .J, Prabhushankar G.L., Laboratory manual of Pharmaceutics. Vallabh Publication, Delhi, 2019; 90

Requirements:

Apparatus Required:

Mortar & pestle, weigh balance, sieve shaker etc.

Chemical Required:

Sodium chloride, glucose, potassium chloride, dry sodium citrate.

Principle:

ORS powder is used as an electrolyte replenisher and usually given in case of severe watery diarrhea. The quantity of all salts is according to the osmolarity required as recommended by WHO guidelines. Addition of powders in the geometrical ratio is to obtain uniform powder mixture. To protect the powder from the effect of atmospheric conditions.

Formula:

Sl. No.	Ingredients	Official formula	Required quantities
1	Sodium chloride	2.6gm	
2	Glucose	13.5gm	
3	Potassium chloride	1.5gm	
4	Tri sodium citrate dihydrate	2.4gm	20gm

Calculation:

Procedure:

1. Weigh sodium chloride, glucose, potassium chloride, disodium citrate in to the mortar.
2. Mix all the salts by adding them in geometrical ratio
3. Store the powder mixture into a airtight container and label it.

Dose: Each 5g is dissolved in 250ml of purified water.

Use: Electrolyte replenisher.

Storage Keep in an airtight container.

Label:

ORS POWDER (WHO) 20gm		
Composition : Sodium chloride Glucose Potassium chloride Tri sodium citrate dihydrate Category: Electrolyte replenisher.	BATCH NO.	MFG.
	DATE:	MFG. LIC. NO.:
	DATE:	EXPIRY
FOR INTERNAL USE ONLY.		
Use: Electrolyte replenisher.		
Storage: Stored in a well closed airtight container at a temperature not exceeding 25 ⁰ C		
MFG BY: ABCD	Batch:	Roll No.:

Report:

EXPERIMENT – 12

PREPARATION OF IODINE GARGLE

Aim: To prepare and submit 30ml of Iodine gargle

Reference:

1. Mehta R.M., Dispensing Pharmacy, Vallabh Prakashan, New Delhi, 2017; 168
2. Subrahmanyam C.V.S., Thimmasetty .J, Prabhushankar G.L., Laboratory manual of Pharmaceutics. Vallabh Publication, Delhi, 2019; 74

Requirements:

Apparatus Required:

Mortar & pestle, weigh balance, measuring cylinder, glass rod, spatula, beaker, funnel etc.

Chemical Required:

Povidone iodine, purified water,

Principle:

It is used to treat infections of lining of mouth and throat such as gingivitis and mouth ulcers. It is an antiseptic active against micro-organisms, bacteria, fungus, virus, protozoa and bacterial spores. It is also used for oral hygiene before and after dental or oral surgery. It is used by diluting with equal volume of warm water gargle up to 10ml for 30 sec without swallowing. These are supplied in coloured fluted bottles.

Formula:

Sl. No.	Ingredients	Official formula	Required quantities
1	Povidone iodine	1gm	
2	Purified water q.s	100ml	30ml

Calculations:

Procedure:

Weighed 1gm of povidone iodine and transfer to 100ml measuring cylinder and add boil and cooled purify water to the measuring cylinder, stir well. Transfer the solution in an appropriate ambered colored glass bottle and label it.

Direction:

Dilute the solution with equal volume of water (warm) Before use. Gargle for 30sec.

Storage:

Store in a cool and dark place.

Use:

Iodine is an antiseptic suitable for use on the skin and mucosa.

Label:

IODINE GARGLE E 30ml	
Compositions: Povidone iodine Purified water	BATCH NO. MFG. DATE: MFG. LIC. NO.: EXPIRY DATE:
Category: Antiseptic	
FOR INTERNAL USE ONLY.	
Use: Iodine is an antiseptic suitable for use on the skin and mucosa	
Storage: Stored in a well closed container cool and dark place and temperature not exceeding 25°C	
MFG BY: ABCD	Batch: Roll No.:

Report:

EXPERIMENT – 13

PREPARATION OF CHLORHEXIDINE MOUTHWASH

Aim: To prepare and submit 30ml of Chlorhexidine mouthwash

Reference:

1. Mehta R.M., Dispensing Pharmacy, Vallabh Prakashan, New Delhi, 2017; 169
2. Subrahmanyam C.V.S., Thimmasetty .J, Prabhushankar G.L., Laboratory manual of Pharmaceutics. Vallabh Publication, Delhi, 2019; 79-80

Requirements:

Apparatus Required:

Mortar & pestle, weigh balance, measuring cylinder, glass rod, spatula, beaker, funnel etc.

Chemical Required:

Zinc sulphate, Zinc chloride, Dil HCl, tartrazine solution, chloroform water,

Principle:

Zinc sulphate, Zinc chloride, acts as an astringent and dil HCl is added to form clear solution, compound tartrazine is a coloring agent and chloroform water acts as a vehicle. This is prepared by simple solution method.

Formula:

Sl. No.	Ingredients	Official formula	Required quantities
1	Zinc sulphate	20gm	
2	Zinc chloride	1gm	
3	Dil HCL	1ml	
4	Compound tartrazine solution	1ml	
5	Chloroform water q.s	100ml	30ml

Calculations:

Procedure:

Dissolve Zinc sulphate, Zinc chloride in chloroform water add dil HCL to make clear solution. Add compound tartrazine solution and finally make up with chloroform water. Add more of purified water to produce the required volume. Filter and transfer in a suitable container.

Direction: For oral use only

Uses: Astringent

Storage: Store in a well closed container & in cool place

Label:

CHLORHEXIDINE MOUTHWASH 30ml		
Compositions: Zinc sulphate Zinc chloride Dil HCL Compound tartrazine solution Chloroform water	BATCH NO.	MFG. DATE:
	MFG. LIC. NO.:	EXPIRY DATE:
Category: Astringent		
FOR INTERNAL USE ONLY.		
Use: It is used as an astringent		
Storage: Store in a well closed container & in cool place		
MFG BY: ABCD	Batch:	Roll No.:

Report: