

Experiment No. 1 (Glass wares)

Aim $\Rightarrow$  To study the different glass wares used in Pharmaceutical Lab.

Reference $\Rightarrow$

from internet $\rightarrow$ (i) wikipedia
(ii) Duckstays.com.
(iii) Sciencing.com.

Requirements $\Rightarrow$

Beakers, funnel, measuring cylinder, mortar pestle, conical flask, and volumetric flask.

Beaker $\div$

Glass wares used as a container.
beakers are simple cylindrical shaped containers.
A beaker is a glass container with a flat bottom and a small spout for pouring.

Uses $\div$

Beakers are used to hold reagent and sample. It is also used in lab for mixing, heating, and stirring liquid.

Expt. No. _____

Funnel ÷

A funnel is a pipe with a wide mouth that helps to pour substances into a container without spilling.

Uses ÷ funnels are used together with filters to separate a mixture.

Measuring cylinder ÷

A tool, a skinny cylinder used to measure volumes. It is generally a more accurate way to measure volume than a beaker or flask.

Uses →

used to measure volume.

Mortar and pestle ÷

A mortar and pestle are used to crush and grind solids into a powder. The mortar is a bowl and the pestle is a small club-shaped tool. They are typically made from stone, or ceramic or glass.

Uses - Used for size reduction.

Teacher's Signature : _____

Expt. No. _____

Conical flask ÷

It is a conical shaped apparatus with a conical shaped body a cylindrically shaped neck and a flat bottom. It generally has measurement marks on the side. The cone shaped helps to prevent spills when stirring the liquid.

Uses →

used for measuring purpose.

Volumetric flask ÷ - Volumetric flask are used to create precise quantities of solutions. A graduation line is etched into the volumetric flask's neck to indicate volume and the lab worker begins to fill the flask by first adding the solute. She continues by pouring in her solvent and then gradually adds drops of graduated line.

Uses ÷ used to create precise quantities of solutions.

Result → The different glasswares used in practical lab was studied.

Teacher's Signature : _____



Formula

S. No.	Ingredients	Quantity given (100 ml)	Quantity taken (50 ml)
1.	Sucrose	66.7 gm	33.3 gm
2.	Purified water	q.s. 100 ml	q.s. 50 ml

Experiment No. - 2 (Simple Syrup)

Aim: ✓

To prepare & submit 50 ml of simple Syrup.

Reference: Gaud R.S., Gupta G.D., "Practical pharmacutics" CBS Publishers and Distributors. First Edition, 2002. Page. No. 229 - 230.

Requirements: Chemicals - Sucrose, Purified water.

Apparatus: Beaker, Glass rod, measuring cylinder.

Theory → Syrups are concentrated nearly saturated solution of sucrose in purified water.

It may or may not contain medicinal substances.

It has sweet taste & act as a good flavouring agent.

Procedure:

- 1) measure the required amount of sucrose and transfer it in a conical flask / Beaker.
2. Add sufficient amount of water.
3. make the syrup by heating or without heat.
4. If necessary filter the syrup.
5. store in a dried container with proper label.

Simple Syrup

Ingredients -

Sucrose - 33.3gm

Water - q.s 50ml

Batch no-012

MFG. Date-4/09/21

Exp. Date-4/03/22

Prepared by - ZAID

Category - Pharmaceutical aid

Storage - Syrup stored in cool Temp.

Use - Sweetening agent

Category:- Pharmaceutical Aid (sweetening agent)

Storage:- Syrup should be store in a loosely stoppered bottle at fairly cool temperature.

Uses:- Pharmaceutical aid as sweetening agents, sweet vehicle and used as the base for various flavoured and medicinal syrups.

Result →

The simple syrup was prepared & submitted successfully.

Talc dusting powder

Ingredients -

Mag. oxide - 0.50 gm

Starch in powder - 1 gm

Purified Sterilized Talc - 10 gm

Batch no - 679

MFG date -

Exp. date -

Prepared by -

Category - Dusting powder

Uses - Pharmaceutical Aid

Storage - Preserve in a wide mouthed bottle

Formula ↓

S. No.	Ingredients	Qty. Given
1.	Magnesium oxide	0.50 gm
2.	Starch in powder	1 gm
3.	Purified sterilized talc	10 gm

Experiment No. 3 (Powders)

Aim : To prepare & submit Talc dusting powder.

Reference : Gaud R.S. Gupta. G.D. "Practical Pharmaceutics." CBS Publishers and Distributors. 18th Edition. 2002. Page No. - 176

Requirements : Chemicals - magnesium oxide, starch powder, purified sterilized talc.

Apparatus → Weighing balance, mortar, pestle, spatula etc.

Theory : Powders are one of the oldest dosage forms. A pharmaceutical powder is a mixture of finely divided drugs or chemicals in dry forms. They are intended for internal or external use for many diseases.

Procedure :

1. weigh the required amount of ingredients.
2. mix additives in mortar & pestle and mix it uniformly after proper mixing.
3. Dispensed in a suitable container.

Category :- Pharmaceutical Aid . dusting powder.

Storage :-

Preserve in a well - closed container
in a wide - mouth bottle .

Uses :-

Pharmaceutical Aid
Dusting Powder .

Result ->

The talc dusting powder was prepared
& submitted successfully .

Formula :-

S.No.	Ingredients	Qty. Given (100 ml)	Qty. Taken (50 ml)
1.	Potassium iodide	2.5 gm	1.25 gm
2.	Iodine	1.25 gm	0.625 gm
3.	Ethanol (90%)	4 ml	2 ml
4.	Peppermint oil	0.4 ml	0.2 ml
5.	Purified water	2.5 ml	1.25 ml
6.	Glycerin, sufficient to produce 100 ml		50 ml

Experiment No. 4

Aim :

To prepare & submit 50 ml of Iodine Paint.

Reference : Gaud R.S. Gupta G.D. "Pharmaceutics" CBS
Publishers and Distributors, 1st edition, 2002
Page No. - 294 - 295.

Synonyms :- mandis Paint.

Requirements :- Chemicals - potassium iodide, Iodine,
ethanol (90%), peppermint oil, purified water,
glycerin, etc.

Apparatus → mortar - pestle, spatula, measuring
cylinder, etc.

Theory: Paints are liquid preparations intended
for applications to the mucous membrane or
skin. They usually contain substances possessing
analgesic, antiseptic, caustic or astringent properties.
In this preparation iodine acts as antiseptic, pota-
ssium iodide dissolves the iodine. peppermint oil acts
as flavoring agent and produce cooling effect.
Alcohol is used as a solubilising agent of the
peppermint oil. This prep preparation

Iodine Paint

Ingredients -

Potassium iodine - 1.25 gm

Iodine - 0.625 gm

Ethanol (90%) - 2 ml

Peppermint oil - 0.2 ml

Glycerin - 1.25
water - 9.5

Batch no - 127

MEG Date -

Exp - Date -

Prepared by -

Category - Antiseptic

Storage - store in air tight container in cool place

Uses - Antiseptic throat paint.

contains iodine hence should be prepared in glass apparatus.

Procedure :-

1. Dissolve potassium iodide & iodine in purified water in glass mortar and pestle.
2. Add a small portion of glycerin.
3. Add peppermint oil dissolved in ethereal & mix.
4. Add sufficient glycerin to produce 100 ml.

Category :- Antiseptic.

Storage :- store in airtight container in cool place.

Label :- shake well before use.

Uses -> Antiseptic throat paint.

Result -

Potassium Permanganate Gargles	
Ingredients -	Batch no - 675
Potassium permanganate - 25 gm	MFG Date -
Purified water - q.s	Exp. Date -
	Prepared by -
Storage - store in a well closed container	
Uses - Antibiotics, Antiseptic etc.	

Formula:

Sr. No.	Ingredients	Qty. Given for 100 ml
1.	Potassium Permanganate	25 gm
2.	Purified water	q.s. 100 ml

Experiment No. 5

Aim: To prepare & submit 100 ml of potassium Permanganate Gargles.

Reference: G.D., Sharma Shailesh, Sharma Neelam.
"Practical manual of Pharmaceutics. 1st, Nisali
Publication. 2nd edition. 2017 page no. 36-37

Requirements: Chemicals - Potassium Permanganate.
Purified water.

Apparatus - mortar - pestle, weighing balance, measuring cylinder etc.

Theory - Gargles are aqueous solutions used to treat or prevent throat infections.

Generally, they are used to relieve soreness in mild throat infections.

- Gargles are generally dispensed in concentrated form. They must be diluted with water prior to its use.

Procedure:

1. Grind weighed amount of Potassium Permanganate with water.
2. Remove undissolved permanganate by filtration.

Teacher's Signature: _____

3. Add sufficient amount of purified water to
produce required quantity.

Storage :- Store in a well - closed container.

Uses :-

Astringent.
Antibiotics.
Antiseptics. etc.

Result :-

The potassium permanganate was prepared
& submitted successfully.

Teacher's Signature : _____

Sheela

Formula

S. No.	Ingredients	Qty. Given for 100 ml
1.	Fresh Orange Peel in the slices.	25 gm
2.	Ethanol (90%)	q.s. 100 ml

Aim: To prepare and submit 100 ml orange tincture by maceration.

Reference :- Gupta G.P. Sharma Shailish, Sharma Neelam.
Practical manual of Pharmaceutics. 1 Nitali
Prakash. 2nd edition, 2017. Pg. No. 26-27

Requirements :- chemicals - Orange Peel, alcohol.

Apparatus - stopper container, weighing balance etc.

Theory :- Tincture is defined as alcoholic or hydroalcoholic solution prepared from vegetable materials or from chemical substances. Tinctures are generally prepared by 2 methods.

1. Percolation
2. maceration

Procedure :-

1. The solid substances are weighed & placed in a stopper container with the whole of the solvent.
2. It is allowed to stand for a period of at least 3 days.
3. Then the solvent is strained, more is pressed combined with extract. Liquid.

Orange Tincture

Ingredients:-

Fresh orange peel in the
slices — 25gm

Ethanol (90%) — 9.5 100ml

Batch no - 1159

MFG Date -

Exp - Date -

Prepared by -

Dose - 2-4 ml

Storage - Preserve in a well closed container.

Uses - Flavouring agent

Dose : 2 to 4 ml.

Storage : Preserve in a well-closed container.

Uses : It is used as a flavoring agent.

Result : The orange tincture was prepared & submitted successfully.

Formula:

S. No	Ingredients	Qty. Given
1.	Wool fat	0.50 gm
2.	Cetostearyl alchal	0.50 gm
3.	Hard Paraffin	0.50 gm
4.	White soft Paraffin	8.50 gm

Experiment No. 7

Aim: To Prepare and submit simple ointment.

Reference: Grad R.S. Gupta G.D. "Practical Pharmaceutics".
CBS Publishers & Distributors, 1st edition, 2002. Page
No. - 118.

Requirements: chemicals. Wool fat cetosteryl alcohol
hard paraffin, white soft paraffin.

Apparatus: Beaker, Glassrod. Electronic balance etc.

Theory: Ointments are semi-solid preparation for application to the skin or mucous membranes. They are often anhydrous, contain the medicament either dissolved or dispersed in the vehicle. The solid substances which are dispersed, should be in the form of a micronized powder.

Ointments are typically used as emollient, protective & vehicles to incorporate medicament.

Procedure :-

1. mix wool fat, cetosteryl alcohol, hard paraffin & white soft paraffin in a container.
2. Heat the mixture gently with stirring until homogeneous.

Teacher's Signature : _____

Simple Ointment

Ingredients-

Wool fat

Cetostearyl alcohol

Hard Paraffin

White Soft Paraffin

Batch no-147

MFG Date -

Exp. date -

Prepared by -

Category - Pharmaceutical aid

Uses - Pharmaceutical aid

Storage - Preserve in a well-closed container

3. Stir continually until cold.

Category: Pharmaceutical Aid.

Storage: Presence in a well-closed container protected from light.

Uses: Pharmaceutical Aid.

Result: The simple ointment was prepared successfully.

Formula :

S. No.	Ingredients	Qty Given (100ml)	Qty. Taken (50ml)
1.	Liquid Paraffin	50. ml	25 ml
2.	Indin gum in Powder	12.5 gm	6.25 gm
3.	Tragacanth in Powder	0.5 gm	0.25 gm
4.	Sodium benzoate	0.5 gm	0.25 gm
5.	Vanillin	0.5 gm	0.25 gm
6.	Glycerin	12.5 ml	6.25 ml
7.	Chloroform	0.25 ml	0.125 ml
8.	Purified water	q.s. 100ml	q.s. 50ml

Liquid Paraffin Emulsion	
Liquid Paraffin - 25ml	
Indian gum in powder - 6.25g	
Tragacanth in powder - 0.25 gm	
Sod. benzoate - 0.25 gm	
Vanillin - 0.25 gm	
Glycerin - 6.25 g	
Chloroform - 0.125 ml	
Purified water - q.s. 50ml	
Category - Laxative	
Dose - 8 - 30ml	
Storage - Emulsion should be kept at Temp. not 20°C	

Experiments No. 8

Aim: To prepare & submit 50 ml of Liquid paraffin Emulsion.

Reference: Chaud R.S. Gupta G.D. "Practical Pharmaceutics." CBS Publishers Distributors. 1st edition 2002
Page No. 76.

Requirements: chemicals - Liquid Paraffin, Indain gum powder, Tragacanth powder, sodium benzoate, vanillin Glycerin, chloroform, Purified water.

Apparatus: Beaker, Mortar - Pestle etc.

Theory: Emulsion is a heterogeneous system consisting of at least one immiscible liquid dispersed in the form of droplets.

The liquid droplets generally known as the emulsion phase or emulsion globules or dispersed phase which they are dispersed is known as the continuous phase or the dispersion medium or the continuous phase.

Procedure:

1. Triturate the weighed quantity of liquid Paraffin & chloroform with the Indain gums, tragacanth and vanillin in mortar - pestle.
2. Add 25 ml of purified water & triturate until a creamy emulsion is formed.
3. Dissolve sodium benzoate in small quantity of purified water.

4. Add glycerin soln of sodium benzoate with continuous trituration.
5. Add sufficient purified water to produce 100 ml of emulsion & mix properly.

Category: - Laxative.

Dose: 8 to 30 ml.

Storage: Emulsion should be kept at temp. not exceeding 20°C. It should not be allowed to freeze.

Result: The Liquid Paraffin Emulsion was prepared & submitted successfully.

Uses - Laxative.

ORS Powder

Ingredients -

Sodium chloride - 3.5g

Potassium chloride - 1.5gm

Sodium citrate - 20gm

Dextrose monohydrate - 22gm

Batch no - 167

MFG date -

Exp. date -

Prepared by -

Uses - Used for Rehydration

Directions - Dissolve in one litre of drinking water

Storage - Store in air tight sachet in dry & cool place

Formula :-

S. No	Ingredients	Qty. Given	Qty. Taken :- 5)
1.	Sodium chloride	50 gm	10 gm
2.	Potassium chloride	75 gm	15 gm
3.	Sodium bicarbonate	75 gm	15 gm
4.	Dextrose	10 gm	2 gm

Experiment No. 9

Aim : To prepare & submit compound sodium chloride & dextrose oral powder.

Synonym : Electrolyte Powder.

Reference : Chaud R.S., Gupta G.P. "Practical Pharmaceutics." CBS Publishers Distributors 1st edition 2002

Page No. - 183

Requirements : chemicals → sodium chloride, Potassium chloride, sodium bi-carbonate, dextrose.

Apparatus : Weighing balance, mortar - pestle, spatula etc.

Theory : Powders are of the oldest dosage forms. A pharmaceutical powder is a mixture of finely divided drugs or chemicals in dry form.

They are intended for internal or external use for many diseases.

Procedure :

1. mix weighed amount of substances in ascending order its weighed.
2. Wrap individual powder using an waxed paper or an outer covering of metal foil or -

Teacher's Signature : _____

dispersed in individual well-closed containers of metal foil for use on one occasion.

Dose:-

in accordance with the needs & response of the patient.

Storage - Wrap individual powder using an inner wax paper or an outer covering of metal foil or dispersed in individual well-closed containers.

- The label on the container or the label on the package must state:

1. Direction for use.
2. Any portion of the solutions unused 24 hrs after preparation should be discarded.
3. Amount contained in the unit-dose container.

Uses ->

used for electrolyte balance & dehydration.

Result ->

The electrolyte powder was prepared & submitted successfully.

Cold cream

Ingredients-

White beeswax - 24.50 gm
 Liquid Paraffin - 50 ml
 Borax - 1 gm
 Glycerine - 4.28 ml
 Methyl paraben - 0.20 gm
 Propyl paraben - 0.02 gm
 Orange oil - 0.50 ml
 Purified water - 100 ml

Batch no - 179

MFG Date -

Exp - Date -

Prepared by -

Category - Semi-Solid Emulsions

Uses - Protective, Emollient etc

Storage - Store at a temp. not exceeding 30°C

Formula:

S.No	Ingredients	Qty Taken (100 ml)
1.	White beeswax	24.50 gm
2.	Liquid Paraffin	50 ml
3.	Borax	1 gm
4.	Glycerin	4.28 ml
5.	Methyl Paraben	0.20 gm
6.	Propyl Paraben	0.02 gm
7.	Orange oil	0.50 ml
8.	Purified water q.s. to	100 ml

Experiment No. 10

Aim → To prepare & submit cold cream.

Reference:- from internet (Pharmaeducation.net)

Requirements - chemicals → white beeswax, Liquid Paraffin, Borax, glycerin, methyl paraben, Propyl paraben, orange oil, purified water.

Apparatus → Beakers, weighing balance, Heating Plate, glass rod etc.

Theory → Creams are viscous semi-solid emulsion which are meant for external use.

They usually contain a water-soluble base due to which they can be easily removed from the skin.

They are of softer consistency & have light weight in comparison to true ointment when applied to the skin.

Procedures.

1. Oil phase Preparation - white beeswax, Liquid Paraffin were melted in a beaker at 70° - 80° & mixed.
2. Aqueous phase Preparation - methyl paraben, Propyl paraben, borax & glycerin were dissolved in water in another beaker at the temp. 70° - 80° .
3. Addition of Aqueous phase to oil phase →

Teacher's Signature: _____

The oil Phase was then added to the aqueous Phase with continuous stirring until it has cooled to about 45° .

Then fragrance was added with continuous stirring.

→ Filling, labelling & Packaging.

Category:- semi-solid emulsions.

Storage:- store at a temperature not exceeding 30°
Protect from light.

Uses:- protective, cleansing, retention of moisture, emollient etc.

Results The cold cream was prepared & submitted successfully.

Chloroform water	
Ingredients - chloroform water - 0.12 ml Purified water - q.s. 100 ml	Batch no - 698 MFG date - Exp. date - Prepared by -
Category - Pharmaceutical acid.	
Storage - Protect from light	
Uses - Preservative etc.	

Formula ↴

S.N.	Ingredients	Qty Given (100) ml	Qty. taken (50 ml)
1.	Chloroform	0.25 ml	0.12 ml
2.	Purified	q.s. 100 ml	q.s. 50 ml

Experiment No. 11

Aim → To prepare & submit 50 ml of chloroform water.

Reference → Gupta. Z. D. Sharma. Sharma Meelam, "Practical manual of Pharmaceutics - I" Mistrali Prakashan, 2nd Edition, 2017. Page No. 2-3.

Requirements: chemicals → chloroform. Purified water.

Apparatus → Beaker, measuring cylinder. Glass rod etc.

Theory: Aromatic waters are clear, saturated aqueous soln of volatile oils or volatile substances. Taste & odour of aromatic waters are similar to the drug or volatile substance which may incorporate in them.

→ chloroform is a clear, odourless and a mobile liquid with ether odour & has burning sweet taste.

Procedure:-

1. measure the requirement amount of chloroform & dissolve in purified water by shaking.
2. shake until chloroform is completely dissolved in water.
3. Transfer it in clean amber colour container & close it tightly.

Teacher's Signature: _____

Category → Pharmaceutical Aid.

Dose : 15-30 ml

Storage : Storage in a well-closed amber colour container & protect from light.

Uses : Pharmaceutical Aid. Preservative, vehicle, local Anesthetic.

Result : → The chloroform water was prepared & submitted successfully.

Teacher's Signature : _____

Shree

Camphor water	
Ingredients -	Batch no. 790
Camphor — 0.05 gm	MFG Date -
Ethanol (90%) — 0.10 ml	Exp. date -
Purified water — 9.85 ml	Prepared by -
Category - Pharmaceutical aid	
Dose - 15-30 ml	
Storage - store in a well-closed container	

Formula ↓

S.No	Ingredients	Qty Given (100 ml)	Qty taken 50 ml
1.	Camphor	0.10 gm	0.05 gm
2.	Ethanol (90%)	0.25 ml	0.10 ml
3.	Purified water	9.55 ml	9.55 ml

Experiments NO. 12

Aim: To Prepare & submit 50 ml of camphor water.

Reference: Gupta A.D. sharma shailash, sharma neelam, "Practical manual of pharmaceuticals-I" Mistrali Parakashan, 2nd edition, 2017
page No. - 7

Requirements: chemicals + camphor, Ethanol, Purified water.

Apparatus: Dropper, measuring cylinder, weighing balance, Beakers
Glass rod.

Theory: Aromatic waters are clear, saturated aqueous solutions of volatile oils or volatile substances.

Taste & odour of aromatic waters are similar to the drug or volatile substances which may incorporate in them.

→ camphor is a ketone, obtained from *Cinnamomum camphora*.

It is colourless or white crystals or crystalline masses.

It is highly volatile in nature at room temperature and readily burns with a bright smoky flame.

Procedure:

ii) measured the required amount of camphor & dissolve it in ethanol

iii) Add this alcoholic solution drop-wise is dissolved.

Teacher's Signature: _____

- (iii) If necessary filter the solutions & store in a closed container.

Category → Pharmaceutical Aid.

Dose → 15 - 30 ml.

Storage → Storage in well-closed container.

Uses → Pharmaceutical Aid, which is used as a carminative & to ~~relax~~ relieve gripping pain.

Result → The camphor water was prepared and submitted successfully.

Aqueous Iodine solution	
Ingredients -	Batch no - 796
Iodine - 2.5 gm	MFG Date -
Potassium iodide - 5 gm	exp. date -
Purified water - 9.5.50 ml	Prepared by -
Category - Source of Iodine	
Dose - 0.3 - 1 ml	
Storage - Preserve aqueous sol ⁿ in a well closed container	

Formula →

S.N.	Ingredients	Quantity Given (100 ml)	Qty taken (50 ml)
1.	Iodine	5 gm	2.5 gm
2.	Potassium iodine	10 gm	5 gm
3.	Purified water	9.5.100 ml	9.5.50 ml

Aim:- To prepare & submit 50 ml of Aqueous Iodine solution.

Synonyms: Lugol's solution.

Reference → Card R.S. Gupta. G.D., "Practical pharmacology"
CBS publishers & Distributors, 1st Edition, 2002
Page No. 188.

Requirements: Chemicals - Iodine, Potassium iodide,
purified water.

Apparatus → Weighing balance, Beaker, Glass rod,
measuring cylinder.

Theory:- A solution is an homogeneous one-phase system. Consisting of 2 or more components. It contains 2-phase i.e. solvents and solute. The solvent is the phase in which the dispersions occur & solute that component which is dispersed as small ions or molecules in the solvents.

Procedure:-

1. measure the required amount of ingredients.
2. Dissolve Potassium iodide & iodine in 10 ml

Teacher's Signature : _____

of purified water.

- (3) Dissolve Potassium Add sufficient amount of purified water to produce 700 ml solution.

Category:- Source of Iodine.

Dose:- 0.3 to ml

Storage:- Preserve aqueous iodine solution in a well-closed container.

It should be resistant to iodine.

Uses:- Source of Iodine.

Result:- The Aqueous iodine solution was prepared & submitted successfully.

Teacher's Signature : 

Sulphur Ointment	
Ingredients -	Batch no - 795
Precipitated Sulphur - 1gm	MFG date -
Simple Ointment - 9gm	Exp. date -
	Prepared by -
Category - Scabicide	
Storage - Preserve in a well-closed container	
Uses - Scabicide	

Formula ↓

S.N.	Ingredients	Qty. Given
1.	Precipitated sulphur	1 gm
2.	Simple ointment	9 gm

Aim: To Prepare & submit ointment.

Reference: Gaub R. S Gupta C. D "Practical Pharmacutics" CBS Publishers & Distributors, 1st Edition 2002, Page No. 121.

Requirements: Chemicals + Precipitated Sulphur, simple ointment.

Apparatus + material - pestle, spatula, weighing Balance etc.

Theory: Ointments are semi-solid preparation for application to the skin or mucous membranes. They are often anhydrous & contain the medicament.

Formula: either dissolved or dispersed in the vehicle.

Procedure:

1. Triturate the precipitated sulphur with a portion of the simple ointment until smooth.
2. Add gradually the remainder of the simple ointment and mix thoroughly.

Category: Scabicide.

Storage:- Preserve in a well - closed container,
protect from light.

Uses:- Scabicide.

Result: The sulphur ointment was prepared &
submitted successfully.

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Teacher's Signature : _____

Checked

Peppermint spirit

Ingredients-	Batch no - 794
Peppermint oil - 5ml	Mfg date -
Ethanol (90%) - q.s 100ml	exp. date -
	Prepared by -
Category - Flavouring agent	
Dose - 1ml three times a day	
Storage - store in a well-closed container	

Formula :-

S.N.	Ingredients	Qty Given (100ml)	Qty taken (50ml)
1.	Peppermint oil	10 ml	5 ml
2.	Ethanol (90%)	q.s 100ml	q.s. 50ml

Aim: ~~To~~ Prepare & submit 50 ml of peppermint spirit.

Reference: Gupta C. D. sharma shailish, sharma neelam.
"Practical manual of pharmaceuticals - 1st Nirali Prakashan.
2nd Edition, 2017 page No. 18-19.

Requirements: Chemicals + peppermint oil Ethanol (90%)
distilled water.

Apparatus → Beaker, spatula, measuring cylinder, etc.

Theory. Spirits are alcoholic or hydroalcoholic solutions of volatile substances & contain 50% to 90% of alcohol. The high alcoholic content maintains water-insoluble oils in solution.

IF water is added to a spirit, the oil gets separated. Spirits are prepared by dissolving or by distillation method. Peppermint oil is obtained by distillation from the fresh aer ground parts of the flowering plants of mentha piperita.

Procedure:

1. Take measured quantity of peppermint oil & mix with ethanol.
2. IF the solution is not clear, shake with purified talc (5%) & filter it.

Teacher's Signature : _____

3. Add sufficient amount of alcohol to make up the volume.

Category:- Flavouring agent of carminative.

Dose:- Usually 1ml three times a day.

Storage:- Store in a well-closed container in a cool place.

Uses:- It is used as a flavouring agent, carminative, antiseptic & local anesthetic.

Result:- To Peppermint spirit was prepared & submitted successfully.

Orange Syrup	
Ingredients - Orange Tincture - 3gm Syrup - 50ml	Batch no. Mfg date - Exp date - Prepared by -
Category - Pharmaceutical acid	
Uses - Store in a cool place	
Storage - Pharmaceutical acid	

Formula ↓

S. No.	Ingredients	Qty. Given (100 ml)	Qty. Taken (50 ml)
1.	Orange Tincture	6 gm	3 gm
2.	Syrup Q.s	100 ml	50 ml

Aim :- To prepare & submit 50 ml of Orange syrup.

Reference :- Gupta C.P., Sharma Shalish, Sharma Nellam.
"Practical manual of Pharmaceutics - II" Nirali Prakashan
1st Edition, 2017 Page No. 126-127

Requirements → Orange tincture (Ethanol) simple syrup
(source purified water)

Apparatus → Beaker, Glass rod, spatula, weighing balance
measuring cylinder, stopper container.

Theory → Syrups are concentrated oral solutions of sugar or nearly saturated solutions of sucrose in water.
It is important to note that sucrose concentration should not reach the saturation point, as a saturated solution may lead to crystallization of sucrose. Syrups are classified into the class like medicated syrups and flavoured syrups.

Procedure :-

1. Prepare Orange tincture by the maceration process.
2. Mix the Orange tincture with syrup.

3. make up the volume.

Category → Pharmaceutical Aid.

Storage :- store in a cool place.

Uses : Pharmaceutical Aid

Result: The Orange syrup was prepared & submitted successfully.

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Teacher's Signature : _____

[Signature]

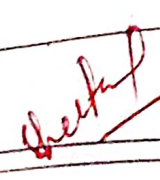
3. make up the volume.

Category → Pharmaceutical Aid.

Storage :- store in a cool place.

Uses : Pharmaceutical Aid

Result: The Orange syrup was prepared & submitted successfully.

Teacher's Signature : 

Aim:- To prepare & submit 50 ml of strong iodine solution.

Reference:- Gupta A. D. Sharma Shalish Sharma Nisham
" Practical manual of Pharmaceutics - I Nishali Prakashan
2nd Edition, 2017. page No. 10-11.

Requirements: chemicals - Iodine, Potassium iodine purified water Ethanol.

Apparatus:- Weighing balance, Beaker, Glass rod, measuring cylinder, mortar & pestle.

Theory:- A solution is a homogeneous one-phase system consisting of 2 or more components. It contains 2 phase i.e. solvent & solute. The solvent is the phase in which the dispersion occurs & solute is that component which is dispersed as small ions or molecules in the solvents. The advantages of solutions are -

- (i) Easy to swallow
- (ii) suitable for paediatric preparations.
- (iii) Drug in solution form is readily available for absorption.

Formula:

S.N	Ingredients	Qty. Given (100ml)	Qty. Taken (50ml)
1.	Iodine	10 gm	5 gm
2.	Potassium iodine	6 gm	3 gm
3.	Purified water	10 ml	5 ml
4.	Ethanol upto	q.s 100ml	q.s 50ml

Strong Iodine Solution	
Ingredients -	Batch no -
Iodine - 5g	MFG date -
Potassium iodine - 3gm	Exp. date -
Purified water - 5ml	Prepared by -
Ethanol - q.s 50ml	
Category - Antiseptic	
Storage - Preserve in well-closed container	
Uses - Antiseptic	

Procedure:-

- (1) mix potassium iodide & iodine in glass mortar - pestle
- (2) Dissolve potassium iodide & iodine mixture in a purified water.
- (3) Add sufficient ethanol to produce required volume.

Category:- Antiseptic

Storage → The material of the container should be resistant to iodine antiseptic.

Uses:- Antiseptic

Result → The strong Iodine solution was prepared & submitted successfully.

Teacher's Signature : _____

Sheela

Calamine Lotion	
Calamine - 7.5 gm	Batch no. 098
Zinc oxide - 2.5 gm	M/G dab -
Bentonite - 1.5 gm	expolati -
Sod. citrate - 0.25 ml	Prepared by -
Liquefied phenol - 0.25 ml	
Glycerine - 2.5 ml	
Rose water - 9.5. 50 ml	
Category - Protective	
Storage - Preserve in a well - closed container	
Uses - Protective	

Formula ↴

S.No.	Ingredients	Qty. Given (100 ml)	Qty. Taken (50 ml)
1.	Calamine	15 gm	7.5 gm
2.	Zinc oxide	5 gm	2.5 gm
3.	Bentonite	3. gm	1.5 gm
4.	Sodium citrate	0.5 gm	0.25 gm
5.	Liquefied Phenol	0.5 gm	0.25 ml
6.	Glycerin	5. gm	2.5 ml
7.	Rose water	9.5 100 ml	9.5 50 ml

Aim :- To prepare & submit 50ml of calamine lotion.

Reference :- Aard R.S Gupta C.O "practical pharmaceuticals"
CBS publishers & distributors 1st edition, 2002
page NO - 105.

Requirements : Chemicals - Calamine, zinc oxide, Bentonite,
sodium citrate, Liquefied phenol, Glycerin,
Rose water.

Apparatus - Beaker, mortar - pestle, spatula, measuring
cylinder etc.

Theory :- Lotions are usually liquid or liquid
suspensions or semi-solid preparation containing
1 or more medicaments intended to be applied to
the uniform skin without friction.

- Calamine is a basic zinc carbonate suitable calced
with ferric oxide. It is used as mild astringents.
Bentonite is a colloidal hydrated aluminium silicate
& acts as a suspending agent. zinc oxide acts as
sedative & protective of skin. Phenol is used too
as antiseptic & preservatives.

Glycerin has soothing effect. Rose water is used as
vehicle & flavouring agent.

Procedure :- Prepare sodium citrate solution in -

40 ml rose water.

(2) Trisulfate calamine zinc oxide & bentonite with citrate soln.

(3) Add liquefied phenol & mix.

(4) Add glycerin & sufficient rose water to produce 50 ml.

Category → Protective.

Storage → Preserve in well-closed container.

Uses → Protective.

Result → The calamine lotion was prepared & submitted successfully.

Liquid Handwash	
Ingredients -	Batch no. 792
Sodium lauryl Sulphate - 40ml	MFG date
Glycerine - 10ml	exp. date -
water - 50ml	Prepared by -
Fragrance (Lemon oil) - 1ml	
Gum Acacia - 2gm.	
Category - Cosmetics	
Storage - Store in a well-closed container	
Uses - cleaning purpose / hand hygiene	

Formula ↴

S.No.	Ingredients	Qty. Taken (100ml)
1	Glycerine	10 ml
2	Sodium lauryl sulphate	40 ml
3	water	50 ml
4	Fragrance (Lemon oil)	1 ml
5	Gum acacia	2 gm

Aim:- To Prepare & submit Liquid Handwash.

Reference → from Internet.

Requirements : Chemicals → Glycerine, Sodium lauryl sulphate
Water. Fragrance (Lemon oil). Thickening agent.
(Gum acacia)

Apparatus → Weighing balance, Beaker, Glass rod,
measuring cylinder, spatula.

Theory → Liquid handwash is anti-bacterial Liquid that has an active substance used to inhibit, destroy or render harmless active bacterial and on hands.

- Liquid handwashes are generally preferred over soaps due to ease of use & the ability of Liquid soaps to maintain the skin's natural moisture.

Procedure →

1. Take sodium lauryl sulphate in a clean beaker.
2. mix Glycerine and stir well.
3. Add water to the above mixture and shake well.
4. Now Add Fragrance to the mixture.
5. At last add thickening agent to the mixture and keep aside for 15-20 minutes.

Category :- Cosmetics

Storage :- store in a well-closed container with dispenser neck.

Uses :- for cleaning purposes (For hand hygiene).

Result → Liquid Handwash was prepared and submitted successfully.

Teacher's Signature : _____

Shreyas

Concentrated Peppermint water

Ingredients -

Peppermint oil - 1ml

Ethanol (90%) - 30ml

Purified water - q.s 50ml

Talc - 2.5 gm

Batch no -

Mfg date -

Exp. date -

Prepared by -

Category - Pharmaceutical Aid

Uses - Carminative & Flavouring agent

Storage - Store in a well-closed container

Formula →

S.No	Ingredients	Qty Given (100ml)	Qty Taken (50ml)
1.	Peppermint oil	2 ml	1 ml
2.	Ethanol (90%)	60 ml	30 ml
3.	Purified water	q.s. 100 ml	q.s 50 ml
4.	Talc	5 gm	2.5 gm

Concentrated Peppermint water

Ingredients -

Peppermint oil - 1ml

Ethanol (90%) - 30ml

Purified water - q.s 50ml

Talc - 2.5 gm

Batch no -

MFG date -

Exp. date -

Prepared by -

Category - Pharmaceutical Aid

Uses - Carminative & Flavouring agent

Storage - Store in a well-closed container

Formula →

S. No	Ingredients	Qty Given (100ml)	Qty Taken (50ml)
1.	Peppermint oil	2 ml	1 ml
2.	Ethanol (90%)	60ml	30 ml
3.	Purified water	q.s. 100 ml	q.s 50 ml
4.	Talc	5 gm	2.5 gm

Aim → To prepare & submit 50 ml of concentrated peppermint water.

Reference → Gupta C.D sharma shailesh, sharma neelam, "Practical manual of Pharmaceutics-I" vizal prakashan 2nd edition, 2017 Page No 6-7

Requirements - Chemicals → Chemicals - Peppermint oil.
Ethanol. Talc purified water.

Apparatus → measuring cylinder, glass rod, Beaker etc.

Theory → Concentrated aromatic waters are alcoholic saturated solutions of volatile oils are other substances & about 40 times stronger than the aromatic waters. In these preparations oil content is excess than that required to form a saturated solution. Purified talc is used as absorbent part of the is separated along with the talc by water.

Procedure →

- 1) Dissolve measured amount of volatile oil in 90% ethanol.
- 2) Add the sufficient purified water in successive small portion with vigorous shaking.
3. make up the required volume.
4. It is necessary to shake vigorously after each addition.

5. Add 5gm of sterilized purified Talc & shake it.
6. Allow to stand for a few minutes & shake occasionally.
7. Remove Talc by filtration.
8. Store in a well-closed container.

Category :- ~~Pharmaceutical Aid~~

Dose :- 0.25 - 1 ml

Storage :- store in a well-closed container.

Uses :- It is used as flavouring agent & carminative.

Result → The concentrated peppermint water was prepared & submitted successfully.

Formula ↴

S.N.	Ingredients	Qty. Taken (100 ml)
1.	Water	60 ml
2.	Sodium Lauryl sulphate	15 ml
3.	Sodium chloride	4 gm
4.	Perfume	3 ml
5.	Glycerine	2 ml
6.	Gum acacia	2 gm

Aim :- To prepare & submit handwash.

Reference :- from Internet.

Requirements :- Chemicals $\rightarrow$ Water, sodium lauryl sulphate, Glycerine, sodium chloride, Perfume (orange oil), Gum acacia.

Apparatus $\rightarrow$ Weighing balance, Beaker, Glass rod, measuring cylinder, spatula.

Theory :- Liquid hand wash is an antibacterial liquid that has an active substance used to inhibit, destroy active bacteria on hand. Liquid hand washes are generally preferred over soaps's natural moisture.

Procedure $\Rightarrow$

1. weigh the required amount of ingredient.
2. Take 60 ml water in a clean beaker.
3. Add SLS and shake well.
4. Add NaCl and mix well (NaCl should be added properly in parts).
5. Add Glycerine and mix well.
6. Add Fragrance (Perfume to the mixture).

Category $\rightarrow$ Cosmetics.

Handwash	
Ingredients - water - 60ml SLS - 15ml Sod. chloride - 4gm perfume - 3ml Glycerine - 2ml Gum Acacia - 2gm	Batch no - MFG date - Exp. date - Prepared by -
Category - cosmetic	
Storage - store in a dispenser bottle	
Uses - hand hygiene.	

Storage :- Store in a dispenser bottle.

Uses :- used for hand hygiene.

Result :- Hand wash was prepared & submitted successfully.

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Teacher's Signature : _____

[Signature]

Completed

Shubul

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