Suspensions

Experiment 6 - Practical Notes

Name: _____ Roll no.: _____ Date: _____

Aim

To prepare, compare and label the formulations listed in this practical using the assigned formula.

Principle

Suspensions contain insoluble particles distributed in a liquid. Wetting, particle size, structured vehicle and redispersibility influence dose uniformity.

Requirements

- Assigned master formulas and ingredients for the formulations listed below.
- Balance, beakers, measuring cylinders, stirring equipment and compatible containers.

Procedure

1. Calculate and inspect

Record insoluble ingredients, wetting agents and vehicle components.

2. Wet the powder

Form a smooth paste with the specified wetting liquid; remove visible lumps.

3. Disperse

Add vehicle in portions with trituration or mixing, rinsing the mortar into the measure.

4. Complete and test

Make up the volume, mix and record sedimentation and redispersion after a defined standing period.

5. Package

Leave room for shaking and apply the specified shake-well and route labels.

Preparations in This Practical

Preparation	Formulation role / method distinction
Calamine Lotion	Triturate the assigned insoluble powders with the wetting component, gradually dilute with vehicle and complete the volume.
Magnesium Hydroxide Mixture BP	Prepare or incorporate the specified magnesium hydroxide dispersion, mix with the stated vehicle and assess settling and redispersibility.

Evaluation and Label

- Check absence of coarse lumps, sediment volume and ease of redispersion.

Observations and Record

Preparation	Batch size / yield	Appearance and checks
Calamine Lotion	_____	_____
Magnesium Hydroxide Mixture BP	_____	_____

Worked Example

The numbers below are illustrative; enter your own observations in the record.

- Scale factor = required final quantity / quantity in the master formula.
- Illustration: a 100 mL formula scaled to 30 mL has factor 0.30; 5 g of an ingredient becomes 1.5 g.
- Percentage w/v means grams in 100 mL of final preparation; percentage w/w means grams in 100 g of final preparation.

Result

Record each preparation, formula version, actual yield, evaluation, container and complete label.

Precautions

- Record which official or college formula and strength were used. The historic IP, BP, BPC and NF titles in the syllabus do not establish a current market specification.
- Avoid confusing the amount of vehicle added with the final volume or mass.
- Use an appropriate route label; a teaching batch is not supplied to a patient.
- Check absence of coarse lumps, sediment volume and ease of redispersion.

Viva Questions and Answers

1. Why is wetting necessary?

It helps replace air at powder surfaces so particles disperse in the vehicle.

2. Is rapid settling alone proof of a poor suspension?

No. Redispersibility and dose uniformity must also be considered.

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