

Pharmacopoeial Evaluation of Glass Containers

Practical 11 | Industrial Pharmacy I

Aim

To study Pharmacopoeial Evaluation of Glass Containers, and interpret the recorded observations.

Principle

- Glass-container suitability includes resistance to aqueous chemical attack and the characteristics required for its intended product. Surface and crushed-glass tests are distinct assessments.
- The property is obtained from a defined observable under controlled conditions.
- Replicate measurements, instrument checks and consistent units are needed before comparison.

Materials and Apparatus

- Assigned glass containers, instructor-demonstrated pharmacopoeial tests and completed extraction/titration records.
- Assigned test material and calibration or comparison material.
- The apparatus specified for this property, a balance or volumetric equipment where relevant, and a record sheet.

Method

1. Identify the container and the intended pharmaceutical use.
2. Read the assigned method and distinguish the surface test from the glass-grains test.
3. Review the instructor-prepared test and reagent-blank records.
4. Calculate the endpoint or corrected titration result on the specified basis.
5. Compare with the exact method/category limit supplied for the exercise.
6. Report only the tested property and state the container category used.

Observation Record

Complete this record using actual laboratory findings or the provided teaching data.

Observation / parameter	Record / finding
Container type and use	_____
Test method	_____
Blank reading	_____
Test reading	_____
Applicable criterion	_____
Conclusion	_____

Calculations and Interpretation

- Corrected titration result = test result minus applicable blank result, on the stated method basis.
- Use the category-specific criterion; there is no single limit suitable for every glass test.

Result

Record the actual finding, calculated value with units where relevant, and a conclusion supported by the observations.

Finding: _____

Conclusion: _____

Precautions

- Keep temperature and test conditions consistent across comparative readings.
- Record raw readings before rounding calculated values.
- Do not compare results obtained with different methods as if they were interchangeable.

Viva Questions

1. Why distinguish surface and glass-grains tests?

They assess different aspects of the container surface and glass material and have method-specific criteria.

2. Why control the test conditions?

A change in conditions may alter the measured property independently of the intended variable.

3. Why retain replicate readings?

They show repeatability and help identify an anomalous measurement.

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