

**INSTITUTE OF TEACHING AND RESEARCH IN AYURVEDA**  
[INSTITUTE OF NATIONAL IMPORTANCE]

MINISTRY OF AYUSH, GOVERNMENT OF INDIA

**B. PHARM. (AYU.) II YEAR**

**PHARMACEUTICAL ANALYSIS OF AYURVEDIC DRUGS I**

**Question Bank**

**Chapter: Samplings**

**[10 marks]**

1. Discuss sampling methods & importance in herbal, herbomineral formulation.
2. How error in sampling is responsible to miss interpretate the status of product.

**[2/ 5marks]**

1. Define sampling.
2. Write various sampling methods.
3. Write sampling method for solid.
4. Write sampling method for liquid.
5. Write sampling method for tablet & pills.
6. Write sampling method of material in bulk.
7. Particle size determination.

**Chapter: Fats & Oils**

**[10marks]**

1. Write down analytical profile of fats & oils.  
OR Discuss parameter employed for evaluating oil & fat preparation.
2. Explain working method with Abb's refractometer while using in oil analysis.
3. Narrate oil groups & a candidate belongs to the group.
4. RMPK Value. OR Discuss the method generally used to determine volatile fatty acid.
5. Explain importance & method of Peroxide Value in oil Sample.
6. What are the types of compounds that are saponifiable? Discuss methods of saponification.
7. Define refractive index. How it is determined? Discuss pharmaceutical applications of refractive index.

**[5marks]**

1. Why iodine monochloride is necessary in iodine value?
2. Describe importance of EDTA in trimetric methods.
3. Short note on Acid value. Give its 2 examples.
4. Discuss importance & method of estimation of RMPK Value in oils.

5. Give 2 examples of Fats & oils. Give analytical profile of Fats & oils.
6. Write a note on triglycerides.
7. Define oils & fats. Give its classification & explain Hydroxyl value.

**[2marks]**

1. Define fats & oils.
2. Classification of fats & oils with examples.
3. Define Saturated & Unsaturated fats & oils.
4. Define acid value.
5. Define volatile oil.
6. Define Saponification value.
7. Define Iodine Value.
8. Define Viscosity.
9. Define Refractive Index.
10. Define Hydroxyl Value.
11. Define Unsaponifiable matter.
12. Define RMPK value.
13. Define Moisture Content.
14. Define Peroxide value.
15. Write examples of fatty acids. (Lower, higher, saturated, unsaturated)
16. Write examples of peroxide value.
17. Test for volatile oils.  
Or Qualitative test for volatile oils
18. Give significance of acid value.
19. Give significance of Saponification value.
20. Give significance of Iodine Value
21. Give significance of Viscosity.
22. Give significance of RMPK value
23. Kreis test (rancidity test).
24. Test for adulteration.
25. Difference of oil and fats.
26. Draw structure of Disodium Salt of EDTA.  
Or The symbolic representation of EDTA di-sodium salt has shown as  $\text{Na}_2\text{H}_2\text{Y} \cdot 12\text{H}_2\text{O}$ .
27. Write two examples of volatile containing drugs.

**Chapter: Physico- Chemical Parameters**

**[10marks]**

1. Discuss extractive principle & use of different solvent with reasons.
2. How solvation capacity is used to extract components?
3. Describe plan of analysis when herbal drug contained with oil sample. (Volatile oil estimation method).
4. Discuss the importance of gravimetric and titrimetric method in the drug analysis.
5. Short note on Solubility as parameter.
6. Define refraction, Describe Abb's refractometer in brief.

**[5marks]**

1. Discuss water soluble & acid insoluble ash as parameters.
2. Explain weight variation & disintegration time of tablet.
3. Enlist Chemical parameters of drug analysis & give its importance.
4. Short note on Abb's refractometer.
5. What is solution? How it is used in extraction methods.
6. Why digestion is considered as important stage prior to Filtration.
7. Solubility in weak acid/base.
8. How fluorescence analysis is useful in drug analysis.
9. How scattered light used in analysis?
10. Short note on Fluorescence analysis.
11. Narrate importance of physic-chemical parameter in drug analysis.
12. Give account of optical methods in standardization.
13. Short note on plynometer.

**[2marks]**

1. Short note on Moisture content (loss on drying).
2. Define Ash Value.
3. Define Ash Analysis.
4. Define Water soluble ash.
5. Define Acid insoluble ash.
6. Define specific Gravity.
7. Define Refractive index.
8. Define Total solids.
9. Define Extractive values in different solvents.
10. Define foreign matter.
11. Define Fluorescence analysis.
12. Write name of instruments used for measurement of specific gravity.
13. Enlist physical parameters of drug analysis & give its importance.
14. Write down snell's law.

**Chapter: Metals Minerals & Bhasma Kshara Preparations**

**[10marks]**

1. Limit Test of Iron
2. Limit Test of Arsenic
3. Why gold is considered as noble metal?
4. Limit Test of Heavy Metals
5. Discuss compounds, uses & application of lead in Ayurvedic medicine.
6. Describe metallic, mineral & bhasma/ kshara preparations with a view point of analysis.
7. Write down compounds, use & estimation method for mercury.  
Or Write down estimation method for mercury.
8. Discuss compounds, uses and estimation method for calcium.

**[5marks]**

1. Estimation of Zinc.
2. Explain estimation of Mercury in bhasma sample OR Qualitative test of Mercury.
3. Brief classical method of analysis with respect to metal analysis.

4. Narrate estimation method for sodium & potassium in sample.
5. Give 2 names of formulations of gold & silver.
6. Explain titrimetric estimation of sample having calcium as element. (Calcium estimation)
7. Qualitative test for different element.
8. While analysis of positive ion presence of other positive ion what precaution you should Take.
9. Quantitative test for Heavy metal.
10. Quantitative test for Chloride.
11. Quantitative test for Arsenic.
12. Narrate instruments methods to analyze mineral products.
13. Brief classical methods of analysis with respect to metal analysis.
14. Describe plan of analysis for Rasa sindura.
15. Why analysis of positive ion in presence of their positive ion what precaution you take.
16. Test for Iron

**[2marks]**

1. Define Herbal.
2. Define Herbomineral.
3. Define Bhasma.
4. Write two preparations of bhasma.
5. Define Kshara.
6. Qualitative test for Copper.
7. Qualitative test for Arsenic.

**Chapter 2 Avaleha & Paka**

**[10marks]**

1. Estimation of Sugars.
2. Write down analytical profile of Avaleha & Paka
3. Define invert sugar? Explain sugar estimation methods.
4. Discuss different types of extraction method used in powder drugs in Avaleha & Paka preparations.
5. Explain sugar estimation methods & narrate importance in drug analysis.

**[5marks]**

1. Test for non-reducing sugars.
2. Test for Sugar
3. Define PH & write down importance of pH.
4. How PH of solution affect the estimation
5. Why perceptions are digested before they are subjected to filtration.
6. Short note on volatile constituents.
7. Test for sugar.(Keller-killani test (For sugar) 5
8. Why digestion concentrated as important stage prior to filtration.
9. Why filtration is not easy in plant drug when fine powder is made and herb contain mucilage.
10. Test for reducing sugar and non-reducing sugar.(Fehling's Test, Benedict's test)

**[2marks]**

1. Define Avaleha & Paka.
2. Write down difference between Avaleha & Paka.
3. Discuss the role of lead acetate in sugar analysis
4. Difference between reducing and non-reducing sugars.

### **Chapter: Asava & Arishta**

**[10marks]**

1. Write down analytical profile of Asava & Arishta.
2. Short note on Asava & Arishta.

**[5marks]**

1. Write Solubility in water
2. How will you prepare Fehling solution?
3. Importance of Asava & Arishta
4. Define triglycerides. Give chemistry of fats & oils.
5. Test for reducing sugar and non-reducing sugar.(Fehling's Test, Benedict's test).
6. Difference between reducing sugar and non-reducing sugar.

**[2marks]**

1. Define specific Gravity.
2. Define refractive index.
3. Define reducing sugar.
4. Define non reducing sugar.
5. Define pH.
6. Define Asava & Arishta.
7. Write down difference between Asava & Arishta.
8. Write preservatives used in Asava & Arishta.
9. Write two Examples with formula of Asava & Arishta.
10. Define Invert Sugar.
11. Test for sugar.(Keller-killani test (For sugar)
12. Give 2 examples of Asava & Arishta.
13. Write test for Tannin.
14. Test for non-reducing sugars.
15. Discuss the role of lead acetate in sugar estimation.
16. Write test for Flavonoid.
17. Write 2 names of instruments used for measurements of refractive index.
18. Write Test for alkaloids.
19. Write Test for steroid.