

EX No1 Chemical test: for Tragacanth.

Aim: To identify the chemical characters of given sample.

Background

Unorganized drugs, as the name suggests, are drugs that show no definite cellular structure. These are derived from plant, animal or mineral sources by some process of extraction and followed by purification if necessary. Unorganized drugs are fairly homogenous and may be solids, semisolids or liquids. These may be differentiated by observing the solubility in alcohol and then applying other physical and chemical standards. Tragacanth is the dried gummy exudation from the stem of *Astragalus gummifer*, *Labillardiere* and other species of *Astragalus* (Fam. Leguminosae). It occurs in flat or curved ribbon shaped flakes. Odourless, almost tasteless, white or pale yellowish-white, somewhat translucent, horny; fracture short.

Chemicals Required :

Hydrochloric acid, Sodium hydroxide solution, Fehling's solution, Barium chloride solution, Lead acetate, Ruthenium red, Iodine Caustic potash.

PROCEDURE

- 1). To 4 ml of 0.5% w/v solution, add 0.5 ml of hydrochloric acid and heat for 30 minutes on a water bath. Divide the liquid into two parts. (a). To one part, add 1.5 ml of sodium hydroxide solution and Fehling's solution, warm on water bath: red precipitate is produced. (b). To the second part, add barium chloride solution (10%): No precipitate is obtained (distinction from agar)
- 2). To a 0.5% w/v solution of the gum, add 20% w/v solution of lead acetate: A voluminous flocculent precipitate is obtained (distinction from acacia)
- 3). Mount a small quantity of powder in ruthenium red and examine microscopically: Particles do not acquire pink colour (distinction from Indian tragacanth)
- 4). To 0.1 g of powder, add N/50 Iodine: The mixture acquires an olive green colour (distinction from acacia and agar).
- 5). Powder is warmed with 5% aqueous caustic potash: Canary yellow colour will obtain. Indian tragacanth .It is obtained from *Sterculia aurea* Roxburgh; (Fam: Sterculiaceae). It is insoluble in alkali. It has acetous (acetic acid like) odour and starch is absent. It gives brownish colour when boiled with aqueous KOH. It is stained pink by solution of Ruthenium red.

CONCLUSION From the above morphological characters and chemical tests the given crude drug is identified as Tragacanth.

REFERENCES 1.Kokate CK. Practical Pharmacognosy, 4 edition, Vallabh Prakashan. Delhi; 1994; 98