RESINS PART 2

PHYSICOCHEMICAL PROPERTIES OF RESINS

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| **Property** | **Description** |
| **Solubility** | Insoluble in water; soluble in alcohol, chloroform, ether, and volatile oils. |
| **Appearance** | Hard, brittle, or soft, translucent or opaque solids. |
| **Taste and Odor** | Characteristically aromatic or bland; may be tasteless or bitter. |
| **Melting Point** | Resins generally soften over a range of temperatures rather than melting sharply. |
| **Acidic Nature** | Many resins contain free resin acids and thus show weak acidity. |
| **Combustibility** | Burns with a smoky flame and aromatic odor. |
| **Interaction with Alkali** | Form soap-like salts with alkali (due to resin acids). |

GENERAL CHEMICAL TESTS FOR RESINS

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| **Test Name** | **Procedure** | **Observation** | **Inference** |
| **Solubility Test** | Shake extract with water, alcohol, ether. | Soluble in alcohol/ether, insoluble in water. | Indicates resin presence. |
| **Turbidity Test** | Add water to alcoholic extract. | Turbidity appears. | Confirms water-insoluble resin components. |
| **HCl Test** | Add concentrated HCl to alcoholic extract. | Reddish-brown precipitate. | Indicates presence of resins. |
| **Ferric Chloride Test** | Add FeCl₃ to alcoholic extract. | Brown or green color. | Indicates phenolic groups in resin. |
| **Acetone Test** | Add acetone to resin sample. | Complete dissolution of resin. | Confirms resin solubility. |
| **NaOH Test** | Add NaOH to resin. | Forms soap-like emulsion. | Due to resin acid reacting with base |