

6. WEEK

**DISSOLUTION RATE METHODS
AND APPLIED DEVICES**

DISSOLUTION RATE METHODS (USP 30)

- **Apparatus 1 – BASKET APPARATUS**
- **Apparatus 2 – PADDLE APPARATUS**
- **Apparatus 3 – RECIPROCATING CYLINDER**
- **Apparatus 4 – FLOW THROUGH CELL**
- **Apparatus 5 – PADDLE OVER DISC**
- **Apparatus 6 – CYLINDER**
- **Apparatus 7 – RECIPROCATING HOLDER**

Apparatus 1 - BASKET APPARATUS

- **Cuvette**
(glass or other inert and transparent material)
- **Engine**
- **Shaft (spindle)**
- **Cylindrical basket**
- **$37 \pm 0,5$ °C**
- **The spindle and basket must be made of stainless steel.**

Standardized factors:

- **Steel property**
- **Mesh size of the basket**
- **Material and geometry of the cuvette**
- **Rotation speed (25 - 200 rpm) (Usually used at 50, 75 and 100 rpm)**
- **How many centimeters the basket will be higher than the bottom of the cuvette.**
- **Liquid volume**
- **Sample point**

- **The basket method should be used instead of the pallet method in floating dosing forms. In the pallet method, the floating tablet is a single surface with liquid, and the tablet can hit spindle during the experiment.**
- **If the formulation contains glue or prepared with hydrophilic polymer, the basket method is not preferred because the pores of the basket may be clogged.**
- **Solid dosage forms (Tablets, capsules)**
- **Floating dosage forms**

Apparatus 2 – PADDLE APPARATUS

- Cuvette
- Engine
- Shaft (spindle)
- Paddle
- $37 \pm 0,5 \text{ }^{\circ}\text{C}$
- The spindle and paddle must be made of stainless steel.

Standardized factors:

- **Steel property**
- **Material and geometry of the cuvette**
- **Rotation speed (25 - 200 rpm) (Usually used at 50, 75 and 100 rpm)**
- **How many centimeters the paddle will be higher than the bottom of the cuvette.**
- **Liquid volume**
- **Sample point**

- **Before the pallet rotation is initiated, the dosing configuration must be settled to the bottom of the cuvette.**
- **For floating dosage forms; small sinkers made from non-reactive material can be mounted in dosage forms.**
- **Capsules, tablets**