

7. WEEK

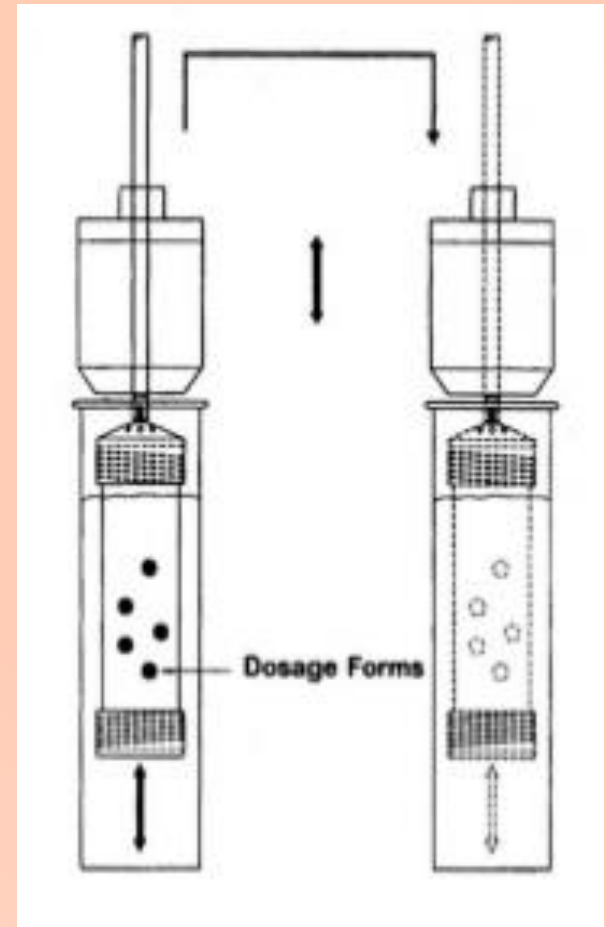
**DISSOLUTION RATE METHODS
AND APPLIED DEVICES**

Apparatus 3 – RECIPROCATING CYLINDER

- **Similar to the disintegration test device.**
- **It consists of a cylindrical, flat-bottomed glass cuvette.**
- **It is a cylinder made of glass and moving up and down.**
- **Both ends of the cylinder have sieves made of suitable nonreactive materials.**

Apparatus 3 – RECIPROCATING CYLINDER

- Engine
- $37 \pm 0,5 \text{ } ^\circ\text{C}$
- Capsules, tablets,
- Suspensions, granules



Apparatus 4 – FLOW THROUGH CELL

- **A reservoir for the dissolution medium**
- **Pump**
- **Flow through cell**
- **Collector**
- **Water bath ($37 \pm 0,5$ °C)**
- **The standard flow rates recommended by the USP are 4, 8 and 16 ml / min.**
- **The lowest flow rate must be used for the sink conditions.**

- **Flow through cell is made of transparent and inert material.**
- **It contains a filter system to prevent the undissolved particles from escaping from the top of the cell.**
- **The lower conical part is often filled with small (1 mm diameter) glass beads. These beads regulate the flow of liquid.**
- **The dosage can be placed into the cell with a holder.**

- **Controlled release dosage forms**
- **Implantable systems**
- **Tablets**
- **Microparticulate systems**
- **Suppositorius**



Apparatus 5 – PADDLE OVER DISC

- It is a recommended method for transdermal delivery systems (TTS)
- Stainless steel disc designed to hold the transdermal system at the bottom of the cuvette
- $32 \pm 0,5 \text{ } ^\circ\text{C}$



Apparatus 6 – CYLINDER

- It is a recommended method for transdermal delivery systems (TTS).
- It has a cylindrical mixing element made of stainless steel.
- The dosage is placed over the cylinder.
- $32 \pm 0,5 \text{ } ^\circ\text{C}$

Apparatus 7 – RECIPROCATING HOLDER

- **There is a holder that moves up and down and the tip of the holder changes according to the dosage form.**
- **It can be specified for use in a wide variety of dosage forms.**
- **It is used for tablets and TTS.**

NON-OFFICINAL METHODS

➤ **STATIC METHODS**

- **implantable systems**
- **Microparticles**
- **Nanoparticles**

➤ FRANZ DIFFUSION CELL

- Semi-solid dosage forms (Crem, gel, ointment)

