事　務　連　絡
平成 22 年 7 月 30 日

各都道府県衛生主管部（局）
薬務主管課　　御中

厚生労働省医薬食品局審査管理課

日本薬局方における国際調和について

平成２２年７月３０日厚生労働省告示第３２２号により、第十五改正日本薬局方の一部改正が行われたところですが、今般、三極薬局方検討会議（PDG）において、日本薬局方、欧州薬局方及び米国薬局方間で調和合意がなされた 6.10 溶出試験法について、別添のとおり英文版を作成しましたので御連絡いたします。

別添

6.10 Dissolution Test

Change to read following part under Apparatus for Flow-Through Cell Method:

Apparatus for Flow-Through Cell Method (Apparatus 3)—The assembly consists of a reservoir and a pump for the dissolution medium; a flow-through cell; a water bath that maintains the dissolution medium at 37±0.5℃. Use the cell size specified in the individual monograph.

The pump forces the dissolution medium upwards through the flow-through cell. The pump has a delivery range between 4 and 16 mL per minute, with standard flow rates of 4, 8, and 16 mL per minute. It must deliver a constant flow (±5 percent of the nominal flow rate); the flow profile should be sinusoidal with a pulsation of 120±10 pulses per minute. A pump without the pulsation may also be used. Dissolution test procedures using the flow-through cell must be characterized with respect to rate and any pulsation.

The flow-through cell (see Figures 6.10-3 and 6.10-4), of transparent and inert material, is mounted vertically with a filter system (specified in the individual monograph) that prevents escape of undissolved particles from the top of the cell; standard cell diameters are 12 and 22.6 mm; the bottom cone is usually filled with small glass beads of about 1-mm diameter with one bead of about 5 mm positioned at the apex to protect the fluid entry tube; a tablet holder (see Figures 6.10-3 and 6.10-4) is available for positioning of special dosage forms. The cell is immersed in a water bath, and the temperature is maintained at 37±0.5℃.

The apparatus uses a clamp mechanism of two O-rings to assemble the cell. The pump is separated from the dissolution unit in order to shield the latter against any vibrations originating from the pump. The position of the pump should not be on a level higher than the reservoir flasks. Tube connections are as short as possible. Use suitably inert tubing, such as polytef, with about 1.6-mm inner diameter and inert flanged-end connections.

Apparatus Suitability—The determination of suitability of a test assembly to perform dissolution testing must include conformance to the dimensions and tolerances of the apparatus as given above. In addition, critical test parameters that have to be monitored periodically during use include volume and temperature of the dissolution medium, rotation speed (Basket Method and Paddle Method), and flow rate of medium (Flow-Through Cell Method).

Determine the acceptable performance of the dissolution test assembly periodically.