Q4B Evaluation and Recommendation of Pharmacopoeial Texts for Use in the ICH Regions

Annex 7: Dissolution Test General Chapter

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INTERNATIONAL CONFERENCE ON HARMONISATION OF TECHNICAL REQUIREMENTS FOR REGISTRATION OF PHARMACEUTICALS FOR HUMAN USE

DRAFT CONSENUS GUIDELINE

EVALUATION AND RECOMMENDATION OF PHARMACOPOEIAL TEXTS FOR USE IN THE ICH REGIONS

ON

DISSOLUTION TEST GENERAL CHAPTER

Q4B ANNEX 7

Current *Step 2* Version
dated 13 November 2008

At Step 2 of the ICH Process, a consensus draft text or guideline, agreed by the appropriate ICH Expert Working Group, is transmitted by the ICH Steering Committee to the regulatory authorities of the three ICH regions (the European Union, Japan and the USA) for internal and external consultation, according to national or regional procedures.

Q4B Annex 7
Document History

Current *Step 2* version

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Q4B Annex 7	Approval by the Steering Committee under *Step 2* and release for public consultation.	13 November 2008

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Draft ICH Consensus Guideline

Released for Consultation on 13 November 2008, at *Step 2* of the ICH Process

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DISSOLUTION TEST GENERAL CHAPTER

Q4B Annex 7

1. INTRODUCTION

This annex is the result of the Q4B process for Dissolution Test.

The proposed texts were submitted by the Pharmacopoeial Discussion Group (PDG).

2. Q4B OUTCOME

2.1 Analytical Procedures

The ICH Steering Committee, based on the evaluation by the Q4B Expert Working Group (EWG), recommends that the official pharmacopoeial texts, Ph.Eur. 2.9.3. Dissolution, JP 6.10 Dissolution Test, and USP <711> Dissolution, can be used as interchangeable in the ICH regions subject to the following conditions:

2.1.1 The Dissolution Test is not considered to be interchangeable in the ICH regions when enzymes are used in the media.

2.1.2 The dissolution apparatus should be appropriately calibrated to ensure compliance with regional good manufacturing practice (GMP) requirements.

2.1.3 Except for Apparatus 1 and 2, apparatus numbers are not consistent in the three pharmacopoeias. Accordingly, other apparatus should be referred to in the dossier by an unambiguous descriptive title or compendial reference.

2.1.4 The Dissolution Test is not considered to be interchangeable in the ICH regions for dosage forms referred to in the regional compendia as *delayed-release, gastro-resistant*, or *enteric-coated*.

2.1.5 Validation studies should be conducted to demonstrate that the test results are not adversely affected if the thermometer is to remain in the dissolution vessel per regional good manufacturing practice (GMP).

2.1.6 The Dissolution Test is not considered to be interchangeable in the ICH regions for JP Interpretation 2.

2.1.7 The Dissolution Test is not considered to be interchangeable in the ICH regions for use of *large* vessels (greater than 1 liter).

2.1.8 Product-specific parameters such as media, stirring rate, sampling time, and the use and type of sinkers should be specified and justified in the application dossier.

2.1.9 When using the small cell tablet holder with the flow-through cell apparatus, only the dimensions described in the PDG harmonised text Figure 5 are considered interchangeable.

2.2 Acceptance Criteria

Acceptance criteria should be specified in the application dossier.

3. TIMING OF ANNEX IMPLEMENTATION

When this annex is implemented (incorporated into the regulatory process at ICH Step 5) in a region, it can be used in that region. Timing might differ for each region.

4. CONSIDERATIONS FOR IMPLEMENTATION

4.1 General Consideration

When sponsors or manufacturers change their existing methods to the implemented Q4B-evaluated pharmacopoeial texts that are referenced in Section 2.1 of this annex, any change notification, variation, and/or prior approval procedures should be handled in accordance with established regional regulatory mechanisms pertaining to compendial changes.

4.2 FDA Consideration

Based on the recommendation above, and with reference to the conditions set forth in this annex, the pharmacopoeial texts referenced in Section 2.1 of this annex can be considered interchangeable. However, FDA might request that a company demonstrate that the chosen method is acceptable and suitable for a specific material or product, irrespective of the origin of the method.

An appropriately rigorous mechanical calibration method (such as ASTM International's ASTM E2503-07, Standard Practice for Qualification of Basket and Paddle Dissolution Apparatus, or the procedures for Mechanical Qualification of Dissolution Apparatus 1 and 2, DPA-LOP.002, on the FDA Web site), when properly executed, will satisfy the current good manufacturing practice (CGMP) requirement for dissolution apparatus calibration under § 211.160(b)(4) of Title 21 of the Code of Federal Regulations.

4.3 EU Consideration

For the European Union, the monographs of the Ph. Eur. have mandatory applicability. Regulatory authorities can accept the reference in a marketing authorisation application, renewal or variation application citing the use of the corresponding text from another pharmacopoeia as referenced in Section 2.1, in accordance with the conditions set out in this annex, as fulfilling the requirements for compliance with the Ph. Eur. Chapter 2.9.3. on the basis of the declaration of interchangeability made above.

EU considers that it could accept the approach to the dissolution test for delayed-release products as published in the USP as meeting the criteria of the Ph. Eur. The

validation studies referred to in Section 2.1.5 of this annex would normally be submitted in the marketing authorisation dossier.

4.4 MHLW Consideration

The pharmacopoeial texts referenced in Section 2.1 of this annex can be used as interchangeable in accordance with the conditions set out in this annex. Details of implementation requirements will be provided in the notification by MHLW when this annex is implemented.

MHLW considers that it could accept the approach to the dissolution test for reciprocating cylinder apparatus as published in Ph. Eur. and USP, if the validation studies have been submitted in the marketing authorization dossier.

5. REFERENCES USED FOR THE Q4B EVALUATION

5.1 The PDG Stage 5B sign-off document (Rev. 1): *Japanese Pharmacopoeial Forum*, Volume 14, number 4 (December 2005).

5.2 The pharmacopoeial references for Dissolution Test for this annex are:

5.2.1 *European Pharmacopoeia* (Ph. Eur.):
6th Edition (official on January 2008) Dissolution Test (reference 01/2008: 20903).

5.2.2 *Japanese Pharmacopoeia* (JP):
6.10 Dissolution Test as it appears in Supplement I to the JP Fifteenth Edition (September 28, 2007, The Ministerial Notification No. 316).

5.2.3 *United States Pharmacopeia* (USP):
<711> Dissolution Test USP 28, 2nd Supplement, official August 1, 2005.