BDMCA/DPS/02/B

#### APPLICATION OF REGISTRATION OF MEDICINAL PRODUCTS

### QUALITY REQUIREMENTS FOR DRUG PRODUCT (PART II – SECTION 2)

| PRC  | DDUCT: | REF.NO.   |
|------|--------|---|
| N.B. |        | r Part II – Section 2. Spacing should be ecessary. Extension sheets for details and ropriately numbered and referenced. |

### **SECTION A**

Table of contents for the filed application.

### **SECTION B**

Checklist of tabulated information required for registration of medicinal product.

### **SECTION C**

### P1. DRUG PRODUCT

- P1.1 <u>Description</u> (Physical Characteristics)
- P1.2 <u>Composition</u> (Complete Formula)
- P1.2.1 Active Ingredient(s)

Name of Active Ingredient(s) Content

P1.2.2 Other Ingredients

(adjunct, excipients, colour, preservative, flavour, etc)

Name of Ingredient(s) Content Function

### P1.2.3 <u>Overages</u> (where applicable) Name of Ingredient(s)

<u>Overage</u>

(To include reasons for including overage)

- P1.3 Description of Reconstitution Diluents, if applicable
- P1.4 <u>Type of Container Closure System / Pack Size</u> (Briefly)

#### P2. PHARMACEUTICAL DEVELOPMENT

- P2.1 <u>Information on Development Studies</u>
  (Applicable to NCE and Biotechnological Products Only)
  - P2.1.1 Product Development and its Manufacturing Process
  - P2.1.2 Bibliography of Development Studies

### P2.2 Component of Drug Product

#### P2.2.1Drug Substance

State briefly the characteristics-performance relationship of the drug substance, mentioning also, where applicable, and its compatibility with excipients listed in Item P2.1.1 and other drugs in the same formulation.

### P2.2.2 Excipients

State briefly the concentration and characteristics of excipients that can influence product performance, also mentioning, compatibility of the excipients with each other.

### P2.3 Drug Product

### P2.3.1 Formulation Development

i) State briefly structure-active relationship of drug substance putting

into consideration the proposed route of administration and usage.

- ii) Highlight evolution of formulation design from initial concept to final design of drug substance.
- iii) Summarise all formulations used, including changes made, between proposed commercial formulation and those used in pivotal clinical batches and primary stability batches. Also provide the rationale for changes made, if any.
- iv) Manufacturer's comparative in-vitro studies and standards, as well as in-vivo studies and standards for the release of active ingredients. (For example, dissolution, diffusion, etc.)
- v) Identification of special design features and rationale for their use.
- vi) Rationale for special formulations.

| Detail of tests, analytical methods and test protocols enclosed.  | [ ]     |
|---|---------|
| Summary of in-vitro and in-vivo studies on release rates of product investigators.                        | by othe |
| Details of test/studies, analytical methods, test protocols reports of and supporting documents enclosed. | studies |
| Bibliography of comparative in-vitro and in-vivo studies for release                                      | rates.  |
| P2.3.2 <u>Overages</u>  |         |

- P2.3.3 Physicochemical and Biological Properties
- P2.4 Manufacturing Process Development
  - P2.4.1 <u>Development of Manufacturing Process for Commercial Production</u>
    <u>Batches</u>
  - P2.4.2 <u>Differences between Manufacturing Process(es) Used for Pivotal</u>
    <u>Clinical Batches and Commercial Production Batches that can</u>
    <u>Influence Performance and Manufacturability of Drug Product</u>

| P2.5  | Container Closure System   |
|-------|--|
|       | P2.5.1 <u>Suitability of Container Closure System</u>                                    |
|       |  |
|       | P2.5.2 Performance of Dosing Device  |
|       |  |
| P2.6  | Microbiological Attributes   |
|       | P2.6.1 Non-Sterile Products  |
|       | . <del></del>  |
|       | P2.6.2 Selection of Preservative Systems   |
|       |  |
|       | P2.6.3 Container Closure System of Sterile Preparation                                   |
|       |  |
| P2.7  | Compatibility  |
|       | Summary of compatibility studies of drug product with primary container                  |
|       | closure system, product accessories and reconstitution diluents.                         |
|       |  |
| MANUI | FACTURE OF PRODUCT   |
| P3.1  | Batch Manufacturing Master Formula  Name of Ingredients  Quantities Used per  Batch Size |
|       | Name of Ingredients Quantities Used per Batch Size (Active and otherwise) Batch          |
|       |  |
|       | Stages of Manufacturing  |
|       |  |
| P3.2  | Manufacturing Process & Process Control  |
|       | P3.2.1 Brief Description and Principles  |
|       | Detailed manufacturing process enclosed [ ]  |

P3.

#### P3.2.2 <u>In-process Quality Control</u> (IPQC)

Tests performed during manufacturing process and sampling protocols.

Tests Stage at which Frequency of Quality of sample taken each time test is done sampling

Details of test, test protocols, analytical methods specification limits and sampling plans enclosed

#### P3.3 Controls of Critical Steps and Intermediates

P3.3.1 Critical Steps

Critical Steps Control <u>Acceptance</u>

> Specifications Limits

P3.3.2 Intermediates

Intermediates Control Acceptance

> Specifications Limits

#### P3.4 Process Validation and/or Evaluation

#### P4. **QUALITY CONTROL OF EXCIPIENTS**

#### P4.1 Specification for Excipients

**Specifications** Name of Acceptance Limits **Source** Excipients (State whether B.P/ (Manufacturer and U.S.P/ manufacturer's, country of origin)

etc)

Details of specifications tests, test protocols, analytical methods, sampling protocols, etc. enclosed. [ ]

### P4.2 <u>Analytical Procedures</u> (Refer to Annex A)

### P4.2.1 <u>Description of Analytical Procedures</u>

### P4.2.2 Source of Compliance

State whether quality control is done in part or solely by the manufacturer's own quality control department or an external laboratory.

If quality control tests are done by an external laboratory, state the following:

- i) Name and address of the laboratory;
- ii) Tests done by the external laboratory;
- iii) Reasons why the tests are not done by the manufacturer;
- iv) Whether the manufacturer or the external laboratory is responsible for deciding if a batch of product is suitable for release for marketing.

Certificate of Analysis for Compliance of Purchase Specifications [ ]

### P4.3 Excipients of Human and Animal Origin

P4.3.1 Description

P4.3.2 Specification

P4.3.3 Sources

P4.3.4 Viral Safety Data

### P4.4 Novel Excipients

P4.4.1 Manufacture of Excipients

P4.4.2 Safety Characteristics

### P5. QUALITY CONTROL OF FINISHED PRODUCT

| P5.1 | Specifications for (active and otherw                      | -   |  |   |               |
|------|--|---|--|---|---------------|
|      | Name of<br>Ingredients                                     | Specifications (State whether B.P/U.S.P/ manufacturer's, etc)   | Acceptance<br>Limits                           | Source<br>(Manufacture<br>country of or |               |
|      | Details of specification protocols, etc. end               | ations tests, test prot<br>closed.  | ocols, analytical r                            | nethods, sar                            | npling<br>[ ] |
|      | Certificate of Anal  | ysis of two recent ba   | tches of finished p                            | oroduct encl                            | osed.<br>[ ]  |
| P5.2 | Analytical Procedo<br>(Refer to Annex A                    |   |  |   |               |
|      |  | ality control is done in<br>all department or an e  |  |   | cturer's      |
|      | If quality control following:                              | tests are done by   | v an external la                               | boratory, sta                           | ate the       |
|      | ii) Tests done by<br>iii) Reasons why<br>iv) Whether the m | dress of the laborator<br>the external laborator<br>the tests are not don<br>nanufacturer or the ex<br>atch of product is sui | ory;<br>e by the manufac<br>xternal laboratory | is responsib                            |               |
|      | Certificate of Anal  | ysis for Compliance   | to Purchase Spec                               | ification                               | []            |
| P5.3 | Validation of Anal<br>(Refer to Annex C                    | ytical Procedures Us  | <u>ed</u>                                      |   |               |
| P5.4 | Batch Analyses R   | <u>eport</u>  |  |   |               |
|      | P5.4.1 Description   | of Batches Analyse  | <u>d</u>                                       |   |               |
|      | P5.4.2 Results of  | Tests Conducted on  | All Relevant Bato                              | <u>hes</u>                              |               |
|      |  | of recent batches of<br>product seeking regis   | •  | vhich are                               | [ ]           |

| P5.5  | Characterisation | οf | Impurities  |
|-------|------------------|----|-------------|
| F 5.5 | Charactensation  | OI | IIIIpullies |

Summary of impurities monitored or tested for during and after manufacture of drug product.

ImpuritiesAnalytical MethodAcceptanceMonitoredUsedLimits

(E.g. TLC, HPLC, chemical test, IR spectroscopy, atomic absorption, etc)

Analytical reports for batches used for toxicity tests and clinical work submitted in support of the drug registration application, if different from the above [ ]

P5.6 <u>Justification of Specification</u>

<u>Specification</u> <u>Analytical</u> <u>Acceptance</u> <u>Justification</u>

<u>Procedure</u> <u>Limits</u>

#### P6. REFERENCE STANDARDS OR MATERIALS

- P6.1 Reference Standards or Materials Used for Testing
- P6.2 Purity

(Measurement by Quantitative Procedures)

### P7. CONTAINER CLOSURE SYSTEM / PACKAGING

P7.1 Immediate Container Closure System / Primary Packaging

Type:

Material:

Capacity (where applicable):

Closure and liner (type and material) : (where applicable)

| Name and Address of Manufacturer:   |
|---|
| Specifications:   |
| Outer Container(s) / Secondary Packaging(s)   |
| Type:   |
| Material :  |
| Capacity (where applicable):  |
| Closure and liner (type and material) : (where applicable)  |
| Name and Address of Manufacturer:   |
| Specifications:   |
| Product Accessories   |
| Description/Type:   |
| Material :  |
| Packaging Inclusions (Dose-measuring device/applicators/administration set/desiccant/ fillers/etc., if any) |
| Description:  |
| Material and Composition:   |
| Reasons for Inclusion:  |
| Capacity (where applicable):  |
|   |

|       | Name and address of Manufacturer:   |
|-------|---|
|       | Specification:  |
|       | Duration of Satisfactory Performance: (where applicable)  |
|       | Instruction to users:   |
| P7.4  | Other Supporting Data   |
|       | The application must have ready details of containers and packaging materials - composition of material and added substances, technical properties and specifications, methods for testing relevant properties/specifications, safety or toxicity of material and added substances, efficacy of closures in manufacturing sterile products, compatibility of inclusions with finished product, etc. |
|       | However, <u>DO NOT</u> enclose such details and supporting documents. The applicant shall be notified when such details are needed; they shall be made available to the Authority <u>immediately</u> on request.  |
|       | Suitability information should be referred under Item P2.5.   |
| PRODU | JCT STABILITY   |
| P8.1  | Storage Conditions Included on Label  |
| P8.2  | Proposed Shelf-life of Product  |
| P8.3  | Stability Studies Summary and Conclusion  |
|       | Completed Stability Studies (Summary of stability studies, characteristics and degradation products monitored, results and conclusions of completed stability studies). Results of studies on at least 2 batches are required.  |
|       | Details of completed stability studies, place of study, protocols, analytical methods, results and conclusions, etc. enclosed.  |

P8.

### P8.4 <u>Post-approval Stability Protocol and Stability Commitment</u>

On-going / Proposed Stability Studies
(Outline of on-going or proposed stability studies)

Details of on-going/proposed stability studies, protocols, analytical methods, etc. enclosed.

<u>N.B.</u> Results and conclusions of studies shall be submitted to The Authority on completion of such studies.

### P8.5 <u>Stability Data Reports</u>

Report on stability study that include batches examined, conditions of storage, container closure systems, duration of study, monitoring of changes, analytical methods, results of study, and conclusion.

#### P9. PRODUCT INTERCHANGEABILITY

(Applies to Major Variation and Generic Products Only)

P9.1 Type of Studies Conducted

P9.2 Protocols Used & Result of Studies Conducted

#### **SECTION D**

Summary of Other Data

Bibliography of Relevant Data

<u>N.B.</u> Details of data particulars, full reports of studies including methodology, protocols, analytical methods, results, interpretation, conclusion, copies of papers, articles, etc. referenced and relevant supporting documents shall be kept by the applicant and submitted to the Authority immediately on request.

| GNATION: |
|----------|
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|          |
|          |
|          |