

Egyptian Guidelines on Quality Module for Human Pharmaceuticals products submitted for Re-registration

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1. Introduction

- This guidance aims to provide applicants with information and documents required for preparation of the Quality Module for human pharmaceutical products according to re registration process.
- It aims also to inform the applicants with the adopted references and guidelines used in the evaluation of Quality Module in a way that does not contradict with any of the Egyptian published regulations, legislations, decisions & registration ministerial decrees.
- It should be noted that the Egyptian Drug Authority has the right to request any additional information
 or documents and refer to any other international guidelines that aren't listed in this guidance, in order
 to establish the safety, efficacy and quality of a medicine in keeping with the knowledge current at the
 time of evaluation, alternative approaches may be used but these should be scientifically and technically
 justified.

2. Scope

This guidance applies for any human pharmaceutical product submitted for evaluation of Quality Module according to re registration process.

3. Abbreviations:

- 3.1. CTD: Common Technical Document
- **3.2. ICH:** The International Council for Harmonization of Technical Requirements for Pharmaceuticals for Human Use
- 3.3. CEP: The Certification of Suitability of the European Pharmacopeia
- 3.4. API: Active pharmaceutical ingredient
- 3.5. APIMF: Active pharmaceutical ingredient Master file
- 3.6. FPP: Finished pharmaceutical product
- 3.7. DMF: Drug Master File
- 3.8. INN: International Nonproprietary Name
- 3.9. USAN: United States Adopted Name
- 3.10. JAN: Japanese Accepted Name
- 3.11. BAN: British Approved Name
- 3.12. CAS: Chemical Abstracts Service registry number.

Central Administration for Pharmaceutical Products General Administration of Human Pharmaceuticals Registration Administration of Technical Affairs for Human Pharmaceuticals



- 3.13. FDA: Food and drug administration federal agency
- 3.14. EDA: Egyptian Drug Authority
- 3.15. CoAs.: Certificates of Analysis
- 3.16. TSE: Transmissible spongiform encephalopathy
- 3.17. USP: United States Pharmacopeia
- 3.18. Eur.Ph.: European Pharmacopoeia
- 3.19. B.P: British Pharmacopoeia
- 3.20. J.P: Japanese Pharmacopoeia

4. Definitions

- **4.1.** The Common Technical Document (CTD): is a set of specifications for a dossier to be submitted to the regulatory authorities for the registration/marketing authorization of medicines.
- **4.2.** The International Council for Harmonization of Technical Requirements for Pharmaceuticals for Human Use (ICH): is unique in bringing together the regulatory authorities and pharmaceutical industry to discuss scientific and technical aspects of pharmaceuticals and develop ICH guidelines.
- **4.3.** The Certification of Suitability (CEP): It is a certificate to certify that the quality of the substance produced at the site(s) listed on the CEP (or its annexes) is suitably controlled by the corresponding Ph. Eur. monograph (current edition including supplements), supplemented by the test(s) stated on the CEP and the analytical procedures included in the annex.
- **4.4.** Active pharmaceutical ingredient (API): Any substance or mixture of substances intended to be used in the manufacture of a pharmaceutical dosage form, and that, when so used, becomes an active ingredient of that pharmaceutical dosage form. Such substances are intended to furnish pharmacological activity or other direct effect in the diagnosis, cure, mitigation, treatment or prevention of disease, or to affect the structure and function of the body.
- **4.5. API starting material:** A raw material, intermediate, or an API that is used in the production of an API and that is incorporated as a significant structural fragment into the structure of the API. An API starting material can be an article of commerce, a material purchased from one or more suppliers under contract or commercial agreement, or produced in-house.



- **4.6. API Master file (APIMF)**: other global terms include DMF (drug master file) and ASMF (active substance master file) is a document containing complete information on an Active Pharmaceutical Ingredient (API) containing factual and complete information on a drug product's chemistry, manufacture, stability, purity, impurity profile, packaging, and the cGMP status of any human drug product. A drug master file comprises two parts: the Applicant's Part (Open Part), which contains all the information that the license-holder needs to assess the quality and submit a license or amendment application; and the Restricted Part (Closed Part), which contains confidential information about the manufacturing procedure only disclosed to the authorities.
- **4.7. Applicant:** The person or company who submits an application for marketing authorization of a new pharmaceutical product, an update to an existing marketing authorization or a variation to an existing market authorization.
- **4.8. Finished pharmaceutical product (FPP):** A finished dosage form of a pharmaceutical product, which has undergone all stages of manufacture, including packaging in its final container and labelling.
- **4.9. API Intermediate:** A material produced during steps of the processing of an API that undergoes further molecular change or purification before it becomes an API. Intermediates may or may not be isolated (5). manufacturer. A company that carries out operations such as production, packaging, repackaging, labelling and relabeling of pharmaceuticals.
- **4.10. Pilot-scale batch:** A batch of an API or FPP manufactured by a procedure fully representative of and simulating that to be applied to a full production-scale batch.
- **4.11. Primary batch:** A batch of an API or FPP used in a stability study, from which stability data are submitted in a registration application for the purpose of establishing a retest period or shelf-life.
- **4.12. Production batch:** A batch of an API or FPP manufactured at production scale by using production equipment in a production facility as specified in the application.

5. Main Topic:

5.1. Module 3. Quality:

5.1.1 Information on Quality should be presented in the structured CTD format described in the ICH M4Q guidance as follow:

3.1 Table of Contents of Module

3.2 Body of Data



3.2.S DRUG SUBSTANCE

- 3.2.S.1 General Information
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 - 3.2.S.1.2 Structure
 - 3.2.S.1.3 General Properties
- 3.2.S.2 Manufacture
- 3.2.S.2.1 Manufacturer(s)
- 3.2.S.2.2 Description of Manufacturing Process and Process Controls
- 3.2.S.2.3 Control of materials
- 3.2.S.2.4 Controls of critical steps and intermediates
- 3.2.S.2.5 Process validation and/or evaluation
- 3.2.S.2.6 Manufacturing process development

3.2.S.3 Characterization

- 3.2.S.3.1 Elucidation of structure and other characteristics
- 3.2.S.3.2 Impurities

3.2.S.4 Control of the API

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- 3.2.S.4.2 Analytical procedures
- 3.2.S.4.3 Validation of analytical procedures
- 3.2.S.4.4 Batch analyses
- 3.2.S.4.5 Justification of specification
- 3.2.S.5 Reference standards or materials
- 3.2.S.6 Container-closure system
- 3.2.S.7 Stability
- 3.2.S.7.1 Stability summary and conclusions
- 3.2.S.7.2 Post-approval stability protocol and stability commitment



- 3.2.S.7.3 Stability data
- 3.2.P Drug product (or finished pharmaceutical product (FPP))
 - 3.2.P.1 Description and composition of the FPP
 - 3.2.P.2 Pharmaceutical Development
 - 3.2.P.2.1 Components of the FPP
 - 3.2.P.2.1.1 Active pharmaceutical ingredient
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 - 3.2.P.2.2 Finished pharmaceutical product
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 - 3.2.P.2.2.2 Overages
 - 3.2.P.2.2.3 Physicochemical and biological properties
 - 3.2.P.2.3 Manufacturing process development
 - 3.2.P.2.4 Container-closure system
 - 3.2.P.2.5 Microbiological attributes
 - 3.2.P.2.6 Compatibility

3.2.P.3 Manufacture

- 3.2.P.3.1 Manufacturer(s)
- 3.2.P.3.2 Batch formula
- 3.2.P.3.3 Description of manufacturing process and process controls
- 3.2.P.3.4 Controls of critical steps and intermediates
- 3.2.P.3.5 Process validation and/or evaluation

3.2.P.4 Control of excipients

- 3.2.P.4.1 Specifications
- 3.2.P.4.2 Analytical procedures
- 3.2.P.4.3 Validation of analytical procedures
- 3.2.P.4.4 Justification of specifications



- 3.2.P.4.5 Excipients of human or animal origin
- 3.2.P.4.6 Novel excipients
- 3.2.P.4 Control of FPP
 - 3.2.P.5.1 Specifications
 - 3.2.P.5.2 Analytical procedures
 - 3.2.P.5.3 Validation of analytical procedures
 - 3.2.P.5.4 Batch analyses
 - 3.2.P.5.5 Characterization of impurities
 - 3.2.P.5.6 Justification of specification(s)
- 3.2.P.6 Reference standards or materials
- 3.2.P.7 Container-closure system
- 3.2.P.8 Stability
 - 3.2.P.8.1 Stability summary and conclusions
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- **3.2.A APPENDICES**
 - 3.2.A.1 Facilities and Equipment
 - 3.2.A.2 Adventitious Agents Safety Evaluation
 - 3.2.A.3 Excipients
- 3.2.R.1 Production documentation
 - 3.2.R.1.1 Executed production documents
 - 3.2.R.1.2 Master production documents
- 3.2.R.2 Analytical procedures and validation information
- 3.3 Literature References

<u>Reference:</u>



• ICH guideline M4 (R4) on common technical document (CTD) for the registration of pharmaceuticals for human use - organization of CTD

5.1.2 Description of content of Module 3

3.1 Table of contents

A Table of Contents for the filed application should be provided.

3.2 Body of Data

Options for S-part submission

The applicant should clearly indicate at the beginning of the API section how the information on the API for each API manufacturer is being submitted:

- Option 1: Confirmation of API prequalification document.
- Option 2: Certificate of suitability of the European Pharmacopoeia (CEP).
- Option 3: API master file (APIMF/DMF).
- Option 4: Full details in the Product Dossier.

> In case of Option 3: API master file (APIMF/DMF).

3.2.S DRUG SUBSTANCE

3.2.S.1 General Information

3.2.S.1.1 Nomenclature

Information on the nomenclature of the drug substance should be provided. For example:

- Recommended International Nonproprietary Name (INN);
- Compendial name if relevant;
- Chemical name(s);
- Company or laboratory code;
- Other non-proprietary name(s), e.g., national name, United States Adopted Name (USAN), Japanese Accepted Name (JAN); British Approved Name (BAN)
- Chemical Abstracts Service (CAS) registry number.

3.2.S.1.2 Structure

The structural formula, including relative and absolute stereochemistry, the molecular formula, and the relative molecular mass should be provided.

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3.2.S.1.3 General Properties

A list should be provided of physicochemical and other relevant properties of the drug substance.

3.2.S.2 Manufacture

3.2.S.2.1 Manufacturer(s)

The name, address, and responsibility of each manufacturer, including contractors, and each proposed production site or facility involved in manufacturing and testing should be provided.

3.2.S.2.2 Description of Manufacturing Process and Process Controls

Brief Information should be provided to adequately describe the manufacturing process and process controls of the drug substance.

3.2.S.2.3 Control of Materials

Materials used in the manufacture of the drug substance should be listed. Information on the quality and control of these materials should be provided.

3.2.S.2.4 Controls of Critical Steps and Intermediates

Critical Steps: Information on critical steps identified in the manufacturing process to ensure that the process is controlled should be provided.

Intermediates: Information on the quality and control of intermediates isolated during the process should be provided.

3.2.S.2.5 Process Validation and/or Evaluation

Process validation and/or evaluation studies for aseptic processing and sterilization should be included.

3.2.S.2.6 Manufacturing Process Development

A description and discussion should be provided for the drug substances development.

For all above subsections under section 3.2.S.2 Manufacture, if data aren't available, for example: well established or old molecule, Justification should be submitted.

References:

- Investigation of chiral active substances (human) Scientific guideline.
- Development and Manufacture of Drug Substances (Chemical Entities and Biotechnological/Biological Entities) Q11

3.2.S.3 Characterization

3.2.S.3.1 Elucidation of Structure and other Characteristics

Confirmation of structure based on spectral analyses should be provided.

Reference to Identification testing in section 3.2.S.4 could be accepted.

3.2.S.3.2 Impurities



Information on impurities should be provided.

3.2.S.4 Control of Drug Substance

3.2.S.4.1 Specification

The specification for the drug substance should be provided.

<u>References:</u>

- ICH Q6A specifications: test procedures and acceptance criteria for new drug substances and new drug products: chemical substances.
- ICH Q3A (R2) Impurities in new drug substances Scientific guideline.
- ICH Q3C (R8) Residual solvents Scientific guideline.
- ICH Q3D Elemental impurities Scientific guideline Scientific guideline.
- ICH M7 Assessment and control of DNA reactive (mutagenic) impurities in pharmaceuticals to limit potential carcinogenic risk Scientific guideline
- <u>Setting specifications for related impurities in antibiotics.</u>

3.2.S.4.2 Analytical Procedures

The analytical procedures used for testing the drug substance should be provided.

If API is pharmacopeial, Reference to monograph is acceptable.

References:

• ICH Q2(R2) Validation of analytical procedures - Scientific guideline

3.2.S.4.3 Validation of Analytical Procedures

Analytical validation information, including experimental data for the analytical procedures used for testing the drug substance, should be provided.

If API is pharmacopeial, Reference to monograph is acceptable.

References:

• ICH Q2(R2) Validation of analytical procedures - Scientific guideline

3.2.S.4.4 Batch Analyses

Description of batches (batch number, type, manufacturing date & production site) and results of recent batch analyses should be provided.

3.2.S.4.5 Justification of Specification

Justification for the drug substance specification should be provided.

If API is pharmacopeial, Reference to monograph is acceptable.

3.2.S.5 Reference Standards or Materials



Information on the reference standards or reference materials used for testing of the drug substance should be provided.

If data aren't available, for example: well established or old molecule, Justification should be submitted.

3.2.S.6 Container Closure System

A Brief description of the container closure system(s) should be provided, including the identity of materials of construction of each primary packaging component.

For non-functional secondary packaging components (e.g., those that do not provide additional protection), only a brief description should be provided. For functional secondary packaging components, additional information should be provided.

<u>References:</u>

- WHO TRS 986 annex 6 "Guidelines on submission of documentation for a multisource (generic) finished pharmaceutical product: quality part".
- <u>Container closure systems for packaging human drugs and biologics (FDA Guidance for Industry, May 1999).</u>

3.2.S.7 Stability

3.2.S.7.1 Stability Summary and Conclusions

The types of studies conducted, protocols used and conclusions with respect to storage conditions and retest date or shelf-life, as appropriate.

3.2.S.7.2 Post-approval Stability Protocol and Stability Commitment

The post-approval stability protocol and stability commitment should be provided.

If data aren't available, for example: well established or old molecule, Justification should be submitted

3.2.S.7.3 Stability Data

Results of the recent stability studies should be presented in an appropriate format such as tabular, graphical, or narrative.

<u>References:</u>

- ICH Q1A: "Stability testing of new drug substances and drug products".
- ICH Q1B: "Photo stability Testing of New Drug Substances and Products"
- ICH Q1D: "ICH Q1D Bracketing and matrixing designs for stability testing of drug substances and drug products.
- ICH Q1E: "Evaluation for stability data"
- <u>Stability testing of active pharmaceutical ingredients and finished pharmaceutical products WHO</u> technical series 1010, 2018 annex 10.
- WHO Technical Report Series, No. 929, Annex 5, 2005, Table A.1 (7) "A typical set of studies of the degradation paths of an active pharmaceutical ingredient".
- Declaration of storage conditions for medicinal products particulars and active substances (Annex)



In case of Option 2: Certificate of Suitability of the European Pharmacopoeia (CEP).

A complete copy of the CEP (including any annexes) should be provided in this section. The CEP holder on behalf of the FPP manufacturer or applicant who refers to the CEP should duly fill out the declaration of access for the CEP to applicant/FPP manufacturer.

In addition, a written commitment should be included that the applicant will inform EDA in the event of changes, or if the CEP is withdrawn. It should also be acknowledged by the applicant that withdrawal of the CEP would require additional consideration of the API data requirements (full Module 3.2.S) to support the product dossier.

The written commitment should accompany the copy of the CEP. Along with the CEP, the applicant should supply the following information in the dossier.

3.2.S.1.3 General properties

Discussions on any additional applicable physicochemical and other relevant API properties that are not controlled by the CEP and Eur.Ph. monograph, e.g., solubilities and polymorphs as per guidance in this section.

3.2.S.3.1 Elucidation of structure and other characteristics

Studies to identify polymorphs (exception: where the CEP specifies a polymorphic form) and particle size distribution, where applicable, as per guidance in this section.

3.2.S.4.1 Specification

The specifications of the FPP manufacturer including all tests and limits of the CEP and Ph.Eur. monograph and any additional tests and acceptance criteria that are not controlled in the CEP and Ph.Eur. monograph, such as polymorphs and/or particle size distribution.

3.2.S.4.2 / 3.2.S.4.3 Analytical procedures and validation

For any methods used by the FPP manufacturer in addition to those in the CEP and Ph.Eur. monograph.

3.2.S.4.4 Batch analysis

Results from two batches of at least pilot scale, demonstrating compliance with the FPP manufacturer's API specifications.

3.2.S.5 Reference standards or materials

Information on the FPP manufacturer's reference standards.

3.2.S.6 Container closure system

Specifications including descriptions and identification of primary packaging components. Exception: where the CEP specifies a container closure system and the applicant / FPP manufacturer declares to use the same container closure system.

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3.2.S.7 Stability

Exception: where the CEP specifies a re-test period that is the same as or of longer duration, and storage conditions which are the same or higher temperature and humidity as proposed by the applicant.

In the case of sterile APIs, data on the sterilization process of the API, including validation data, should be included in the dossier.

3.2.P DRUG PRODUCT

3.2.P.1 Description and Composition of the Drug Product

A description of the drug product and its composition should be provided. The information provided should include, for example:

• Description of the dosage form;

• Composition, i.e., list of all components of the dosage form, and their amount on a per unit basis (including overages, if any) the function of the components, and a reference to their quality standards (e.g., compendial monographs or manufacturer's specifications)

- Description of accompanying reconstitution diluent(s); and
- Type of container and closure used for the dosage form and accompanying reconstitution diluent, if applicable.

3.2.P.2 Pharmaceutical Development

The Pharmaceutical Development section should contain information on the development studies conducted to establish that the dosage form, the formulation, manufacturing process, container closure system, microbiological attributes and usage instructions are appropriate for the purpose specified in the application.

3.2.P.2.1 Components of the Drug Product

3.2.P.2.1.1 Drug Substance

The compatibility of the drug substance with excipients listed in 3.2.P.1 should be discussed. Additionally, key physicochemical characteristics of the drug substance that can influence the performance of the drug product should be discussed.

3.2.P.2.1.2 Excipients

The choice of excipients listed in 3.2.P.1, should be discussed relative to their respective functions.

3.2.P.2.2 Drug Product

3.2.P.2.2.1 Formulation Development

Results from comparative studies should be discussed when appropriate.

3.2.P.2.2.2 Overages

Any overages in the formulation(s) described in 3.2.P.1 should be justified.

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3.2.P.2.2.3 Physicochemical and Biological Properties

Parameters relevant to the performance of the drug product, should be addressed.

3.2.P.2.3 Manufacturing Process Development

The selection and optimization of the manufacturing process, in particular its critical aspects, should be explained. Where relevant, the method of sterilization should be explained and justified.

3.2.P.2.4 Container Closure System

The suitability of the container closure system used for the storage, transportation (shipping) and use of the drug product should be discussed.

3.2.P.2.5 Microbiological Attributes

Where appropriate, the microbiological attributes of the dosage form should be discussed.

3.2.P.2.6 Compatibility

The compatibility of the drug product with reconstitution diluent(s) or dosage devices should be addressed to provide appropriate and supportive information for the labeling.

<u>For all above subsections under section 3.2.P.2 Pharmaceutical Development,</u> Brief description of studies related to development of drug product should be submitted.

<u>Reference to previously assessed studies or EDA issued approvals could be accepted., if data aren't available, for</u> <u>example: well established or old molecule, Justification should be submitted.</u>

References:

ICH Q8 (R2) Pharmaceutical development - Scientific guideline

3.2.P.3 Manufacture

3.2.P.3.1 Manufacturer(s)

The name, address, and responsibility of each manufacturer, including contractors, and each proposed production site or facility involved in manufacturing and testing should be provided.

3.2.P.3.2 Batch Formula

A batch formula should be provided that includes a list of all components of the dosage form to be used in the manufacturing process, their amounts on a per batch basis, including overages, and a reference to their quality standards.

3.2.P.3.3 Description of Manufacturing Process and Process Controls

A flow diagram & a narrative description of the manufacturing process should be presented giving the steps of the process and showing where materials enter the process.

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3.2.P.3.4 Controls of Critical Steps and Intermediates

<u>Critical Steps</u>: Tests and acceptance criteria should be provided at the critical steps of the manufacturing process, to ensure that the process is controlled.

Intermediates: Information on the quality and control of intermediates isolated during the process should be provided.

If data aren't available, for example: well established manufacturing process, Justification should be submitted.

3.2.P.3.5 Process Validation and/or Evaluation

Description, documentation, and results of the validation and/or evaluation studies should be provided for critical steps or critical assays used in the manufacturing process (e.g., validation of the sterilization process or aseptic processing or filling).

<u>References:</u>

- Process validation for finished products information and data to be provided in regulatory submissions
- Sterilization of the medicinal product, active substance, excipient and primary container

3.2.P.4 Control of Excipients

3.2.P.4.1 Specifications

The specifications for excipients should be provided.

CoAs could be accepted.

3.2.P.4.2 Analytical Procedures

The analytical procedures used for testing the excipients should be provided, where appropriate.

If excipient is pharmacopeial, Reference to monograph is acceptable.

3.2.P.4.3 Validation of Analytical Procedures

Analytical validation information, including experimental data, for the analytical procedures used for testing the excipients should be provided, where appropriate.

If excipient is pharmacopeial, Reference to monograph is acceptable.

3.2.P.4.4 Justification of Specifications

Justification for the proposed excipient specifications should be provided, where appropriate.

If excipient is pharmacopeial, Reference to monograph is acceptable.

3.2.P.4.5 Excipients of Human or Animal Origin

For excipients of human or animal origin, information should be provided regarding adventitious agents (e.g., sources, specifications; description of the testing performed; viral safety data). (Details in 3.2.A.2).

3.2.P.4.6 Novel Excipients



For excipient(s) used for the first time in a drug product or by a new route of administration, full details of manufacture, characterization, and controls, with cross references to supporting safety data (nonclinical and/or clinical) should be provided according to the drug substance format. (Details in 3.2.A.3).

3.2.P.5 Control of Drug Product

3.2.P.5.1 Specification(s)

The specification(s) for the drug product should be provided.

References:

- ICH Q6A specifications: test procedures and acceptance criteria for new drug substances and new drug products: chemical substances
- <u>Dissolution Testing and Acceptance Criteria for Immediate-Release Solid Oral Dosage Form Drug</u> <u>Products Containing High Solubility Drug Substances (FDA Guidance for Industry, 2018)</u>
- ICH Q3B (R2) Impurities in new drug products Scientific guideline
- ICH Q3C (R8) Residual solvents Scientific guideline
- ICH Q3D Elemental impurities Scientific guideline Scientific guideline
- ICH M7 Assessment and control of DNA reactive (mutagenic) impurities in pharmaceuticals to limit potential carcinogenic risk Scientific guideline
- Setting specifications for related impurities in antibiotics.
- Reflection paper on the dissolution specification for generic solid oral immediate release products with systemic action.

3.2.P.5.2 Analytical Procedures

The analytical procedures used for testing the drug product should be provided.

If analytical procedure is pharmacopeial, Reference to monograph is acceptable.

<u>References:</u>

• ICH Q2(R2) Validation of analytical procedures - Scientific guideline

3.2.P.5.3 Validation of Analytical Procedures

Analytical validation information, including experimental data, for the analytical procedures used for testing the drug product, should be provided.

If analytical procedure is pharmacopeial, Reference to monograph is acceptable.

<u>References:</u>

• ICH Q2(R2) Validation of analytical procedures - Scientific guideline

3.2.P.5.4 Batch Analyses

A description of batches (Type, batch number, strength, manufacturing date & site) and results of recent batch analyses should be provided.

3.2.P.5.5 Characterization of Impurities

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Information on the characterization of impurities should be provided, if not previously provided in "3.2. S.3.2 Impurities".

Reference to specifications "Section 3.2.P.5.1" could be accepted.

3.2.P.5.6 Justification of Specification(s)

Justification for the proposed drug product specification(s) should be provided.

If FPP is pharmacopeial, Reference to monograph is acceptable.

3.2.P.6 Reference Standards or Materials

Information on the reference standards or reference materials used for testing of the drug product should be provided, if not previously provided in "3.2. S.5 Reference Standards or Materials".

If data aren't available, for example: well established or old molecule, Justification should be submitted.

3.2.P.7 Container Closure System

A description of the container closure systems should be provided, including the identity of materials of construction of each primary packaging component and its specification. The specifications should include description and identification.

CoAs could be accepted.

For non-functional secondary packaging components (e.g., those that neither provide additional protection nor serve to deliver the product), only a brief description should be provided. For functional secondary packaging components, additional information should be provided.

<u>References:</u>

- WHO TRS 986 annex 6 "Guidelines on submission of documentation for a multisource (generic) finished pharmaceutical product: quality part".
- <u>Container closure systems for packaging human drugs and biologics (FDA Guidance for Industry, May 1999).</u>

3.2.P.8 Stability

3.2.P.8.1 Stability Summary and Conclusion

The types of studies conducted, protocols used and conclusions with respect to storage conditions and shelflife, as appropriate.

3.2.P.8.2 Post-approval Stability Protocol and Stability Commitment

The post-approval stability protocol and stability commitment should be provided.

If data aren't available, for example: well established or old molecule, Justification should be submitted

3.2.P.8.3 Stability Data



Results of the recent stability studies should be presented in an appropriate format such as tabular, graphical, or narrative.

<u>References:</u>

- ICH Q1A: "Stability testing of new drug substances and drug products".
- ICH Q1B: "Photo stability Testing of New Drug Substances and Products"
- ICH Q1D: "ICH Q1D Bracketing and matrixing designs for stability testing of drug substances and drug products.
- ICH Q1E: "Evaluation for stability data"
- <u>Stability testing of active pharmaceutical ingredients and finished pharmaceutical products WHO</u> technical series 1010, 2018 annex 10.
- Declaration of storage conditions for medicinal products particulars and active substances (Annex)
- In-use stability testing of human medicinal products

3.2.A APPENDICES

3.2.A.1 Facilities and Equipment

Not Applicable

3.2.A.2 Adventitious Agents Safety Evaluation

• Adventitious agents are defined by the World Health Organization (WHO) as microorganisms that may have been unintentionally introduced into the manufacturing process of a biological medicinal product.

- These include bacteria, fungi, mycoplasma/spiroplasma, mycobacteria, rickettsia, protozoa, parasites, transmissible spongiform encephalopathy (TSE) agents and viruses.

• Information assessing the risk with respect to potential contamination with adventitious agents should be provided in this section.

This information can include, for example, certification and/or testing of raw materials and excipients, and control of the production process, as appropriate for the material, process and agent.

3.2.A.3 Excipients

• If a significant amount of data for an excipient (e.g., a novel excipient or a non-compendial nonnovel excipient) needs to be provided, this information should be included in 3.2.A.3 Excipients, if required.

If only a minimal amount of information was necessary for these excipients (e.g., pharmacopeia), this information should be provided in 3.2.P.4.1 and/or 3.2.P.2.1.2.

• **Novel Excipients** means a material or a composition that has not been previously used in an approved drug product or that has been previously used in an approved drug product but which it is desired to employ for a new route of administration, or a higher level of use than has been previously listed in the IID or Handbook of pharmaceutical Excipients.



Full details of manufacture, characterisation and controls with cross references to supporting safety data should be provided for novel excipients, according to the drug substance format.

3.2.R Regional information

3.2.R.1 Production documents

3.2.R.1.1 Executed production documents

Copies of the executed production documents, for batches manufactured by a procedure fully representative of a full production-scale batch, should be provided

3.2.R.1.2 Master production documents

Copies of the FPP master production documents should be provided for each proposed strength, commercial batch size and manufacturing site.

Reference to section "3.2.R.1.1 Executed production documents" could be accepted

3.2.R.2 Analytical Procedures and Validation information

Summaries for the analytical procedures and validation information (in a tabular forms) from sections 3.2.S.4.2, 3.2.S.4.3, 2.3.S.4.4, 2.3.S.7.3, 3.2.P.5.2 and 3.2.P.5.3, where relevant.

3.3 Literature references

References to the scientific literature relating to both the API and FPP should be included in this section of the product dossier when appropriate.

If data aren't available, for example: well established or old molecule, Justification should be submitted.

6. General Notice:

- Data submitted should be representative of last current Drug substance and FPP Quality data considering all approved variations.
- Egyptian Drug Authority has the right to request any additional information or documents and refer to any other international guidelines that aren't listed in this guidance, in order to establish the safety, efficacy and quality of a medicine in keeping with the knowledge current at the time of evaluation, alternative approaches may be used but these should be scientifically and technically justified, regardless of the current status previously issued EDA approval or assessed parts



7. References

- 1- <u>The Common Technical Document for The Registration of Pharmaceuticals for Human Use: Quality M4Q</u> (R1).
- 2- ICH guideline M4 (R4) on common technical document (CTD) for the registration of pharmaceuticals for human use - organization of CTD
- 3- <u>WHO TRS 986 annex 6 "Guidelines on submission of documentation for a multisource (generic) finished</u> pharmaceutical product: quality part".
- 4- Investigation of chiral active substances (human) Scientific guideline.
- 5- <u>Development and Manufacture of Drug Substances (Chemical Entities and Biotechnological/Biological</u> <u>Entities) Q11</u>
- 6- ICH Q6A specifications: test procedures and acceptance criteria for new drug substances and new drug products: chemical substances.
- 7- ICH Q3A (R2) Impurities in new drug substances Scientific guideline.
- 8- ICH Q3C (R8) Residual solvents Scientific guideline.
- 9- ICH Q3D Elemental impurities Scientific guideline Scientific guideline.
- 10-<u>ICH_M7</u> Assessment and control of DNA reactive (mutagenic) impurities in pharmaceuticals to limit potential carcinogenic risk Scientific guideline
- 11- Setting specifications for related impurities in antibiotics.
- 12- ICH Q2(R2) Validation of analytical procedures Scientific guideline
- 13- <u>Container closure systems for packaging human drugs and biologics (FDA Guidance for Industry, May 1999).</u>
- 14- ICH Q1A: "Stability testing of new drug substances and drug products".
- 15- ICH Q1B: "Photo stability Testing of New Drug Substances and Products"
- 16-<u>ICH Q1D: "ICH Q1D Bracketing and matrixing designs for stability testing of drug substances and drug products.</u>
- 17- ICH Q1E: "Evaluation for stability data"
- 18- <u>Stability testing of active pharmaceutical ingredients and finished pharmaceutical products WHO technical</u> series 1010, 2018 annex 10.
- 19- WHO Technical Report Series, No. 929, Annex 5, 2005, Table A.1 (7) "A typical set of studies of the degradation paths of an active pharmaceutical ingredient".
- 20- Declaration of storage conditions for medicinal products particulars and active substances (Annex)
- 21- Quality Working Party questions and answers on API mix
- 22- ICH Q8 (R2) Pharmaceutical development Scientific guideline
- 23- Process validation for finished products information and data to be provided in regulatory submissions
- 24- Sterilization of the medicinal product, active substance, excipient and primary container
- 25- <u>Dissolution Testing and Acceptance Criteria for Immediate-Release Solid Oral Dosage Form Drug Products</u> <u>Containing High Solubility Drug Substances (FDA Guidance for Industry, 2018)</u>
- 26- ICH Q3B (R2) Impurities in new drug products Scientific guideline
- 27- <u>Reflection paper on the dissolution specification for generic solid oral immediate release products with</u> <u>systemic action.</u>
- 28- In-use stability testing of human medicinal products
- 29- Pharmaceutical quality of inhalation and nasal products Scientific guideline

Central Administration for Pharmaceutical Products General Administration of Human Pharmaceuticals Registration Administration of Technical Affairs for Human Pharmaceuticals



- 30- Quality of oral modified release products Scientific guidelines.
- 31- <u>Pharmaceutical development of intravenous medicinal products containing active substances solubilized</u> <u>in micellar systems (non-polymeric surfactants) - Scientific guideline</u>
- 32- United States Pharmacopeia (USP)
- 33- European Pharmacopoeia (Eur.Ph)
- 34- British Pharmacopoeia (B.P)
- 35- Japanese Pharmacopoeia (J.P)
- 36- International Pharmacopeia.
- 37- Applicable EDA Guidance to be read in conjunction with this Guideline

-Quality Module Submission Guidance -Soft File Arrangement Guidance

8. Annexes

<u>NA</u>