

**CENTER FOR DRUG EVALUATION AND  
RESEARCH**

*APPLICATION NUMBER:*

**215868Orig1s000**

**PRODUCT QUALITY REVIEW(S)**

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|                 |                       |           |    |
|-----------------|-----------------------|-----------|----|
| Title:          | NDA Executive Summary |           |    |
| Document ID:    | OPQ-ALL-TEM-0013      |           |    |
| Effective Date: | 31 May 2022           | Revision: | 00 |
| Total Pages:    | 3                     |           |    |



Template Revision: 03

|  |                               |                   |                     |
|--|-------------------------------|-------------------|---------------------|
| <b>Storage Temperature/ Conditions</b> | 20°C–25°C                     |                   |                     |
| <b>Review Team</b>                     | <b>Discipline</b>             | <b>Primary</b>    | <b>Secondary</b>    |
|  | <i>Drug Substance</i>         | Zhixing Shan      | Gaetan Ladouceur    |
|  | <i>Drug Product/ Labeling</i> | Mari Chelliah     | Valerie Amspacher   |
|  | <i>Manufacturing</i>          | Yan Xu            | Tianhong (Tim) Zhou |
|  | <i>Biopharmaceutics</i>       | Jia Yin           | Ta-Chen Wu          |
|  | <i>Microbiology</i>           | George Arhin      | Elizabeth Berr      |
|  | <i>Other (specify):</i>       | N/A               | N/A                 |
|  | <i>RBPM</i>                   | Anika Lalmansingh |                     |
|  | <i>ATL</i>                    | Valerie Amspacher |                     |
| <b>Consults</b>                        | N/A                           |                   |                     |

**2. Final Overall Recommendation - Approval**

**3. Action Letter Information**

**a. Expiration Dating:** The proposed shelf-life of 24 months is acceptable when stored at 20°C–25°C (68°F–77° F).

**b. Additional Comments for Action – N/A**

**4. Basis for Recommendation:**

**a. Summary of Rationale for Recommendation:**

*Based on reviews by drug substance, drug product, process/facilities, biopharmaceutics and microbiology.*



|                 |                       |           |    |
|-----------------|-----------------------|-----------|----|
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Template Revision: 03

**b. Is the overall recommendation in agreement with the individual discipline recommendations?** Yes

**Recommendation by Subdiscipline:**

- Drug Substance** - Adequate
- Drug Product** - Adequate
- Quality Labeling** - Adequate
- Manufacturing** - Adequate
- Biopharmaceutics** - Adequate
- Microbiology** - Adequate

**Environmental Assessment:** Categorical Exclusion - Adequate  
**QPA for EA(s):** No

**5. Life-Cycle Considerations**

**Established Conditions per ICH Q12: No**  
**Comments:**

**Comparability Protocols (PACMP): No**  
**Comments:**

**Additional Lifecycle Comments: N/A**

Facilities screenshot showing approval (taken 15 Jun 22)

The screenshot displays the 'Submission Facility Status View' for NDA-215868-ORIG-1. At the top, it shows the submission ID and a progress bar indicating 98.95% completion. The main content area is titled 'Latest Submission Manufacturing Status for NDA-215868-Original-1' and contains the following data:

|   |   |   |                                     |                                     |
|---|---|---|-------------------------------------|-------------------------------------|
| <b>Latest Overall Manufacturing Inspection Recommendation</b><br><b>Approve</b><br>Completion Date: 05/11/2022<br>NDA-215868-ORIG-1 | <b>Inspection Requested</b><br><b>0</b> | <b>Inspection Completed</b><br><b>0</b> | <b>pOAI/OAI Alerts</b><br><b>No</b> | <b>Pending Profile</b><br><b>No</b> |
|---|---|---|-------------------------------------|-------------------------------------|

Below the data, there is a hint: 'Hint: Click Facility ID link to open Facility Program. Click Facility Name to open Facility Status View: Detail. To refresh the report, please click Refresh under Page Options. Page Options can be found next to the ? icon located at the top right.'



Valerie  
Amspacher

Digitally signed by Valerie Amspacher  
Date: 6/15/2022 08:49:01AM  
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## CHAPTER IV: LABELING

For more details about the items in this template, please see [Chapter IV \(Labeling\) of the NDA IQA Guide](#)

### 1.0 PRESCRIBING INFORMATION

#### Assessment of Product Quality Related Aspects of the Prescribing Information:

#### 1.1 HIGHLIGHTS OF PRESCRIBING INFORMATION

| Item  | Items in Proposed Labeling<br>(choose "Adequate", "Inadequate", or "N/A") | Assessor's Comments<br>(If an item is Inadequate, provide more details on the issues, as appropriate) |
|---|---|---|
| <b>Product Title in Highlights</b>  |   |   |
| Established name(s) <sup>1</sup>  | Adequate  | MIDAZOLAM IN 0.8% SODIUM CHLORIDE   |
| Route(s) of administration  | Adequate  | for intravenous use   |
| <b>Dosage Forms and Strengths Heading in Highlights</b>   |   |   |
| Summary of the dosage form(s) and strength(s) in metric system  | Adequate  | 50 mg per 50 mL (1 mg/mL) and 100 mg per 100 mL (1 mg/mL)   |
| Assess if the tablet is scored. If product meets guidelines and criteria for a scored tablet, state "functionally scored".  | N/A   |   |
| For injectable drug products for parental administration, use appropriate package type term (e.g., single-dose, multiple-dose, single-patient-use). Other package terms include pharmacy bulk package and imaging bulk package. | Adequate  | Single-dose   |
| If the drug product contains an active ingredient that is a salt, clearly state whether the strength is based on the active moiety (e.g., Tablets: 10 mg of drug-x) or active   | N/A   |   |

<sup>1</sup> Established name = [Drug] [Route of Administration] [Dosage Form]

|  |  |  |
|--|--|--|
| ingredient (e.g., Tablets: 10 mg of drug-x hydrochloride). |  |  |
|--|--|--|

## 1.2 FULL PRESCRIBING INFORMATION

### 1.2.1 Section 2 (DOSAGE AND ADMINISTRATION)

| Item  | Items in Proposed Labeling<br>(choose "Adequate", "Inadequate", or "N/A") | Assessor's Comments<br>(If an item is Inadequate, provide more details on the issues, as appropriate) |
|---|---|---|
| <b>DOSAGE AND ADMINISTRATION section</b>  |   |   |
| Special instructions for product preparation (e.g., reconstitution and resulting concentration, dilution, compatible diluents, storage conditions needed to maintain the stability of the reconstituted or diluted product) | N/A   |   |
| Important administration instructions supported by product quality information (e.g., do not crush or chew extended-release tablets, instructions for mixing with food)   | N/A   |   |
| For parenteral products: include statement:<br><i>"Parenteral drug products must be inspected visually for particulate matter and discoloration prior to administration, whenever solution and container permit"</i>        | Adequate  |   |
| If there is a USP monograph for the drug product and it contains a labeling requirement, ensure the labeling requirement is fulfilled. Note the labeling requirement may be applicable to another                           | Adequate  |   |



|   |     |  |
|---|-----|--|
| section of the PI (e.g., Section 11).   |     |  |
| For radioactive products, include radiation dosimetry for the patient and healthcare practitioner(s) who administer the drug  | N/A |  |
| For hazardous products, include the statement <i>“DRUG X is a hazardous drug. Follow applicable special handling and disposal procedures.<sup>x</sup>”</i> with x numerical citation to <i>“OSHA Hazardous Drugs”</i> . | N/A |  |

### 1.2.2 Section 3 (DOSAGE FORMS AND STRENGTHS)

| Item   | Items in Proposed Labeling<br>(choose "Adequate", "Inadequate", or "N/A") | Assessor's Comments<br>(If an item is Inadequate, provide more details on the issues, as appropriate) |
|--|---|---|
| <b>DOSAGE FORMS AND STRENGTHS section</b>  |   |   |
| Available dosage form(s)   | Adequate  |   |
| Strength(s) in metric system   | Adequate  |   |
| If the active ingredient is a salt, apply the USP Salt Policy per FDA Guidance. Clearly state whether the strength is based on the active moiety (e.g., Tablets: 10 mg of drug-x) or active ingredient (Tablets: 10 mg of drug-x hydrochloride). | N/A   |   |
| A description of the identifying characteristics of the dosage forms, including shape, color, coating, scoring, imprinting, and color and clarity of the solution, when applicable   | Adequate  |   |
| Assess if the tablet is scored. If product meets guidelines and criteria for a scored tablet, state "functionally scored"  | N/A   |   |
| For injectable drug products for parental administration, use appropriate package type term (e.g., single-dose, multiple-dose, single-patient-use). Other package type terms include pharmacy bulk package and imaging bulk package.             | Adequate  |   |

### Section 11 (DESCRIPTION)

| Item   | Items in Proposed Labeling<br>(choose "Adequate", "Inadequate", or "N/A") | Assessor's Comments<br>(If an item is Inadequate, provide more details on the issues, as appropriate) |
|--|---|---|
| <b>DESCRIPTION section</b>   |   |   |
| Proprietary and established name(s)  | Adequate  | There is no proprietary name  |
| Dosage form(s) and route(s) of administration  | Adequate  |   |
| If the active ingredient is a salt, apply the USP Salt Policy and include the equivalency statement per Salt <a href="#">Guidance</a> and <a href="#">MAPP</a> . For example: "TRADENAME contains 100 mg of drug-x (equivalent to 123.7 mg of drug-x hydrochloride)" | N/A   |   |
| List names of all inactive ingredients. Use USP/NF names in alphabetical order. Avoid brand names.   | Adequate  |   |
| For parenteral injectable dosage forms, include the name and quantities of all inactive ingredients. For ingredients added to adjust the pH or make isotonic, include the name and statement of effect.  | Adequate  |   |
| If alcohol is present, must provide the amount of alcohol in terms of percent volume of absolute alcohol   | N/A   |   |
| Sterility statement (if applicable)  | Adequate  |   |
| Pharmacological/Therapeutic class  | Adequate  |   |
| Chemical name, structural formula, molecular weight  | Adequate  |   |
| If radioactive, statement of important nuclear characteristics.  | N/A   |   |
| Other important chemical or physical properties (such as pKa or pH)  | N/A   |   |

**Section 11 (DESCRIPTION) Continued**

| Item   | Items in Proposed Labeling<br>(choose "Adequate", "Inadequate", or "N/A") | Assessor's Comments<br>(If an item is Inadequate, provide more details on the issues, as appropriate) |
|--|---|---|
| For oral prescription drug products, include gluten statement (if applicable)  | N/A   |   |
| Remove statements that may be misleading or promotional (e.g., "synthesized and developed by Drug Company X," "structurally unique molecular entity")  | N/A   |   |
| If there is a USP monograph for the drug product and it contains a labeling requirement, ensure the labeling requirement is fulfilled. Note the labeling requirement may be applicable to another section of the PI (e.g., Section 2). | Adequate  |   |

**1.2.4 Section 16 (HOW SUPPLIED/STORAGE AND HANDLING)**

| Item   | Items in Proposed Labeling<br>(choose "Adequate", "Inadequate", or "N/A") | Assessor's Comments<br>(If an item is Inadequate, provide more details on the issues, as appropriate) |
|--|---|---|
| <b>HOW SUPPLIED/STORAGE AND HANDLING section</b>   |   |   |
| Available dosage form(s)   | Adequate  |   |
| Strength(s) in metric system   | Adequate  |   |
| Available units (e.g., bottles of 100 tablets)   | Adequate  |   |
| Identification of dosage forms (e.g., shape, color, coating, scoring, imprinting, and color and clarity of the solution, when applicable); Include NDC(s)  | Adequate  |   |
| Assess if the tablet is scored. If product meets guidelines and criteria for a scored tablet, state "functionally scored"  | N/A   |   |
| For injectable drug products for parental administration, use appropriate package type term (e.g., single-dose, multiple-dose, single-patient-use). Other package terms include pharmacy bulk package and imaging bulk package.  | Adequate  |   |
| Special handling about the supplied product (e.g., protect from light, refrigerate). If there is a statement to "Dispense in original container," provide reason why (e.g., to protect from light or moisture, to maintain stability, etc.). For hazardous drugs, state "DRUG X is a hazardous drug. Follow applicable special handling and disposal procedures. <sup>x</sup> " with x numerical citation to "OSHA Hazardous Drugs." | Adequate  |   |

**Section 16 (HOW SUPPLIED/STORAGE AND HANDLING) (Continued)**

| Item  | Items in Proposed Labeling<br>(choose "Adequate", "Inadequate", or "N/A") | Assessor's Comments<br>(If an item is Inadequate, provide more details on the issues, as appropriate) |
|---|---|---|
| Storage conditions. Where applicable, use USP storage range rather than storage at a single temperature.  | Adequate  |   |
| Latex: If product does not contain latex and manufacturing of product and container did not include use of natural rubber latex or synthetic derivatives of natural rubber latex, state: <i>"Not made with natural rubber latex. Avoid statements such as "latex-free."</i> | Adequate  |   |
| Include information about child-resistant packaging   | N/A   |   |

**1.2.5 Other Sections of Labeling**

There may be other sections of labeling that contain product-quality related information. For example, there are specific required/recommended warnings for certain inactive ingredients [e.g., aspartame, aluminum in large and small volume parenterals, sulfites, FD&C Yellow Number 5 (tartrazine), and benzyl alcohol]. Please notify the prescription drug review division if the product contains any of these inactive ingredients.

Please include your comments about other sections of labeling if they contain product quality information.

**1.2.6 Manufacturing Information After Section 17 (for drug products)**

| Item  | Items in Proposed Labeling<br>(choose "Adequate", "Inadequate", or "N/A") | Assessor's Comments<br>(If an item is Inadequate, provide more details on the issues, as appropriate) |
|---|---|---|
| <b>Manufacturing Information After Section 17</b>   |   |   |
| Name and location of business (street address, city, state, and zip code) of the manufacturer, distributor, and/or packer | Adequate  |   |

## 2.0 PATIENT LABELING

### Assessment of Product Quality Related Aspects of Patient Labeling (e.g., Medication Guides, Instructions for Use, Patient Information):

| Item  | Items in Proposed Labeling<br>(choose "Adequate", "Inadequate", or "N/A") | Assessor's Comments about Carton Labeling<br>(If an item is Inadequate, provide more details on the issues, as appropriate) |
|---|---|---|
| Established name <sup>2</sup>   | N/A   | Patient Labeling not applicable   |
| Special preparation instructions (if applicable)  | N/A   |   |
| Storage and handling information (if applicable)  | N/A   |   |
| If the product contains a desiccant, ensure the desiccant has a warning (e.g., "Do not eat.") and the size and shape of the desiccant differs from the dosage form. | N/A   |   |
| Active ingredient(s) (if applicable)  | N/A   |   |
| Alphabetical listing of inactive ingredients (if applicable)  | N/A   |   |
| Name and location of business (street address, city, state, and zip code) of manufacturer, distributor, and/or packer   | N/A   |   |

***Any deficiencies should be listed at the end in the "ITEMS FOR ADDITIONAL ASSESSMENT."***

## 3.0 CONTAINER AND CARTON LABELING

### 3.1 Container Labels

<sup>2</sup> Established name = [Drug] [Route of Administration] [Dosage Form]





| Item  | Items in Proposed Labeling<br>(choose “Adequate”, “Inadequate”, or “N/A”) | Assessor’s Comments about Carton Labeling<br>(If an item is Inadequate, provide more details on the issues, as appropriate) |
|---|---|---|
| Established name <sup>3</sup> , (font size and prominence)  | Adequate  |   |
| Strength(s) in metric system  | Adequate  |   |
| Route(s) of administration  | Adequate  |   |
| If the active ingredient is a salt, include the equivalency statement per Salt <a href="#">Guidance</a> and <a href="#">MAPP</a> .  | N/A   |   |
| Net contents (e.g., tablet count, volume of liquid)   | Adequate  |   |
| “Rx only” displayed on the principal display  | Adequate  |   |
| NDC   | Adequate  |   |
| Lot number and expiration date  | Adequate  |   |
| Storage conditions. If applicable, include a space on the carton labeling for the user to write the new beyond-use-date (BUD).  | Adequate  |   |
| For injectable drug products for parental administration, use appropriate package type term (e.g., single-dose, multiple-dose, single-patient-use). Other package terms include pharmacy bulk package and imaging bulk package, and these products require a “Not for direct infusion” statement. | Adequate  |   |
| For parenteral injectable dosage forms, include the name and quantities of all active and inactive ingredients in alphabetical order. For ingredients added to adjust the pH or make isotonic, include the name and statement of effect.  | Adequate  |   |
| If alcohol is present, must provide the amount of alcohol in terms of percent volume of absolute alcohol  | N/A   |   |
| Linear Bar code   | Adequate  |   |

<sup>3</sup> Established name = [Drug] [Route of Administration] [Dosage Form]

| Item  | Items in Proposed Labeling<br>(choose "Adequate", "Inadequate", or "N/A") | Assessor's Comments about Carton Labeling<br>(If an item is Inadequate, provide more details on the issues, as appropriate) |
|---|---|---|
| Name of manufacturer/distributor /packer  | Adequate  |   |
| If there is a Medication Guide, must include a statement about dispensing a Medication Guide to each patient.   | N/A   |   |
| No text on Ferrule and Cap overseal, unless a cautionary statement is required.   | N/A   |   |
| If there is a USP monograph for the drug product and it contains a labeling requirement, ensure the labeling requirement is fulfilled.  | Adequate  |   |
| When a drug product differs from the relevant USP standard of strength, quality, or purity, as determined by the application of the tests, procedures, and acceptance criteria set forth in the relevant compendium, its difference shall be plainly stated on its label. | Inadequate  | The pH of the proposed product differs from the USP monograph. The carton labels need to be edited to reflect this.         |
| And others, if space is available.  | Choose an item.   |   |

**Assessment of Carton and Container Labeling: Adequate**

The carton labels will be edited during the labeling negotiation to indicate that the pH of the proposed product does not meet the USP monograph.

**ITEMS FOR ADDITIONAL ASSESSMENT**

**Assess consistency of product-quality information in prescription drug labeling (PI, c/c labeling, and FDA-approved patient labeling). See [Carton/Container Labeling Specific Resources](#) for a presentation about inappropriate inconsistencies of product quality information between labeling. If there are inappropriate inconsistencies between the labeling (e.g., established name, strength(s), package type term, discard statement, identifying characteristics, storage, reconstitution/dilution instructions), please list these as deficiencies in this section.**

**Overall Assessment and Recommendation:**

**Adequate**

*Primary Labeling Assessor: Mariappan Chelliah*

*Secondary Assessor: Valerie Amspacher*



Mariappan  
Chelliah

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Valerie  
Amspacher

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**BIOPHARMACEUTICS****NDA: NDA-215868-ORIG-1****Submission Type:** 505(b)(2)**Listed Drug:** NDA 211844**Reference Standard:** ANDA 075857**Drug Product Name / Strength:** Midazolam in 0.8% Sodium Chloride Injection (1 mg/mL)/50 mg/50 mL and 100 mg/100 mL**Dosage Form:** Injection**Route of Administration:** Intravenous infusion**Applicant:** Exela Pharma Sciences, LLC**Indication:** Sedation of intubated and mechanically ventilated adult, pediatric, and neonatal patients as a component of anesthesia or during treatment in a critical care setting**Submission Date:** 9/20/2021**Primary Reviewer:** Jia Yin, Ph.D.**Secondary Reviewer:** Ta-Chen Wu, Ph.D.**Tertiary Reviewer:** Okponanabofa Eradiri, Ph.D.**Recommendation:** Adequate

**Background:** The Applicant seeks approval for Midazolam in 0.8% Sodium Chloride Injection 1 mg/mL via 505(b)(2) pathway. The Listed Drug (LD), Versed® (Midazolam Hydrochloride) Injection 1 mg/mL under NDA 018654, is discontinued. The Reference Standard (RS) for this product is Preservative Free Midazolam Hydrochloride Injection 1 mg/mL under ANDA 075857. The Applicant also referenced the recently approved NDA 211844 (Midazolam in 0.9% Sodium Chloride Intravenous Solution 1 mg/mL) as a second LD because it is pharmaceutically equivalent to the proposed drug product. The Applicant submitted a request for a waiver of in vivo bioavailability/bioequivalence requirements.

**REVIEW SUMMARY**

Biopharmaceutics review is focused on assessing bridging of the proposed drug product to the two listed drugs.

***Formulation bridging: Adequate***

The proposed commercial formulation is identical to the formulation of the NDA registration batches. No bridging study is needed.

***Bridging to Listed Drugs: Acceptable***

A scientific bridge between the proposed drug product and the LD product (NDA 211844) is deemed acceptable per 21 CFR 320.24(b)(6).

**RECOMMENDATION**

Based on the review of the overall information, from a Biopharmaceutics perspective, NDA 215868 for Midazolam in 0.8% Sodium Chloride Injection 1 mg/mL (50 mg/50 mL and 100 mg/100 mL) is adequate.

**BIOPHARMACEUTICS ASSESSMENT**

**List Submissions Being Reviewed**

| Received Date | Submission          |
|---------------|---------------------|
| 9/20/2021     | Original submission |

**Formulation Bridging**

**Reviewer’s Assessment:**

The proposed commercial formulation (**Table 1**) is identical to the formulation of the NDA registration batches. No in vivo bridging study is needed.

**Table 1** Composition of proposed Midazolam Injection

| Components               | Quality Standard | Function       | Amount |              |               |                |
|--------------------------|------------------|----------------|--------|--------------|---------------|----------------|
|                          |                  |                | % w/v  | mg/ mL       | 50 mg Vial    | 100 mg Vial    |
| Midazolam Base           | Active           | Drug substance | 0.1    | 1 mg         | 50 mg         | 100 mg         |
| Sodium Chloride, USP     | USP              | (b) (4)        | 0.8    | 8 mg         | 400 mg        | 800 mg         |
| Hydrochloric Acid, NF    | NF               | pH adjuster    | N/A    | pH to 3.5    | (b) (4)       | (b) (4)        |
| Sodium Hydroxide, NF     | NF               | pH adjuster    | N/A    | pH to 3.5    | pH to 3.5     | pH to 3.5      |
| Water for Injection, USP | USP              | (b) (4)        | N/A    | q.s. to 1 mL | q.s. to 50 mL | q.s. to 100 mL |

**Bridging**

**Reviewer’s Assessment:**

As this is an NDA submission via 505(b)(2) pathway, biowaiver is not applicable in this case. Biopharmaceutics will assess the bridging between the proposed drug product and the listed drug (LD) under NDA 211844

Based on the submitted information and internal discussion with the Drug Product review team, a scientific bridge between the proposed product and the LD product can be established under 21 CFR 320.24(b)(6):



- 1) The only composition difference between the proposed drug product and the LD product is the NaCl concentration.
- 2) The 0.1% difference in NaCl concentrations between the proposed product and the LD product is unlikely to cause any clinical concerns, as the proposed product has the same NaCl concentration as the RS product.

The Applicant submitted a biowaiver request for both strengths and provided the following justifications (**Table 2**):

- 1) Midazolam in 0.8% Sodium Chloride Injection is a parenteral drug product intended for intravenous administration.
- 2) The proposed drug product has the same active ingredient, dosage form, route of administration (Intravenous), and indications as the LD products (NDA 018654 and NDA 211844) and the RS product (ANDA 075857).
- 3) The proposed drug product has the same inactive ingredient as the LD product (NDA 211844) and the RS product (ANDA 075857).
- 4) One of the LD products, NDA 018654, is currently discontinued. The other LD product, NDA 211844, was recently approved with 50 mg/50mL and 100 mg/100 mL presentations in IV bags. The RS product (ANDA 075857) is available as 2 mg/2 mL, 5 mg/5 mL, 5 mg/mL, and 10 mg/2 mL presentations. The composition of the proposed and the currently approved products (NDA 211844 and ANDA 075857) under the conditions of use are similar.

**Table 2** Composition of the proposed drug product and the LD and RS products

| Composition per mL  | LD product <sup>1</sup><br>Versed (midazolam hydrochloride) Injection<br>NDA 018654 | RS Product <sup>2</sup><br>Midazolam Hydrochloride Injection<br>ANDA075857 | Midazolam in 0.9% Sodium Chloride Injection <sup>3</sup><br>NDA 211844 | Exela's Proposed Midazolam in 0.8% Sodium Chloride Injection <sup>4</sup><br>NDA215868 |
|---------------------|---|--|--|--|
| Midazolam           | 1 mg/mL   | 1 mg/mL  | 1 mg/mL  | 1 mg/mL  |
| Sodium chloride     | 8 mg/mL   | 8 mg/mL  | 9 mg/mL  | 8 mg/mL  |
| Edetate disodium    | 0.1 mg/mL   | Nil  | Nil  | Nil  |
| Benzyl alcohol      | 10 mg/mL  | Nil  | Nil  | Nil  |
| Hydrochloric acid   | Approx. 3   | Approx. 3  | q.s. to pH 2.5 - 3.5   | q.s. to pH 3.5   |
| Sodium hydroxide    | Approx. 3   | Approx. 3  | q.s. to pH 2.5 - 3.5   | q.s. to pH 3.5   |
| Water for Injection | q.s. to 1 mL  | q.s. to 1 mL   | q.s. to 1 mL   | q.s. to 1 mL   |
| How supplied        | 2/5/10 mL vials   | 2/5 mL vials   | 50/100 mL IV Bags  | 50/100 mL vials  |
| Midazolam/unit      | 2 mg/5 mg/10 mg   | 2 mg/5 mg  | 50 mg/100 mg   | 50 mg/100 mg   |
| Indications and use | As per the LD product label   | As per the RS product label  | As per the approved product label – intravenous infusion only          | Similar to LD - Carved out for intravenous infusion only                               |

<sup>1</sup> Information regarding RLD product, Versed (midazolam hydrochloride) Injection 1mg/mL of HLR Technology, was obtained from PDR, 2000.

<sup>2</sup>Information regarding RS product, Midazolam Hydrochloride Injection 1mg/mL, Hospira Inc., was obtained from the package insert (<https://dailymed.nlm.nih.gov/dailymed/drugInfo.cfm?setid=1abda8b8-48a8-4995-af86-39220d1aa240>).

<sup>3</sup>Information regarding, Midazolam in Sodium Chloride Injection 1mg/mL, Inforlife SA, was obtained from the package insert ([https://www.accessdata.fda.gov/drugsatfda\\_docs/label/2021/211844s000lbl.pdf](https://www.accessdata.fda.gov/drugsatfda_docs/label/2021/211844s000lbl.pdf)).

<sup>4</sup>Information regarding, Midazolam in 0.8% Sodium Chloride Injection 1mg/mL, is provided in Module 1.14 labeling.



Jia  
Yin

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## MICROBIOLOGY

|                                     |  |
|-------------------------------------|--|
| <b>Product Information</b>          |  |
| <b>ANDA Number</b>                  | 215868   |
| <b>Assessment Cycle Number</b>      | 1  |
| <b>Drug Product Name / Strength</b> | Midazolam in 0.8% Sodium Chloride Injection, 1 mg/mL, (50 mL and 100 mL fill volumes)                |
| <b>Route of Administration</b>      | Intravenous injection  |
| <b>Applicant Name</b>               | Exela Pharma Sciences, LLC   |
| <b>Manufacturing Site</b>           | 320 Cooperative Way<br>Lenoir, NC 28645<br>Registration Number: 3008563008<br>DUNS Number: 117180896 |
| <b>Method of Sterilization</b>      | (b) (4)  |

**Assessment Recommendation: Adequate**

**Theme:**

|  |  |
|--|--|
| <input type="checkbox"/> N/A                         | <input type="checkbox"/> Depyrogenation Validation Data                              |
| <input type="checkbox"/> Product Sterility Assurance | <input type="checkbox"/> Product Release and/or Stability Specifications             |
| <input type="checkbox"/> Media Fill Data             | <input type="checkbox"/> Validation for Product Release and/or Stability Test Method |
| <input type="checkbox"/> Validation of Product Test  | <input type="checkbox"/> Other (Requires Division Director Approval)                 |
| <input type="checkbox"/> Due to Consult              |  |

**Justification: N/A**

**Assessment Summary:** The submission is **recommended** for approval on the basis of sterility assurance.

**List Submissions Being Assessed (table):**

| Submit                                   | Received           | Review Request | Assigned to Reviewer |
|--|--------------------|----------------|----------------------|
| September 20, 2021<br>(eCTD Sequence #1) | September 20, 2021 | N/A            | September 29, 2021   |
| December 30, 2021 <sup>1</sup>           | December 30, 2021  | N/A            | January 4, 2022      |

|  |                   |     |                   |
|--|-------------------|-----|-------------------|
| (eCTD Sequence #9) <sup>1</sup>                    |                   |     |                   |
| February 22, 2022 (eCTD Sequence #13) <sup>2</sup> | February 22, 2022 | N/A | February 22, 2022 |
| February 28, 2022 (eCTD Sequence #15) <sup>3</sup> | February 28, 2022 | N/A | February 28, 2022 |
| April 4, 2022 (eCTD Sequence #18) <sup>3</sup>     | April 4, 2022     | N/A | April 4, 2022     |
| May 6, 2022 (eCTD Sequence #19) <sup>4</sup>       | May 6, 2022       | N/A | May 6, 2022       |
| May 13, 2022 (eCTD Sequence #) <sup>5</sup>        | May 13, 2022      | N/A | May 16, 2022      |

<sup>1</sup>December 30, 2021 submission is response to Agency’s December 7, 2021 IR letter

<sup>2</sup>February 22, 2022 submission is response to Agency’s January 25, 2022 IR letter

<sup>3</sup>February 28, 2022 and April 4, 2022 submissions are responses to Agency’s February 25, 2022 IR letter.

<sup>4</sup>May 6, 2022 submission is response to Agency’s April 19, 2022 IR letter.

<sup>5</sup>May 13, 2022 submission is IR response submission to update labeling to limit the infusion duration to 48 hours.

**Highlight Key Issues from Last Cycle and Their Resolution: N/A**

**Concise Description of Outstanding Issues: None**

**Supporting Documents**

- (b) (4) rubber  
(b) (4) Reviewed in Microbiology review D (b) (4)M40R01.docx dated 01/29/2020.
- Microbiology document N (b) (4)MR01.docx, dated 06/17/2020 for review of finished drug product bacterial endotoxins testing.

**Select Number of Approved Comparability Protocols: 0**

**P.1 DESCRIPTION OF THE COMPOSITION OF THE DRUG PRODUCT**

- **Description of drug product –**  
The subject drug product is a clear, colorless sterile, non-pyrogenic, preservative free solution filled as 1 mg/mL (50 mL and 100 mL fill in 50 mL and 100 mL single-dose molded clear glass (b) (4) vials respectively).

• **Drug product composition –**

| Ingredient               |              |               |                | Function                         |
|--------------------------|--------------|---------------|----------------|----------------------------------|
|                          | mg/mL        | 50 mL fill    | 100 mL fill    |                                  |
| Midazolam Base           | 1 mg         | 50 mg         | 100 mg         | Active Pharmaceutical Ingredient |
| Sodium Chloride, USP     | 8 mg         | 400 mg        | 800 mg         | (b) (4)                          |
| Hydrochloric Acid, NF    | q.s.         | q.s.          | q.s.           | (b) (4) / pH adjuster            |
| Sodium Hydroxide, NF     | q.s.         | q.s.          | q.s.           | pH adjuster                      |
| Water for Injection, USP | q.s. to 1 mL | q.s. to 50 mL | q.s. to 100 mL | (b) (4)                          |

• **Description of container closure system –**

| Component | Description   | Manufacturer |
|-----------|---|--------------|
| Container | 50 mL/20 mm and 100 mL molded clear USP (b) (4) glass vials | (b) (4)      |
| Closure   | 20 mm, (b) (4) gray (b) (4) rubber closure (b) (4)          | (b) (4)      |
| Overseal  | 20 mm Overseal with Flip-off top                            | (b) (4)      |

**Reviewer’s Assessment: Adequate**

**P.2 PHARMACEUTICAL DEVELOPMENT**

**P.2.5 MICROBIOLOGICAL ATTRIBUTES**

**Container/Closure and Package Integrity**

(b) (4)



George  
Arhin

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Elizabeth  
Barr

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Valerie  
Ampacher

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/s/  
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VALERIE R AMSPACHER  
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