DEPARTMENT OF HEALTH AND HUMAN SERVICES
FOOD AND DRUG ADMINISTRATION

DISTRICT OFFICE ADDRESS AND PHONE NUMBER	DATE(S) OF INSPECTION
10903 New Hampshire Ave, Bldg71, Rm 5054 Silver Spring, MD 20993-0002 (240)402-9160	05/19/2025 - 05/27/2025 FEI NUMBER 3010479596

NAME AND TITLE OF INDIVIDUAL TO WHOM REPORT IS ISSUED	
John Rim, CEO	
FIRM NAME Samsung Biologics Co., Ltd.	STREET ADDRESS 300 Songdobaiodae-Ro
CITY, STATE AND ZIP CODE Yeonsu Incheon 21987, Korea (the Republic of)	TYPE OF ESTABLISHMENT INSPECTED Drug Substance Manufacturer

THIS DOCUMENT LISTS OBSERVATIONS MADE BY THE FDA REPRESENTATIVE(S) DURING THE INSPECTION OF YOUR FACILITY. THEY ARE INSPECTIONAL OBSERVATIONS, AND DO NOT REPRESENT A FINAL AGENCY DETERMINATION REGARDING YOUR COMPLIANCE. IF YOU HAVE AN OBJECTION REGARDING AN OBSERVATION, OR HAVE IMPLEMENTED, OR PLAN TO IMPLEMENT, CORRECTIVE ACTION IN RESPONSE TO AN OBSERVATION, YOU MAY DISCUSS THE OBJECTION OR ACTION WITH THE FDA REPRESENTATIVE(S) DURING THE INSPECTION OR SUBMIT THIS INFORMATION TO FDA AT THE ADDRESS ABOVE. IF YOU HAVE ANY QUESTIONS, PLEASE CONTACT FDA AT THE PHONE NUMBER AND ADDRESS ABOVE.

DURING AN INSPECTION OF YOUR FIRM WE OBSERVED:

1. **Procedures implemented to prevent cross-contamination of drug substances during product change over (PCO) operations were not followed.**

   a) Specifically, between 01OCT2018 to 21MAY2025, you routinely failed to change (b) (4) within the (b) (4) on the (b) (4) lines as part of change over between manufacturing of different drug substances within (b) (4) (as identified within deviations DEV-017954 and DEV-017965). This practice does not follow your current and historical procedures "SOP-(b) (4)-00161, (ver. 2.0 - 14.0), Maintenance Procedure of (b) (4)," which requires that the (b) (4) be changed (b) (4) DS lot. You have manufactured, (b) (4) and (b) (4) the following drug substances (of which (b) (4) are within known expiry/retest dates) for manufacture of drug products (for U.S. and ROW markets) without having changed the (b) (4):

Drug Substance Product Code	Proprietary Name of Drug Product	Plant Number	Batches Released and Shipped
(b) (4)			

SEE REVERSE OF THIS PAGE	/s/	EMPLOYEE(S) NAME AND TITLE (Print or Type)	DATE ISSUED
		Travis S. Bradley, Investigator Peng Zhou, Investigator Ze Peng, Biologist Haarin Chun, Biologist	05/27/2025

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DISTRICT OFFICE ADDRESS AND PHONE NUMBER	DATE(S) OF INSPECTION
10903 New Hampshire Ave, Bldg71, Rm 5054 Silver Spring, MD 20993-0002 (240)402-9160	05/19/2025 - 05/29/2025* FEI NUMBER 3010479596

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(b) (4)

b) Your investigation of the failure to change out (b) (4) did not include an adequate risk assessment in that you have not determined the impact of this failure on the various DS manufactured during the subject timeframe. Additionally, both deviations DEV-017954 and DEV-017965 were classified by quality as "(b) (4)." This classification does not follow section 8.3.2.2 of procedure SOP-QA-00037 (ver. 41.0) titled "Deviation Procedure," which states that a (b) (4) deviation is a (b) (4) (b) (4) Additionally, as deviation DEV-017954 was classified as a (b) (4) deviation, (b) (4) were not (b) (4).

2. The responsibilities and procedures applicable to the quality control unit were not followed.

a) Since 29SEP2021, 56 CAPAs and 74 change controls have been implemented to improve data integrity practices at your firm. However, since the conclusion of the previous agency inspection end dated 30JUL2024, data integrity deficiencies have continued as follows:

- DEV-017935 – Opened on 27FEB2025 (in support of deviation DEV-017965) for documenting changing of (b) (4) for product change over (PCO) within building (b) (4) during drug substance (b) (4) campaign (U.S. marketed product) without actual replacement of associated (b) (4). This was documented as Data Falsification on 20JAN2025. During the investigation, it was

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revealed that the falsification action was instructed by the manufacturing shift leader. Additionally, the investigation found that documentation of the performance of preventative maintenance for (b) (4) of (b) (4) within building (b) (4) was also falsified during the period of 16FEB2025 to 18FEB2025.

- DEV-017546 – Opened on 10JAN2025 states that on 26DEC2024 the Quality Systems (QS) Director attempted to identify an employee who had anonymously reported a data integrity violation which was documented under DEV-017515, for falsification of (b) (4) testing data for "(b) (4) " for (b) (4) (b) (4) (OOS for lot (b) (4) reported (b) (4) specification (b) (4)) tested 07SEP2023 and utilized for ROW drug substance manufacturing.

- DEV-017118 – Opened on 29NOV2024 states that in response to a transcription error within the batch record for drug substance product (b) (4) (U.S. marketed product) batch (b) (4) (incorrect lot number and serial number of (b) (4) documented during production), a shift supervisor instructed manufacturing operators to change the documented (b) (4) lot and serial number without verification that the changed lot and serial numbers were correct.

3. Procedures and controls utilized within the Quality Control (QC) Laboratory in support of drug substance release and (b) (4) testing are deficient. The following was observed.

a) Your firm failed to adhere to established (b) (4) protocols for drug substance (DS) by not performing sample pulls and associated (b) (4) testing within defined protocol timeframes (SOP-QC-00067). The following issues were noted:

- (b) (4) sample pulls were conducted outside the allowable time window specified in the protocol (DEV-012880). For example, the (b) (4) sample for (b) (4) DS batch (b) (4) was scheduled for pull on August 21, 2023, but the samples were pulled (b) (4) days outside the (b) (4) window defined by the stability protocol (b) (4)-02130.

- (b) (4) testing was not performed within the required (b) (4) timeframe after sample pull (DEV-013019), as defined by the (b) (4) protocol ((b) (4)-02130 and SOP-QC-00067). For example:

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- (b) (4) DS batch (b) (4) was due by September 20, 2023, but was not completed until (b) (4)
- (b) (4) DS batch (b) (4) under (b) (4), (b) (4), and (b) (4) conditions were delayed by (b) (4) (b) (4) past the expected testing window due to repeated assay failures, including standard curve issues regarding (b) (4)
- (b) (4) DS batch (b) (4) test was reported OOS due to (b) (4) with an initial due date of November 24, 2023, and actual testing completed on (b) (4)

- (b) (4) were not properly managed to ensure timely and valid execution of testing (DEV-017846). For which (b) (4) DS batch (b) (4) (b) (4) testing was initiated on time (February 7, 2025) but was invalidated due to a "(b) (4)." Contributing factors included delays in requalification of the (b) (4) reference standard and equipment error. As a result, valid testing was not completed until (b) (4), beyond the required testing timeframe.

b) Firm procedure SOP-QC-00083 (ver. 13.0) titled "Quality Control Laboratory Waste Disposal" was not followed in Plant (b) (4), Room (b) (4). Specifically,

- The (b) (4) for quality control laboratory waste disposal were labelled inconsistently (e.g., (b) (4) when (b) (4) is filled-up or (b) (4) within (b) (4) (b) (4)", or no label, although either (b) (4) was used in each (b) (4)
- The QC lab waste was not disposed appropriately ((b) (4) were found in a (b) (4) labelled as (b) (4), and (b) (4) were found in a (b) (4) with a (b) (4).

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4. Failure to follow established procedures for reporting and implementing changes to an approved application.

a. Your firm implemented a revised version of the (b) (4) assay method ((b) (4) – Determination of (b) (4) for the release and (b) (4) testing of drug substance (DS) batches for manufacturing (b) (4) prior to receiving FDA approval for the change and prior to completion of the required waiting period following submission of a CBE-30 supplement.

The revised assay method was used for release testing of (b) (4) DS batches (Batch numbers: (b) (4) , (b) (4)) and for stability testing of (b) (4) DS batches (Batch numbers: (b) (4)). The batches including (b) (4) DS batches (b) (4) were released between 09JAN2024 and 22JAN2024, after implementation of the new method on 27OCT2023, even though the corresponding CBE-30 supplement ((b) (4)) was not submitted until 20MAR2024 and not approved until 10SEP2024.

b. The approved protocol for qualifying new (b) (4) reference standards was not completely implemented, i.e., change was identified when comparing the information provided in Section 3.2.S.5 of an Annual Report with (b) (4) to that in the original BLA (b) (4)

c. The data to support (b) (4) reference standard were not completely reported.

*DATES OF INSPECTION
05/19/2025(Mon), 05/20/2025(Tue), 05/21/2025(Wed), 05/22/2025(Thu), 05/23/2025(Fri), 05/26/2025(Mon), 05/27/2025(Tue)

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The observations of objectionable conditions and practices listed on the front of this form are reported:

1. Pursuant to Section 704(b) of the Federal Food, Drug and Cosmetic Act, or
2. To assist firms inspected in complying with the Acts and regulations enforced by the Food and Drug Administration.

Section 704(b) of the Federal Food, Drug, and Cosmetic Act (21 USC 374(b)) provides:

"Upon completion of any such inspection of a factory, warehouse, consulting laboratory, or other establishment, and prior to leaving the premises, the officer or employee making the inspection shall give to the owner, operator, or agent in charge a report in writing setting forth any conditions or practices observed by him which, in his judgment, indicate that any food, drug, device, or cosmetic in such establishment (1) consists in whole or in part of any filthy, putrid, or decomposed substance, or (2) has been prepared, packed, or held under insanitary conditions whereby it may have become contaminated with filth, or whereby it may have been rendered injurious to health. A copy of such report shall be sent promptly to the Secretary."