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1.0 Purpose

This SOP describes the preparation of End-of-Production (EOP) cell banks prepared from bacterial fermentation broth.

2.0 Scope

This procedure applies to personnel performing fermentation production operations at the Biopharmaceutical Development Program (BDP).

3.0 Authority and Responsibility

3.1 The Director of Technical Operations, Biopharmaceutical Development Program (BDP), has the authority to define this procedure.

3.2 Production personnel are responsible for training personnel on this procedure and for documenting this training to Biopharmaceutical Quality Assurance (BQA).

3.3 Production personnel are responsible for the implementation of this procedure.

3.4 BQA is responsible for quality oversight of this procedure.

4.0 Guidelines

4.1 Refer to ***SOP 13200 - Qualification of Cells and CGMP Cell Banks***, for general guidelines regarding cell banking and cell bank testing.

4.2 A BDP part number must be established for the EOP bank being performed. This BDP part number will also be found on the associated Master Specification. If a BDP part number has not been created, one must be created.

4.3 An EOP bank must be made for each GMP bacterial fermentation product.

4.4 The culture age of the broth used in preparing the bank must be the longest-running fermentation produced during the production campaign. If an EOP bank has been prepared and a subsequent fermentation runs longer than the fermentation from which the original EOP bank was prepared, a second EOP bank must be prepared from the current fermentation.

4.5 For fermentation runs where induction is performed, take a sample immediately prior to induction.

4.6 If the bacterial EOP back is vialed within 1 hour of the time the sample is taken, the sample may be stored at 2-8°C until it is vialed. Otherwise, continue incubating the sample at the temperature and agitation rate used for the last seed flask stage of the fermentation process until the bank is vialed.

4.7 Testing of an EOP bank is generally not required for an early-phase product. If the EOP bank is required to be tested (by a regulatory agency, IND sponsor or NCI), a Master Specification will be generated and the EOP bank will be tested as per the Master Specification. General testing guidelines for EOP banks are given in ***SOP 13200 - Qualification of Cells and CGMP Cell Banks*****.**

5.0 Procedure

5.1 Request a bottle of 60% glycerol solution, BDP PN 10387, or prepare a 60% w/v glycerol solution as follows. If the glycerol solution is requested from BDP MMIC then N/A section 3.0 of Form 12171-01 .

5.1.1 Tare a 250 mL glass bottle and weigh out 42 $\pm$ 2 grams of glycerol into the bottle.

5.1.2 Using a 50 mL pipet, add 36.7 $\pm$ 0.2 mL of WFI to the bottle.

5.1.3 Place a stir bar in the bottle and place on a magnetic mixer, adjust the speed of the mixer so that a vortex begins to form but does not reach the bottom of the bottle. Cap the bottle and mix for 2-60 minutes.

5.1.4 Label the bottle "60% glycerol for Bacterial Cell Banking," lot, expiry date of 6 months, initials, and date. Place steriwrap over the bottle cap.

5.1.5 Sterilize the glycerol solution in an autoclave using a validated cycle.

5.1.6 Store the bottle of glycerol solution at room temperature until use.

5.2 Obtain a > 150 mL sample of the fermentation broth from which the EOP bank is to be prepared.

5.3 Fill cryovials with cultured broth as follows.

5.3.1 Clean and decontaminate the BSC to be used for the EOP banking process per ***SOP 19102 - Routine Use and Disinfection of Biological Safety Cabinets, Incubators, Shakers, and Centrifuges***.

5.3.2 Working in the BSC, aseptically transfer 145-155 mL of the sample from 5.2 into the bottle of 60% glycerol solution. Place the bottle on a magnetic stirrer and adjust the speed so that a vortex begins to form but does not reach the bottom of the bottle. Allow the bottle contents to mix for 2-10 minutes then re-adjust the speed setting so that there is a visibly detectable disturbance on the top of the mixture but no vortex is formed.

5.3.3 Using aseptic technique, remove the cap from each cryovial and, using a pipette, transfer 1 ± 0.2 mL (0.8-1.2 mL) of the cell suspension into the cryovial, then re-cap the cryovial and place the vial in the storage box. Fill a minimum of 50 vials.

5.3.4 Label the cryovials "EOP bank," product, BDP part number, lot number, date and initials.

5.3.5 Store the prepared cell bank vials at ≤ -70°C until they are submitted to MMIC for storage.

5.4 Deliver the vials from step 5.3.5 to MMIC for storage at ≤ -70°C per ***SOP 20303 - CGMP Product Accountability***.

5.5 The Pressure Indicator (PI) will withdrawal necessary samples from MMIC and submit to PA/QC for testing per the Master Specification and ***SOP 22002 - Request for Quality Control Testing***.

6.0 Documentation

6.1 Document this procedure on **Form 12171-01**, EOP Banking Summary.

6.2 Attached the completed **Form 12171-01** to the batch record pertaining to the lot from which the EOP bank was prepared.

7.0 References and Related Documents

SOP 13200 Qualification of Cells and CGMP Cell Banks

SOP 19102 Routine Use and Disinfection of Biological Safety Cabinets, Incubators, Shakers, and Centrifuges

SOP 20303 CGMP Product Accountability

SOP 22002 Request for Quality Control Testing

Form 12171-01 EOP Bank Summary

8.0 Change Summary