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EQUIPMENT ID No.	
LOCATION	
DATE OF QUALIFICATION	
SUPERSEDES PROTOCOL No.	NIL



PROTOCOL No.:

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1.0 PROTOCOL Al	PPKC	)VAL:
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### **INITIATED BY:**

DESIGNATION	NAME	SIGNATURE	DATE
OFFICER / EXECUTIVE (QUALITY ASSURANCE)			

### **REVIEWED BY:**

DESIGNATION	NAME	SIGNATURE	DATE
HEAD (PRODUCTION)			
HEAD (QUALITY CONTROL)			
HEAD (ENGINEERING)			

### **APPROVED BY:**

DESIGNATION	NAME	SIGNATURE	DATE
HEAD (QUALITY ASSURANCE)			



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### 2.0 **OBJECTIVE:**

To provide documented evidence that the Equipment is performing as per the parameter defined in operational qualification and that it gives result as per the predetermined acceptance criteria.

To demonstrate that the system will operate reproducibly and consistently within its operating range.

To confirm the suitability of the Standard Operating Procedures for all routine activities associated with the system.

The document also provides the observed and obtained values indicating compliance to the PQ Protocol.

### **3.0 SCOPE:**

The Protocol covers all aspects of Performance Qualification for the Premix Filling Machine.

This Protocol will define the methods and documentation used to qualify the Premix Filling Machine for PO.



PROTOCOL No.:

### 4.0 **RESPONSIBILITY:**

The Qualification team, comprising of a representative from each of the following departments, shall be responsible for the overall compliance of this Protocol.

DEPARTMENTS	RESPONSIBILITIES
Quality Assurance	<ul> <li>Preparation, Review, Approval and Compilation of the Performance Qualification Protocol.</li> <li>Co-ordination with Quality Control, Production and Engineering to carryout Performance Qualification Activity.</li> <li>Monitoring of Performance Qualification.</li> </ul>
Production	<ul> <li>Review of Protocol.</li> <li>To co-ordinate and support Performance Qualification Activity.</li> </ul>
Engineering	<ul> <li>Reviewing of qualification Protocol for correctness, completeness and technical excellence.</li> <li>Responsible for trouble shooting (if occurred during execution).</li> <li>Maintenance &amp; preventive maintenance as per schedule.</li> </ul>
Quality Control	<ul> <li>Review of Performance Qualification report.</li> <li>Approval of report post approval.</li> </ul>



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### **5.0 EQUIPMENT DETAILS:**

Equipment Name	Premix Filling Machine
Equipment ID.	
Manufacturer's Name	
Supplier's Name	
Location of Installation	Cephalosporin block

### **6.0 SYSTEM DESCRIPTION:**

The Pre-Mix Filling packing machines are nozzle filling machines. They are specially designed for filling particular quantity of the solution, suspension and other liquid phase in the bottle. The machine is ideal for the free flow liquid.

### 7.0 REASON FOR QUALIFICATION:

After completion of the Operational Qualification of the equipments, it is imperative to perform the Performance Qualification. The study will establish that the parameters are followed, critical variables are under control and the quality of the output is, as desired.

### **8.0** SITE OF STUDY:

Dry Powder Injection.

### 9.0 FREQUENCY OF QUALIFICATION:

- Once in two year time period.
- After any major breakdown or after major modification.
- After Change of Location.



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### 10.0 PRE-QUALIFICATION REQUIREMENTS:

### 10.1 SYSTEM PRE-REQUISITES:

Verify that the DQ / IQ / OQ of the Premix Filling Machine have been executed and approved. Verify that the SOP for Operating, Cleaning and Preventive Maintenance of the Premix Filling Machine has been prepared.

S. NO.	DESCRIPTION OF PRE-REQUISITE	COMPLETED (YES / NO)	CHECKED BY ENGINEERING SIGN / DATE	VERIFIED BY QA SIGN / DATE
	Verify that the DQ / IQ / OQ of the			
	Premix filling machine has been			
	executed and approved.			
1.	DQ Protocol Document No.:			
2.	IQ Protocol Document No.: OQ			
3.	Protocol Document No.:			
4.	SOP of "Operation and Cleaning			
	of Premix Filling Machine"			



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### 11.0 TESTS & CHECKS:

### 11.1 PROCEDURE:

Three batches of same product or different product shall be considered for performance qualification. To evaluate the performance of equipment machine shall be operated at different speeds in three different batches and data shall be recorded. During this, following parameters shall be checked:

• Average fill Volume and variation of fill bottle volume.

### 11.2 ACCEPTANCE CRITERIA:

Filled bottle should comply with the limits of volume & Fill variation define in BMR.

### 11.3 FILL VOLUME VARIATION TEST:

<b>A.</b>	PRODUCT NAME:	<b>BATCH NUMBER:</b>
	MFG DATE:	DATE:

No. of Bottles	Initial				Middle			Final	
	Full Hopper	Half Hopper	Optimum Speed	Full Hopper	Half Hopper	Optimum Speed	Full Hopper	Half Hopper	Optimum Speed
1.									
2.									
3.									
4.									
5.									
6.									
7.									
8.									
9.									
10.									



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B.	PRODUCT NAME:	BATCH NUMBER
	MFG DATE:	DATE:

No. of Bottles	Initial				Middle			Final	
	Full Hopper	Half Hopper	Optimum Speed	Full Hopper	Half Hopper	Optimum Speed	Full Hopper	Half Hopper	Optimum Speed
1.									
2.									
3.									
4.									
5.									
6.									
7.									
8.									
9.									
10.									



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C.	PRODUCT NAME:	BATCH NUMBER:
	MFG DATE:	DATE:

No. of Bottles	Initial				Middle			Final	
	Full Hopper	Half Hopper	Optimum Speed	Full Hopper	Half Hopper	Optimum Speed	Full Hopper	Half Hopper	Optimum Speed
1.									
2.									
3.									
4.									
5.									
6.									
7.									
8.									
9.									
10.									

Checked By	Verified By
Production	<b>Quality Assurance</b>
Sign / Date:	Sign / Date:
Inference:	
•••••	
	Reviewed By
	Manager QA
	Sign / Date:



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11.4	4,11	<b>V// N</b>	N/  L'	<b>TEST:</b>
11.7		V ()L		11201.

A. PRODUCT NAME: BATCH NUMBER:

MFG: DATE:

No. of Bottles	Initial				Middle			Final	
	Full Hopper	Half Hopper	Optimum Speed	Full Hopper	Half Hopper	Optimum Speed	Full Hopper	Half Hopper	Optimum Speed
1.									
2.									
3.									
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B. PRODUCT NAME: BATCH NU
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MFG DATE: DATE:

No. of Bottles	Initial				Middle			Final	
	Full Hopper	Half Hopper	Optimum Speed	Full Hopper	Half Hopper	Optimum Speed	Full Hopper	Half Hopper	Optimum Speed
1.									
2.									
3.									
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5.									
6.									
7.									
8.									
9.									
10.									



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C.		PRODUCT NAME: MFG DATE:								
	ОВ	SERVATI	ONS:							
No. Bott		Initial				Middle			Final	
Dott	ies	Full Hopper	Half Hopper	Optimum Speed	Full Hopper	Half Hopper	Optimum Speed	Full Hopper	Half Hopper	Optimum Speed
1	١.									
2	2.									
3	3.									
4	1.									
5	5.									
6	5.									
7	7.									
8	3.									
9	€.									
1	10.									
	ction Date	1 e:				S	erified By Quality Assu lign / Date:			
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### 12.0 CHECKLIST OF ALL TESTS & CHECKS:

The following table lists the number of tests / samples to be carried out & comments on the sample record sheet.

TESTS OR CHECKS	EXECUTED [Y/N]	COMMENT
Average fill Volume and Fill variation		
of fill bottle		

### 13.0 REFERENCES:

### The Principle Reference is the following:

- Validation Master Plan
- Schedule M: "Good Manufacturing Practices and Requirements of Premises, Plant and Equipment for Pharmaceutical Products."
- WHO Essential Drugs and Medicines Policy, QA of Pharmaceuticals, Vol-2: Good Manufacturing Practices and Inspection.

### The following references are used to give addition guidance:

- FDA/ISPE Baseline Pharmaceutical Engineering Guide-Volume 5: Commissioning and Qualification Guide, First Edition / March 2001.
- Code of Federal Regulations (CFR), Title 21, Part 210, Current Good Manufacturing Practice (cGMP) in Manufacturing, Processing, Packing, or Holding of Drugs, Beta. April 1, 1998.
- Code of Federal Regulations (CFR), Title 21, Part 211, Current Good Manufacturing Practice (cGMP) for Finished Pharmaceuticals, April 1, 1998.
- EU Guide to Good Manufacturing Practice, Part 4, 1997.
- European Commission's working party on control of medicines and inspections document, Validation Master Plan, Design Qualification, Installation & Operational Qualification, Non Sterile Process Validation, Cleaning Validation, October 1999.
- GMP Guide, Validation of Automated Systems in Pharmaceutical Manufacture, Version 4.0, December 2001.



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14.0	DOCUMENTS TO BE ATTACHED:
	Any Other Relevant Documents
15.0	NON COMPLIANCE:
	•••••••••••••••••••••••••••••••••••••••
16.0	DEVIATION FROM PRE-DEFINED SPECIFICATION, IF ANY:
	•••••••••••••••••••••••••••••••••••••••
17.0	CHANGE CONTROL, IF ANY:
18.0	REVIEW (INCLUSIVE OF FOLLOW UP ACTION, IF ANY):
	•••••••••••••••••••••••••••••••••••••••
19.0	CONCLUSION:
	•••••••••••••••••••••••••••••••••••••••
	•••••••••••••••••••••••••••••••••••••••
	•••••••••••••••••••••••••••••••••••••••
20.0	RECOMMENDATION:
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	•••••••••••••••••••••••••••••••••••••••



PROTOCOL No.:

### 21.0 ABBREVIATIONS:

Sr. : Senior

No. : Number

gm : gram

BSS : British Standard Sieve

BMR : Batch Manufacturing Record

WHO : World Health Organization

FDA : Food and Drug Administration

CFR : Code of Federal Regulations

GMP : Good Manufacturing Practices

SOP : Standard Operating Procedure

PRF : Premix Filling Machine

°C : Degree Centigrade

mm : Millimeter

Amp. : Amper

DQ : Design Qualification

IQ : Installation Qualification

OQ : Operational Qualification

PQ : Performance Qualification



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### 22.0 REPORT POST APPROVAL

**INITIATED BY:** 

DESIGNATION	NAME	SIGNATURE	DATE
OFFICER / EXECUTIVE (QUALITY ASSURANCE)			

### **REVIEWED BY:**

DESIGNATION	NAME	SIGNATURE	DATE
HEAD (PRODUCTION)			
HEAD (QUALITY CONTROL)			
HEAD (ENGINEERING)			

### **APPROVED BY:**

DESIGNATION	NAME	SIGNATURE	DATE
HEAD (QUALITY ASSURANCE)			