

PERFORMANCE QUALIFICATION REPORT FOR AUTOMATIC SIX HEAD LIQUID FILLING AND SEALING MACHINE

PROTOCOL No.:

PERFORMANCE QUALIFICATION REPORT FOR AUTOMATIC SIX HEAD LIQUID FILLING AND SEALING MACHINE

EQUIPMENT ID No.	
LOCATION	Filling and Sealing Room
DATE OF QUALIFICATION	
SUPERSEDES PROTOCOL No.	NIL



PERFORMANCE QUALIFICATION REPORT FOR AUTOMATIC SIX HEAD LIQUID FILLING AND SEALING MACHINE

PROTOCOL No.:

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AUTOMATIC SIX HEAD LIQUID FILLING AND SEALING MACHINE

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1.0 REPORT PRE- APPROVAL:

PREPARED BY:

DESIGNATION	NAME	SIGNATURE	DATE
OFFICER/EXECUTIVE (QUALITY ASSURANCE)			

REVIEWED BY:

DESIGNATION	NAME	SIGNATURE	DATE
OPERATING MANAGER (QUALITY ASSURANCE)			
HEAD (ENGINEERING)			

APPROVED BY:

DESIGNATION	NAME	SIGNATURE	DATE
HEAD (PRODUCTION)			



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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 Automatic Six Head Liquid Filling and Sealing machine.
- This Protocol will define the methods and documentation used to qualify the Automatic Six Head Liquid Filling and Sealing machine for PQ.



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

5.0 EQUIPMENT DETAILS:

Equipment Name	Automatic Six Head Liquid Filling and Sealing machine
Equipment ID.	
Manufacturer's Name	
Supplier's Name	
Location of Installation	Filling and Sealing room



AUTOMATIC SIX HEAD LIQUID FILLING AND SEALING MACHINE

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6.0 SYSTEM DESCRIPTION:

The Automatic Six Head Filling and Sealing machine is Divide into two Parts.

Filling Process:

The Six Head Automatic Filling machine Shall be Used to Filling by six head also work on Volumetric filling Principal, Whom fills with the help of vacuum and maintain the level of liquid in bottles on specified size and shape of bottles.

It is Comprises of Main Electric Panel with VFD, Relay, Operating panel, emergency switch & Push buttons, Nozzles Drive Assembly, Mechanical Stoppering System & Mechanical operation with motor gear box, cam, gears etc.

Sealing Process:

The Equipment shall be used to sealing with die by six head on specified size & shape of Bottle. Machines are equipped with cap feeder system for Continuous trouble free cap feeding.

It Comprises of Conveyer unit, Worm Assy, Star plate set sealing head Assy, Vibrator Bowl, Control Panel.



AUTOMATIC SIX HEAD LIQUID FILLING AND SEALING MACHINE

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7.0 PRE-QUALIFICATION REQUIREMENTS:

7.1 SYSTEM PRE-REQUISITES:

Verify that the SOP for Operating, Cleaning and Preventive Maintenance of the Automatic Six Head Liquid Filling and Sealing machine has been prepared.

S.No.	DESCRIPTION OF PRE-REQUISITE	COMPLETED (YES / NO)	CHECKED BY ENGINEERING SIGN / DATE	VERIFIED BY QA SIGN / DATE
1.	DQ Protocol Document No.:			
2.	IQ Protocol Document No.:			
3.	OQ Protocol Document No.:			
	SOP of "Operation and Cleaning			
4.	of Automatic Six Head Liquid			
	Filling and Sealing machine"			

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Production	Quality Assurance
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	Reviewed By
	Manager QA
	Sign / Date:



AUTOMATIC SIX HEAD LIQUID FILLING AND SEALING **MACHINE**

PROTOCOL No	١.	
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8.0	TESTS A	&	CHECKS:

Performance Evaluation For Machine Speed Optimization: 8.1

Trial No.: 01			
Date of Test		Equipment ID	
Total Bottles taken for test		Bottle Size	
Parameter	Low Speed ()	Optimum Speed()	High Speed ()
Sample after(mi	in)		
Machine jam			
Bottle Breakage			
Rejection			
Sample after(mi	in)		
Machine jam			
Bottle Breakage			
Rejection			
Sample after(mi	in)		
Machine jam			
Bottle Breakage			
Rejection			
Total rejection			
Checked By Production		Verifie	
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Trial No.: 02

PERFORMANCE QUALIFICATION REPORT FOR

AUTOMATIC SIX HEAD LIQUID FILLING AND SEALING MACHINE

PROTOCOL No.:

Equipment ID Date of Test Total Bottles taken for Bottle Size test Low Speed (**High Speed (Parameter Optimum Speed(** Sample after (min) Machine jam **Bottle Breakage** Rejection Sample after (min) Machine jam **Bottle Breakage** Rejection Sample after (min) Machine jam **Bottle Breakage** Rejection **Total rejection Checked By** Verified By **Production Quality Assurance Sign/Date:** Sign/Date:.... **Inference:**

> Reviewed By Manager QA Sign/Data:

Sign/Date:



PROTOCOL No.:

AUTOMATIC SIX HEAD LIQUID FILLING AND SEALING MACHINE

Trial No.: 03

111ai 140 03						
Date of Test		Equipment ID				
Total Bottles taken for test		Bottle Size				
Parameter	Low Speed ()	Optimum Speed()	High Speed ()			
Sample after(m	in)					
Machine jam						
Bottle Breakage						
Rejection						
Sample after(m	in)					
Machine jam						
Bottle Breakage						
Rejection						
Sample after (m	in)	I				
Machine jam						
Bottle Breakage						
Rejection						
Total rejection						
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Production		Verified By Quality Assurance				
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8.2 FILL VOLUME VARIATION TEST:

8.2.1 Fill Volume Variation: Trail-01

Date of test	
Product Name	
Batch No.	
Fill vol(Limit: ± % of Target Filled volume)	
Measuring Cylinder ID	

Nozzle No.	Bottle	Low Speed	Bottle	s/ min)	Optimum S ₁	Optimum Speed (Bottles / min)			High Speed (Bottles/Minute)		
1102216 110.	No.	Initial	Middle	Final	Initial	Middle	Final	Initial	Middle	Final	
	1										
01	2										
	3										
	4										
	5										
	1										
	2										
02	3										
	4										
	5										
03	1										



PR	Ω	Γ	C	N	ן . ז	Nn	•

Nozzle No. 04 05	Bottle	Low Speed (Bottles/ min)			Optimum S	peed (Bo	ottles / min)	High Speed (Bottles/Minute)		
Nozzie No.	No.	Initial	Middle	Final	Initial	Middle	Final	Initial	Middle	Final
	2									
	3									
	4									
	5									
	1									
04	2									
	3									
	4									
	5									
	1									
	2									
05	3									
	4									
	5									
	1									
	2									
06	3									
	4									
	5									
Min fill vol.				1						



PROTOCOL No.:

Nozzle No.	Bottle	Low Speed (Bottles/ min)			Optimum Sp	peed (Bo	ttles / min)	High Speed (Bottles/Minute)		
	No.	Initial	Middle	Final	Initial	Middle	Final	Initial	Middle	Final
Max. fill vol.										
Avg. vol.										

Checked By Production Sign/Date:	Verified By Quality Assurance Sign/Date
Inference:	
	Reviewed By Manager QA) Sign/Date:



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AUTOMATIC SIX HEAD LIQUID FILLING AND SEALING MACHINE

8.2.2 Fill Volume Variation: Trail-02

Date of test	
Product Name	
Batch No.	
Fill vol(Limit: ± % of Target Filled volume)	
Measuring Cylinder ID	

Nozzle No.	Bottle	Low Speed (Bottles/ min)			Optimum S	Optimum Speed (Bottles / min)			High Speed (Bottles/Minute)		
140ZZIC 140.	No.	Initial	Middle	Final	Initial	Middle	Final	Initial	Middle	Final	
	1										
	2										
01	3										
	4										
	5										
	1										
	2										
02	3										
	4										
	5										
03	1										
2	2										



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Nozzle No.	Bottle	Low Speed (Bottles/ min)			Optimum S	Optimum Speed (Bottles / min)			High Speed (Bottles/Minute)		
NUZZIE NU.	No.	Initial	Middle	Final	Initial	Middle	Final	Initial	Middle	Final	
	3										
	4										
	5										
	1										
	2										
04	3										
	4										
	5										
	1										
	2										
05	3										
	4										
	5										
	1										
	2										
06	3										
	4										
	5										
Min fill vol.		1	1			1	1		1	1	
Max. fill vol.											



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Nozzle No.	Bottle	Low Speed (Bottles/ min)			Optimum Speed (Bottles / min)			High Speed (Bottles/Minute)		
No.	No.	Initial	Middle	Final	Initial	Middle	Final	Initial	Middle	Final
Avg. vol.										

Checked By Production Sign/Date:	Verified By Quality Assurance Sign/Date
	•••••
•••••••••••••••••••••••••••••••••••••••	•••••
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AUTOMATIC SIX HEAD LIQUID FILLING AND SEALING MACHINE

8.2.3 Fill Volume Variation: Trail-03

Date of test	
Product Name	
Batch No.	
Fill vol(Limit: ± % of Target Filled volume)	
Measuring Cylinder ID	

Nozzle No.	Bottle	Low Speed (Bottles/ min)			Optimum Sp	Optimum Speed (Bottles / min)			High Speed (Bottles/Minute)		
TIOZZIC TIO.	No.	Initial	Middle	Final	Initial	Middle	Final	Initial	Middle	Final	
	1										
01	2										
	3										
	4										
	5										
	1										
	2										
02	3										
	4										
	5										
03	1										
	2										



PERFORMANCE QUALIFICATION REPORT FOR AUTOMATIC SIX HEAD LIQUID FILLING AND SEALING MACHINE

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1 1/	٠,	_	.,			1.4	

Nozzle No.	Bottle	Low Speed (Bottles/ min)			Optimum S	peed (Be	ottles / min)	High Speed (Bottles/Minute)		
NOZZIE NO.	No.	Initial	Middle	Final	Initial	Middle	Final	Initial	Middle	Final
	3									
	4									
	5									
	1									
	2									
04	3									
	4									
	5									
	1									
	2									
05	3									
	4									
	5									
	1									
	2									
06	3									
	4									
	5									
Min fill vol.										
Max. fill vol.										



PROTOCOL No.:

Nozzle No.	Bottle No.	Low Speed (Bottles/ min)		Optimum Speed (Bottles / min)			High Speed (Bottles/Minute)			
		Initial	Middle	Final	Initial	Middle	Final	Initial	Middle	Final
Avg. vol.										

Checked By Production Sign/Date:	Verified By Quality Assurance Sign/Date
	Reviewed By Manager QA Sign/Date:



AUTOMATIC SIX HEAD LIQUID FILLING AND SEALING MACHINE

8.3 PHYSICAL T

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Date of test	Pack Size	
Product Name	Equipment ID	
Batch No.	Speed	

Nozzle No.	Bottle No.	Physical appearance	Foreign particle	Remarks
01	1			
VI	2			
02	1			
02	2			
03	1			
03	2			
04	1			
04	2			
05	1			
03	2			
06	1			
	2			

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Production	Quality Assurance
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Inference:	
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	Reviewed By
	Manager QA
	Sign/Date:



AUTOMATIC SIX HEAD LIQUID FILLING AND SEALING MACHINE

TRIA	AL N	(O.:	:02

Date of test	Pack Size	
Product Name	Equipment ID	
Batch No.	Speed	

Nozzle No.	Bottle No.	Physical appearance	Leakage	Foreign particle	Remarks
01	1				
01	2				
02	1				
<u> </u>	2				
03	1				
	2				
04	1				
	2				
05	1				
	2				
06	1				
	2				

Checked By	Verified By
Production	Quality Assurance
Sign/Date:	Sign/Date
Inference:	
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	Reviewed By
	Manager QA
	Sign/Date:



PROTOCOL No.:

TRIA	١T.	N	N	•	N	13
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Date of test	Pack Size	
Product Name	Equipment ID	
Batch No.	Speed	

Nozzle No.	Bottle No.	Physical appearance	Leakage	Foreign particle	Remarks
01	1				
	2				
02	1				
02	2				
03	1				
0.5	2				
04	1				
04	2				
05	1				
03	2				
06	1				
	2				

Checked By	Verified By
Production	Quality Assurance
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	Reviewed By
	Manager QA
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PROTOCOL No.:

8.4	Sealing	Ouality:	Trial-01: At	minimum	Speed
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Date of Test	Batch Number	
Product Name	Bottle Size	
Equipment ID	Speed	

	Observation								
Bottle No.	Proper Sealing (Leak Test)	Proper Teething	Breakage of Cap	Cut on Seals	Seal Rotation	Remarks			
1.									
2.									
3.									
4.									
5.									
6.									
7.									
8.									
9.									
10.									
11.									
12.									

Checked By	Verified By
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	Manager QA
	Sign/Date:



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Q 5	Sooling	Ouglitzza	Twial 02.	At minimum	Cnood
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Date of Test	Batch Number	
Product Name	Bottle Size	
Equipment ID	Speed	

	Observation							
Proper Sealing (Leak Test)	Proper Teething	Breakage of Cap	Cut on Seals	Seal Rotation	Remarks			
S	Sealing	Sealing Froper Toothing	Sealing Troper Breakage of Con	Sealing Toothing Con Cut on Seals	Sealing Troper Breakage of Cut on Seals Seal Rotation			

Checked By	Verified By
Production	Quality Assurance
Sign/Date:	Sign/Date
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	Reviewed By
	Manager QA
	Sign/Date:



PROTOCOL No.:

0 (C 1!	O 1:4	T-1-1 02.	At minimum	
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Date of Test	Batch Number	
Product Name	Bottle Size	
Equipment ID	Speed	

	Observation						
Bottle No.	Proper Sealing (Leak Test)	Proper Teething	Breakage of Cap	Cut on Seals	Seal Rotation	Remarks	
1.							
2.							
3.							
4.							
5.							
6.							
7.							
8.							
9.							
10.							
11.							
12.							

Checked By Production Sign/Date:	Verified By Quality Assurance Sign/Date		
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	Reviewed By Manager QA Sign/Date:		



AUTOMATIC SIX HEAD LIQUID FILLING AND SEALING MACHINE

8.7	Sealing	Quality:	Trial-01:	At Maximum	Speed

Date of Test	Batch Number	
Product Name	Bottle Size	
Equipment ID	Speed	

	Observation							
Bottle No.	Proper Sealing (Leak Test)	Proper Teething	Breakage of Cap	Cut on Seals	Seal Rotation	Remarks		
1.								
2.								
3.								
4.								
5.								
6.								
7.								
8.								
9.								
10.								
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Production	Quality Assurance	
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	Reviewed By	
	Manager QA	
	Sign/Date:	



AUTOMATIC SIX HEAD LIQUID FILLING AND SEALING MACHINE

MACHINE

8.8	Sealing	Quality:	Trial-02:	At Maximum	Speed

Date of Test	Batch Number	
Product Name	Bottle Size	
Equipment ID	Speed	

			<u>I</u>	Observation						
Proper Sealing (Leak Test)	Proper Teething	Breakage of Cap	Cut on Seals	Seal Rotation	Remarks					
S	Sealing	Sealing Froper Toothing	Sealing Troper Breakage of Con	Sealing Toothing Con Cut on Seals	Sealing Troper Breakage of Cut on Seals Seal Rotation					

Checked By	Verified By
Production	Quality Assurance
Sign/Date:	Sign/Date
Inference:	
	Reviewed By
	Manager QA
	Sign/Date:



AUTOMATIC SIX HEAD LIQUID FILLING AND SEALING MACHINE

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8.9	Sealing	Quanty:	Trial-03:	At Ma	xımum	Speea

Date of Test	Batch Number	
Product Name	Bottle Size	
Equipment ID	Speed	

			Observation	n		
Bottle No.	Proper Sealing (Leak Test)	Proper Teething	Breakage of Cap	Cut on Seals	Seal Rotation	Remarks
1.						
2.						
3.						
4.						
5.						
6.						
7.						
8.						
9.						
10.						
11.						
12.						

Checked By	Verified By
Production	Quality Assurance
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	Reviewed By
	Manager QA
	Sign/Date:



AUTOMATIC SIX HEAD LIQUID FILLING AND SEALING MACHINE

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9.0 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
Machine Speed Optimization		
Fill Variation Test		
Physical Test		
Sealing Quality		

10.0 REFERENCES:

- 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.

11.0 DOCUMENTS TO BE ATTACHED:

- Training Record.
- Any Other Relevant Documents

12.0	NON COMPLIANCE:
13.0	DEVIATION FROM PRE-DEFINED SPECIFICATION, IF ANY:



PROTOCOL No.	\mathbf{n}	ΔT	$\alpha \alpha \alpha$	T	NT
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14.0	CHANGE CONTROL, IF ANY:
15.0	REVIEW (INCLUSIVE OF FOLLOW UP ACTION, IF ANY):
16.0	CONCLUSION:
17.0	RECOMMENDATION:



PROTOCOL No.:

FOR

AUTOMATIC SIX HEAD LIQUID FILLING AND SEALING MACHINE

18.0 ABBREVIATIONS:

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

QA : Quality Assurance

CQA : Corporate Quality Assurance

SOP : Standard Operating Procedure

LFS : Automatic Six Head Liquid Filling and Sealing machine

°C : Degree Centigrade

mm : Millimeter

Amp. : Amper

DQ : Design Qualification

IQ : Installation Qualification

OQ : Operational Qualification

PQ : Performance Qualification

Pvt. : Private

Ltd. : Limited



AUTOMATIC SIX HEAD LIQUID FILLING AND SEALING MACHINE

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19.0	REPORT POST	TAPPROVAL:
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PREPARED BY:

DESIGNATION	NAME	SIGNATURE	DATE
OFFICER/EXECUTIVE (QUALITY ASSURANCE)			

REVIEWED BY:

DESIGNATION	NAME	SIGNATURE	DATE
OPERATING MANAGER (QUALITY ASSURANCE)			
HEAD (ENGINEERING)			

APPROVED BY:

DESIGNATION	NAME	SIGNATURE	DATE
HEAD (PRODUCTION)			