

**GILES CHEMICAL ~ PREMIER MAGNESIA****Validation Protocol**

Title: Auto Pouch 3 IQ/OQ/PQ Protocol

Number: E15-VAL-RIQ-702

Owner: Patrick Owen

Revision: 0

Effective Date: February 10, 2015

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**Approvals**

Signing below indicates agreement that the protocol is ready for execution of the Installation, Operational, and Performance Qualification for WeighPack Swifty Bagger 1200 located at 396 Smathers Street at the Packaging facility.

Project Team Member	Functional Area	Signature	Date
Patrick Owen	Engineering		2-10-15
Sammy Joe Henson	Maintenance		2/10/15
Monte Plott	Production		2/10/15
Matt Haynes	Operations		2/10/15
Deborah Durbin	Quality		2/10/15

A final summary report that consists of results and conclusions based on the data collected after protocol execution will be written and approved. The executed protocol will be attached behind the report.

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#### I. PURPOSE:

The purpose of this protocol is to certify with documented evidence that the Auto Pouch #3 (WeighPack Swifty Bagger 1200), still functions as intended throughout its anticipated operating ranges after being relocated across the production floor. This protocol sets forth the objectives, methodology, documentation, and test activities needed to complete the Installation Qualification (IQ), Operational Qualification (OQ) and Process Qualification (PQ) for the Auto Pouch #3 located at Giles Chemical Repackaging Unit, 396 Smathers Street, Waynesville, NC.

#### II. BACKGROUND:

This Epsom Salt Auto Pouch #3 was manufactured by WeighPack in Toronto, Canada. The machine was purchased by Giles in March of 2014. The installation is expected by May 1, 2014. The machine is used to fill and seal pre-made plastic pouches, typically in 3 pound size.

The products that are impacted by this study are all Epsom Salt products manufactured by Giles Chemical.

#### III. OVERVIEW

No other departments or systems will be affected by the installation or use of this equipment.

The following tests will be performed in this qualification:

Controls/Indicators Verification – to document that the start/stop, emergency stop, and feed controls work properly.

Lot code and expiration date verification: Verification of proper imprinting of the lot code and expiration date.

Sealed pouch: Verification that the Epsom Auto Pouch #3 securely seals the pouch.

Fill Weights: Verify that Auto Pouch #3 is capable of producing a finished product that contains a weight of Epsom Salt with a minimum of the label stated weight.

#### IV. SYSTEM DESCRIPTION:

A. Auto Pouch #3 will open, fill, and top seal plastic pouches with Epsom Salt. It is a 1 line system, opening filling, and sealing 1 pouch at a time.

B. Description of Operation

01. The empty pouches are fed into the machine by a vacuum cup system. The feeder system presents the pouches to a set of gripper arms. The grippers move the pouch in a linear fashion through each station, opening, filling, sealing, and discharge. The motion is intermittent.
02. The pouch is fed to the gripper arms, then moves to a pre filling station. There, mechanical flaps open the pouch for filling. The next station is the pouch detect, air blow station. A vacuum sensor detects if suction cups are successful in opening the pouch, and air is injected into the open pouch in anticipation of filling. The next station is for filling and settling. A 4 head linear scale dumps a pre-measured dose of salt into the pouch. A mechanical settler gently taps the bottom of the filled pouch to settle the contents.
03. The filled pouch then indexes to the sealing station, where the top of the pouch is sealed. Finally the pouch indexes to the drop station where the gripper arms release it onto a discharge conveyor.
04. From the discharge conveyor, the pouches are dropped onto a packing table. Finally, the pouches are manually packed into case packaging.

#### V. SCOPE

The Installation Operational Performance Qualification protocol is intended to certify with documented evidence that Auto Pouch #3 is installed, operates, and functions as intended throughout its anticipated operating ranges.

#### VI. ROLES AND RESPONSIBILITIES

##### 1. Engineering

- ❖ Write and issue the protocol

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- ❖ Investigate protocol deviation reports
  - ❖ Execute the OQ and manage the data collection for the PQ.
  - ❖ Review raw data and originate interim notification to Quality Assurance
  - ❖ Write and route the final report
2. Quality Assurance
- ❖ Review and approve the protocol.
  - ❖ Review and approve raw data and notifications.
  - ❖ Review, approve, and store the final report.
3. Maintenance
- ❖ Provide Equipment Manuals needed to execute operational qualification.
  - ❖ Review and approve the protocol.
  - ❖ Execute the IQ.
  - ❖ Review and approve raw data and notifications.
  - ❖ Review and approve the final report
4. Production
- ❖ Execute the PQ.
  - ❖ Review and approve the final report.

## VII. TEST PROGRAM

### A. INSTALLATION QUALIFICATION

#### Objective

The objective of the installation verification is to document that Auto Pouch #3 is installed as indicated by WeighPack.

#### Equipment/Materials

Auto Pouch #3, WeighPack Swifty Bagger 1200

Ideal Digital Multimeter Model #61-340 (SN 100100221)

#### Procedure

Perform each listed below for Auto Pouch #3.

- Location: Verify that the equipment is situated to allow sufficient room around the machine for access doors and panels to be opened.
- Level: Verify instrument is level.
- Utilities
  - Electrical Requirements: Verify that instrument is receiving its specified Voltage.

#### Acceptance Criteria

Ensure that the installation is in accordance with the manual's specifications.

### B. OPERATION QUALIFICATION

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#### Objective

The objective of Controls/Indicators Verification is to document that Auto Pouch #3 operates as indicated by WeighPack. The controls will be operated to test the ability of Auto Pouch #3 to provide adequate control for starting/stopping, pouch feed, and emergency stop.

#### Equipment/Materials

Auto Pouch #3, WeighPack Swifty Bagger 1200

#### Procedure

Test each operation of Auto Pouch #3

#### Acceptance Criteria

Verification that start/stop, infeed, and emergency stop controls function as indicated by operation manual

### C. PERFORMANCE QUALIFICATION

#### Objective

The objective of performance testing is to document that Auto Pouch #3 performs the function required by Giles Chemical. The final product will be tested to verify:

- That Auto Pouch #3 firmly seals pouch.
- That the lot code and expiration date numbers are printed properly and accurately.
- That the fill weights are within the accepted range (3.0+ pounds for 3 pound pouches ).

#### Equipment/Materials

Auto Pouch #3, WeighPack Swifty Bagger 1200

Empty Pouch(es) (for tare)

Scale

#### Procedure

Run Auto Pouch #3 on 3 pound pouches for 4 hours while randomly sampling 25 pouches per hour for testing, for a total sample size of 100 pouches.

Examine the finished product and check for:

- That Auto Pouch #3 firmly seals the top of the pouch.
- That the lot code and expiration date numbers are imprinted properly and accurately.
- That the fill weights are within the accepted range.

#### Acceptance Criteria

Auto Pouch #3 firmly seals the pouch.

Auto Pouch #3 correctly imprints the lot code and expiration date.

That the fill weights are within the accepted range of 3.00+ pounds for 3 pound pouches.

## VIII. CALIBRATION

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Verify that all instrumentation that requires calibration is calibrated.

- Scale
- Ideal Digital Multimeter Model #61-340 (SN 100100221)

### IX. REFERENCE:

WeighPack Operation Manual

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**AUTO POUCHER #3: INSTALLATION QUALIFICATION****A. Installation Qualification****01. Location**

- a. Verify that Auto Pouch #3 is positioned properly

LOCATION			
Distance Criterion	Is the current area sufficient to open the access without obstructions (Yes/No)	Verified By	Date
Allow sufficient room around the machine for access doors and panels to be opened			
The machine must be located in an area that is adequately ventilated			
Comments:			

**02. Level**

- a. It is important to make sure that the Auto Pouch #3 is level.

LEVEL			
Is the unit level? (Yes/No)	Acceptable (Yes/No)	Verified By	Date
Comments:			

**03. Utilities**

- a. Verify that unit is receiving its specified utility requirements.

UTILITIES			
Electrical			
Specified	Actual	Verified By	Date
220 - 240 V for Machine			
220-240 V for Scale			
60 Hz			
Air			
The machine requires compressed air.			
A compressed air line should be in place			
Comments:			

Reviewed By: \_\_\_\_\_

Date: \_\_\_\_\_

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**B. Operation Qualification****01. Controls/Indicators Verification** – to document that Auto Pouch #3 operates as described.**Controls/Indicators Verification**

Description	Function	Did Item function properly (Yes/No)	Verified By	Date
<b>Former</b>				
Controls On/Off	With line power to the machine turned on, the control switch powers up the control panel			
Infeed	The infeed button on the control screen starts the process of feeding pouches onto the carousel			
Emergency Stop	The emergency stop button stops the motion of the machine when pressed. It must be reset before the machine can be started again.			
Date Coder	Verify that the date coder puts a date code on the pouch as it indexes to the date code station.			
Dump Scale	Verify that when a pouch is presented to the fill station that the filler dumps a charge into the properly presented pouch.			
Sealer	Verify that the sealing station seals the filled pouch when it indexes into the seal station.			
Comments:				

Reviewed By: \_\_\_\_\_

Date: \_\_\_\_\_

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**C. Firmly Sealed:** Verify That Auto Pouch #3 firmly seals the pouch.

Run Auto Pouch #3 for 4 hours while randomly sampling 25 pouches per hour for testing, for a total sample size of 100 pouches.

Pouch Sealing			Trial		of 4
Sample #	Is the top sealed? (Yes/No)	Is the top scorched? (Yes/No)	Does the seal leak? (Yes/No)	Verified By	Date
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
Comments:					

Reviewed By: \_\_\_\_\_

Date: \_\_\_\_\_

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**AUTO POUCHER #3: PERFORMANCE QUALIFICATION (Continued)****A. Date Code Imprinting:** Verify that the date code is imprinted properly and accurately.

Run the Auto Pouch #3 for 4 hours while randomly sampling 25 pouches per hour for testing, for a total sample size of 100 pouches.

Lot Code and Expiration Date Imprinting			Trial	of 4
Sample #	Is the Date Code visible? (Yes/No)	Is the Date Code correct? (Yes/No)	Verified By	Date
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
Comments:				

Reviewed By: \_\_\_\_\_

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**AUTO POUCHER #3: PERFORMANCE QUALIFICATION (Continued)****A. Fill Weights:** Verify that the fill weights are within the accepted range of 3.00+ Pounds.

Run the Auto Pouch #3 for 4 hours while randomly sampling 25 pouches per hour for testing, for a total sample size of 100 pouches.

Fill Weights			Trial	of 4
Sample #	Actual Weight (Yes/No)	Acceptable (Yes/No)	Verified By	Date
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
<b>Comments:</b>				

Reviewed By: \_\_\_\_\_

Date: \_\_\_\_\_

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**CALIBRATION VERIFICATION**

Equipment	Serial #	Calibration Date	Calibration Due Date	Verified By	Date
Scale					
Multimeter					

Reviewed By: \_\_\_\_\_

Date: \_\_\_\_\_

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## ATTACHMENT I - PROTOCOL DEVIATION REPORT LOG

Log each Protocol Deviation Report in the table below. Attach the PDRs to this Attachment.

PDR #	DESCRIPTION	DATE INITIATED	DATE RESOLVED
Comments:			

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## ATTACHMENT II.      PROTOCOL DEVIATION REPORT (PDR)

\_\_\_\_\_ General Information \_\_\_\_\_

System Name: \_\_\_\_\_ Protocol Number: \_\_\_\_\_

Deviation Report Number: \_\_\_\_\_ Protocol Step & Page No.: \_\_\_\_\_ -

\_\_\_\_\_ Instructions \_\_\_\_\_

1. The validation specialist assigns a sequential report number for each deviation with a specific protocol. For example, 001, 002, etc. can be easily referenced in a report.
2. Reference the relevant protocol number, step and page number of the noted deviation above.
3. Complete the below listed sections. If necessary, use additional pages and attach any supporting info.
4. Include the original PDR(s) with the protocol as an attachment. Summarize the impact of the deviation in the Validation Report.

\_\_\_\_\_  
Description of Deviation:

Investigation Evaluation and Results:

Corrective Action and Resolution:

\_\_\_\_\_  
Overall Investigation Review:

Prepared By: \_\_\_\_\_ Date: \_\_\_\_\_

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**ATTACHMENT III - SIGNATURE IDENTIFICATION LOG SHEET**

Identify in the table below any personnel involved in the execution of this protocol.

Name	Affiliation	Signature	Initial	Date

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