ION LABS	Standard Operating Procedure Lockout/Tagout Procedure	SOP Number G-104	Revision 3
		Effective Date 01/20/23	Page Page 1 of 8
Written by/ Date 10/19/22	Reviewed by/ Date 10/24/22	Approved by/ Date 12/20/22	
Title: Safety Director	Title: Maintenance Manager	Title: QA Director	

1.0 Purpose

This procedure establishes a Lockout / Tagout (LOTO) Program that is compliant with 29 CFR 1910.147 for proper Lockout and Tagout of equipment. This program also meets OSHA standards.

2.0 Scope

This procedure provides the general guidelines for Lockout Tagout procedures for general safety and procedures for equipment.

3.0 Responsibility

3.1 It the responsibility of all employees to follow these guidelines for equipment safety.

3.2 It is the responsibility of all Department Heads, Managers and Supervisors to implement this procedure and ensure compliance by personnel with requirements in this procedure.

3.3 It is the responsibility of Management to ensure that this procedure is being followed.

4.0 Definitions

4.1 **LOTO -** Lockout / Tagout; Safety procedures that identify equipment that is damaged or de-energized.

4.2 **OSHA -** Occupational Safety and Health Administration; A division of the Department of Labor that sets and enforces occupational health and safety rules.

4.3 **Authorized Employee –** an employee that has the authority to use lockout devices and is responsible for locking and tagging out equipment that is in need of maintenance,

repairs, replacement or cleaning.

4.4 **Affected Employee –** any employee that has direct contact with equipment that is in Lockout or Tagout.

4.5 **All employees** – employees, contractors, temporary employees, or other personnel that are exposed to or work around equipment that can be under Lockout / Tagout protocols.

4.6 **Designated Security Cabinet** – any station, cabinet, or location that is used to hold and store locks and/or devices for locking out de-energized equipment.

5.0 References

5.1 29 CFR 1910.147 The Control of Hazardous Energy (Lockout/Tagout)

5.2 G-104-F1, Form, Lockout/Tagout Authorized Employee Certification

5.3 G-107, SOP, Confined Space Entry Program

6.0 General Requirements

6.1 Training of all employees, authorized employees, and affected employees shall be given at time of new hire orientation and then once annually, to be completed by the end of Q2 (June) each year.

6.1.1 All employees will receive general knowledge training of the LOTO Program.

6.1.2 Affected and Authorized employees will receive more detailed training, including but not limited to general LOTO training, knowing how to Tagout a piece of equipment, how to follow appropriate Lockout procedures, how to use Lockout devices, and how emergency lock removal is handled.

6.2 The Safety Director will maintain a list of Authorized Employees.

6.3 The Safety Director and Maintenance Manager will ensure that <u>each</u> energy control procedure required by §1910.147(c)(4) will be inspected annually to ensure that the

energy control procedure is adequate and is being properly implemented by the authorized employee in accordance with the LOTO standard. Use Form G-104-F1.

6.4 The Maintenance Manager will ensure that all designated security cabinets are fully stocked with supplies, including locks, lock-out devices, and tags.

6.5 If the method of isolating the energy to the equipment is limited to unplugging the equipment and maintaining control of the plug, the employee performing maintenance on the equipment does not have to be an authorized employee.

7.0 Procedure for the application of locks to ribbon blenders and v-blenders

7.1 V-Blenders will be locked out:

7.1.1 When they are in the process of dropping a blend.

7.1.2 When they are in a major clean (start to finish).

7.1.3 When the maintenance team is repairing or performing preventative maintenance.

7.2 Ribbon blenders will be locked out:

7.2.1 At any time that an employee needs to enter the blend tank (refer to SOP G-107 Confined Space Entry Program).

7.2.2 When they are in a major clean (start to finish).

7.2.3 When the maintenance team is repairing or performing preventative maintenance.

7.3 Special Circumstances are as follows:

7.3.1 If a manager or member of the safety team believes that employees working in the hazardous area around the blenders are at risk of injury, the manager or safety team member may request that a supervisor place a lock on the energy

isolating device (disconnect). The blender will remain locked out until the risk has been abated. Abatement of the risk will be as follows:

7.3.1.1 The manager or safety team member will complete a risk assessment.

7.3.1.2 Proper corrective action will be taken.

7.3.2 Once the corrective action has been completed, the lock can be removed.

7.4 Operations not requiring that a blender be locked out:

7.4.1 When the blenders are being loaded.

8.0 Procedure for equipment that is not working properly

8.1 If any piece of equipment is not working properly or appears to have damage, any employee will notify a Supervisor (authorized employee).

8.2 The Supervisor (authorized employee) will assess if the equipment is damaged and cannot be used.

8.2.1 If the equipment is not damaged, the equipment will be restarted per the appropriate start up procedure for that piece of equipment.

8.3 If the equipment is damaged it needs to be taken out of service immediately.

8.3.1 If possible, move the equipment out of the way of other personnel.

8.3.2 The Supervisor will immediately place a Tagout on the equipment with their name and date on the tag.

8.3.3 The Supervisor will notify Maintenance of damaged equipment.

9.0 Procedure for equipment that is being repaired or preventative maintenance (PM) is being performed

9.1 Maintenance employee or Contractor will retrieve all needed lockout devices to complete repairs from Maintenance Office (or designated cabinet or area)

9.1.1 A list of lockout devices for each room, standalone equipment, or item with an Ion # will be kept with the lockout devices.

9.1.2 Maintenance employee or Contractor will sign-out all lockout devices and locks needed.

9.2 Application of lockout devices.

9.2.1 Equipment will be de-energized by normal shutdown procedures.

9.2.2 Referring to Form G-105-F1 Equipment List for lockout, apply all lockout devices.

9.2.2.1 Each employee that will be doing repairs or PM need to apply their own lock to every lockout device.

9.2.2.1.1 Multiple locks will require a hasp.

9.2.2.1.2 Each person will place a Tag on each of their locks.

9.2.3 Attempt to turn equipment back on to make sure all energy has been removed.

9.2.4 Place all switches or buttons to "off" or safe position.

9.2.5 Once repairs or PM has been completed each person will remove their own lock.

9.2.6 Once all lockout devices have been removed, notify everyone in the area that the equipment is going to be turned back on.

9.2.7 Follow proper startup procedures for equipment.

10.0 Procedure for equipment that needs cleaning

10.1 Operators (authorized employees) will retrieve all needed lockout devices to complete repairs from the station for that room.

10.1.1 A list of lockout devices for each room, standalone equipment, or item with an Ion # will be kept outside of the room.

10.1.2 Operators (authorized employees) will sign-out all lockout devices and locks needed.

10.2 Application of lockout devices.

10.2.1 Equipment will be de-energized by normal shutdown procedures.

10.2.2 Referring to the Room Lockout Reference Guide apply all lockout devices.

10.2.2.1 An authorized employee that will be present in the room for cleaning must apply their own lock to every lockout device.

10.2.2.2 Any employee involved in cleaning machinery and/or equipment that is locked out must also apply their own lock to the equipment or machinery.

10.2.2.2.1 Multiple locks will require a hasp.

10.2.2.2.2 Each person will place a Tag on each of their locks.

10.2.3 Attempt to turn equipment back on to make sure all energy has been removed.

10.2.4 Place all switches or buttons to "off" or safe position.

10.2.5 Once cleaning has been completed a member of Quality Control will approve the cleaning.

10.2.6 Once the equipment or room has been approved as clean by Quality Control all locks and lockout devices will be removed.

10.2.7 Once all lockout devices have been removed, notify everyone in the area that the equipment is going to be turned back on.

10.2.8 Follow proper startup procedures for equipment.

11.0 Procedure for Shift Changes

11.1 If a shift change is made and equipment is under Lockout, than personnel will use the following procedure:

11.2 The arriving Authorized Employee will sign-out a lock or use the lock already assigned to them.

11.3 If there is a multi-lock Hasp being used to Lockout a piece of equipment:

11.3.1 Both the arriving Authorized Employee and leaving Authorized Employee must be present at the Lock-out device.

11.3.2 The arriving Authorized Employee will place their lock on the Hasp.

11.3.3 The leaving Authorized Employee will remove their lock from the Hasp.

11.3.4 The leaving Authorized Employee will return their lock and key to designated security cabinet.

11.4 If there is NO multi-lock Hasp being used to Lockout a piece of equipment:

11.4.1 Both the arriving Authorized Employee and leaving Authorized Employee must be present at the Lock-out device.

11.4.2 The leaving Authorized Employee will remove their lock from the lockout device.

11.4.3 The arriving Authorized Employee will place their lock on the lockout device.

11.4.4 The leaving Authorized Employee will return their lock and key to designated security cabinet.

11.5 If the arriving Authorized Employee is not available (i.e. has called out or is late) then:

11.5.1 A Supervisor will place their lock on the designated lockout device or locked out equipment, following the same protocol as the arriving employee.

12.0 Revision History

Revision	Date	Description of Changes	CCR #	By
0	11/09/17	New	17-1415	K. Tyrell
1	03/05/21	Updated procedure to reflect current requirements. Added form G-104-F1. Revised 9.2.2.1. Added 9.2.2.2.	CC-21-0092	B. Almand
2	02/03/22	Revised general requirements.	CC-22-0067	B. Almand
3	10/18/22	Added process for when it is required to lock out a blender.	CC-22-0414	B. Almand

ION LABS	Lockout/Tagout Authorized Employee Certification		
	Form: G-104-F1	CCR No. CC-22-0067	Revision: 1

DEPARTMENT	DATE	SUPERVISOR
AUTHORIZED EMPLOYEE NAME (PRINT)	AUTHORIZED EMPLOYEE NAME (SIGN)	
DESCRIPTION OF THE MACHINERY OR EQUIPMENT BEING LOCKED OUT:		
Has the above named employee successfully completed "Control of Hazardous Energy for Authorized Employees" training?	☐ YES ☐ NO	
DATE OF LAST TRAINING		
Did the employee do the following:		
De-energize all sources of hazardous energy.	☐ YES ☐ NO ☐ N/A	
Disconnect or shut down engines or motors.	☐ YES ☐ NO ☐ N/A	
De-energize electrical circuits.	☐ YES ☐ NO ☐ N/A	
Block fluid (gas or liquid) flow in hydraulic or pneumatic systems.	☐ YES ☐ NO ☐ N/A	
Block machine parts against motion.	☐ YES ☐ NO ☐ N/A	
Block or dissipate stored energy.	☐ YES ☐ NO ☐ N/A	
Discharge capacitors.	☐ YES ☐ NO ☐ N/A	
Release or block springs that are under compression or tension.	☐ YES ☐ NO ☐ N/A	
Vent fluids from pressure vessels, tanks, or accumulators.	☐ YES ☐ NO ☐ N/A	
Lockout and tagout all forms of hazardous energy including electrical breaker panels.	☐ YES ☐ NO ☐ N/A	
Verify by test and/or observation that all energy sources are de-energized.	☐ YES ☐ NO ☐ N/A	
Inspect repair work before removing your lock and activating the equipment.	☐ YES ☐ NO ☐ N/A	
After completing repairs, maintenance, etc., remove your assigned lock.	☐ YES ☐ NO ☐ N/A	
Make sure that all workers are clear of danger points before re-energizing the system.	☐ YES ☐ NO ☐ N/A	
The above referenced employee has been found to be proficient in the application and implementation of lockout/tagout procedures.		
Authorized Test Examiner Name (Print):		
Authorized Test Examiner Name (Sign):		