



**MILESTONE**  
H E L P I N G  
P A T I E N T S



# STANDARDIZED SPECIMENS' COLLECTION WITH ZERO FORMALIN EXPOSURE



**UltraSAFE**  
Automated Formalin  
Dispensing System

# ZERO FORMALIN EXPOSURE

## | THE PROBLEM

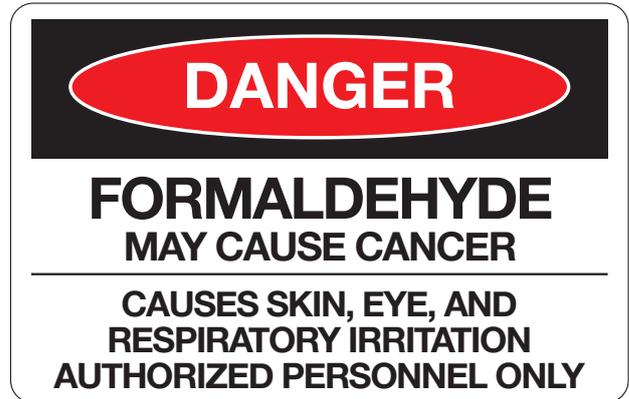
In 2006, formaldehyde was declared carcinogenic and mutagenic to humans by I.A.R.C. (International Agency for Research on Cancer). In today's labs, formaldehyde is the standard fixative for collecting and storing biospecimens for pathological examinations and diagnoses. Operators, from operating rooms to pathology departments, risk high levels of exposure to formaldehyde fumes. Therefore, hospital and clinic safety departments are required to adopt precautions to ensure the safety of their personnel.

## | THE SOLUTION

UltraSAFE is Milestone's solution to formaldehyde reclassification. Using a unique, patent applied for, technology, different sized buckets are automatically filled with formalin in the "Dirty Room", which preserves the biospecimen in fixative right after the surgical excision. This allows for total operator safety, assuring a formalin-free OR environment.

## | UNIQUE VALVE DESIGN

UltraSAFE buckets are available in four standard sizes: 1, 3, 5 or 10 liters (transparent version available for 1, 3 and 5 L). All buckets have an exclusive quadricuspid one-way valve built-in to the lid. This valve is specifically designed to prevent the escape of formalin fumes during operation and, at the same time, it allows formalin dispensing using UltraSAFE's automatic filling. An additional cap attached to the valve seals the bucket for extra safety during transportation. On the bucket's lid, a unique 2D barcode ensures biospecimen traceability. The UltraSAFE software can be used to associate this 2D barcode with the biospecimen ID number for full patient safety.



*Quadricuspid valve during operation*



*Closed quadricuspid valve during transportation and storage*

# AUTOMATED PROCESS FOR A SAFER WORKING ENVIRONMENT



Fully enclosed charcoal filters plus HEPA H14 filter for stand-alone operability

User friendly touchscreen with icon-driven software and video tutorials

Built-in UV lamp for sterilization step

Built-in barcode for bucket recognition and specimen traceability

Printer for label with additional information (specimen ID, user, date and time of operation, fixative volume, formalin ratio, weight of specimen)



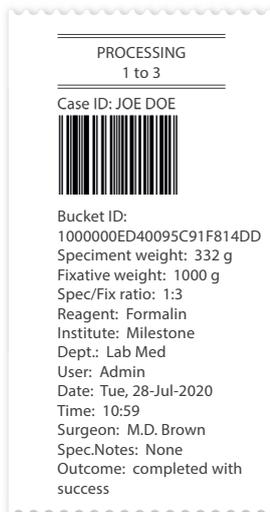
Automatic dispensing nozzle with dedicated exhaust system

Fully enclosed and vented chamber

Auto-locking door for safe operation

Scale for specimen/fixative weighing

Slide out drawer storing up to 4 containers (20 L or 5 Gal each). The drawer is fully vented to ensure fume extraction



## SAFE AND EASY WORKFLOW



In the OR, surgical biospecimens are placed in an empty bucket



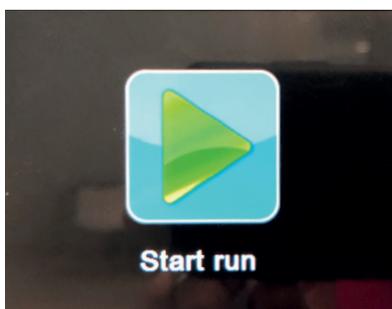
The operator closes the lid, with the unique sealing valve, on the bucket



The bucket is scanned for identification and tracking purposes



The operator places the bucket in the vented chamber and closes the door



To start fixative dispensing, the operator presses "Start" on the touchscreen



The bucket is automatically centered and the weight of the biospecimen is detected



The automatic filling system lowers and the dispensing nozzle penetrates the one-way valve



Formalin is added until the preset formalin/specimen weight ratio is achieved



For additional safety during transportation, the operator closes the cap valve

## Envision an innovative automatic system that:

- Eliminates formalin exposure for personnel in the OR and pathology labs
- Guarantees full biospecimen safety and traceability
- Allows perioperative nurses and pathologists to optimize their workflow
- Standardizes the formalin volume/specimen weight ratio
- Certifies the time to fixation for a reliable, preanalytical step, diagnosis

## Your vision is now a reality: UltraSAFE

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### The Game Changer for Formalin Control

- Automatic formalin dispensing according to biospecimen weight
  - Easy and fast operations: i.e. 1L of fixative dispensed in 20 seconds
  - Engineered to work as a stand-alone system
  - Built-in filter eliminates the need to connect to an external exhaust system
  - Built-in printer for full documentation and traceability
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### State-of-the-Art Bucket Technology



- Custom buckets designed to accommodate current pathology workflow
- Laser engraved, unique bucket ID for full traceability
- White or transparent buckets available in 1, 3, 5 or 10 liter capacities
- Unique sealing valve built-in to bucket lids (patent pending)

## | MILESTONE'S SOLUTIONS FOR BIOSPECIMEN COLLECTION



### **TissueSAFE plus**

Biospecimen Vacuum System



### **SealSAFE**

Automated Filling and Vacuum Sealing System

## | ENHANCE SPECIMEN TRACEABILITY

Through the Data Logger Card, operators can monitor time and temperature during transportation, assuring that accurate documentation is promptly available at accessioning and during grossing.

Milestone MileWATCH software allows the tracking and monitoring of the process within Milestone systems and provides instant notifications in case of need.



### **Data Logger Card**

Time and Temperature Monitoring System



### **MileWATCH**

24/7 Monitoring and Tracking

# MILESTONE HELPING PATIENTS

Milestone is a company headquartered in Northern Italy and was founded in 1988 as a corporation specializing in advanced microwave instrumentation

for analytical and organic chemistry labs. As the technology leader in pre-analytical instrumentation, Milestone supports a worldwide installed base of over 25.000 systems. In 1994, Milestone established a separate Medical Division to expand our expertise in the crucial pre-analytical phase to the world of histopathology. We pioneered the first microwave rapid tissue processor for same day diagnosis and the first macro-digital system to enhance the grossing step. Today, our rapid tissue processors, macro-digital imaging systems, and pre-analytical instrumentation are used every day in the most renowned clinical and research laboratories around the world. But we never stop. We continue to lead the industry with constant innovation and improvement. Driven by the leading principle we live by, Helping patients.

**MILESTONE**



HELPING  
PATIENTS

#### **MILESTONE Srl**

Via Fatebenefratelli, 1/5 - 24010 Sorisole (BG) - Italy - Tel: +39 035 4128264  
www.milestonemed.com - email: marketing@milestonemedsrl.com

#### **MILESTONE MEDICAL TECHNOLOGIES, INC.**

6475 Technology Avenue, Suite F, Kalamazoo, MI 49009 - USA  
Tel: 269-488-4950 - Toll-free: 866-995-5300 -  
www.milestonemed.com - email: info@milestonemed.com



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