

**FAST
EFFICIENT**
PERIOPERATIVE
SPONGE
DETECTION

Squate™ Detection System X

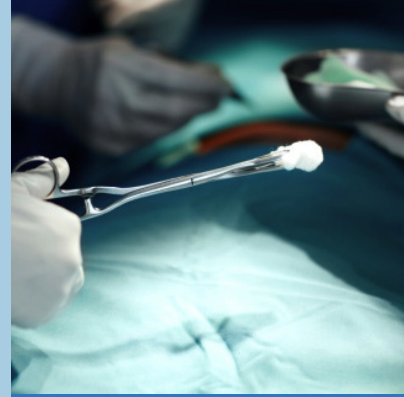
Medtronic
Further. Together

REDUCING PATIENT RISK THROUGH EFFECTIVE SPONGE DETECTION

Your goals are our goals. Having worked closely with surgeons and their teams for years, we understand the challenges you face in the OR.

Despite increased awareness and rigorous counting protocols, surgical sponges are still being left inside patients — with serious implications. Patient risks include sepsis, re-operation, and in some cases, death. Your hospital needs solutions that help protect it from potential risks and liability.

Our sponge detection system provides a better alternative to counting technologies which are still very reliant on intraoperative radiology to ensure prevention of retained sponges.^{1,2}



**SPONGE
MISCOUNTS
1 IN 64
PROCEDURES³**

COST SAVING BENEFITS

**Combined cost savings and avoidance
outweigh implementation costs**

Annual cost of RSI prevention technology

- Incremental cost of RF-tagged sponges
- Sterile drapes



Annual cost savings and cost avoidance⁴

- Significant cost savings
 - Decreased x-ray use
 - Decreased OR time
- Cost avoidance
 - Readmission/second surgery
 - Legal



ACTIVELY HELPS REDUCE THE RISK OF RSIs⁴

The Situate™ detection system X

Our innovative detection system helps locate sponges within seconds, reducing the cost and time pressures associated with missing surgical sponges.⁴

Embeds into your workflow, fast and efficient results

The Situate™ detection system X embeds itself in your current workflow.

1

Automated Body Scanner

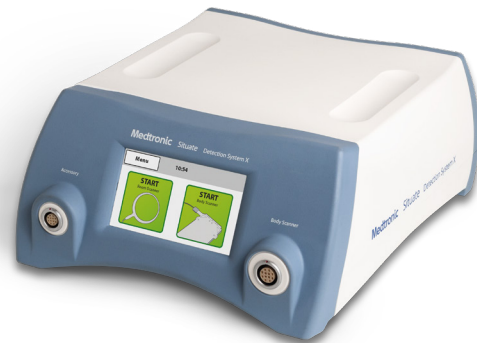
Contains an evenly-distributed array of six radiolucent antennae placed under the patient, able to detect Situate™ premium cotton to a depth of up to 16" in vivo completely hands-free.



2

Console

Provides instructional prompts and a comprehensive reporting system allowing for peace of mind.



3

Tagged Cotton

Our range of sponges, gauzes, and towels are embedded with a proprietary RF tag, ready for immediate use.



DETECTS MISSING SPONGES **WITHIN SECONDS**

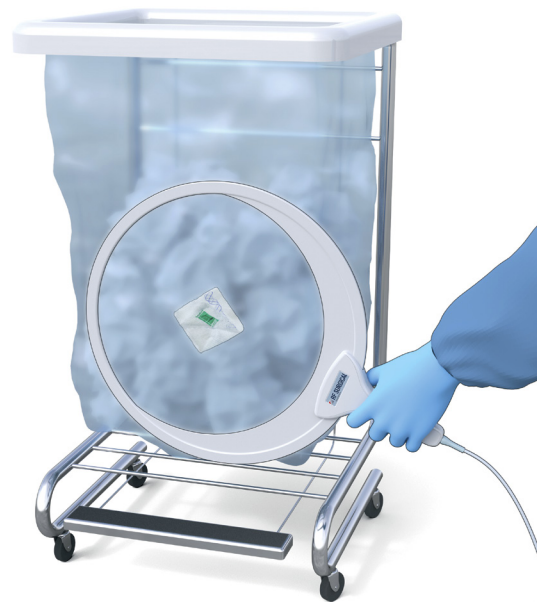
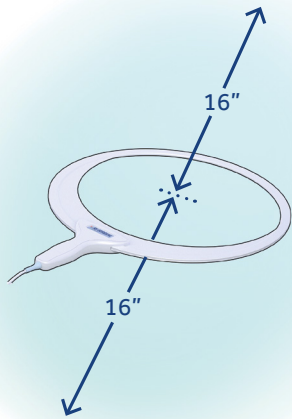
The Situate™ detection system X offers a scanning device designed to detect sponges in and around the sterile field.

4

Room Scanner

- Handheld, motion-based scanning device that quickly helps locate missing sponges beyond the sterile field—in linens, trash and elsewhere

Coverage Area: surrounding OR environment



USER-FRIENDLY
INTERFACE
**IMPROVING OR
EFFICIENCY
AND DATA
MANAGEMENT⁴**

The very best protocols and training programs have yet to prove manual counting failsafe in the realities of today's operating rooms.^{5,6}

The Situate™ detection system X provides real-time feedback for proactive compliance. The console and user interface provide on-screen prompts that guide workflow, and generate unique confirmation codes of each scan for convenient EMR entry during the procedure. This allows OR staff to reconcile any inaccuracies before the case is closed, as an adjunct to manual counting.



TECHNOLOGY YOU CAN TRUST

The power of detection

Situate™ detection system X is a patented proprietary technology developed as an adjunct to manual counting to overcome the difficulty of finding a surgical sponge in vivo and in the surrounding operating room.

Innovative technology

Situate™ detection system X technology utilizes sensors to transmit non-ionizing, low frequency radio waves to detect tagged cotton, to help ensure no cotton is left behind. When the tagged cotton is stimulated by the device's signal, it transmits its own signal back to the detector, identifying its presence. The reliable communication between the detector and the tag enables the quick identification of missing sponges.



The Situate™ Detection System X Advantage

Situate™ detection system X technology has three unique features that make it the only complete sponge detection solution for the OR:

1

Low energy radio frequency

Unlike conventional RFID technologies, low frequency maintains its signal strength through dense tissue, blood and bone as well as near metal, making it an optimal solution for in vivo detection.^{7,8}

2

Environmental compatibility

Situate™ detection system X technology filters the electrical noise found in modern ORs, and meets the IEC medical electrical equipment general requirements for basic safety for electromagnetic compatibility.

3

Extended reach

Complementing scanning components allow for detection outside the patient and across the OR itself.



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2. Greenberg CC, Diaz-Flores R, Lipsitz SR, et al. Bar-coding surgical sponges to improve safety: a randomized controlled trial. *Ann Surg*. 2008 Apr;247(4):612-6.
3. Steelman VM, Schaapveld AG, Perkounkova Y, et al. The hidden costs of reconciling the surgical sponge count. Poster presented at: Association of periOperative Registered Nurses surgical conference and expo. March 7-11, 2015; Denver, CO.
4. Study compares hospitals utilizing the RFDS to those relying on manual counting protocol. Williams TL, Tung DK, Steelman VM, et al. Retained surgical sponges: findings from incident reports and a cost-benefit analysis of radiofrequency technology. *J Am Coll Surg*. 2014 Sep;219(3):354-64.
5. Gawande AA, Studdert DM, Orav EJ, et al. Risk factors for retained instruments and sponges after surgery. *New England Journal of Medicine*. 2003;348(3):229-235.
6. Cima RR, Kollengode A, Garnatz J, et al. Incidence and characteristics of potential and actual retained foreign object events in surgical patients. *J Am Coll Surg*. 2008;207(1):80-87.
7. Compared to manual counting alone. Steelman VM. Sensitivity of detection of radiofrequency surgical sponges: a prospective, cross-over study. *Am J Surg*. 2011 Feb;201(2):233-7.
8. Rivera et al. ASSIST - Automated System for Surgical Instrument and Sponge Tracking, 2008 IEEE International Conference on RFID, The Venetian, Las Vegas, Nevada, USA, April 16-17, 2008.

[medtronic.com/situate](https://www.medtronic.com/situate)