Materials List for:

Intra-Operative Neural Monitoring of Thyroid Surgery in a Porcine Model

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Materials

Name	Company	Catalog Number	Comments
Criticare systems	nGenuity	8100E	physiologic monitoring, including capnography, electrocardiography (ECG) and monitoring of oxygenation (SaO2)
Intraoperative NIM nerve monitoring systems	Medtronic	NIM-Response 3.0	monitor EMG activity from multiple muscles. If there is a change in nerve function, the NIM system may provide audible and visual warnings to help reduce the risk of nerve damage.
NIM TriVantage EMG Tube	Medtronic	8229706	6 mm ID, 8.2 mm OD. The NIM TriVantage EMG Tube is a standard size, non-reinforced, DEHP-free PVC tube that features smooth, conductive silver ink electrodes and a cross-band to guide placement. It has reduced sensitivity to rotation and movement while offering increased EMG responses that facilitate improved nerve dissection.
NIM Contact Reinforced EMG Endotracheal Tube	Medtronic	8229506	6 mm ID, 9 mm OD. The NIM Contact EMG Tube continuously monitors electromyography (EMG) activity during surgery. An innovative design allows the tube to maintain contact, even upon rotation. Vocal cords are more easily visible against the white band. Recording electrode leads are twisted pair. Packaged sterile with one green and one white subdermal needle. Single use.

NIM Standard Reinforced EMG Endotracheal Tube	Medtronic	8229306	6 mm ID, 8.8 mm OD. The NIM Standard EMG Tube continuously monitors electromyography (EMG) activity during surgery. Recording electrode leads are twisted pair. Packaged sterile with one green and one white subdermal needle. Single use.
NIM Flex EMG Endotracheal Tube	Medtronic	8229960	6 mm. The NIM Flex EMG Tube monitors vocal cord and recurrent laryngeal nerve EMG activity during surgery. An updated, dual-channel design allows the tube to maintain contact with the vocal cords, even upon rotation. Recording electrode leads are twisted pair. Packaged sterile with one green and one white subdermal needle. Single use.
Standard Prass Flush-Tip Monopolar Stimulator Probe	Medtronic	8225101	Tips and Handles. For locating and mapping cranial nerves in the surgical field, the single-use Standard Prass Monopolar Stimulating Probe features a flush 0.5 mm tip diameter. The probe is insulated to the tip to prevent current shunting. Individually sterile packaged.
Ball-Tip Monopolar Stimulator Probe	Medtronic	8225275/ 8225276	Tip and Handle, 1.0 mm/ 2.3mm. Featuring a flexible ball tip and flexible shaft, the single-use Ball-Tip Monopolar Stimulating Probe allows greater access to neural structures. The 1.0 mm tip diameter allows atraumatic contact to larger neural structures. The probe is insulated to the tip to prevent current shunting. Individually sterile packaged.
Yingling Flex Tip Monopolar Stimulator Probe	Medtronic	8225251	Tips and Handles. The highly flexible single-use Yingling Monopolar Stimulating Probe allows stimulation in areas outside the surgeon's field of view. The platinum-iridium wire of the probe is fully insulated to the ball tip to prevent current shunting. Individually sterile packaged with one green subdermal electrode.
Prass Bipolar Stimulator Probe	Medtronic	8225451	The single-use Prass Bipolar Stimulating Probe features a slim, flexible tip that allows greater access to neural structures. The probe tip is 0.5 mm in distance between cathode and anode for minimal shunting. Individually sterile packaged.

Concentric Bipolar Stimulator Probe	Medtronic	8225351	The single-use Concentric Bipolar Stimulating Probe features a 360° contact area. Insulation is complete to the active tip; cables and handles are polarized. Individually sterile packaged.
Side-by-Side Bipolar Stimulator Probe	Medtronic	8225401	The single-use Side-by-Side Bipolar Stimulating Probe features probe tips that are 1.3 mm apart, allowing neural structures to be stimulated between the tips. Insulation is complete to the active tip; cables and handles are polarized. Individually sterile packaged.
APS (Automatic Periodic Stimulation) Electrode*	Medtronic	8228052 / 8228053	2 mm/ 3mm. The APS Electrode offers continuous, real-time monitoring. The electrode is placed on the nerve and can provide early warning of a change in nerve function.
Neotrode ECG Electrodes	ConMed	1741C-003	The electrode is made of a clear tape material, which allows for continuous observation of the patient's skin during monitoring.
LigaSure Small Jaw	Medtronic	LF1212	A FDA-approved electrothermal bipolar vessel sealing system for surgery