



DEPARTMENT OF THE AIR FORCE  
HEADQUARTERS AERONAUTICAL SYSTEMS CENTER (AFMC)  
WRIGHT-PATTERSON AIR FORCE BASE OHIO

**MEMORANDUM TO:** ASC/WNU  
1901 TENTH STREET  
WRIGHT-PATTERSON AFB, OH 45433

28 March 2012

**FROM:** ASC/WLV (C-27J PROGRAM BRANCH)  
BLDG 16, RM 127-L  
2275 D STREET  
WRIGHT-PATTERSON AFB OH 45433-7222

**SUBJECT:** Safe to Fly (STF) Memorandum for Hutchinson Technology Inc. InSpectra™ StO<sub>2</sub> Tissue Oxygenation Monitor Model 650

- References:
- a. ASC/WNUP report, 13 January 2011, Technical Report of the Hutchinson Technology Inc. InSpectra™ StO<sub>2</sub> Tissue Oxygenation Monitor Model 650
  - b. ASC/WNU memo, 15 February 2011, Safe-To-Fly (STF) Recommendation for the Hutchinson Technology Inc. InSpectra™ StO<sub>2</sub> Tissue Oxygenation Monitor Model 650
  - c. TO 1C-27J-9, Cargo Loading and Offloading Manual

1. Based on tests documented in reference "a", the Hutchinson Technology Inc. InSpectra™ StO<sub>2</sub> Tissue Oxygenation Monitor Model 650 (ISTOM Model 650) is approved for transport and operational usage on the C-27J.

The ISTOM Model 650 is a portable medical device used to measure a patient's local oxygen saturation of hemoglobin in tissue (StO<sub>2</sub>), and an index of total hemoglobin (THI) in the tissue being monitored. The unit comes with two electrical cords, one for power and one attaching the sensor. The unit measures 12.5" H x 10.5" W x 8.5" deep.

2. The ISTOM Model 650 mounted on NATO litters meets the restraint requirement of 9G forward (3G if transported as cargo), 2G Up, 1.5G aft, 1.5G lateral, and, if unsupported by other structure, 4.5G down. The ISTOM Model 650 weighs 9 pounds.
- a) The battery operation of the ISTOM Model 650 is only two hours. For flights longer than two hours, plug the provided power cord into an aircraft receptacle.
  - b) The ISTOM Model 650 unit may be placed between the patient's legs or on an equipment litter. The ISTOM Model 650 should be tied down with two straps, one on each end of the unit. Each strap should wrap around the upright part of the handle on its respective end. (These straps may also be securing the patient's legs.)

Cc: HQ AMC/SGX