

HELIOX (70/30 He/O₂) VIA THE VAPOTHERM 2000i.
Steven T Polston, RRT, Norton Healthcare inc. Louisville, KY, In K. Kim, MD, Assistant Professor, Pediatric Emergency Medicine, University of Louisville Health Sciences Center. **BACKGROUND:** This is an equipment investigation examining the effects on Heliox (He/O₂) delivery of the Vapotherm[®] 2000i from Vapotherm[®] inc. Vapotherm[®] 2000i is a humidification device capable of providing saturated gas at high flow rates via nasal cannulae. **METHOD:** The device was set up with 70% Helium: 30% Oxygen (70/30 He/O₂) as source gas. Our facility uses oxygen equipment converted for He/O₂ use. A CGA280 to CGA540 adapter converted a preset 50 psi Oxygen regulator/flowmeter. The output was calculated by a 1.7 correction factor. Two flow rates were compared: Flow A, 6 Lpm. (10 Lpm corrected) and flow B, 10 Lpm, (17 Lpm corrected). Source gas tanks were monitored to depletion as defined by 300 psi. **RESULTS:** Gas temperature entering the Vapotherm was 16° C for all flows used. Output from the patient delivery tube was 37° C for all flows. Tanks life was 8.5 to 9 hours at flow A and 4 to 5.5 hours for flow B. **CONCLUSIONS:** The Vapotherm 2000i device did not adversely impact tank life. Gas flow to the patient was conditioned to provide saturated humidity at body temperature, avoiding the delivery of dry, cold inspired gas. The Vapotherm 2000i may serve as a useful accessory for Heliox (He/O₂) delivery.

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