



**HUDSON ISO-GARD® MASK
WITH CLEARAIR™ TECHNOLOGY**

Reduce the Invisible Risk



An Invisible Risk Exists in Recovery

An invisible risk exists in the Recovery Room. Patients are exhaling waste anaesthetic gas (WAG) into the breathing zone of their attending nurses, and although it cannot be detected by sight and often not by odour, it may have potential health effects for Recovery staff. Are all reasonable steps being taken to minimize the exposure?^{1,6}

While there are sophisticated scavenging systems in the Operating Theatre, those systems do not currently exist in Recovery, and measurements of WAG may not account for the clinicians' breathing zones as they provide bedside care. Since the patients' exhalation is the primary source point of WAG, it can be difficult for Recovery managers to limit their staff's exposure – that is, without a little help.^{1,6+7}

REFERENCES:

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- 5 Data on file with Teleflex Incorporated.
- 6 Health and Safety Executive (2011) EH40/2005 Workplace Exposure Limits, London: Crown.
- 7 European Agency for Safety and Health at Work (2011) *Innovative solutions to safety and health risks in the construction, healthcare and HORECA sectors*, Luxembourg: Publications Office of the European Union.
- 8 The Control of Substances Hazardous to Health Regulations 2002 SI 2002/2677 The Stationary Office 2002; *The Control of Substances Hazardous to Health* (Amendment) Regulations 2004 SI 2004/3386 The Stationary Office 2004

LEARN THE FACTS

Recovery staff are exposed to Waste Anaesthetic Gas (WAG) in the Recovery Setting while caring for their patients.⁴

OSHA warns that WAG can produce hazardous health effects such as fatigue, nausea and dizziness.³ The European Agency for Safety and Health at Work suggests that halogenated agents have been linked to reproductive problems in women and developmental defects in their offspring.⁷

Control of Substances Hazardous to Health Regulations (COSHH) state “Every employer shall ensure that the exposure of his employees to substances hazardous to health is either prevented or, where this is not reasonably practicable, adequately controlled”.⁸

The ambient air in the Recovery room may contain multiple anaesthetic gases, which can include nitrous oxide, halothane, enflurane, isoflurane, desflurane and sevoflurane.³

NIOSH recommends monitoring WAG in the breathing zones of the most heavily exposed workers while they perform standard procedures.¹

European Agency for health and safety at work quote the NIOSH WAG exposure limits:⁷

- 2 parts per million of ceiling concentration for halogenated gases
- 25 parts per million of time weighted average for nitrous oxide¹

OUR COMMITMENT

Teleflex is committed to providing solutions that enable healthcare providers to enhance patient and provider safety.

The ISO-Gard family of products features simple, effective respiratory solutions that help clinicians control contaminants and guard against patient/caregiver exposure.

THE CLEARAIR PROMISE

ClearAir Technology provides clinicians source control for contaminants, such as WAG, helping hospitals comply with COSH, European Agency for Safety and Health at work and NIOSH recommendations for workplace safety, giving clinicians peace of mind as they deliver bedside care to their patients.



THE MOST CRITICAL AREA IN THE PACU

The breathing zone, directly in front of the patient’s mouth, is where waste anaesthetic gases may linger as they’re exhaled from the patient. This becomes the primary source point for clinician exposure to WAG as they provide bedside care to patients.^{1,4}



VISUALIZING WAG WITH INFRARED IMAGING

Thanks to advances in infrared thermographic imaging technology, it’s now possible to see WAG. Tuning the equipment to visualize N₂O emissions yields images of patients exhaling WAG.²



PREVENTION IS THE BEST MEDICINE

COSHH recommends: Some workplace activities give rise to frequent short (less than 15 minutes) periods of high exposure which, if averaged over time, do not exceed either an 8-hour TWA or a 15-minute TWA. Such exposures have the potential to cause harm and should be subject to reasonably practicable means of control unless a ‘suitable and sufficient’ risk assessment shows no risk to health from such exposures.⁸

BUT HOW CAN THIS BE ACHIEVED?

THE SOLUTION: THE ISO-GARD® MASK WITH CLEARAIR™ TECHNOLOGY

CLEARAIR O₂ DELIVERY

- source point for oxygen delivery to the patient

MASK MANIFOLD

- patent-pending technology allows for unidirectional gas flow through mask for effective oxygen delivery while simultaneously scavenging patient exhalation

CO₂ MONITORING PORT WITH TETHERED CAP

- allows for sampling of expired gas

EXPANDABLE SUCTION TUBE

- extends to provide easy reach
- to the vacuum source

ONE-WAY INHALATION VALVES

- prevents WAG escape while allowing for low work-of-breathing entrainment of room air to supplement incoming oxygen flow as needed

CLEARAIR WAG SUCTION

- provides for the evacuation of scavenged gas and ensures effective disposal of WAG

Suction should be set between 30-50 mm Hg when suction tubing is in use.

FILTER

- optional filter for suction line helps to control contamination of the hospital vacuum system



THE SOLUTION: THE ISO-GARD® MASK WITH CLEARAIR™ TECHNOLOGY

A revolutionary product with a simple purpose, the ISO-Gard Mask with ClearAir Technology assists in protecting clinicians by helping to reduce the hazardous waste anaesthetic gas (WAG) in the Recovery environment.

As the only available solution for “source control” of WAG, the ISO-Gard Mask with ClearAir Technology is a combination scavenging and oxygen delivery mask with a CO₂ monitoring port. It is placed on the patient like other oxygen masks, but unlike standard masks, it employs a special, patent-pending oxygen/gas-scavenging manifold to help reduce waste anaesthetic gas in the clinician’s breathing zone.

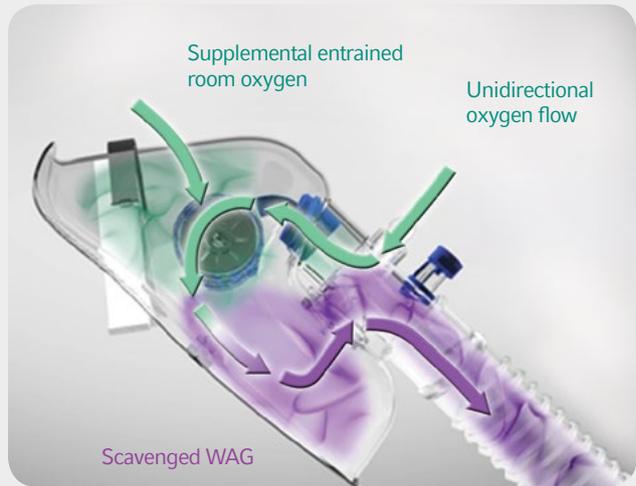
Recovery managers and staff can rest easier knowing this simple, safe and effective device is simultaneously scavenging WAG and delivering oxygen to their patients.

THE ISO-GARD MASK WITH CLEARAIR TECHNOLOGY

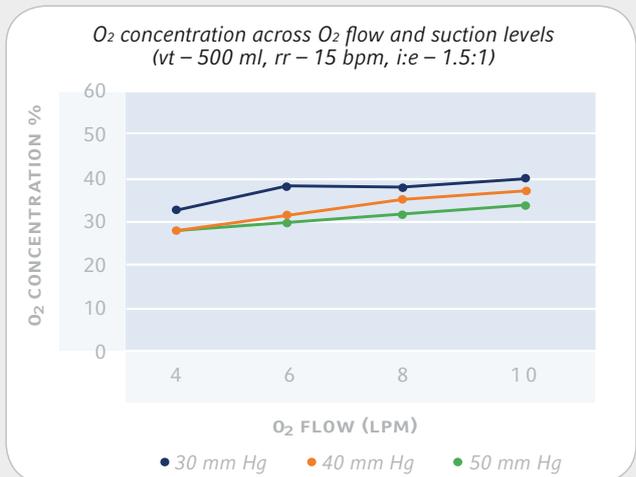
- Reduces hazardous WAG within breathing zone of caregiver.
- Minimizes the cumulative effect of low-level exposure of WAG to caregiver.
- Provides unidirectional flow of oxygen through mask to ensure maximum FIO₂.

ADDITIONAL KEY FEATURES

- CO₂ monitoring port for sampling expired gas
- Fits into existing Recovery workflow
- Delivers up to 10 LPM of oxygen flow



The design of the ISO-Gard® Mask with ClearAir™ Technology creates a unidirectional flow of fresh oxygen to the patient’s nasal/oral area for inhalation. At the same time, negative pressure or suction is applied to the port in the lower portion of the mask to scavenge the patient’s exhalation. In order to maximize patient comfort, a tight mask seal to the face is not required.



Testing has demonstrated a suction level of 30-50 mm Hg will effectively scavenge WAG and deliver desired FIO₂.⁵

HUDSON RCI ISO-GARD® MASK

HUDSON

REF.	MASK	SUCTION TUBE	OXYGEN TUBE	FILTER	WYE	CLAMPS (2)
8014	x	x	x	x	x	x

Teleflex is a leading global provider of specialty medical devices used for diagnostic and therapeutic procedures in critical care, urology and surgery. Our mission is to provide solutions that enable healthcare providers to improve outcomes and enhance patient and provider safety.

We specialise in devices for general and regional anaesthesia, cardiac care, respiratory care, urology, vascular access and surgery and we serve healthcare providers in more than 150 countries. Teleflex also provides specialty products for medical device manufacturers.

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