CareFusion

MicroGard™ Filter

- Maximum bacterial and viral filtration
- Resistance to air flow below published acceptable levels
- Filter volume (rebreathing dead space) < 55 ml
- Completely disposable

Patient and Instrument Protection

CareFusion
Respiratory Care
Your partner:

Outpatient Monitoring	Lung Function Diagnostics	Cardiorespiratory Diagnostics
Sleep Diagnostics & Therapy	Point-of-Care Diagnostics	Ventilation

Cross Contamination: A real Concern

Real Spirometer Protection

Pulmonary function laboratory personnel should be concerned about the basic principles of hygiene and the potential risks of cross-contamination when working with diagnostic equipment. Any diagnostic instrument, which comes into contact with the respiratory tract of patients, is inevitably contaminated with microor ganisms present in the patient's secretions, and therefore has the potential to transmit several types of respiratory infections.

With today's awareness of disease transmission, breathing through a medical instrument has become a real concern. The possibility of cross-contamination has caused a rethinking of the methods traditionally used to protect both the patient and instrument. That's why MicroGard™ is an important part of your laboratory protocol, providing the assurance of a safe testing environment every time you use it.

Independent studies of the MicroGard™ filter clearly demonstrate superiority as a barrier to viral and bacterial cross-contamination, while resistance to inspiratory and expiratory air flow is lower than published recommendations. Priced to be truly disposable, MicroGard™ filters provide your patients and your laboratory the assurance and protection you need, at a cost you can afford.

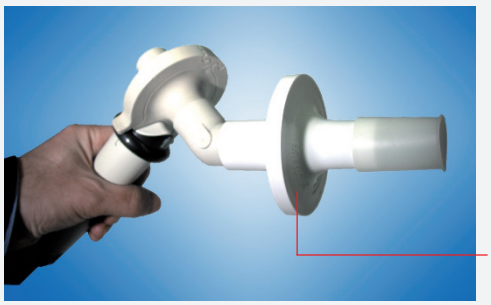
The table below is a summary of the independent laboratory studies performed and each manufacturer's specifications regarding resistance and filter volume. As you can see, the manufacturers of Filter 2 to 5 did not test their product for inspiratory resistance. The published specification for inspiratory resistance during the beginning of a Diffusing Capacity test is „less than 1.5 cmH_2O at 6 liters/second". Each filter reported the expiratory resistance as per liter/second, and were tested at 12 liters/second, as per published specifications.

Please note that the MicroGard™ specifications are the minimum allowed specifications. Independent laboratory testing of the latest MicroGard® barrier media has shown a typical filtration efficiency for BFE of >99.9 % and for VFE of better than 99.9%[2]. The maximum allowed Delta P has shown typical values of 0.4 cmH_2O[2].

Instructions For Use

Place the MicroGard™ microbial filter in-line directly between the patient's mouthpiece and the pulmonary function testing equipment. Dispose of the filter after use on each patient.

Filter	EXSP Res.	INSP Res.	Dead Space	Bact. Filter	Viral Filter
MicroGard®	0.7 cmH_2O	0.7 cmH_2O	50 ml	99%	99%
Filter 2	0.7 cmH_2O	not reported	50 ml	99%	99%
Filter 3	0.7 cmH_2O	not reported	93 ml	54%	61%
Filter 4	0.8 cmH_2O	not reported	45 ml	47%	29%
Filter 5	0.9 cmH_2O	not reported	55 ml	?	?



MicroGard™ filter
Highest safety standards

Technical Specifications

Description

The MicroGard™ filter is a disposable barrier type filter intended to protect both patient and instrument, by preventing the transmission of pathogens by droplets and aerosolized particles between the patient and the spirometer, or pulmonary function testing instrument. Independent studies with bacteria and viral aerosols demonstrate 99% filtration[2].

Indications

A disposable filter for use in prevention of contamination of spirometers and pulmonary function testing instruments, associated valves and hoses, from aerosols and particles which may be present in a patient's exhaled gas. The MicroGard™ filter incorporates the highest filtration medium available with an exceptionally low resistance to air flow. Filter resistance to air flow is less than one-half of published recommendations for pulmonary function testing devices[3,4].

Applications

Spirometry, Lung Function Diagnostics (Lung Volumes, Diffusing Capacity, Airway Resistance, Compliance)

Specifications

Inspiratory Resistance:	<0.7 cm H_2O
Expiratory Resistance:	<0.7 cm H_2O
Filtering Efficiency:	>99%
Filter Volume:	50 ml
Connections:	30 mm ID, 30 mm AD

Caution

This device is intended for single patient use and should be destroyed after use. No attempt to clean or sterilize should be made as this would affect the resistance and the filtering capacity of the device.

References

1. Nelson Laboratories, Inc. Technical Reports. N. 49169 (26/Feb./93), 49170 (24/Feb./93)
2. Nelson Laboratories, Inc. Technical Reports. N. 165704 (June '99), N153793 (Nov. '99)
3. American Thoracic Society. Single Breath Carbon Monoxide Diffusion Capacity (transfer factor) Recommendations for a Standard Technique. Am Rev Resp Dis 1987; 136:1299-1307
4. American Thoracic Society. Standardization of Spirometry. 1987 Update. Am Rev Resp Dis 1987; 136:1285-1298

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