COSMED
The Metabolic Company

Antibacterial filter

Part Number: A 182 300 004

The most efficient and affordable solution to prevent Bacterial and Viral Cross Contamination

Viral filtration efficiency

Sample identification	Challenge level (PFU)	Total PFU recovered	Filtration efficiency[1]
301 - 436 (2800/01) #1	6.5 x 10^6	36	99.9994%
301 - 436 (2800/01) #2	6.5 x 10^6	9	99.9999%
301 - 436 (2800/01) #3	6.5 x 10^6	9	99.9999%
301 - 436 (2800/01) #4	6.5 x 10^6	18	99.9997%
301 - 436 (2800/01) #5	6.5 x 10^6	<1*	>99.99998%
301 - 436 (2800/01) #6	6.5 x 10^6	9	99.9999%

Bacterial filtration efficiency

Sample identification	Flow rate	Challenge level (CFU)	Total CFU recovered	Filtration efficiency[1]
2800/01	30 Lpm	2.5 x 10^6	2	99.999920%

The above tables have been taken out from the certificates of bacterial (above) and viral (below) efficiency released by Nelson laboratories.

Technical Specifications

Ordering number	A 182 300 004
Dimensions	Length: 77.5mm Small exit (27.9mm ext. 20.6mm int.) Large exit (30.7mm ext. 26mm int.)
Material	polypropylene, environmentally friendly. Not emitting gas or toxic fumes when incinerated
Packaging	confection of 50 filters individually packed in single plastic bags
Pathogenous agents	bacteria and virus
Bacterial filtration efficiency	99.9999%
Viral filtration efficiency	99.9999% down to 0.027 micron
Resistance	0.7cmH2O/s @ 720L/min
Dead space	75 ml
Testing Procedure	filters are batch tested to BS 3928

Application

- Pneumology
- Indirect Calorimetry

Related Products

- Spirometers
- Quark line
- K5/K4 b²
- Fitmate line

- Single patient use
- Designed for testing adults and children
- High filtration efficiency, limited dead-space, perfect seal and low resistance

Transmission of infections (Hepatitis B, Tuberculosis, Chickenpox) is likely during pulmonary function testing if the necessary hygienic measures are not strictly observed. Prevention of nosocomial transmission of pathogens can be achieved in two ways only: disinfection of all the parts in contact with the expired gas (through sterilization) or use of barrier filters.

ATS/ERS Statement (1997) provides a helpful guide to users on how to prevent such infections, explicitly recommending that:

"...clean droplet barrier filter should be used to protect all equipment in contact with expirates from patients, unless the equipment is sterilized or replaced between patients...".

Barrier filters, preventing the aspiration of saliva or other fluids reduce to almost zero the possibility of bacteria and virus cross contamination without altering the mechanical characteristics of the Lung Volume equipment.

COSMED filters are complementary with the flowmeters allowing a combined system that reaches a total resistance inferior to those suggested by ATS/ERS for the flowmeter alone (1,5cmH_2O/L/sec@14 L/sec).

[1] *The significance of % filtration efficiency is explained by the number of organisms passing through the filter. If the number of organisms challenging the filter are 1 000 000, when the efficiency is 99.999% only 10 organisms pass through (or only 1 if the efficiency is 99.9999%). A 99.999% filter is therefore 10 times more efficient than 99.99% filter (or a 99.9999% filter is 100 times more efficient than a 99.99% one).*

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