

# HEPA FILTERS: ANNUAL INTEGRITY TESTING

## DOCUMENT SUMMARY/KEY POINTS

- High Efficiency Particulate Air (HEPA) filters are high efficiency sub-micron particle filtration devices. They are suitable in areas where clean room conditions and contamination control are critical.

### Testing & Standards

- HEPA filter testing is extremely important to confirm that the filters are properly installed and are not leaking.
- Generally all HEPA filters should be integrity tested when installed, and then at least every twelve months.
- Results of testing must be reported to Infection Prevention and Control for Standard 3 of the NSQHS Standards.

## CHANGE SUMMARY

- Added Cardiac Catheter Facility and COU (Close Observation Unit) to the CHW list.
- Added Infection Prevention and Control must be notified of results following testing.

## READ ACKNOWLEDGEMENT

- Maintenance and Infection Prevention and Control staff should read and acknowledge they understand the contents of this document.
- Managers from the following area should be aware this procedure is being performed in their Departments by Maintenance staff:
  - **SCH locations:** CICU, CH2W, CH2S (when rooms are completed), CH3W, SCH ED
  - **CHW locations:** Operating Suites, CSSD, Pharmacy, Oncology Clinic, Cardiac Catheter Facility, Camperdown and Variety Wards, COU (Close Observation Unit), Edgar Stephens Ward, Transgenic Facility and the Gene and Cell Medicine Facility.
- Finance and Corporate Services staff should be aware of the procedure.

<b>Approved by:</b>	SCHN Policy, Procedure and Guideline Committee	
<b>Date Effective:</b>	1 <sup>st</sup> January 2020	<b>Review Period:</b> 3 years
<b>Team Leader:</b>	Mechanical Engineer	<b>Area/Dept:</b> Maintenance Dept CHW

## 1 Introduction

### ***Purpose/Scope***

This procedure is a mandatory requirement under Australian Standard (AS) 1807.6. A number of HEPA filters are installed throughout the two hospitals:

- **At CHW:** 132 HEPA filters are installed.
- **At SCH:** 26 HEPA filters are installed.

### ***Expected results***

Ensures that under the AS1807.6 that all HEPA filters are tested or replaced/if required by National Association of Testing Authorities (NATA) accreditor/ and are properly tested by a recognised NATA accreditors that have expertise in HEPA filter verifications.

### ***Responsibilities***

Mechanical Engineer

### ***Related Documents***

NATA Test & Verification Certificate of each HEPA filter integrity provided by NATA accreditor.

### ***Facility Entry Requirements***

When entering specialised areas, a specific protocol may need to be followed prior to entry. The entry requirements will be provided by relevant facility managers and personnel.

## 2 Procedure at The Children's Hospital at Westmead

### **HEPA Filter Testing at CHW**

1. Prior to the expiration of the previous Certificates of HEPA filters, Camfil, AES Environmental, Airepure Australia or other NATA accredited manufacturers of NSW will submit the quote for annual filter integrity test that will be required to be completed by relevant Departments Heads.
2. The new certified forms identify all HEPA filter that exist within the hospital. The mechanical engineer will review the detail noted on each form to ensure it truly reflects the HEPA integrity report description detailed.
3. All obtained quotes for all HEPA filter integrity test to be submitted to relevant departments heads including nominated fee, one month prior to expiration date.
4. Results of integrity testing are categorised into a 'pass' [no leaks occurred during testing] or 'fail' [leaks occurred during testing].
5. Where a filter has failed, the room/s affected is closed immediately until the filter/s is replaced and retested.

6. Engineering promptly notifies the local NUM/NM and Infection Prevention and Control CNC via email of any 'failed' testings and confirmation the failed filter has been replaced and the new filter has 'passed' testing. The room/s may re-open after confirmation has been received the filter has passed testing.
7. Results should be forwarded to Infection Prevention and Control Committee [via the CNC] to be reported against Standard 3 [section 3.15.2], Australian Commission on Safety and Quality in Health Care – Preventing and Controlling Healthcare Associated Infections.
8. When NATA test verification certifications forms are received they are to be filed into departmental archives.

## CHW HEPA Filter Information

1. **Operating Theatre 1** Inc Anaesthetic Room # (5 off) manufacturer: Airepure, Camfil, AES Environmental Part number: 753374.
2. **Operating Theatre 2** Inc Anaesthetic Room # (5 off) manufacturer: Airepure, Camfil, AES Environmental Part number: 753374.
3. **Operating Theatre 3** Inc Anaesthetic Room # (5 off) manufacturer: Airepure, Camfil, AES Environmental Part number: 753374.
4. **Operating Theatre 4** Inc Anaesthetic Room # (5 off) manufacturer: Airepure, Camfil, AES Environmental Part number: 753374.
5. **Operating Theatre 5** Inc Anaesthetic Room # (5 off) manufacturer: Airepure, Camfil, AES Environmental Part number: 753374.
6. **Operating Theatre 6** Inc Anaesthetic Room # (5 off) manufacturer: Airepure, Camfil, AES Environmental Part number: 753374.
7. **Operating Theatre 7** Inc Anaesthetic Room # (5 off) manufacturer: Airepure, Camfil, AES Environmental Part number: 753374.
8. **Operating Theatre 8** Inc Anaesthetic Room # (5 off) manufacturer: Airepure, Camfil, AES Environmental Part number: 753374.
9. **Operating Theatre 9** inc Anaesthetic Room #(5 off) manufacturer: Airepure, Camfil, AES Environmental Part Number:MP99/610610
10. **Minor Operating Theatre 10** #(4 off) manufacturer: Airepure, Camfil, AES Environmental Part Number:1687/1704/1
11. **CSSD** (Central Sterilisation Service Department) # (11off) manufacturer: Airepure, Camfil, AES Environmental Part number: 753324F and 753324.
12. **Pharmacy** #(11 off) manufacturer: Airepure Australia, Camfil, AES Environmental Part Number: AP7119304/3/8/9
13. **Oncology Clinic** #(2 off) manufacturer; Airepure, Camfil, AES Environmental Part Number:MP70-610610
14. **Camperdown Ward** # (12off) manufacturer: Airepure, Camfil, AES Environmental Part number: 753374. and 753385
15. **Variety Clubbe Ward** (3 off) manufacturer: Airepure, Camfil, AES Environmental Part Number:MP70-610610

16. **Transgenic Facilities-TGF** (23 off) manufacturer: Airepure, Camfil, AES Environmental Part number: 753542./ 753540 and 753524.
17. **Gene and Cell Medicine Facility-GCFM** (12off): Airepure, Camfil, AES Environmental Part number: MPP99-60460496.
18. **Edgar Stephens Ward** (2 off) manufacturer: Airepure, Camfil, AES Environmental Part number: 753374. and 753385.
19. **Cardiac Catheter Facility** (6 off) manufacturer : Airepure, Camfil AES Environmental Part number: TFP600D
20. **COU (Close Observation Unit)** (1 off) manufacturer : Airepure, Camfil AES Environmental Part number: TFP1200D

### 3 Procedure at Sydney Children's Hospital, Randwick

#### HEPA Filter Testing at SCH

1. Prior to the expiration of the previous Certificates of HEPA filters NATA accredited manufacturers of NSW will submit the quote for annual filter integrity test that will be required to be completed by relevant Department Heads.
2. The new certified forms identify all HEPA filters that exist within the hospital. The mechanical engineer will review the detail noted on each form to ensure it truly reflects the HEPA integrity report description detailed.
3. When a HEPA filter is tested and/or changed, the detailed report should be submitted to the NUM of the respective ward via email as soon as received by the Engineering Department.
4. Ideally, all obtained quotes for all HEPA filter integrity test to be submitted to relevant departments heads including nominated fee, one month prior to expiration date.
5. When NATA test verification certifications forms are received they are to be filed into departmental archives and emailed to the responsible ward. All verification certificates must be emailed from the NATA testing body to the engineering department with a copy emailed to the responsible NUM.
6. **IF A HEPA FILTER OR THE VENTILATION FAILS THE INTEGRITY TESTING**
  - i. **Engineering Department has formally requested that the testing body will inform them by phone/fax or email within 24 hours of testing. If a major failure occurs the testing body will inform the NUM/Engineering Department before departing the hospital.**
  - ii. The Engineering Department will contact the following individuals to discuss clinical impact and mediation strategies:
    - NUM of the respective ward
    - Infection Control CNC
    - Directorate Head responsible for the ward/service
  - iii. Report from the testing body will be available for review.
  - iv. Mediation strategies and clinical implication will be discussed with the respective team and the Infectious Disease Consultant on call.

- v. Testing post remediation should be obtained and reports to be sent to NUM responsible for the ward.

## SCH HEPA Filter Information

Asset Category	Building Room		Installation Date	Current status
ISOLRM62 ISOLATION ROOM # 1 SURGICAL WARD	RCAMHS 02 C1SW	150087	1/01/2013	Active
ISOLRM63 ISOLATION ROOM # 2 SURGICAL WARD	RCAMHS 02 C1SW	10552	1/01/2013	Active
ISOLRM05 ISOLATION ROOM SCH C1.148	RCH 01W	C1.148	ICUC 1/11/1995	Active
ISOLRM04 ISOLATION ROOM SCH C1.149	RCH 01W	C1.149	ICUC 1/11/1995	Active
ISOLRM03 ISOLATION ROOM SCH C1.150	RCH 01W	C1.150	ICUC 1/11/1995	Active
ISOLRM02 ISOLATION ROOM SCH C1.152	RCH 01W	C1.152	ICUC 1/11/1995	Active
ISOLRM01 ISOLATION ROOM SCH C1.154	RCH 01W	C1.154	ICUC 1/11/1995	Active
ISOLRM58 ISOLATION ROOM C2 SOUTH ROOM1	RCH 02S	10552	1/09/2008	Inactive
ISOLRM59 ISOLATION ROOM C2 SOUTH ROOM2	RCH 02S	10552	1/09/2008	Inactive
ISOLRM60 ISOLATION ROOM C2 WEST ROOM C2.144	RCH 02W	C2.144	1/09/2008	Active
ISOLRM61 ISOLATION ROOM C2 WEST ROOM C2.158	RCH 02W	C2.158	1/09/2008	Active
ISOLRM09 ISOLATION ROOM SCH C2.145	RCH 02W	C2.145	C2W 1/11/1995	Active
ISOLRM08 ISOLATION ROOM SCH C2.147	RCH 02W	C2.147	C2W 1/11/1995	Active
ISOLRM07 ISOLATION ROOM SCH C2.148	RCH 02W	C2.148	C2W 1/11/1995	Active
ISOLRM06 ISOLATION ROOM SCH C2.150	RCH 02W	C2.150	C2W 1/11/1995	Active
ISOLRM13 ISOLATION ROOM SCH C3.174	RCH 03W	C3.174	C3W 1/11/1995	Active
ISOLRM10 ISOLATION ROOM SCH C3.176	RCH 03W	C3.176	C3W 1/11/1995	Active
ISOLRM11 ISOLATION ROOM SCH C3.178	RCH 03W	C3.178	C3W 1/11/1995	Active
ISOLRM12 ISOLATION ROOM SCH C3.180	RCH 03W	C3.180	C3W 1/11/1995	Active
ISOLRM14 ISOLATION ROOM SCH C3.182	RCH 03W	C3.182	C3W 1/11/1995	Active
ISOLRM15 ISOLATION ROOM SCH C3.183	RCH 03W	C3.183	C3W 1/11/1995	Active
ISOLRM16 ISOLATION ROOM SCH C3.184	RCH 03W	C3.184	C3W 1/11/1995	Active
ISOLRM17 ISOLATION ROOM SCH C3.185	RCH 03W	C3.185	C3W 1/11/1995	Active
ISOLRM46 ISOLATION ROOM SCH EMERGENCY	RCPED.01	P1.045	SCHEM.1/11/1995	Active

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