

Ref: Recommendations Summary Report – NIMAH Mthatha Histology Laboratory

Ref: Recommendations for the Mthatha Nelson Mandela Academic Hospital NHLS Histology Laboratory

Date: 14th of November 2021.

Recommendations: Laboratory fume extraction system

1. The Lab/Rooms to have negative pressure in relation to adjacent areas
2. Doors and windows to remain closed at all times
3. Atleast a minimum of 6 air changes per hour (ACH) for a Histology laboratory as per ASHE Standard 170-2017
4. Re-route rooms extraction air from centralized system to dedicated extraction using a duct inline fan
5. Inline duct extraction fan which is capable of 2600m³/h with duty pressure of 500pa to archive at most 12ACH– to extract all the room air to the atmosphere.

Room Name	Room Space Volume	Room Exhaust Air Volume
Room F/3/D30	34m ³	408 m ³ /h
Room F/3/D31	66m ³	792 m ³ /h
Room F/3/D33	72m ³	864 m ³ /h
Room F/3/D34	42m ³	504 m ³ /h
Total		2568 m ³ /h

6. All rooms to have new extraction points/grills connected with a fan with steel hard ducting
7. Each room duct branch to have a dedicated duct manual damper to regulate the amount of air exhausted from each room.
7. Room air to be extracted to outdoor at a height above roof level through a service duct or building wall.
8. The existing split air conditioner may continue to provide cooling in the room
9. The centralized supply air systems may continue to provide sufficient air in the room using new diffusers

APPENDIX A: Supply and Exhaust Air Schematic:

End. _____

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