

MICROBIAL ASSESSMENT

HELENSBURGH COMMUNITY CENTRE & YOUTH CENTRE

26 WALKER STREET
HELENSBURGH NSW 2508

Client:

Wollongong City Council
Burelli Street,
Wollongong NSW 2500

Reference:	Revision:	Date of Report:	Prepared By:	Authorised By:
20-13128-03-OH	Revision 0	17/12/2021	Luke Parkins	Michael Fernandez

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1 Introduction and Scope

Clearsafe Environmental Solutions Pty Ltd (Clearsafe) was requested by Peter Kellaway of Wollongong City Council to undertake a limited assessment with regard to microbial levels within nominated areas of both the Helensburgh Community Centre (Basketball Court) and Helensburgh Youth Centre, 26 Walker Street, Helensburgh NSW 2508. The investigation was commissioned to assess airborne microbial concentrations within both nominated locations as well as to gather surficial microbial data throughout the Helensburgh Youth Centre due to growing concerns about the microbial climate. The assessment consisted of a visual inspection of both the aforementioned nominated areas supplemented with airborne microbial monitoring and surficial swab analysis throughout the Helensburgh Youth Centre by a trained and experienced consultant.

It should be noted that multiple microbial assessments have already been conducted within the Helensburgh Community Centre (centred around the Basketball Court) and as such the focus in this investigation is primarily concentrated around the Helensburgh Youth Centre.

The agreed Scope of Work is summarised below:

- Moisture level spot checks in several locations throughout the Helensburgh Youth Centre using a hand-held moisture meter.
- Surficial microbial sampling (yeast, mould and bacteria) in seven (7) locations throughout the Helensburgh Youth Centre using sterilised swabs (Including a blank and reference sample)
- Airborne microbial sampling (yeast, mould and bacteria) in eight (8) locations throughout the Helensburgh Youth Centre and Helensburgh Community Centre using agar settle plates (Including a blank and reference sample)
- Visual inspection of the Helensburgh Youth Centre for visible evidence of water ingress and mould growth.
- Recommendations on the treatment of any identified mould affected surfaces.
- Preparation of a professional report summarising the findings of the investigation.

2 Limitations

All work is conducted in a conscientious and professional manner, with due diligence and appropriate care. However due to the disproportionate cost of potential damages or liability relative to the cost of our services, Clearsafe cannot offer any guarantee that all hazards have been identified. Subsequently, Clearsafe's liability to the client or any other party resulting from the performance or non-performance of the service, whether under contract law, tort law or otherwise, is limited to a maximum of up to five (5) times the total fee excluding expenses.

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3 Sampling Details

A site inspection and sampling was undertaken on the 7th of December 2021.

A TechCheck Plus (SN 13960) hand held moisture meter was used to undertake spot checks and measure relative moisture levels within representative building materials such as walls/ceiling surfaces and timber within a limited number of representative areas within the nominated buildings.

Microbial samples were collected onto sterile, sealed and pre-packaged transport swabs/growth media using standard Clearsafe sampling procedures. The samples were transported in an iced insulated box and arrived at the nominated testing laboratory within 24hrs subsequent to the sampling.

Samples were collected from locations which were considered to be representative of the general conditions at the time of sampling.

The microbial sampling program was limited to surficial and airborne viable microorganisms in selected locations and during a specific period in time. Viable microorganism concentrations are known to vary markedly with differing meteorological and seasonal conditions.

4 Adopted Standards

Viable micro-organisms are common on urban surfaces and within indoor air. Microbial levels are relevant to indoor air quality as they can cause allergies and infections and may also negatively impact on an area's aesthetics by affecting surface coatings and releasing odorous volatile organic compounds.

The human body is well adapted to cope with most micro-organisms that are regularly encountered. As such it has not been possible for the scientific community to reproducibly establish levels of micro-organisms (on surfaces or in air) that are considered to be 'safe' or 'unsafe'.

The established methodology for assessing microbial levels is to collect samples from both affected and non-affected locations and make comparisons. It is common for there to be large variations detected between locations and therefore Clearsafe, in line with the industry accepted standard, uses the following triggers to indicate a need for remediation or further investigation:

- Evident mould growth as observed by a trained and experienced consultant.
- Microbial sample results greater than double (x2) the reference sample.

5 Observations

The site consists of the Helensburgh Community Centre and the attached Helensburgh Youth Centre located at 26 Walker Street, Helensburgh. Previous investigations through Wollongong City Council including a periodical assessment of the basketball court and its subfloor's microbial climate prior to and subsequent to the installation of ventilation have identified elevated microbial levels within the basketball court subfloor. The current investigation has supplemented those visual observations and surficial findings with airborne microbial data and has additionally included an investigation into the microbial climate of the attached Youth Centre. As previous investigations within the Helensburgh Community Centre have already been undertaken, the scope of the current investigation pertains primarily to the microbial climate within the Helensburgh Youth Centre. Listed below are observations made at the time of the inspection.

Clearsafe was advised the following information from the client:

- Remedial options for the Helensburgh Community Centre Basketball Court (and its subfloor) are still being considered.
- Ventilation had been installed within the Community Centre several months previous to allow for adequate airflow within the subfloor space of the Basketball Court.
- The Youth Centre is currently closed and there have been growing concerns about the microbial climate within the building, in particular, within the south-western 'Office'.
- Flooding has occurred within the Youth Centre in the past and has been particularly noticeable within the south-western 'Office'.

The following observations were noted during the inspection:

Helensburgh Community Centre (Basketball Court & Basketball Court Subfloor)

- A mouldy/musty odour was present within the subfloor of the basketball court at the time of the inspection.
- The western section of the basketball court was not barricaded and the area was freely accessible.
- Visible microbial growth was still observed on the underside of the floorboards and on structural timber joists/bearers within the subfloor.
- The ground surfaces and timber joists/bearers within the subfloor were not visibly damp or damp to the touch.

- A white growth was still observed on the western and northern brick walls of the subfloor.
- Several timber joists and timber bearers within the subfloor were completely broken off and/or were significantly damaged, potentially compromising the timber floors structural integrity.
- The condition of the basketball court timber floorboards, viewed from above, were still in particularly poor condition.
- Several fibrous cement fragments (presumed to be asbestos-containing) were observed within the subfloor at the time of the inspection.

Helensburgh Youth Centre

- A mouldy/musty odour was present within the south-western 'Office' and faintly within 'Meeting Room 4', however, was not apparent throughout the rest of the structure.
- Visible mould was observed throughout several locations within the structure including but not necessarily limited to; underneath the carpet within the south-western 'Office', the ceiling above the 'Male' toilet, several of the wall linings within the 'Meeting Room 3' cupboards and on top of several of the plasterboard ceiling linings (viewed from above within the ceiling cavity).
- Limited assumed water/structural damage was also observed throughout several locations within the structure including but not necessarily limited to; interior wall paint spalling within the south-western 'Office', the ceiling above the 'Male' toilet, the 'Kitchen' wall and ceiling linings and within the 'Meeting Room 3' cupboards.

6 Moisture Level Spot Checks

Method:

A Tech Check Plus hand held moisture meter was used to measure moisture within timber surfaces in several locations.

Results:

Table 1: Moisture level of timber surfaces

Location	Timber Surfaces (%)
Youth Centre, internal, south-western "Office", eastern skirting board	9.2
Youth Centre, internal, south-western "Office", western skirting board	13.1
Youth Centre, internal, hallway, western skirting board	7.1
Youth Centre, internal, hallway, western skirting board	6.0
Youth Centre, internal, 'Meeting Room 4', western skirting board	7.1
Youth Centre, internal, 'Meeting Room 4', southern skirting board	6.5
Youth Centre, internal, 'Meeting Room 4', eastern skirting board	6.2
Youth Centre, internal, 'Meeting Room 3', western skirting board	6.5
Youth Centre, internal, 'Meeting Room 3', northern skirting board	6.3

Youth Centre, internal, 'Meeting Room 3', eastern skirting board	6.1
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Table 2: Moisture level of Drywall/Plasterboard surfaces

Location	Drywall/Plasterboard Surfaces (%)
Youth Centre, internal, south-western "Office", western wall	0.6
Youth Centre, internal, south-western "Office", ceiling	0.9
Youth Centre, internal, hallway, western wall	0.3
Youth Centre, internal, hallway, eastern wall	0.2
Youth Centre, internal, 'Meeting Room 4', western wall	0.4
Youth Centre, internal, 'Meeting Room 4', ceiling	0.6
Youth Centre, internal, disabled toilet, ceiling	0.8
Youth Centre, internal, disabled toilet, western wall	0.2
Youth Centre, internal, disabled toilet, eastern wall	0.1
Youth Centre, internal, 'Female Toilet', ceiling	0.7

Youth Centre, internal, 'Female Toilet', northern washroom wall	0.3
Youth Centre, internal, 'Male Toilet', ceiling	0.7
Youth Centre, internal, 'Male Toilet', northern washroom wall	0.2
Youth Centre, internal, 'Kitchen', southern wall	0.1
Youth Centre, internal, 'Kitchen', ceiling	0.9
Youth Centre, internal, 'Meeting Room 3', 2nd most southern cupboard, western wall	0.6
Youth Centre, internal, 'Meeting Room 3', 2nd most southern cupboard, ceiling	0.4
Youth Centre, internal, 'Meeting Room 3', southern wall	0.4
Youth centre, internal, 'Storage' room, southern wall	0.1
Youth centre, internal, 'Storage' room, ceiling	0.5

Discussion:

In regards to moisture content readings, all of the sampled timber locations reported results within or slightly below what is considered to be an acceptable limit for hardwood timbers (9-14% moisture content as per AS 2796.1-1999 *Timber-hardwood-sawn and milled products-part 1:product specification, Standards Australia 1999*). Moisture results for all sampled drywall/plasterboard locations reported results <1%, which is considered the trigger level for further investigation.

7 Surficial Microbial Sampling

Method:

Surficial microbial sampling was undertaken in seven (7) locations within the Helensburgh Youth Centre using swabs (Including a blank and reference sample). The swabs are used to collect microbial spores from direct contact with surfaces and are then placed onto growth media and incubated in a controlled environment, before being analysed for viable colony forming units (CFU). The results are then compared with control samples collected from a similar non-affected location nearby.

Results:

Table 3: Surficial Microbial Counts Using Swabs

Sample No.	Location	Bacteria Count (CFU/swab)	Mould Count (CFU/swab)	Yeast Count (CFU/swab)
20-13128/SB	Field Blank	<10	<10	<10
20-13128/SR	Youth Centre, internal, hallway, eastern wall (Between 'Male' and 'Female' toilets)	<10	<10	<10
20-13128/S1	Youth Centre, internal, south-western 'Office', south-western corner (underneath carpet on timber strips)	<10	>3000 est.	'Unable to report yeast due to overgrown mould'
20-13128/S2	Youth Centre, internal, 'Male' toilet, ceiling above toilet	<10	>3000 est.	<10
20-13128/S3	Youth Centre, internal, 'Meeting Room 3', 2nd most southern cupboard, western wall	730	>3000 est.	<10
20-13128/S4	Youth Centre, ceiling cavity above disabled toilet, top surface of ceiling immediately	70 est.	650	'Unable to report yeast due to overgrown mould'

	adjacent ceiling access cover)			
20-13128/ S5	Youth Centre, ceiling cavity above 'Storage' room, top surface of ceiling immediately adjacent ceiling access cover)	<10	>3000 est.	<10

Note: est. = Estimated

Discussion:

Surface swab analysis suggests detectable microbial growth was present in all sampled locations (with the exclusion of the reference sample). Of the aforementioned surficial microbial results, all sample results displayed significantly high levels of mould well above double that of the reference sample, with samples 3 and 4 additionally displaying elevated amounts of bacteria well above double that of the reference sample. Surficial yeast concentrations were undetected in samples 2, 3 and 5, with the remaining samples being unable to be counted due to the presence of overgrown mould. The need for remediation/treatment should be considered.

8 Airborne Microbial Sampling

Method:

Passive airborne microbial sampling on agar settle plates was undertaken in seven (7) locations (not including the blank sample) for an approximate time of two (2) hours. Microbial spores on the agar are incubated in a controlled environment, before being analysed for viable colony forming units (CFU). The results are then compared with control samples collected from a similar non-affected location nearby. Sample results are presented as CFU/plate over a two (2) hour period.

Results:

Table 3: Airborne Microbial Counts

Sample No.	Location	Bacteria Count (CFU/plate)	Mould Count (CFU/plate)	Yeast Count (CFU/plate)
20-13128 /AB	Field Blank	<1	<1	<1
20-13128 /AR	Helensburgh Youth Centre, external, on western side of roof	12	46	1
20-13128 /A1	Helensburgh Youth Centre, internal, 'Kitchen', on counter	7	62	<1
20-13128 /A2	Helensburgh Youth Centre, internal, south-western 'Office', on western cabinet	5	94	<1
20-13128 /A3	Helensburgh Community Centre, internal, 'Kitchen', on central bench	3	9	<1
20-13128 /A4	Helensburgh Community Centre, internal, Basketball Court, on table on western side of court	3	24	<1

20-13128 /A5	Helensburgh Community Centre, internal, Basketball Court, stage	7	24	2
20-13128 /A6	Helensburgh Community Centre, subfloor, on brick pylon immediately adjacent eastern entrance beneath stage	10	28	3

Discussion:

Passive airborne microbial sampling analysis was undertaken on agar settle plates over a period of approximately two hours both within the Helensburgh Community Centre and Helensburgh Youth Centre. Sample analysis indicates that detectable airborne bacteria and airborne mould were present throughout all measured locations (including the reference sample). In this instance, the 'reference' area pertains to the outside ambient air, which when compared to all sampled indoor locations displayed highly similar results, with the exclusion of airborne mould for sample 2 which was slightly above double that of the reference result. Airborne bacterial results for sample 2 was double that of the reference sample (ambient air) and whilst not considered significantly high, should be considered a basis for further treatment or further investigation. Airborne yeast was also detected within the reference sample, as well as samples 5 and 6, however, sample results were exceptionally low. The need for remediation/treatment within the south-western 'Office' of the Youth centre should be considered.

9 Conclusion

Clearsafe Environmental Solutions Pty Ltd (Clearsafe) was requested by Peter Kellaway of Wollongong City Council to undertake a limited assessment with regard to microbial levels within a nominated area of both the Helensburgh Community Centre (Basketball Court) and Helensburgh Youth Centre, 26 Walker Street, Helensburgh NSW 2508. The investigation was commissioned to assess airborne microbial concentrations within both nominated locations as well as to gather surficial microbial data throughout the Helensburgh Youth Centre due to growing concerns about the microbial climate. The assessment consisted of a visual inspection of both the aforementioned nominated areas supplemented with airborne microbial monitoring and surficial swab analysis throughout the Helensburgh Youth Centre by a trained and experienced consultant.

Moisture level results for all of the sampled timber locations reported results within or slightly below what is considered to be an acceptable limit for hardwood timbers (9-14% moisture content as per *AS 2796.1-1999 Timber-hardwood-sawn and milled products-part 1:product specification, Standards Australia 1999*). Moisture results for all sampled drywall/plasterboard locations reported results <1%, which is considered the trigger level for further investigation.

Surface swab analysis suggests detectable microbial growth was present in all sampled locations (with the exclusion of the reference sample). Of the aforementioned surficial microbial results, all sample results displayed significantly high levels of mould well above double that of the reference sample, with samples 3 and 4 additionally displaying elevated amounts of bacteria well above double that of the reference sample. Surficial yeast concentrations were undetected in samples 2, 3 and 5, with the remaining samples being unable to be counted due to the presence of overgrown mould.

Passive airborne microbial sampling analysis indicates that detectable airborne bacteria and airborne mould were present throughout all measured locations (including the reference sample). However, all sampled indoor locations displayed highly similar results to that of the reference sample (ambient air), with the exclusion of airborne mould for sample 2 which was slightly above double that of the reference result but not considered significantly high. Airborne yeast was also detected within the reference sample, as well as samples 5 and 6, however, sample results were exceptionally low.

In conclusion, surface swab analysis in conjunction with airborne microbial readings and visual observations suggests that there exists an underlying moisture ingress/microbial growth issue within the Helensburgh Youth Centre. Based on anecdotal evidence provided to the inspecting consultant and findings during the current investigation, the inspecting consultant is of the opinion that the source of the issue is likely centred around the ceiling cavity/roof of the structure. Anecdotal evidence suggests flooding has occurred previously within the structure and was visibly evident within the south-western 'Office', the inspecting consultant visually observed water staining/microbial growth primarily throughout the ceiling

linings of the building (more apparent when observed from above within the ceiling cavity). These visual observations were strongly supported with significantly high surficial microbial readings and a slightly elevated airborne microbial reading within the south-western 'Office' which appears to be the location most strongly impacted by the previous weather events. A strong musty/mouldy olfactory sensation was also apparent within the south-western 'Office' of the structure, and less evident within adjoining locations. Clearsafe recommends remediation/treatment as per the following recommendations.

10 Recommendations

The following recommendations apply to the microbial remediation works:

- Remediation work should be carried out by professional contractors in accordance with relevant guidelines and in consideration of the following points.
- The work area should not be occupied during cleaning processes.
- Conduct a building inspection by a professional building inspector to investigate the source of the water ingress within the ceiling cavity of the Helensburgh Youth Centre.
- It is recommended that the carpet within the south-western 'Office' is removed and surfaces beneath the carpet flooring are thoroughly treated and cleaned with a professional mould treatment (normally a 10% diluted vinegar solution) or suitable air or liquid based alternative (such as HEPA filter vacuum cleaning, air washing, ultrasonic cleaning, steam cleaning or low pressure flushing etc). Subsequently wet wipe all impacted surfaces and allow them to completely dry prior to replacement with new floor coverings. A limited inspection underneath other carpet floor coverings throughout the structure did not identify any further apparent microbial growth, however, as a precautionary measure consideration should be given to the cleaning/replacement of other carpet floor coverings and subsequent remediation measures as detailed above.
- Furnishings with no apparent visible growth were located within the south-western 'Office' at the time of the inspection, as a precautionary measure Clearsafe recommends that these furnishings are thoroughly cleaned as per processes referred to above. Consideration should be given to the disposal of soft ('porous') furnishings within this room should microbial growth be apparent.
- Clearsafe recommends that consideration be given to the replacement of all visually microbial impacted ceiling linings throughout the structure subsequent to the identification of the microbial growth/moisture ingress issue. Should this not be an option, all ceiling linings within the structure are to be thoroughly treated and cleaned with a professional mould treatment (normally a 10% diluted vinegar solution) or suitable air or liquid based alternative (such as HEPA filter vacuum cleaning, air washing, ultrasonic cleaning, steam cleaning or low pressure flushing etc). Subsequently wet wipe all impacted surfaces and allow them to completely dry prior. The above also applies to the western cupboards within 'Meeting Room 3' which, excluding visible microbial growth, also appeared structurally damaged.
- Given the minor paint spalling within the south-western 'Office', consideration should also be given to the removal and/or overpainting of the wall linings with an anti-mould paint

-
- Post mould remediation works reduce the humidity within the identified microbial impacted areas by natural or artificial means (desiccant, dehumidifiers, increasing air flow).
 - Post mould remediation works, increase natural light levels and ventilation within the identified microbial impacted areas
 - An Occupational Hygiene consultant should be contacted to conduct a final inspection and clearance testing following remediation work.

The aforementioned recommendations are applicable to the Helensburgh Youth Centre only. Separate reports have been prepared for the Helensburgh Community Centre with their own detailed list of remedial/treatment options.

11 Closure and Contact Information

For any queries relating to this report, please contact Clearsafe on 1300 042 962 or info@clearsafe.com.au.

Clearsafe is pleased to provide our consulting services for this commission.

Kind Regards,



Luke Parkins
Project Consultant

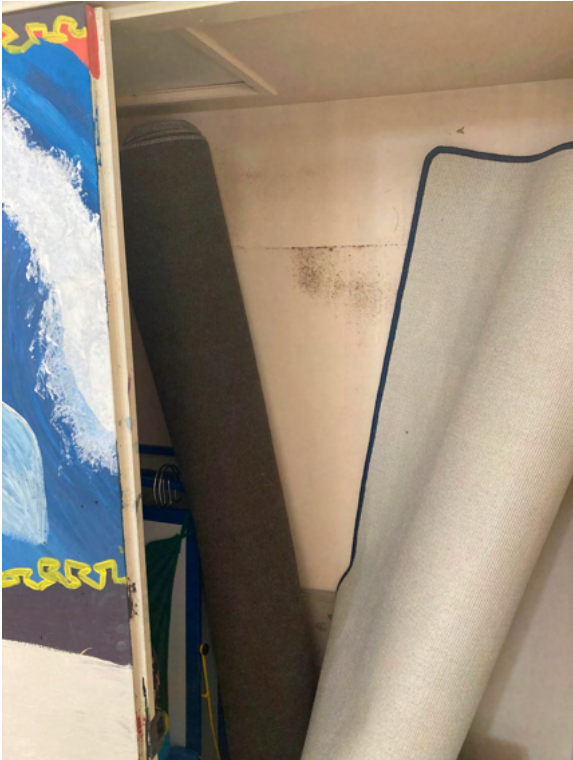


Michael Fernandez
Regional Manager

APPENDIX A

SITE PHOTOGRAPHS

Photo	Location
	Representative photograph of the timber strips underneath the south-western corner of the carpet of the south-western 'Office', at the time of the inspection
	Representative photograph of the paint conditions within the south-western 'Office', at the time of the inspection

	Representative photograph of the ceiling above the toilet within the 'Male' toilets, at the time of the inspection
	Representative photograph of some of the visible microbial growth within one of the cupboards adjoining 'Meeting Room 3', at the time of the inspection
	Representative photograph of the horizontal surfaces directly above the cupboards adjoining 'Meeting Room 3', at the time of the inspection



Representative photograph of the horizontal ceiling cavity surfaces within the structure, at the time of the inspection



Representative photograph of the horizontal ceiling cavity surfaces within the structure, at the time of the inspection

APPENDIX B

LABORATORY REPORTS

COA No:	SYD-51663875-0
Supersedes:	None
COA Date:	13/12/2021
Page 1 of 4	

TO:

Clearsafe Environmental Solutions
Clearsafe Environmental Solutions
PO Box 337
UNANDERRA, NSW 2526

Received From:	Unanderra, NSW
Received Date:	08/12/2021

Location of Test: (except where noted)	Regents Park, NSW
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Analytical Results

Desc. 1: ^	20-13128/SB	Sample Number: 457023037			
		Condition Rec'd: NORMAL			
		Temp Rec'd (°C): 4.0			
		Date Started: 8/12/2021			
		Results apply only to the sample as received			
<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>Method Reference</u>	<u>Result Date</u>	<u>Loc.</u>
Total Bacterial Count	<10	CFU/swab	M17.2	11/12/2021	
Total Mould Count	<10	CFU/swab	M17.2	13/12/2021	
Total Yeast Count	<10	CFU/swab	M17.2	13/12/2021	

Desc. 1: ^	20-13128/SR	Sample Number: 457023038			
		Condition Rec'd: NORMAL			
		Temp Rec'd (°C): 4.0			
		Date Started: 8/12/2021			
		Results apply only to the sample as received			
<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>Method Reference</u>	<u>Result Date</u>	<u>Loc.</u>
Total Bacterial Count	<10	CFU/swab	M17.2	11/12/2021	
Total Mould Count	<10	CFU/swab	M17.2	13/12/2021	
Total Yeast Count	<10	CFU/swab	M17.2	13/12/2021	



Accredited for compliance with ISO/IEC 17025 - Testing
NATA Corporate Accreditation Number: 2020
Melbourne Microbiology Site No: 2013
Sydney Microbiology Site No: 2759 Chemistry Site No: 2135
Perth Microbiology Site No: 10635
Brisbane Microbiology Site No: 15147
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TGA Licence No: MI-04072005-LI-000664-2

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AU-COA-33 v13

MERIEUX NUTRISCIENCES

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CERTIFICATE OF ANALYSIS

COA No:	SYD-51663875-0
Supersedes:	None
COA Date:	13/12/2021
Page 2 of 4	

TO:

Clearsafe Environmental Solutions
Clearsafe Environmental Solutions
PO Box 337
UNANDERRA, NSW 2526

Received From:	Unanderra, NSW
Received Date:	08/12/2021

Location of Test: (except where noted)
Regents Park, NSW

Analytical Results

Desc. 1: ^	20-13128/S1	Sample Number:	457023039
		Condition Rec'd:	NORMAL
		Temp Rec'd (°C):	4.0
		Date Started:	8/12/2021
Results apply only to the sample as received			

<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>Method Reference</u>	<u>Result Date</u>	<u>Loc.</u>
Total Bacterial Count	<10	CFU/swab	M17.2	11/12/2021	
Total Mould Count	>3000 est.	CFU/swab	M17.2	13/12/2021	
Total Yeast Count	Unable to report yeast due to over grown mould	CFU/swab	M17.2	13/12/2021	

Desc. 1: ^	20-13128/S2	Sample Number:	457023040
		Condition Rec'd:	NORMAL
		Temp Rec'd (°C):	4.0
		Date Started:	8/12/2021
Results apply only to the sample as received			

<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>Method Reference</u>	<u>Result Date</u>	<u>Loc.</u>
Total Bacterial Count	<10	CFU/swab	M17.2	11/12/2021	
Total Mould Count	>3000 est.	CFU/swab	M17.2	13/12/2021	
Total Yeast Count	<10	CFU/swab	M17.2	13/12/2021	



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CERTIFICATE OF ANALYSIS

COA No:	SYD-51663875-0
Supersedes:	None
COA Date:	13/12/2021
Page 3 of 4	

TO:

Clearsafe Environmental Solutions
Clearsafe Environmental Solutions
PO Box 337
UNANDERRA, NSW 2526

Received From:	Unanderra, NSW
Received Date:	08/12/2021

Location of Test: (except where noted)
Regents Park, NSW

Analytical Results

Desc. 1: ^	20-13128/S3	Sample Number:	457023041
		Condition Rec'd:	NORMAL
		Temp Rec'd (°C):	4.0
		Date Started:	8/12/2021
Results apply only to the sample as received			

<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>Method Reference</u>	<u>Result Date</u>	<u>Loc.</u>
Total Bacterial Count	730	CFU/swab	M17.2	11/12/2021	
Total Mould Count	>3000 est.	CFU/swab	M17.2	13/12/2021	
Total Yeast Count	<10	CFU/swab	M17.2	13/12/2021	

Desc. 1: ^	20-13128/S4	Sample Number:	457023042
		Condition Rec'd:	NORMAL
		Temp Rec'd (°C):	4.0
		Date Started:	8/12/2021
Results apply only to the sample as received			

<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>Method Reference</u>	<u>Result Date</u>	<u>Loc.</u>
Total Bacterial Count	70 est.	CFU/swab	M17.2	11/12/2021	
Total Mould Count	650	CFU/swab	M17.2	13/12/2021	
Total Yeast Count	Unable to report yeast due to over grown mould	CFU/swab	M17.2	13/12/2021	



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NATA Corporate Accreditation Number: 2020
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TGA Licence No: MI-04072005-LI-000664-2

Silliker Australia P/L trading as Mérieux NutriSciences

AU-COA-33 v13

COA No:	SYD-51663875-0
Supersedes:	None
COA Date:	13/12/2021
Page 4 of 4	

TO:

Clearsafe Environmental Solutions
 Clearsafe Environmental Solutions
 PO Box 337
 UNANDERRA, NSW 2526

Received From:	Unanderra, NSW
Received Date:	08/12/2021

Location of Test: (except where noted)	Regents Park, NSW
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Analytical Results

Desc. 1: ^	20-13128/S5	Sample Number: 457023044			
		Condition Rec'd: NORMAL			
		Temp Rec'd (°C): 4.0			
		Date Started: 8/12/2021			
		Results apply only to the sample as received			
<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>Method Reference</u>	<u>Result Date</u>	<u>Loc.</u>
Total Bacterial Count	<10	CFU/swab	M17.2	11/12/2021	
Total Mould Count	>3000 est.	CFU/swab	M17.2	13/12/2021	
Total Yeast Count	<10	CFU/swab	M17.2	13/12/2021	



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LABORATORY MANAGER

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Silliker Australia P/L trading as Merieux NutriSciences

AU-COA-33 v13

MERIEUX NUTRISCIENCES

SYDNEY LABORATORY
Unit C2, 391 Park Road
Regents Park, NSW 2143
02 8718 6888 Fax 02 8718 6899

CERTIFICATE OF ANALYSIS

COA No:	SYD-51663895-0
Supersedes:	None
COA Date:	13/12/2021
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TO:

Clearsafe Environmental Solutions
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PO Box 337
UNANDERRA, NSW 2526

Received From:	Unanderra, NSW
Received Date:	08/12/2021

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Analytical Results

Desc. 1: ^	20-13128/AB-A	Sample Number:	457023015
		Condition Rec'd:	NORMAL
		Temp Rec'd (°C):	4.0
		Date Started:	8/12/2021
Results apply only to the sample as received			

Analyte	Result	Units	Method Reference	Result Date	Loc.
Total Mould Count	<1	CFU/plate	M33	13/12/2021	
Total Yeast Count	<1	CFU/plate	M33	13/12/2021	

Desc. 1: ^	20-13128/AR-A	Sample Number:	457023016
		Condition Rec'd:	NORMAL
		Temp Rec'd (°C):	4.0
		Date Started:	8/12/2021
Results apply only to the sample as received			

Analyte	Result	Units	Method Reference	Result Date	Loc.
Total Mould Count	46	CFU/plate	M33	13/12/2021	
Total Yeast Count	1	CFU/plate	M33	13/12/2021	

Desc. 1: ^	20-13128/A1-A	Sample Number:	457023017
		Condition Rec'd:	NORMAL
		Temp Rec'd (°C):	4.0
		Date Started:	8/12/2021
Results apply only to the sample as received			

Analyte	Result	Units	Method Reference	Result Date	Loc.
Total Mould Count	62	CFU/plate	M33	13/12/2021	
Total Yeast Count	<1	CFU/plate	M33	13/12/2021	



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Analytical Results

Desc. 1: ^	20-13128/A2-A	Sample Number:	457023018
		Condition Rec'd:	NORMAL
		Temp Rec'd (°C):	4.0
		Date Started:	8/12/2021
Results apply only to the sample as received			

Analyte	Result	Units	Method Reference	Result Date	Loc.
Total Mould Count	94	CFU/plate	M33	13/12/2021	
Total Yeast Count	<1	CFU/plate	M33	13/12/2021	

Desc. 1: ^	20-13128/A3-A	Sample Number:	457023019
		Condition Rec'd:	NORMAL
		Temp Rec'd (°C):	4.0
		Date Started:	8/12/2021
Results apply only to the sample as received			

Analyte	Result	Units	Method Reference	Result Date	Loc.
Total Mould Count	9	CFU/plate	M33	13/12/2021	
Total Yeast Count	<1	CFU/plate	M33	13/12/2021	

Desc. 1: ^	20-13128/A4-A	Sample Number:	457023020
		Condition Rec'd:	NORMAL
		Temp Rec'd (°C):	4.0
		Date Started:	8/12/2021
Results apply only to the sample as received			

Analyte	Result	Units	Method Reference	Result Date	Loc.
Total Mould Count	24	CFU/plate	M33	13/12/2021	
Total Yeast Count	1	CFU/plate	M33	13/12/2021	



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AU-COA-33 v13

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Received Date:	08/12/2021

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Analytical Results

Desc. 1: ^	20-13128/A5-A	Sample Number:	457023021
		Condition Rec'd:	NORMAL
		Temp Rec'd (°C):	4.0
		Date Started:	8/12/2021
Results apply only to the sample as received			

Analyte	Result	Units	Method Reference	Result Date	Loc.
Total Mould Count	24	CFU/plate	M33	13/12/2021	
Total Yeast Count	2	CFU/plate	M33	13/12/2021	

Desc. 1: ^	20-13128/A6-A	Sample Number:	457023022
		Condition Rec'd:	NORMAL
		Temp Rec'd (°C):	4.0
		Date Started:	8/12/2021
Results apply only to the sample as received			

Analyte	Result	Units	Method Reference	Result Date	Loc.
Total Mould Count	28	CFU/plate	M33	13/12/2021	
Total Yeast Count	3	CFU/plate	M33	13/12/2021	



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MERIEUX NUTRISCIENCES

SYDNEY LABORATORY
Unit C2, 391 Park Road
Regents Park, NSW 2143
02 8718 6888 Fax 02 8718 6899

CERTIFICATE OF ANALYSIS

COA No:	SYD-51662939-0
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Clearsafe Environmental Solutions
PO Box 337
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Location of Test: (except where noted)	Regents Park, NSW
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Analytical Results

Desc. 1: ^	20-13128/AB-B	Sample Number:	457023025
		Condition Rec'd:	NORMAL
		Temp Rec'd (°C):	4.0
		Date Started:	8/12/2021
Results apply only to the sample as received			

Analyte	Result	Units	Method Reference	Result Date	Loc.
Total Bacterial Count	<1	CFU/plate	M33	11/12/2021	

Desc. 1: ^	20-13128/AR-B	Sample Number:	457023026
		Condition Rec'd:	NORMAL
		Temp Rec'd (°C):	4.0
		Date Started:	8/12/2021
Results apply only to the sample as received			

Analyte	Result	Units	Method Reference	Result Date	Loc.
Total Bacterial Count	12	CFU/plate	M33	11/12/2021	

Desc. 1: ^	20-13128/A1-B	Sample Number:	457023027
		Condition Rec'd:	NORMAL
		Temp Rec'd (°C):	4.0
		Date Started:	8/12/2021
Results apply only to the sample as received			

Analyte	Result	Units	Method Reference	Result Date	Loc.
Total Bacterial Count	7	CFU/plate	M33	11/12/2021	



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AU-COA-33 v13

COA No:	SYD-51662939-0
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Analytical Results

Desc. 1: ^	20-13128/A2-B	Sample Number:	457023028
		Condition Rec'd:	NORMAL
		Temp Rec'd (°C):	4.0
		Date Started:	8/12/2021
Results apply only to the sample as received			

<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>Method Reference</u>	<u>Result Date</u>	<u>Loc.</u>
Total Bacterial Count	5	CFU/plate	M33	11/12/2021	

Desc. 1: ^	20-13128/A3-B	Sample Number:	457023029
		Condition Rec'd:	NORMAL
		Temp Rec'd (°C):	4.0
		Date Started:	8/12/2021
Results apply only to the sample as received			

<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>Method Reference</u>	<u>Result Date</u>	<u>Loc.</u>
Total Bacterial Count	3	CFU/plate	M33	11/12/2021	

Desc. 1: ^	20-13128/A4-B	Sample Number:	457023030
		Condition Rec'd:	NORMAL
		Temp Rec'd (°C):	4.0
		Date Started:	8/12/2021
Results apply only to the sample as received			

<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>Method Reference</u>	<u>Result Date</u>	<u>Loc.</u>
Total Bacterial Count	3	CFU/plate	M33	11/12/2021	



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UNANDERRA, NSW 2526

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Analytical Results

Desc. 1: ^	20-13128/A5-B	Sample Number:	457023031
		Condition Rec'd:	NORMAL
		Temp Rec'd (°C):	4.0
		Date Started:	8/12/2021
Results apply only to the sample as received			

Analyte	Result	Units	Method Reference	Result Date	Loc.
Total Bacterial Count	7	CFU/plate	M33	11/12/2021	

Desc. 1: ^	20-13128/A6-B	Sample Number:	457023034
		Condition Rec'd:	NORMAL
		Temp Rec'd (°C):	4.0
		Date Started:	8/12/2021
Results apply only to the sample as received			

Analyte	Result	Units	Method Reference	Result Date	Loc.
Total Bacterial Count	10	CFU/plate	M33	11/12/2021	



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LABORATORY MANAGER

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