

TEST REPORT

CLIENT DETAILS LABORATORY DETAILS

EDMUND LEI SGS HONG KONG LIMITED Manager Client INTEGRAL CONSULTING LTD **ENVIRONMENTAL SERVICE** Laboratory

Address AVENIDA AMIZADE. NO. 918, 1/F, 4/F, 5/F & UNIT 301-4, 307-11, 3/F, ON Address

WORLD TRADE CENTRE BUILDING, WUI CENTRE, 25 LOK YIP ROAD, FANLING,

7 ANDAR B, C, MACAU

852 2774 7177 853 2881 1999 Telephone Telephone Facsimile 853 2881 0202 Facsimile 852 2334 2461

Email EDMUND.LEI@INTEGRAL.COM.MO Email

HKIEQ15-00121 R0 Order Number Report Number

Samples Air (4) SGS Reference

Default Project Date Reported 2015/09/23 Project

COMMENTS

SIGNATORIES WING YAN CHAN Laboratory Executive

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Sample Number	Sample Location	Sampling Date	Test Required

Sampling Site Information

MACAO SCIENCE CENTER, AVENIDA DR. SUN YAT-SEN, MACAU

			Temperature				
HKIEQ15-00121.001	Conference Room 3-4	Conference Room 3-4 Relative Hu	Relative Humidity				
4			Air Movement				
		_	Carbon Monoxide				
			Carbon Dioxide				
HKIEQ15-00121.002	Concourse		Respirable Suspended Particulates Particulate Matter (PM 2.5)				
		47.40 A	Particulate Matter (PM 2.5)				
		- 17-18 August 2015	Nitrogen Dioxide				
HKIEQ15-00121.003	1/F Exhibition Centre		Nitrogen Dioxide Ozone Formaldehyde				
TIMEQ 13-00 12 1.003	1/1 Exhibition Sentic						
		_	Total Volatile Organic Compound				
			Total Bacteria Count				
HKIEQ15-00121.004	Planetarium		Formaldehyde Total Volatile Organic Compound Total Bacteria Count Yeast & Mould				
			Radon				

Test Method

Air Movement: VelociCal 9545-A or Compuflow Thermo-anemometer 8585-M

Total Bacteria Count: TSA Medium with Incubation 30°C 48 Hours

Relative Humidity: TSI IAQCalc 7545
Room Temperature: TSI IAQCalc 7545
Carbon Dioxide: TSI IAQCalc 7545
Carbon Monoxide: TSI IAQCalc 7545

Respirable Suspended Particulates: TSI DustTrak Aerosol/Dust 8520 or 8532
Particulate Matter (PM 2.5): TSI DustTrak Aerosol/Dust 8520 or 8532

Formaldehyde (HCHO): USEPA TO-11A, HPLC
Nitrogen Dioxide (NO₂): The Ogawa Passive Sampler

Ozone (O₃): AeroQUAL Series 500 or Ozone meter Model Z-1200XP

Total Volatile Organic Compound: ppbRAE 3000 Parts per Billion VOC Monitor Yeast & Mould: PDA Medium with incubation 25 °C 5 Days

Radon (Rn): Sun Nuclear Model #1030 Radon Monitor or NITON Professional meter (model no : RAD 7)

IAQ Objectives (FOR REFERENCE ONLY**)

	Temperature	Relative Humidity	Air Movement	Carbon Dioxide	Carbon Monoxide	Respirable Suspended Particulates	Nitrogen Dioxide	Ozone	Formaldehyde	Total Volatile Organic Compound	Radon	Total Bacteria Count	Particulate Matter (PM2.5)	Yeast & Mould
Unit	°C	%	m/s	ppm	ppm	μg/m³	μg/m³	ppb	μg/m³	μg/m³	Bq/m³	cfu/m³	μg/m³	cfu/m³
Good Class	<25.5	<70	<0.3	<1000	<8.7	<180	<150	<61	<100	<600	<200	<1000	N/A	N/A

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Sample ID	Sampling Location	Sample Matrix Unit LOR	Temperature Air ℃ -	Relative Humidity Air % -	Air Movement Air m/s -
HKIEQ15-00121.001	Conference Room 3-4	-	22	59	0.03
HKIEQ15-00121.002	Concourse	-	28	58	0.04
HKIEQ15-00121.003	1/F Exhibition Centre	-	23	64	0.18
HKIEQ15-00121.004	Planetarium	-	24	52	0.06

					Respirable
			Carbon Dioxide (CO ₂)	Carbon Monoxide (CO)	Suspended
					Particulate (RSP)
		Sample Matrix	Air	Air	Air
		Unit	ppm	ppm	μg/m³
Sample ID	Sampling Location	LOR			
HKIEQ15-00121.001	Conference Room 3-4	-	440	0	11
HKIEQ15-00121.002	Concourse	-	600	0	14
HKIEQ15-00121.003	1/F Exhibition Centre	-	790	0	12
HKIEQ15-00121.004	Planetarium	-	470	0	6.4

			Particulate Matter (PM 2.5)	Nitrogen Dioxide (NO ₂)	Ozone (O ₃)
		Sample Matrix Unit	Air µg/m³	Air μg/m³	Air ppb
Sample ID	Sampling Location	LOR			`` <u>-</u>
HKIEQ15-00121.001	Conference Room 3-4	-	6	83	3.3
HKIEQ15-00121.002	Concourse	-	11	91	14
HKIEQ15-00121.003	1/F Exhibition Centre	-	2.3	120	9
HKIEQ15-00121.004	Planetarium	-	5.7	97	26

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Laboratory: 1/F, 4/F, 5/F & Units 301-4, 307-11, 3/F, On Wui Centre, 25 Lok Yip Road, Fanling, N.T., Hong Kong Office: 5/F & 8/F, Manhattan Centre, 8 Kwai Cheong Road, Kwai Chung, N.T., Hong Kong t (852) 2334 4481 t (852) 2764 3126 t mkg.hk@sgs.com

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Sample ID	Sampling Location	Sample Matrix Unit LOR	Formaldehyde (HCHO) Air µg/m³ -	Total Volatile Organic Compound (TVOC) Air µg/m³ -	Total Bacteria Count (TBC) Air cfu/m³ -
HKIEQ15-00121.001	Conference Room 3-4	-	23	200	220
HKIEQ15-00121.002	Concourse	-	5.2	990	TNTC
HKIEQ15-00121.003	1/F Exhibition Centre	-	35	500	420
HKIEQ15-00121.004	Planetarium	-	17	14	110

Sample ID	Sampling Location	Sample Matrix Unit LOR	Yeast & Mould (Y&M) Air cfu/m³ -	Radon (Rd) Air Bq/m³ -
HKIEQ15-00121.001	Conference Room 3-4	-	4.8	0
HKIEQ15-00121.002	Concourse	-	22	6.2
HKIEQ15-00121.003	1/F Exhibition Centre	-	16	36
HKIEQ15-00121.004	Planetarium	-	18	9.6

Notes:

1) Sampling address: Macao Science Center, Avenida Dr. Sun Yat-Sen, Macau

2) Sampling dates: 17-18 August 2015

*** End of Report **

FOOTNOTES

CFU Colony forming unit LOR Limit of Reporting

Sample analyzed as received

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