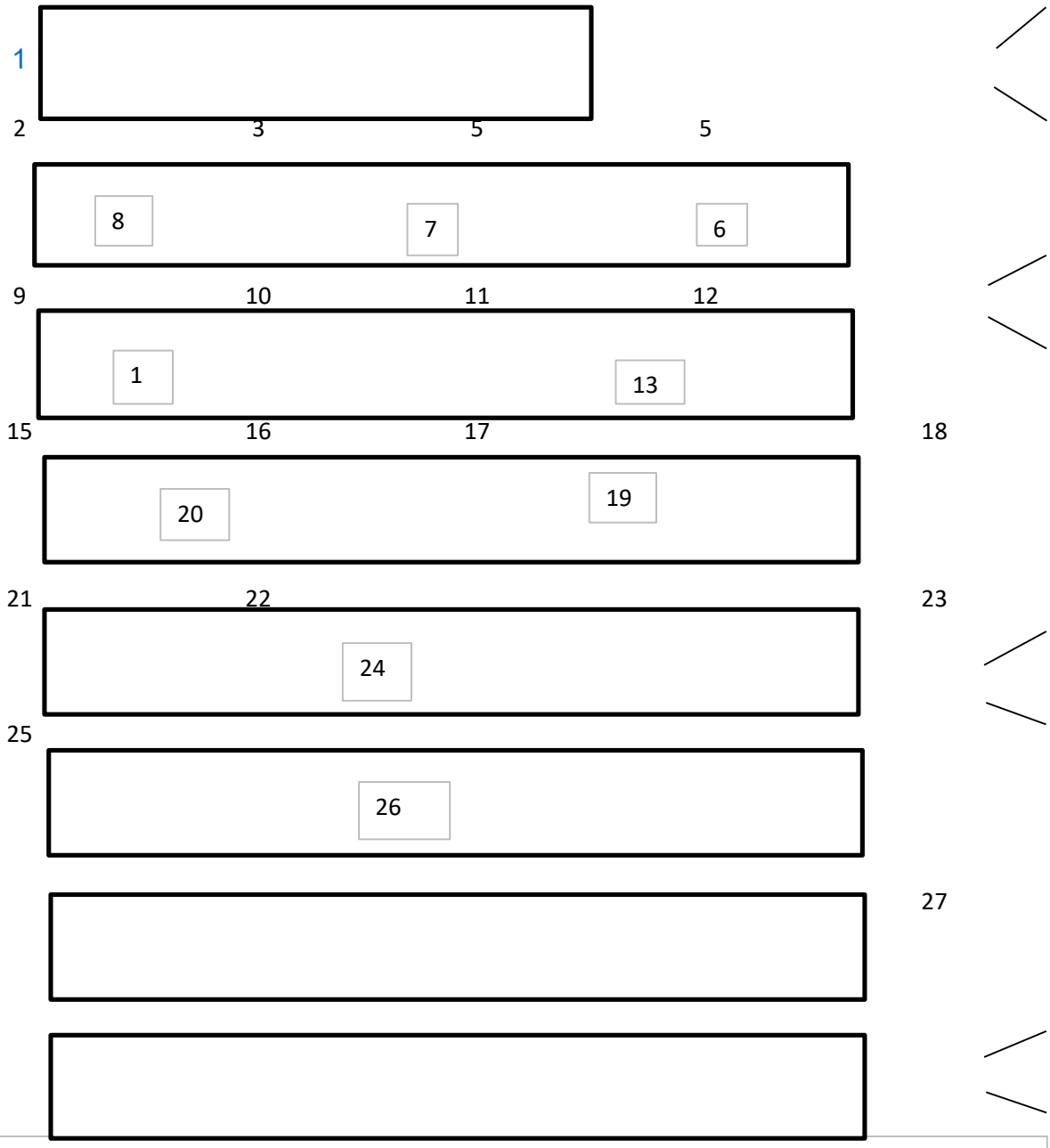
Data Centre Cleaning Report

CLIENT	XXXY
ADDRESS	14 Canal Walk
LOCATION	Data Hall 1
PREPARED BY	Steve Yates
DATE	15/10/2020

TEL: 0870 005 281 EMAIL: sales@itcleaning.co.uk WEB: www.itcleaning.co.uk
112 CLIFTON STREET, OLD TOWN, SWINDON, SN1 3QA

ROOM REPORT & LOCATIONS



Specification: ISO 14644-1 2015 Class 8 clean.

Underfloor void: Dust from rockwool was found in places especially at top end of the data hall. All area vacuumed and wiped as required.

High Level: Perspex was tack wiped very little dust was present.

Tops of Cabinets: Very dusty lots of brown dust present. Rockwool is made from reheated lave when this disintegrates it again becomes rock. Vacuumed and wiped.

Cabinets: Very dusty on all surfaces, inside hot aisles all vacuumed and wiped. Equipment tops vacuumed. Bottoms of cabinets in cold aisle vacuumed.

Floor: Buffed with high speed white white pad.

ISO: The room passed ISO 14644-1 2015 Class 7, better than the required class 8

COLLECTED DATA

TIMESTAMP	LOCATION (Name)	0.5 MICRON (particles/m^3)	1.0 MICRON (particles/m^3)	5.0 MICRON (particles/m^3)
15/10/2020 13:52:49	POD1_01	150000	54500	1816
15/10/2020 13:53:28	POD1_02	150000	40700	202
15/10/2020 13:54:12	POD1_03	150000	33500	101
15/10/2020 13:55:19	POD1_04	160000	63200	2119
15/10/2020 13:56:02	POD1_05	170000	40200	908
15/10/2020 13:56:49	POD1_06	160000	34900	101
15/10/2020 13:57:33	POD1_07	170000	44300	1715
15/10/2020 13:58:28	POD1_08	190000	65500	
15/10/2020 13:59:12	POD1_09	150000	48700	101
15/10/2020 13:59:54	POD1_10	140000	32600	101
15/10/2020 14:01:01	POD1_11	120000	29000	
15/10/2020 14:01:43	POD1_12	140000	30600	101
15/10/2020 14:02:24	POD1_13	130000	27300	101
15/10/2020 14:03:10	POD1_14	120000	27100	202
15/10/2020 14:04:39	POD1_15	140000	48200	1110
15/10/2020 14:05:30	POD1_16	160000	41100	238
15/10/2020 14:06:38	POD1_17	160000	48800	1009
15/10/2020 14:07:37	POD1_18	200000	64100	101
15/10/2020 14:08:25	POD1_19	120000	28200	1312
15/10/2020 14:09:07	POD1_20	130000	24900	101
15/10/2020 14:09:49	POD1_21	120000	26800	807
15/10/2020 14:10:48	POD1_22	120000	43100	2128
15/10/2020 14:12:07	POD1_23	120000	30700	504
15/10/2020 14:14:38	POD1_24	190000	76600	
15/10/2020 14:15:32	POD1_25	140000	40300	504
MAX		200000	76600	2128
CLASS 8 LIMITS		3520000	832200	29300
PERCENTAGE OF LIMIT				
Maximum		**6%**	**9%**	**7%**
CLASS 7 LIMITS		352000	83220	2930
PERCENTAGE OF LIMIT				
Maximum		**57%**	**92%**	**73%**

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I.T.CLEANING

CERTIFICATE OF CONFORMITY

XXXY
14 Canal Walk
Data Hall 1

Specification Achieved

ISO 14644 Class 7

Plus all accessible surfaces free from dust.

Specification Required:	Class 8 or better
Date:	15/10/2020 **This certificate is valid for 1 year**
Time:	14:17
Tester:	Steve Yates
Test Instrument:	Light house Solair 5100+
Area tested:	908 m^2
Number of tests locations:	27
Sample protocol:	Regular Spaces across the room
Sample volume:	0.01 m^3
Sample time:	21s
Air flow:	Non Directional
Occupancy state:	Operational
Particle sizes tested:	0.5µm, 1.0µm, 5.0µm

TEST RESULTS

Particle Size	particles/m^3	CLASS 7		CLASS 8	
0.5 micron	200,000	**PASS**	352,000	**PASS**	3,520,000
1.0 micron	76,600	**PASS**	83,220	**PASS**	832,200
5.0 micron	2,128	**PASS**	2,930	**PASS**	29,300

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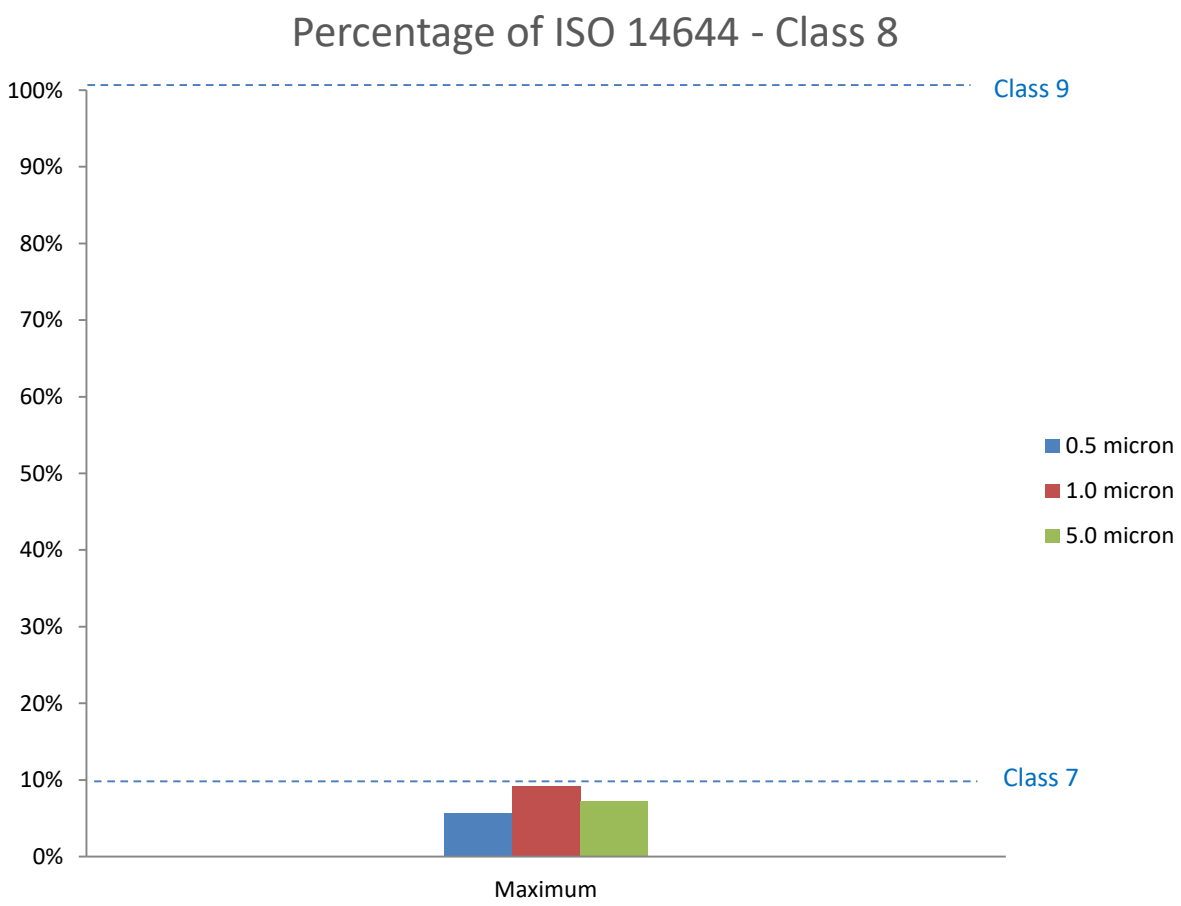
GRAPHICAL RESULTS



International Standards for Cleanrooms and Critical Environments

Airborne Particulate Cleanliness Classes ISO 14644

Class	Number of Particles per Cubic Meter by Micrometer Size					
	0.1 um	0.2 um	0.3 um	0.5 um	1 um	5 um
ISO 1	10	2				
ISO 2	100	24	10	4		
ISO 3	1,000	237	102	35	8	
ISO 4	10,000	2,370	1,020	352	83	
ISO 5	100,000	23,700	10,200	3,520	832	29
ISO 6	1,000,000	237,000	102,000	35,200	8,320	293
ISO 7				352,000	83,200	2,930
ISO 8				3,520,000	832,000	29,300
ISO 9				35,200,000	8,320,000	293,000

ISO-14644-1 Classification of Air Cleanliness

Cleanliness class designations and quantity have changed from FS209E (see Table 1). Along with the obvious change to metric measure of air volume, ISO 14644-1 adds three additional classes.

IT Cleaning Ltd Specification for Data Room class 8 clean; Air particulate levels to Class 8 or better plus all accessible surfaces free from dust.

Strategic Testing: (Table 1) Schedule of Tests to Demonstrate Continuing Compliance.

Test Parameter	Class	Maximum Time Interval	Test Procedure
Particle Count Test	≤ ISO 5	6 Months	ISO 14644-1 Annex A
	> ISO 5	12 Months	
Air Pressure Difference	All Classes	12 Months	ISO 14644-1 Annex B5
Airflow	All Classes	12 Months	ISO 14644-1 Annex B4

Definitions

Operational	Populated room, equipment is live
Occupied	Populated room, equipment is not live
Unoccupied	Unpopulated room

CERTIFICATE OF CALIBRATION

Microtechnica
Service & Calibration Specialists - Particle Counters & TOC Analysers

CERTIFICATE NO. M12707/NT/01

CERTIFICATE OF CALIBRATION

CUSTOMER DETAILS								
CUSTOMER IT Cleaning Limited								
ADDRESS 112 Clifton Street, Swindon, SN1 3QA								
PARTICLE COUNTER DETAILS								
MODEL Lighthouse Solair 5100+								
SERIAL NUMBER 080203003					**REFERENCE ID** 00165			

CALIBRATION TEST INSTRUMENTATION			
INSTRUMENT	**SERIAL NUMBER**	**CERTIFICATE NUMBER**	**CALIBRATION EXPIRY**
PHA	uT-4003	M12602/AC/03	16 Oct 2020
Digital Multimeter	1090519753	1595638	30 Aug 2020
Rotameter	F138007/2	100835	14 Oct 2020

PRE CALIBRATION CHANNEL SETTINGS								
Size (µm)	0.5	0.7	1.0	3.0	5.0	10.0	----	----
Threshold	215 mV	478 mV	586 mV	1571 mV	2876 mV	3720 mV	----	----

PERFORMANCE DETAILS					
Particle Size (µm)	**Lot Number**	**Expiry Date**	**Output**		
0.508	193188	Jan 2021	223 mV	**Calibration Volt.**	N/A
0.702	190236	Oct 2020	478 mV	**Flow Rate**	1.0 CFM
1.030	192847	Jan 2021	570 mV	**Noise**	23.5 mV
2.020	196617	Apr 2021	979 mV	**Signal/Noise**	9.0:1
5.300	192013	Dec 2020	2964 mV		
10.100	183436	Apr 2020	3761 mV	**Extra Details:**	

COMMENTS Instrument within specification

POST CALIBRATION CHANNEL SETTINGS								
Size (µm)	0.5	0.7	1.0	3.0	5.0	10.0	----	----
Threshold	211 mV	476 mV	569 mV	1607 mV	2820 mV	3759 mV	----	----

THE INSTRUMENT HAS BEEN CALIBRATED IN ACCORDANCE WITH ASTM F328-98 AND IS SUITABLE FOR USE

NAME Nick Todd	**CALIBRATION DATE** 19 Feb 2020
SIGNATURE	**NEXT CALIBRATION DUE** 19 Feb 2021

Rev 3.0
Oct 2019
Form No. F1048

This is to certify that the instrument, as detailed above, has been calibrated in accordance with Microtechnica standard procedures. Test equipment used is traceable to national or international standards.

QMS ISO 9001 : 2015 REGISTERED