

5-Jun-20

Date of Calibration

Cerificate of Calibration

Calibrated by:

Wong Shing Kwai

Description:

Digital Dust Indicator

It is certified that the item under calibration has been calibrated by corresponding calibrated High Volume Sampler

Manufacturer:	Sibata Scient	ific Technology LTD.	_	Validity of Calibra	5-Aug-20	
Model No.:	LD-5R					
Serial No.:	972777					
Equipment No.:	SA-01-06		Sensitivity	0.001 mg/m3		
High Volume Sa	mpler No.:	A-01-03	Before Sensi	tivity Adjustment	645	
Tisch Calibration	n Orifice No.:	3607	After Sensitiv	vity Adjustment	645	
		Ca	alibration of 1	hr TSP		
Calibration		Laser Dust Monito	r		HVS	
Point	M	Iass Concentration (μg	/m3)	Mass	s concentration ($\mu g/m^3$)
X-axis			Y-axis			
1	1 46.0				100.5	
2	40.0				96.5	
3	3 34.0				91.0	
Average		40.0			96.0	
By Linear Regr Slope , mw =	ession of Y or 0.79		Inte	rcept, bw =	64.3333	
Correlation co		0.9959		<u>_</u>	04.555	<u>'</u>
Correlation Co	cincient –	0.773	,	_		
		Se	et Correlation	Factor		
Particaulate Con	centration by I	High Volume Sampler	$(\mu g/m^3)$		96.0	
Particaulate Con	centration by I	Dust Meter (μg/m ³)			40.0	
Measureing time	e, (min)			60.0		
Set Correlation I	Factor, SCF					
SCF = [K=High	h Volume San	npler / Dust Meter, (µ	ıg/m3)]	2.4		
In-house method	l in according t	to the instruction manu	ual:			
		ed with a calibrated Hi		npler and The result v	was used to gene	rate the Correlation
		Monitor and High Volu	=			
Those filter pap	ers are weigh	ted by HOKLAS lab	oratory (Wella	b Litimed)		



5-Jun-20

Date of Calibration

Cerificate of Calibration

Digital Dust Indicator

Description:

It is certified that the item under calibration has been calibrated by corresponding calibrated High Volume Sampler

_							
Manufacturer:	Sibata Scientific Technology LTD	Validit	Validity of Calibration Record 5-Aug-20				
Model No.:	LD-5R						
Serial No.:	972778						
Equipment No.:	SA-01-07	Sensitivity 0.001	mg/m3				
High Volume Sa	mpler No.: <u>A-01-01A</u>	Before Sensitivity Adj	tivity Adjustment 735 CPM				
Tisch Calibration	n Orifice No.: 3607	After Sensitivity Adjus	rivity Adjustment 735 CPM				
		Calibration of 1 hr TSP					
Calibration	Laser Dust Monit	or	HVS				
Point	Mass Concentration (μ X-axis	g/m3)	Mass concentration (μg/m³) Y-axis				
1	47.0		100.5				
2	37.0		96.5				
3	26.0		91.0				
Average	36.7		96.0				
By Linear Regr Slope , mw = Correlation co	ession of Y on X 	Intercept, bw	= 79.383	37			
		<u>·</u>					
		Set Correlation Factor					
	centration by High Volume Sample	$r (\mu g/m^3)$	96.0				
Particaulate Con	centration by Dust Meter (μg/m³)		36.7				
Measureing time	e, (min)		60.0				
Set Correlation I	Factor, SCF						
SCF = [K=Higl	h Volume Sampler / Dust Meter, (μg/m3)]	2.6				
The Dust Monito Factor (CF) betw	in according to the instruction man or was compared with a calibrated F ween the Dust Monitor and High Vo	ligh Volume Sampler and lume Sampler.	•	nerate the Correlation			

Those filter papers are weighted by HOKLAS laboratory (Wellab Litimed)

Calibrated by: Wong Shing Kwai Approved by: Lemy Kenry Leung



Approved by: _lemp \\ Henry Leung

Cerificate of Calibration

Calibrated by:

Wong Shing Kwai

It is certified that the item under calibration has been calibrated by corresponding calibrated High Volume Sampler

Description:	Digital Dust Indicator		Date of Calibration 5-Jun-20			
Manufacturer:	Sibata Scientific Technology L	TD.	Validity of Calibration Record 5-Aug-2			
Model No.:	LD-5R					
Serial No.:	972779					
Equipment No.:	SA-01-08	Sensitivity	0.001 mg/m3			
High Volume Sa	mpler No.: <u>A-01-01A</u>	Before Sensitiv	rity Adjustment	744 CPM		
Tisch Calibration	n Orifice No.: <u>3607</u>	After Sensitivi	sitivity Adjustment 744 CPM			
		Calibration of 1 hi	· TSP			
Calibration	Laser Dust Mo	nitor		HVS		
Point	Mass Consentration (us/m2)			ss concentration (µ Y-axis	g/m ³)	
1	46.0		100.5			
2	33.0	96.5				
3	19.0		91.0			
Average	32.7			96.0		
•	ession of Y on X					
Slope , mw =	0.3524	Interc	ept, bw =	84.4890		
Correlation co	pefficient* =0.	.9976				
		Set Correlation Fa	actor			
Particaulate Con	centration by High Volume Sam	ıpler (μg/m³)		96.0		
Particaulate Con	centration by Dust Meter (µg/m ²	3)		32.7		
Measureing time	e, (min)			60.0		
Set Correlation I	Factor, SCF					
SCF = [K=Higl	h Volume Sampler / Dust Mete	er, (µg/m3)]	2.9			
The Dust Monito Factor (CF) betw	in according to the instruction or was compared with a calibrate ween the Dust Monitor and High oers are weighted by HOKLAS	ed High Volume Samp Volume Sampler.		was used to gener	ate the Correlation	



File No. MA16034/05/0024

Project No.	AM1 - Tin Hau	Temple				<u>-</u>	
Date:	9-Jı	ın-20	Next Due Date:	9-4	Aug-20	Operator:	SK
Equipment No.:	o.: A-01-05		Model No.:	GS	S2310	_ Serial No	10599
			Ambient C	ondition			
Temperatu	re, Ta (K)	303	Pressure, Pa			759.1	
•	`		•	`	•		
		Or	fice Transfer Star	ndard Informa	ation		
Serial	l No.	3746	Slope, mc	0.0592	Intercept		-0.02740
Last Calibra	ation Date:	17-Jan-20			$c = [\Delta H \times (Pa/760)]$		
Next Calibr	ation Date:	17-Jan-21		$Qstd = \{ [\Delta H \ x] \}$	(Pa/760) x (298/7	Γa)] ^{1/2} -bc} /	mc
	1		Calibration of	ΓSP Sampler	ı		
Calibration		Oı	fice			HVS	. 1/2
Point	ΔH (orifice), in. of water	[ΔH x (Pa/76	50) x (298/Ta)] ^{1/2}	Qstd (CFM) X - axis	ΔW (HVS), in. of water		760) x (298/Ta)] ^{1/2} Y-axis
1	12.8		3.55	60.36	8.6		2.91
2	9.4		3.04	51.79	6.3		2.49
3	7.5		2.71	46.31	4.8		2.17
4	4.8		2.17	37.14	3.1		1.75
5	2.5		1.57	26.93	1.8		1.33
	ression of Y on 2	X			0.011	0	
Slope, mw =		_		Intercept, bw	0.011	9	
	coefficient* =	90, check and re	.9983	•			
'11 Correlation C	_0e111clent < 0.9	90, check and re	canorate.				
			Set Point Ca	lculation			
From the TSP F	ield Calibration	Curve, take Qstd	= 43 CFM				
From the Regres	ssion Equation, t	he "Y" value acc	ording to				
					21/2		
		mw x C	$\mathbf{pstd} + \mathbf{bw} = [\Delta \mathbf{W} \ \mathbf{x}]$	(Pa/760) x (29	98/Ta)]" ²		
Therefore, Se	et Point; W = (n	nw x Qstd + bw)	2 x (760 / Pa) x (7	Γa / 298) =	4.30		
Remarks:							
			d				
Conducted by:	SK Wong	Signature:				Date:	9 June 2020
Checked by:	Henry Leung	Signature:	-len X	~~		Date:	9 June 2020



File No. MA16034/08/0024

Project No.	AM2 - Sai Tso	Wan Recreation	Ground				
Date:	9-Jı	ın-20	Next Due Date: 9-Aug-20		Operator:	SK	
Equipment No.:	A-0	1-08	Model No.:	GS	52310	Serial No.	1287
			Ambient C	ondition			
Temperatu	re, Ta (K)	303	Pressure, Pa			759.1	
		Or	ifice Transfer Star	idard Informa	ation		
Serial	No.	3746	Slope, mc	0.0592	Intercept		-0.02740
Last Calibra	tion Date:	17-Jan-20			$c = [\Delta H \times (Pa/760)]$		
Next Calibra	ation Date:	17-Jan-21		$Qstd = \{ [\Delta H \ x] \}$	(Pa/760) x (298/7	Γa)] ^{1/2} -bc} / m	c
			Calibration of	TSP Sampler			
Calibration	ΔH (orifice),		fice	Oatd (CEM)	ΔW (HVS), in.	HVS	(200 /T)1 ^{1/2}
Point	in. of water	[ΔH x (Pa/76	$(50) \times (298/Ta)]^{1/2}$	Qstd (CFM) X - axis	of water		50) x (298/Ta)] ^{1/2} -axis
1	12.8		3.55	60.36	8.4		2.87
2	9.8	1	3.10	52.87	6.1		2.45
3	7.8		2.77	47.22	4.8	,	2.17
4	4.8		2.17	37.14	3.0		1.72
5	2.6		1.60	27.46	1.9		1.37
By Linear Regr Slope, mw = Correlation		_	.9964	ntercept, bw =	0.063	1	
*If Correlation C	Coefficient < 0.9	90, check and re	calibrate.				
			Set Point Ca	lculation			
From the TSP Fi	eld Calibration	Curve, take Qstd	= 43 CFM				
From the Regres	sion Equation, t	he "Y" value acc	ording to				
		mw x Q	$\mathbf{Qstd} + \mathbf{bw} = [\Delta \mathbf{W} \ \mathbf{x}]$	(Pa/760) x (29	98/Ta)] ^{1/2}		
Therefore, Se	et Point; W = (n	nw x Qstd + bw)	$x^2 \times (760 / Pa) \times (760 / Pa)$	Γa / 298) =	4.17		
Remarks:							
Conducted by:	SK Wong	Signature:	<u> </u>			Date:	9 June 2020
Checked by:		Signature:	-leng 0	01-08).xls		Date:	9 June 2020



File No. MA16034/03/0024

Project No.	AM3 - Yau Lai	Estate, Bik Lai l	House				
Date:	9-Jı	ın-20	Next Due Date: 9-Aug-20		Operator:	SK	
Equipment No.:	A-0	01-03	Model No.:	GS	52310	Serial No.	10379
			Ambient C	ondition			
Temperatu	re Ta(K)	303	Pressure, Pa			759.1	
Temperatu	10, 14 (11)	303	11055410,14	(11111115)		733.1	
		Or	ifice Transfer Star	ndard Informa	ation		
Serial	No.	3746	Slope, mc	0.0592	Intercept	t, bc	-0.02740
Last Calibra	ntion Date:	17-Jan-20	r	nc x Qstd + bo	$c = [\Delta H \times (Pa/760)]$	$(298/Ta)]^{1/2}$	2
Next Calibra	ation Date:	17-Jan-21			(Pa/760) x (298/7		
	-		-				
			Calibration of	ΓSP Sampler			
Calibration		Oı	fice			HVS	
Point	ΔH (orifice), in. of water	[ΔH x (Pa/76	60) x (298/Ta)] ^{1/2}	Qstd (CFM) X - axis	ΔW (HVS), in. of water		50) x (298/Ta)] ^{1/2} -axis
1	12.8		3.55	60.36	8.5	2	2.89
2	9.3		3.02	51.52	6.5	2	2.53
3	7.8		2.77	47.22	5.1	2	2.24
4	5.2		2.26	38.64	3.4		1.83
5	2.6		1.60	27.46	2.0		1.40
By Linear Regr Slope , mw = Correlation		_	.9969	ntercept, bw =	0.095	3	
		90, check and re					
			Set Point Ca	lculation			
From the TSP Fi	eld Calibration	Curve, take Qstd	= 43 CFM				
From the Regres	sion Equation, t	he "Y" value acc	ording to				
		mw x Q	$\mathbf{Qstd} + \mathbf{bw} = [\Delta \mathbf{W} \ \mathbf{x}]$	(Pa/760) x (29	98/Ta)] ^{1/2}		
Therefore, Se	et Point; W = (n	nw x Qstd + bw)	² x (760 / Pa) x (7	Γα / 298) =	4.41		
Remarks:							
Conducted by:	SK Wong	Signature:	<u> </u>			Date:	9 June 2020
Checked by: F:\Cinotech Solution		Signature:	Composition (A-6034 20200609 AM3 (A-	01-03).xls		Date:	9 June 2020



File No. MA16034/54/0024

Project No.	AM4(A) - Cha	Kwo Ling Public	c Cargo Working A	rea Administra	tive Office		
Date:	9-Jı	ın-20	Next Due Date: 9-Aug-20		Operator:	SK	
Equipment No.:	A-(01-54			E-5170	Serial No.	1536
			Ambient C	ondition			
Temperatur	re, Ta (K)	303	Pressure, Pa			759.1	
			•	-			
		Or	ifice Transfer Star	ndard Informa	ation		
Serial	No.	3746	Slope, mc	0.0592	Intercept	t, bc	-0.02740
Last Calibra	tion Date:	17-Jan-20			$c = [\Delta H \times (Pa/760]]$		
Next Calibra	ation Date:	17-Jan-21		$Qstd = \{ [\Delta H x] \}$	(Pa/760) x (298/7	Γa)] ^{1/2} -bc} / n	nc
			Calibration of T	ΓSP Sampler			
Calibration		Oı	rfice			HVS	-
Point	ΔH (orifice), in. of water	[ΔH x (Pa/76	60) x (298/Ta)] ^{1/2}	Qstd (CFM) X - axis	ΔW (HVS), in. of water		(60) x (298/Ta)] ^{1/2} Y-axis
1	12.9		3.56	60.59	8.5		2.89
2	9.8		3.10	52.87	6.3		2.49
3	7.5		2.71	46.31	5.0		2.22
4	5.2		2.26	38.64	3.2		1.77
5	2.9		1.69	28.97	1.9		1.37
By Linear Regr Slope, mw = Correlation		_	.9988	Intercept, bw =	-0.059	2	
*If Correlation C	Coefficient < 0.9	90, check and re	calibrate.				
			Set Point Ca	lculation			
From the TSP Fi	eld Calibration	Curve, take Qstd	= 43 CFM				
From the Regres	sion Equation, t	he "Y" value acc	cording to				
		mw x Q	$\mathbf{Qstd} + \mathbf{bw} = [\Delta \mathbf{W} \ \mathbf{x}]$	(Pa/760) x (29	98/Ta)] ^{1/2}		
Therefore, Se	et Point; W = (n	nw x Qstd + bw)	$x^2 \times (760 / Pa) \times (78)$	Γa / 298) =	4.18		
Remarks:							
			لدا				
Conducted by:	SK Wong	Signature:				Date:	9 June 2020
Checked by:	Henry Leung	Signature:	- leng X	~~		Date:	9 June 2020
F:\Cinotech Solution	ns\Equipment\Calibrati	on Cert\HVS\new\MA1	6034_20200609_AM4(A)_	(A-01-54).xls			



File No. MA16034/37/0024

Project No.	AM5(A) - Tseu	ng Kwan O DSI	Desilting Compou	ınd			
Date:	9-Ju	ın-20	Next Due Date: 9-Aug-20		Operator:	SK	
Equipment No.:	A-0	1-37	Model No.:	GS2310		Serial No	1704
			Ambient C	ondition			
Temperatui	re, Ta (K)	303	Pressure, Pa			759.1	
G : 1	N.		ifice Transfer Star		l	1	0.00740
Serial Last Calibra		3746 17-Jan-20	Slope, mc	0.0592	Intercept $c = [\Delta H \times (Pa/760)]$		-0.02740
Next Calibra		17-Jan-20 17-Jan-21	-	nc x Qstu + bt Ostd = {[AH x	: — _[ДН х (Fа/760 (Pa/760) х (298/]	/)	c
Next Callula	ation Date.	1 / -Jaii-21	`		(1 a/ /00) x (290/)	-bc ₃ / in	<u> </u>
		•	Calibration of T	ΓSP Sampler			
Calibration		Oı	·fice	· ·		HVS	
Point	ΔH (orifice), in. of water	[ΔH x (Pa/76	60) x (298/Ta)] ^{1/2}	Qstd (CFM)	ΔW (HVS), in.		$(50) \times (298/\text{Ta})^{1/2}$
1	12.9		3.56	X - axis 60.59	of water		-axis 2.91
2	9.7	1	3.09	52.61	6.3		2.49
3	7.9		2.79	47.52	5.2		2.26
4	5.3		2.28	39.01	3.3		1.80
5	2.9		1.69	28.97	1.9		1.37
	0.0490 coefficient* =	0	.9993	Intercept, bw =	-0.075	31	
*If Correlation C	Coefficient < 0.9	90, check and re	calibrate.				
			Set Point Ca	alculation			
From the TSP Fi	eld Calibration	Curve, take Qstd	= 43 CFM				
From the Regres	sion Equation, t	he "Y" value acc	ording to				
		mw v ($\mathbf{0std} + \mathbf{bw} = [\Delta \mathbf{W} \ \mathbf{x}]$	(Pa/760) v (29	98/Ta)] ^{1/2}		
		IIIW X (zstu · bw – įΔw x	(1 a/ /00) X (2)	76/1 <i>a</i>)]		
Therefore, Se	t Point; W = (m	nw x Qstd + bw)	$x^2 \times (760 / Pa) \times (760 / Pa)$	$\Gamma a / 298) =$	4.20		
Remarks:							
•							
Conducted by:	SK Wong	Signature:		~		Date:	9 June 2020
			\ .			_	0.1
Checked by:	Henry Leung	Signature:	- temy 0	vo 7		Date:	9 June 2020
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File No. MA16034/07/0024

Project No.	AM6 - Park Ce	ntral				_	
Date:	6-Jul-20		Next Due Date: 6-Sep-20		Sep-20	Operator:	SK
Equipment No.:			Model No.:	GS2310		Serial No.	10592
			Ambient C	ondition			
Temperatui	re, Ta (K)	304	Pressure, Pa			760.1	
1	, , ,			<i>C</i>			
		Or	ifice Transfer Star	ndard Informa	ation		
Serial	No.	3746	Slope, mc	0.0592	Intercept	t, bc	-0.02740
Last Calibra	tion Date:	17-Jan-20			$c = [\Delta H \times (Pa/760)]$		
Next Calibra	ation Date:	17-Jan-21		$Qstd = \{ [\Delta H x] \}$	(Pa/760) x (298/	Γa)] ^{1/2} -bc} / m	c
		•					
			Calibration of	ΓSP Sampler			
Calibration		Oı	Orfice			HVS	
Point	ΔH (orifice),	[ΔH x (Pa/76	60) x (298/Ta)] ^{1/2}	Qstd (CFM)	ΔW (HVS), in.		$(50) \times (298/\text{Ta})^{1/2}$
	in. of water			X - axis	of water		-axis
2	12.5 8.9	<u> </u>	3.50 2.95	59.60	7.5		2.71 2.34
3	7.2		2.66	50.36 45.34	5.6 4.5		2.34
4	4.6		2.12	36.33	3.0		1.71
5	3.0		1.71	29.43	1.8		1.33
By Linear Regr Slope, mw = Correlation of		_	.9982	Intercept, bw	0.025	4	
*If Correlation C	Coefficient < 0.9	990, check and re	calibrate.				
			Set Point Ca	lculation			
From the TSP Fi		_					
From the Regres	sion Equation, t	he "Y" value acc	cording to				
		mw x ($\mathbf{Qstd} + \mathbf{bw} = [\Delta \mathbf{W} \ \mathbf{x}]$	(Pa/760) x (29	98/Ta)] ^{1/2}		
Therefore, Se	t Point; W = (n	nw x Qstd + bw)	$(760 / Pa) \times (760 / Pa) \times (760 / Pa)$	Γa / 298) =	4.02		
Remarks:							
Conducted by:	SK Wong	Signature:				Date:	6 July 2020
Checked by:		Signature:	- leng (Xo 7		Date:	6 July 2020
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RECALIBRATION **DUE DATE:**

January 17, 2021

ertificate o

Calibration Certification Information

Cal. Date: January 17, 2020

Rootsmeter S/N: 438320

Ta: 295 Pa: 744.2 °K

Operator: Jim Tisch

mm Hg

Calibration Model #: TE-5025A

Calibrator S/N: 3746

Run	Vol. Init (m3)	Vol. Final (m3)	ΔVol. (m3)	ΔTime (min)	ΔP (mm Hg)	ΔH (in H2O)
1	1	2	1	1.4340	3.2	2.00
2	3	4	1	1.0180	6.4	4.00
3	5	6	1	0.9080	7.9	5.00
4	7	8	1	0.8700	8.7	5.50
5	9	10	1	0.7150	12.6	8.00

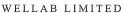
	Data Tabulation								
Vstd	Qstd	$\sqrt{\Delta H \left(\frac{Pa}{Pstd}\right) \left(\frac{Tstd}{Ta}\right)}$		Qa	√∆H(Ta/Pa)				
(m3)	(x-axis)	(y-axis)	Va	(x-axis)	(y-axis)				
0.9849	0.6868	1.4066	0.9957	0.6944	0.8904				
0.9807	0.9633	1.9892	0.9914	0.9739	1.2592				
0.9787	1.0779	2.2240	0.9894	1.0896	1.4078				
0.9776	1.1237	2.3325	0.9883	1.1360	1.4765				
0.9724	1.3601	2.8131	0.9831	1.3749	1.7808				
	m=	2.09221		m=	1.31010				
QSTD	b=	-0.02779	QA	b=	-0.01759				
	r=	0.99994		r=	0.99994				

Calculations						
Vstd=	ΔVol((Pa-ΔP)/Pstd)(Tstd/Ta)	Va=	ΔVol((Pa-ΔP)/Pa)			
Qstd=	Vstd/∆Time	Qa=	= Va/ΔTime			
For subsequent flow rate calculations:						
Qstd=	$1/m\left(\left(\sqrt{\Delta H\left(\frac{Pa}{Pstd}\right)\left(\frac{Tstd}{Ta}\right)}\right)-b\right)$	Qa=	$1/m\left(\left(\sqrt{\Delta H\left(Ta/Pa\right)}\right)-b\right)$			

Standard Conditions		
Tstd:	298.15 °K	
Pstd:	760 mm Hg	
	Key	
ΔH: calibrator manometer reading (in H2O)		
ΔP: rootsmeter manometer reading (mm Hg)		
Ta: actual absolute temperature (°K)		
Pa: actual barometric pressure (mm Hg)		
b: intercept		
m: slono		

RECALIBRATION

US EPA recommends annual recalibration per 1998 40 Code of Federal Regulations Part 50 to 51, Appendix B to Part 50, Reference Method for the Determination of Suspended Particulate Matter in the Atmosphere, 9.2.17, page 30



1 of 1



Rms 1214, 1502, 1516, 1701 & 1716, Technology Park, 18 On Lai Street, Shatin, N.T., Hong Kong. Tel: 2898 7388 Fax: 2898 7076 Website: www.wellab.com.hk

TEST REPORT

APPLICANT: Cinotech Consultants Limited

Room 1710, Technology Park,

18 On Lai Street,

Shatin, NT, Hong Kong

 Test Report No.:
 32151

 Date of Issue:
 2019-09-27

 Date Received:
 2019-09-26

 Date Tested:
 2019-09-26

 Date Completed:
 2019-09-27

 Next Due Date:
 2020-09-26

ATTN: Mr. Henry Leung Page:

Certificate of Calibration

Item for calibration:

Description : 'SVANTEK' Integrating Sound Level Meter

Manufacturer : SVANTEK
Model No. : SVAN 957
Serial No. : 21455
Microphone No. : 43730
Equipment No. : N-08-07

Test conditions:

Room Temperatre : 17-22 degree Celsius

Relative Humidity : 40-70%

Test Specifications:

Performance checking at 94 and 114 dB

Methodology:

In-house method, according to manufacturer instruction manual

Results:

Reference Set Point, dB	Instrument Readings, dB
94	94.0
114	114.0

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.

PATRICK TSE
Laboratory Manager



0022999

Customer: Cinotech Consultants Limited RM 1710, Technology Park, 18 On Lai Street, Shatin, N.T. Hong Kong		Object 1 : Serial No. /Ref. No. : Object 2 : Serial No. /Ref. No. :	Microphone
Customer Code: SVEC09005		Manufacturer: Svar	ntek
Date of calibration: Date of the recommended re-calibration:	19/12/2019 19/12/2020	Certificate No.: Handle by:	0022999 E0002

Measuring results

Reference value	Indication value	Deviation	Allowed deviation	Object	
94.0dB	94.0dB	0.0dB	+/- 1.5dB	1	
114.0dB	114.0dB	0.0dB	+/- 1.5dB	1	

Measuring equipment

index Calibrator / Master		Calibrator / Master	Traceability
C Description	1	Master Sound Meter, SVAN949,sn:8571	IEC61672
	2	Sound Calibrator, SV30A sn:32580	IEC60942

Ambient conditions

Temperature (20...26)°C

Humidity (20...60)%RH

Measuring procedure

Calibrated by Type 1 Sound Calibrator with Master Sound Level Meter under 1kHz Frequency.

Uncertainty

+/- 0.2 dB for probability not less than 95%.

Conformity

- 1. The resulted values were those obtained at the time of test and applies only to the item calibrated.
- 2. The measurement uncertainty was calculated according to the regulations of GUM with the coverage factor k=2 and contains the uncertainty of the measuring procedure and the uncertainty of the measuring system.
- 3. The equipment being used in this calibration are regularly calibrated by laboratory according to ISO/IEC17025.
- 4.HKAS has accredited this laboratory (HOKLAS 267) for specific calibration activities as listed in the HOKLAS directory of accredited laboratories.
- 5. The calibrations certificate may not be reproduced.

Measured value(s)	within	the allowable deviation.
(-/	AA TCTTTTT	

Performed by

Calibration Technician

Approved by



0022522

Object 1: Customer: BSWA 308 SLM Serial No. /Ref. No. : Cinotech Consultants Limited 570187 / 550841 RM 1710, Technology Park, Object 2: 18 On Lai Street, Shatin, N.T. Serial No. /Ref. No. Hong Kong Customer Code: SVEC09005 Manufacturer: **BSWAtech** Date of calibration: 23/09/2019 Certificate No.: 0022522 Date of the recommended re-calibration: Handle by: 23/09/2020 E0002

Measuring results

Reference value	Indication value	Deviation	Allowed deviation	Object
94.0dB	94.0dB	0.0dB	+/- 1.5dB	1
114.0dB	113.9dB	-0.1dB	+/- 1.5dB	1

Measuring equipment

index	Calibrator / Master	Traceability
1	Master Sound Meter, SVAN949,sn:8571	IEC61672
2	Sound Calibrator, SV30A sn:32580	IEC60942

Ambient conditions

Temperature (20...26)°C

Humidity (20...60)%RH

Measuring procedure

Calibrated by Type 1 Sound Calibrator with Master Sound Level Meter under 1kHz Frequency.

Uncertainty

+/- 0.2 dB for probability not less than 95%.

Conformity

- 1. The resulted values were those obtained at the time of test and applies only to the item calibrated.
- 2. The measurement uncertainty was calculated according to the regulations of GUM with the coverage factor k=2 and contains the uncertainty of the measuring procedure and the uncertainty of the measuring system.
- 3. The equipment being used in this calibration are regularly calibrated by laboratory according to ISO/IEC17025.
- 4.HKAS has accredited this laboratory (HOKLAS 267) for specific calibration activities as listed in the HOKLAS directory of accredited laboratories.
- 5. The calibrations certificate may not be reproduced.

Measured value(s)	ithin ti	he allowable	deviation.
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Performed by

Calibration Technician

Approved by



0023156

Customer: Cinotech Consultants Limited RM 1710, Technology Park, 18 On Lai Street, Shatin, N.T. Hong Kong	Object 1: SVAN979 SLM Serial No. /Ref. No.: 27190 / SN-01-02 Object 2: Microphone Serial No. /Ref. No.: 25202
Customer Code: SVEC09005	Manufacturer: BSWAtech
Date of calibration: 08/01/2020 Date of the recommended re-calibration: 08/01/2021	Certificate No.: 0023156 Handle by: E0002

Measuring results

Reference value	Indication value	Deviation	Allowed deviation	Object
94.0dB	94.0dB	0.0dB	+/- 1.5dB	1
114.0dB	113.9dB	-0.1dB	+/- 1.5dB	1

Measuring equipment

index	Calibrator / Master	Traceability
1	Master Sound Meter, SVAN949,sn:8571	IEC61672
2	Sound Calibrator, SV30A sn:32580	IEC60942

Ambient conditions

Temperature (20...26)°C

Humidity (20...60)%RH

Measuring procedure

Calibrated by Type 1 Sound Calibrator with Master Sound Level Meter under 1kHz Frequency.

Uncertainty

+/- 0.2 dB for probability not less than 95%.

Conformity

- 1. The resulted values were those obtained at the time of test and applies only to the item calibrated.
- 2. The measurement uncertainty was calculated according to the regulations of GUM with the coverage factor k=2 and contains the uncertainty of the measuring procedure and the uncertainty of the measuring system.
- 3. The equipment being used in this calibration are regularly calibrated by laboratory according to ISO/IEC17025.
- 4.HKAS has accredited this laboratory (HOKLAS 267) for specific calibration activities as listed in the HOKLAS directory of accredited laboratories.
- 5. The calibrations certificate may not be reproduced.

Measured value(s)	within	the allowable deviation

Performed by

Calibration Technician

Approved by



0023001

Customer: Cinotech Consultants Limited RM 1710, Technology Park, 18 On Lai Street, Shatin, N.T. Hong Kong		Object 1 : B&K4231 sound calibrator Serial No. /Ref. No. : 2326353 / N-02-01 Object 2 : Serial No. /Ref. No. :
Customer Code: SVEC09005		Manufacturer: Bruel & Kjaer
Date of calibration: Date of the recommended re-calibration:	19/12/2019 19/12/2020	Certificate No.: 0023001 Handle by: E0002

Measuring results

Reference value	Indication value	Deviation	Allowed deviation	Object
94.0dB	94.2dB	+0.2dB	+/- 0.2dB	1
114.0dB	114.1dB	+0.1dB	+/- 0.2dB	1

Measuring equipment

index	Calibrator / Master	Traceability
1	Master Sound Meter, SVAN949,sn:8571	IEC61672
2	Sound Calibrator, SV30A sn:32580	IEC60942

Ambient conditions

Temperature (20...26)°C

Humidity (20...60)%RH

Measuring procedure

Calibrated by Type 1 Sound Level Meter and 1kHz Sound Source .

Uncertainty

+/- 0.2 dB for probability not less than 95%.

Conformity

- 1. The resulted values were those obtained at the time of test and applies only to the item calibrated.
- 2. The measurement uncertainty was calculated according to the regulations of GUM with the coverage factor k=2 and contains the uncertainty of the measuring procedure and the uncertainty of the measuring system.
- 3. The equipment being used in this calibration are regularly calibrated by laboratory according to ISO/IEC17025.
- 4.HKAS has accredited this laboratory (HOKLAS 267) for specific calibration activities as listed in the HOKLAS directory of accredited laboratories.
- 5. The calibrations certificate may not be reproduced.

within the allowable devis	ation.
Performed by	Approved by
Calibration Technician	Quality Manager



0023002

Customer: Cinotech Consultants Limited RM 1710, Technology Park, 18 On Lai Street, Shatin, N.T. Hong Kong	Object 1: SV30A sound calibrator Serial No. /Ref. No.: 10965 / N-09-02 Object 2: Serial No. /Ref. No.:
Customer Code : SVEC09005	Manufacturer: Svantek
Date of calibration: 19/12/2019 Date of the recommended re-calibration: 19/12/2020	002002

Measuring results

Reference value	Indication value	Deviation	Allowed deviation	Object
94.0dB	93.9dB	-0.1dB	+/- 0.3dB	1
114.0dB	114.2dB	+0.2dB	+/- 0.3dB	1

Measuring equipment

index	Calibrator / Master	Traceability
1	Master Sound Meter, SVAN949,sn:8571	IEC61672
2	Sound Calibrator, SV30A sn:32580	IEC60942

Ambient conditions

Temperature (20...26)°C

Humidity (20...60)%RH

Measuring procedure

Calibrated by Type 1 Sound Level Meter and 1kHz Sound Source .

Uncertainty

+/- 0.2 dB for probability not less than 95%.

Conformity

- 1.The resulted values were those obtained at the time of test and applies only to the item calibrated.
- 2. The measurement uncertainty was calculated according to the regulations of GUM with the coverage factor k=2 and contains the uncertainty of the measuring procedure and the uncertainty of the measuring system.
- 3. The equipment being used in this calibration are regularly calibrated by laboratory according to ISO/IEC17025.
- 4.HKAS has accredited this laboratory (HOKLAS 267) for specific calibration activities as listed in the HOKLAS directory of accredited laboratories.
- 5. The calibrations certificate may not be reproduced.

Measured value(s)	within	the allowable deviation
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Performed by

Calibration Technician

Approved by



0022673

Customer:		Object 1 : ST-120 sound calibrator
Cinotech Consultants Limited		Serial No. /Ref. No.: 181001608
RM 1710, Technology Park,		Object 2:
18 On Lai Street, Shatin, N.T.		Serial No. /Ref. No. :
Hong Kong		
Customer Code: SVEC09005		Manufacturer : Soundtek
Date of calibration:	24/10/2019	Certificate No.: 0022673
Date of the recommended re-calibration:	24/10/2020	Handle by: F0002

Measuring results

Reference value	Indication value	Deviation	Allowed deviation	Object
94.0dB	94.0dB	0.0dB	+/- 0.3dB	1
114.0dB	114.1dB	+0.1dB	+/- 0.5dB	1

Measuring equipment

index	Calibrator / Master	Traceability
1	Master Sound Meter, SVAN949,sn:8571	IEC61672
2	Sound Calibrator, SV30A sn:32580	IEC60942

Ambient conditions

Temperature (20...26)°C

Humidity (20...60)%RH

Measuring procedure

Calibrated by Type 1 Sound Level Meter and 1kHz Sound Source .

Uncertainty

+/- 0.2 dB for probability not less than 95%.

Conformity

- 1. The resulted values were those obtained at the time of test and applies only to the item calibrated.
- 2. The measurement uncertainty was calculated according to the regulations of GUM with the coverage factor k=2 and contains the uncertainty of the measuring procedure and the uncertainty of the measuring system.
- 3. The equipment being used in this calibration are regularly calibrated by laboratory according to ISO/IEC17025.
- 4.HKAS has accredited this laboratory (HOKLAS 267) for specific calibration activities as listed in the HOKLAS directory of accredited laboratories.
- 5. The calibrations certificate may not be reproduced.

iation.	
Approved by	
Ouglity Manager	_

Appleone Calibration Laboratory Ltd.

Rm1309, 13/F, No.77 Wing Hong St, Kln, HKSAR

Tel: +852 2370 4437 Fax: +852 2114 0393



0022676

Customer: Cinotech Consultants Limited RM 1710, Technology Park, 18 On Lai Street, Shatin, N.T. Hong Kong		Object 1: ST-120 sound calibrator Serial No. /Ref. No.: 181001636 Object 2: Serial No. /Ref. No.:
Customer Code: SVEC09005		Manufacturer: Soundtek
Date of calibration: Date of the recommended re-calibration:	24/10/2019 24/10/2020	Certificate No.: 0022676 Handle by: E0002

Measuring results

Reference value	Indication value	Deviation	Allowed deviation	Object
94.0dB	93.7dB	-0.3dB	+/- 0.3dB	1
114.0dB	113.7dB	-0.3dB	+/- 0.5dB	1

Measuring equipment

index	Calibrator / Master	Traceability
1	Master Sound Meter, SVAN949,sn:8571	IEC61672
2	Sound Calibrator, SV30A sn:32580	IEC60942

Ambient conditions

Temperature (20...26)°C

Humidity (20...60)%RH

Measuring procedure

Calibrated by Type 1 Sound Level Meter and 1kHz Sound Source .

Uncertainty

+/- 0.2 dB for probability not less than 95%.

Conformity

- 1. The resulted values were those obtained at the time of test and applies only to the item calibrated.
- 2. The measurement uncertainty was calculated according to the regulations of GUM with the coverage factor k=2 and contains the uncertainty of the measuring procedure and the uncertainty of the measuring system.
- 3. The equipment being used in this calibration are regularly calibrated by laboratory according to ISO/IEC17025.
- 4.HKAS has accredited this laboratory (HOKLAS 267) for specific calibration activities as listed in the HOKLAS directory of accredited laboratories.
- 5. The calibrations certificate may not be reproduced.

Measured value(s)	within	the allowable deviation.
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Performed by

Calibration Technician

Quality Manager

Approved by

Appleone Calibration Laboratory Ltd. Rm1309, 13/F, No.77 Wing Hong St, Kln, HKSAR

Tel: +852 2370 4437 Fax: +852 2114 0393



WELLAB LIMITED Room 1701, Technology Park, 18 On Lai Street, Shatin, N.T., Hong Kong.

Tel: 2898 7388 Fax: 2898 7076 Website: www.wellab.com.hk

TEST REPORT

APPLICANT: Cinotech Consultants Limited

RM 1710, Technology Park,

18 On Lai Street,

Shatin, N.T., Hong Kong

Test Report No.: 33541 Date of Issue:

2020-05-29

Date Received: Date Tested:

2020-05-25 2020-05-25 to

2020-05-29

Date Completed:

2020-05-29

ATTN:

Mr. Henry Leung

Page:

1 of 2

Certificate of Calibration

Item for calibrati

YSI EXO1 Multiparameter Sondes	Equipment No.:	SW-08-06
Manufacturer:	YSI Incorporated, a	Xylem brand
Description:	Model No.	Serial No.
- EXO1 Sonde, 100 meter Depth, 4 Sensor ports	599501-02	16J100680
- EXO Optical DO Sensor, Ti	599100-01	16H102985
- EXO conductivity/Temperature Sensor, Ti	599870	16G102307
- EXO Turbuduty Sensor, Ti	599101-01	16H102463
- EXO pH Sensor Assembly, Guarded, Ti	599701	17B103615

Test conditions:

Room Temperature

: 17-22 degree Celsius

Relative Humidity

: 40-70%

Test Specifications:

Performance checking for Conductivity, Temperature, pH, Dissolved oxygen (D.O.)

and Turbidity

Methodology:

According to manufacturer instruction manual, APHA 20e 4500-O C

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.

PATRICK TSE

General Manager



WELLAB LIMITED Room 1701, Technology Park, 18 On Lai Street, Shatin, N.T., Hong Kong.

Tel: 2898 7388 Fax: 2898 7076 Website: www.wellab.com.hk

TEST REPORT

Test Report No.: Date of Issue: 33541 2020-05-29

Date Received:

2020-05-25

Date Tested:

2020-05-25 to 2020-05-29

Date Completed:

2020-05-29

Page:

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Certificate of Calibration

Results:

Conductivity performance checking

		Instrument Readings (µS/cm)	Accetance Criteria	Comment
KCl sto	ck solution	13000	12246-13534	Pass
(1289	0 μS/cm)			

Temperature performance checking

Reference thermometer- E431 Readings (°C)	Instrument Readings (°C)	Correction (°C)	Comment
20.0	20.002	-0.002	N/A

pH performance checking

	Instrument Readings	Accetance Criteria	Comment
	(pH unit)		
pH QC buffer 4.00	4.01	4.00 <u>+</u> 0.10	Pass
pH QC buffer 6.86	6.86	6.86 <u>+</u> 0.10	Pass
pH QC buffer 9.18	9.19	9.18 <u>+</u> 0.10	Pass

D.O. performance checking

	Instrument Readings (mg/L)	Accetance Criteria	Comment
Zero DO soultion	0.08	<0.1mg/L	Pass

Winkler Titration value	Instrument Readings (mg/L)	Accetance Criteria	Comment
(mg/L)			
8.00	7.89	Difference between	Pass
		Titration value and	
		instrument reading	
		<0.2mg/L	

Turbidity performance checking

Turbidity stock solution	Instrument Readings (NTU)	Accetance Criteria	Comment
10 NTU	10.03	9.0-11.0	Pass
50 NTU	50.08	45.0-55.0	Pass
100 NTU	101.1	90.0-110.0	Pass

Depth performance checking

Water Depth	Instrument Readings (m)	Accetance Criteria	Comment
0.5 meter	0.50	0.45-0.55	Pass

Calibration Item: Minimate Plus Unit (Calibration with Geophone

12 March 2021

BG14852)

Model No.: 716A0403

Serial No.: BE15890

Calibration Date: 12 March 2020

Method Used: In-house Method B3-001

In-house Testing Procedure No.: B3-001

Next Calibration Date:

Test References	Model	Serial No.
Blastmate III	714A0801	BA15521
ISEE Triaxial Geophone	714A9701	BG14463
GLOBAL SPECIALISTS 3MHz*	2030	256812
Stanford Spectrum Analyzer	SR760	41550
Aglient Multimeter*	34410A	MY47011119
HP Distortion Meter*	339A	810699
Bruel & Kjaer Accelerometer*	4370	30323
Bruel & Kjaer Charge Amplifier*	2647	2518810
Bruel & Kjaer Conditional Amplifier*	269	2152173
LDS Air Cooled Vibrator	V556	92794/1
LDS Field Power Supply	FPS10L	ARA 04/05
LDS Power Amplifier	PA1000L	ARA 07/06

^{*}References are traceable to NIST or equivalent.

INSTANTEL INC. hereby certifies that this unit has been calibrated and that the results are consistent with the specifications published regarding this instrument. The SENSORCHECK feature of the unit is sufficiently reliable to indicate proper operation, although it is recommended that this unit be sent to INSTANTEL or an authorized service center for regular calibration.

Authorized by:

(Au Yeung Hang Chuen, Isaac)

Calibration Item: TRIAXIAL GEOPHONE (Calibration with

main unit BE15890)

Part Number:

714A9701

Serial No.:

BG14852

Calibration Date:

12 March 2020

Next Calibration Date:

12 March 2021

Method Used:

In-house Method B3-001

In-house Testing Procedure No.: B3-001

Test References	Model	Serial No.
Blastmate III	714A0801	BA15521
ISEE Triaxial Geophone	714A9701	BG14463
GLOBAL SPECIALISTS 3MHz*	2030	256812
Stanford Spectrum Analyzer	SR760	41550
Aglient Multimeter*	34410A	MY47011119
HP Distortion Meter*	339A	810699
Bruel & Kjaer Accelerometer*	4370	30323
Bruel & Kjaer Charge Amplifier*	2647	2518810
Bruel & Kjaer Conditional Amplifier*	269	2152173
LDS Air Cooled Vibrator	V556	92794/1
LDS Field Power Supply	FPS10L	ARA 04/05
LDS Power Amplifier	PA1000L	ARA 07/06

^{*}References are traceable to NIST or equivalent.

INSTANTEL INC. hereby certifies that this unit has been calibrated and that the results are consistent with the specifications published regarding this instrument. The SENSORCHECK feature of the unit is sufficiently reliable to indicate proper operation, although it is recommended that this unit be sent to INSTANTEL or an authorized service center for regular calibration.

Authorized by:

(Au Yeung Hang Chuen, Isaac)

Calibration Item: Linear Microphone (Calibration with main unit

BE15890)

Model No.: 714A9801

Serial No.: BH11455

Galibration Date: 12 March 2020

ext Calibration Date: 12 March 2021

Method Used: In-house Method MM-002

In-house Testing Procedure No.: MM-002

Test References	Model	Serial No.
Blastmate III	714A0801	BA15521
Linear Microphone	714A9801	BH11561
GLOBAL SPECIALISTS 3MHz*	2030	256812
stanford Spectrum Analyzer	SR760	41550
Aglient Multimeter*	34410A	MY47011119
P Distortion Meter*	339A	810699
Bruel & Kjaer Microphone*	4193	2677340
ow Frequency Calibrator*	42AE	105366
Bruel & Kjaer Conditional Amplifier*	269	2152173
XIII		

References are traceable to NIST or equivalent.

STANTEL INC. hereby certifies that this unit has been calibrated and that the results are consistent with the specifications published regarding this instrument. The SENSORCHECK feature of the unit is sufficiently reliable indicate proper operation, although it is recommended that this unit be sent to INSTANTEL or an authorized ervice center for regular calibration.

Authorized by:

(Au Yeung Hang Chuen, Isaac)

Calibration Item: Minimate Plus Unit (Calibration with Geophone

BG16955)

Model No.: 716A0403

Serial No.: BE16223

Calibration Date: 12 March 2020

Next Calibration Date: 12 March 2021

Method Used: In-house Method B3-001

In-house Testing Procedure No.: B3-001

Test References	Model	Serial No.
Blastmate III	714A0801	BA15521
ISEE Triaxial Geophone	714A9701	BG14463
GLOBAL SPECIALISTS 3MHz*	2030	256812
Stanford Spectrum Analyzer	SR760	41550
Aglient Multimeter*	34410A	MY47011119
HP Distortion Meter*	339A	810699
Bruel & Kjaer Accelerometer*	4370	30323
Bruel & Kjaer Charge Amplifier*	2647	2518810
Bruel & Kjaer Conditional Amplifier*	269	2152173
LDS Air Cooled Vibrator	V556	92794/1
LDS Field Power Supply	FPS10L	ARA 04/05
LDS Power Amplifier	PA1000L	ARA 07/06

^{*}References are traceable to NIST or equivalent.

INSTANTEL INC. hereby certifies that this unit has been calibrated and that the results are consistent with the specifications published regarding this instrument. The SENSORCHECK feature of the unit is sufficiently reliable to indicate proper operation, although it is recommended that this unit be sent to INSTANTEL or an authorized service center for regular calibration.

Authorized by:

(Au Yeung Hang Chuen, Isaac)

Calibration Item: TRIAXIAL GEOPHONE (Calibration with

main unit BE16223)

Part Number: 714A9701

Serial No.: BG16955

Calibration Date: 12 March 2020

Next Calibration Date: 12 March 2021
Method Used: In-house Method B3-001

In-house Testing Procedure No.: B3-001

Test References	Model	Serial No.
Blastmate III	714A0801	BA15521
ISEE Triaxial Geophone	714A9701	BG14463
GLOBAL SPECIALISTS 3MHz*	2030	256812
Stanford Spectrum Analyzer	SR760	41550
Aglient Multimeter*	34410A	MY4701111
HP Distortion Meter*	339A	810699
Bruel & Kjaer Accelerometer*	4370	30323
Bruel & Kjaer Charge Amplifier*	2647	2518810
Bruel & Kjaer Conditional Amplifier*	269	2152173
LDS Air Cooled Vibrator	V556	92794/1
LDS Field Power Supply	FPS10L	ARA 04/05
LDS Power Amplifier	PA1000L	ARA 07/06

^{*}References are traceable to NIST or equivalent.

INSTANTEL INC. hereby certifies that this unit has been calibrated and that the results are consistent with the specifications published regarding this instrument. The SENSORCHECK feature of the unit is sufficiently reliable to indicate proper operation, although it is recommended that this unit be sent to INSTANTEL or an authorized service center for regular calibration.

Authorized by:

(Au Yeung Hang Chuen, Isaac)

Calibration Item:

Linear Microphone (Calibration with main unit

BE16223)

Model No.:

714A9801

Serial No.:

BH11458

Calibration Date:

12 March 2020

Next Calibration Date:

12 March 2021

Method Used:

In-house Method MM-002

In-house Testing Procedure No.:

MM-002

714A0801 714A9801	BA15521
714A9801	
711110001	BH11561
2030	256812
SR760	41550
34410A	MY47011119
339A	810699
4193	2677340
42AE	105366
269	2152173
	SR760 34410A 339A 4193 42AE

References are traceable to NIST or equivalent.

NSTANTEL INC. hereby certifies that this unit has been calibrated and that the results are consistent with the specifications published regarding this instrument. The SENSORCHECK feature of the unit is sufficiently reliable indicate proper operation, although it is recommended that this unit be sent to INSTANTEL or an authorized ervice center for regular calibration.

Authorized by:

(Au Yeung Hang Chuen, Isaac)

Calibration Item: Minimate Plus Unit (Calibration with Geophone

BG15353)

Model No.:

716A0403

Serial No.:

BE15891

Calibration Date:

26 February 2020

Next Calibration Date:

26 February 2021

Method Used:

In-house Method B3-001

In-house Testing Procedure No.: B3-001

亞	Test References	Model	Serial No.
I	Blastmate III	714A0801	BA15521
類	SEE Triaxial Geophone	714A9701	BG14463
	LOBAL SPECIALISTS 3MHz*	2030	256812
	tanford Spectrum Analyzer	SR760	41550
	glient Multimeter*	34410A	MY47011119
ŀ	IP Distortion Meter*	339A	810699
Ž.	Bruel & Kjaer Accelerometer*	4370	30323
XE	Bruel & Kjaer Charge Amplifier*	2647	2518810
Ì	Bruel & Kjaer Conditional Amplifier*	269	2152173
I	DS Air Cooled Vibrator	V556	92794/1
類	DS Field Power Supply	FPS10L	ARA 04/05
Ø	DS Power Amplifier	PA1000L	ARA 07/06

^{*}References are traceable to NIST or equivalent.

INSTANTEL INC. hereby certifies that this unit has been calibrated and that the results are consistent with the specifications published regarding this instrument. The SENSORCHECK feature of the unit is sufficiently reliable to indicate proper operation, although it is recommended that this unit be sent to INSTANTEL or an authorized service center for regular calibration.

Authorized by:

(Au Yeung Hang Chuen, Isaac)

Calibration Item: TRIAXIAL GEOPHONE (Calibration with main

unit BE15891)

Part Number:

714A9701

Serial No.:

BG15353

Calibration Date:

26 February 2020

Next Calibration Date:

26 February 2021

Method Used:

In-house Method B3-001

In-house Testing Procedure No.: B3-001

	est References	Model	Serial No.
E	lastmate III	714A0801	BA15521
現	SEE Triaxial Geophone	714A9701	BG14463
X	LOBAL SPECIALISTS 3MHz*	2030	256812
	tanford Spectrum Analyzer	SR760	41550
1	glient Multimeter*	34410A	MY47011119
ŀ	IP Distortion Meter*	339A	810699
Ä	ruel & Kjaer Accelerometer*	4370	30323
ĶĒ	ruel & Kjaer Charge Amplifier*	2647	2518810
E	ruel & Kjaer Conditional Amplifier*	269	2152173
L	DS Air Cooled Vibrator	V556	92794/1
類	DS Field Power Supply	FPS10L	ARA 04/05
\langle	DS Power Amplifier	PA1000L	ARA 07/06

INSTANTEL INC. hereby certifies that this unit has been calibrated and that the results are consistent with the specifications published regarding this instrument. The SENSORCHECK feature of the unit is

sufficiently reliable to indicate proper operation, although it is recommended that this unit be sent to

INSTANTEL or an authorized service center for regular calibration.

References are traceable to NIST or equivalent.

Authorized by:

(Au Yeung Hang Chuen, Isaac)

Calibration Item: Minimate Plus Unit (Calibration with Geophone

BG15180)

Model No.: 716A0403

Serial No.: BE15894

Calibration Date: 24 February 2020 Next Calibration Date: 24 February 2021

Method Used: In-house Method B3-001

In-house Testing Procedure No.: B3-001

H	est References	Model	Serial No.
I	Blastmate III	714A0801	BA15521
#	SEE Triaxial Geophone	714A9701	BG14463
X	LOBAL SPECIALISTS 3MHz*	2030	256812
X	tanford Spectrum Analyzer	SR760	41550
7	glient Multimeter*	34410A	MY47011119
//1	IP Distortion Meter*	339A	810699
K.	ruel & Kjaer Accelerometer*	4370	30323
X	ruel & Kjaer Charge Amplifier*	2647	2518810
E	ruel & Kjaer Conditional Amplifier*	269	2152173
L	DS Air Cooled Vibrator	V556	92794/1
#	DS Field Power Supply	FPS10L	ARA 04/05
	DS Power Amplifier	PA1000L	ARA 07/06

*References are traceable to NIST or equivalent.

INSTANTEL INC. hereby certifies that this unit has been calibrated and that the results are consistent with the specifications published regarding this instrument. The SENSORCHECK feature of the unit is sufficiently reliable to indicate proper operation, although it is recommended that this unit be sent to INSTANTEL or an authorized service center for regular calibration.

Authorized by:

(Au Yeung Hang Chuen, Isaac)

Calibration Item: TRIAXIAL GEOPHONE (Calibration with main

unit BE15894)

Part Number:

714A9701

Serial No.:

BG15180

Calibration Date:

24 February 2020

Next Calibration Date:

24 February 2021

Method Used:

In-house Method B3-001

In-house Testing Procedure No.:

B3-001

#	Test References	Model	Serial No.
	Blastmate III	714A0801	BA15521
#	ISEE Triaxial Geophone	714A9701	BG14463
	GLOBAL SPECIALISTS 3MHz*	2030	256812
B	Stanford Spectrum Analyzer	SR760	41550
	Aglient Multimeter*	34410A	MY47011119
	HP Distortion Meter*	339A	810699
及	Bruel & Kjaer Accelerometer*	4370	30323
	Bruel & Kjaer Charge Amplifier*	2647	2518810
H	Bruel & Kjaer Conditional Amplifier*	269	2152173
	LDS Air Cooled Vibrator	V556	92794/1
#	LDS Field Power Supply	FPS10L	ARA 04/05
\mathbb{R}	LDS Power Amplifier	PA1000L	ARA 07/06

References are traceable to NIST or equivalent.

INSTANTEL INC. hereby certifies that this unit has been calibrated and that the results are consistent with the specifications published regarding this instrument. The SENSORCHECK feature of the unit is sufficiently reliable to indicate proper operation, although it is recommended that this unit be sent to INSTANTEL or an authorized service center for regular calibration.

Authorized by:

(Au Yeung Hang Chuen, Isaac)

Calibration Item: Linear Microphone (Calibration with main unit

BE17902)

Model No.: 714A9801

Serial No.: BH14078

Calibration Date: 23 May 2019 Next Calibration Date: 23 May 2020

Method Used: In-house Method MM-002

In-house Testing Procedure No.: MM-002

Test References	Model	Serial No.
Blastmate III	714A0801	BA15521
Linear Microphone	714A9801	BH11561
GLOBAL SPECIALISTS 3MHz*	2030	256812
Stanford Spectrum Analyzer	SR760	41550
Aglient Multimeter*	34410A	MY47011119
HP Distortion Meter*	339A	810699
Bruel & Kjaer Microphone*	4193	2677340
Low Frequency Calibrator*	42AE	105366
Bruel & Kjaer Conditional Amplifier*	269	2152173

*References are traceable to NIST or equivalent.

INSTANTEL INC. hereby certifies that this unit has been calibrated and that the results are consistent with the specifications published regarding this instrument. The SENSORCHECK feature of the unit is sufficiently reliable to indicate proper operation, although it is recommended that this unit be sent to INSTANTEL or an authorized service center for regular calibration.

Authorized by:

(Au Yeung Hang Chuen, Isaac)

Date: 23 May 2019

Calibration Item: Minimate Plus Unit (Calibration with Geophone

BG20674)

Model No.: 716A0403

Serial No.: BE17902

Calibration Date: 23 May 2019

Next Calibration Date: 23 May 2020

Method Used: In-house Method B3-001

In-house Testing Procedure No.: B3-001

Test References	Model	Serial No.
Blastmate III	714A0801	BA15521
ISEE Triaxial Geophone	714A9701	BG14463
GLOBAL SPECIALISTS 3MHz*	2030	256812
Stanford Spectrum Analyzer	SR760	41550
Aglient Multimeter*	34410A	MY47011119
HP Distortion Meter*	339A	810699
Bruel & Kjaer Accelerometer*	4370	30323
Bruel & Kjaer Charge Amplifier*	2647	2518810
Bruel & Kjaer Conditional Amplifier*	269	2152173
LDS Air Cooled Vibrator	V556	92794/1
LDS Field Power Supply	FPS10L	ARA 04/05
LDS Power Amplifier	PA1000L	ARA 07/06

^{*}References are traceable to NIST or equivalent.

INSTANTEL INC. hereby certifies that this unit has been calibrated and that the results are consistent with the specifications published regarding this instrument. The SENSORCHECK feature of the unit is sufficiently reliable to indicate proper operation, although it is recommended that this unit be sent to INSTANTEL or an authorized service center for regular calibration.

Authorized by:

(Au Yeung Hang Chuen, Isaac)

Date: 23 May 2019

Calibration Item: TRIAXIAL GEOPHONE (Calibration with main

unit BE17902)

Part Number:

714A9701

Serial No.:

BG20674

Calibration Date:

23 May 2019

Next Calibration Date:

23 May 2020

Method Used:

In-house Method B3-001

In-house Testing Procedure No.: B

B3-001

Test References	Model	Serial No.
Blastmate III	714A0801	BA15521
ISEE Triaxial Geophone	714A9701	BG14463
GLOBAL SPECIALISTS 3MHz*	2030	256812
Stanford Spectrum Analyzer	SR760	41550
Aglient Multimeter*	34410A	MY47011119
HP Distortion Meter*	339A	810699
Bruel & Kjaer Accelerometer*	4370	30323
Bruel & Kjaer Charge Amplifier*	2647	2518810
Bruel & Kjaer Conditional Amplifier*	269	2152173
LDS Air Cooled Vibrator	V556	92794/1
LDS Field Power Supply	FPS10L	ARA 04/05
LDS Power Amplifier	PA1000L	ARA 07/06

^{*}References are traceable to NIST or equivalent.

INSTANTEL INC. hereby certifies that this unit has been calibrated and that the results are consistent with the specifications published regarding this instrument. The SENSORCHECK feature of the unit is sufficiently reliable to indicate proper operation, although it is recommended that this unit be sent to INSTANTEL or an authorized service center for regular calibration.

Authorized by:

(Au Yeung Hang Chuen, Isaac)

Date: 23 May 2019

Calibration Item: Minimate Plus Unit (Calibration with Geophone

BG20673)

Model No.: 716A0403

Serial No.: BE13849

Calibration Date: 26 February 2020 Next Calibration Date: 26 February 2021

Method Used: In-house Method B3-001

In-house Testing Procedure No.: B3-001

H	lest References	Model	Serial No.
	Blastmate III	714A0801	BA15521
現	SEE Triaxial Geophone	714A9701	BG14463
X	GLOBAL SPECIALISTS 3MHz*	2030	256812
X	stanford Spectrum Analyzer	SR760	41550
	Aglient Multimeter*	34410A	MY47011119
Į	IP Distortion Meter*	339A	810699
A	Bruel & Kjaer Accelerometer*	4370	30323
8	Bruel & Kjaer Charge Amplifier*	2647	2518810
	Bruel & Kjaer Conditional Amplifier*	269	2152173
I	DS Air Cooled Vibrator	V556	92794/1
猫	DS Field Power Supply	FPS10L	ARA 04/05
Ø	DS Power Amplifier	PA1000L	ARA 07/06

*References are traceable to NIST or equivalent.

NSTANTEL INC. hereby certifies that this unit has been calibrated and that the results are consistent with the specifications published regarding this instrument. The SENSORCHECK feature of the unit is sufficiently reliable to indicate proper operation, although it is recommended that this unit be sent to INSTANTEL or an authorized service center for regular calibration.

Authorized by:

(Au Yeung Hang Chuen, Isaac)

Calibration Item:

Linear Microphone (Calibration with main unit

BE13849)

Model No.:

714A9801

Serial No.:

BH13154

Calibration Date:

26 February 2020

Next Calibration Date:

26 February 2021

Method Used:

In-house Method MM-002

In-house Testing Procedure No.:

MM-002

Test References	Model	Serial No.
Blastmate III	714A0801	BA15521
Linear Microphone	714A9801	BH11561
GLOBAL SPECIALISTS 3MHz*	2030	256812
Stanford Spectrum Analyzer	SR760	41550
Aglient Multimeter*	34410A	MY47011119
HP Distortion Meter*	339A	810699
Bruel & Kjaer Microphone*	4193	2677340
Low Frequency Calibrator*	42AE	105366
Bruel & Kjaer Conditional Amplifier*	269	2152173

^{*}References are traceable to NIST or equivalent.

INSTANTEL INC. hereby certifies that this unit has been calibrated and that the results are consistent with the specifications published regarding this instrument. The SENSORCHECK feature of the unit is sufficiently reliable to indicate proper operation, although it is recommended that this unit be sent to INSTANTEL or an authorized service center for regular calibration.

Authorized by:

Au

(Au Yeung Hang Chuen, Isaac)

Calibration Item: TRIAXIAL GEOPHONE (Calibration with main

unit BE13849)

Part Number:

714A9701

Serial No.:

BG20673

Calibration Date:

26 February 2020

Next Calibration Date:

26 February 2021

Method Used:

In-house Method B3-001

In-house Testing Procedure No.: B3-001

H	Test References	Model	Serial No.
	Blastmate III	714A0801	BA15521
現	SEE Triaxial Geophone	714A9701	BG14463
X	GLOBAL SPECIALISTS 3MHz*	2030	256812
N	Stanford Spectrum Analyzer	SR760	41550
	Aglient Multimeter*	34410A	MY47011119
ŽĮ.	IP Distortion Meter*	339A	810699
Ä	Bruel & Kjaer Accelerometer*	4370	30323
Ø	Bruel & Kjaer Charge Amplifier*	2647	2518810
	Bruel & Kjaer Conditional Amplifier*	269	2152173
I	DS Air Cooled Vibrator	V556	92794/1
Ħ	DS Field Power Supply	FPS10L	ARA 04/05
	DS Power Amplifier	PA1000L	ARA 07/06

^{*}References are traceable to NIST or equivalent.

INSTANTEL INC. hereby certifies that this unit has been calibrated and that the results are consistent with the specifications published regarding this instrument. The SENSORCHECK feature of the unit is sufficiently reliable to indicate proper operation, although it is recommended that this unit be sent to INSTANTEL or an authorized service center for regular calibration.

Authorized by:

(Au Yeung Hang Chuen, Isaac)

Calibration Item: Minimate Plus Unit (Calibration with Geophone

BG16512)

Model No.: 716A0403

Serial No.: BE13853

Calibration Date: 24 February 2020 Next Calibration Date: 24 February 2021

Next Calibration Date: 24 February 2021
Method Used: In-house Method B3-001

In-house Testing Procedure No.: B3-001

Test References	Model	Serial No.
Blastmate III	714A0801	BA15521
ISEE Triaxial Geophone	714A9701	BG14463
GLOBAL SPECIALISTS 3MHz*	2030	256812
Stanford Spectrum Analyzer	SR760	41550
Aglient Multimeter*	34410A	MY47011119
HP Distortion Meter*	339A	810699
Bruel & Kjaer Accelerometer*	4370	30323
Bruel & Kjaer Charge Amplifier*	2647	2518810
Bruel & Kjaer Conditional Amplifier*	269	2152173
LDS Air Cooled Vibrator	V556	92794/1
LDS Field Power Supply	FPS10L	ARA 04/05
LDS Power Amplifier	PA1000L	ARA 07/06

References are traceable to NIST or equivalent.

INSTANTEL INC. hereby certifies that this unit has been calibrated and that the results are consistent with the specifications published regarding this instrument. The SENSORCHECK feature of the unit is sufficiently reliable to indicate proper operation, although it is recommended that this unit be sent to INSTANTEL or an authorized service center for regular calibration.

Authorized by:

(Au Yeung Hang Chuen, Isaac)

Calibration Item: TRIAXIAL GEOPHONE (Calibration with main

unit BE13853)

Part Number:

714A9701

Serial No.:

BG16512

Calibration Date:

24 February 2020

Next Calibration Date:

24 February 2021

Method Used:

In-house Method B3-001

In-house Testing Procedure No.: B3-001

Test References	Model	Serial No.
Blastmate III	714A0801	BA15521
ISEE Triaxial Geophone	714A9701	BG14463
GLOBAL SPECIALISTS 3MHz*	2030	256812
Stanford Spectrum Analyzer	SR760	41550
Aglient Multimeter*	34410A	MY47011119
HP Distortion Meter*	339A	810699
Bruel & Kjaer Accelerometer*	4370	30323
Bruel & Kjaer Charge Amplifier*	2647	2518810
Bruel & Kjaer Conditional Amplifier*	269	2152173
LDS Air Cooled Vibrator	V556	92794/1
LDS Field Power Supply	FPS10L	ARA 04/05
LDS Power Amplifier	PA1000L	ARA 07/06

References are traceable to NIST or equivalent.

INSTANTEL INC. hereby certifies that this unit has been calibrated and that the results are consistent with the specifications published regarding this instrument. The SENSORCHECK feature of the unit is sufficiently reliable to indicate proper operation, although it is recommended that this unit be sent to INSTANTEL or an authorized service center for regular calibration.

Authorized by:

(Au Yeung Hang Chuen, Isaac)

Calibration Item: Minimate Plus Unit (Calibration with Geophone

BG17240)

Model No.: 716A0403

Serial No.: BE20015

Calibration Date: 26 February 2020
Next Calibration Date: 26 February 2021

Method Used: In-house Method B3-001

n-house Testing Procedure No.: B3-001

H	Test References	Model	Serial No.
	Blastmate III	714A0801	BA15521
#	ISEE Triaxial Geophone	714A9701	BG14463
$\langle \! \rangle$	GLOBAL SPECIALISTS 3MHz*	2030	256812
R	Stanford Spectrum Analyzer	SR760	41550
	Aglient Multimeter*	34410A	MY47011119
$\overset{>}{\not\sim}$	HP Distortion Meter*	339A	810699
THE REPORT OF THE PROPERTY OF	Bruel & Kjaer Accelerometer*	4370	30323
X	Bruel & Kjaer Charge Amplifier*	2647	2518810
#	Bruel & Kjaer Conditional Amplifier*	269	2152173
	LDS Air Cooled Vibrator	V556	92794/1
4	LDS Field Power Supply	FPS10L	ARA 04/05
otan	LDS Power Amplifier	PA1000L	ARA 07/06
N P /	ATT		

*References are traceable to NIST or equivalent.

INSTANTEL INC. hereby certifies that this unit has been calibrated and that the results are consistent with the specifications published regarding this instrument. The SENSORCHECK feature of the unit is sufficiently reliable to indicate proper operation, although it is recommended that this unit be sent to INSTANTEL or an authorized service center for regular calibration.

Authorized by:

(Au Yeung Hang Chuen, Isaac)

Calibration Item: TRIAXIAL GEOPHONE (Calibration with main

unit BE20015)

Part Number:

714A9701

Serial No.:

BG17240

Calibration Date:

26 February 2020

Next Calibration Date:

26 February 2021

Method Used:

In-house Method B3-001

In-house Testing Procedure No.: B3-001

j	est References	Model	Serial No.
В	lastmate III	714A0801	BA15521
費	SEE Triaxial Geophone	714A9701	BG14463
K	LOBAL SPECIALISTS 3MHz*	2030	256812
X	tanford Spectrum Analyzer	SR760	41550
A	glient Multimeter*	34410A	MY47011119
H	P Distortion Meter*	339A	810699
43	ruel & Kjaer Accelerometer*	4370	30323
(B	ruel & Kjaer Charge Amplifier*	2647	2518810
В	ruel & Kjaer Conditional Amplifier*	269	2152173
L	DS Air Cooled Vibrator	V556	92794/1
先	DS Field Power Supply	FPS10L	ARA 04/05
Ø.	DS Power Amplifier	PA1000L	ARA 07/06

^{*}References are traceable to NIST or equivalent.

INSTANTEL INC. hereby certifies that this unit has been calibrated and that the results are consistent with the specifications published regarding this instrument. The SENSORCHECK feature of the unit is sufficiently reliable to indicate proper operation, although it is recommended that this unit be sent to INSTANTEL or an authorized service center for regular calibration.

Authorized by:

(Au Yeung Hang Chuen, Isaac)

Calibration Item: Linear Microphone (Calibration with main unit

BE20015)

Model No.:

714A9801

Serial No.:

BH12658

Calibration Date:

26 February 2020

Next Calibration Date:

26 February 2021

Method Used:

In-house Method MM-002

In-house Testing Procedure No.:

MM-002

est References	Model	Serial No.
astmate III	714A0801	BA15521
near Microphone	714A9801	BH11561
LOBAL SPECIALISTS 3MHz*	2030	256812
anford Spectrum Analyzer	SR760	41550
glient Multimeter*	34410A	MY47011119
P Distortion Meter*	339A	810699
ruel & Kjaer Microphone*	4193	2677340
ow Frequency Calibrator*	42AE	105366
uel & Kjaer Conditional Amplifier*	269	2152173
	astmate III near Microphone LOBAL SPECIALISTS 3MHz* anford Spectrum Analyzer glient Multimeter* P Distortion Meter* ruel & Kjaer Microphone* ow Frequency Calibrator*	astmate III 714A0801 near Microphone 714A9801 LOBAL SPECIALISTS 3MHz* 2030 anford Spectrum Analyzer SR760 glient Multimeter* 34410A P Distortion Meter* 339A nuel & Kjaer Microphone* 4193 ow Frequency Calibrator* 42AE

^{*}References are traceable to NIST or equivalent.

INSTANTEL INC. hereby certifies that this unit has been calibrated and that the results are consistent with the specifications published regarding this instrument. The SENSORCHECK feature of the unit is sufficiently reliable to indicate proper operation, although it is recommended that this unit be sent to INSTANTEL or an authorized service center for regular calibration.

Authorized by:

(Au Yeung Hang Chuen, Isaac)

Date: 26 February 2020

R:\Service Dept\Calibration\Instantel\BH12658 (26-02-20)

Calibration Item:

TRIAXIAL GEOPHONE (Calibration with main

unit UM12902)

Part Number:

721A2901

Serial No .:

UM12902

Calibration Date:

14 May 2019

Next Calibration Date:

14 May 2020

Method Used:

In-house Method MM-001

In-house Testing Procedure No.:

MM-001

Test References	Model	
Blastmate III	The state of the s	Serial No.
	714A0801	BA15521
ISEE Triaxial Geophone	714A9701	BG14463
GLOBAL SPECIALISTS 3MHz*	2030	
Stanford Spectrum Analyzer	SR760	256812
Aglient Multimeter*		41550
HP Distortion Meter*	34410A	MY47011119
	339A	810699
Bruel & Kjaer Accelerometer*	4370	30323
Bruel & Kjaer Charge Amplifier*	2647	
Bruel & Kjaer Conditional Amplifier*	269	2518810
DS Air Cooled Vibrator		2152173
DS Field Power Supply	V556	92794/1
경험에는 내가 기뻐하다 보니 되었다면 뭐죠? (5) 이용하다는 경우시간 경기를 보았다.	FPS10L	ARA 04/05
DS Power Amplifier	PA1000L	
References		ARA 07/06

^{*}References are traceable to NIST or equivalent.

INSTANTEL INC. hereby certifies that this unit has been calibrated and that the results are consistent with the specifications published regarding this instrument. The SENSORCHECK feature of the unit is sufficiently reliable to indicate proper operation, although it is recommended that this unit be sent to INSTANTEL or an authorized service center for regular calibration.

Authorized by:

(Au Yeung Hang Chuen, Isaac)

Date:

14 May 2019

Calibration Item: Micromate Unit (Calibration with Geophone

UM12902)

 Model No.:
 721A2501

 Serial No.:
 UM12902

Calibration Date: 14 May 2019 Next Calibration Date: 14 May 2020

Method Used: In-house Method MM-001

In-house Testing Procedure No.: MM-001

Test References	Model	Serial No.
Blastmate III	714A0801	BA15521
ISEE Triaxial Geophone	714A9701	BG14463
GLOBAL SPECIALISTS 3MHz*	2030	256812
Stanford Spectrum Analyzer	SR760	41550
Aglient Multimeter*	34410A	MY47011119
HP Distortion Meter*	339A	810699
Bruel & Kjaer Accelerometer*	4370	30323
Bruel & Kjaer Charge Amplifier*	2647	2518810
Bruel & Kjaer Conditional Amplifier*	269	2152173
LDS Air Cooled Vibrator	V556	92794/1
LDS Field Power Supply	FPS10L	ARA 04/05
LDS Power Amplifier	PA1000L	ARA 07/06

^{*}References are traceable to NIST or equivalent.

INSTANTEL INC. hereby certifies that this unit has been calibrated and that the results are consistent with the specifications published regarding this instrument. The SENSORCHECK feature of the unit is sufficiently reliable to indicate proper operation, although it is recommended that this unit be sent to INSTANTEL or an authorized service center for regular calibration.

Authorized by:

(Au Yeung Hang Chuen, Isaac)

Date: 14 May 2019

Calibration Item: Micromate Linear Microphone (Calibration with

main unit UM12902)

Model No.: 721A0201 Serial No.: UL3397

Calibration Date: 14 May 2019 Next Calibration Date: 14 May 2020

Method Used: In-house Method MM-002

In-house Testing Procedure No.: MM-002

Test References	Model	Serial No.
Blastmate III	714A0801	BA15521
Linear Microphone	714A9801	BH11561
GLOBAL SPECIALISTS 3MHz*	2030	256812
Stanford Spectrum Analyzer	SR760	41550
Aglient Multimeter*	34410A	MY47011119
HP Distortion Meter*	339A	810699
Bruel & Kjaer Microphone*	4193	2677340
Low Frequency Calibrator*	42AE	105366
Bruel & Kjaer Conditional Amplifier*	269	2152173

^{*}References are traceable to NIST or equivalent.

INSTANTEL INC. hereby certifies that this unit has been calibrated and that the results are consistent with the specifications published regarding this instrument. The SENSORCHECK feature of the unit is sufficiently reliable to indicate proper operation, although it is recommended that this unit be sent to INSTANTEL or an authorized service center for regular calibration.

Authorized by:

Au Yeung Hang Chuen, Isaac

Calibration Item: Micromate Linear Microphone (Calibration with

main unit UM12904)

Model No.: 721A0201 Serial No.: UL3400

Calibration Date: 14 May 2019 Next Calibration Date: 14 May 2020

Method Used: In-house Method MM-002

In-house Testing Procedure No.: MM-002

Test References	Model	Serial No.
Blastmate III	714A0801	BA15521
Linear Microphone	714A9801	BH11561
GLOBAL SPECIALISTS 3MHz*	2030	256812
Stanford Spectrum Analyzer	SR760	41550
Aglient Multimeter*	34410A	MY47011119
HP Distortion Meter*	339A	810699
Bruel & Kjaer Microphone*	4193	2677340
Low Frequency Calibrator*	42AE	105366
Bruel & Kjaer Conditional Amplifier*	269	2152173
kD of one		2132173

^{*}References are traceable to NIST or equivalent.

INSTANTEL INC. hereby certifies that this unit has been calibrated and that the results are consistent with the specifications published regarding this instrument. The SENSORCHECK feature of the unit is sufficiently reliable to indicate proper operation, although it is recommended that this unit be sent to INSTANTEL or an authorized service center for regular calibration.

Authorized by:

(Au Yeung Hang Chuen, Isaac

Calibration Item: Micromate Unit (Calibration with Geophone

UM12904)

Model No.: 721A2501 Serial No.: UM12904

Calibration Date: 14 May 2019 Next Calibration Date: 14 May 2020

Method Used: In-house Method MM-001

In-house Testing Procedure No.: MM-001

Test References	Model	
Blastmate III		Serial No.
ISEE Triaxial Geophone	714A0801	BA15521
	714A9701	BG14463
GLOBAL SPECIALISTS 3MHz*	2030	
Stanford Spectrum Analyzer	SR760	256812
Aglient Multimeter*		41550
HP Distortion Meter*	34410A	MY47011119
	339A	810699
Bruel & Kjaer Accelerometer*	4370	30323
Bruel & Kjaer Charge Amplifier*	2647	
Bruel & Kjaer Conditional Amplifier*		2518810
LDS Air Cooled Vibrator	269	2152173
	V556	92794/1
LDS Field Power Supply	FPS10L	ARA 04/05
DS Power Amplifier	PA1000L	
References are traceable to NIGE	=======	ARA 07/06

^{*}References are traceable to NIST or equivalent.

INSTANTEL INC. hereby certifies that this unit has been calibrated and that the results are consistent with the specifications published regarding this instrument. The SENSORCHECK feature of the unit is sufficiently reliable to indicate proper operation, although it is recommended that this unit be sent to INSTANTEL or an authorized service center for regular calibration.

Authorized by:

(Au Yeung Hang Chuen, Isaac)

Date: 14 May 2019

Calibration Item: TRIAXIAL GEOPHONE (Calibration with main

unit UM12904)

Part Number: 721A2901
Serial No.: UM12904
Calibration Date: 14 May 2019

Next Calibration Date: 14 May 2020

Method Used: In-house Method MM-001

In-house Testing Procedure No.: MM-001

Test References	Model	Serial No.
Blastmate III	714A0801	BA15521
ISEE Triaxial Geophone	714A9701	BG14463
GLOBAL SPECIALISTS 3MHz*	2030	256812
Stanford Spectrum Analyzer	SR760	41550
Aglient Multimeter*	34410A	MY47011119
HP Distortion Meter*	339A	810699
Bruel & Kjaer Accelerometer*	4370	30323
Bruel & Kjaer Charge Amplifier*	2647	2518810
Bruel & Kjaer Conditional Amplifier*	269	2152173
LDS Air Cooled Vibrator	V556	92794/1
LDS Field Power Supply	FPS10L	ARA 04/05
LDS Power Amplifier	PA1000L	ARA 07/06

^{*}References are traceable to NIST or equivalent.

INSTANTEL INC. hereby certifies that this unit has been calibrated and that the results are consistent with the specifications published regarding this instrument. The SENSORCHECK feature of the unit is sufficiently reliable to indicate proper operation, although it is recommended that this unit be sent to INSTANTEL or an authorized service center for regular calibration.

Authorized by:

(Au Yeung Hang Chuen, Isaac)

Date: 14 May 2019

Calibration Item: Micromate Linear Microphone (Calibration with

main unit UM12905)

Model No.: 721A0201 Serial No.: UL3401

Calibration Date: 14 May 2019
Next Calibration Date: 14 May 2020

Method Used: In-house Method MM-002

In-house Testing Procedure No.: MM-002

Test References	Model	Serial No.
Blastmate III	714A0801	BA15521
Linear Microphone	714A9801	BH11561
GLOBAL SPECIALISTS 3MHz*	2030	256812
Stanford Spectrum Analyzer	SR760	41550
Aglient Multimeter*	34410A	MY47011119
HP Distortion Meter*	339A	810699
Bruel & Kjaer Microphone*	4193	2677340
Low Frequency Calibrator*	42AE	105366
Bruel & Kjaer Conditional Amplifier*	269	2152173

^{*}References are traceable to NIST or equivalent.

INSTANTEL INC. hereby certifies that this unit has been calibrated and that the results are consistent with the specifications published regarding this instrument. The SENSORCHECK feature of the unit is sufficiently reliable to indicate proper operation, although it is recommended that this unit be sent to INSTANTEL or an authorized service center for regular calibration.

Authorized by:

Au Yeung Hang Chuen, Isaac

Bate: 14-May 2019

Calibration Item: TRIAXIAL GEOPHONE (Calibration with main

unit UM12905)

Part Number:

721A2901

Serial No.:

UM12905

Calibration Date:

14 May 2019

Next Calibration Date:

14 May 2020

Method Used:

In-house Method MM-001

In-house Testing Procedure No.: M

MM-001

Test References	Model	Sowial Na
Blastmate III	714A0801	Serial No.
ISEE Triaxial Geophone	714A9701	BA15521
GLOBAL SPECIALISTS 3MHz*	2030	BG14463
Stanford Spectrum Analyzer	SR760	256812
Aglient Multimeter*	34410A	41550
HP Distortion Meter*	339A	MY47011119
Bruel & Kjaer Accelerometer*	4370	810699
Bruel & Kjaer Charge Amplifier*	2647	30323
Bruel & Kjaer Conditional Amplifier*	269	2518810
LDS Air Cooled Vibrator	V556	2152173
LDS Field Power Supply	FPS10L	92794/1
LDS Power Amplifier	PA1000L	ARA 04/05
*D C	TATOUOL	ARA 07/06

^{*}References are traceable to NIST or equivalent.

INSTANTEL INC. hereby certifies that this unit has been calibrated and that the results are consistent with the specifications published regarding this instrument. The SENSORCHECK feature of the unit is sufficiently reliable to indicate proper operation, although it is recommended that this unit be sent to INSTANTEL or an authorized service center for regular calibration.

Authorized by:

(Au Yeung Hang Chuen, Isaac)

Date: 14 May 2019

Calibration Item: Micromate Unit (Calibration with Geophone

UM12905)

Model No.: 721A2501
Serial No.: UM12905
Calibration Date: 14 May 2019
Next Calibration Date: 14 May 2020

Method Used: In-house Method MM-001

In-house Testing Procedure No.: MM-001

Test References	Model	6
Blastmate III	714A0801	Serial No.
ISEE Triaxial Geophone	714A9701	BA15521
GLOBAL SPECIALISTS 3MHz*		BG14463
Stanford Spectrum Analyzer	2030	256812
	SR760	41550
Aglient Multimeter*	34410A	MY47011119
HP Distortion Meter*	339A	810699
Bruel & Kjaer Accelerometer*	4370	30323
Bruel & Kjaer Charge Amplifier*	2647	
Bruel & Kjaer Conditional Amplifier*	269	2518810
LDS Air Cooled Vibrator	V556	2152173
LDS Field Power Supply		92794/1
LDS Power Amplifier	FPS10L	ARA 04/05
*Poforona *Pofor	PA1000L	ARA 07/06

^{*}References are traceable to NIST or equivalent.

INSTANTEL INC. hereby certifies that this unit has been calibrated and that the results are consistent with the specifications published regarding this instrument. The SENSORCHECK feature of the unit is sufficiently reliable to indicate proper operation, although it is recommended that this unit be sent to INSTANTEL or an authorized service center for regular calibration.

Authorized by:

(Au Yeung Hang Chuen, Isaac)

Date: 14 May 2019

Calibration Item: TRIAXIAL GEOPHONE (Calibration with main

unit UM12907)

Part Number: 721A2901

Serial No.: UM12907

Calibration Date: 24 February 2020 Next Calibration Date: 24 February 2021

Method Used: In-house Method MM-001

In-house Testing Procedure No.: MM-001

Model	Serial No.
714A0801	BA15521
714A9701	BG14463
2030	256812
SR760	41550
34410A	MY47011119
339A	810699
4370	30323
2647	2518810
269	2152173
V556	92794/1
FPS10L	ARA 04/05
PA1000L	ARA 07/06
	714A0801 714A9701 2030 SR760 34410A 339A 4370 2647 269 V556 FPS10L

*References are traceable to NIST or equivalent.

INSTANTEL INC. hereby certifies that this unit has been calibrated and that the results are consistent with the specifications published regarding this instrument. The SENSORCHECK feature of the unit is sufficiently reliable to indicate proper operation, although it is recommended that this unit be sent to INSTANTEL or an authorized service center for regular calibration.

Authorized by:

(Leung Man Hin, Eric)

Calibration Item: Micromate Linear Microphone (Calibration with

main unit UM12907)

Model No.:

721A0201

Serial No.:

UL3398

Calibration Date:

24 February 2020

Next Calibration Date:

24 February 2021

Method Used:

In-house Method MM-002

In-house Testing Procedure No.:

MM-002

Tes	st References	Model	Serial No.
Bla	astmate III	714A0801	BA15521
Lin	ear Microphone	714A9801	BH11561
GL	OBAL SPECIALISTS 3MHz*	2030	256812
Sta	nford Spectrum Analyzer	SR760	41550
Åg	lient Multimeter*	34410A	MY47011119
XHP	Distortion Meter*	339A	810699
Bru	nel & Kjaer Microphone*	4193	2677340
Įξον	w Frequency Calibrator*	42AE	105366
Bru	el & Kjaer Conditional Amplifier*	269	2152173

References are traceable to NIST or equivalent.

STANTEL INC. hereby certifies that this unit has been calibrated and that the results are consistent with the specifications published regarding this instrument. The SENSORCHECK feature of the unit is sufficiently reliable indicate proper operation, although it is recommended that this unit be sent to INSTANTEL or an authorized service center for regular calibration.

Authorized by:

(Leung Man Hin, Eric)

Calibration Item: Micromate Unit (Calibration with Geophone

UM12907)

Model No.:

721A2501

Serial No.:

UM12907

Calibration Date:

24 February 2020

Next Calibration Date:

24 February 2021

Method Used:

In-house Method MM-001

In-house Testing Procedure No.:

MM-001

Test References	Model	Serial No.
Blastmate III	714A0801	BA15521
ISEE Triaxial Geophone	714A9701	BG14463
GLOBAL SPECIALISTS 3MHz*	2030	256812
Stanford Spectrum Analyzer	SR760	41550
Aglient Multimeter*	34410A	MY47011119
HP Distortion Meter*	339A	810699
Bruel & Kjaer Accelerometer*	4370	30323
Bruel & Kjaer Charge Amplifier*	2647	2518810
Bruel & Kjaer Conditional Amplifier*	269	2152173
LDS Air Cooled Vibrator	V556	92794/1
LDS Field Power Supply	FPS10L	ARA 04/05
LDS Power Amplifier	PA1000L	ARA 07/06

References are traceable to NIST or equivalent.

INSTANTEL INC. hereby certifies that this unit has been calibrated and that the results are consistent with the specifications published regarding this instrument. The SENSORCHECK feature of the unit is sufficiently reliable to indicate proper operation, although it is recommended that this unit be sent to INSTANTEL or an authorized service center for regular calibration.

Authorized by:

(Leung Man Hin, Eric)

Calibration Item: TRIAXIAL GEOPHONE (Calibration with main

unit UM12928)

Part Number: 721A2901
Serial No.: UM12928
Calibration Date: 7 May 2019
Next Calibration Date: 7 May 2020

Method Used: In-house Method MM-001

In-house Testing Procedure No.: MM-001

Test References	Model	Serial No.
Blastmate III	714A0801	BA15521
ISEE Triaxial Geophone	714A9701	BG14463
GLOBAL SPECIALISTS 3MHz*	2030	256812
Stanford Spectrum Analyzer	SR760	41550
Aglient Multimeter*	34410A	MY47011119
HP Distortion Meter*	339A	810699
Bruel & Kjaer Accelerometer*	4370	30323
Bruel & Kjaer Charge Amplifier*	2647	2518810
Bruel & Kjaer Conditional Amplifier*	269	2152173
LDS Air Cooled Vibrator	V556	92794/1
LDS Field Power Supply	FPS10L	ARA 04/05
LDS Power Amplifier	PA1000L	ARA 07/06

^{*}References are traceable to NIST or equivalent.

INSTANTEL INC. hereby certifies that this unit has been calibrated and that the results are consistent with the specifications published regarding this instrument. The SENSORCHECK feature of the unit is sufficiently reliable to indicate proper operation, although it is recommended that this unit be sent to INSTANTEL or an authorized service center for regular calibration.

Authorized by:

(Leung Man Hin, Eric)

Calibration Item: Micromate Unit (Calibration with Geophone

UM12928)

Model No.: 721A2501

Serial No.: UM12928

Calibration Date: 7 May 2019

Next Calibration Date: 7 May 2020

Method Used: In-house Method MM-001

In-house Testing Procedure No.: MM-001

Test References	Model	Serial No.
Blastmate III	714A0801	BA15521
ISEE Triaxial Geophone	714A9701	BG14463
GLOBAL SPECIALISTS 3MHz*	2030	256812
Stanford Spectrum Analyzer	SR760	41550
Aglient Multimeter*	34410A	MY4701111
HP Distortion Meter*	339A	810699
Bruel & Kjaer Accelerometer*	4370	30323
Bruel & Kjaer Charge Amplifier*	2647	2518810
Bruel & Kjaer Conditional Amplifier*	269	2152173
LDS Air Cooled Vibrator	V556	92794/1
LDS Field Power Supply	FPS10L	ARA 04/05
LDS Power Amplifier	PA1000L	ARA 07/06

^{*}References are traceable to NIST or equivalent.

INSTANTEL INC. hereby certifies that this unit has been calibrated and that the results are consistent with the specifications published regarding this instrument. The SENSORCHECK feature of the unit is sufficiently reliable to indicate proper operation, although it is recommended that this unit be sent to INSTANTEL or an authorized service center for regular calibration.

Authorized by:

(Leung Man Hin, Eric)

Calibration Item: Micromate Linear Microphone (Calibration with

main unit UM12928)

Model No.: 721A0201
Serial No.: UL3383
Calibration Date: 7 May 2019
Next Calibration Date: 7 May 2020

Method Used: In-house Method MM-002

In-house Testing Procedure No.: MM-002

Test References	Model	Serial No.
Blastmate III	714A0801	BA15521
ISEE Triaxial Geophone	714A9701	BG14463
GLOBAL SPECIALISTS 3MHz*	2030	256812
Stanford Spectrum Analyzer	SR760	41550
Aglient Multimeter*	34410A	MY47011119
HP Distortion Meter*	339A	810699
Bruel & Kjaer Accelerometer*	4370	30323
Bruel & Kjaer Charge Amplifier*	2647	2518810
Bruel & Kjaer Conditional Amplifier*	269	2152173
LDS Air Cooled Vibrator	V556	92794/1
LDS Field Power Supply	FPS10L	ARA 04/05
LDS Power Amplifier	PA1000L	ARA 07/06
LDS Power Amplifier	PA1000L	ARA 07/06

^{*}References are traceable to NIST or equivalent.

INSTANTEL INC. hereby certifies that this unit has been calibrated and that the results are consistent with the specifications published regarding this instrument. The SENSORCHECK feature of the unit is sufficiently reliable to indicate proper operation, although it is recommended that this unit be sent to INSTANTEL or an authorized service center for regular calibration.

Authorized by:

(Leung Man Hin, Eric)

Calibration Item:

TRIAXIAL GEOPHONE (Calibration with main

unit UM12929)

Part Number:

721A2901

Serial No.:

UM12929

Calibration Date:

2 May 2019

Next Calibration Date:

2 May 2020

Method Used:

In-house Method MM-001

In-house Testing Procedure No.:

MM-001

Test References	Model	Serial No.
Blastmate III	714A0801	BA15521
ISEE Triaxial Geophone	714A9701	BG14463
GLOBAL SPECIALISTS 3MHz*	2030	256812
Stanford Spectrum Analyzer	SR760	41550
Aglient Multimeter*	34410A	MY47011119
HP Distortion Meter*	339A	810699
Bruel & Kjaer Accelerometer*	4370	30323
Bruel & Kjaer Charge Amplifier*	2647	2518810
Bruel & Kjaer Conditional Amplifier*	269	2152173
LDS Air Cooled Vibrator	V556	92794/1
LDS Field Power Supply	FPS10L	ARA 04/05
LDS Power Amplifier	PA1000L	ARA 07/06

^{*}References are traceable to NIST or equivalent.

INSTANTEL INC. hereby certifies that this unit has been calibrated and that the results are consistent with the specifications published regarding this instrument. The SENSORCHECK feature of the unit is sufficiently reliable to indicate proper operation, although it is recommended that this unit be sent to INSTANTEL or an authorized service center for regular calibration.

Authorized by:

(Leung Man Hin, Eric)

Date:

2 May 2019

Calibration Item: Micromate Unit (Calibration with Geophone

UM12929)

Model No.: 721A2501
Serial No.: UM12929
Calibration Date: 2 May 2019
Next Calibration Date: 2 May 2020

Method Used: In-house Method MM-001

In-house Testing Procedure No.: MM-001

Test References	Model	Serial No.
Blastmate III	714A0801	BA15521
ISEE Triaxial Geophone	714A9701	BG14463
GLOBAL SPECIALISTS 3MHz*	2030	256812
Stanford Spectrum Analyzer	SR760	41550
Aglient Multimeter*	34410A	MY47011119
HP Distortion Meter*	339A	810699
Bruel & Kjaer Accelerometer*	4370	30323
Bruel & Kjaer Charge Amplifier*	2647	2518810
Bruel & Kjaer Conditional Amplifier*	269	2152173
LDS Air Cooled Vibrator	V556	92794/1
LDS Field Power Supply	FPS10L	ARA 04/05
LDS Power Amplifier	PA1000L	ARA 07/06

^{*}References are traceable to NIST or equivalent.

INSTANTEL INC. hereby certifies that this unit has been calibrated and that the results are consistent with the specifications published regarding this instrument. The SENSORCHECK feature of the unit is sufficiently reliable to indicate proper operation, although it is recommended that this unit be sent to INSTANTEL or an authorized service center for regular calibration.

Authorized by:

(Leung Man Hin, Eric)

Calibration Item: Micromate Linear Microphone (Calibration with

main unit UM12929)

Model No.: 721A0201 Serial No.: UL3384

Calibration Date: 2 May 2019 Next Calibration Date: 2 May 2020

Method Used: In-house Method MM-002

In-house Testing Procedure No.: MM-002

Test References	Model	Serial No.
Blastmate III	714A0801	BA15521
ISEE Triaxial Geophone	714A9701	BG14463
GLOBAL SPECIALISTS 3MHz*	2030	256812
Stanford Spectrum Analyzer	SR760	41550
Aglient Multimeter*	34410A	MY47011119
HP Distortion Meter*	339A	810699
Bruel & Kjaer Accelerometer*	4370	30323
Bruel & Kjaer Charge Amplifier*	2647	2518810
Bruel & Kjaer Conditional Amplifier*	269	2152173
LDS Air Cooled Vibrator	V556	92794/1
LDS Field Power Supply	FPS10L	ARA 04/05
LDS Power Amplifier	PA1000L	ARA 07/06

^{*}References are traceable to NIST or equivalent.

INSTANTEL INC. hereby certifies that this unit has been calibrated and that the results are consistent with the specifications published regarding this instrument. The SENSORCHECK feature of the unit is sufficiently reliable to indicate proper operation, although it is recommended that this unit be sent to INSTANTEL or an authorized service center for regular calibration.

Authorized by:

(Leung Man Hin, Eric)

Calibration Item: TRIAXIAL GEOPHONE (Calibration with main

unit UM13698)

Part Number: 721A2901
Serial No.: UM13698
Calibration Date: 7 May 2019
Next Calibration Date: 7 May 2020

Method Used: In-house Method MM-001

In-house Testing Procedure No.: MM-001

Test References	Model	Serial No.
Blastmate III	714A0801	BA15521
ISEE Triaxial Geophone	714A9701	BG14463
GLOBAL SPECIALISTS 3MHz*	2030	256812
Stanford Spectrum Analyzer	SR760	41550
Aglient Multimeter*	34410A	MY47011119
HP Distortion Meter*	339A	810699
Bruel & Kjaer Accelerometer*	4370	30323
Bruel & Kjaer Charge Amplifier*	2647	2518810
Bruel & Kjaer Conditional Amplifier*	269	2152173
LDS Air Cooled Vibrator	V556	92794/1
LDS Field Power Supply	FPS10L	ARA 04/05
LDS Power Amplifier	PA1000L	ARA 07/06

^{*}References are traceable to NIST or equivalent.

INSTANTEL INC. hereby certifies that this unit has been calibrated and that the results are consistent with the specifications published regarding this instrument. The SENSORCHECK feature of the unit is sufficiently reliable to indicate proper operation, although it is recommended that this unit be sent to INSTANTEL or an authorized service center for regular calibration.

Authorized by:

(Leung Man Hin, Eric)

Calibration Item: Micromate Unit (Calibration with Geophone

UM13698)

Model No.: 721A2501

Serial No.: UM13698

Calibration Date: 7 May 2019

Next Calibration Date: 7 May 2020

Method Used: In-house Method MM-001

In-house Testing Procedure No.: MM-001

Test References	Model	Serial No.
Blastmate III	714A0801	BA15521
ISEE Triaxial Geophone	714A9701	BG14463
GLOBAL SPECIALISTS 3MHz*	2030	256812
Stanford Spectrum Analyzer	SR760	41550
Aglient Multimeter*	34410A	MY47011119
HP Distortion Meter*	339A	810699
Bruel & Kjaer Accelerometer*	4370	30323
Bruel & Kjaer Charge Amplifier*	2647	2518810
Bruel & Kjaer Conditional Amplifier*	269	2152173
LDS Air Cooled Vibrator	V556	92794/1
LDS Field Power Supply	FPS10L	ARA 04/05
LDS Power Amplifier	PA1000L	ARA 07/06

^{*}References are traceable to NIST or equivalent.

INSTANTEL INC. hereby certifies that this unit has been calibrated and that the results are consistent with the specifications published regarding this instrument. The SENSORCHECK feature of the unit is sufficiently reliable to indicate proper operation, although it is recommended that this unit be sent to INSTANTEL or an authorized service center for regular calibration.

Authorized by:

(Leung Man Hin, Eric)

Calibration Item: TRIAXIAL GEOPHONE (Calibration with main

unit UM13701)

Part Number: 721A2901
Serial No.: UM13701
Calibration Date: 7 May 2019
Next Calibration Date: 7 May 2020

Method Used: In-house Method MM-001

In-house Testing Procedure No.: MM-001

Test References	Model	Serial No.
Blastmate III	714A0801	BA15521
ISEE Triaxial Geophone	714A9701	BG14463
GLOBAL SPECIALISTS 3MHz*	2030	256812
Stanford Spectrum Analyzer	SR760	41550
Aglient Multimeter*	34410A	MY47011119
HP Distortion Meter*	339A	810699
Bruel & Kjaer Accelerometer*	4370	30323
Bruel & Kjaer Charge Amplifier*	2647	2518810
Bruel & Kjaer Conditional Amplifier*	269	2152173
LDS Air Cooled Vibrator	V556	92794/1
LDS Field Power Supply	FPS10L	ARA 04/05
LDS Power Amplifier	PA1000L	ARA 07/06

^{*}References are traceable to NIST or equivalent.

INSTANTEL INC. hereby certifies that this unit has been calibrated and that the results are consistent with the specifications published regarding this instrument. The SENSORCHECK feature of the unit is sufficiently reliable to indicate proper operation, although it is recommended that this unit be sent to INSTANTEL or an authorized service center for regular calibration.

Authorized by:

(Leung Man Hin, Eric)

Calibration Item: Micromate Unit (Calibration with Geophone

UM13701)

Model No.: 721A2501
Serial No.: UM13701
Calibration Date: 7 May 2019

Next Calibration Date: 7 May 2020

Method Used: In-house Method MM-001

In-house Testing Procedure No.: MM-001

Test References	Model	Serial No.
Blastmate III	714A0801	BA15521
ISEE Triaxial Geophone	714A9701	BG14463
GLOBAL SPECIALISTS 3MHz*	2030	256812
Stanford Spectrum Analyzer	SR760	41550
Aglient Multimeter*	34410A	MY47011119
HP Distortion Meter*	339A	810699
Bruel & Kjaer Accelerometer*	4370	30323
Bruel & Kjaer Charge Amplifier*	2647	2518810
Bruel & Kjaer Conditional Amplifier*	269	2152173
LDS Air Cooled Vibrator	V556	92794/1
LDS Field Power Supply	FPS10L	ARA 04/05
LDS Power Amplifier	PA1000L	ARA 07/06

^{*}References are traceable to NIST or equivalent.

INSTANTEL INC. hereby certifies that this unit has been calibrated and that the results are consistent with the specifications published regarding this instrument. The SENSORCHECK feature of the unit is sufficiently reliable to indicate proper operation, although it is recommended that this unit be sent to INSTANTEL or an authorized service center for regular calibration.

Authorized by:

(Leung Man Hin, Eric)

Calibration Item: TRIAXIAL GEOPHONE (Calibration with main

unit UM13695)

Part Number: 721A2901
Serial No.: UM13695
Calibration Date: 2 May 2019
Next Calibration Date: 2 May 2020

Method Used: In-house Method MM-001

In-house Testing Procedure No.: MM-001

Test References	Model	Serial No.
Blastmate III	714A0801	BA15521
ISEE Triaxial Geophone	714A9701	BG14463
GLOBAL SPECIALISTS 3MHz*	2030	256812
Stanford Spectrum Analyzer	SR760	41550
Aglient Multimeter*	34410A	MY47011119
HP Distortion Meter*	339A	810699
Bruel & Kjaer Accelerometer*	4370	30323
Bruel & Kjaer Charge Amplifier*	2647	2518810
Bruel & Kjaer Conditional Amplifier*	269	2152173
LDS Air Cooled Vibrator	V556	92794/1
LDS Field Power Supply	FPS10L	ARA 04/05
LDS Power Amplifier	PA1000L	ARA 07/06

^{*}References are traceable to NIST or equivalent.

INSTANTEL INC. hereby certifies that this unit has been calibrated and that the results are consistent with the specifications published regarding this instrument. The SENSORCHECK feature of the unit is sufficiently reliable to indicate proper operation, although it is recommended that this unit be sent to INSTANTEL or an authorized service center for regular calibration.

Authorized by:

(Leung Man Hin, Eric)

Calibration Item: Micromate Unit (Calibration with Geophone

UM13695)

Model No.: 721A2501
Serial No.: UM13695
Calibration Date: 2 May 2019
Next Calibration Date: 2 May 2020

Method Used: In-house Method MM-001

In-house Testing Procedure No.: MM-001

Test References	Model	Serial No.
Blastmate III	714A0801	BA15521
ISEE Triaxial Geophone	714A9701	BG14463
GLOBAL SPECIALISTS 3MHz*	2030	256812
Stanford Spectrum Analyzer	SR760	41550
Aglient Multimeter*	34410A	MY47011119
HP Distortion Meter*	339A	810699
Bruel & Kjaer Accelerometer*	4370	30323
Bruel & Kjaer Charge Amplifier*	2647	2518810
Bruel & Kjaer Conditional Amplifier*	269	2152173
LDS Air Cooled Vibrator	V556	92794/1
LDS Field Power Supply	FPS10L	ARA 04/05
LDS Power Amplifier	PA1000L	ARA 07/06

^{*}References are traceable to NIST or equivalent.

INSTANTEL INC. hereby certifies that this unit has been calibrated and that the results are consistent with the specifications published regarding this instrument. The SENSORCHECK feature of the unit is sufficiently reliable to indicate proper operation, although it is recommended that this unit be sent to INSTANTEL or an authorized service center for regular calibration.

Authorized by:

(Leung Man Hin, Eric)

Calibration Item: Micromate Linear Microphone (Calibration with

main unit UM13695)

Model No.: 721A0201
Serial No.: UL3396
Calibration Date: 2 May 2019

Next Calibration Date: 2 May 2020

Method Used: In-house Method MM-002

In-house Testing Procedure No.: MM-002

Test References	Model	Serial No.
Blastmate III	714A0801	BA15521
ISEE Triaxial Geophone	714A9701	BG14463
GLOBAL SPECIALISTS 3MHz*	2030	256812
Stanford Spectrum Analyzer	SR760	41550
Aglient Multimeter*	34410A	MY47011119
HP Distortion Meter*	339A	810699
Bruel & Kjaer Accelerometer*	4370	30323
Bruel & Kjaer Charge Amplifier*	2647	2518810
Bruel & Kjaer Conditional Amplifier*	269	2152173
LDS Air Cooled Vibrator	V556	92794/1
LDS Field Power Supply	FPS10L	ARA 04/05
LDS Power Amplifier	PA1000L	ARA 07/06

^{*}References are traceable to NIST or equivalent.

INSTANTEL INC. hereby certifies that this unit has been calibrated and that the results are consistent with the specifications published regarding this instrument. The SENSORCHECK feature of the unit is sufficiently reliable to indicate proper operation, although it is recommended that this unit be sent to INSTANTEL or an authorized service center for regular calibration.

Authorized by:

(Leung Man Hin, Eric)

Calibration Item: Micromate Unit (Calibration with Geophone

UM13702)

Model No.: 721A2501
Serial No.: UM13702
Calibration Date: 2 May 2019
Next Calibration Date: 2 May 2020

Method Used: In-house Method MM-001

In-house Testing Procedure No.: MM-001

Test References	Model	Serial No.
Blastmate III	714A0801	BA15521
ISEE Triaxial Geophone	714A9701	BG14463
GLOBAL SPECIALISTS 3MHz*	2030	256812
Stanford Spectrum Analyzer	SR760	41550
Aglient Multimeter*	34410A	MY47011119
HP Distortion Meter*	339A	810699
Bruel & Kjaer Accelerometer*	4370	30323
Bruel & Kjaer Charge Amplifier*	2647	2518810
Bruel & Kjaer Conditional Amplifier*	269	2152173
LDS Air Cooled Vibrator	V556	92794/1
LDS Field Power Supply	FPS10L	ARA 04/05
LDS Power Amplifier	PA1000L	ARA 07/06

^{*}References are traceable to NIST or equivalent.

INSTANTEL INC. hereby certifies that this unit has been calibrated and that the results are consistent with the specifications published regarding this instrument. The SENSORCHECK feature of the unit is sufficiently reliable to indicate proper operation, although it is recommended that this unit be sent to INSTANTEL or an authorized service center for regular calibration.

Authorized by:

(Leung Man Hin, Eric)

Calibration Item: TRIAXIAL GEOPHONE (Calibration with main

unit UM13702)

Part Number: 721A2901
Serial No.: UM13702
Calibration Date: 2 May 2019
Next Calibration Date: 2 May 2020

Method Used: In-house Method MM-001

In-house Testing Procedure No.: MM-001

Test References	Model	Serial No.
Blastmate III	714A0801	BA15521
ISEE Triaxial Geophone	714A9701	BG14463
GLOBAL SPECIALISTS 3MHz*	2030	256812
Stanford Spectrum Analyzer	SR760	41550
Aglient Multimeter*	34410A	MY47011119
HP Distortion Meter*	339A	810699
Bruel & Kjaer Accelerometer*	4370	30323
Bruel & Kjaer Charge Amplifier*	2647	2518810
Bruel & Kjaer Conditional Amplifier*	269	2152173
LDS Air Cooled Vibrator	V556	92794/1
LDS Field Power Supply	FPS10L	ARA 04/05
LDS Power Amplifier	PA1000L	ARA 07/06

^{*}References are traceable to NIST or equivalent.

INSTANTEL INC. hereby certifies that this unit has been calibrated and that the results are consistent with the specifications published regarding this instrument. The SENSORCHECK feature of the unit is sufficiently reliable to indicate proper operation, although it is recommended that this unit be sent to INSTANTEL or an authorized service center for regular calibration.

Authorized by:

(Leung Man Hin, Eric)

Calibration Item: Micromate Linear Microphone (Calibration with

main unit UM13702)

 Model No.:
 721A0201

 Serial No.:
 UL3395

Calibration Date: 2 May 2019
Next Calibration Date: 2 May 2020

Method Used: In-house Method MM-002

In-house Testing Procedure No.: MM-002

Test References	Model	Serial No.
Blastmate III	714A0801	BA15521
ISEE Triaxial Geophone	714A9701	BG14463
GLOBAL SPECIALISTS 3MHz*	2030	256812
Stanford Spectrum Analyzer	SR760	41550
Aglient Multimeter*	34410A	MY47011119
HP Distortion Meter*	339A	810699
Bruel & Kjaer Accelerometer*	4370	30323
Bruel & Kjaer Charge Amplifier*	2647	2518810
Bruel & Kjaer Conditional Amplifier*	269	2152173
LDS Air Cooled Vibrator	V556	92794/1
LDS Field Power Supply	FPS10L	ARA 04/05
LDS Power Amplifier	PA1000L	ARA 07/06

^{*}References are traceable to NIST or equivalent.

INSTANTEL INC. hereby certifies that this unit has been calibrated and that the results are consistent with the specifications published regarding this instrument. The SENSORCHECK feature of the unit is sufficiently reliable to indicate proper operation, although it is recommended that this unit be sent to INSTANTEL or an authorized service center for regular calibration.

Authorized by:

(Wong, Keefe Solomon)

Calibration Item: Micromate Unit (Calibration with Geophone

UM14387)

Model No.: 721A2501 Serial No.: UM14287

Calibration Date: UM14387

Calibration Date: 6 August 2019

Next Calibration Date: 6 August 2020

Method Used: In-house Method MM-001

In-house Testing Procedure No.: MM-001

Test References	Model	
Blastmate III	STATE OF THE PARTY	Serial No.
ISEE Triaxial Geophone	714A0801	BA15521
	714A9701	BG14463
GLOBAL SPECIALISTS 3MHz*	2030	256812
Stanford Spectrum Analyzer	SR760	
Aglient Multimeter*	34410A	41550
HP Distortion Meter*		MY47011119
Bruel & Kjaer Accelerometer*	339A	810699
	4370	30323
Bruel & Kjaer Charge Amplifier*	2647	2518810
Bruel & Kjaer Conditional Amplifier*	269	张 大學也不過
LDS Air Cooled Vibrator	V556	2152173
LDS Field Power Supply		92794/1
	FPS10L	ARA 04/05
LDS Power Amplifier	PA1000L	ARA 07/06
*References are traceable to NUCT.		-14107/00

^{*}References are traceable to NIST or equivalent.

INSTANTEL INC. hereby certifies that this unit has been calibrated and that the results are consistent with the specifications published regarding this instrument. The SENSORCHECK feature of the unit is sufficiently reliable to indicate proper operation, although it is recommended that this unit be sent to INSTANTEL or an authorized service center for regular calibration.

Authorized by:

(Leung Man Hin, Eric)

Date: 6 August 2019

Calibration Item: TRIAXIAL GEOPHONE (Calibration with main

unit UM14387)

Part Number: 721A2901 Serial No.: UM14387

Calibration Date: 6 August 2019
Next Calibration Date: 6 August 2020

Method Used: In-house Method MM-001

In-house Testing Procedure No.: MM-001

Test References	Model	Serial No.
Blastmate III	714A0801	BA15521
ISEE Triaxial Geophone	714A9701	BG14463
GLOBAL SPECIALISTS 3MHz*	2030	256812
Stanford Spectrum Analyzer	SR760	41550
Aglient Multimeter*	34410A	MY47011119
HP Distortion Meter*	339A	810699
Bruel & Kjaer Accelerometer*	4370	30323
Bruel & Kjaer Charge Amplifier*	2647	2518810
Bruel & Kjaer Conditional Amplifier*	269	2152173
LDS Air Cooled Vibrator	V556	92794/1
LDS Field Power Supply	FPS10L	ARA 04/05
LDS Power Amplifier	PA1000L	ARA 07/06

^{*}References are traceable to NIST or equivalent.

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Authorized by:

(Leung Man Hin, Eric)
Date: 6 August 2019

Calibration Item: Micromate Linear Microphone (Calibration with

main unit UM14387)

Model No.: 721A0201 Serial No.: UL3687

Calibration Date: 6 August 2019 Next Calibration Date: 6 August 2020

Method Used: In-house Method MM-002

In-house Testing Procedure No.: MM-002

Model	
A CONTRACTOR AND A CONT	Serial No.
	BA15521
714A9701	BG14463
2030	256812
SR760	
34410A	41550
	MY47011119
	810699
4370	30323
2647	2518810
269	
V556	2152173
	92794/1
	ARA 04/05
	ARA 07/06
alent.	711CA 07/00
	SR760 34410A 339A 4370 2647

INSTANTEL INC. hereby certifies that this unit has been calibrated and that the results are consistent with the specifications published regarding this instrument. The SENSORCHECK feature of the unit is sufficiently reliable to indicate proper operation, although it is recommended that this unit be sent to INSTANTEL or an authorized service center for regular calibration.

Authorized by:

(Leung Man Hin, Eric)

Date: 6 August 2019

Calibration Item: Micromate Unit (Calibration with Geophone

UM15463)

Model No.: 721A2501 Serial No.: UM15463

Calibration Date: 13 August 2019
Next Calibration Date: 13 August 2020

Method Used: In-house Method MM-001

In-house Testing Procedure No.: MM-001

Test References	Model	Serial No.
Blastmate III	714A0801	BA15521
ISEE Triaxial Geophone	714A9701	BG14463
GLOBAL SPECIALISTS 3MHz*	2030	256812
Stanford Spectrum Analyzer	SR760	41550
Aglient Multimeter*	34410A	MY47011119
HP Distortion Meter*	339A	810699
Bruel & Kjaer Accelerometer*	4370	30323
Bruel & Kjaer Charge Amplifier*	2647	2518810
Bruel & Kjaer Conditional Amplifier*	269	2152173
LDS Air Cooled Vibrator	V556	92794/1
LDS Field Power Supply	FPS10L	ARA 04/05
LDS Power Amplifier	PA1000L	ARA 07/06
		AICA 07/00

^{*}References are traceable to NIST or equivalent.

INSTANTEL INC. hereby certifies that this unit has been calibrated and that the results are consistent with the specifications published regarding this instrument. The SENSORCHECK feature of the unit is sufficiently reliable to indicate proper operation, although it is recommended that this unit be sent to INSTANTEL or an authorized service center for regular calibration.

Authorized by:

(Leung Man Hin, Eric)

Date: 13 August 2019

Calibration Item: TRIAXIAL GEOPHONE (Calibration with main

unit UM15463)

Part Number: 721A2901 Serial No.: UM15463

Calibration Date: 13August 2019
Next Calibration Date: 13 August 2020

Method Used: In-house Method MM-001

In-house Testing Procedure No.: MM-001

Model	Serial No.
714A0801	BA15521
714A9701	BG14463
2030	256812
SR760	41550
34410A	MY47011119
339A	810699
4370	30323
2647	2518810
269	2152173
V556	92794/1
FPS10L	ARA 04/05
PA1000L	ARA 07/06
	714A0801 714A9701 2030 SR760 34410A 339A 4370 2647 269 V556 FPS10L

^{*}References are traceable to NIST or equivalent.

INSTANTEL INC. hereby certifies that this unit has been calibrated and that the results are consistent with the specifications published regarding this instrument. The SENSORCHECK feature of the unit is sufficiently reliable to indicate proper operation, although it is recommended that this unit be sent to INSTANTEL or an authorized service center for regular calibration.

Authorized by:

(Leung Man Hin, Eric)

Date: 13 August 2019

Calibration Item: Micromate Linear Microphone (Calibration with

main unit UM15463)

Model No.: 721A0201 Serial No.: UL3688

Calibration Date: 13 August 2019
Next Calibration Date: 13 August 2020

Method Used: In-house Method MM-002

In-house Testing Procedure No.: MM-002

Test References	Model	Serial No.
Blastmate III	714A0801	BA15521
ISEE Triaxial Geophone	714A9701	BG14463
GLOBAL SPECIALISTS 3MHz*	2030	256812
Stanford Spectrum Analyzer	SR760	41550
Aglient Multimeter*	34410A	MY47011119
HP Distortion Meter*	339A	810699
Bruel & Kjaer Accelerometer*	4370	30323
Bruel & Kjaer Charge Amplifier*	2647	2518810
Bruel & Kjaer Conditional Amplifier*	269	2152173
LDS Air Cooled Vibrator	V556	92794/1
LDS Field Power Supply	FPS10L	ARA 04/05
LDS Power Amplifier	PA1000L	ARA 07/06

^{*}References are traceable to NIST or equivalent.

INSTANTEL INC. hereby certifies that this unit has been calibrated and that the results are consistent with the specifications published regarding this instrument. The SENSORCHECK feature of the unit is sufficiently reliable to indicate proper operation, although it is recommended that this unit be sent to INSTANTEL or an authorized service center for regular calibration.

Authorized by:

(Leung Man Hin, Eric)

Date: 13 August 2019