



# Test Report


SEIKO INSTRUMENTS INC.  
563, TAKATSUKA-SHINDEN, MATSUDO-SHI, CHIBA 270-  
2222, JAPAN

Report No : CE/2004/B1333A  
Date : 2004/11/15  
Page : 1 of 10

**The following merchandise was(were) submitted and identified by the client as :**

Type of Product : 8-PIN SOP-G  
Sample Received : 2004/11/08.  
Testing Date : 2004/11/08 TO 2004/11/15

=====  
**Test Result** : - Please see the next page -

  
Daniel Yeh, M.R. / Operation Manager  
Signed for and on behalf of  
SGS TAIWAN LTD.



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Report No : CE/2004/B1333A  
 Date : 2004/11/15  
 Page : 2 of 10

## Test Result

PART NAME NO.1 : PLEASE REFER TO THE SAMPLE CARD(S).(MIX ALL PARTS)

Test Item(s):	Unit	Method	MDL	Result				
				NO.1				
Carbon tetrachloride	ppm	With reference to US EPA 8260. Analysis was performed by GC/MS linked Headspace.	1	N.D.				

Test Item(s):	Unit	Method	MDL	Result				
				NO.1				
CFC's(Chlorofluorocarbons)		With reference to US EPA 8260.						
Group I								
Chlorofluorocarbon-11(CAS No:000075-69-4)	ppm	Analysis was performed by GC/MS.(CFC's(Chlorofluorocarbons))	1	N.D.				
Chlorofluorocarbon-12(CAS No:000075-71-8)	ppm	Analysis was performed by GC/MS.(CFC's(Chlorofluorocarbons))	1	N.D.				
Chlorofluorocarbon-113(CAS No:000076-13-1)	ppm	Analysis was performed by GC/MS.(CFC's(Chlorofluorocarbons))	1	N.D.				
Chlorofluorocarbon-114(CAS No:000076-14-2)	ppm	Analysis was performed by GC/MS.(CFC's(Chlorofluorocarbons))	1	N.D.				
Chlorofluorocarbon-115(CAS No:000076-15-3)	ppm	Analysis was performed by GC/MS.(CFC's(Chlorofluorocarbons))	1	N.D.				
Group III								
Chlorofluorocarbon-13(CAS No:000075-72-9)	ppm	Analysis was performed by GC/MS.(CFC's(Chlorofluorocarbons))	1	N.D.				
Chlorofluorocarbon-111(CAS No:000354-56-3)	ppm	Analysis was performed by GC/MS.(CFC's(Chlorofluorocarbons))	1	N.D.				

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Report No : CE/2004/B1333A

Date : 2004/11/15

Page : 3 of 10

Test Item(s):	Unit	Method	MDL	Result				
				NO.1				
Chlorofluorocarbon-112(CAS No:000076-12-0)	ppm	Analysis was performed by GC/MS.(CFC's(Chlorofluorocarbons))	1	N.D.				
Chlorofluorocarbon-211(CAS No:135401-87-5)	ppm	Analysis was performed by GC/MS.(CFC's(Chlorofluorocarbons))	1	N.D.				
Chlorofluorocarbon-212(CAS No:076564-99-3)	ppm	Analysis was performed by GC/MS.(CFC's(Chlorofluorocarbons))	1	N.D.				
Chlorofluorocarbon-213(CAS No:060285-54-3)	ppm	Analysis was performed by GC/MS.(CFC's(Chlorofluorocarbons))	1	N.D.				
Chlorofluorocarbon-214(CAS No:002268-46-4)	ppm	Analysis was performed by GC/MS.(CFC's(Chlorofluorocarbons))	1	N.D.				
Chlorofluorocarbon-215(CAS No:000076-17-5)	ppm	Analysis was performed by GC/MS.(CFC's(Chlorofluorocarbons))	1	N.D.				
Chlorofluorocarbon-216(CAS No:001652-80-8)	ppm	Analysis was performed by GC/MS.(CFC's(Chlorofluorocarbons))	1	N.D.				
Chlorofluorocarbon-217(CAS No:000422-86-6)	ppm	Analysis was performed by GC/MS.(CFC's(Chlorofluorocarbons))	1	N.D.				

Test Item(s):	Unit	Method	MDL	Result				
				NO.1				
1,1,1-trichloroethane	ppm	Analysis was performed by GC/MS.	1	N.D.				

Test Item(s):	Unit	Method	MDL	Result				
				NO.1				
Chlorinated Paraffin (C10~C13) (CAS NO:010871-26-2)	%	With reference to 83/264/EEC & EPA 8270D. Analysis was performed by GC/MS.	0.01	N.D.				

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Report No : CE/2004/B1333A  
 Date : 2004/11/15  
 Page : 4 of 10

Test Item(s):	Unit	Method	MDL	Result				
				NO.1				
Halon		With reference to US EPA 8260.						
Halon-1211(CAS No:000353-59-3)	ppm	Analysis was performed by GC/MS	1	N.D.				
Halon-1301(CAS No:000075-63-8)	ppm	Analysis was performed by GC/MS	1	N.D.				
Halon-2402(CAS No:000124-73-1)	ppm	Analysis was performed by GC/MS	1	N.D.				

Test Item(s):	Unit	Method	MDL	Result				
				NO.1				
PBBs(Polybrominated biphenyls)(CAS NO:67774-32-7)	%	With reference to USEPA3540 or USEPA3550. Analysis was performed by HPLC/DAD, LC/MS or GC/MS. (prohibited by 2002/95/EC (RoHS), 83/264/EEC and 76/769/EEC)	0.0005	N.D.				
PBBEs(PBDEs)(Polybrominated biphenyl ethers)	%	With reference to USEPA3540 or USEPA3550. Analysis was performed by HPLC/DAD, LC/MS or GC/MS. (prohibited by 2002/95/EC (RoHS), 83/264/EEC and 76/769/EEC)	0.0005	N.D.				

Test Item(s):	Unit	Method	MDL	Result				
				NO.1				
Polychlorinated Naphthalene	ppm	With reference to 83/264/EEC & EPA 8270D. Analysis was performed by GC/MS.	5	N.D.				

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Report No : CE/2004/B1333A  
Date : 2004/11/15  
Page : 5 of 10

Test Item(s):	Unit	Method	MDL	Result				
				NO.1				
PCBs(Polychlorinated Biphenyls)(CAS NO:001336-36-3)	ppm	With reference to US EPA 8082,89/677/EEC. Analysis was performed by GC/ECD/MS.	0.5	N.D.				
PCTs(Polychlorinated Terphenyls)	ppm	With reference to US EPA 8082,89/677/EEC. Analysis was performed by GC/ECD/MS.	0.5	N.D.				

Test Item(s):	Unit	Method	MDL	Result				
				NO.1				
Halogen		As per prEN14582 method B.						
Halogen-Chlorine (Cl)(CAS No:007782-50-5)	ppm	Filling the oxygen and absorb solution in the flask and take sample in the flask and burn it , The absorb solution was analyzed by IC method	50	N.D.				
Halogen-Fluorine (F)(CAS No:007782-41-4)	ppm	Filling the oxygen and absorb solution in the flask and take sample in the flask and burn it , The absorb solution was analyzed by IC method	50	N.D.				
Halogen-Bromine (Br)(CAS No:007726-95-6)	ppm	Filling the oxygen and absorb solution in the flask and take sample in the flask and burn it , The absorb solution was analyzed by IC method	50	2300.0				
Halogen-Iodine (I)(CAS No:007553-56-2)	ppm	Filling the oxygen and absorb solution in the flask and take sample in the flask and burn it , analyzed by ICP	50	N.D.				

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Report No : CE/2004/B1333A

Date : 2004/11/15

Page : 6 of 10

Test Item(s):	Unit	Method	MDL	Result				
				NO.1				
HCFC's(Hydrogenated chlorofluorocarbons)		With reference to US EPA 8260.						
Hydrochlorofluorocarbon-21(CAS No.:000075-43-4)	ppm	Analysis was performed by GC/MS.(HCFC's(Hydrogenated chlorofluorocarbons))	1	N.D.				
Hydrochlorofluorocarbon-22(CAS No.:000075-45-6)	ppm	Analysis was performed by GC/MS.(HCFC's(Hydrogenated chlorofluorocarbons))	1	N.D.				
Hydrochlorofluorocarbon-31(CAS No.:000593-70-4)	ppm	Analysis was performed by GC/MS.(HCFC's(Hydrogenated chlorofluorocarbons))	1	N.D.				
Hydrochlorofluorocarbon-121(CAS No.:000354-14-3)	ppm	Analysis was performed by GC/MS.(HCFC's(Hydrogenated chlorofluorocarbons))	1	N.D.				
Hydrochlorofluorocarbon-122(CAS No.:000354-21-2)	ppm	Analysis was performed by GC/MS.(HCFC's(Hydrogenated chlorofluorocarbons))	1	N.D.				
Hydrochlorofluorocarbon-123(CAS No.:000306-83-1)	ppm	Analysis was performed by GC/MS.(HCFC's(Hydrogenated chlorofluorocarbons))	1	N.D.				
Hydrochlorofluorocarbon-124(CAS No.:002837-89-0)	ppm	Analysis was performed by GC/MS.(HCFC's(Hydrogenated chlorofluorocarbons))	1	N.D.				
Hydrochlorofluorocarbon-131(CAS No.:000359-28-4)	ppm	Analysis was performed by GC/MS.(HCFC's(Hydrogenated chlorofluorocarbons))	1	N.D.				
Hydrochlorofluorocarbon-131b(CAS No.:000471-43-2)	ppm	Analysis was performed by GC/MS.(HCFC's(Hydrogenated chlorofluorocarbons))	1	N.D.				
Hydrochlorofluorocarbon-133a(CAS No.:000075-88-7)	ppm	Analysis was performed by GC/MS.(HCFC's(Hydrogenated chlorofluorocarbons))	1	N.D.				
Hydrochlorofluorocarbon-141b(CAS No.:001717-00-6)	ppm	Analysis was performed by GC/MS.(HCFC's(Hydrogenated chlorofluorocarbons))	1	N.D.				

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Report No : CE/2004/B1333A

Date : 2004/11/15

Page : 7 of 10

Test Item(s):	Unit	Method	MDL	Result				
				NO.1				
Hydrochlorofluorocarbon-221	ppm	Analysis was performed by GC/MS.(HCFC's(Hydrogenated chlorofluorocarbons))	1	N.D.				
Hydrochlorofluorocarbon-222(CAS No.:000422-30-0)	ppm	Analysis was performed by GC/MS.(HCFC's(Hydrogenated chlorofluorocarbons))	1	N.D.				
Hydrochlorofluorocarbon-223	ppm	Analysis was performed by GC/MS.(HCFC's(Hydrogenated chlorofluorocarbons))	1	N.D.				
Hydrochlorofluorocarbon-224	ppm	Analysis was performed by GC/MS.(HCFC's(Hydrogenated chlorofluorocarbons))	1	N.D.				
Hydrochlorofluorocarbon-225ca(CAS No.:000422-56-0)	ppm	Analysis was performed by GC/MS.(HCFC's(Hydrogenated chlorofluorocarbons))	1	N.D.				
Hydrochlorofluorocarbon-225cb(CAS No.:000507-55-1)	ppm	Analysis was performed by GC/MS.(HCFC's(Hydrogenated chlorofluorocarbons))	1	N.D.				
Hydrochlorofluorocarbon-226(CAS No.:000431-87-8)	ppm	Analysis was performed by GC/MS.(HCFC's(Hydrogenated chlorofluorocarbons))	1	N.D.				
Hydrochlorofluorocarbon-231	ppm	Analysis was performed by GC/MS.(HCFC's(Hydrogenated chlorofluorocarbons))	1	N.D.				
Hydrochlorofluorocarbon-232	ppm	Analysis was performed by GC/MS.(HCFC's(Hydrogenated chlorofluorocarbons))	1	N.D.				
Hydrochlorofluorocarbon-233	ppm	Analysis was performed by GC/MS.(HCFC's(Hydrogenated chlorofluorocarbons))	1	N.D.				
Hydrochlorofluorocarbon-234	ppm	Analysis was performed by GC/MS.(HCFC's(Hydrogenated chlorofluorocarbons))	1	N.D.				

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Report No : CE/2004/B1333A

Date : 2004/11/15

Page : 8 of 10

Test Item(s):	Unit	Method	MDL	Result				
				NO.1				
Hydrochlorofluorocarbon-235(CAS No.:013838-16-9)	ppm	Analysis was performed by GC/MS.(HCFC's(Hydrogenated chlorofluorocarbons))	1	N.D.				
Hydrochlorofluorocarbon-241	ppm	Analysis was performed by GC/MS.(HCFC's(Hydrogenated chlorofluorocarbons))	1	N.D.				
Hydrochlorofluorocarbon-242	ppm	Analysis was performed by GC/MS.(HCFC's(Hydrogenated chlorofluorocarbons))	1	N.D.				
Hydrochlorofluorocarbon-243(CAS No.:000338-75-0)	ppm	Analysis was performed by GC/MS.(HCFC's(Hydrogenated chlorofluorocarbons))	1	N.D.				
Hydrochlorofluorocarbon-244	ppm	Analysis was performed by GC/MS.(HCFC's(Hydrogenated chlorofluorocarbons))	1	N.D.				
Hydrochlorofluorocarbon-251	ppm	Analysis was performed by GC/MS.(HCFC's(Hydrogenated chlorofluorocarbons))	1	N.D.				
Hydrochlorofluorocarbon-252	ppm	Analysis was performed by GC/MS.(HCFC's(Hydrogenated chlorofluorocarbons))	1	N.D.				
Hydrochlorofluorocarbon-253(CAS No.:000354-06-1)	ppm	Analysis was performed by GC/MS.(HCFC's(Hydrogenated chlorofluorocarbons))	1	N.D.				
Hydrochlorofluorocarbon-261(CAS No.:000420-97-3)	ppm	Analysis was performed by GC/MS.(HCFC's(Hydrogenated chlorofluorocarbons))	1	N.D.				
Hydrochlorofluorocarbon-262(CAS No.:000420-97-3)	ppm	Analysis was performed by GC/MS.(HCFC's(Hydrogenated chlorofluorocarbons))	1	N.D.				
Hydrochlorofluorocarbon-271	ppm	Analysis was performed by GC/MS.(HCFC's(Hydrogenated chlorofluorocarbons))	1	N.D.				

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Report No : CE/2004/B1333A  
Date : 2004/11/15  
Page : 9 of 10

Test Item(s):	Unit	Method	MDL	Result					
				NO.1					
PVC free(CAS No:9002-86-2)	**	With reference to ASTM E1252 method. Analysis was performed by FTIR/ATR AND Pyro-GC/MS.	-	Negative					

Test Item(s):	Unit	Method	MDL	Result					
				NO.1					
Chromium VI (Cr+6)	ppm	As per US EPA 7196A and US EPA 3060A.	2	N.D.					
Cadmium (Cd)	ppm	ICP-AES After As per EN 1122, Method B:2001 or other acid digestion.	2	N.D.					
Mercury (Hg)	ppm	ICP-AES After As per US EPA 3052 or other acid digestion.	2	N.D.					
Lead (Pb)	ppm	ICP-AES After As per US EPA 3050B or other acid digestion.	2	N.D.					

- NOTE : (1) N.D. = Not detected.(<MDL)  
(2) ppm = mg/kg  
(3) MDL= Method Detection Limit  
(4) " ---" = Not Applicable  
(5) " -" = Not Regulation  
(6) \* = Results shown are of the adjusted analytical results.  
(7) \*\*= Qualitative analysis(No Unit)  
(8) Negative = Undetectable / Positive = Detectable.

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Report No : CE/2004/B1333A  
Date : 2004/11/15  
Page : 10 of 10

