



ICP-OES DAILY CUSTOMER MAINTENANCE (continued)

Page: \_\_\_

Month/Year Sept 2009

F- Flushed  
N.A.- Not Applicable

X- Instrument off  
N.A.- Not applicable

Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
<b>Cleaning Procedures</b>															
After analyzing aqueous solutions, flush out the system for five minutes with the torch on with deionized water or a 2% nitric acid solution followed by deionized water.	/	/	/	/				/	/	/	/			/	/
After analyzing organic solutions, flush out the system for five minutes with the torch on with a cleaning solvent.	/	/	/	/					/	/	/			/	/
On a weekly basis, clean a Gemcone or concentric nebulizer overnight in a 1 to 5% Nitric Acid solution and then rinse with deionized water.*	/	/	/	/			/	/	/	/	/			/	/
After analyzing aqueous solutions, flush out the unbaffled cyclonic chamber for five minutes with the torch on with a 10% nitric acid solution followed by deionized water. If large droplets are still collecting in the spray chamber place the cyclonic spray chamber in an ultrasonic bath with a detergent or asprale a 1% TritonX100 solution.	/	/	/	/			/	/	/	/	/			/	/

Analyst:

d d d d d | d d d d d | d d

\* Not applicable to Mira Mist Nebulizer

ICP-OES DAILY CUSTOMER MAINTENANCE (continued)

Page: \_\_\_

Month/Year Sept 2009

F- Flushed  
N.A.- Not Applicable

X- Instrument off  
N.A.- Not applicable

Day	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
<b>Cleaning Procedures</b>																
After analyzing aqueous solutions, flush out the system for five minutes with the torch on with deionized water or a 2% nitric acid solution followed by deionized water.	/	/	/			/	/	/	/	/			/	/	/	
After analyzing organic solutions, flush out the system for five minutes with the torch on with a cleaning solvent.	/	/				/	/	/	/	/			/	/	/	
On a weekly basis, clean a Gemcone or concentric nebulizer overnight in a 1 to 5% Nitric Acid solution and then rinse with deionized water.	/	/	/			/	/	/	/	/			/	/	/	
After analyzing aqueous solutions, flush out the unbaffled cyclonic chamber for five minutes with the torch on with a 10% nitric acid solution followed by deionized water. If large droplets are still collecting in the spray chamber place the cyclonic spray chamber in an ultrasonic bath with a detergent or aspirate a 1% TritonX100 solution.	/	/	/			/	/	/	/	/			/	/	/	

Analyst: ale alalalalal alalal

ICP-OES DAILY CUSTOMER MAINTENANCE (continued)

Page: \_\_\_

Month/Year Sept 2009

I- Inspected  
N- Noted

N.A. - Not applicable  
X- Instrument off

Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Miscellaneous															
Check that the exhaust vent system is switched on, working properly and not blocked.	/	/	/	/			/	/	/	/	/			/	/
Note corrosion that exists in or on the instrument.	/	/	/	/			/	/	/	/	/			/	/
On a weekly basis, clean instrument covers.	/	/	/	/			/	/	/	/	/			/	/
On a weekly basis, check database for information to archive and/or delete.	/	/	/	/			/	/	/	/	/			/	/
Document problems and record all aspects of any maintenance in log.	/	/	/	/			/	/	/	/	/			/	/

Analyst: A d d d d d d d d d d

Comments:

ICP-OES DAILY CUSTOMER MAINTENANCE (continued)

Page: \_\_\_

Month/Year Sept 2009

I- Inspected  
N- Noted

N.A.- Not applicable  
X- Instrument off

Day	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
<b>Miscellaneous</b>																
Check that the exhaust vent system is switched on, working properly and not blocked.	/	/	/			/	/	/	/	/			/	/	/	
Note corrosion that exists in or on the instrument.	/	/	/			/	/	/	/	/			/	/	/	
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On a weekly basis, check database for information to archive and/or delete.	/	/	/			/	/	/	/	/			/	/	/	
Document problems and record all aspects of any maintenance in log.	/	/	/			/	/	/	/	/			/	/	/	

Analyst: 

d	d	d														
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d	d	d	d	d	d											
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y	d	n														
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Comments:

ICP-OES DAILY CUSTOMER MAINTENANCE

Page: \_\_\_

Month/Year Oct 2009

I- Inspected  
R- Replaced

X- Instrument off  
N.A. - Not applicable

Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Sample Introduction System															
On a weekly basis, inspect the torch, glassware, and injector tube. The glassware should be clean and dry, with no traces of deposits or signs of melting	I	I			I	I	I	I	I			I	I	I	
On weekly basis, check that the nebulizer is not clogged.	I	I			I	I	I	I	I			I	I	I	
Check that the nebulizer/ end cap is tightly secured to spray chamber	I	I			I	I	I	I	I			I	I	I	
Check that the sample capillary tubing is clean and in good condition.	I	I			I	I	I	I	I			I	I	I	
Check that the sample capillary tubing is attached to the nebulizer sample inlet.	I	I			I	I	I	I	I			I	I	I	
Check that the RF coil is clean and dry.	OK														
Check that the drain fitting is secured on the spray chamber drain.	I	I			I	I	I	I	I			I	I	I	

Analyst: AO AO

ICP-OES DAILY CUSTOMER MAINTENANCE (continued)

Month/Year Oct 2009

I - Inspected  
D - Delivered

D- Drained  
X- Instrument off

Page: \_\_\_\_  
N.A.- Not applicable

Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
BY VENDOR USE															
Check the argon supply, connections and pressure. Make sure a spare tank is ready if necessary.	/	/			/	/	/	/	/			/	/	/	
Check the nitrogen purge gas tank connections, supply and pressure. Make sure a spare tank is ready if necessary.	/	/			/	/	/	/	/			/	/	/	/
Check weekly the shear gas (usually compressed air) connections, supply and pressure. Make sure a spare tank is ready if necessary. Drain water in the air compressor.	/	/			/	/	/	/	/			/	/	/	
Check that the cylinder valves are open and that the regulators of the gases are within the proper pressure range.	/	/			/	/	/	/	/			/	/	/	
Check for leaks at the gas connection at the instrument.	/	/			/	/	/	/	/			/	/	/	

Analyst: llh agc llh llh

ICP-OES DAILY CUSTOMER MAINTENANCE (continued)

Page: \_\_\_

Month/Year Oct 2009

F- Flushed  
N.A. - Not Applicable

X- Instrument off  
N.A. - Not applicable

Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Cleaning Procedures:															
After analyzing aqueous solutions, flush out the system for five minutes with the torch on with deionized water or a 2% nitric acid solution followed by deionized water.	/	/		/	/	/	/	/	/			/	/	/	
After analyzing organic solutions, flush out the system for five minutes with the torch on with a cleaning solvent.	/	/			/	/	/	/	/			/	/	/	/
On a weekly basis, clean a Gemcone or concentric nebulizer overnight in a 1 to 5% Nitric Acid solution and then rinse with deionized water.*	/	/			/	/	/	/	/			/	/	/	
After analyzing aqueous solutions, flush out the unbaffled cyclonic chamber for five minutes with the torch on with a 10% nitric acid solution followed by deionized water. If large droplets are still collecting in the spray chamber place the cyclonic spray chamber in an ultrasonic bath with a detergent or aspirate a 1% TritonX100 solution.	/	/			/	/	/	/	/			/	/	/	

Analyst:

Q A Q A A A A A Q A A A

\* Not applicable to Mira Mist Nebulizer

ICP-OES DAILY CUSTOMER MAINTENANCE (continued)

Page: \_\_\_\_

Month/Year Oct 2009

I- Inspected  
N- Noted

N.A - Not applicable  
X- Instrument off

Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Miscellaneous															
Check that the exhaust vent system is switched on, working properly and not blocked.	I	I			I	I	I	I	I			I	I	I	
Note corrosion that exists in or on the instrument.	I	I			I	I	I	I	I				I	I	I
On a weekly basis, clean instrument covers.	I	I			I	I	I	I	I			I	I	I	
On a weekly basis, check database for information to archive and/or delete.	I	I			I	I	I	I	I			I	I	I	
Document problems and record all aspects of any maintenance in log.	I	I			I	I	I	I	I			I	I	I	

Analyst:

U A U A U A U A U A U A U A U A U A U A U A U A U A U A U A U A

Comments:

Chiller not operational 11/12/09

INSTRUMENT INFORMATION  
ADVANCED TECHNOLOGY LABORATORIES

INSTRUMENT ID: ICP7

INSTRUMENT NAME: ICP-MS

MANUFACTURER: Parkin Elmer

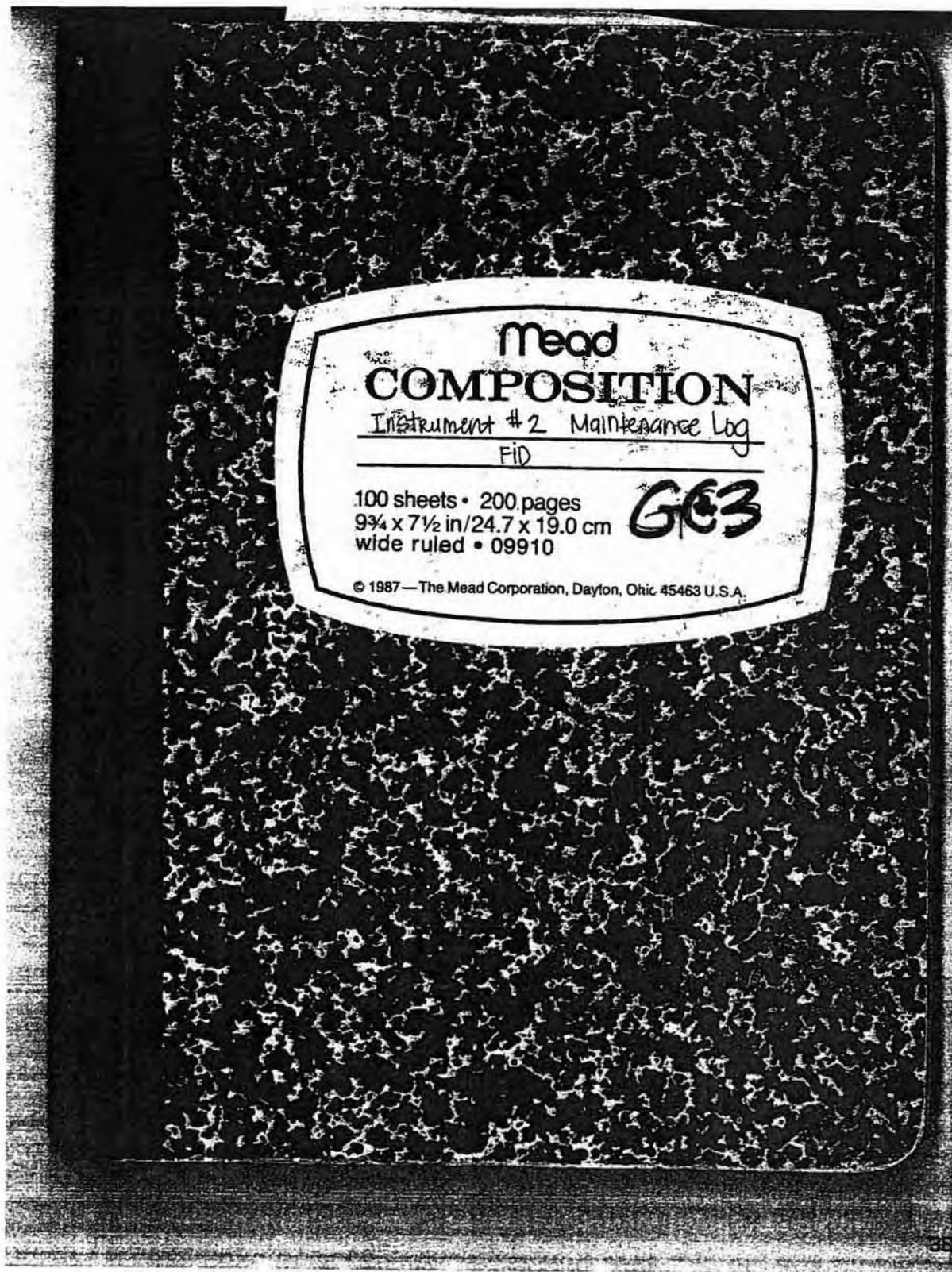
MODEL: Elan DRC-e

	7	8	9	10	11	12	13	14	15	16
SI	SI	SI	SI			SI				
SS	SS	SS	SS			SS				
11e-05	11e-05	11e-05	11e-05			11e-05				
C	R	C			C					
V	V	Free 10/26/09			V					
R	R	R			R					
R	R	R			R					
7.2e-06	7.2e-06	7.2e-06	7.2e-06		7.2e-06					
0.93	0.93	0.93			0.93					
6.5	6.5	6.5			6.5					
SI	SI	SI			SI					
185306	185306	185306			185306					
101781	101781	101781			101781					
2.9	2.9	2.9			2.9					
6.7	6.7	6.7			6.7					
1.5	1.5	1.5			1.5					
1.6	1.6	1.6			1.6					
SB	SB	SB			SB					









Mead  
**COMPOSITION**

Instrument #2 Maintenance Log

FID

100 sheets • 200 pages  
9 3/4 x 7 1/2 in / 24.7 x 19.0 cm  
Wide ruled • 09910

**GEB**

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**mead**

ENTER THE FOLLOWING INFORMATION:

- ① new column
- ② 5 point
- ③ clean PID, inj port
- ④ change syringe
- ⑤ clean jet
- ⑥ clean source

**SQUARE DEAL**

**CL**

GC 3  
HP 5890 GC  
S/N 2843A19572

**M**

NAME \_\_\_\_\_

Front Injector: HP 7673 Injector  
S/N 3013A22610

SCHOOL \_\_\_\_\_

TIME	FROM TO...	PERIOD 1	PERIOD 2	PERIOD 3	PERIOD 4	PERIOD 5	PERIOD 6	PERIOD 7	PERIOD 8

MONDAY  
SUBJECT  
ROOM  
INST.

TUESDAY  
SUB.  
ROOM  
INST.

WEDNESDAY  
SUB  
ROOM  
INST.

THURSDAY  
SUB  
ROOM  
INST.

FRIDAY  
SUB  
ROOM  
INSTRUCTION

SATURDAY  
SUBJECT  
ROOM  
INSTRUCTOR

The following table contains codes for routine maintenance:

Code Letter	Maintenance
<b>A</b>	Change septa
<b>B</b>	Cut column, guard column
<b>C</b>	Change gold seal
<b>D</b>	Change liner

NOTE: All other maintenance must be written out in detail.

12

2/8

2/8

4/1

4/1

5/1

6

6

*10/10/05*

Environmental Technologies  
Laboratories  
1-800-499-4388 00001

ORGANICS SIGNATURE LOG

NAME	INITIALS	SIGNATURE
ISAAC GOMEZ	IG	
CHRISTOPHER MENDOZA	CM, CFM	
CARLA REALBIT	CR	
JULIE VASUTHASAWAT	JV	
Michelle Liu	ML	
Mamelle Rand	MR	

1/2  
2/3  
3/4  
4/1  
4/1

as seen  
1)  
wash.

changed liner & septa. also the O-ring around the liner was changed. (Bi)

5/15/94 made new standards; ran new curve. (Bi)

6/9/94 changed liner & septa. (Bi)

6/11/94 changed the column to two 15m DB-5.615. Also installed (Bi) a second injector and second detector. Also changed temperature program ↪

610003

6-2-09 Flows : column : 4.1 ml/min  
(at 40°C) split : 11.3 ml/min  
purge : 3.5 ml/min

Air : 412 ml/min

H<sub>2</sub> : 41 ml/min

make up : 31 ml/min

6/5/09 changed column  
30m x 0.53mm ID x 0.5µm  
SN# = 927261

changed liner, gold seal

6-19-09 changed liner, septa, gold seal.

6-28-09 CCV failing low

7-14-09 ~~the~~ Regular maintenance

7-21-09 CCV recovery low for GLYCOLS

8-27-09 Regular maintenance

9-21-09 Regular maintenance

10-13-09 Regular maintenance

Advanced Technology  
Laboratories  
1-800-499-4388

000020

CORRECTIVE ACTION

REMARKS

INITIAL



changed liner, septa, gold seal	ok	JK
changed liner, septa	ok	JK
clipped column, changed liner, septa	ok	JK
changed liner, septa	ok	JK
changed liner, septa	ok	JK
clipped column 3 inches		
changed liner, septa	ok	JK

**composition book**

MS # 13 INSTRUMENT  
MAINTENANCE  
LOG

**100** sheets  
7 1/2 in x 9 3/4 in (19.1 cm x 24.8 cm)

**wide ruled**

Name	Initial	Signature
DAT PHAN	DP	<i>[Signature]</i>
Marnellie Ramus	MR	<i>[Signature]</i>

**INSTRUMENT INFORMATION  
ADVANCED TECHNOLOGY LABORATORIES**

INSTRUMENT ID: MS 13 (11)  
 INSTRUMENT NAME: MS13  
 MANUFACTURE: APPLIED

MODEL: 6890/5973/6890 (ALS)  
 SERIAL NUMBER: GC 6890: US00023148  
MS 5973: US10380 - Scratch &  
6890ALS: US0002295

LOCATION: SEMILAB/ALS  
 INSTRUMENT MANUAL (reference to its location)

6890 in VOA/MS 5973 in SEMI VOA  
 DATE RECEIVED: 11/2007 *from RFD*  
 DATE PLACED IN SERVICE \_\_\_\_\_  
 CONDITION WHEN RECEIVED: used  
 INSTRUMENT SOFTWARE (if any): ENVISOR/VANT  
 VERSION (if any): D.01.02.016



Date	Problems/Events
08.03.09	Routine maintenance
08.10.09	Routine maintenance
08.17.09	Routine maintenance
08.24.09	Routine maintenance
08.31.09	Routine maintenance
09.05.09	Routine maintenance
09.19.09	Routine maintenance
09.17.09	Low Phosds



09.21.09	Routine maintenance
09.25.09	Routine maintenance
10.01.09	Routine maintenance
10.12.09	Routine maintenance

Corrective action

Problem solved? Initials

changed liner

DP

changed liner, gold seal, washer, clipped column

DP

changed liner

DP

changed liner, clipped column

DP

changed liner

DP

changed liner

DP

changed liner, gold seal, washer, clipped column

DP

Cleaned source

DP

changed column ( 9Ni 173471 )

DP

replaced gold seal + washer + liner

Yes

DP

DP 12.21.07

~~Replaced~~ changed liner

DP

changed liner

DP

changed liner, O-ring, septa, gold seal, washer, clipped column

DP

changed liner

# composition book

HPLC 01 INSTRUMENT  
MAINTENANCE  
LOG

**100** sheets  
7 1/2 in x 9 3/4 in (19.1 cm x 24.8 cm)

**wide ruled**

Name	Initial	Signature
DAI PHAN	DP	<i>[Signature]</i>
Mamellie Ramos	mr	<i>[Signature]</i>

DAI  
09/22/08

INSTRUMENT INFORMATION  
ADVANCED TECHNOLOGY LABORATORIES

INSTRUMENT ID: HPLC 01  
 INSTRUMENT NAME: HPLC 01  
 MANUFACTURE: DIGMEX

MODEL: ULTIMATE 3000 / RF2000  
 SERIAL NUMBER: PUMP: 8209850  
AUTO SAMPLER: 8209790  
COLUMN 8010284  
VWD: 8010209 ; RF 800: 8209546 51074

LOCATION: SEMIOSTATICS  
 INSTRUMENT MANUAL (reference to its location)

HPLC DESK  
 DATE RECEIVED: July 2008  
 DATE PLACED IN SERVICE: Sept 2008  
 CONDITION WHEN RECEIVED: NEW  
 INSTRUMENT SOFTWARE (if any): CHRAMELEON  
 VERSION (if any): G-80 SP4

Date	Problem/Event
12-2-08	Over pressure
2-10-09	shortage of ACN supply
2-27-09	Column contaminated
3-31-09	Column contaminated
4-24-09	Column contaminated, peaks tailing
5-15-09	Peaks tailing
6-1-09	Peaks tailing, high base line
6-26-09	Peaks tailing
7-24-09	Column contaminated, clogged
7-29-09	Column clogged, high pressure
8-13-09	High pressure, low response on RF 2000
9-17-09	
10-11-09	High base line

