# WATER QUALITY TESTING

# **FOR**

# ZION SCHOOL DISTRICT 6 ELMWOOD SCHOOL

ZION, ILLINOIS

MARCH 31, 2017

PROJECT NUMBER: 17-18288



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#### **INTRODUCTION**

Zion School District 6 implemented a proactive program of water testing at the Elmwood School. Water sampling was conducted by David Johnson an Aires associate consultant on March 31, 2017. Mr. Geoffrey J. Bacci, II, PE designed the studied and developed this report.

All sampling methodology followed protocol required by The Lead in Drinking Water Testing Bill (LDWTB) an guidelines published by the Illinois Department of Public Health (IDPH). Detailed background information on testing requirements, methodology and lead health effects are included in the main report to the District that summarizes results and offers recommendations.

## **RESULTS**

Field sheets identifying sample numbers and sample locations maps are included in Appendix I. Laboratory results are included in Appendix II.

Results that exceed 5 ppb must be communicated to parents in writing. Results that exceeded the EPA action level of 20 ppb are shown in **bold print**. The following locations are results that exceeded 5 ppb:

- ELM-S-02A: first draw kitchen west sink 5.18 ppb
- ELM-W-07A: first draw drinking fountain room 203 67.9 ppb
- ELM-W-07B: flush drinking fountain room 203 34.4 ppb.

Remaining results should at minimum be posted on the Districts website within 7 days. The results of all samples should be e mailed to IDPH within 7 days.

Drinking fountains that exceed the EPA action level of 20 ppb should be taken out of service. Sinks that exceed the EPA action level of 20 ppb should be labeled to avoid using as a drinking or cooking source.

Further investigation and corrective action is necessary to identify the lead source and identify corrective action to reduce lead levels.



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#### PROFESSIONAL CERTIFICATION

Aires Consulting, a division of Gallagher Bassett Services, Inc. conducted this study in the interest of **Zion School District 6** to assist in meeting environmental obligations and regulations. In this respect, we hope the results of this study are useful. *This study was not intended to include every environmental exposure that may be present at the facility; only those items specifically addressed in the report were evaluated. If you have any questions concerning this study please let us know.* 

Respectfully Submitted,

Geoffrey J. Bacci, II, PE

**Director Operations** 

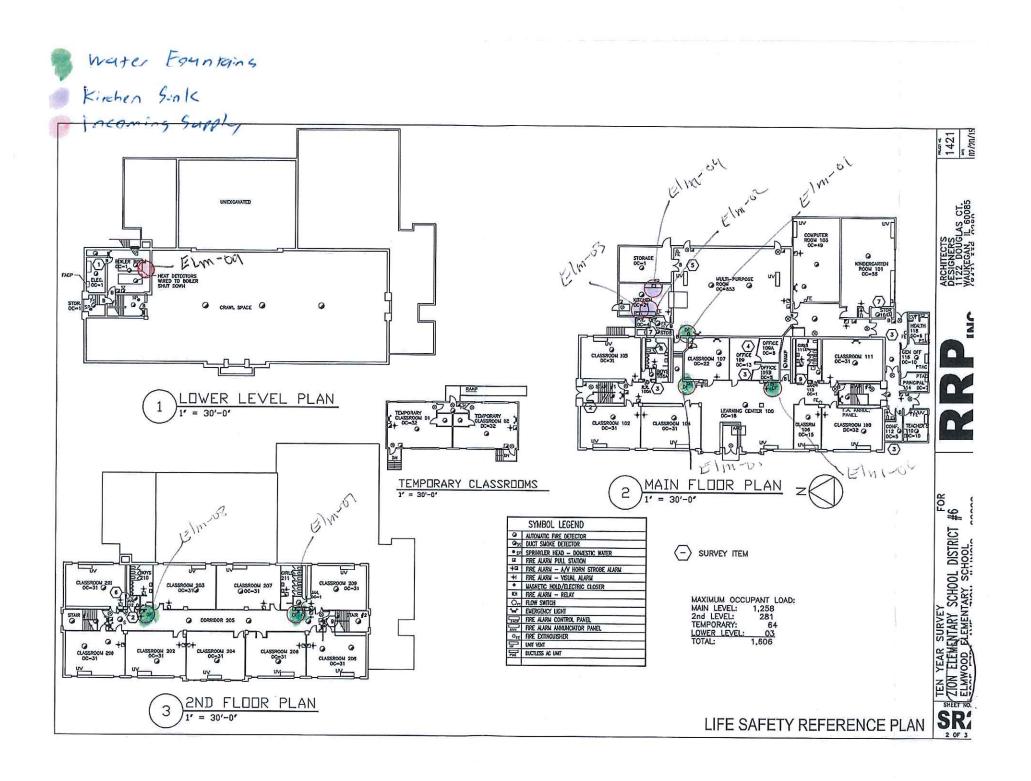


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Elmwood Project Location Consultant Last Time Used: P.O. # Date Date Time:

\* Type: W = Water fountain B= Bottle fill S = Sink I = Incoming source

Sample Description  School ID Type* Sample #	Sampling Time	Sample Location	Outlet Description	Sampler Comments
2=1m-6-01A		0.4.	(Make/Model)	
Elm-W-OIB	10:12	Sym	Elkaj	
Elm-5-62A	10115	12,1chen west		
Elm-5-02B	10:17	7.770.24 (0.53)	Stringer & Steal	
Elm-5-031	10:19	Kitclen west	shu less steel	
Elm-5-03B	10; 20	,	3/1/1/ 1855 3 NEE 1	
E1m-5-04A	10:22	Kitchen east	Spamless slee	
Elm-5-04B	10:24		=/=////2003/2/2003	
E/m-tv-05A	10:27	Across from Roam 104	Elkgi	
1=1m-6-01B	16:30			
Elm-W-0611	10) 32	Next brown 107	Elkay	
Elm-6-0613	10:34			
Elm-W-67A Elm-W-67B	10:40	Next to Room 203	Elkay	
Elm-W-0314	10:42			
Elm-10-6813	10:44	Next to Room 209	Elkaj	· 8
Elm-1-09	7	211		
EIM-1	10:50	Builer Rusm	In ZK	PH= 7.91 4/4/17 NB
				·





Friday, April 28, 2017

Geoff Bacci II

Aires Consulting Group

1550 Hubbard Ave. Batavia, IL 60510

TEL: (630) 879-3006 FAX: (630) 879-3014

RE: Zion District 6/ Elmwood Elementary School

PAS WO: 17D0130

Prairie Analytical Systems, Inc. received 17 sample(s) on 4/4/2017 for the analyses presented in the following report.

All applicable quality control procedures met method specific acceptance criteria unless otherwise noted.

This report shall not be reproduced, except in full, without the prior written consent of Prairie Analytical Systems, Inc.

If you have any questions, please feel free to contact me at (224) 253-1348.

Respectfully submitted,

(hrota)

Christina E. Pierce

**Project Manager** 

Certifications: NELAP/NELAC - IL #100323

EPA200.8

Method

Method

Analyst

JTC

Analyst

\*Lead

Analyses

Date: 4/28/2017

4/26/17 15:20

**Date Analyzed** 

#### LABORATORY RESULTS

**Client:** Aires Consulting Group

**Project:** Zion District 6/ Elmwood Elementary School Lab Order: 17D0130

**Lab ID:** 17D0130-01 **Client Sample ID:** ELM-W-01A **Collection Date:** Matrix: Drinking Water 3/31/17 10:10

Result Limit Qual Units DF **Date Prepared Date Analyzed** Method Analyses Metals by ICP-MS

 $\mu g/L$ 

1

DF

DF

4/26/17 12:10

**Date Prepared** 

**Client Sample ID: Lab ID:** 17D0130-02 ELM-W-01B

2.00

U

Result

Result

Matrix: Drinking Water **Collection Date:** 3/31/17 10:12

DF Date Prepared Analyses Result Limit Qual Units Date Analyzed Method Analyst Metals by ICP-MS 3.99 2.00 4/26/17 12:10 \*Lead μg/L 1 4/26/17 15:24 EPA200.8 JTC

Lab ID: 17D0130-03 **Client Sample ID:** ELM-S-02A

Limit

**Collection Date:** Matrix: Drinking Water 3/31/17 10:15

Metals by ICP-MS EPA200.8 \*Lead 5.18 2.00 μg/L 1 4/26/17 12:10 4/26/17 15:29 JTC

Units

Units

Qual

Qual

Lab ID: 17D0130-04 **Client Sample ID:** ELM-S-02B

Matrix: Drinking Water **Collection Date:** 3/31/17 10:17 Limit

**Date Prepared** Date Analyzed Analyses Analyst Metals by ICP-MS \*Lead 2.21 2.00  $\mu g/L$ 1 4/26/17 12:10 4/26/17 15:33 EPA200.8 JTC

**Lab ID:** 17D0130-05 **Client Sample ID:** ELM-S-03A

**Collection Date:** 3/31/17 10:19 Matrix: Drinking Water

Result Limit Qual Units DF **Date Prepared** Date Analyzed Method Analyses Analyst Metals by ICP-MS \*Lead 3.33 2.00  $\mu g/L$ 1 4/26/17 12:10 4/26/17 15:38 EPA200.8 JTC

**Client Sample ID:** ELM-S-03B **Lab ID:** 17D0130-06

**Collection Date:** Matrix: Drinking Water 3/31/17 10:20

Analyses Result Limit Qual Units DF **Date Prepared** Date Analyzed Method Analyst Metals by ICP-MS \*Lead 2.28 2.00 μg/L 4/26/17 12:10 4/26/17 15:42 EPA200.8 JTC

**Client Sample ID: Lab ID:** 17D0130-07 ELM-S-04A

**Collection Date:** Matrix: Drinking Water 3/31/17 10:22

DF Result Limit Qual Units **Date Prepared Date Analyzed** Method Analyst Analyses Metals by ICP-MS \*Lead 3.07 2.00  $\mu g/L$ 1 4/26/17 12:10 4/26/17 15:47 EPA200.8 JTC

Date: 4/28/2017

LABORATORY RESULTS
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**Client:** Aires Consulting Group

Project: Zion District 6/ Elmwood Elementary School Lab Order: 17D0130

**Client Sample ID:** ELM-S-04B **Lab ID:** 17D0130-08

Matrix: Drinking Water **Collection Date:** 3/31/17 10:24 Limit

Result Qual Units **Date Prepared Date Analyzed** Method Analyses Analyst Metals by ICP-MS  $\mu g/L$ \*Lead 3.89 2.00 1 4/26/17 12:10 4/26/17 15:51 EPA200.8 JTC

DF

**Lab ID:** 17D0130-09 **Client Sample ID:** ELM-W-05A **Collection Date:** Matrix: Drinking Water 3/31/17 10:28

Analyses Result Limit Qual Units DF **Date Prepared** Date Analyzed Method Analyst Metals by ICP-MS \*Lead U 2.00  $\mu g/L$ 1 4/26/17 12:15 4/26/17 16:23 EPA200.8 JTC

**Client Sample ID:** ELM-W-05B **Lab ID:** 17D0130-10

Matrix: Drinking Water **Collection Date:** 3/31/17 10:30

DF Analyses Result Limit Qual Units **Date Prepared** Date Analyzed Method Analyst Metals by ICP-MS U \*Lead 2.00 μg/L 1 4/26/17 12:15 4/26/17 16:36 EPA200.8 JTC

**Client Sample ID: Lab ID:** 17D0130-11 ELM-W-06A Matrix: Drinking Water **Collection Date:** 3/31/17 10:32

DF Analyses Result Limit Qual Units **Date Prepared Date Analyzed** Method Analyst Metals by ICP-MS \*Lead U 2.00  $\mu g/L$ 1 4/26/17 12:15 4/26/17 16:40 EPA200.8 JTC

**Client Sample ID:** ELM-W-06B **Lab ID:** 17D0130-12

**Collection Date:** 3/31/17 10:34 Matrix: Drinking Water Analyses Result Limit Qual Units DF **Date Prepared Date Analyzed** 

Metals by ICP-MS \*Lead 4.75 2.00 μg/L 1 4/26/17 12:15 4/26/17 16:45 EPA200.8 JTC

Client Sample ID: ELM-W-07A **Lab ID:** 17D0130-13

**Collection Date:** Matrix: Drinking Water 3/31/17 10:40 Analyses Result Limit Qual Units DF **Date Prepared Date Analyzed** Method

Metals by ICP-MS \*Lead 67.9 2.00  $\mu g/L$ 1 4/26/17 8:40 4/27/17 18:01 EPA200.8 JTC

**Lab ID:** 17D0130-14 **Client Sample ID:** ELM-W-07B

**Collection Date:** Matrix: Drinking Water 3/31/17 10:42 Result Limit Qual Units DF **Date Analyzed** 

Analyses **Date Prepared** Method Analyst Metals by ICP-MS \*Lead 34.4 2.00 μg/L 1 4/26/17 8:40 4/27/17 18:05 EPA200.8 JTC

Method

Analyst

Analyst

Prairie Analytical Systems, Inc. **Date:** 4/28/2017

LABORATORY RESULTS

**Client:** Aires Consulting Group

**Project:** Zion District 6/ Elmwood Elementary School

**Client Sample ID:** ELM-W-07B **Collection Date:** 3/31/17 10:42 Lab Order: 17D0130

**Lab ID:** 17D0130-14

Matrix: Drinking Water

Collection Date:	3/31/17 10:42						Matrix: Di	rinking Water		
Analyses		Result	Limit	Qual	Units	DF	Date Prepared	Date Analyzed	Method	Analyst
Client Sample ID:	ELM-W-08A						Lab ID: 17	7D0130-15		
<b>Collection Date:</b>	3/31/17 10:44						Matrix: Dr	rinking Water		
Analyses		Result	Limit	Qual	Units	DF	Date Prepared	Date Analyzed	Method	Analyst
Metals by ICP-MS										
*Lead		U	2.00		μg/L	1	4/26/17 12:15	4/26/17 16:49	EPA200.8	JTC
Client Sample ID:	ELM-W-08B						<b>Lab ID:</b> 17	'D0130-16		
<b>Collection Date:</b>	3/31/17 10:45						Matrix: Di	rinking Water		
Analyses		Result	Limit	Qual	Units	DF	Date Prepared	Date Analyzed	Method	Analyst
Metals by ICP-MS										
*Lead		2.46	2.00		μg/L	1	4/26/17 12:15	4/26/17 16:54	EPA200.8	JTC
Client Sample ID:	ELM-I-09						<b>Lab ID:</b> 17	D0130-17		
<b>Collection Date:</b>	3/31/17 10:50						Matrix: Di	rinking Water		
Analyses		Result	Limit	Qual	Units	DF	Date Prepared	Date Analyzed	Method	Analyst
Metals by ICP-MS										
*Lead		5.95	2.00		μg/L	1	4/26/17 12:15	4/26/17 17:11	EPA200.8	JTC

**Date:** 4/28/2017 Prairie Analytical Systems, Inc.

#### LABORATORY RESULTS

**Client:** Aires Consulting Group

**Project:** Zion District 6/ Elmwood Elementary School Lab Order: 17D0130

## **Metals by ICP-MS - Quality Control**

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch A002107 - EPA 200.8 Metals										
Blank (A002107-BLK1)				Prepared: 0	04/26/201 A	nalyzed: 04	4/27/201			
Lead	U	2.00	$\mu g/L$							
LCS (A002107-BS1)				Prepared: 0	04/26/201 A	nalyzed: 04	4/27/201			
Lead	526	2.00	$\mu g/L$	500.00		105	85-115			
Matrix Spike (A002107-MS1)	Sour	ce: 17D0129-	17	Prepared: 0	04/26/201 A	nalyzed: 04	4/27/201			
Lead	598	2.00	μg/L	500.00	69.7	106	75-125			
Matrix Spike (A002107-MS2)	Sour	ce: 17D0243-	01	Prepared: 0	04/26/201 A	nalyzed: 04	4/27/201			
Lead	538	2.00	μg/L	500.00	3.34	107	75-125			
Matrix Spike Dup (A002107-MSD1)	Sour	ce: 17D0129-	17	Prepared: 0	04/26/201 A	nalyzed: 04	4/27/201			
Lead	598	2.00	μg/L	500.00	69.7	106	75-125	0.1	20	
Matrix Spike Dup (A002107-MSD2)	Sour	ce: 17D0243-	01	Prepared: 0	04/26/201 A	nalyzed: 04	4/27/201			
Lead	548	2.00	μg/L	500.00	3.34	109	75-125	2	20	
Batch A002113 - EPA 200.8 Metals										
Blank (A002113-BLK1)				Prepared &	: Analyzed:	04/26/201				
Lead	U	2.00	μg/L	•	•					
LCS (A002113-BS1)				Prepared &	: Analyzed:	04/26/201				
Lead	516	2.00	μg/L	500.00		103	85-115			
Matrix Spike (A002113-MS1)	Sour	ce: 17D0110-	24	Prepared &	: Analyzed:	04/26/201				
Lead	486	2.00	μg/L	500.00	4.97	96	75-125			

**Date:** 4/28/2017 Prairie Analytical Systems, Inc.

#### LABORATORY RESULTS

**Client:** Aires Consulting Group

**Project:** Lab Order: 17D0130 Zion District 6/ Elmwood Elementary School

Metals by ICP-MS - Quality Control

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch A002113 - EPA 200.8 Metals										
Matrix Spike (A002113-MS2)	Sour	ce: 17D0129-	-13	Prepared &	Analyzed:	04/26/201				
Lead	497	2.00	μg/L	500.00	13.4	97	75-125			
Matrix Spike Dup (A002113-MSD1)	Sour	ce: 17D0110-	24	Prepared &	: Analyzed:	04/26/201				
Lead	494	2.00	μg/L	500.00	4.97	98	75-125	1	20	
Matrix Spike Dup (A002113-MSD2)	Sour	rce: 17D0129-	-13	Prepared &	: Analyzed:	04/26/201				
Lead	491	2.00	μg/L	500.00	13.4	96	75-125	1	20	
<b>Batch A002114 - EPA 200.8 Metals</b>										
Blank (A002114-BLK1)				Prepared &	Analyzed:	04/26/201				
Lead	U	2.00	μg/L	•	•					
LCS (A002114-BS1)				Prepared &	Analyzed:	04/26/201				
Lead	524	2.00	μg/L	500.00		105	85-115			
Matrix Spike (A002114-MS1)	Sour	rce: 17D0130-	.09	Prepared &	Analyzed:	04/26/201				
Lead	492	2.00	μg/L	500.00	0.877	98	75-125			
Matrix Spike (A002114-MS2)	Sour	rce: 17D0131-	-06	Prepared &	Analyzed:	04/26/201				
Lead	495	2.00	μg/L	500.00	3.14	98	75-125			
Matrix Spike Dup (A002114-MSD1)	Sour	rce: 17D0130-	-09	Prepared &	: Analyzed:	04/26/201				
Lead	499	2.00	μg/L	500.00	0.877	100	75-125	1	20	
Matrix Spike Dup (A002114-MSD2)	Sour	rce: 17D0131-	-06	Prepared &	: Analyzed:	04/26/201				
Lead	490	2.00	μg/L	500.00	3.14	97	75-125	1	20	

**Date:** 4/28/2017

#### LABORATORY RESULTS

**Client:** Aires Consulting Group

Zion District 6/ Elmwood Elementary School **Project:** Lab Order: 17D0130

#### **Notes and Definitions**

NELAC certified compound.

U Analyte not detected (i.e. less than RL or MDL).

Chain of Custody Record

Chicago IL Office - 9114 Virginia Rd., Ste 112 - Lake in the Hills, IL 60156 - Phone (847) 651-2604 - Facsimile (847) 458-9680 Central IL - 1210 Capital Airport Drive - Springfield, IL 62707-8490 - Phone (217) 753-1148 - Facsimile (217) 753-1152 Central / Southern IL Contact - Phone (217) 414-7762 - Facsimile (217) 753-1152

MICHOLICAL Systems	prairieanalytical.com
	WWW

Client	Aires Consulting - Gallagher Bassett	allagher Bassett			Analysis ar	Analysis and/or Method Requested	dnested		Reporting
Address	1550 Hubbard Ave								0000 D
City, State, Zip Code	Batavia, IL 60510				71 -				C
Phone / Facsimile	630.879.3006				ıter .				Industrial /       Commercial
Project Name / Number	Zion District 6				PM				M
Project Location	Elmwood Elementary School	School 3025 Ezra Ave	zra Ave, Zion		биіҳ	wg - 1/4			
P.O. # or Invoice To	17-18288				ninQ				C Residential
Contact Person	Geoff Bacci II				ı ui ı				표   Industrial
Sample Description	Sampling	Matrix	No. of	Sample Type	oeə.			Leavening	Sampler Comments
				1					
See attached Adden	See attached Addendum (	le information ()	samples)						
F/m - W-01A	2/3/17/101	170	4		×				
15/m -W-018	1/2:1	2			×				
E1m - 5- 42A	110/	· ·	2		~				
1=1m -5-02B	101	()			*				
E/m-5-63A	1501	9	Paralles S		X				
Elm-5-030	/	2			×				
E1m - 5-01A	101	22			X				
51M-5-48	1/012	1.	Sent desired		×				
ELM-W-05A	82:01 /	As	- Allegados		×			~	
1=1m-m-15B	5/0/3	7			×				
Matrix Code	A - Aqueous	DW - Drinking Water		GW - Ground Water	NA - Non-Aqueous Liquid	S - Solid		0-0	X - Other (Specify)
Preservative Code	0 - None	1 - HCl	2	2 - H2SO4	3 - HNO3	4 - NaOH	,	5 - 5035 Kit	X - Other (Specify)
Relin	Relinquished By	Date	Time		Received By		Date	Time	Method of Shipment
2 Come	A management of the same	4/3/17	11:00	100	SACL	7	1/4/10	10 Am	
10 saro	62	1/17/1	2:36	¥ 10	2000	<u> </u>	(d=1)	スカナ	Ар
		4/4/17	1700	3	Mostly	9	4/18/17	1030	pend
	7 4 1 0 7	7	-	1	Turnaround Tinge Standard	-Rush	QC Level	On wet ice?	) aur
a ALL compuence	All compusate samples converted in 250 ml	2 200 K	1 50 FLSS.		Date Required:	₩.	2 3 4	Three CTNo	8.2

Page

Revision 4 March 21, 2017

6 Copies. White-Client/Yellow-PAS, Inc./Pink-Sampler Copies. White - Client / Yellow - PAS, Inc. / Pink - Sampler PAS COC - Aires

Revision 4 March 21, 2017

# Chain of Custody Addendum Sample Information

Client	Aires Consulting - Gallagher Bassett
Project Name / Number	District 6
Project Location	Elmwood Elementary
P.O. # or Invoice To	17-18288
Contact Person	Geoff Bacci II 630-726-2185

\* Type: W = Water fountain B= Bottle fill S = Sink I = Incoming source

Sample Description	Sam	Sampling	Time La	Time Last Used	Matrix	Preserv	Sample C	Sample Containers	Sample Type	ype	Analysis Requested	pe	
	Date	Time	Date	Time	Code	Code	No. of	Size	Comp	Grab	Pb in Drinking Water	Hd	- Sampler Comments
School ID Type* Sample #													
ELM					MQ	9	1	500 mL		$\dagger_{\star}$	×	×	
ELM - M-OGA	3/3/1/2	10,32			MO	0	~	250 mL		×	×		
ELM - W- UGR	// /	10:34			DW	0	<b>-</b>	250 mL		×	×		
ELM - W- W1A		10:40			DW	0	-	250 mL		×	×		
ELM -W-07B		prio/	10:42		DW	0	-	250 mL		×	×		
ELM -W-USA	\	10:214			DW	0	-	250 mL		×	×		
ELM -W-08B	_	10:45			DW	0	~	250 mL		×	×		
ELM - エー ころ	3	10/30			DW	0	-	250 mL		×	×		
MIN.					DW	0	-	250 mL		×	×		
ELM					DW	0	-	250 mL		×	×		
ELM					DW	0	-	250 mL		×	×		
ELM					DW	0	~	250 mL		×	×		
ELM					DW	0	~	250 mL		×	×		
ELM					DW	0	~	250 mL		×	×		
ELM					DW	0	-	250 mL		×	×		
ELM					MO	0	~	250 mL		×	×		
ELM					DW	0	~	250 mL		×	×		
ELM				/	DW	0	~	250 mL		×	×		
ELM				/	DW	0	~	250 mL		×	·×		
ELM					DW	0	-	250 mL		×	×		
										1		30	

2 of 2

PAS COC - Aires