

CALIBRATION AND VERIFICATION LOG (FDEP SOP FT 1000-FT 1500, FD 1000-FD 4000)

Build "X" this box if there are qualified data on this page.

Meter ID: 154177 RQ: 2021-03-15-33 Project: SMP

- Notes: (1) Always wait for meter to stabilize before recording any readings.
 (2) Report all digits displayed. Do not round before reporting measurements. (See special instructions for depth).
 (3) For Calibrations, record calibrated meter reading. Do not record initial meter reading before calibration.

Temperature (Quarterly) FT 1400 Date of Last Temperature Verification

DO DEP SOP FT 1500	Name	Date	Time CT-ET	Temp °C	Baro-meter mmHg	D.O. Chart mg/L	Meter D.O. mg/L	% DO	Probe Charge	Probe Gain	Pass / Fail	Lab / Field
Calibr.	Paul Blair	3-31-21	7:40	21.7	759.3	8.79	8.77	100.1	/	1.21	P/F	L/F
ICV	"	"	7:41	21.7	759.3	8.79	8.77	100.0	/	"	P/F	L/F
CCV	"	"	14:30	25.9	758.1	8.10	8.22	106.1	/	"	P/F	L/F
CCV											P/F	L/F

DO Acceptance criteria from Table ± 0.3 mg/L. Rapid-Pulse Sensors: DO Gain Range 0.7 to 1.4; DO Charge Range 25-75.
 Optical: DO gain range 0.85 to 1.15 (Pro DSS 0.75 to 1.50); DO charge N/A. Steady-state & Galvanic Sensors: DO Gain & Charge N/A.

Spec. Cond. FT 1200	Name	Date	Time CT-ET	Lot #	Expir. Date	Standard μ mhos/cm	Meter Reading μ mhos/cm	Pass / Fail	Lab / Field
Calibr.	Paul Blair	3-31-21	7:45	201209D	12-21	1000	1000	P/F	L/F
ICV	"	"	7:46	2905F63	5-21	100	101.4	P/F	L/F
CCV	"	"	14:31	201209D	12-21	1000	1001	P/F	L/F
CCV			14:32	2905F63	5-21	100	99.0	P/F	L/F

Conductivity Acceptance criteria $\pm 5\%$

pH DEP SOP FT 1100	Name	Date	Time CT-ET	Lot #	Expir. Date	pH Buffer SU	Temp °C	Meter reading SU	mV	Pass / Fail	Lab / Field
Calibr.	Paul Blair	3-31-21	7:47	201209F	6-22	7.21	21.4	7.91	-25.1	P/F	L/F
Calibr.	"	"	7:48	201112A	5-22	4.21	21.8	4.21	151.4	P/F	L/F
Calibr.	"	"	7:49	200493A	10-21	10.03	22.5	10.03	-194.5	P/F	L/F
ICV	"	"	7:50	"	"	10.03	22.1	10.00	-194.1	P/F	L/F
CCV			14:35	201112A	5-22	4.01	22.6	4.00	151.1	P/F	L/F
CCV										P/F	L/F

pH Acceptance criteria ± 0.2 SU; mV pH 7 Range 0 ± 50 ; mV pH 4 Range $+180 \pm 50$; mV pH 10 Range -180 ± 50 .
 If mV are recorded: slope from 7 to 10 169.4, slope from 4 to 7 176.5 (both must be between 165 and 180 mV)

Does meter have a depth sensor that will be used to measure total depth & sample depth? YES / NO / NA (not surf. water project)

If YES, complete daily Calibr. & ICV below and list date of last quarterly depth verification:

If NO, what will be used? (circle one) Secchi Disk Line / Sonar Unique ID: 51 / 51; Date of last verification: 3-31-21

Depth Sensor (Daily Calibration & ICV)	Name	Date	Time CT-ET	Calibrated Value (0.00 or Offset), meters	ICV Value, meters	Pass / Fail	Lab / Field
Pressure mode in air						P/F	L/F

Report two decimal places. Round numbers ≤ 4 down, ≥ 5 up. ICV acceptance criteria $\pm 5\%$ or ± 0.05 m, whichever is greater.

COMMENTS:

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
CHAIN OF CUSTODY FORM

Date: 3/31/2021 **Collected By:** Ben Harden, Paul Blair
Customer: TLH-DIST **Sampling Agency:** FDEP
RQ: RQ-2021-03-15-33 **Project ID:** SMP

PLEASE RETURN THE ORIGINAL OF THIS FORM WITH SAMPLE SUBMITTAL
FORMS AND THE COOLER PACKING WORKSHEET TO THE LAB

Number of Coolers Shipped: 1

Delivery Method: HandDelivered

FIELD ID (Labels) submitted under this RQ for this collection date.

Site Location	Field ID/WIN ID
Crystal Lake Center	 G3TLHR0012
Williford Spring	 G3TLHR0009
Rattlesnake Lake Center	 G3TLHR0013
FB	 FB_03312021

RELINQUISHED BY(SIGNATURE):

DATE/TIME:

Paul Blair

THIS SECTION TO BE COMPLETED BY LABORATORY

Rec'd/Inspected By:

Rec'd/Inspected

Date:



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION STRATEGIC MONITORING PROGRAM FIELD SHEET

January 2020

Meter Passed End
of Day CCV
Yes / No

WIN Station Name: Crystal Lake Center **Date:** 3/31/2021
WIN/Field ID: G3TLHR0012 **WBID:** 795A **ENR:** - **Latitude:** 30.4531
County: WASHINGTON **Org ID:** 21FLTLHR **Longitude:** -85.7027
Receiving Body of Water: Choctawhatchee - St. Andrew **RQ:** 2021-03-15-33

Sampling Team Members		WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
☒	Ben Harden		x		x	x
☒	Paul Blair	x		x		
☐						
☐						

Sampling Equipment	
☒ Sample Container	☐ Carboy
☐ Dipper	☐ Van Dorn
☒ Syringe	☐ Pole
Depth measured with: Sonar	
Secchi Equipment ID:	
Collection Method	
☐ Wading	☐ Canoe/Kayak
☐ From Shore	☐ Electric Motor
☐ Other	☒ Gasoline Motor

Water Level: ☒ Normal ☐ Low ☐ High ☐ Dry ☐ Pooled ☐ Flooded						Meter ID# 154177				
Photos: NO	Flow: NA		Tide:		Tide Times: High: Low:					
Biological Samples Collected: ☒ None ☐ HA ☐ SCI ☐ RPS ☐ Algae ID ☐ LVS ☐ LVI Other:										
SBIO ID Numbers:										
Notes: CABLE NOT LONG ENOUGH TO REACH 0.5 FROM BOTTOM										

Duplicate Sample

Time Zone: EST	Time:	Field ID: N/A	(WIN ID_DUP)
WIN DMT Activity ID:			

Blank

Time Zone:	Time:	Field ID:	(Blank Type_DDDMMYYY)
DI Source:	Location:		
DI Type:	Equipment ID:		
DI Container (Name/ID):		DI Container Type:	

LIMS EVENT ID: WIN Import ID:
Enter Field Parameters, Verify Station ID In LIMS DMT: QC Station ID, Field Parameters In LIMS DMT:
(Initials/Date) (Initials/Date)
Scan/Save Field Sheets Migrate Data to WIN: Verify Data In WIN:
(Initials/Date) (Initials/Date) (Initials/Date)



RQ-2021-03-15-33

Customer: WQAP

Project ID: SMP

Collected By: Ben Harden, Paul Blair

Field Report Prepared By: Ben Harden

Sampling Agency: FDEP

Place Label Here

WIN ID/Field ID:



G3TLHR0012

Location: Crystal Lake Center

Comments:

Matrix: Fresh

(Check one)

☒ GRAB☐ COMPOSITE

Date	Time	DO (mg/L)	DO (%SAT)	Temp. (C°)	pH	Sample Depth (m)	Secchi Disk (m)	Total Depth (m)	Sp COND (µmhos/cm)	Salinity (PPT _h)
3/31/2021	1015 EST	9.23	105.4	21.9	6.75	0.3	7 ☐ VOB (S)	24.8	29.5	0.01
	1020	9.28	105.8	21.8	6.72	2.0	Central Lab please use top row for login purposes		29.4	0.01
	1025 EST	10.55	106.6	15.9	6.58	8.9			28.8	0.01

Parameter Suite	Parameter Methods	Preservation	pH Check	# Bottles sent to Lab	Bottle Group
Preserved Nutrients (P-500ML)	☒ W-NH3 / W-NO2NO3 / W-TKN / W-TOC / W-S-A-TP	☒ Ice ☒ H2SO4*	☒ <2	1	B
	Lot # 0293040 Exp: 10-19-21				
Metals (P-500ML)	☒ W-ICPMS ☒ W-ICP ☒ W-HARD	☒ Ice ☒ HNO3*	☒ <2	1	B
	Lot # 0344060 Exp: 1-4-22				
Filtered Nutrients (P125ML)	☒ W-PO4-F ☒ Field Filtered 0.45 µm Filter	☒ Ice		1	B
	Filter Lot # N/A				
	Syringe Lot # 0079900				
Chlorophyll (BP-1L)	☒ CHLSUITE-W	☒ Ice		1	B
Physical/Aggregate (Fresh) (P-1L)	☒ Alkalinity / W-F / W-TSS / TURBIDITY / W-CL-IC / W-COLOR / W-SO4-IC / W-TDS	☒ Ice		1	B
Physical/Aggregate (Marine) (P-1L)	☐ Alkalinity / W-BR-IC / W-F / W-TSS / TURBIDITY	☐ Ice			
Macroinvertebrates (PJ-2L)	☐ MI-FW-QLDC	☐ Formalin			
Periphyton (PT-50ML)	☐ ALGAE-ID	☐ Ice			
Microbiology (Contract Lab Bottle)	☐ E Coli ☐ F Coli ☐ Enterococci ☐ Contract Lab	☐ Ice			
Molecular (QPCR-P-500ML)	☐ PCR-HF183 ☐ PCR-BacR ☐ PCR-DG3 ☐ PCR-GULL2 ☐ PCR-GFD ☐	☐ Ice			
Tracers (BG-500ML)	☐ W-E8321-DI ☐ W-E8321-MS	☐ Ice			
Pesticides (BG-500ML) (BG-1L)	☐ W-E8321-DI ☐ WE8321-MS ☐ W-PSNP-TQ ☐ W-CT-CL-R	☐ Ice			
	☐ W-PCL-SQ-R ☐ W-CARB-AA (5 ml of MCAA** Buffer Solution) ☐ W-DIELDRIN				
Phytoplankton/Periphyton	DTM-QL-C ☐ PEN-QL-C ☐ DTY-QN-C ☐ PKD-QN-C	☐ Ice			
	DTM-QN-C ☐ PRN-QN-C ☐ PKD-QN-BV ☐				

Name:
Ben Harden
Paul Blair

Signature:

Date:

*2.0 ml of Preservative used unless noted otherwise.

**MCAA: Monochloroacetic acid buffer solution



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION STRATEGIC MONITORING PROGRAM FIELD SHEET

January 2020

Meter Passed End
of Day CCV
Yes / No

WIN Station Name: Williford Spring **Date:** 3/31/2021
WIN/Field ID: G3TLHR0009 **WBID:** 553Y **ENR:** - **Latitude:** 30.4396
County: WASHINGTON **Org ID:** 21FLTLHR **Longitude:** -85.5476
Receiving Body of Water: Choctawhatchee - St. Andrew **RQ:** 2021-03-15-33

Sampling Team Members		WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
☒	Ben Harden		x		x	x
☒	Paul Blair	x		x		
☐						
☐						

Sampling Equipment	
☒ Sample Container	☐ Carboy
☐ Dipper	☐ Van Dorn
☒ Syringe	☐ Pole
Depth measured with: Secchi	
Secchi Equipment ID: #1	
Collection Method	
☒ Wading	☐ Canoe/Kayak
☐ From Shore	☐ Electric Motor
☐ Other _____	☐ Gasoline Motor

Water Level: ☒ Normal ☐ Low ☐ High ☐ Dry ☐ Pooled ☐ Flooded						Meter ID# 154177					
Photos: NO	Flow: FLOW			Tide:		Tide Times: High: Low:					
Biological Samples Collected: ☒ None ☐ HA ☐ SCI ☐ RPS ☐ Algae ID ☐ LVS ☐ LVI Other:											
SBIO ID Numbers:											
Notes:											

Duplicate Sample

Time Zone: EST	Time:	Field ID: N/A	(WIN ID_DUP)
WIN DMT Activity ID:			

Blank

Time Zone:	Time:	Field ID:	(Blank Type_DDDMMYYY)
DI Source:	Location:		
DI Type:	Equipment ID:		
DI Container (Name/ID):		DI Container Type:	

LIMS EVENT ID: WIN Import ID:
Enter Field Parameters, Verify Station ID In LIMS DMT: QC Station ID, Field Parameters In LIMS DMT:
(Initials/Date) (Initials/Date)
Scan/Save Field Sheets Migrate Data to WIN: Verify Data In WIN:
(Initials/Date) (Initials/Date) (Initials/Date)



RQ-2021-03-15-33

Customer: WQAP

Project ID: SMP

Collected By: Ben Harden, Paul Blair

Field Report Prepared By: Ben Harden

Sampling Agency: FDEP

Place Label Here

WIN ID/Field ID:



G3TLHR0009

Location: Williford Spring

Comments:

Matrix: Fresh

(Check one)

☒ GRAB☐ COMPOSITE

Date	Time	DO (mg/L)	DO (%SAT)	Temp. (C°)	pH	Sample Depth (m)	Secchi Disk (m)	Total Depth (m)	Sp COND (µmhos/cm)	Salinity (PPT _h)
3/31/2021	1125 EST	0.67	7.6	21.4	7.88	0.3	1.2 ☐ VOB (S)	1.3	140.3	0.07
							Central Lab please use top row for login purposes			
	EST									

Parameter Suite	Parameter Methods	Preservation	pH Check	# Bottles sent to Lab	Bottle Group
Preserved Nutrients (P-500ML)	☒ W-NH3 / W-NO2NO3 / W-TKN / W-TOC / W-S-A-TP	☒ Ice ☒ H2SO4*	☒ <2	1	A
	Lot # 0293040 Exp: 10-19-21				
Metals (P-500ML)	☐ W-ICPMS ☐ W-ICP ☐ W-HARD	☐ Ice ☐ HNO3*	☐ <2		
	Lot # Exp:				
Filtered Nutrients (P125ML)	☒ W-PO4-F ☒ Field Filtered 0.45 µm Filter	☒ Ice		1	A
	Filter Lot # N/A				
	Syringe Lot # 0079900				
Chlorophyll (BP-1L)	☒ CHLSUITE-W	☒ Ice		1	A
Physical/Aggregate (Fresh) (P-1L)	☒ Alkalinity / W-F / W-TSS / TURBIDITY / W-CL-IC / W-COLOR / W-SO4-IC / W-TDS	☒ Ice		1	A
Physical/Aggregate (Marine) (P-1L)	☐ Alkalinity / W-BR-IC / W-F / W-TSS / TURBIDITY	☐ Ice			
Macroinvertebrates (PJ-2L)	☐ MI-FW-QLDC	☐ Formalin			
Periphyton (PT-50ML)	☐ ALGAE-ID	☐ Ice			
Microbiology (Contract Lab Bottle)	☐ E Coli ☐ F Coli ☐ Enterococci ☐ Contract Lab	☐ Ice			
Molecular (QPCR-P-500ML)	☐ PCR-HF183 ☐ PCR-BacR ☐ PCR-DG3 ☐ PCR-GULL2 ☐ PCR-GFD	☐ Ice			
Tracers (BG-500ML)	☐ W-E8321-DI ☐ W-E8321-MS	☐ Ice			
Pesticides (BG-500ML) (BG-1L)	☐ W-E8321-DI ☐ WE8321-MS ☐ W-PSNP-TQ ☐ W-CT-CL-R	☐ Ice			
	☐ W-PCL-SQ-R ☐ W-CARB-AA (5 ml of MCAA** Buffer Solution) ☐ W-DIELDRIN				
Phytoplankton/Periphyton	☐ DTM-QL-C ☐ PEN-QL-C ☐ DTY-QN-C ☐ PKD-QN-C	☐ Ice			
	☐ DTM-QN-C ☐ PRN-QN-C ☐ PKD-QN-BV				

Name:
Ben Harden
Paul Blair

Signature:

Date:

*2.0 ml of Preservative used unless noted otherwise.

**MCAA: Monochloroacetic acid buffer solution



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION STRATEGIC MONITORING PROGRAM FIELD SHEET

January 2020

Meter Passed End
of Day CCV
Yes / No

WIN Station Name: Rattlesnake Lake Center **Date:** 3/31/2021
WIN/Field ID: G3TLHR0013 **WBID:** 780A **ENR:** - **Latitude:** 30.4598
County: WASHINGTON **Org ID:** 21FLTLHR **Longitude:** -85.5664
Receiving Body of Water: Choctawhatchee - St. Andrew **RQ:** 2021-03-15-33

Sampling Team Members		WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
☒	Ben Harden		x		x	x
☒	Paul Blair	x		x		
☐						
☐						

Sampling Equipment	
☒ Sample Container	☐ Carboy
☐ Dipper	☐ Van Dorn
☒ Syringe	☐ Pole
Depth measured with: Sonar	
Secchi Equipment ID:	
Collection Method	
☐ Wading	☐ Canoe/Kayak
☐ From Shore	☐ Electric Motor
☐ Other	☒ Gasoline Motor

Water Level: ☐ Normal ☐ Low ☒ High ☐ Dry ☐ Pooled ☐ Flooded						Meter ID# 154177				
Photos: NO	Flow: NA		Tide:		Tide Times: High: Low:					
Biological Samples Collected: ☒ None ☐ HA ☐ SCI ☐ RPS ☐ Algae ID ☐ LVS ☐ LVI Other:										
SBIO ID Numbers:										
Notes:										

Duplicate Sample

Time Zone: EST	Time:	Field ID: N/A	(WIN ID_DUP)
WIN DMT Activity ID:			

Blank

Time Zone: EST	Time: 1200	Field ID: FB_03312021	(Blank Type_DDDMMYYYY)
DI Source: BMC		Location: D-112	
DI Type: FB		Equipment ID:	
DI Container (Name/ID): DI Carboy 3		DI Container Type: Carboy	

LIMS EVENT ID: **WIN Import ID:**
Enter Field Parameters, Verify Station ID In LIMS DMT: **QC Station ID, Field Parameters In LIMS DMT:**
(Initials/Date) (Initials/Date)
Scan/Save Field Sheets **Migrate Data to WIN:** **Verify Data In WIN:**
(Initials/Date) (Initials/Date) (Initials/Date)



RQ-2021-03-15-33

Customer: WQAP

Project ID: SMP

Collected By: Ben Harden, Paul Blair

Field Report Prepared By: Ben Harden

Sampling Agency: FDEP

Place Label Here

WIN ID/Field ID:



G3TLHR0013

Location: Rattlesnake Lake Center

Comments: There is no metals bottle associated with the sample. Only the blank.

Matrix: Fresh

(Check one)

☒ GRAB☐ COMPOSITE

Date	Time	DO (mg/L)	DO (%SAT)	Temp. (C°)	pH	Sample Depth (m)	Secchi Disk (m)	Total Depth (m)	Sp COND (µmhos/cm)	Salinity (PPTH)
3/31/2021	1150 EST	8.65	101.9	23.5	5.56	0.3	1.6 ☐ VOB (S)	1.8	13.6	0
	1155 EST	8.66	102	23.4	5.48	1.3	Central Lab please use top row for login purposes		13.5	0

Parameter Suite	Parameter Methods	Preservation	pH Check	# Bottles sent to Lab	Bottle Group
Preserved Nutrients (P-500ML)	☒ W-NH3 / W-NO2NO3 / W-TKN / W-TOC / W-S-A-TP	☒ Ice ☒ H2SO4*	☒ <2	1	A
	Lot # 0293040 Exp: 10-19-21				
Metals (P-500ML)	☒ W-ICPMS ☒ W-ICP ☒ W-HARD	☒ Ice ☒ HNO3*	☒ <2	1	C
	Lot # 0344060 Exp: 1-4-22				
Filtered Nutrients (P125ML)	☒ W-PO4-F ☒ Field Filtered 0.45 µm Filter	☒ Ice		1	C
	Filter Lot # N/A				
	Syringe Lot # 007				
Chlorophyll (BP-1L)	☐ CHLSUITE-W	☐ Ice			
Physical/Aggregate (Fresh) (P-1L)	☒ Alkalinity / W-F / W-TSS / TURBIDITY / W-CL-IC / W-COLOR / W-SO4-IC / W-TDS	☒ Ice		1	A
Physical/Aggregate (Marine) (P-1L)	☐ Alkalinity / W-BR-IC / W-F / W-TSS / TURBIDITY	☐ Ice			
Macroinvertebrates (PJ-2L)	☐ MI-FW-QLDC	☐ Formalin			
Periphyton (PT-50ML)	☐ ALGAE-ID	☐ Ice			
Microbiology (Contract Lab Bottle)	☐ E Coli ☐ F Coli ☐ Enterococci ☐ Contract Lab	☐ Ice			
Molecular (QPCR-P-500ML)	☐ PCR-HF183 ☐ PCR-BacR ☐ PCR-DG3 ☐ PCR-GULL2 ☐ PCR-GFD ☐	☐ Ice			
Tracers (BG-500ML)	☐ W-E8321-DI ☐ W-E8321-MS	☐ Ice			
Pesticides (BG-500ML) (BG-1L)	☐ W-E8321-DI ☐ WE8321-MS ☐ W-PSNP-TQ ☐ W-CT-CL-R	☐ Ice			
	☐ W-PC-L-SQ-R ☐ W-CARB-AA (5 ml of MCAA** Buffer Solution) ☐ W-DIELDRIN				
Phytoplankton/Periphyton	DTM-QL-C ☐ PEN-QL-C ☐ DTY-QN-C ☐ PKD-QN-C	☐ Ice			
	DTM-QN-C ☐ PRN-QN-C ☐ PKD-QN-BV ☐				

Name:
Ben Harden
Paul Blair

Signature:

Date:

*2.0 ml of Preservative used unless noted otherwise.

**MCAA: Monochloroacetic acid buffer solution



RQ- 2021-03-15-33

Collected By: Ben Harden, Paul Blair

Customer: WQAP

Field Report Prepared By: Ben Harden, Paul Blair

Project ID: SMP

Sampling Agency: FDEP

BLANK



Field ID: FB 03312021

Comments:

Matrix: FB

(Check one) ☐ COMPOSITE ☒ GRAB

Date

Time

DI Source: BMC

3/31/2021

1200

EST

Parameter Suite	Parameter Methods	Preservation	pH Check	# Bottles sent to Lab	Bottle Group
Preserved Nutrients (P-500ML)	☒ W-NH3 / W-NO2NO3 / W-TKN / W-TOC / W-S-A-TP	☒ Ice ☒ H2SO4	☐ <2	1	C
	Lot # 0293040 Exp: 10-19-21				
Metals (P-500ML)	☒ W-ICPMS ☒ W-ICP	☒ Ice ☒ H2SO4	☒ <2	1	C
	Lot # 0344060 Exp: 1-4-22				
Filtered Nutrients (P125ML)	☐ W-PO4-F Filter ☐ Field Filtered 0.45 µm	☐ Ice			
	Filter Lot #				
	Syringe Lot #				
Physical/Aggregate (Fresh) (P-1L)	☒ Alkalinity / W-F / W-TSS / TURBIDITY / W-Cl-IC / W-COLOR / W-SO4-IC / W-IC / TDS	☒ Ice		1	C
Physical/Aggregate (Marine) (P-1L)	☐ Alkalinity / W-BR-IC / W-F / W-TSS / TURBIDITY	☐ Ice			
Tracers (BG-500ML)	☐ W-E8321-DI ☐ W-E8321-MS	☐ Ice			
Pesticides (BG-500ML) (BG-1L)	☐ W-E8321-DI ☐ WE8321-MS ☐ W-PSNP-TQ ☐ W-CT-CL-R	☐ Ice			
	☐ W-PCL-SQ-R ☐ W-CARB-AA (5 ml of MCAA** Buffer Solution) ☐ W-DIELDIN				
Name: Ben Harden Paul Blair		Signature:		Date:	

*2.0 ml of Preservative used unless noted otherwise.

**MCAA: Monochloroacetic acid buffer solution