



Republic of the Philippines
BUTUAN CITY WATER DISTRICT
 Gov. Jose A. Rosales Avenue, Butuan City
 Tel. No. (085) 342 3145 Website: www.bcwtd.gov.ph

Environmental Quality Report		
FM - DPM - BCWD - WQD- 03		
Rev. No.	Effective Date	Page No.
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DOH Certificate of Accreditation No.: 16-02-19-LW-1

Requested by : **TANDAG CITY WATER DISTRICT**
 Address : **Palmera, Mabua, Tandag City**
 Contact No. : **09209492120**
 Collected by : **J. Fino Jr.**
 Date and Time of Collection : **Dec. 7, 2021 /4:25am**
 Submitted : **Dec. 7, 2021 /10:40am**
 Examination : **Dec. 9-22, 2021**
 Sample Type : **Ground water**
 Sampling Location : **P83 Brgy. Quezon, Tandag City**

Laboratory Sample No.: **PC21-244**
 O.R. No.: **8453257**
 O.R. Date: **Dec. 7, 2021**

BUTUAN CITY WATER DISTRICT
WATER QUALITY DIVISION
RELEASED
 DATE: 12-27-21 TIME: 12:30pm
 BY: *[Signature]*

PHYSICAL / CHEMICAL ANALYSES OF WATER

Parameters	*PNSDW Maximum Level (mg/L) or Characteristic	Result	Method
PHYSICAL			
Color Apparent	10 Color units	10	APHA Platinum-Cobalt
Turbidity	5 NTU**	1.91	Turbidimetric
CHEMICAL			
pH	6.5-8.5	7.26	Glass electrode
	5-7 undergo RO or distillation process		
TDS(total dissolved solids)	600 mg/L	84.2	Conductimetric
	<10 undergo RO or distillation process		
Nitrate	50 mg/L	5.40	Cadmium Reduction
Arsenic	0.01 mg/L	<0.005	AAS
Cadmium	0.003 mg/L	<0.001 mg/L	AAS
Lead	0.01 mg/L	<0.005 mg/L	AAS
NON-COMPLYING PARAMETERS		None	

*PNSDW: Philippine National Standards for Drinking Water
 NTU:nephelometric turbidity units

Remarks: Results relate only to sample as submitted and tested.

Analyzed & Certified:
[Signature]
MEINHEART S. CATACTE, RCh.
 Principal Chemist
 PRC Reg. No.: 9034

Authorized for release by:
[Signature]
ENGR. AL PATRICK M. DELA CALZADA, SE
 OIC-Production & Distribution Dept.

Water Facility Construction Maintenance & Quality Water Production Division

SAN FRANCISCO WATER DISTRICT LABORATORY
(DOH Accreditation Number: 16-01-19-LW-1)

Requesting Party	: TANDAG CITY WATER DISTRICT	Environmental Condition	: Cloudy
Contact Person	: Jerry A. Bernadas	Type of Analyte	: Raw Water
Contact Number	: 0920 949 2120	Treatment	: None
Date & Time of Sample Collection	: September 7, 2021 / 5:11 AM	Disinfection	: None
Address (collected sample)	: PS2, Brgy. Quason, Tandag City	Preservation	: Chilled
Source of Water	: Deep Well	Date of Sample Received	: September 7, 2021
Sampling Point	: Faucet	Date of Analysis	: September 7 to October 29, 2021
Type of Sample Bottle Used	: PET Bottle	Date Paid/O.R. Number	: September 7, 2021/O.R. No. 652654
		Laboratory Sample No	: PC21-09-344

LABORATORY TEST RESULTS

Parameters	Method	*PNSDW 2017 (Maximum Allowable Level)	Test Results
Mandatory			
Arsenic	ICP-OES	0.01 mg/L	<0.005
Cadmium	ICP-OES	0.003 mg/L	0.001
Lead	ICP-OES	0.01 mg/L	<0.005
Nitrate	Cadmium Reduction	50.00 mg/L	?
Color, apparent	APHA PtCo	10 units	?
Turbidity	NTU	5 NTU	0.23
pH	pH meter	6.5 - 8.5	7.52
Total Dissolved Solids	Electrical Conductance	500 mg/L 5.0 - 7.0 undergo R.O. or disinfection 600 mg/L 100mg/L undergo R.O. or disinfection	49
Primary			
Barium	ICP-OES	0.70 mg/L	<0.005
Boron	ICP-OES	2.00 mg/L	<0.005
Chromium	ICP-OES	0.05 mg/L	<0.005
Manganese	ICP-OES	0.4 mg/L	0.020
Nickel	ICP-OES	0.07 mg/L	<0.005
Selenium	ICP-OES	0.04 mg/L	0.005
Sulfate	Sulfate	250mg/L	<1
Secondary			
Aluminum	ICP-OES	0.2 mg/L	<0.005
Copper	ICP-OES	1.0 mg/L	<0.005
Iron	ICP-OES	1.0 mg/L	0.014
Zinc	ICP-OES	5.0 mg/L	<0.005
Chloride	Digital Titration	250mg/L	9
Total Hardness	Digital Titration	300mg/L	139
Odor	Sensory Test	Unobjectionable	Unobjectionable
Other Parameters			
Appearance	Sensory Test	Clear	
Temperature	Electrode	°C	23.8
Specific Conductance	Electrode	µS/cm	95
Salinity	Electrode	ppt	0.3
Molybdenum	ICP-OES	mg/L	<0.005
Beryllium	ICP-OES	mg/L	<0.005
Cobalt	ICP-OES	mg/L	<0.005
Silver	ICP-OES	mg/L	<0.005

1 mg/L = 1,000 µg/L = 1 ppm

1 µg/L = 1 ppb

ppb - parts per billion; ppm - part per million; ppb - parts per billion

*PNSDW: Philippine National Standards for Drinking Water.

Remarks: Results relate only to sample as submitted and tested.

The appearance of the submitted water sample is not clear from visible particles.

All other parameters tested on the water sample are within the allowable limits prescribed in PNSDW 2017.

I hereby certify that the above presented test results are true and correct.

Analyzed and Certified Correct:

[Signature]

Approved:

[Signature]

Noted:

[Signature]
ELMER T. LUZON



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 Address : Palmera, Mabua, Tandag City
 Contact No. : 09209492120
 Collected by : J. Fino Jr.
 Date and Time of Collection : Dec. 7, 2021 /4:05am
 Submitted : Dec. 7, 2021 /10:40am
 Examination : Dec. 9-22, 2021
 Sample Type : Ground water
 Sampling Location : PS1 Brgy. Quezon, Tandag City

Laboratory Sample No.: PC21-242
 O.R. No.: 8453257
 O.R. Date: Dec. 7, 2021

BUTUAN CITY WATER DISTRICT
 WATER QUALITY DIVISION

RELEASED

DATE: 12-27-21 TIME: 2:50p

PHYSICAL / CHEMICAL ANALYSES OF WATER

Parameters	*PNSDW Maximum Level (mg/L) or Characteristic	Result	Method
PHYSICAL			
Color Apparent	10 Color units	5	APHA Platinum-Cobalt
Turbidity	5 NTU**	2.60	Turbidimetric
CHEMICAL			
pH	6.5-8.5	7.09	Glass electrode
	5-7 undergo RO or distillation process		
TDS(total dissolved solids)	600 mg/L	52.4	Conductimetric
	<10 undergo RO or distillation process		
Nitrate	50 mg/L	6.10	Cadmium Reduction
Arsenic	0.01 mg/L	<0.005	AAS
Cadmium	0.003 mg/L	<0.001 mg/L	AAS
Lead	0.01 mg/L	<0.005 mg/L	AAS
NON-COMPLYING PARAMETERS		None	

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