

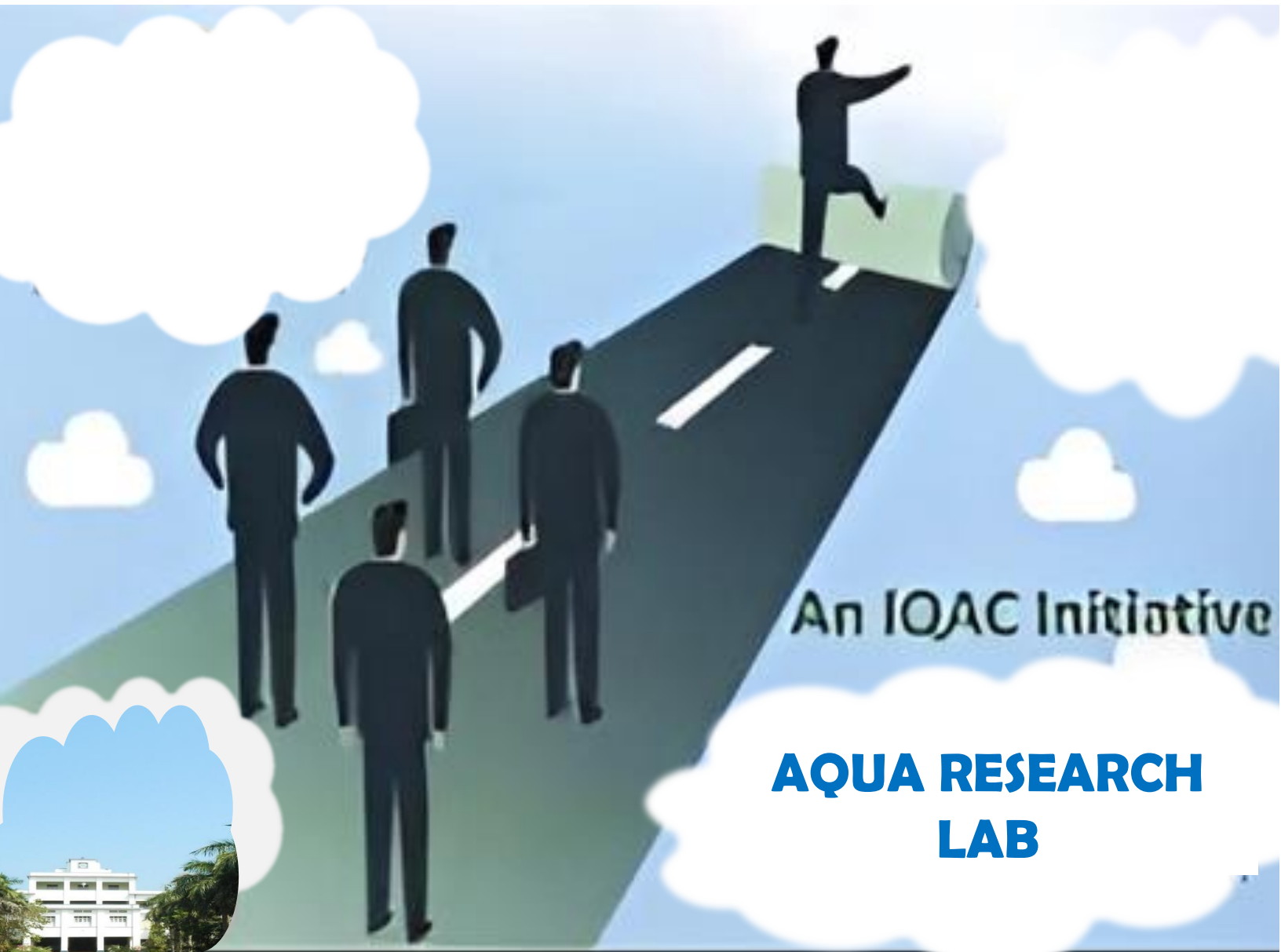


**CHRIST**  
COLLEGE (AUTONOMOUS)  
IRINJALAKUDA, KERALA

2022-23

# IQAC INITIATIVES

“EARN WHILE LEARN”



An IQAC Initiative

**AQUA RESEARCH  
LAB**





## AQUA RESEARCH LAB

The Aqua Research Lab (water quality testing lab) at Irinjalakuda Christ College has been approved by the State Pollution Control Board. It conducted comprehensive tests to assess the quality of water from various sources.

### Objectives

The objective of this project was to analyse key parameters to ensure water safety, identify potential contaminants, and provide valuable insights for environmental and public health considerations.

### Activity

The quality of water used for domestic and industrial purposes and various water quality factors can be tested here. Industries nearby like hotels, shops, institutions, etc. can get water samples tested in the lab to obtain and renew licenses. The safety of drinking water and the level of impurities in the water will be tested here at a nominal cost both for the public as well as business purposes. Highly equipped with facilities to test the important physical, chemical and biological components of water, researchers here provide

guidelines to improve water quality too. These services have been provided to the public for the past five years at an affordable cost. This is the only institution in the district with international certification (CEREM). Water samples to be tested can be delivered to the lab in person or to the Department of Geology and Ecology on weekdays between 9am and 4pm.

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## Outcome

- This enterprise disseminated social responsibility with scientific expertise in the students and faculty
- The strategy facilitated technological transfer through skill development



Water Quality Testing Lab



**CHRIST**  
COLLEGE (AUTONOMOUS)  
IRINJALAKUDA, KERALA

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(Reg.No.137/75; No. F. 22-1/2015/AC.U.G.C.)  
Affiliated to University of Calicut and Re-accredited by NAAC A++ & SAAC A+ Grade

**WATER ANALYSIS REPORT**

Sample No: 01

Name & Address: Narayanan  
Kandhassam  
Iringalakuda

Date of collection:  
Collected by:

Standard referred by :IS:10500:2012

Sl No.	Characteristics	Method	Unit	Acceptable Limit	Results
<b>PHYSICAL PARAMETERS</b>					
1	Turbidity	IS:3025(10)-1984	NTU	1	
2	Colour	IS:3025 part 04	Hz units	5Hz units max.	
3	Odour	IS:3025 part 05	Agreeable	Agreeable	
4	Electrical Conductivity	IS:3025(14)-1984	us/cm	-	
5	Ph	IS:3025(11)-1983		6.5 – 8.5	
6	Total Dissolved Solids	IS:3025(16)-1984	mg/L	500	
<b>CHEMICAL PARAMETERS</b>					
7	Acidity	IS:3025(22)-1986	mg/L	-	
8	Alkalinity	IS:3025(13)-1986	mg/L	200	
9	Total Hardness	IS:3025(21)-1983	mg/L	200	
10	Calcium (as Ca)	IS:3025(40)-1991	mg/L	75	
11	Magnesium (as Mg)	IS:3025(33)-1994	mg/L	30	
12	Chloride (as Cl)	IS:3025(32)-1988	mg/L	250	
13	Fluoride	IS:3025(23)-2008	mg/L	1	
14	Iron (as Fe)	IS:3025(32)-2003	mg/L	0.3	
15	Nitrate (as NO <sub>3</sub> )	IS:3025(34)-1988	mg/L	45	
16	Sulphate (as SO <sub>4</sub> )	IS:3025(24)-1986	mg/L	200	
<b>BACTERIOLOGICAL ANALYSIS</b>					
17	Coliforms	MPN METHOD	No. of Coliforms/100ml	Shall not detectable in any 100ml sample	
18	E. Coli	IS:1622-1981	No. of Coliforms/100ml	Shall not detectable in any 100ml sample	

Remarks:

  
Verified by:  
Chief Analyst

Water Analysis Report

CHRIST AQUA RESEARCH LAB  
CHRIST COLLEGE (AUTONOMOUS)  
IRINJALAKUDA

WATER ANALYSIS REPORT

Sample No:

Name & Address: *Shinto - English dept.*  
*854 762 9486*

Date of collection: *20-12-2022*

Collected by:

Standard referred by :IS:10500:2012

Sl No.	Characteristics	Method	Unit	Acceptable Limit	Results
<b>PHYSICAL PARAMETERS</b>					
1	Turbidity	IS:3025(10)-1984	NTU	1	10.2
2	Colour	IS:3025 part 04	Hz units	5Hz units max.	17.1
3	Odour	IS:3025 part 05	Agreeable	Agreeable	Agreeable
4	Taste	IS:3025 part 08	Agreeable	Agreeable	Agreeable
5	Electrical Conductivity	IS:3025(14)-1984	us/cm	-	139.9
6	Ph	IS:3025(11)-1983		6.5 - 8.5	7.43
7	Total Dissolved Solids	IS:3025(16)-1984	mg/L	500	90.9
8	Total Solids	IS:3025(16)-1984	mg/L	500	90.9
9	Total Suspended Solids	IS:3025(16)-1984	mg/L	300	0
<b>CHEMICAL PARAMETERS</b>					
10	Acidity	IS:3025(22)-1986	mg/L	-	12
11	Alkalinity	IS:3025(13)-1986	mg/L	200	124
12	Total Hardness	IS:3025(21)-1983	mg/L	200	118
13	Calcium (as Ca)	IS:3025(40)-1991	mg/L	75	13.617
14	Magnesium (as Mg)	IS:3025(33)-1994	mg/L	30	20.412
15	Chloride (as Cl)	IS:3025(32)-1988	mg/L	250	32
16	Fluoride	IS:3025(23)-2008	mg/L	1	0
17	Iron (as Fe)	IS:3025(32)-2003	mg/L	0.3	0.5
18	Nitrate (as NO <sub>3</sub> )	IS:3025(34)-1988	mg/L	45	2
19	Sulphate (as SO <sub>4</sub> )	IS:3025(24)-1986	mg/L	200	35.9
<b>BACTERIOLOGICAL ANALYSIS</b>					
20	Coliforms	MPN METHOD	No. of Coliforms/100ml	Shall not detectable in any 100ml sample	MPN index 23
21	E. Coli	IS:1622-1981	No. of Coliforms/100ml	Shall not detectable in any 100ml sample	NIL

Remarks:



Date:

*[Signature]*  
Verified by:  
Chief Analyst

CHRIST AQUA RESEARCH LAB  
CHRIST COLLEGE (AUTONOMOUS)  
IRINJALAKUDA

WATER ANALYSIS REPORT

Sample No:  
Name & Address: *Musthafa*  
*8547113011*

Date of collection: *28/2/23.*  
Collected by:

Standard referred by :IS:10500:2012

Sl No.	Characteristics	Method	Unit	Acceptable Limit	Results
<b>PHYSICAL PARAMETERS</b>					
1	Turbidity	IS:3025(10)-1984	NTU	1	7.3
2	Colour	IS:3025 part 04	Hz units	5Hz units max.	2.1
3	Odour	IS:3025 part 05	Agreeable	Agreeable	Agreeable
4	Taste	IS:3025 part 08	Agreeable	Agreeable	Agreeable
5	Electrical Conductivity	IS:3025(14)-1984	us/cm	-	7.39
6	Ph	IS:3025(11)-1983		6.5 – 8.5	8.89
7	Total Dissolved Solids	IS:3025(16)-1984	mg/L	500	4.80
8	Total Solids	IS:3025(16)-1984	mg/L	500	4.80
9	Total Suspended Solids	IS:3025(16)-1984	mg/L	300	0
<b>CHEMICAL PARAMETERS</b>					
10	Acidity	IS:3025(22)-1986	mg/L	-	4
11	Alkalinity	IS:3025(13)-1986	mg/L	200	8
12	Total Hardness	IS:3025(21)-1983	mg/L	200	2
13	Calcium (as Ca)	IS:3025(40)-1991	mg/L	75	0.801
14	Magnesium (as Mg)	IS:3025(33)-1994	mg/L	30	0
15	Chloride (as Cl)	IS:3025(32)-1988	mg/L	250	18
16	Fluoride	IS:3025(23)-2008	mg/L	1	0
17	Iron (as Fe)	IS:3025(32)-2003	mg/L	0.3	0
18	Nitrate (as NO <sub>3</sub> )	IS:3025(34)-1988	mg/L	45	2
19	Sulphate (as SO <sub>4</sub> )	IS:3025(24)-1986	mg/L	200	3.6
<b>BACTERIOLOGICAL ANALYSIS</b>					
20	Coliforms	MPN METHOD	No. of Coliforms/100ml	Shall not detectable in any 100ml sample	0
21	E. Coli	IS:1622-1981	No. of Coliforms/100ml	Shall not detectable in any 100ml sample	NIL

Remarks:



Date:

*[Signature]*  
Verified by:  
Chief Analyst

CHRIST AQUA RESEARCH LAB  
CHRIST COLLEGE (AUTONOMOUS)  
IRINJALAKUDA

WATER ANALYSIS REPORT

Sample No:  
Name & Address: *Ravindran*

Date of collection:  
Collected by:

Standard referred by :IS:10500:2012

Sl No.	Characteristics	Method	Unit	Acceptable Limit	Results
<b>PHYSICAL PARAMETERS</b>					
1	Turbidity	IS:3025(10)-1984	NTU	1	0.7
2	Colour	IS:3025 part 04	Hz units	5Hz units max.	NIL
3	Odour	IS:3025 part 05	Agreeable	Agreeable	NIL
4	Taste	IS:3025 part 08	Agreeable	Agreeable	NIL
5	Electrical Conductivity	IS:3025(14)-1984	us/cm	-	64.5 $\mu$ s
6	Ph	IS:3025(11)-1983		6.5 - 8.5	5.75
7	Total Dissolved Solids	IS:3025(16)-1984	mg/L	500	30.6 ppm
8	Total Solids	IS:3025(16)-1984	mg/L	500	30.9
9	Total Suspended Solids	IS:3025(16)-1984	mg/L	300	0.2
<b>CHEMICAL PARAMETERS</b>					
10	Acidity	IS:3025(22)-1986	mg/L	-	110
11	Alkalinity	IS:3025(13)-1986	mg/L	200	24
12	Total Hardness	IS:3025(21)-1983	mg/L	200	64
13	Calcium (as Ca)	IS:3025(40)-1991	mg/L	75	16.82
14	Magnesium (as Mg)	IS:3025(33)-1994	mg/L	30	12.1
15	Chloride (as Cl)	IS:3025(32)-1988	mg/L	250	164
16	Fluoride	IS:3025(23)-2008	mg/L	1	0
17	Iron (as Fe)	IS:3025(32)-2003	mg/L	0.3	0
18	Nitrate (as NO <sub>3</sub> )	IS:3025(34)-1988	mg/L	45	5
19	Sulphate (as SO <sub>4</sub> )	IS:3025(24)-1986	mg/L	200	10.1
<b>BACTERIOLOGICAL ANALYSIS</b>					
20	Coliforms	MPN METHOD	No. of Coliforms/100ml	Shall not detectable in any 100ml sample	17
21	E. Coli	IS:1622-1981	No. of Coliforms/100ml	Shall not detectable in any 100ml sample	NIL

Remarks:



Date:

*[Signature]*  
Verified by:  
Chief Analyst

CHRIST AQUA RESEARCH LAB  
CHRIST COLLEGE (AUTONOMOUS)  
IRINJALAKUDA

WATER ANALYSIS REPORT

Sample No:  
Name & Address: *SUBRAMANIAN GURUKKAL*

Date of collection: *6-2-23*  
Collected by:

Standard referred by :IS:10500:2012

*7306397611*

Sl No.	Characteristics	Method	Unit	Acceptable Limit	Results
<b>PHYSICAL PARAMETERS</b>					
1	Turbidity	IS:3025(10)-1984	NTU	1	3.9
2	Colour	IS:3025 part 04	Hz units	5Hz units max.	2.9
3	Odour	IS:3025 part 05	Agreeable	Agreeable	Agreeable
4	Taste	IS:3025 part 08	Agreeable	Agreeable	Agreeable
5	Electrical Conductivity	IS:3025(14)-1984	us/cm	-	170.2
6	Ph	IS:3025(11)-1983		6.5 - 8.5	8.03
7	Total Dissolved Solids	IS:3025(16)-1984	mg/L	500	111.6
8	Total Solids	IS:3025(16)-1984	mg/L	500	113.1
9	Total Suspended Solids	IS:3025(16)-1984	mg/L	300	1.0
<b>CHEMICAL PARAMETERS</b>					
10	Acidity	IS:3025(22)-1986	mg/L	-	40
11	Alkalinity	IS:3025(13)-1986	mg/L	200	64
12	Total Hardness	IS:3025(21)-1983	mg/L	200	66
13	Calcium (as Ca)	IS:3025(40)-1991	mg/L	75	4.005
14	Magnesium (as Mg)	IS:3025(33)-1994	mg/L	30	13.608
15	Chloride (as Cl)	IS:3025(32)-1988	mg/L	250	80
16	Fluoride	IS:3025(23)-2008	mg/L	1	0
17	Iron (as Fe)	IS:3025(32)-2003	mg/L	0.3	0
18	Nitrate (as NO <sub>3</sub> )	IS:3025(34)-1988	mg/L	45	50
19	Sulphate (as SO <sub>4</sub> )	IS:3025(24)-1986	mg/L	200	42.7
<b>BACTERIOLOGICAL ANALYSIS</b>					
20	Coliforms	MPN METHOD	No. of Coliforms/100ml	Shall not detectable in any 100ml sample	10
21	E. Coli	IS:1622-1981	No. of Coliforms/100ml	Shall not detectable in any 100ml sample	NIL

Remarks:



Date:

*[Signature]*  
Verified by:  
Chief Analyst



CHRIST AQUA RESEARCH LAB  
CHRIST COLLEGE (AUTONOMOUS)  
IRINJALAKUDA

WATER ANALYSIS REPORT

Sample No:

Name & Address: *RAJARAJU*  
*8281261951*

Date of collection: *22/11/22*  
Collected by:

Standard referred by :IS:10500:2012

Sl No.	Characteristics	Method	Unit	Acceptable Limit	Results
<b>PHYSICAL PARAMETERS</b>					
1	Turbidity	IS:3025(10)-1984	NTU	1	0.2
2	Colour	IS:3025 part 04	Hz units	5Hz units max.	1.8
3	Odour	IS:3025 part 05	Agreeable	Agreeable	Agreeable
4	Taste	IS:3025 part 08	Agreeable	Agreeable	Agreeable
5	Electrical Conductivity	IS:3025(14)-1984	us/cm	-	172.4
6	Ph	IS:3025(11)-1983		6.5 - 8.5	9.49
7	Total Dissolved Solids	IS:3025(16)-1984	mg/L	500	112.3
8	Total Solids	IS:3025(16)-1984	mg/L	500	112.8
9	Total Suspended Solids	IS:3025(16)-1984	mg/L	300	0.2
<b>CHEMICAL PARAMETERS</b>					
10	Acidity	IS:3025(22)-1986	mg/L	-	62
11	Alkalinity	IS:3025(13)-1986	mg/L	200	54
12	Total Hardness	IS:3025(21)-1983	mg/L	200	84
13	Calcium (as Ca)	IS:3025(40)-1991	mg/L	75	24.831
14	Magnesium (as Mg)	IS:3025(33)-1994	mg/L	30	5.346
15	Chloride (as Cl)	IS:3025(32)-1988	mg/L	250	66
16	Fluoride	IS:3025(23)-2008	mg/L	1	0
17	Iron (as Fe)	IS:3025(32)-2003	mg/L	0.3	0
18	Nitrate (as NO <sub>3</sub> )	IS:3025(34)-1988	mg/L	45	28
19	Sulphate (as SO <sub>4</sub> )	IS:3025(24)-1986	mg/L	200	1
<b>BACTERIOLOGICAL ANALYSIS</b>					
20	Coliforms	MPN METHOD	No. of Coliforms/100ml	Shall not detectable in any 100ml sample	7
21	E. Coli	IS:1622-1981	No. of Coliforms/100ml	Shall not detectable in any 100ml sample	NIL

Remarks:



Date:

*[Signature]*  
Verified by:  
Chief Analyst



## Internal Quality Assurance Cell

