WATER REPORT

Conserve water, preserve the planet

CHITKARA UNIVERSITY

July, 2024

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Water Management

SOURCES OF FRESH WATER

The source of the fresh water of university is groundwater. Two tube wells have been installed in the university. The details of the tube wells are given below:

Location	Depth (meters)	Diameter (mm)	Discharge m^3/hr	Operational hours/day	H.P. of Pump	Whether electromagnetic flow meter with Telemetric module installed
Tubewell / 2014	350.00	200	42.00	7/365	33.00	Yes
Tubewell/ 2022	492	200	45.00	7/365	33.00	Yes
Tubewell/ 2023	492	200	45.00	7/365	33.00	Yes

Tube wells installed with electromagnetic flow meter with telemetric module

The maximum annual water abstraction of the university during the financial year 2023-2024 was 730 m³.

• The University has maintained record of ground water abstraction. Electromagnetic flow water meters have been installed. Water meter readings are recorded on a daily basis. Record of energy consumption for abstraction of ground water has also been maintained by the University.

• The University has also maintained the record of consumption of water for every section.

Months	2023-24
Jul-23	31.46 m^3
Aug-23	51.89 m^3
Sep-23	55.68 m^3
Oct-23	58.61 m^3
Nov-23	64.37 m^3
Dec-23	64.36 m^3
Jan-24	71.27 m^3
Feb-24	64.14 m^3
Mar-24	68.17 m^3
Apr-24	84.60 m^3
May-24	74.26 m^3
Jun-24	41.20 m^3
Yearly total	**730.00 m^3**
Treated Water generated	**584.10 m^3**
Used in Dual Plumbing	**233.64 m^3**
Used in Horticulture	**221.96 m^3**
Used in Karnal Technology	**128.50 m^3**

WATER STORAGE FACILITIES WITHIN THE CAMPUS

1. One Overhead Tank of Capacity 400 KL
2. One Underground Storage Tank of capacity 400 KL
3. One Underground storage Tank of capacity 100KL

Overhead Tank of Capacity 400KL

Underground storage tank of 400 KL

SEWAGE TREATMENT PLANTS

The university has two Sewage Treatment plants based on the MBBR technology to treat wastewater of capacity 250 KLD and 1 MLD. A new STP of 2 MLD is going to be commissioned in August 2024.

General Process Description for 250 KLD STP with FAB Technology

The Treatment Plant is based on FAB Technology and having 250 capacity with following treatment scheme.

➢ **Stage 1: Primary Treatment**

Bar Screen Chamber, Sewage Collection tank, Oil & Grease Trap

➢ **Stage 2: Secondary or biological treatment**

FAB Reactor, Coagulation tank, Clarifier

➢ **Stage 3: Tertiary treatment**

Chlorine Contact tank, Pressure Sand Filter, Activated Carbon Filter, Hypo Dosing System, Treated Water Tank

➢ **Stage 4: Sludge Treatment**

Sludge Drying Beds

Sewage Treatment Plant of Capacity 250 KLD

Treatment scheme of STP 1 of capacity of 250 KLD

GENERAL PROCESS DESCRIPTION FOR 1 MLD STP WITH MBBR TECHNOLOGY

The Treatment Plant is based on MBBR Technology having 1 MLD capacity with following treatment scheme.

➢ **Stage 1: Primary Treatment**

Bar Screen Chamber, Sewage Collection tank, Oil & Grease Trap

➢ **Stage 2: Secondary or biological treatment**

MBBR Reactor I & II, Coagulation tank, Clarifier

➢ **Stage 3: Tertiary treatment**

Chlorine Contact tank, Pressure Sand Filter, Activated Carbon Filter, Hypo Dosing System, Treated Water Tank-I, Treated Water Tank-II

➢ **Stage 4: Sludge Treatment**

Sludge Drying Beds

Treated wastewater being used in the campus and Sewage Treatment Plant of capacity 1 MLD

Treated wastewater being used in the campus and Sewage Treatment Plant of capacity 1 MLD

USAGE OF TREATED WATER

Dual plumbing system at Chitkara University, Punjab

Karnal technology in which treated STP water is used

Treated water being used in horticulture

RAINWATER HARVESTING SYSTEM

Rainwater harvesting is a technique to capture the rainwater when it precipitates, store that water for direct use or charge the groundwater and use it later.

There are typically four components in a rainwater harvesting system:

- Roof Catchment.
- Collection.
- Transport.
- Infiltration or storage tank and use.

If rainwater is not harvested and channelized its runoffs quickly and flow out through storm- water drains. For storm-water management the recharge pits, percolation pits and porous trenches are constructed to allow storm water to infiltrate inside the soil.

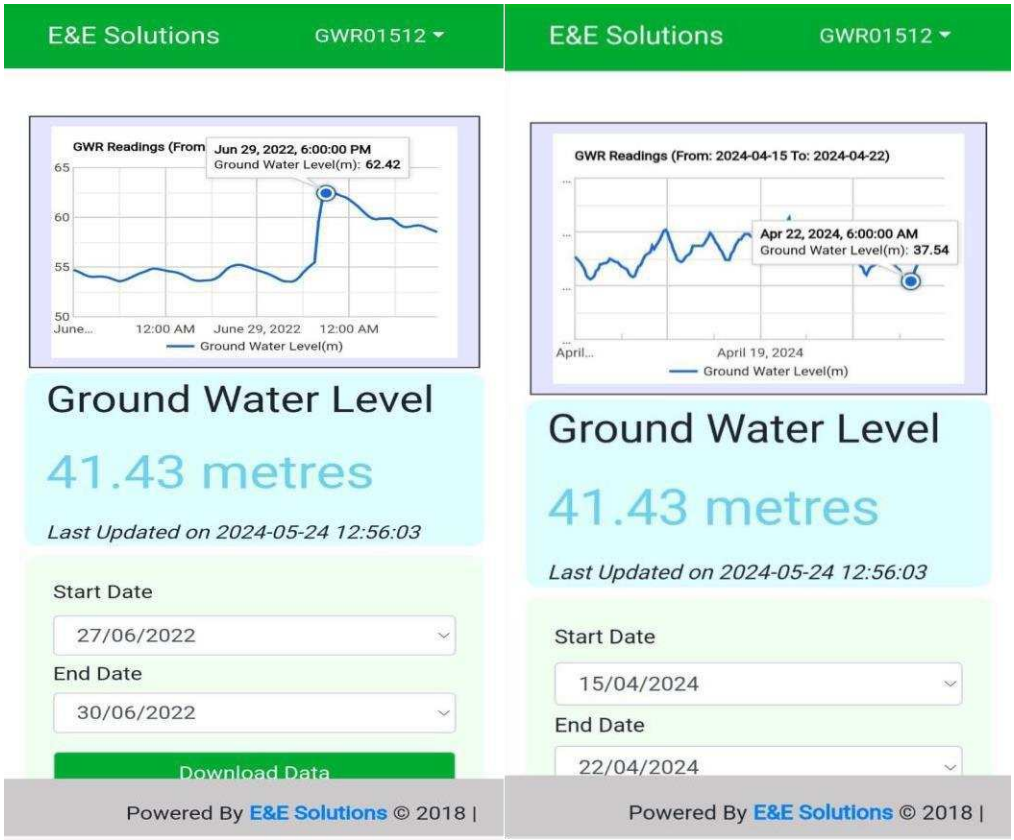
GROUND WATER LEVELS IN PATIALA

The depth to water level ranges from 4.43 to 20.62 m bgl during pre-monsoon period and 6.99 to 24.28 m bgl during post monsoon period. The seasonal fluctuation varies from 0.03 to (-) 3.66 m in the area. The long-term water levels trend indicates average fall of 0.50 m/year.

RAINWATER CONSERVATION POLICY AT CHITKARA UNIVERSITY

The clayey soil is found to be dominant in the soil of campus, so the campus has been provided with a deep well borewell harvesting system. The rainwater collected in the catchment areas (Roofs, Roads and Ground) is conserved by recharging the ground water. The water falling on the roof of the building and roads is made to fall into ground and a steep slope is provided at the ground and the water from ground will flow to the recharging pit. The runoff water may contain silts and Grits so to prevent the entry of the silts entering the water has to pass through the filtration Media (layer of sand and gravels). The filtered water will then pass through the perforated pipes which are connected to borewell pipe, and the rainwater will join the aquifer Chitkara University has 8 Rainwater Harvesting points at different locations. The capacity and type of system is as given below: -

GROUND WATER LEVEL IMPROVEMENTS



The ground water table has considerably increased to 37.54 Meter from all-time low of above 60 Meters.

Annual Meeting Contract (AMC), Water Testing, and Water Awareness at Chitkara University

1. Annual Meeting Contract (AMC): - The Annual Meeting Contract (AMC) at Chitkara University is a critical agreement that ensures regular maintenance and checks of water systems. The AMC mentioned in the provided document, typically such a contract covers regular inspections of water infrastructure, ensuring all equipment like pumps, filters, and plumbing systems are functioning properly. This helps in avoiding disruptions in the water supply and ensuring that the water distributed throughout the campus is safe for consumption.

2. Water Testing: - Chitkara University likely conducts water testing as part of its health and safety measures. Regular water testing ensures that the water on campus meets both national and international quality standards. This process involves checking for contaminants like bacteria, heavy metals, and chemical pollutants, and assessing parameters such as pH, hardness, and turbidity. Water testing safeguards the health of students and staff, ensuring access to clean and potable water across the campus.

3. Water Awareness: - Chitkara University emphasizes water awareness among students and staff, promoting conservation and responsible usage through various initiatives. The provided document highlights an awareness poster encouraging everyone to:

- **Save Water**: The poster stresses that every drop counts and urges people to close taps after use and report leaks immediately to the building supervisor or housekeeping staff. A contact number is provided for quick reporting of water issues.
- **Simple Ways to Conserve**: It suggests ways to conserve water, like reducing the energy needed for water treatment, protecting natural ecosystems, and preventing droughts and shortages. This message is aimed at instilling a habit of mindful water consumption in the university community.

These efforts reflect Chitkara University's commitment to environmental sustainability and resource conservation, ensuring that future generations benefit from their water-saving initiatives.

PURCHASE ORDER

Invoice To **Chitkara University, Punjab** Chandigarh Patiala National Highway Vill. Jansla, Banur, Distt. Patiala	Purchase Order No. **CU/PB/PO/ 22-23/5898**	Dated **28-Oct-22**
	Mode/Terms of Payment: **Credit**	
Supplier **Mech Engineers** 920-A , Industrial Area ,Phase - 2 , Chandigarh Contact No.: 0172-2652417, 098140-98720 E-Mail: mechengineers2k@gmail.com **Tin No.: 04030009720**	Supplier's Ref. **CU-PB-5898**	Other References(s) **Electrical Material**
	Terms of Delivery **ONE YEAR**	Contact Person
	Reference / C:	
	Destination **SQUARE ONE** Nature of Work	

Sr. No.	Description of Goods	Quantity	Rate (₹)	Net Amount (₹)	Disc. (%/ Amount)	GST (%)	Amount (₹)
1	**AMC for R.O Plant** 08 visits + 02 emergency visits AMC Period Starts from 01-11-2022 to 31-10-2023 6 PCS OF CARTRIDGE & FILTER PRICE INCLUDE **Indent No.: 22-23/2371(Admin Department-Square One~1)**	**1 No**	**15000.00**	**15000.00**	**---**	**18.00%** (2700.00)	**17700.00**
	Total	**1 No**	**---**	**15000.00**	**---**	**2700.00**	**17700.00**

Amount Chargeable (in words)

Seventeen Thousand Seven Hundred Only

E. & O.E

Remarks

a. If the material is not as per given specification that will be rejected & returned to you for reverse pick up.

b. Safe Transportation of all the Material without any damage shall be your responsibility.

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for Chitkara University -- (28-Oct-22)

Authorised Signatory

PURCHASE ORDER

Invoice To **Chitkara University, Punjab** Chandigarh Patiala National Highway Vill. Jansla, Banur, Distt. Patiala	Purchase Order No. **CU/PB/PO/ 22-23/7966**	Dated **31-Dec-22**
	Mode/Terms of Payment: **Credit**	
Supplier **Aqua Care Services** H.No- 1371,Sector - 52 ,Chandigarh Contact No.: 93164-81683 E-Mail: aquacare_services@yahoo.in	Supplier's Ref. **CU-PB-7966**	Other References(s) **AQUAGUARD WATER FILTER**
	Terms of Delivery .	Contact Person
	Reference / C:	
	Destination **ADMIN OFFICE** Nature of Work	

Sr. No.	Description of Goods	Quantity	Rate (₹)	Net Amount (₹)	Disc. (%/ Amount)	GST (%)	Amount (₹)
1	**AMC for Aquaguard Water Purifier** The Other terms and conditions of the contract are as follows:- Two Periodically service visit per year during the period for contract, when the purifier will be thoroughly checked, cleaned, serviced and adjusted. Replacement of the Activated Carbon block will be made once during the service contract period. Replacement of pre filter Candle will be made once in year. Replacement of worn out/exhausted parts, including part will new/rectified spares during the periodical servicing or breakdown visits during the service contract period AMC PERIOD FROM 02-01-2023 TO 01-01-2024 **Indent No.: 22-23/3076(Admin Department-Admin Office~1)**	**50 No**	**2000.00**	**100000.00**	---	---	**100000.00**
	Total	**50 No**	---	**100000.00**	---	---	**100000.00**

Amount Chargeable (in words)
One Lakh Only

E. & O.E

Remarks:

a. If the material is not as per given specification that will be rejected & returned to you for reverse pick up.

b. Safe Transportation of all the Material without any damage shall be your responsibility.

AMC PERIOD FROM 02-01-2023 TO 01-01-2024
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for Chitkara University (31-Dec-22)

Authorised Signatory

PURCHASE ORDER

Invoice To **Chitkara University, Punjab** Chandigarh Patiala National Highway Vill. Jansla, Banur, Distt. Patiala **GST No.: 03AAATC6244N1ZQ**	Purchase Order No. **PO/ 24-25/5452**	Dated **12-Aug-24**
	Mode/Terms of Payment: **Credit**	
	Project No. ---	Other References(s)
Supplier **Mech Engineers** 920-A , Industrial Area ,Phase - 2 , Chandigarh Contact No.: 0172-2652417, 098140-98720, 99143-43720 E-Mail: mechengineers2k@gmail.com **Tin No.: 04030009720**	Terms of Delivery **1 year**	Contact Person
	PO Type: **Supply Only**	
	Destination **Admin Department-Square One Terrace** Nature of Work	

Sr. No.	Description of Goods	Quantity	Rate (₹)	Net Amount (₹)	Disc. (%/ Amount)	GST (%)	Amount (₹)
1	**AMC for R.O Plant** 20-JAN-2024 TO 19-JAN-2025 **Indent No.:** ADMIN DEPARTMENT FOOD COURT, 23-24/3608(Admin Department-Square One Terrace~1)	**1 No**	**15000.00**	**15000.00**	---	**18.00%** (2700.00)	**17700.00**
	Total	**1 No**	---	**15000.00**	---	**2700.00**	**17700.00**

Amount Chargeable (in words)

Seventeen Thousand Seven Hundred Only

E. & O.E

Remarks:

a. If the material is not as per given specification that will be rejected & returned to you for reverse pick up.

b. Safe Transportation of all the Material without any damage shall be your responsibility.

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for Chitkara University (12-Aug-24)

Authorised Signatory

PURCHASE ORDER

Invoice To **Chitkara University, Punjab** Chandigarh Patiala National Highway Vill. Jansla, Banur, Distt. Patiala **GST No.: 03AAATC6244N1ZQ**	Purchase Order No. **PO/ 24-25/6725**	Dated **07-Sep-24**
	Mode/Terms of Payment: **Credit**	
	Project No. ---	Other References(s)
Supplier **Aqua Care Services** H.No- 1371,Sector - 52 ,Chandigarh Contact No.: 93164-81683 E-Mail: aquacare_services@yahoo.in	Terms of Delivery **7 DAYS**	Contact Person
	PO Type: **Supply Only**	
	Destination **Admin Department-Academic Buildings** Nature of Work	

Sr. No.	Description of Goods	Quantity	Rate (₹)	Net Amount (₹)	Disc. (%/ Amount)	GST (%)	Amount (₹)
1	**AMC for Aquaguard Water Purifier** 25-SEP-2024 TO 24-SEP-2025 **Indent No.:** 24-25/1951(Admin Department-Academic Buildings~1)	**110 No**	**2100.00**	**231000.00**	---	---	**231000.00**
2	**AMC for R.O Purifier** 25-SEP-2024 TO 24-SEP-2025 THE ABOVE RATES ARE INCLUDING GST **Indent No.:** 24-25/1951(Admin Department-Fleming Block~2)	**3 No**	**4500.00**	**13500.00**	---	---	**13500.00**
	Total	**113 No**	---	**244500.00**	---	---	**244500.00**

Amount Chargeable (in words)

E. & O.E

Two Lakh Forty Four Thousand Five Hundred Only

Remarks:

a. If the material is not as per given specification that will be rejected & returned to you for reverse pick up.

b. Safe Transportation of all the Material without any damage shall be your responsibility.

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for Chitkara University (07-Sep-24)

Authorised Signatory

Chitkara University
Central Instrumentation Facility

TC-11489

Document No. CUCIF/TRF
Dated: 11-04-2024

TEST REPORT

Customer's Name and address:	Sample receipt date	:	06-04-2024
	Date of Testing	:	09-04-2024
Chitkara University, (PB)	Report Issue Date	:	11-04-2024
	Reference No.	:	27/2024
Kind Attn: Capt. Ravinder Singh	Location of testing	:	CUCIF , Babbage Block (CU)
	Name of work	:	Chemical Testing

SAMPLE PARTICULARS

Description of sample	:	Liquid
Sample quantity	:	500 ml
Sample condition	:	Intact and fit for testing
Sample identification No.	:	24CWS04/003
Sample collected/ submitted/drawn by	:	Mr. Jaswinder Singh
Location/ source of sample	:	Indoor Stadium(Sportorium)WC-2, Chitkara University (PB)
Sampling procedure	:	NA
Type of testing	:	Chemical Testing
Environmental conditions during sampling	:	Temperature: 25°C Humidity : 52%

TEST RESULTS

S. No.	Parameter(s)	Test method	Unit	Test Result	Acceptable requirement	Permissible Limit	Uncertainty in measurement
01	pH	IS:3025 Part(11): 2022	-	7.89	6.5 – 8.5	No Relaxation	0.18
02	TDS (Total Dissolved Solid)	IS:3025 Part(16): 2012	mg/L	489	500	2000	0.05

03	Total Hardness	IS:3025 Part(21): 2019	mg/L	69	200	600	0.04
04	Alkalinity	IS:3025 Part(23):2019	mg/L	216.11	200	600	0.0168
05	Calcium	IS:3025 Part(40):2019	mg/L	15.73	30	200	0.48
06	Fluoride	IS:3025 Part(60):2019	mg/L	1.33	1.0	1.5	0.02
07	Residual Free Chlorine	IS:3025 Part(26):2019	mg/L	0	0.2	1.0	0.03
08	Specific Conductance	IS:3025 Part(14) : 2013	µS/cm	73.70	-	-	0.3
09	Potassium	IS: 3025 Part(45):2019	mg/L	0.83	-	-	0.046
10	Sodium	IS: 3025 Part(45):2019	mg/L	163	-	-	0.039

Remarks/opinions: The alkalinity and fluoride are slightly higher and other given parameters are within acceptable limit.

Authorized signatory

Name: Dr. Jyotsna Kaushal
Designation: PDF

Chitkara University Central Instrumentation Facility
Chitkara University, Punjab
Chandigarh-Patiala National Highway
Rajpura,Punjab.India-140401

Name of the Laboratory: Chitkara University Central Instrumentation Facility (CUCIF)				
Document No. CUCIF/TRF		Document Name: Test report format for Chemical testing of Water		
Issue No: 00	Issue Date: 01/06/2023	Copy No.:	Section No: C(12)	Page No: 1/1
Amendment No: NA	Amendment date:NA	Approved and issued by:		

Chitkara University
Central Instrumentation Facility

TC-11489

TEST REPORT

Document No. CUCIF/TRF

Customer's Name and address: Chitkara University, (PB) **Kind Attn**: Hony. Capt. Ravinder Singh **Contact No.**: 9501004247 **Email ID**: ravinder.singh@chitkara.edu.in	Sample receipt date	:	05-08-2024
	Date of Testing	:	06-08-2024
	Report Issue Date	:	10-08-2024
	Reference No.	:	43/2024
	Location of testing	:	CUCIF , Babbage Block (CU)
	Name of work	:	Chemical Testing

SAMPLE PARTICULARS

Description of sample	:	Liquid
Sample quantity	:	500 ml
Sample condition	:	Intact and fit for testing
Sample identification No.	:	24CWS08/001
Sample collected/drawn by	:	Mr. Jaswinder Singh
Location/ source of sample	:	Picasso 1st Floor(WC), Chitkara University (PB)
Sampling procedure	:	NA
Type of testing	:	Chemical Testing
Environmental conditions	:	Temperature: 27°C Humidity : 56%

TEST RESULTS

S. No.	Parameter(s)	Test method	Unit	Test Result	Limits of IS: 10500-2012	
					Acceptable requirement	Permissible Limit
01	pH	IS:3025 Part(11): 2022	-	8.02	6.5 – 8.5	No Relaxation
02	TDS (Total Dissolved Solid)	IS:3025 Part(16): 2012	mg/L	440	500	2000

Chandigarh-Patiala National Highway (NH- 64) Village Jhansla, Rajpura, Punjab 140401

03	Total Hardness	IS:3025 Part(21): 2019	mg/L	49.72	200	600
04	Alkalinity	IS:3025 Part(23):2019	mg/L	249.44	200	600
05	Calcium	IS:3025 Part(40):2019	mg/L	9.33	30	200
06	Fluoride	IS:3025 Part(60):2019	mg/L	0.72	1.0	1.5
07	Residual Free Chlorine	IS:3025 Part(26):2019	mg/L	BDL	0.2	1.0
08	Specific Conductance	IS:3025 Part(14) : 2013	µS/cm	76.44	-	-
09	Potassium	IS: 3025 Part(45):2019	mg/L	0.87	-	-
10	Sodium	IS: 3025 Part(45):2019	mg/L	141	-	-

Note: BDL –Below detectable limit

1. **The test report refers only to tested sample and applicable parameters.**
2. **This report can neither be used as evidence in the court of law nor can it be used in part or full in any media without prior permission.**
3. **The sample will be destroyed after seven days from the date of issue of test report unless otherwise specified.**

Authorized signatory
Chitkara University Central Instrumentation Facility
Chitkara University, Punjab
Chandigarh-Patiala National Highway
Rajpura,Punjab India-140401

****End of Report****

Name of the Laboratory: Chitkara University Central Instrumentation Facility (CUCIF)				
Document No. CUCIF/TRF		Document Name: Test report format for Chemical testing of Water		
Issue No: 00	Issue Date: 01/06/2023	Copy No.:	Section No: C(12)	Page No: 2/2
Amendment No:01	Amendment date 01/07/2024	Approved and issued by: QM		

Chitkara University
Central Instrumentation Facility

TC-11489

Document No. CUCIF/TRF
Dated: 03-02-2024

TEST REPORT

Customer's Name and address:	Sample receipt date	:	29-01-2024
	Date of Testing	:	31-01-2024
Chitkara University (PB)	Report Issue Date	:	03-02-2024
	Reference No.	:	14/2024
Kind Attn: Mr. Rattandeep Singh	Location of testing	:	CUCIF, Babbage Block (CU)
	Name of work	:	Chemical Testing

SAMPLE PARTICULARS

Description of sample	:	Liquid
Sample quantity	:	500 ml
Sample condition	:	Intact and fit for testing
Sample identification No.	:	24CWS01/014
Sample collected/ submitted/drawn by	:	Mr. Jaswinder Singh
Location/ source of sample	:	Turing Block 5th Floor , Chitkara University (PB)
Sampling procedure	:	NA
Type of testing	:	Chemical Testing
Environmental conditions during sampling	:	Temperature: 21 Humidity : 62%

TEST RESULTS

S. No.	Parameter(s)	Test method	Unit	Test Result	Acceptable requirement	Permissible Limit	Uncertainty in measurement
01	pH	IS:10500-2012	-	7.70	6.5 – 8.5	No Relaxation	0.18
02	TDS (Total Dissolved Solid)	IS:10500-2012 Part	mg/L	476	500	2000	0.05
03	Total Hardness	IS:10500-2012 Part 21	mg/L	77.52	200	600	0.04
04	Alkalinity	IS:10500-	mg/L	220	200	600	0.0168

		2012, IS:3025 Part 23					
05	Calcium	IS:10500-2012, IS:3025 Part 40	mg/L	19.20	30	200	0.48
06	Fluoride	IS:10500-2012, IS:3025 Part 60	mg/L	1.37	1.0	1.5	0.02
07	Residual Free Chlorine	IS:10500-2012, IS:3025 Part 26	mg/L	0	0.2	1.0	0.03
08	Specific Conductance	IS 3025 Part 14 : 2013	µS/cm	72.91	-	-	0.3
09	Potassium	IS 3025; Part 45 : 2019	mg/L	0.83	-	-	0.046
10	Sodium	IS 3025; Part 45 : 2019	mg/L	89.30	-	-	0.039

Remarks/opinions: The alkalinity and fluoride are higher the acceptable limit.

Authorized signatory

Name: Dr. Jyotsna Kaushal
Designation: TM

Chitkara University Central Instrumentation Facility
Chitkara University, Punjab
Chandigarh-Patiala National Highway
Rajpura,Punjab.India-140401

Name of the Laboratory: Chitkara University Central Instrumentation Facility (CUCIF)				
Document No. CUCIF/TRF		Document Name: Test report format for Chemical testing of Water		
Issue No: 00	Issue Date: 01/06/2021	Copy No.:	Section No: C (12)	Page No: 1/1
Amendment No:	Amendment date:	Approved and issued by:		

Chitkara University
Central Instrumentation
Facility

TC-11489

Document No. CUCIF/TRF
Dated: 09-01-2024

TEST REPORT

Customer's Name and address:	Sample receipt date	:	04-01-2024
	Date of Testing	:	06-01-2024
Chitkara University (PB)	Report Issue Date	:	09-01-2024
	Reference No.	:	02/2024
	Location of testing	:	CUCIF,Babbage Block (CU)
Kind Attn: Mr.Rattandeep Singh	Name of work	:	Chemical Testing

SAMPLE PARTICULARS

Description of sample	:	Liquid
Sample quantity	:	500 ml
Sample condition	:	Intact and fit for testing
Sample identification No.	:	24CWS01/002
Sample collected/ submitted/drawn by	:	Mr. Jaswinder Singh
Location/ source of sample	:	Turing Block 3rd Floor-1(Pantry Side)) Chitkara University (PB)
Sampling procedure	:	NA
Type of testing	:	Chemical Testing
Environmental conditions during sampling	:	Temperature: 21°C Humidity : 62%

TEST RESULTS

S. No.	Parameter(s)	Test method	Unit	Test Result	Acceptable requirement	Permissible Limit	Uncertainty in measurement
01	pH	IS:10500-2012	-	8.08	6.5 – 8.5	No Relaxation	0.18
02	TDS (Total Dissolved Solid)	IS:10500-2012 Part	mg/L	472	500	2000	0.05
03	Total Hardness	IS:10500-2012 Part 21	mg/L	74.48	200	600	0.04

04	Alkalinity	IS:10500-2012, IS:3025 Part 23	mg/L	225	200	600	0.0168
05	Calcium	IS:10500-2012, IS:3025 Part 40	mg/L	14.93	30	200	0.48
06	Fluoride	IS:10500-2012, IS:3025 Part 60	mg/L	1.93	1.0	1.5	0.02
07	Residual Free Chlorine	IS:10500-2012, IS:3025 Part 26	mg/L	0	0.2	1.0	0.03
08	Specific Conductance	IS 3025 Part 14 : 2013	µS/cm	70.20	-	-	0.3
09	Potassium	IS 3025; Part 45 : 2019	mg/L	1.57	-	-	0.046
10	Sodium	IS 3025; Part 45 : 2019	mg/L	192	-	-	0.039
11	Cadmium	IS:3025 Part 41 2012	mg/L	0	0.003	No Relaxation	0.001
12	Chromium	IS: 3025 Part 52 2012	mg/L	0	0.05	No Relaxation	0.001
13	Lead	IS: 3025 Part 47 2012	mg/L	0	0.01	No Relaxation	0.0006

Remarks/opinions: The alkalinity and fluoride are higher and other given parameters are within acceptable limit.

Authorized signatory

Name: Dr. Jyotsna Kaushal
Designation: TM

Chitkara University Central Instrumentation Facility
Chitkara University, Punjab
Chandigarh-Patiala National Highway
Rajpura,Punjab,India-140401

Name of the Laboratory: Chitkara University Central Instrumentation Facility (CUCIF)				
Document No. CUCIF/TRF		Document Name: Test report format for Chemical testing of Water		
Issue No: 00	Issue Date: 01/06/2021	Copy No.:	Section No: C (12)	Page No: 1/1
Amendment No:	Amendment date:	Approved and issued by:		

Chitkara University
Central Instrumentation Facility

TC-11489

Document No. CUCIF/TRF
Dated: 15-07-2024

TEST REPORT

Customer's Name and address: Chitkara University (PB) **Kind Attn** : Hony. Capt. Ravinder Singh **Contact No.** : 9501004247 **Email Id** : singh.ravinder@chitkara.edu.in	Sample receipt date	:	10-07-2024
	Date of Testing	:	13-07-2024
	Report Issue Date	:	15-07-2024
	Reference No.	:	42/2024
	Location of testing	:	CUCIF, Babbage Block (CU)
	Name of work	:	Chemical Testing

SAMPLE PARTICULARS

Description of sample	:	Liquid
Sample quantity	:	500 ml
Sample condition	:	Intact and fit for testing
Sample identification No.	:	24CWS07/005
Sample collected/drawn by	:	Mr. Jaswinder Singh
Location/ source of sample	:	Fleming Block 4Th Floor (Inside He) Chitkara University
Sampling procedure	:	NA
Type of testing	:	Chemical Testing
Environmental conditions during sampling	:	Temperature: 25°C Humidity : 55%

TEST RESULTS

S. No.	Parameter(s)	Test method	Unit	Test Result	Limits of IS: 10500-2012	
					Acceptable requirement	Permissible Limit
01	pH	IS:3025 Part(11):2022	-	8.19	6.5 – 8.5	No Relaxation
02	TDS (Total Dissolved Solid)	IS:3025 Part(16):2012	mg/L	469.33	500	2000
03	Total Hardness	IS:3025 Part(21):2019	mg/L	52.90	200	600

04	Alkalinity	IS:3025 Part(23):2019	mg/L	248.89	200	600
05	Calcium	IS:3025 Part(40):2019	mg/L	12.27	30	200
06	Fluoride	IS:3025 Part(60):2019	mg/L	0.62	1.0	1.5
07	Residual Free Chlorine	IS:3025 Part(26):2012	mg/L	ND	0.2	1.0
08	Specific Conductance	IS: 3025 Part(14):2013	µS/cm	67.82	-	-
09	Potassium	IS: 3025 Part(45):2019	mg/L	0.87	-	-
10	Sodium	IS:3025 Part(45):2019	mg/L	111.67	-	-

Note: ND - not detectable

1. **The test report refers only to tested sample and applicable parameters.**
2. **This report can neither be used as evidence in the court of law nor can it be used in part or full in any media without prior permission.**
3. **The sample will be destroyed after seven days from the date of issue of test report unless otherwise specified.**

Authorized Signatory
Chitkara University Central Instrumentation Facility
Chitkara University, Punjab
Chandigarh-Patiala National Highway
Rajpura,Punjab.India-140401

End of Report

Name of the Laboratory:	Chitkara University Central Instrumentation Facility (CUCIF)			
Document No. CUCIF/TRF		Document Name: Test report format for Chemical testing of Water		
Issue No: 00	Issue Date: 01/06/2021	Copy No.:	Section No: C (12)	Page No: 2/2
Amendment No: NA	Amendment date: NA	Approved and issued by: QM		

Chitkara University
Central Instrumentation
Facility

TC-11489

Document No. CUCIF/TRF
Dated: 02-03-2024

TEST REPORT

Customer's Name and address:	Sample receipt date	:	21-02-2024
	Date of Testing	:	27-02-2024
Chitkara University (PB)	Report Issue Date	:	02-03-2024
	Reference No.	:	18/2024
Kind Attn: Capt. Ravinder Singh	Location of testing	:	CUCIF, Babbage Block (CU)
	Name of work	:	Chemical Testing

SAMPLE PARTICULARS

Description of sample	:	Liquid
Sample quantity	:	500 ml
Sample condition	:	Intact and fit for testing
Sample identification No.	:	24CWS02/004
Sample collected/ submitted/drawn by	:	Mr. Jaswinder Singh
Location/ source of sample	:	Tesla Block 1st Floor(WC-4) , Chitkara University (PB)
Sampling procedure	:	NA
Type of testing	:	Chemical Testing
Environmental conditions during sampling	:	Temperature: 22 Humidity : 62%

TEST RESULTS

S. No.	Parameter(s)	Test method	Unit	Test Result	Acceptable requirement	Permissible Limit	Uncertainty in measurement
01	pH	IS:3025 Part(11):2022	-	7.68	6.5 – 8.5	No Relaxation	0.18
02	TDS (Total Dissolved Solid)	IS:3025 Part(16):2012 m	mg/L	472	500	2000	0.05
03	Total Hardness	IS:3025 Part(21):2019	mg/L	76	200	600	0.04

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04	Alkalinity	IS:3025 Part(23):2019	mg/L	229.44	200	600	0.0168
05	Calcium	IS:3025 Part(40):2019	mg/L	18.13	30	200	0.48
06	Fluoride	IS:3025 Part(60):2019	mg/L	1.23	1.0	1.5	0.02
07	Residual Free Chlorine	IS:3025 Part(26):2012	mg/L	0	0.2	1.0	0.03
08	Specific Conductance	IS: 3025 Part(14):2013	µS/cm	82.61	-	-	0.3
09	Potassium	IS: 3025 Part(45):2019	mg/L	0.17	-	-	0.046
10	Sodium	IS:3025 Part(45):2019	mg/L	88.63	-	-	0.039

Remarks/opinions: The alkalinity and fluoride are higher than the acceptable limit.

Authorized signatory

Dr. Jyotsna Kaushal
Designation: TM

Chitkara University Central Instrumentation Facility
Chitkara University, Punjab
Chandigarh-Patiala National Highway
Rajpura,Punjab.India-140401

Name of the Laboratory: Chitkara University Central Instrumentation Facility (CUCIF)				
Document No. CUCIF/TRF		Document Name: Test report format for Chemical testing of Water		
Issue No: 00	Issue Date: 01/06/2021	Copy No.:	Section No: C (12)	Page No: 1/1
Amendment No:	Amendment date:	Approved and issued by:		

Chitkara University
Central Instrumentation Facility

TC-11489

Document No. CUCIF/TRF
Dated: 06-05-2024

TEST REPORT

Customer's Name and address:	Sample receipt date	:	30-04-2024
	Date of Testing	:	02-05-2024
Chitkara University, (PB)	Report Issue Date	:	06-05-2024
	Reference No.	:	33/2024
Kind Attn: Capt. Ravinder Singh	Location of testing	:	CUCIF ,Babbage Block (CU)
	Name of work	:	Chemical Testing

SAMPLE PARTICULARS

Description of sample	:	Liquid
Sample quantity	:	500 ml
Sample condition	:	Intact and fit for testing
Sample identification No.	:	24CWS05/002
Sample collected/ submitted/drawn by	:	Mr. Jaswinder Singh
Location/ source of sample	:	Circle one GF,Chitkara University (PB)
Sampling procedure	:	NA
Type of testing	:	Chemical Testing
Environmental conditions during sampling	:	Temperature: 25°C Humidity : 44%

TEST RESULTS

S.No.	Parameter(s)	Test method	Unit	Test Result	Acceptable requirement	Permissible Limit	Uncertainty in measurement
01	pH	IS:3025 Part(11): 2022	-	8.12	6.5 – 8.5	No Relaxation	0.18
02	TDS (Total Dissolved Solid)	IS:3025 Part(16): 2012	mg/L	475	500	2000	0.05
03	Total Hardness	IS:3025Part(21): 2019	mg/L	72.83	200	600	0.04

04	Alkalinity	IS:3025Part(23):2019	mg/L	206.11	200	600	0.0168
05	Calcium	IS:3025Part(40):2019	mg/L	16.53	30	200	0.48
06	Fluoride	IS:3025Part(60):2019	mg/L	1.37	1.0	1.5	0.02
07	Residual Free Chlorine	IS:3025Part(26):2019	mg/L	0	0.2	1.0	0.03
08	Specific Conductance	IS:3025 Part(14) : 2013	µS/cm	72.62	-	-	0.3
09	Potassium	IS: 3025 Part(45):2019	mg/L	0.57	-	-	0.046
10	Sodium	IS: 3025Part(45):2019	mg/L	227	-	-	0.039

Remarks/opinions: Thefluorideis higherandothergivenparametersarewithin acceptablelimit.

Authorized signatory

Name: Dr. Jyotsna Kaushal
Designation: TIM

Chitkara University Central Instrumentation Facility
Chitkara University, Punjab
Chandigarh-Patiala National Highway
Rajpura,Punjab.India-140401

Name of the Laboratory:Chitkara University Central Instrumentation Facility (CUCIF)				
Document No. CUCIF/TRF		Document Name: Test report format for Chemical testing of Water		
Issue No: 00	Issue Date: 01/06/2023	Copy No.:	Section No: C(12)	Page No: 1/1
Amendment No: NA	Amendment date:NA	Approved and issued by:		

Chitkara University
Central Instrumentation
Facility

TC-11489

TEST REPORT

Document No.: CUCIF/TRF

Customer's Name and address: Chitkara University (PB) **Kind Attn** :Capt. Ravinder Singh **Contact No.** :9501004247 **Email Id** : singh.ravinder@chitkara.edu.in	Sample receipt date	:	12-09-2024
	Date of Testing	:	13-09-2024
	Report Issue Date	:	18-09-2024
	Reference No.	:	59/2024
	Location of testing	:	CUCIF, Babbage Block (CU)
	Name of work	:	Chemical Testing

SAMPLE PARTICULARS

Description of sample	:	Liquid
Sample quantity	:	500 ml
Sample condition	:	Intact and fit for testing
Sample identification No.	:	24CWS09/007
Sample collected/drawn by	:	Mr. Jaswinder Singh
Location/ source of sample	:	Bloom Block Ground Floor, Chitkara University(PB)
Sampling procedure	:	NA
Type of testing	:	Chemical Testing
Environmental conditions	:	Temperature: 26°C Humidity : 62%

TEST RESULTS

S. No.	Parameter(s)	Test method	Unit	Test Result	Limits of IS: 10500-2012	
					Acceptable requirement	Permissible Limit
01	pH	IS:3025 Part(11):2022	-	8.16	6.5 – 8.5	No Relaxation
02	TDS (Total Dissolved Solid)	IS:3025 Part(16):2012	mg/L	452.33	500	2000
03	Total Hardness	IS:3025 Part(21):2019	mg/L	61.56	200	600

Chandigarh-Patiala National Highway (NH- 64) Village Jhansla, Rajpura, Punjab 140401

04	Alkalinity	IS:3025 Part(23):2019	mg/L	260	200	600
05	Calcium	IS:3025 Part(40):2019	mg/L	36.67	30	200
06	Fluoride	IS:3025 Part(60):2019	mg/L	0.73	1.0	1.5
07	Residual Free Chlorine	IS:3025 Part(26):2012	mg/L	BDL	0.2	1.0
08	Specific Conductance	IS: 3025 Part(14):2013	µS/cm	67.82	-	-
09	Potassium	IS: 3025 Part(45):2019	mg/L	0.97	-	-
10	Sodium	IS:3025 Part(45):2019	mg/L	145.33	-	-

Note: BDL- Below detectable limit

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2. This report can neither be used as evidence in the court of law nor can it be used in part or full in any media without prior permission.
3. The sample will be destroyed after seven days from the date of issue of test report unless otherwise specified.

Authorized Signatory

Chitkara University Central Instrumentation Facility
Chitkara University, Punjab
Chandigarh-Patiala National Highway
Rajpura,Punjab.India-140401

End of Report

Name of the Laboratory:	Chitkara University Central Instrumentation Facility (CUCIF)			
Document No. CUCIF/TRF		Document Name: Test report format for Chemical testing of Water		
Issue No: 00	Issue Date: 01/06/2021	Copy No.:	Section No: C (12)	Page No: 2/2
Amendment No: 01	Amendment date: 01/07/2024	Approved and issued by: QM		

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TC-6145

TEST REPORT

ULR No. : TC-614524000000527F

Party Name	: M/s Chitkara University Chandigarh - Patiala National Highway Village jhansla, Rajpura, Dist. Patiala, Punjab	Report No.	: CEFT|119
		Format No.	: 7.8 F-01G
		Reporting Date	: 25.04.2024
		Analysis Completion date	: 20.04.2024 to 25.04.2024
		Receipt Date	: 20.04.2024
Sample Description	: Drinking Water	Sampling Date	: 19.04.2024
Sampling Location	: Pi C Hostel	Sampling Method	: As per APHA Method
Source	: -	Sample Quantity	: 2 Ltr.
Sample Collected by	: Sampler	LSRF/Sample ID	: CEFT|GEN|2404200119

TEST RESULT

S. No.	Parameter	Result	Unit	Limit of IS: 10500-2012 (Reaffirmed - 2018)		Test-Method
				Requirement (Acceptable Limit)	Permissible limit in the Absence of Alternate Source (Max.)	
Physical Parameters						
1	pH (at 25 °C)	7.22	-	6.5 to 8.5	No Relaxation	IS: 3025 (Part-11)
2	Total Dissolved Solids, (Max.)	345	mg/l	500	2000	IS: 3025 (Part-16)
General Parameters						
3	Total Hardness as $CaCO_3$, (Max.)	108.0	mg/l	200	600	IS: 3025 (Part-21)
4	Calcium as Ca, (Max.)	30.6	mg/l	75	200	IS: 3025 (Part-40)
5	Alkalinity as $CaCO_3$, (Max.)	86.2	mg/l	200	600	IS: 3025 (Part-23)
6	Chloride as Cl, (Max.)	56.9	mg/l	250	1000	IS: 3025 (Part-32)
7	Nitrate as NO_3, (Max.)	3.8	mg/l	45	No Relaxation	IS:3025 (Part-34)
8	Fluoride as F, (Max.)	ND	mg/l	1	1.5	IS:3025 (Part-60)
9	Magnesium as Mg , (Max.)	7.7	mg/l	30	100	APHA 3500-Mg (B)
10	Sulphate as SO_4,(Max.)	6.8	mg/l	200	400	IS: 3025 (Part-24)
11	Nickel as Ni (Max.)	ND	mg/l	0.0	No Relaxation	IS: 3025 (Part-54)
12	Sodium as Na, (Max.)	22.0	mg/l	No Relaxation	No Relaxation	IS: 3025 (Part-45)
13	Potassium as K, (Max.)	3.6	mg/l	No Relaxation	No Relaxation	IS: 3025 (Part-45)
14	Cobalt as Co (Max)	ND	mg/l	-	-	APHA 24th Edd.
15	Chromium as Cr, (Max.)	ND	mg/l	0.05	No Relaxation	IS 3025 (Part-52)
16	Copper as Cu, (Max.)	ND	mg/l	0.1	1.5	IS: 3025 (Part-42)
Microbiological Parameters						
17	Total coliform	Absent	per 100 ml	Absent per 100 ml		IS:15185:2016
18	E.coli	Absent	per 100 ml	Absent per 100 ml		IS:15185:2016

Note: 1. ND = Not Detectable

** End of Report**

Checked by
Mr. Rahul

Authorized Signatory
Mr. Nadeem

Authorized Signatory
Mrs. Puja

Note : 1. The test results are related to the sample/ tested as identified.
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3. Any Discrepancy found in the test report may be communicated within seven days.
4. This report shall not be reproduced, cannot be used as evidence in the court of law and should be used in any advertising media without written permission of CEO, CEFT Pvt. Ltd.
5. The Court Jurisdiction will be Delhi.
6. Customer complaint register is available at the laboratory.

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TC-6145

TEST REPORT

ULR No. : TC-614524000000528F

Party Name	: M/s Chitkara University Chandigarh - Patiala National Highway Village jhansla, Rajpura, Dist. Patiala, Punjab	Report No.	: CEFT|120
		Format No.	: 7.8 F-01G
		Reporting Date	: 25.04.2024
		Analysis Completion date	: 20.04.2024 to 25.04.2024
		Receipt Date	: 20.04.2024
Sample Description	: Drinking Water	Sampling Date	: 19.04.2024
Sampling Location	: Archemides Hostel	Sampling Method	: As per APHA Method
Source	: -	Sample Quantity	: 2 Ltr.
Sample Collected by	: Sampler	LSRF/Sample ID	: CEFT|GEN|2404200120

TEST RESULT

S. No.	Parameter	Result	Unit	Limit of IS: 10500-2012 (Reaffirmed - 2018)		Test-Method
				Requirement (Acceptable Limit)	Permissible limit in the Absence of Alternate Source (Max.)	
Physical Parameters						
1	pH (at 25 °C)	7.99	-	6.5 to 8.5	No Relaxation	IS: 3025 (Part-11)
2	Total Dissolved Solids, (Max.)	388	mg/l	500	2000	IS: 3025 (Part-16)
General Parameters						
3	Total Hardness as $CaCO_3$, (Max.)	114.8	mg/l	200	600	IS: 3025 (Part-21)
4	Calcium as Ca, (Max.)	36.2	mg/l	75	200	IS: 3025 (Part-40)
5	Alkalinity as $CaCO_3$, (Max.)	92.6	mg/l	200	600	IS: 3025 (Part-23)
6	Chloride as Cl, (Max.)	56.9	mg/l	250	1000	IS: 3025 (Part-32)
7	Nitrate as NO_3, (Max.)	4.2	mg/l	45	No Relaxation	IS:3025 (Part-34)
8	Fluoride as F, (Max.)	ND	mg/l	1	1.5	IS:3025 (Part-60)
9	Magnesium as Mg , (Max.)	5.9	mg/l	30	100	APHA 3500-Mg (B)
10	Sulphate as SO_4,(Max.)	12.4	mg/l	200	400	IS: 3025 (Part-24)
11	Nickel as Ni (Max.)	ND	mg/l	0.0	No Relaxation	IS: 3025 (Part-54)
12	Sodium as Na, (Max.)	20.4	mg/l	No Relaxation	No Relaxation	IS: 3025 (Part-45)
13	Potassium as K, (Max.)	2.8	mg/l	No Relaxation	No Relaxation	IS: 3025 (Part-45)
14	Cobalt as Co (Max)	ND	mg/l	-	-	APHA 24th Edd.
15	Chromium as Cr, (Max.)	ND	mg/l	0.05	No Relaxation	IS 3025 (Part-52)
16	Copper as Cu, (Max.)	ND	mg/l	0.1	1.5	IS: 3025 (Part-42)
Microbiological Parameters						
17	Total coliform	Absent	per 100 ml	Absent per 100 ml		IS:15185:2016
18	E.coli	Absent	per 100 ml	Absent per 100 ml		IS:15185:2016

Note: 1. ND = Not Detectable

** End of Report**

Checked by
Mr. Rahul

Authorized Signatory
Mr. Nadeem

Authorized Signatory
Mrs. Puja

Note : 1. The test results are related to the sample/ tested as identified.
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TC-6145

TEST REPORT

ULR No. : TC-614524000000529F

Party Name	: M/s Chitkara University Chandigarh - Patiala National Highway Village jhansla, Rajpura, Dist. Patiala, Punjab	Report No.	: CEFT|121
		Format No.	: 7.8 F-01G
		Reporting Date	: 25.04.2024
		Analysis Completion date	: 20.04.2024 to 25.04.2024
		Receipt Date	: 20.04.2024
Sample Description	: Drinking Water	Sampling Date	: 19.04.2024
Sampling Location	: Aristotle hostel	Sampling Method	: As per APHA Method
Source	: -	Sample Quantity	: 2 Ltr.
Sample Collected by	: Sampler	LSRF/Sample ID	: CEFT|GEN|2404200121

TEST RESULT

S. No.	Parameter	Result	Unit	Limit of IS: 10500-2012 (Reaffirmed - 2018)		Test-Method
				Requirement (Acceptable Limit)	Permissible limit in the Absence of Alternate Source (Max.)	
Physical Parameters						
1	pH (at 25 °C)	7.65	-	6.5 to 8.5	No Relaxation	IS: 3025 (Part-11)
2	Total Dissolved Solids, (Max.)	370	mg/l	500	2000	IS: 3025 (Part-16)
General Parameters						
3	Total Hardness as $CaCO_3$, (Max.)	112.0	mg/l	200	600	IS: 3025 (Part-21)
4	Calcium as Ca, (Max.)	28.6	mg/l	75	200	IS: 3025 (Part-40)
5	Alkalinity as $CaCO_3$, (Max.)	78.8	mg/l	200	600	IS: 3025 (Part-23)
6	Chloride as Cl, (Max.)	52.9	mg/l	250	1000	IS: 3025 (Part-32)
7	Nitrate as NO_3, (Max.)	4.6	mg/l	45	No Relaxation	IS:3025 (Part-34)
8	Fluoride as F, (Max.)	ND	mg/l	1	1.5	IS:3025 (Part-60)
9	Magnesium as Mg , (Max.)	9.8	mg/l	30	100	APHA 3500-Mg (B)
10	Sulphate as SO_4,(Max.)	14.5	mg/l	200	400	IS: 3025 (Part-24)
11	Nickel as Ni (Max.)	ND	mg/l	0.0	No Relaxation	IS: 3025 (Part-54)
12	Sodium as Na, (Max.)	24.0	mg/l	No Relaxation	No Relaxation	IS: 3025 (Part-45)
13	Potassium as K, (Max.)	3.1	mg/l	No Relaxation	No Relaxation	IS: 3025 (Part-45)
14	Cobalt as Co (Max)	ND	mg/l	-	-	APHA 24th Edd. 2023
15	Chromium as Cr, (Max.)	ND	mg/l	0.05	No Relaxation	IS 3025 (Part-52)
16	Copper as Cu, (Max.)	ND	mg/l	0.1	1.5	IS: 3025 (Part-42)
Microbiological Parameters						
17	Total coliform	Absent	per 100 ml	Absent per 100 ml		IS:15185:2016
18	E.coli	Absent	per 100 ml	Absent per 100 ml		IS:15185:2016

Note: 1. ND = Not Detectable

** End of Report**

Checked by
Mr. Rahul

Authorized Signatory
Mr. Nadeem

Authorized Signatory
Mrs. Puja

Note : 1. The test results are related to the sample/ tested as identified.
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Regd. Address - Bldg. No. 17, 1st Floor, DLF Industrial Area, Moti Nagar, New Delhi - 110015 Ph.: - 011-45012722
Email: info@ceftlab.com, Website : www.ceftlab.com

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TC-6145

TEST REPORT

ULR No. : TC-614524000000530F

Party Name	: M/s Chitkara University Chandigarh - Patiala National Highway Village jhansla, Rajpura, Dist. Patiala, Punjab	Report No.	: CEFT|122
		Format No.	: 7.8 F-01G
		Reporting Date	: 25.04.2024
		Analysis Completion date	: 20.04.2024 to 25.04.2024
		Receipt Date	: 20.04.2024
Sample Description	: Drinking Water	Sampling Date	: 19.04.2024
Sampling Location	: Franklin Hostel	Sampling Method	: As per APHA Method
Source	: -	Sample Quantity	: 2 Ltr.
Sample Collected by	: Sampler	LSRF/Sample ID	: CEFT|GEN|2404200122

TEST RESULT

S. No.	Parameter	Result	Unit	Limit of IS: 10500-2012 (Reaffirmed - 2018)		Test-Method
				Requirement (Acceptable Limit)	Permissible limit in the Absence of Alternate Source (Max.)	
	Physical Parameters					
1	pH (at 25 °C)	7.77	-	6.5 to 8.5	No Relaxation	IS: 3025 (Part-11)
2	Total Dissolved Solids, (Max.)	374	mg/l	500	2000	IS: 3025 (Part-16)
	General Parameters					
3	Total Hardness as $CaCO_3$, (Max.)	110.0	mg/l	200	600	IS: 3025 (Part-21)
4	Calcium as Ca, (Max.)	28.2	mg/l	75	200	IS: 3025 (Part-40)
5	Alkalinity as $CaCO_3$, (Max.)	76.5	mg/l	200	600	IS: 3025 (Part-23)
6	Chloride as Cl, (Max.)	54.9	mg/l	250	1000	IS: 3025 (Part-32)
7	Nitrate as NO_3, (Max.)	4.6	mg/l	45	No Relaxation	IS:3025 (Part-34)
8	Fluoride as F, (Max.)	ND	mg/l	1	1.5	IS:3025 (Part-60)
9	Magnesium as Mg , (Max.)	9.6	mg/l	30	100	APHA 3500-Mg (B)
10	Sulphate as SO_4,(Max.)	14.2	mg/l	200	400	IS: 3025 (Part-24)
11	Nickel as Ni (Max.)	ND	mg/l	0.0	No Relaxation	IS: 3025 (Part-54)
12	Sodium as Na, (Max.)	22.0	mg/l	No Relaxation	No Relaxation	IS: 3025 (Part-45)
13	Potassium as K, (Max.)	2.8	mg/l	No Relaxation	No Relaxation	IS: 3025 (Part-45)
14	Cobalt as Co (Max)	ND	mg/l	-	-	APHA 24th Edd.
15	Chromium as Cr, (Max.)	ND	mg/l	0.05	No Relaxation	IS 3025 (Part-52)
16	Copper as Cu, (Max.)	ND	mg/l	0.1	1.5	IS: 3025 (Part-42)
	Microbiological Parameters					
17	Total coliform	Absent	per 100 ml	Absent per 100 ml		IS:15185:2016
18	E.coli	Absent	per 100 ml	Absent per 100 ml		IS:15185:2016

Note: 1. ND = Not Detectable

Page No. 1/1

** End of Report**

Checked by
Mr. Rahul

Authorized Signatory
Mr. Nadeem

Authorized Signatory
Mrs. Puja

Note : 1. The test results are related to the sample/ tested as identified.
2. The sample will be discarded after retention time of 7 days unless otherwise specified.
3. Any Discrepancy found in the test report may be communicated within seven days.
4. This report shall not be reproduced, cannot be used as evidence in the court of law and should be used in any advertising media without written permission of CEO, CEFT Pvt. Ltd.
5. The Court Jurisdiction will be Delhi.
6. Customer complaint register is available at the laboratory.

Centre for Environment and Food Technology Pvt. Ltd.

An ISO 9001; 2015, ISO 45001; 2018 (OHSAS); ISO/IEC 17025; 2017

NABL Accredited, FSSAI and MoEF Recognised Testing Laboratory

TC-6145

TEST REPORT

ULR No. : TC-614524000000538F

Party Name : M/s Chitkara University
Chandigarh - Patiala National Highway
Village jhansla, Rajpura, Dist. Patiala, Punjab

Report No. : CEFT|123
Format No. : 7.8 F-01G
Reporting Date : 25.04.2024
Analysis Completion date : 20.04.2024 to 25.04.2024
Receipt Date : 20.04.2024
Sampling Date : 19.04.2024
Sampling Method : As per APHA Method
Sample Quantity : 2 Ltr.
LSRF/Sample ID : CEFT|GEN|2404200123

Sample Description : Drinking Water
Sampling Location : IBN Hostel
Source : -
Sample Collected by : Sampler

TEST RESULT

S. No.	Parameter	Result	Unit	Limit of IS: 10500-2012 (Reaffirmed - 2018)		Test-Method
				Requirement (Acceptable Limit)	Permissible limit in the Absence of Alternate Source (Max.)	
	Physical Parameters					
1	pH (at 25 °C)	7.44	-	6.5 to 8.5	No Relaxation	IS: 3025 (Part-11)
2	Total Dissolved Solids, (Max.)	362	mg/l	500	2000	IS: 3025 (Part-16)
	General Parameters					
3	Total Hardness as $CaCO_3$, (Max.)	124.0	mg/l	200	600	IS: 3025 (Part-21)
4	Calcium as Ca, (Max.)	35.4	mg/l	75	200	IS: 3025 (Part-40)
5	Alkalinity as $CaCO_3$, (Max.)	88.4	mg/l	200	600	IS: 3025 (Part-23)
6	Chloride as Cl, (Max.)	62.9	mg/l	250	1000	IS: 3025 (Part-32)
7	Nitrate as NO_3, (Max.)	5.1	mg/l	45	No Relaxation	IS:3025 (Part-34)
8	Fluoride as F, (Max.)	ND	mg/l	1	1.5	IS:3025 (Part-60)
9	Magnesium as Mg , (Max.)	8.6	mg/l	30	100	APHA 3500-Mg (B)
10	Sulphate as SO_4,(Max.)	14.4	mg/l	200	400	IS: 3025 (Part-24)
11	Nickel as Ni (Max.)	ND	mg/l	0.0	No Relaxation	IS: 3025 (Part-54)
12	Sodium as Na, (Max.)	24.0	mg/l	No Relaxation	No Relaxation	IS: 3025 (Part-45)
13	Potassium as K, (Max.)	3.4	mg/l	No Relaxation	No Relaxation	IS: 3025 (Part-45)
14	Cobalt as Co (Max)	ND	mg/l	-	-	APHA 24th Edd.
15	Chromium as Cr, (Max.)	ND	mg/l	0.05	No Relaxation	IS 3025 (Part-52)
16	Copper as Cu, (Max.)	ND	mg/l	0.1	1.5	IS: 3025 (Part-42)
	Microbiological Parameters					
17	Total coliform	Absent	per 100 ml	Absent per 100 ml		IS:15185:2016
18	E.coli	Absent	per 100 ml	Absent per 100 ml		IS:15185:2016

Note: 1. ND = Not Detectable

** End of Report**

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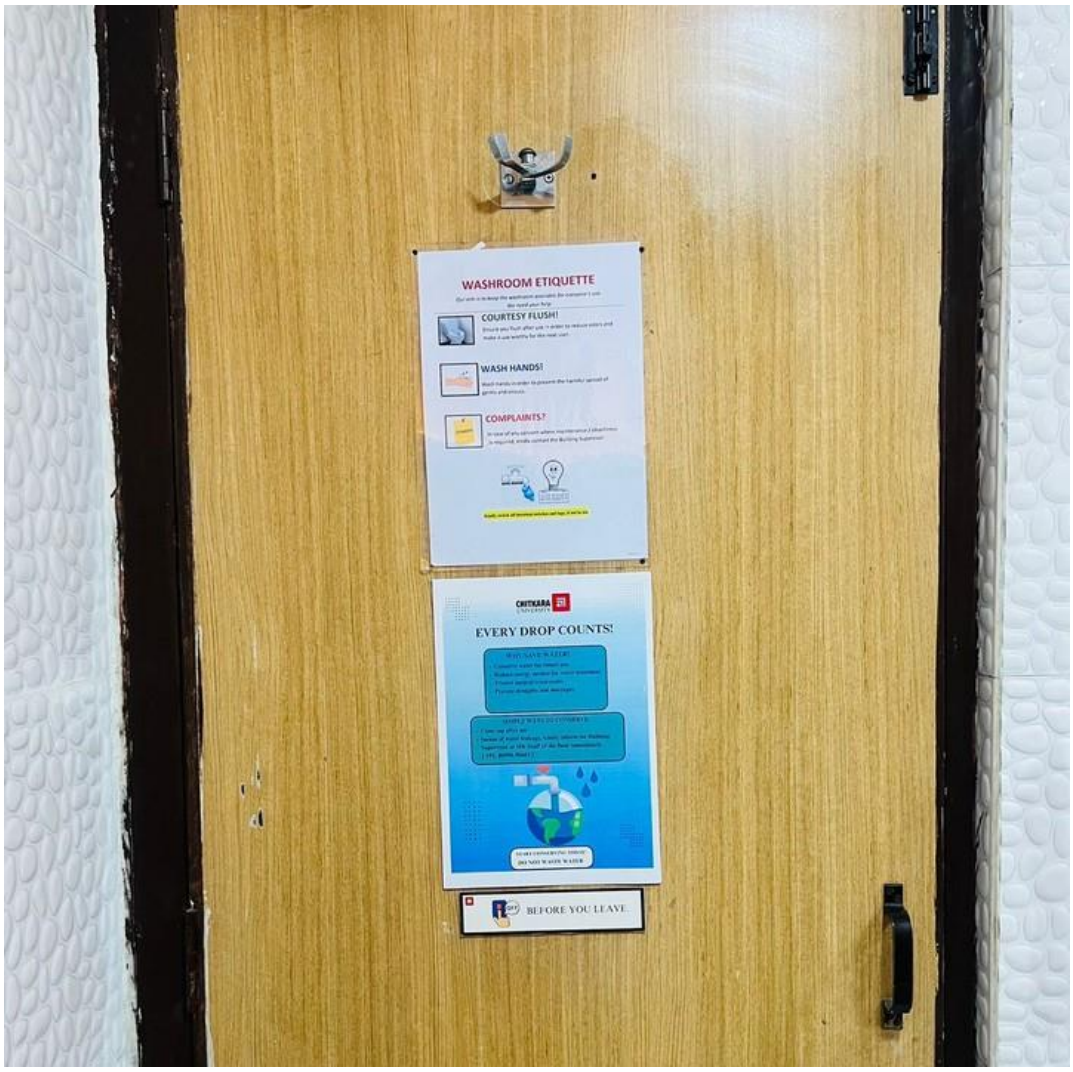
5. The Court Jurisdiction will be Delhi.
6. Customer complaint register is available at the laboratory.

Regd. Address - Bldg. No. 17, 1st Floor, DLF Industrial Area, Moti Nagar, New Delhi - 110015 Ph.: - 011-45012722
Email: info@ceftlab.com, Website : www.ceftlab.com

Awareness Posters for Staff & Students



CHITKARA UNIVERSITY

EVERY DROP COUNTS!

WHY SAVE WATER?

- Conserve water for future use.
- Reduce energy needed for water treatment.
- Protect natural ecosystems.
- Prevent droughts and shortages.

SIMPLE WAYS TO CONSERVE:

- Close tap after use
- Incase of water leakage, kindly inform the Building Supervisor or HK Staff of the floor immediately. [+91. 86996.96661]

START CONSERVING TODAY!

DO NOT WASTE WATER

JAQUAR & CO. PVT. LTD.

SP–53, RIICO Industrial Area, Bhiwadi-301019
Distt. Alwar, Rajasthan (India)
Tel. No. 91-1493-518608, Fax: 91-1493-518615
Website: www.jaquar.com

No.: JQR / 2017 / 1119
Dated: 20.11.2017

TO WHOM SO EVER IT MAY CONCERN

Indian Green Building Council / LEED India / GRIHA have following baseline requirements for water consumption;

IGBC Green New Buildings Rating System

(Version: 3, March, 2015 Edited with Addendum 2.0)

Fixtures	Baseline (Maximum Flow Rate / Consumption)	Pressure
Water Closets (Full-flush)	6.0 LPF	-
Water Closets (Half-flush)	3.0 LPF	-
Urinals	4.0 LPF	-
Faucets / Taps	6.0 LPM	3 Bar
Health Faucets	6.0 LPM	3 Bar
Showerhead / Handheld Spray	10.0 LPM	3 Bar

POINTS ARE AWARDED AS BELOW:

CREDIT POINT 1 : Water Consumption 8% lower than baseline
CREDIT POINT 2 : Water Consumption 12% lower than baseline
CREDIT POINT 3 : Water Consumption 16% lower than baseline
CREDIT POINT 4 : Water Consumption 20% lower than baseline
CREDIT POINT 5 : Water Consumption 24% lower than baseline

IGBC Green Existing Buildings O&M Rating System

(Pilot Version, Abridged Reference Guide, April, 2013)

Fixtures	Baseline (Maximum Flow Rate / Consumption)
Water Closets	6.0 LPF
Faucets / Taps	8.0 LPM
Urinals	4.0 LPF

POINTS ARE AWARDED AS BELOW:

CREDIT POINT 2 : Water Consumption 20% lower than baseline
CREDIT POINT 4 : Water Consumption 30% lower than baseline
CREDIT POINT 6 : Water Consumption 40% lower than baseline

(Contd .....2)

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LEED India for Core & Shell Projects (Version: September, 2011) & LEED India New Construction & Major Renovations (Version: February, 2011)

Fixtures	Baseline Flow Requirement	
	Gallon	Ltr.
Commercial Toilets	1.6 GPF	6.0 LPF
Commercial Urinals	1.0 GPF	4.0 LPF
Commercial Lavatory (Restroom) Faucets - For Private Application Only (Hotel/Motel Guest Rooms, Hospital Patient Rooms) at 58 PSI	2.2 GPM	8.5 LPM
Commercial Lavatory (Restroom) Faucets - All others except Private Applications at 58 PSI	0.5 GPM	2.0 LPM
Commercial Pre-rinse Spray Valves (For Food Service Applications)	1.6 GPM	6.1 LPM
Residential Toilets	1.6 GPF	6.1 LPM
Residential Lavatory (Bathroom) Faucets at 58 PSI (4 Bar)	2.2 GPM	8.5 LPM
Residential Kitchen Faucets at 58 PSI (4 Bar)		
Residential Showerheads at 80 PSI (5.5 Bar)	2.5 GPM	9.5 LPM

POINTS ARE AWARDED AS BELOW:

CREDIT POINT 2 : Water Consumption 30% lower than baseline

CREDIT POINT 3 : Water Consumption 35% lower than baseline

CREDIT POINT 4 : Water Consumption 40% lower than baseline

GRIHA

Criterion 11:

o 11.3.1 Reduction in water consumption by 25%. (1 point) - Mandatory

o 11.3.2 Water-use reduction by 50%. (additional 1 point)

 Non Applicability condition: All faucets, which are installed in spaces with water head heights less than 15 feet (4.6 m), in a gravity fed plumbing system, can be exempt for calculations in Criterion 11.

Testing Pressure will be 45PSI or 3.1 Bar.

Fixture	GRIHA Base Case lpm/lpf
Water Closets (Solid)	9
Kitchen Faucets	10
Water Closets (Liquid)	9
Urinals	4
Showers	10
Lavatory Faucets	10

(Contd .....3)

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JAQUAR water efficient products can contribute maximum credit points toward Green Building / LEED / GRIHA Certification.

We are able to **provide reduction** in water flow as per customer's requirement. We can supply the following products to **get due credit** as per norm of IGBC / LEED / GRIHA;

Sl. No.	Fixture	Offered Product Code	3.0-5.5 Bar (44-80 PSI)	Product should be ordered with suffix as
01.	Water Closets (Solid/Liquid)	**Water Closets (Flush Valves)** 51093, 1093, 1093SQ, 1095, 1095SQ, 1093DFP, 1095DFP, 1015	4.0	G
		Water Closets (Flush Valves Dual Flow) 1085, 1085SQ, 1085DFP, 1089, 1089SQ, 1089DFP	4.0 / 2.0	G
02.	Kitchen Faucets	**Single Lever Sink Mixers** 38173B, 39173B, 40173B, 81173B, 29163, 29009B, 29173B, 6163, 6173B, 5163, 5166, 5173B, 5179B, 5007B, 5009B, 3163, 3173B, 33163, 33173B, 10173BPM , 15173BPM	2.5 6.0 8.0 13.0	G GA GB GC
		Sink Mixers 6309, 7309, 5309N, 5309ND, 5319NB, 23309, 23309B, 23321B, 309KN, 309KNB, 319KN, 319KNB, 321KNB, 3309, 3319	3.8 1.3	GD GE
		Sink Cocks 6347, 6357, 6359, 7347, 5347N, 5347ND, 5357N, 5357ND, 5359N, 23347, 347KN, 349KN, 357KN, 359KN, 3357		
		Products fitted with Permix Size 18x1 / 20x1		
		38165, 38309, 39165, 39309, 40165, 37309, 81165, 35179FB, 29165, 7319B, 6165, 6319B, 5165, 5179B, 35179B, 35179FB 19309, 6309SE 38347, 39347, 37347 19347, 6347SE	6.0 8.0 3.8	GA GB GD

(Contd ..... 4)

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03.	**Lavatory Faucets**	**Pillar Cocks / Basin Taps** 35001F, 35021F, 29001, 29021, 6011, 6021, 7011, 5011N, 5021N, 5031, 35021F, 031, 031L65, 83011 23011, 23021, 23123 / 23127, 021KN, 123BKN, 127BKN, 33011, 33021	2.5 6.0 8.0 13.0 3.8 1.3	G GA GB GC GD GE
		Bib Cocks / 2-Way Bib Cocks 35037F, 35041F, 29037, 29041, 6037, 6041, 6047, 7037, 7041, 5037N, 5041N, 5047N, 043, 83037, 10037PM, 10041PM, 15037PM, 15041PM 23037, 23047, 23041, 33037, 33041, 33047		
		Central Hole / 3-Hole Basin Mixers 35167FB, 35169FB, 7167B, 7169B, 7189, 7191, 7171, 7173, 5167NB, 5169NB 23167B, 23169B, 167KNB, 169KNB, 3169B, 3171B, 3181B		
		Single Lever Basin Mixers 38001B, 38005B, 38051B, 39001B, 39005B, 39051B, 40001B, 40005B, 40051B, 37011B, 37005B, 37051B, 35009FB, 35023FB, 35052FB, 29011B, 29005B, 29051B, 6001B, 6051B, 5001B, 5003B, 5005B, 5051B, 5063B, 3001B, 3051B, 7001B, 7051B, 33001B, 33051B, 5033B, 10005BPM, 10011BPM, 10051BPM, 15005BPM, 15011BPM, 15051BPM, 10233KPM, 15233KPM		
		Sensors Basin Mixer 51011, 51021, 51021A, 51027, 51071		
		Conc. Stop Cocks with Basin Spout 37433, 37441K, 10433PM, 10441KPM, 15441KPM		
		Wall Mixers / Bath & Shower Mixers 38119, 39119, 40119, 37119, 81119, 35119F, 35129F, 35143F, 29119, 29143, 29267, 29273UPR, 29281, 6119, 6143, 6217, 6219, 6267, 6271, 6273UPR, 6281, 7217, 7219, 7267, 7271, 7273UPR, 7277, 7281, 5119, 5129, 5143, 5217N, 5219N, 5267N, 5271N, 5273NUPR, 5281N, 3119, 33119, 33141, 33143, 49119, 49119J, 85119, 10115PM, 10117PM, 10119PM, 10125PM 23217UPR, 23219, 23267, 23273KNUPR, 23281UPR, 217KN, 219KN, 267KN, 271KN, 273KNUPR, 281KN, 6217SE, 6267SE, 6273SEUPR, 6281SE, 19267, 19273UPR, 19281, 33273UPR, 35115PM, 35117PM, 35119PM, 35125PM		

(Contd ..... 5)

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		Bath Tub Spouts, Bath Tub Mixer & Bath Fillers 7429, 7463, 29429, 29463, 35429, 35463, 81429, 81463, 37429, 37463, 29135, 29137, 49429, 49463, 35135F, 35137F, 85429, 85463, 10429PM, 10463PM, 15429PM, 15463PM, 429, 433, 463, 439, 461, 467 5429, 5463, 6135, 6137, 6435, 6437, 5123, 5133, 5135, 5137, 5435N, 5437N	2.5 6.0 8.0 13.0 3.8 1.3	G GA GB GC GD GE
		Products fitted with Permix Size 18x1 / 20x1		
		Pillar Cocks / Basin Tap 38011, 38021, 39011, 39021, 40011, 40021, 37001, 37021, 81001, 81021, 5015, 49001, 49021, 061, 85001, 85021, 15001PM, 15021PM, 10001PM, 10021PM, 35001PM, 35021PM 6011SE, 19011	6.0 8.0 3.8	GA GB GD
		Bib Cocks, 2-Way Bib Cocks 37037, 37041, 38037, 38041, 39037, 39041, 40037, 40041, 81037, 81041, 5043, 49037, 49041, 85037, 85041, 35037PM, 35041PM 6041SE, 6047SE, 19041, 19047		
		Single Lever Basin Mixers 5025B, 81005B, 81011B, 81051B, 49009B, 49011B, 49009J, 49011J, 35025B, 85005B, 85011B, 35005BPM, 35011BPM, 35051BPM		
		Central Hole / 3-Hole Basin Mixers 6189, 6191, 5189N, 5191N, 6167B, 6169 6167BSE, 6169SEB, 19167B, 19169B		
		Concealed Stop Cocks with Basin Spout 38433, 38441, 39433, 39441, 40433, 40441, 81433, 81441, 35433F, 35441F, 29433, 29441, 6433, 6441, 5433N, 5441N, 35433PM, 35441KPM		
		Single Lever Basin Mixer Wall Mounted (Kit) 37233K, 38233K, 39233K, 40233K, 81233K, 35233FK, 29233K, 6233K, 5233K, 3233K, 49233K, 49233JK, 33233K, 19233K, 85233K, 10233KPM, 35233KPM		
		Basin Spout 5443, 5447		

(Contd ..... 6)

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04.	**Urinals**	077, 51077, 51083, 51087, 51097	1.5	G
05.	**Showers**	**Over Head Showers** 1603, 1605, 1613, 1619, 1623, 1629, 1633, 1635, 1637, 1639, 1709, 1719, 1755, 1757, 1759, 1769, 1779, 1787, 1789, 1799, 1843, 1985, 1989, 497N, 35495, 35497, 1801, 1995, 1999 **Hand Showers** 1717, 1721, 1727, 1729, 1731, 1737, 1739, 1797, 85537, 1653, 1655, 1657, 5537N, 35537, 49537, 9537N, 1929, 1931, 1937, 1939, 1981, 5541	6.0 8.0 12.0	GA GB GC
06.	**Health Faucet**	583, 585, 565, 563, 573, 577, 579, 583, 593N	3.8 6.0 8.0	GD GA GB

A) **EXCLUDED PRODUCTS:**

i) Single Lever Divertors and 4-Way Divertors, Thermostatic Concealed Bath & Shower Mixers etc. are not supplied with any flow regulator, because these are meant for supply to Over Head Showers or Spouts. Regulators for Over Head Showers and Spouts are available separately.

ii) Similarly Angle Cocks and Concealed Stop Cocks are meant for supply to Basin Mixer / Geysers / Pipeline and regulator is provided at outlet point.

B) Product shall be supplied with suffix G for Urinals and Water Closets. GA, GB & GC for Showers, GD, GA & GB for Health Faucets. G, GA, GB, GC, GD & GE for other Faucets after product code according to the capacity given in this circular.

C) **PRICING & SPARE PARTS CODE FOR FLOW RESTRICTORS & BRASS HOUSING:**

AS PER CIRCULAR, EXISTING REGULAR PRODUCTS SHOULD BE CONVERTED INTO GREEN BUILDING. PLEASE CONTACT TO CUSTOMER CARE DIVISION FOR SPARE PART CODE AND PRICE OF GREEN BUILDING FLOW RESTRICTORS AS WELL AS BRASS HOUSING.

(SHEEL NAINWAL)

AWARDS AND RECOGNITIONS

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CII
Confederation of Indian Industry

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This is to certify that

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Chandigarh, Punjab

has been rated as "The Winner" in
"Within the Fence" Category.
This has been based on evaluation by the Jury at the
National Competition for Excellence in Water Management 2022.

Nikhil Sawhney
Chairman
CII-Triveni Water Institute

Dr. Anil Kakodkar
Chairman of the Jury
CII National Award for
Excellence in Water Management

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for facilitating the

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Sustainable Infrastructure Programme
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