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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 m₃/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



Tube well installed with electromagnetic flow meter with telemetric module

The maximum per day water abstraction of the University during the financial year 2023- 2024 was **730** m³/annum.

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

WATER STORAGE FACILITIES WITHIN THE CAMPUS 1. One Overhead Tank



Overhead Tank

SEWAGE TREATMENT PLANTS

The university has two Sewage Treatment plants based on the MBBR technology to treat wastewater of capacity 250 KLD.

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

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

At Chitkara University, the dual plumbing system and dedicated sewage treatment plants (STPs) prevent polluted water from entering the water system by separating potable and reclaimed water supplies. Potable water is reserved strictly for drinking and washing, while reclaimed water, treated by our STPs to remove waste and bacteria, is used for non-drinking purposes like flushing toilets and irrigation. This approach not only conserves water but ensures that any accidental or incidental pollution within the campus, such as leaks or spills, is contained within the reclaimed water system. By maintaining separate water pipelines, we minimize the risk of cross-contamination, safeguarding both the campus community's health and the surrounding environment.

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



E&E Solutions GWR01512 -	E&E Solutions GWR01512 -
Ground Water Level(m): 62.42 04 05.42 05.	Ground Water Level(m) Ground Water Level(m) Ground Water Level(m) Ground Water Level(m) H1.43 metres
Start Date	Last Updated on 2024-05-24 12:56:03
27/06/2022 ~	Start Date
End Date	15/04/2024 ~
30/06/2022 ~	End Date
Download Data	22/04/2024 ~
Powered By E&E Solutions © 2018	Powered By E&E Solutions © 2018

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.

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Amount Charg eable (in words)

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Remarks:

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

for Chitkara University ,-f-Z8-0ct-22}

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Remarks:

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b. Safo Transportation of all the Material without any damage shall be your r, esponsibility.

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Remarks:

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

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

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Authorised Signa 1 to

E.&O.E



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

TEST REPORT

Customer's Name and address:	Samole receipt date	•	06-04-2024		
	Date of Testing	•	09-04-2024		
Chitkara University, (PB)	Report Issue Date	•	11-042024		
	Reference No.	•	. 27/2024 ·		
Kind Attn: Capt. Ravinder	Location of testin£	•	CUCIF, Babbage Block (CU)		
Singh	Name of work	•	Chemical Testing		

SAMPLE PARTICULARS

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

•

TEST RESULTS

S. No.	Parameter(s	Test method	Unit	Test Result	Acceptable requirement	Permissible Limit	, Uncertainty in measurement
01	pН	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



Facility



TC-11489

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'40'1:2019	mg/L	15.73	30	200	0.48
06	Fluoride	IS,:3025 Parti'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	μSiem	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



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<u>Chitk</u> o11:PD]\JIb Chandigarh-Patiala National Highway Rajpura,Punjab.India-140401

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



TEST REPORT

Document No. CUCIF/TRF

Customer's Name and address:	Sample receipt date	•	05-08-2024
Chitkara University (PB)	Date of Testing		08-08-2024
	Report Issue Date	•	10-08-2024
Kind Attn: Hony. Capt.	Reference No.	•	45/2024
Ravinder Singh	Location of testing	•	CUCIF, Babbage Block (CU)
Contact No.: 9501004247	Name of work	•	Chemical Testing
Email ID:			
ravinder.singh@.chitkara.edu.in			

SAMPLE PARTICULARS

Description of sample	•	Liquid
Sample quantity	•	500 ml
Sample condition	•	Intact and fit for testing
Sample identification No.	•.	24CWS08/003
Sample collected/drawn by	•	Mr. Jaswinder Singh
Location/ source of sample	•	Picasso Block,4 ^{·1} n Floor(WC) Chitkara University (PB)
Sampling procedure	•	NA
Type of testing •	•	Chemical Testing
Environmental conditions	•	Temperature: 26°C

TEST RESULTS

S. No.	Parameter(s)	Test method	Unit	Test	Limits of IS	5: 10500-2012
				Result	Acceptable requirement	Permissible Limit
01	рН	IS:3025 Part(11):2022	-	8.06	6.5 - 8.5	No Relaxation
02	TDS (Total Dissolved Solid)	IS:3025 Part(16):2012	mg/L	460.67	500	2000
03	Total Hardness	IS:3025 Part(21):2019	mg/L	44.45	200	600

Page No.: 1/2





Chitkara University Cerit.ral Instrurr1entatior1 Facility

TC-11489

04	Alkalinity	IS:3025 Part(23):2019	mg/L	251.67	200	600
05	Calcium	IS:3025 Part(40):2019	mg/L	10.13	30	200
06	Fluoride	IS:3025 Part(60):2019	mg/L	0.64	1.0	1.5
07	Residual Free Cl1lorine	IS:3025 Part(26):2012	mg/L	BDL	0.2	. 1.0
08	Specific Col1ductance	IS: 3025 Part(14):2013	µSiem	75.75	-	-
09	Potassi1-1m	IS: 3025 Part(45):2019	mg/L	0.87	-	-
10	Sodium	IS:3025 Part(45):20 I 9	mg/L	136	_	-

Note: BDL -Below detectable limit

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- 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 sam pie will be destroyed after seven days from the date of issue of test report unless otherwise s11ecified.



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:	Page No:				
Amendment No: 0I	Amend1nent date:	Approved and issued	C (12)	2/2				
	01/07/2024	by: QM						



Docutnent No. CUCTF/TRF Dated: 03-02-2024

TEST REPORT

Customer's Name and address:	Sample receipt date	•	29-01-2024
	Date of Testing	•	30-01-2024
Chitl <ara (pb)<="" td="" university,=""><td>Report Is .sue Date</td><td>•</td><td>03-02-2024</td></ara>	Report Is .sue Date	•	03-02-2024
	Refe1·ence No.	•	13/2024 .
Kind Attn: Mr. Rattandeep			
Singh	Location of testing	•	CUCIF, Babbage Block (CU)
	Name of work	•	Chemical Testing

SAMPLE PARTICULARS

Descri:,tion of samole	•	Liquid
Sample quantity	•	500ml
Sample condition	•	Intact and fit for testing
Sample identification No.	•	24CWSO1/013
Sample collected/	•	Mr. Jaswinder Singh
submitted/drawn bv		
: L.ocation/ source of sample	•	Turing Block 5th Floor, Chitl <ara 'pb'•<="" td="" university=""></ara>
Sam, oling orocedure	•	NA
Tv:,e of testin2:		Chemical Testing
Environmental conditions during	•	Temperature: 21
samolin,		Humidity : 61°/o

.

TEST RESULTS

S.No.	Parameter(s)	Test method	Unit	Test Result	Acceptable requirement	Permissible Limit	Uncertainty I [°] II measurement
01	рН	IS:10500-2012	-	7.65	6.5-8.5	No Relaxation	0.18
02	TDS (Total Dissolved So1id)	IS:10500-2012 Pati	mg/L	465	500	2000	0.05
03	Total Hardness	IS:10500-2012 Part 21	mg/L	82.08	200	600	0.04
04	Alkalinity	IS:10500-	mall	2.21.67	200	600	0.0168



			1				
		2012, 1S:3025					
		Part 23					
05	Calcium	IS:10500-	mg/L	17.87	30	200	0.48
		2012, IS:3025					
		Part 40					
06	Fluoride	IS:10500-	mg/L	1.32	1.0	1.5	0.02
		2012,					
		IS:3025					
		Part 60					
07	Residual	IS:10500-	mg/L	0	0.2	10	0.03
	Free	2012,					
	Chlorin e	IS:3025					
	- P -	Part 26		- / ^ -			0.2
08	Specific [.]	IS 3025 Part	µS/c	74.25			0.3
	Conductance	14: 2013	m				
	Conductance					_	
09	P _{otassium}	IS: 3025 Part	mg/L	0.77			0.046
	otassium	45; 1993					
		IS: 3025 Part	mg/L	86.97	_	l _	0.039
10	Sodium	45: 1993	0.				
		10, 1775					

Remarks/opinions: The alkalinity and fluoride values are highe1 than the acceptable limit.

Authorized signatory Varstilkara University Central Instrumentation Facility Designation Facility

De	signat	10 n	1 ec	mica		fatta	ger
(hand	Jan.	1 . h	Indi	3-14	UTV	-
	11100	Du	niaD	111-	and a state		

Name of the Laboratory: Chitkara University Central Instrumentation Facility (• F)								
Document No. CUCIF/TRF	Document Name: Test	report format	for Cl1emical					
		testine. or water						
Issue No: 00	Issue Date:	Copy No.:	Section No:	Page No:				
	01/06/2021		C(12)	1/1				
Amendment No:	Amendment date:	Approved and issued						
		bv:						

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

ti



Doc111ne11t No. CUCIF/TRF Dated: 09-01-2024

TEST REPORT

Custo111er's Na111e a11d add1.ess:	Sa1nple receipt date	•	04-01-2024
	Date ot1 ·esti11g	•	05-01-2024
Chitkara U11iversity, (PB)	Report lsstte Date	•	09-01-2024
Kind Attn. Mr. Rattandeen	Refere11ce No.	•	01/2024
Sillgll	Location ot testing	•	CUClf', Babbage Block (CU)
	Name of work	•	Che1nical ·1·esti11g

SAMPLE PARTICU:L RS

Descriptio11 ot sample	•	Liquid
Sa111ple quantity	•	500 1111
Sample condition	•	Intact and tit tor testillg
Sample identiticatio11 No.	•	24CWS01/001
Sall1ple collected/	•	Mr. Jaswi11der Singl1
st1b111itted/c]1·aw11b		
L()cation/ source c)rsat11ple	•	l't11·ing Block, 3rd 1;loor (LS), c:11itkr:1ra u11iversity (J>B)
S,1111_pli11g p1 ocedur <u>e</u>	•	.NA
'J'ype ot testillg	•	C'.llelllical 'l'estillg
Enviro111J1e11tal collditio11s dt11 i11g	•	'I'en11Jc.ratt1re : $23^{\circ}c$:

saln1:.1Ii11g

llt11ni(lity : 62(1/o

TEST RESIJLTS

S. .N⇔. O1	P ₁₁ ··· Imctc·i (s·) pll	Test 111ctho<l< b=""> IS: I ()5()0-2012</l<>	- JJ11it 	Test Rest11t 8.05	Accc1>tt1blc re <juircment (i.5 - 8.5</juircment 	Pc1·111issilJ.le	U11ccrt,1i11ty in measul·e111cnt ().18
02	IDS (T<>tal •nissl>lvecl Solid)	IS: I 050(1-20:1 2 ,1)ar·t	111g/L	4(, 8	500	20()()	0.05
()3	Telt,11 .H,1r <lness< td=""><td>IS: 1()5()()-2()12 l'ftrt 21</td><td>ll1i:::.:,er/J,</td><td>79.()4</td><td>200</td><td>600</td><td>0.04</td></lness<>	IS: 1()5()()-2()12 l'ftrt 21	ll1i:::.:,er/J,	79.()4	200	600	0.04

Cha11diga1·l1-Patiala National High,vay {"NH- 64) Village J·hansla, Rajpt1ra, P11njab 140401



.Facility



TC-11489

04	Alkalinity	IS:10500- 2012, IS:3025 Part 23	lne/L	227.22	200	600	0.0168
05	Calci111n	IS:10500- 2012, IS:3025 Part 40	ffil _{t,} T/L	16.53	30	200	0.48
06	Fl1.1oricle	IS:10500- 2012, IS:3025 Part 60	mg/L	1.82	1.0	1.5	().()2
07	Resiclual Free Chlo1 ine	IS:10500- 2012, IS:3025 Part 26	tng/L	0	0.2	1.0	0.03
08	Specific Conductance	IS 3025 Part 14: 2013	LS/cm	70.36	-	-	0.3
09	Potassit1m	IS: 3025 Pa.rt 45; 1993	mg/L	1.67	_	-	0.046
10	Sodiuln	IS: 3025 Part 45; 1993	lng/L	186.50	-	-	0.0.39
11	Cad. minni	IS:3025 Part 41 2012	1ng/L	0	0.003	No Relaxation	0.001
12	Cl1ro1ni11111	IS: 3025 Part 52 2012	111g/L	0	0.0,5	No Relaxation	0.001
13	J_ettcl	IS: 3(>25 Part 47 2012	111g/L	0	0.01	No Rel,1xatit)ll	0.0006

Rem:11·1,s/o·pini<>ns:

::rlle all(ali11ity "111d f111.oricle al·e lligller t 11.a11 a cc e p't ab l e l i n1 its otller give11 llarameters ore ,vitl1i11 accei,table li111its.



Nallle,>ftllel,abr,rilt<1ry:(,:llit	kara TJ11iversit)r (;entr:11.111s	trt1n1e11t.,,ti<)t1 Facility (ClJC	1.F)	
.D<>Cl.tn1e11t N c>. (,) (-;; 1 F-/T.Rf		Doct1111e11t Nal11c: 'I'cst r testillgif' Watc	eport ft1r.111,1t tor	(11e111ical
lsst1c No: 00	lsst1c I)ate: ()1/()6/2()21	C:(1py No.:	Section No: C(12)	:Pilge No: 1/1
Am.e11dr11e11t NCJ:	Ar11e11cl111e.r1t date:	ApJlrc>ved a nd iss11ed bv:		

c:handigarl1-Patiala National High,vay''(NH- 64) Village J·11ansla, Rajpt11·a, Pu11jab ·140401



Docl11ne11t NI). C:IJC'IFITRF D,rtecl: 15-07-2024

TEST REPORT

Ct1sto111er's Na111e alld ad.dress:	Sall1ple receipt date	•	10-07-2024
Cl1itl <ara (pb)<="" td="" university=""><td>Date .of Testing</td><td>•</td><td>12-07-2024</td></ara>	Date .of Testing	•	12-07-2024
	Report Isst1e Date	•	15-07-2024
Killd Attn : Holly. Capt.	Reference No.	•	41/2024
Ravinder Singl1	Location of testing	•	CUCIF, Ba bbage Bloclc (CU)
Colltact No. : 9501004247	Nan1e of worl<	:	Clle1nica1 Testing
En1ail Id :			•
sillgh.ravillder ;cllitlcara.ed11.ill			

SM1PLE PARTICULARS

DescrilJtion of salllple	•	Liqt1id
Salllple qt1ant1ty	• :	500 1111
Sall1ple conditio11	• •	Illtact alld fit fol·testlllg
Sall1ple ide11tification No.	•••	24CWS07/004
Sa1111Jle collected/d1·aw11 by	: •	Mr. Jaswi11der Singh
Locatio11/s.011rce of sa1nple	•	Fle111.ing Blocl<, 4rh F.loor (Inside Sl1e) Cl1itl <ara.< td=""></ara.<>
		u 11ive1·sity(P:B)
Sa11112l:i11g ce ! :1:!-		NA
Ty_pe ot''' testil1g	•	Cl1e1nical Testi1.1g:.r
E11vi1·011111 ental cc)i1ditior1s cl11ri11g	·	Te.n1J)e.r,ltl11·e: 25°c
sa.11:11Jli11g		$H_{\text{fl}} \prod_{j} C^{\text{t}}_{ty'} \qquad S E_{\text{o}} O_{\text{o}}$

TEST RESIJLTS

' S,N * _{0.}	Plt·,11netl!1·(s)		[J11it	Test	Luints <•f'IS: 1()500-2{)1.2		
ļ				Result	AcceJlttll)le I'C(Jlli1·en·1Cllt	Pe1·n1issilJle Li111it	
()1	рН	I [™]S.,, C ?	-	8.27	6.5 - 8.5	No Rcl,1x,1tio11	
		Par·t(i l):2()22					
()2	TDS (Tot,11	1' S ,j(J;)	mg/L	47()	5()()	2()()()	
	Dissol\ecl	Part(16):2012	,			1	
	s.()lid)						
03	Total	ч S .,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	mg/L	(-,5_1.7	2()0	600	
	HardIlcss	p, <u>1</u> 1-l(71)).() I') .					

Cl111n diga1·l1-P}1tial,1N,1tior1,1l Hi.gl1tv,1y (NH.- 64) Vill,lge .Jl1,1nsl,1, .Raj11t1.1 ,1, P1111j 11J .14040 1



					· · ·	
04	All <ali11ity< td=""><td>IS:3025 Part(23):2(J19</td><td>mg/L</td><td>256.11</td><td>2()()</td><td>600</td></ali11ity<>	IS:3025 Part(23):2(J19	mg/L	256.11	2()()	600
·05	Calci11111	IS:3t)25 Part(40):2019	mg/L	14.13	30	2()()
06	Fluoride	IS:30,25 Part(60):2019	mg/L	(),71	1. ()	1.5
07	Residt1al Free Cl1lori11e	IS:3025 Part(26):2012	mg/L	ND	0.2	. 1.0
()8	Specific Col1d11ctance	IS: 3()25 Part(14):2(J13	µ,S/cm	()7.52	_	-
09	Potassi111n	IS: 3()25 Part(45):2()19	mg/L	().83	_	-
10	Sodiu1n	IS:3(J25 Part(45):2C)19	mg/L	99.46	_	-

Note: ND - not cletect,1IJle

"

- 1. The test 1-epo1-t refers 011ly to tested sample and applicable 1>ara1neters.
- 2. Tl1is report ca11 11eitl1er be 11sed as e".ide11ce in tl1e cot11.t of la,v 1101. ca11 it be 11sed i11 pai.t 01. ftill in ally media "ritho11t 111.io1. 1Jern1issio11.
- 3. The salling will be cleatro, ecl after sevel1 d 1, rs from the clutte of isstle of test 1 e1>01.t The salling other sevels.



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LIIU	ornep	лі

Ntll11C (`) t e" I.J:tl1<)rat()ry:	Cllitlzart1 (, JJ) e 1s1ly (-'e t 11d II:1sht1111e11tali<)11 1:'1c ilit / ('c't_rc1.f-')				
I)c)Ct.1111e.14 (<) (1 ŗ <u>1</u> 1 J/rr <u>)</u>		[) ()Cll111C:tll N[1111e: $\cdot 1 \cdot cst$ t_c•st11.u) $\vee V$,1ter	rc11()rt f<) fillt1t	J<.)r c:1:1e111iC:al	
ISSUC $N \cdot c$): ()()	Iss1tc l)ate: ().I/()(l/2()21	C:c)11y Nt).:	ScctiJ111 Ne):	l)age N<.):	
A1r1c11(l111e1: 1N ≤):N./∖.	A 111e11d111e11t clrrtc. A.	A.t)J)[()VC(1 a11(1 iss11ec1	C' (1 ?)	2/2	
		l)y: QM			



Document No. CUCIFffRF Dated : 02-03-2024

TEST REPORT

Customer's Name and address:	Sample receipt date	•	21-02-2024
	Date of Testing	•	26-02-2024 .
Chitlcara University (PB)	Report Issue Date	•	02-03-2024
	Reference No.	•	17/2024
Kind Attn: Capt. Ravinder	Location of testing	•	CUCIF, Babbage Block (CU)
Singh	Name of work	•	Chemical Testing

SAMPLE PARTICULARS

Description of sample	•	Liquid
Sample quantity	•	500 ml
Sam le condition	• •	Intact and fit for testing
Samole identification No.	•	24CWS02/003
Sample collected/ .· submitted/drawn bv	•	Mr. Jaswinder Singh
•• Location/ source of sample	•	Tesla Block 1 st Floor (WC-3), Chitkara Universi-ty1'PB1
 Location/ source of sample Sampling procedure 	•	Tesla Block 1 st Floor (WC-3), Chitkara Universi-ty1'PB1 NA
 Location/ source of sample Sampling procedure Tv-oe of testin- 	•	Tesla Block 1 st Floor (WC-3), Chitkara Universi-ty1'PB1 NA Chemical Testing

TEST RESULTS

S No.	Parameter(s)	Test method	Unit	Test Result	Acceptable requi [•] rement	Permissible Limit	Uncertainty I [°] D measurement
01	рН	IS:3025 Part,11,):2022	-	7.68	6.5 -8.5	No Relaxation	0.18
02	IDS (Total Dissolved Solid)	IS:3025 Part(1 6):2012	mg/L	476	500	2000	0.05
03	Total Hardness	IS:3025 Pa11(21):2019	mg/L	74.48	200	600	0.04



Chitkara University CentrnJ.Instrumen,tatio:n Facility



TC-11489

0,4	Alkalinity	IS:3025 Part(23):2019	mg/L	226.11	200	600	0.0168
05	Calcium	IS:3025 Part(40):2019	mg/L	18.93	30	200	0.48
06	Fluoride	IS:3025 Part(60):2019	mg/L	1.43	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	TS: 3025 Part(14):2013	µSiem	81.34	-	_	0.3
09	Potassium	IS: 3025 Pa.rt(45):2019	mg/L	0.13	-	-	0.046
10	Sodium	IS:3025 Part:45·1:2019	mg/L	85.10	-	-	0.039

Remarks/opinions: The alkalinity and fluoride values are higher than the accept.UJ._Jle values.

Authorized signatory Name : Dr. <u>-ti{ft\m!ni</u> l-f. InstrumentationFacility

Designation; CliMaraUniversity, Punjab Chandigarh-Patiala National Highwayi Ra}pura,Punjab.India-140401

Name of the Laboratory: Chitkara University Central Instrumentation Facility (CUCIF)								
DocumentNo. CUCIF/TRF	Docu1nent Name: Test report fo11nat for Chemical testine of Water							
Issu.e No: 00	Issu e Date: 01/06/2021	Copy No.:	Section No: C (12)	Page No: 1/1				
Alnendment No:	Amendment date:	Approved and issued bv:						



Document No. CUCIF/TRF Dated: 06-05-202.4

TEST REPORT

Customer's Name and address:	Sample receipt date	•	30-04-2024
-	Date of Testing	р *	02-05-2024
Chitkara University, (PB)	Report Issue Date	•	06-05-2024
	Reference No.	•	33/2024 .
Kind Attn: Capt. Ravinder Singh	Location of testing	2	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/		Mr. Jaswinder Singh
submitted/drawn by		
Location/ source of _sample	•	Circle one GF, Chitkara University (PB)
Sampling procedure		NA
Type of testing	•	Chemic 1 Testing
Environmental conditions during	•	Temperature: 25°C
sampling		Humidity : 44%

TEST RESULTS

S.No.	Parameter(s)	Test method	Unit	Test Result	Acceptable requirement	Permissible Limit	Uncertainty in measurement
01	рН	IS:3025 Part(1 1): 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





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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	μSiem	72.62	_	-	0.3
09	Potassium	IS: 3025 Part(45):2019	mg/L	0.57	-	-	0.046
10	Sodium	IS: 3025Part(45):2 019	mg/L	227	-	-	0.039

Remarks/opinions:Thefluorideis higherandothergivenparametersarewithin acceptablelimit.

••

Authorized signatory

ChNambeire Div. Crotral Instrumentation Facility Chitissign affiorits The Laushal Chandigarh-Patiala National Highway 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 <u>format</u>	for Chemical					
		testing of Water							
Issue No: 00	Issue Date: 01/06/2023	Copy No:	Section No:	Page No:					
Amendment No:	Amendment date:NA	• Approved and issued	C(12)	1/1					
NA		by:							

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TC-11489

TEST REPORT

Document No.: CUCIF/TRF

Customer's Name and address:	Sample receipt date	•	12-09-2024
Chitkara University (PB)	Date of Testing	•	13-09-2024
	Report Issue Date	•	18-09-2024
Kind Attn :Capt. Ravinder Singl1	Reference No.	•	59/2024
Contact No. :9501004247	Location of testing	•	CUCIF, Babbage Block (CU)
	Nan1e of worl<.	•	Chemical Testing
singl1.,ravinder@chitl <ara.edu.in< td=""><td></td><td></td><td></td></ara.edu.in<>			

SAMPLE PARTICULARS

Description of sample	•	Liquid	
Sample quantity	•	500 1nl	
Sa1nple co11dition	•	Intact and fit for testing	
Sample identification No.	•	24CWS09/007	
Sall1ple collected/drawn by	•	Mr. Jaswinder Sillgll	
Location/ source of same_!e	•	Bloom Block Ground Floor, Chitkaraoniversity(PB)	
Sampling procedure	•	NA	
Type of testing	•	Cl1e1n ical Testing	
Environmental conditions		Te1nperatL1.re: 26°C	
		Humidity : 62%	

TEST RESULTS

•

S. No.	Parameter(s)	Test method	Unit	Test	Limits of IS:	10500-2012
				Result	Acceptable requirement	Permissible Limit
01	рН	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

Page No.:1/2





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04	Alkalinity	IS:3025 Part(23):2019	mg/L	260	200	600
05	Calciu111	IS:3025 Part(40):2019	mg/L	36.67	. 30	200
06	Fluoride	IS:3025 Part(60):2019	m.g/L	0.73	1.0	1.5
07	Residual Free Ch]orine	IS:3025 Part(26):2012	mg/L	BDL	0.2	1.0
08	Specific Condl1ctance	IS: 3025 Part(14):2013	µSiem	67.82	-	_
09	Potassi u111	IS: 3025 Part(45):2019	mg/L	0.97	-	-
10	Sodilliti	IS:3025 Part(45):2019	mg/L	145.33	_	-

Note: BDL- Belo,¥ detectable limit

- **1.** The test report refers 0111y to tested sa1nple 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 witl1out prior permissio11.
- 3. The sample will be destroyed after seven days froll the date of issue of test report unless

otllerwise specified.

••

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End of Report

Name of the Laboratory:	Chitkara University Central Instrumentation Facility (CUCIF)				
Document No. CUCIF/TRF		Docu ment Nam e: Test	report format	for Chemical	
		testing of Water			
Issue No: 00	Issue Date: 01/06/2021	Copy No.:	Section No:	Page No:	
An1endment No: 01	A111e11dment date:	Approved and issued	C (12)	2/2	
	01/07/2024	by: Qrvt			

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

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Centre for Environment and Food Technology Pvt. Ltd.

An ISO 9001; 2015, ISO 45001; 2018 (OHSAS}; ISO/IEC 17025; 2017 NABLAccredited, <u>fSSAI and MoEF Recognised</u> Testing Laboralory





ULR No.: T -61452400Q000526F

Party Name	: Mis Chltknra University Chandigarh - P11tll1111 nlionnl lllghwny Villngc jhonsla, R11J11ura, Dist. r11th1111, Punjol
Sample Description Sampling Location Source	: Drinking Water : Turing Water Moler

Snmplc Cotlcc:lcd by : Sampler

Rc1,ort No. : CEFTill8 ftormnt No. : 7.8 F-0IG Heportlng Dole : 25.04.2024 Annly ls Com11lctlon dale : 20.04.2024 to 25.04..2014 Receipt 0111c : 20.04.2024 : 19.04.2024 S11111pllng Drllc : As per Al'IIA Method S11mpling Method Snmplc Qunnllty : 2 Llr. LSRF/S11mplc ID : CEFTIGEN12404200118

TEST RESULT

				Limit of IS: 10500-2 201		0-2012 (Rurnrmrd - 2018)	
i	S. No.	o. Parameter	Result	Unit	Rcquiremenl (Acceptable Limit)	rermlisIblc limit In the Absence or Alternate Source (Mu,)	Trst-Mclhod
			I	Physical Parameter	S		
	Ι	pH {Bl 25 °C)	7.85		6.5 to 8.5	No Rcloxu1ion	IS: 3025 (Part-I I)
	2	Total Dissolved Solids, (Mox. }	356	mg/I	500	2000	IS: 3025 (Part-16)
			(General Parameters	s		
	3	Total Hardness as CaCO1, (Max.)	126.0	mg/I	200	600	IS: 3025 (Part-21)
	4	Calcium as Ca,(Mox.)	32.2	mg/I	75	200	IS: 3025 (Part-40)
	5	Alkalinity as CaCOi, (Ma.x.)	72	mg/I	200	600	IS: 3025 (Part-23)
-	6	Chloride as Cl, (Mox.)	46.9	mg/I	250	1000	IS: 3025 (Part-J2)
	7	Nitrate as NO,. (Max.)	3.2	mg/I	45	No Relaxation	IS:3025 (Part-34)
-	8	Fluoride as F, (Max.)	ND	mg/I	Ι	1.5	IS:3025 (Part-60)
	9	Magnesium as Mg, (Max.)	11.2	mg/I	30	100	$APHA~3500\text{-}Mg(\mathrm{B})$
	10	Sulphate as SO,,(Max.)	6.8	mg/I	200	400	IS: 3025 (Part-24)
	II	Nickel as Ni (Max.)	ND	mg/I	0.0	No Relaxation	IS: 3025 (Part-54)
	12	Sodium as Na, (Max.)	18.0	mg/I	No Relaxation	No Reloxolion	IS: 3025 (Port-45)
	13	Potassium as K.(Max.)	1.8	mg/I	No Relaxation	No Rcloxulion	IS: 3025 (Part-45)
	14 .	Cobalt as Co (Max)	ND	mg/I		-	APHA 24th Edd. 2023
.!'	15	Chromiumas Cr. (Mox.)	ND	mg/I	0.05	No Relaxition	IS 3025 (Part-52)
	16	Copper as Cu, (Max.)	ND	mg/I	No Reloxalion	No Relaxation	IS: 3025 (Part-42)
			Micr	obiological Param	ctrrs		
	17	Total coliform	Absent	per 100 ml	Absent	per 100 ml	IS:15185:2016
	18	E.coli	Absent	per 100 ml	Absent	per I 00 ml	IS:15185:2016

Note: I. ND = Nol Detectable

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Mr. Rahul

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A	St Microbiologist
12	Mr Nadeem
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Note : 1. l;he test results are related to the sample/ tested as Identified.

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S.,he Court Jurisdiction will be Delhi.

6. Customer complaint register Is available at the laboratory.

RAIN WATER HARVESTING DETAIL						
SR. NO.	LOCATION	DEPTH OF BOREWELL	ТҮРЕ	RECHARGING RATE PER DAY		
1	OMEGA ZONE	70 MTR.	BOREWELL RECHARGE	50000 ltr		
2	OMEGA ZONE	70MTR.	BOREWELL RECHARGE	50000 ltr		
3	OMEGA ZONE	103MTR.	BOREWELL RECHARGE	30000 ltr		
4	BETA ZONE	70MTR.	BOREWELL RECHARGE	50000 ltr		
5	ALPHA ZONE	45MTR.	BOREWELL RECHARGE	30000 ltr		
6	NIGHTINGALE HOSTEL	184MTR.	BOREWELL RECHARGE	40000 ltr		
7	SPORT ARENA	70MTR.	BOREWELL RECHARGE	50000 ltr		
8	COLUMBUS	45MTR.	BOREWELL RECHARGE	30000 ltr		
	TOTAL					

SEPARATE RECHARGING PITS FOR SEPARTE ROOF TOP AREAS

Chitkara University is now constructing separate Recharging pits for the Separate Roof top catchment areas of the building (Hostels, auditorium, Academic blocks) in order to recharge more run off. As of now, three new Recharging Pits has been recently constructed and 25 more recharging pits are proposed.

SR. NO.	LOCATION	DIMENSIONS (LxBxH Meter) Including Filter Media	ТҮРЕ	RECHARGING RATE PER DAY	
1	MARCO POLO HOSTEL	(3x2x2.5)	BOREWELL RECHARGE	727200ltr	
2	MAGELLAN HOSTEL	(3x2x2.5)	BOREWELL RECHARGE	727200ltr	
3	IBN BATTUTA	(3x2x2.5)	BOREWELL RECHARGE	727200ltr	



Sampling Location

Sample Collected by

Source

Centre for Environment and Food Technology Pvt. Ltd.

An ISO 9001; 2015, ISO 45001; 2018 (OHSAS); ISO/IEC 17025; 2017 NABL Accredited, <u>FSSAI and MoEF Recognised</u> Testing Laboratory

Itest reportI



LR No.: TC-61452400000528F

Party Name	: M/s Chitkara Universily Chindigarh • Palla la National Illghway Village ibansin Rainura Dilit rathlin 1•uninh	Report No. Formnt No. Reporting
	, mago juanom, rajputa, D M. Hanni, Polifini	Annly1i8 Co Receipt Dat
Sample Description	:Drinking Water	Snmpllng I

: Archemidcs Hostel

: Sampler

Formnt No.	: 7.8 F-01G
Reporting Onie	: 15.04.2024
Annly1i8 Completion t.Inte	: 20.04.2024 lo 25
Receipt Date	: 20.04.2024
Snmpllng Dute	: 19.04.2024
Snmpllng Methot.I	: A! per APHA N
S11m11le Quunlily	: 2 Ltr.
LSRF/Somple ID	: CEFTIGEN124

5.04.2024 M,thod : CEFTIGEN12404200120

: CE:rq120

TEST RESULT

			_/• /• •	-			
				Limit or I : iu 2			
S. No.	Parameter	Resull	Unit	Requirement (Acceptable Llmil)	Permissible limit in the Abiencc or Alternate Source (MaL)	Tut-MdhrJd	
Physical Parameters							
1	pH (a.t25 °C)	7.99	-	6.S to 8.S	No Relaxa1ion	IS: 3025 (Part-I I)	
2	Total Dissolved Solids, (Max.)	388	mg/I	500	2000	IS: 3025 (Part-16)	
		(General Paramet	en			
3	Total Hardness as CaCO3 , (Max.)	114.8	mg/I	200	600	JS: 3025 (Part-21)	
4	Calcium as Ca,(Max.)	36.2	mg/I	75	200	IS:3025 (Part-40)	
5	Alkalinity as CaCOi, (Max.)	92.6	mg/I	200	600	IS:]025 (Part-23)	
6	Chloride as Cl, (Max.)	56.9	mg/I	250	1000	IS: 3025 (Part-32)	
7	Nitrate as NO _{3_} (Max.)	4.2	mg/I	45	No Relaxation	IS:3025 (Part-34)	
8	Fluoride as F,(Max.)	ND	mg/I	Ι	1.5	IS:3025 (Part-60)	
9	Magnesium as Mg, (Max.)	S.9	mg/I	30	100	APHA 3500-Mg(B)	
10	Sulphate as so .(Max.)	12.4	mg/I	200	400	IS: 3025 (Part-24)	
11	Nickel as Ni (Max.)	ND	mg/1	0.0	No Relaxation	IS: 3025 (Part-54)	
12	Sodium as Na, (Max.)	20.4	mg/I	No Relaxation	No Relaxa1ion	IS: 3025 (Part-45)	
13	Potassium as K, (Max.)	2.8	mg/I	No Relaxation	No Relaxation	IS:3025 (l'art-45)	
14	Cobalt as Co (Max)	ND	mg/I	-	-	APH.A 24th Edd.	
15	Chromium as Cr, (Max.)	ND	mg/I	0.05	No Relaxation	IS 3025 (Part-52)	
^I 16	Copper as Cu, (Max.)	ND	mg/I	0.1	1.5	IS: 3025 (Part-42)	
		Mici	robiological Para	neters			
17	Total colifonn	Absent	per 100 ml	Absen	l per 100 ml	IS:15I85:2016	
18	E.coli	Absent	per 100 ml	Abser	nt per 100 ml	IS:15185:2016	

Nott: 1. ND= Not Deteclable

End of Report... and Food morized Signatory Mr. Nadeem



Page 'o. 1/1

Mr. Rahul

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NASLAccredited, FSSAI and MoEF Recognised Tesling Laboratory

!TEST REPORT!

· M/s Chitkara Unh. cnltv

C-6145

LR o.: T -614S2400000527F

] 2 2 2 2	Party Sample Samplin Source	amc : M/s Chitkara Ur Chandigarh· P11 Village jh11nsla, I Description : Drinking Water ng Location : Pi C Hostel	ıh∙enlty lal1 National IIIgi bjpura, Dist. P1111	nM∗ay l11, Punjab	Report No. Format No. Reporting D111k Anoly 1, Comple Receipt Date Sampling Dace S11mpflng Metho Sample Quantity	: 'EFTf : 7.8 F-C e : 25.04.2 etion dale : 20.04.20 : 20.04.20 : 19.04.20 od : As per 7 : 2 L.tr.	1 19 DIG 024 024 to 25.04.2024 024 024 APIIA Method
r,	ample	Con«icu by . Sampler	7	FEST RESU	LSKF/Sampic I	D : EIIJG	EIN12404200119
					Limil of IS: JOS	00-2012 (Rrarrirmed • 2018)	
	S- No.	Panmeter	Ru ult	Uail	Requirement (Accrptable Limit)	Ptrmilllbl, limit in the Absence or Altunale Sourer (M∎L)	Tnt- 1elhod
]	Physical Paramc	ten		
	1	pH(al 25 °C)	7.22	-	6,5 to 8.5	No Relaxation	IS 3025 (Pan-I I
	2	Tollll Dissolved Solids, (Max.)	345	mg/I	500	2000	I . 3025 (Part-16
			(General Paramet	ters		
]	Total Hardness as DIC01, (Max.)	108.0	mg/I	200	600	Is: 3025 (Pan-21
	4	Calciumas Ca, (Max.)	30.6	mg/I	75	200	IS 3025 (Pan40)
	5	Alkalinity as CaCCh, (Max.)	86,2	mg/I	200	600	IS 3025 (Pan-23
	6	Chloride as Cl, (Max.)	56.9	mg/I	250	1000	IS 3025 (Part-32
	7	Nitrate as N01,(Max.)	18	mg/I	45	No RelaJU1tion	ISJ025 (Part-3-4)
	8	Fluoride as F,(Max.)	ND	mg/I	Ι	1.5	IS 3025 (Part)
	9	Magnesium as Mg ,(Max.)	7.7	mg/I	30	100	APHA 3500-Mg (B
	10	Sulphate as S .(Max.)	6.8	mg/I	200	400	rs 3025 (Pan-24
	II	Nickel as Ni (Max.)	ND	mg/I	0.0	No Relaxation	IS: 3025 (Pan-54
	12	Sodium as Na,(Max.)	22,0	mg/I	No Relaxation	No Relaxation	IS. 3025 (Part-15
	13	Potassiumas K, (Max.)	3.6	mg/I	No Relaxation	No Relaxation	IS. 3025 (Part-15
	14	Cobalt as Co (Max)	ND	mg/I			APHA 24th dd
•	IS	Chromium as Cr,(Max.)	ND	mg/I	0.05	No Relaxation	IS 3025 (Part-52)
ť	16	Copper as Cu.(Max.)	ND	mg/I	0.1	1.5	IS: 3025 (Part-42)
			Micr	obiological Paran	neters		
	17	T (1 1)	Abcont	man 100 ml	Abcont	nor 100 ml	19 15195 2016

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: I. ND = Not Drtcctable

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Mr. Rahul

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Pagr No. 1/1



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5. The Court Jurisdiction willbe Delhi.

6. Customer complaint register Is available at the laboratory.

Regd. Address: Bldg. No. 17, 1st Floor, DLF IndusIrlal Area, Motl Nagar, New Deihl -110015Ph.:.011-45012722 Emall: Inlo@ceftlab.com, Website : www.ceftlab.com



ITEST REPORT



TC-6145 ULR No,: TC-614524000000529F

Party Name Sample Description Sampling Location Source Sample Collected by	: M/s Chitkua Ur Chandigarh - Pat Villagcjhnnsln, R : Drinking Water : AristoClc hoslel :Sampler	iversity ialn National IIIg Injpurn, Dbt. r1ul	hwny al1, l'unjab <u>TEST RESU</u>	Report No. Formal No. Rc1lorllng 011lc An11ly1b Comp l{ecclpl D11te S1m1pllng Oale S11111pll11g M S11111plC Quan LSR1,./Sample II	: EFTI12 : 7.8 F-C : 25.04.2 lcllon c.hue : 20.04.2 : 20.04.2 : 19.04.2 Iethod : As per A tity : 2 LIr. D : CErf/G	1 DIG 024 024 lo 25.04.2024 024 024 024 APIIA lethod E 12404200121
S. No. P	'arameter	Rtsult	Unll	Limit orlS: 1050 Requirement (i\cceplable Limit)	0-2012 (Rufnrmed • 2018) Permlulble limit In Ihe Ab,ence of Allernale Source (Mu.)	T,,1-Method
I	I		Physic al P arame	eters	-	
I pH (at 25 "C)		7.65		6.5 to 8.5	No Relaxation	IS: 3025 (Part-I I
2 Tomi Dis.wived	d Solids, (Max.)	370	mg/I	500	2000	IS: 3025 (Part-16
•	I		General Parame	ters		•
3 Total Hardness	as CaCO), (Max.)	112.0	mg/I	200	600	IS; 3025 (Part-21)
4 Calcium as Ca.	(Max.)	28.6	mg/I	15	200	IS: 3025 (Part-40)
j Alkalinity as Ca	aC()J, (Max.)	78.8	mg/I	200	600	IS. 3025 (Part-23)
6 Chloride as Cl,	(Max.)	52.9	mg/I	250	1000	IS: 3025 (Part-32)
7 Nitrate as NO_3 .	(Max_)	4.6	mg/I	45	No Relaxation	IS:3025 (Pan-34)
8 Fluoride as F, (N	Max.)	ND	mg/I	Ι	1.5	IS:3025 (Part-60)
9 Magnesium as M	Mg, (Max.)	9.8	mg/I	30	100	APHA 3500-Mg (B)
10 Sulphate as SO,,	(Max_)	14.5	mg/I	200	400	IS: 3025 (Pan-24)
11 Nickel as Ni (M	ax.)	ND	mg/I	0.0	No Relaxation	IS: 3025 (Part-54)
12 Sodium as Na, (Max.)	24.0	mg/I	No Relaxation	No Relaxation	IS: 3025 (Part-45)
I) Potassium as K	(Max.)	3.1	mg/I	No Relaxation	No Relaxation	IS: 3025 (Part-45)
14 Cobalt as Co (M	ax)	ND	mg/I			APHA 24th Edd. 202
IS Chromium as Cr	, (Max.)	ND	mg/I	0.05	No Relaxation	IS 3025 (Pan-52)
16 Copper <i>as</i> Cu, (M	Max.)	ND	mg/I	0.1	1.5	IS: 3025 (Part-42)
		Micr	obiological Paran	neters		
17 Total coliform		Absent	per 100ml	Absenl per 100 ml IS:15185		IS:15185:2016
18 E.coli		Absent	per 100ml	Absent per 100 ml		IS:15185:2016
lolt: J. ND= Nol Dele	ectable					

Mr. Rahul

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<u>[TEST REPORT</u>



ULR o.: TC-614524000000530F

Party Name : Mis Chitkara Universily Chandigarh - Patlnla National Highway Village jhansla, Rajpura, Dist. Patlaln, Punjab

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

Report No. : CEFT1122 Format No. : 7,8 F-OIG : 25.04.2024 Reporting Dale Analysis Complellon date : 20.04.2024 to 25.04.2024 Receipt Date : 20.04.2024 Sampling Dute : 19.04.2024 Sampling Method : As per APHA Mtlhod Sample Quantity : 2 Llr. LSRF/Sumple ID : CEFTjGENl2404200l22

TEST RESULT

				Limle or IS: 10500 2	0-2012 (Rt∎rfirmcd- 2018)		
S. No.	Parameter	RtJUlt	Unit	Rtqulrtment (Acceplable Limit)	Permluible limit in the A bse ner of Alternate Source (Max.)	Test-Method	
		P	hysical Parameter	'S			
Ι	pH (at 25 °C)	7.77		6.5 10 8.5	No Relaxation	IS:3025 (Part-I I)	
2	Total Dissolved Solids, (Max.)	374	mg/I	500	2000	IS: 3025 (Part-16)	
		G	eneral Parameter	s			
3	Total Hardness as CaCOi, (Max.)	110.0	mg/I	200	600	IS: 3025 (Part-21)	
4	Calcium as Ca, (Max.)	28.2	mg/I	75	200	rS: 3025 (Part-40)	
5	Alkalinity as CaCOi, (Max)	16.S	mg/I	200	600	IS: 3025 (Part-23)	
6	Chloride as Cl, (Max.)	54.9	mg/I	250	1000	rs: 3025 (Part-32)	
7	Nia-ate as NO). (Max.)	4.6	mg/I	45	No Relaxation	IS:3025 (Part-34)	
8	Fluoride as F, (Max.) ND mg/I I 1.5		1.5	IS:3025 (Part-60)			
9	Magnesium as Mg,(Max.)	9.6	mg/I	30	100	APHA 3500-Mg (B)	
10	Sulphate as SO•,(Max.)	14.2	mg/I	200	400	IS: 3025 (Part-24)	
II.	Nickel as Ni (Max.)	ND	mg/I	0.0	No Relaxation	IS: 3025 (Part-54)	
12	Sodium as Na, (Max.)	22.0	mg/I	No Relaxat ion	No Relaxation	IS: 3025 (Part-45)	
13	Potassium as K., (Max.)	2.8	mg/I	No Relaxation	No Relaxation	IS: 3025 (Part-45)	
14	Cobalt as Co (Max)	ND	mg/I		-	APHA 24th Edd.	
15	Chromium as Cr, (Max.)	ND	mg/I	0.05	No Relaxation	IS 3025 (Part-52)	
16	Copper as Cu, (Max.)	ND	mg/I	0.1	1.5	IS: 3025 (Part-42)	
	Microbiological Parameters						
17	Total colifonn	Absent	per 100ml	Absent per 100 ml		IS:15185:2016	
18	E.coli	Absent	per 100 ml	Absent per 100 ml IS:		IS:15185-2016	

Note: I. ND= Not Detectablt





Che Mr. Rahul

Note : 1. The test results are related to the sample/ tested as Identified.

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I TEST REPORT I

ULR o.: TC-614524000000538F

Party Name	: M/5 Chltkara University
	Chandigarh - Patiala National Highway
	Village jhansla, Rajpura, Dist. Pallala, Punjab

: Drinking Water

: ION Hostel

: Sampler

Sample Description

Sampling Location

Sample Collected by

Source

Report No.	: CEFTjl23
Formal No.	: 7.8 F-0IG
Reporting Date	: 25.04.2024
Annlysls Completion date :	20.04.2024 lo 25.04.2024
Receipt Dale	: 20.04.2024
Sampling Date	: 19.04.2024
Sampling Method	: As per APflA Method
Semple Quantity	: 2 Llr.
LSRF/Sample ID	: CEFTIGEN12404200123

TEST RESULT

				Limit of IS: IOS	00-2012 (Rurlirmrd - 2018)	
S. No.	Parameter	Result	Unit	Requirement (Acceptable Limit)	Permissible limil in the Absence or Alternate Source (MaL)	Tut-Method
		P	Physical Paramet	ers		
Ι	pH (at25 °C)	7.44	-	6.5lo 8.5	No Relaxation	IS: 3025 (Pan-! I)
2	Total Dissolved Solids, (Max_)	362	mg.II	500 2000		IS: 3025 (Part-16)
		0	General Paramete	ers		
J	Total Hardness as CaC01, (Max.)	124.0	mg.II	200	600	IS: 3025 (Part-21)
4	Calcium as Ca. (Max.)	35.4	mg.II	75	200	IS: 3025 (Part-40)
5	Alkalinity as CaCOJ, (Max.)	88.4	mg/l	200	600	IS: 3025 (Pan-23)
6	Chloride as Cl, (Max.)	62.9	mg.II	250	1000	IS: 3025 (Part-32)
7	Nitrate as N . (Max.)	5.1	mg.II	45	No Relaxation	IS:3025 (Pan-34)
8	Fluoride as F, (Max.)	ND	mg/I	Ι	1.5	IS:3025 (Part-60)
9	Magnesium as Mg, (Max.)	8.6	mg/I	30	100	APHA 3S00-Mg(B)
10	Sulphate as S04,(Max_)	14.4	mg.II	200	400	IS: 3025 (Pan-24)
II	Nickel as Ni (Max.)	ND	mg.ll	0.0	No Relaxation	IS: 3025 (Pan-54)
12	Sodium as Na.(Max.)	24.0	mg.II	No Relaxation	No Relaxation	IS: 3025 (Part-45)
13	Potassium as K (Max.)	3.4	mg.II	No Relaxation	No Relaxation	JS: 3025 (Part-45)
14	Cobalt as Co (Max)	ND	mg/I		-	APHA 24th Edd.
15	Chromium as Cr, (Max_)	ND	mg.II	0.05	No Relaxation	IS 3025 (Pan-52)
16	Copper as Cu, (Max.)	ND	mg/I	0.1	1.5	IS: 3025 (Part-42)
		Micro	biological Param	leters		
17	Total colifonn	Absent	per 100 ml	Absent per 100 ml		IS:15185:2016
18	E.coli	Absent	per 100 ml	Absent per 100 ml		IS:15I85:2016

I. ND= Not Dtttctable Note:



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Note: 1. The test results are related to the sample/ tested asIdentified.

2. The s mplewill be discarded after retention time of 7 days unless otherwise specified

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3. AnyDiscrepancyfound In the test repon mav be communicated within seven days •

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Email: Info@cettlab.com Webslt . agar, New Delhl-110015 Ph.:.011-45012722 e • www.ceftlob.com

No. 1/1





TC-6145

Awareness Posters for Staff & Students







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



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)

JAQUAR INTERNATIONAL HEADQUARTER:

Plot No. 3, Sector - M 11, IMT Manesar, Haryana-122050 (INDIA), Phone: 91–124–4756960

Ground Water is a precious Natural resource, Protect it, Preserve it. SAVE WATER – SAVE HUMANITY



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

Eixturos		Baseline Flow Requirement	
Fixtures	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 CDM		
Residential Kitchen Faucets at 58 PSI (4 Bar)	2.2 9711	0.J LPM	
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 Ipm/Ipf
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;

SI. No.	Fixture	Offered Product Code	3.0-5.5 Bar (44-80 PSI)	Product should be ordered with suffix as
01.	Water	Water Closets (Flush Valves)	4.0	G
	Closets (Solid/Liquid)	51093, 1093, 1093SQ, 1095, 1095SQ, 1093DFP, 1095DFP, 1015		
		Water Closets (Flush Valves Dual Flow)	<mark>4.0</mark> / <mark>2.0</mark>	G
		1085, 1085SQ, 1085DFP, 1089, 1089SQ, 1089DFP		
02.	Kitchen	Single Lever Sink Mixers	2.5	G
	Faucets	38173B, 39173B, 40173B, 81173B, 29163, 29009B, 29173B, 6163, 6173B, 5163, 5166, 5173B, 5179B, 5007B, 5009B, 3163, 3173B	6.0	GA
		33163, 33173B, 10173BPM , 15173BPM	8.0	GB
			13.0	GC
		Sink Mixers	3.8	GD
	6309, 7309, 5309N, 5309ND, 5319NB, 23309, 23309B, 23321B, 309KN, 309KNB, 319KN, 319KNB, 321KNB, 3309, 3319		1.3	GE
		Sink Cocks 6347, 6357, 6359, 7347, <mark>5347N,</mark> 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	6.0 8.0	GA GB
		19309, 6309SE	3.8	GD
		38347, 39347, 37347		
		19347, 6347SE		

(Contd 4)



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03.	Lavatory	Pillar Cocks / Basin Taps	2.5	G
_	Faucets	35001F, 35021F, 29001, 29021, 6011, 6021, 7011, <mark>5011N, 5</mark> 021N, 5031, 35021F, 031, 031L65, 83011	6.0	GA
		23011, 23021, 23123 / 23127, 021KN, 123BKN, 127BKN, 33011,	8.0	GB
		33021	13.0	GC
		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	3.8 1.3	GD GE
		Central Hole / 3-Hole Basin Mixers35167FB, 35169FB, 7167B, 7169B, 7189, 7191, 7171, 7173,5167NB, 5169NB23167B, 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	2.5	G
	7429, 7463, 29429, 29463, 35429, 35463, 81429, 81463, 37429.	6.0	GA
	37463, 29135, 29137, 49429, 49463, 35135F, 35137F, 85429, 85463, 10429PM, 10463PM, 15429PM, 15463PM, 429, 433, 463,	8.0	GB
	439, 461, 467	13.0	GC
	5429, 5463, 6135, 6137, 6435, 6437, 5123, 5133, 5135, 5137,	3.8	GD
	5435N, 5437N	1.3	GE
	Products fitted with Permix Size 18x1 / 20x1		
	Pillar Cocks / Basin Tap	6.0	GA
	38011, 38021, 39011, 39021, 40011, 40021, 37001, 37021, 81001, 81021, 5015, 49001, 49021, 061, 85001, 85021, 15001PM, 15021PM, 10001PM, 10021PM, 35001PM, 35021PM 6011SE, 19011	8.0 3.8	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	6.0	GA
		1603, 1605, 1613, <mark>1619,</mark> 1623, 1629, 1633, 1635, 1637, 1639,	8.0	GB
		1709, 1719, 1755, 1757, 1759, 1769, 1779, 1787, 1789, 1799, 1843, 1985, 1989, 497N, 35495, 35497, 1801, 1995, 1999	12.0	GC
		Hand Showers		
		1717, 1721, 1727, 1729, 1731, 1737, 1739, 1797, 85537, 1653, 1655, 1657, 5537N, 35537, 49537, 9537N, 1929, 1931, 1937, 1939, 1981, 5541		
06.	Health Faucet	583, 585, 565, 563, 573, 577, 579, 583, 593N	3.8	GD
			6.0	GA
			8.0	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



