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**DEPARTMENT OF PUBLIC HEALTH AND PREVENTIVE MEDICINE**

R.No.1429/C/2022 (TNR/2447 to TNR/2455), Dated: 05.01.2023.

**From**

**To**

**Tmt. L.Sujatha, M.Sc., M.A., B.Ed.,**  
CHIEF WATER ANALYST,  
Chief Water Analysis Laboratory,  
King Institute Campus, Guindy,  
Chennai – 600 032.

The Commissioner,  
Ambur Municipality,  
Ambur,  
Thirupathur District.

**Sir,**

**Subject:** Report on examination of Water samples from The Ambur Municipality, Thirupathur District, Collected on 06.12.2022.

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Ambur Municipality in Thirupathur District derives its drinking water supply from Hokenakkal CWSS scheme water (Source: Cauvery river).

**Water Supply:**

The Cauvery composite water supply scheme water from Hokenakkal is received in GLR at Samiyar Madam having 32.75 lakhs litres capacity and then pumped into the following 12 OHTs.

S.No.	Location of OHT	Litres in Capacity
1.	Kambikollai OHT	2,50,000
2.	Kareem Nagar OHT	20,00,000
3.	K.M. Nagar OHT	7,00,000
4.	"B".Kaspa OHT	3,00,000
5.	Alagapuri OHT	10,00,000
6.	ReddiThoppu OHT	2,00,000
7.	Bethlahem OHT	7,50,000
8.	"A" Kaspa OHT	4,00,000
9.	SananKuppam OHT	2,00,000
10.	Pavadithoppu OHT	7,50,000
11.	Rafiq Nagar OHT	5,00,000
12.	New Street OHT	5,00,000

**RESULTS OF EXAMINATION OF SAMPLES OF WATER**  
**From: The Ambur Municipality, Thirupathur District.**  
**Collected by: Thiru.S.A.Syed Altaf, H.I. Gr.I**

TNR- 2447      TNR-2448

Date of Collection :06.12.2022		CWSS	1 <sup>st</sup> tap near	Tap in	Tap in	Tap in	
Date of Receipt :07.12.2022		Cauvery	tap near	Santhapettai	Sunnambu	Kandapodi	
Source as per label		river water	Samiyar	Mosque	kara street	street	
		from GLR at	Madam OHT	street			
		Samiyar					
		Madam					
Bacteriological Examination	Total colonies per ml on agar at 37°C	50					
	MPN of Coliform bacteria per 100 ml.	240	0	0	0	0	
	Rapid Test for E.Coli	Positive					
	Results of vibrio test						
Physical Examination	Colour	Colourless	Colourless				
	Turbidity (Units)	5	5				
	Smell	None	None				
Chemical Examination (in mg/l).	Total Solids	360	350				
	Carbonate hardness as CaCO <sub>3</sub>	144					
	Non- Carbonate hardness as CaCO <sub>3</sub>	0					
	Total hardness as CaCO <sub>3</sub>	144					
	Chloride as Chlorine	32	30				
	Ammoniacal nitrogen						
	Albuminoid nitrogen						
	Oxygen absorbed (Tidy's test)	0.96	0.88				
	Nitrate-nitrogen	1.0					
	Acidity	} Phenolphthalein	0				
			as CaCO <sub>3</sub> } Methyl Orange	176			
	Fluoride as Fluorine	0.1					
	PH.	7.9	8.0				
	Iron as Fe Total	0.05	0.05				
	Ferrous						
	Manganese as Mn.						
	Qualitative- Nitrite nitrogen	Trace	Present				
Sulphate	Trace						
Phosphate	Trace						
Toxic substances							
Electrical conductivity (Reciprocal megohms/Cm <sup>2</sup> at 25°C)	520	500					
Microscopical Examination	Monas, Phacus, & Amorphous matter	Amorphous matter					

Available Chlorine in Sodium Hypochlorite solution is 5.8% by Mass

From the above OHTs, the drinking water is distributed to the Public through tap points after chlorination.

It is stated that, the water supply is being maintained once in 2 days by adopting zonal system.

Twenty five samples of water for Bacteriological analysis and nine samples of water for chemical and biological analysis were collected on 06.12.2022 in connection with the periodical monitoring of drinking water quality.

The results of analysis are furnished overleaf.

**1. Water from GLR at Samiyar Madam (Source: Cauvery river) (TNR/2447):**

The sample of water is colourless and clear in physical appearance.

Judged by the results of analysis, it is satisfactory of chemical quality for drinking purpose on this occasion.

But it is of poor bacteriological quality due to the presence of E-coli-I organisms of faecal origin.

It also shows few microscopical organisms.

**2. Water from Ist tap after Samiyar Madam OHT (TNR/2448):**

**3. Water from Ist tap after Kareem Nagar OHT (TNR/2449):**

**4. Water from Ist tap after "A" Kaspas OHT (TNR/2450):**

**5. Water from Ist tap after "B" Kaspas OHT (TNR/2451):**

**6. Water from Ist tap after K.M.Nagar OHT (TNR/2452):**

**7. Water from Ist tap after Pethlahem OHT (2 lakh capacity) (TNR/2453):**

**8. Water from Ist tap after Pethlahem OHT (7.5 lakh capacity) (TNR/2454):**

**9. Water from Ist tap after Alagapurai OHT (TNR/2455):**

The above eight samples of water are colourless and clear in physical appearance.

All the above samples of water smelt chlorinous and recorded residual chlorine between 1 ppm and 2 ppm, except the samples of water from Samiyar madam OHT, Kareem Nagar OHT and "B" Kaspas OHT have not recorded a residual chlorine.

Judged by the results of analysis, they are of satisfactory chemical, bacteriological and biological quality for drinking purpose on this occasion.

The samples of water collected from all the distribution tap points are satisfactory of bacteriological quality on this occasion.

The sample of Sodium Hypo chlorite solution collected from the stock contains **5.8%** of available chlorine content. It is satisfactory quality for water disinfection purpose. However it should be preserved in airtightly in a dark place so as to prevent depletion of chlorine content.

## RESULTS OF EXAMINATION OF SAMPLES OF WATER

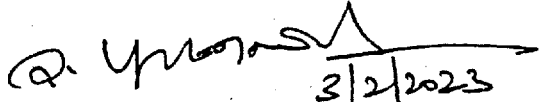
**From: The Ambur Municipality, Thirupathur District.**

**Collected by: Thiru.S.A.Syed Altaf, H.I. Gr.I**

		TNR- 2449				TNR-2450
Date of Collection : 06.12.2022		1 <sup>st</sup> tap near Kareem Nagar OHT	Tap in O.V. road	Tap in Thangalthiy a street	Tap in Perumal koil street	1 <sup>st</sup> tap near "A" Karpa OHT
Date of Receipt : 07.12.2022						
Source as per label						
Bacteriological Examination	Total colonies per ml on agar at 37°C					
	MPN of Coliform bacteria per 100 ml.	0	0	0	0	0
	Rapid Test for E.Coli					
	Results of vibrio test					
Physical Examination	Colour	Colourless				Colourless
	Turbidity (Units)	5				5
	Smell	None				Chlorinous (2 ppm)
Chemical Examination (in mg/l).	Total Solids	350				360
	Carbonate hardness as CaCO <sub>3</sub>					
	Non- Carbonate hardness as CaCO <sub>3</sub>					
	Total hardness as CaCO <sub>3</sub>					
	Chloride as Chlorine	30				32
	Ammoniacal nitrogen					
	Albuminoid nitrogen					
	Oxygen absorbed (Tidy's test)	0.8				0.0
	Nitrate-nitrogen					
	Acidity as CaCO <sub>3</sub>	} Phenolphthalein Methyl Orange				
	Fluoride as Fluorine					
	PH.	7.9				7.9
	Iron as Fe Total	0.05				0.05
	Ferrous					
	Manganese as Mn.					
	Qualitative- Nitrite nitrogen	Present				Nil
	Sulphate					
Phosphate						
Toxic substances						
Electrical conductivity (Reciprocal megohms/Cm <sup>2</sup> at 25°C)	500				510	
Microscopical Examination		Amorphous matter				Amorphous matter

**The following suggestions are offered for immediate implementation to ensure hygienic safety of drinking water supply:**

1. Unwanted vegetation noticed in the premises of OHTs at Kareem Nagar, K.M. Nagar, 'B' Kaspas, 'A' Kaspas, Samiyar Madam and Samiyar Madam GLR should be removed immediately and their surroundings should be kept clean and tidy as per sanitary specifications.
2. Stop cock and platform with drain should be provided to all public fountains to prevent wastage of drinking water and the possible vector borne diseases due to the breeding of mosquitoes in the stagnant water.
3. All the Sumps and OHTs should be scrubbed and cleaned with strong solution of BIS grade bleaching powder periodically so as to ensure hygienic safety of storage units.
4. A separate stock register showing the particulars of procurement of bleaching powder, stock on hand, daily usage for chlorination, date of cleaning of OHT, scouring of pipelines etc., should be maintained for the perusal of inspecting authorities.

  
3/2/2023  
CHIEF WATER ANALYST,  
Chief Water Analysis Laboratory,  
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Duh  
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9203  
3/2/23

Copy submitted to: The Director of Public Health and Preventive Medicine,  
Anna Salai, Chennai – 6.

The Joint Director of Public Health and Preventive  
Medicine (Epidemic),  
Anna Salai, Chennai – 6.

The Commissioner of Municipal Administration,  
No.75, Santhome High Road, MRC Nagar, Chennai – 28.

Copy to: The Deputy Director of Health Services, Thirupathur District.  
The Municipal Engineer, Ambur Municipality,  
Ambur, Thirupathur District.  
The Lab and File.

**RESULTS OF EXAMINATION OF SAMPLES OF WATER**  
**From: The Ambur Municipality, Thirupathur District.**  
**Collected by: Thiru.S.A.Syed Altaf. H.I. Gr.I**

TNR-2451

Date of Collection : 06.12.2022		Tap in Bharvesh-warappa street	Tap in Kamaraj Nagar	Tap in Sengundar 1 <sup>st</sup> street	1 <sup>st</sup> tap near "B" Karpa OHT	Tap in Kumaresan street
Date of Receipt : 07.12.2022						
Source as per label						
Bacteriological Examination	Total colonies per ml on agar at 37°C					
	MPN of Coliform bacteria per 100 ml.	0	0	0	0	0
	Rapid Test for E.Coli					
	Results of vibrio test					
Physical Examination	Colour				Colourless	
	Turbidity (Units)				5	
	Smell				None	
Chemical Examination (in mg/l).	Total Solids				360	
	Carbonate hardness as CaCO <sub>3</sub>					
	Non- Carbonate hardness as CaCO <sub>3</sub>					
	Total hardness as CaCO <sub>3</sub>					
	Chloride as Chlorine				32	
	Ammoniacal nitrogen					
	Albuminoid nitrogen					
	Oxygen absorbed (Tidy's test)				0.72	
	Nitrate-nitrogen					
	Acidity	} Phenolphthalein				
	as CaCO <sub>3</sub>		} Methyl Orange			
	Fluoride as Fluorine					
	PH.				7.9	
	Iron as Fe Total				0.05	
	Ferrous					
	Manganese as Mn.					
	Qualitative- Nitrite nitrogen				Trace	
	Sulphate					
	Phosphate					
	Toxic substances					
Electrical conductivity (Reciprocal megohms/Cm <sup>3</sup> at 25°C)				510		
Microscopical Examination				Amorphous matter		

**RESULTS OF EXAMINATION OF SAMPLES OF WATER**  
**From: The Ambur Municipality, Thirupathur District.**  
**Collected by: Thiru.S.A.Syed Altaf, H.I. Gr.I**

		TNR- 2452			TNR-2453	
Date of Collection : 06.12.2022		Tap in TNHB Quarters	Tap in K.M.Samy Nagar	1 <sup>st</sup> tap near K.M.Nagar 1 <sup>st</sup> street OHT	Tap in K.M.Samy Nagar 6 <sup>th</sup> street	1 <sup>st</sup> tap near Pethlahem OHT (2 Lakh)
Date of Receipt : 07.12.2022						
Source as per label						
Bacteriological Examination	Total colonies per ml on agar at 37°C					
	MPN of Coliform bacteria per 100 ml.	0	0	0	0	0
	Rapid Test for E.Coli					
	Results of vibrio test					
Physical Examination	Colour			Colourless		Colourless
	Turbidity (Units)			5		5
	Smell			Chlorinous (2 ppm)		Slightly Chlorinous (1 ppm)
Chemical Examination (in mg/l).	Total Solids			390		370
	Carbonate hardness as CaCO <sub>3</sub>					
	Non- Carbonate hardness as CaCO <sub>3</sub>					
	Total hardness as CaCO <sub>3</sub>					
	Chloride as Chlorine			38		38
	Ammoniacal nitrogen					
	Albuminoid nitrogen					
	Oxygen absorbed (Tidy's test)			0.0		0.0
	Nitrate-nitrogen					
	Acidity } Phenolphthalein as CaCO <sub>3</sub> } Methyl Orange					
	Fluoride as Fluorine					
	PH.			8.1		8.0
	Iron as Fe Total			0.05		0.05
	Ferrous					
	Manganese as Mn.					
	Qualitative- Nitrite nitrogen			Nil		Nil
	Sulphate					
	Phosphate					
	Toxic substances					
Electrical conductivity (Reciprocal megohms/Cm <sup>2</sup> at 25°C)			560		530	
Microscopical Examination			Amorphous matter		Amorphous matter	

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**RESULTS OF EXAMINATION OF SAMPLES OF WATER**  
**From: The Ambur Municipality, Thirupathur District.**  
**Collected by: Thiru.S.A.Syed Altaf, H.I. Gr.I**

		TNR-2454		TNR-2455			
Date of Collection : 06.12.2022		Tap in Reddy thoppu	1 <sup>st</sup> tap near Pethlahem OHT (7.5 Lakh)	Tap in Vadakku veethi 1 <sup>st</sup> street	1 <sup>st</sup> tap near Alagapuri OHT	Tap in Ananda Nagar	
Date of Receipt : 07.12.2022							
Source as per label						Maximum permissible limit for drinking water as per BIS 10500/1991	
Bacteriological Examination	Total colonies per ml on agar at 37°C					20	
	MPN of Coliform bacteria per 100 ml.	0	0	0	0	0	
	Rapid Test for E.Coli					absent	
	Results of vibrio test						
Physical Examination	Colour		Colourless		Colourless	Colourless	
	Turbidity (Units)		5		5	10	
	Smell		Slightly Chlorinous (1 ppm)		Slightly Chlorinous (1 ppm)	None	
Chemical Examination (in mg/l).	Total Solids		360		360	2000	
	Carbonate hardness as CaCO <sub>3</sub>					-	
	Non- Carbonate hardness as CaCO <sub>3</sub>					-	
	Total hardness as CaCO <sub>3</sub>					600	
	Chloride as Chlorine		38		36	1000	
	Ammoniacal nitrogen					Nil	
	Albuminoid nitrogen					Nil	
	Oxygen absorbed (Tidy's test)		0.0		0.0	1.0	
	Nitrate-nitrogen					10	
	Acidity	} Phenolphthalein Methyl Orange					-
	as CaCO <sub>3</sub>						600
	Fluoride as Fluorine					1.5	
	PH.		7.9		7.9	6.5-8.5	
	Iron as Fe Total		0.05		0.05	0.3	
	Ferrous					Nil	
	Manganese as Mn.					0.3	
	Qualitative- Nitrite nitrogen		Nil		Nil	Trace	
	Sulphate					Present	
	Phosphate					Trace	
Toxic substances							
Electrical conductivity (Reciprocal megohms/Cm <sup>3</sup> at 25°C)		520		510		-	
Microscopical Examination		Amorphous matter		Amorphous matter			