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## DEPARTMENT OF PUBLIC HEALTH AND PREVENTIVE MEDICINE

**From:**

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**To:**

The Commissioner,  
Ambur Municipality,  
Ambur – 635 802  
Thirupathur District.

**R.No.1429/C/2022 (TNR831 to 838) Dated : 13.07.2022**

Sir,

Subject: Report on examination of Water samples from The Ambur  
Municipality, Thirupathur District, Collected on 18.05.2022.

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

### **Water Supply:**

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

The details are as follows.

1. Kambikollai OHT	2,50,000	Litres Capacity
2. Kareem Nagar OHT	20,00,000	Litres Capacity
3. K.M. Nagar OHT	7,00,000	Litres Capacity
4. "B".Kaspa OHT	3,00,000	Litres Capacity
5. Alagapuri OHT	10,00,000	Litres Capacity
6. ReddiThoppu OHT	2,00,000	Litres Capacity
7. Bethlahem OHT	7,50,000	Litres Capacity
8. "A" Kaspa OHT	4,00,000	Litres Capacity
9. SananKuppam OHT	2,00,000	Litres Capacity
10. Pavadithoppu OHT	7.50,000	Litres Capacity
11. Rafiq NagarOHT	5,00,000	Litres Capacity
12. New Street OHT	5,00,000	Litres Capacity

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

**RESULTS OF EXAMINATION OF SAMPLES OF WATER**  
**From: The Ambur Municipality, Ambur, Thirupathur District.**  
**Collected by: Thiru.K.Anandan H.I Gr.I**

TNR/831 TNR/832

Date of Collection : 18.05.2022 Date of Receipt : 19.05.2022 Source as per label		CWSS water from GLR @ Samiyar Madam	1 <sup>st</sup> tap after Sanar Kuppam OHT	Tap in S.V Koil Street	Tap in Ammai appan Street	Maximum permissible limit for drinking water as per BIS 10500/1991
Bacteriological Examination	Total colonies per ml. on agar at 37°C	110				20
	MPN of Coliform bacteria per 100 ml.	150	0	0	0	0
	Rapid Test for E.Coli.I	Positive				absent
	Nature of coliform bacteria isolated Results of vibrio test					
Physical Examination	Colour	Colourless	Colourless			Colourless
	Turbidity (Units)	5	5			10
	Smell	None	Strongly Chlorinous (38.27mg/l)			None
Total Solids	Total Solids	290	1110			2000
	Carbonate hardness as CaCO <sub>3</sub>	134				-
	Non- Carbonate hardness as CaCO <sub>3</sub>	0				-
	Total hardness as CaCO <sub>3</sub>	134				600
	Chloride as Chlorine	35	290			1000
	Ammoniacal Nitrogen	-				Nil
	Albuminoid Nitrogen	-				Nil
	Oxygen absorbed (Tidy's test)	0.72	0.0			-
	Nitrate-Nitrogen	0.5				10
	Alkalinity } Phenolphthalein as CaCO <sub>3</sub> } Methyl Orange	0				-
		152				600
	Fluoride as Fluorine	0.2				1.5
	PH.	7.7	10.4			6.5-8.5
	Iron as Fe Total	0.05	0.05			0.3
	Ferrous					Nil
	Manganese as Mn.					0.3
	Qualitative- Nitrite Nitrogen	Trace	Nil			Trace
	Sulphate	Trace				Present
	Phosphate	Trace				Trace
	Toxic Substances					
Electrical Conductivity (Reciprocal megohms Cm <sup>2</sup> at 20°C)	410	1590			-	

Microscopical Examination Amorphous matter  
**Bleaching powder available chlorine % by mass 9.2**

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

22 samples of water for Bacteriological analysis and 8 samples of water for chemical and biological analysis were collected on 18.05.2022 from the Municipality in connection with the periodical monitoring of drinking water quality.

The results of analysis are furnished overleaf.

**1. CWSS water (Source : Cauvery river water) from GLR in Samiyar Madam (TNR/831):**

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

Chemical analysis reveals that it is of satisfactory chemical quality for drinking purpose on this occasion.

But it is of poor bacteriological quality due to the presence of coliform group of organisms.

**2. Water from Ist tap after SanarKuppamOHT (TNR/832):**

The sample of water is colourless and clear in physical appearance with strongly chlorinous odour (Residual chlorine 38.27mg/l) and pH value (10.4). It is due to haphazard chlorination at the OHT. Hence consumption of such high residual chlorine water with this pH value will leads to Diarrhea, vomiting, throat irritation, stomach ailments and also skin burns when contacted among consumers. In this condition, this water is unsuitable for drinking.

It is therefore advised to use only 4 gms of BIS grade Bleaching powder or 20 ml of 4 to 6% Sodium hypochlorite solution for every 1000 litres of water at the storage unit (OHT) and give half an hour contact time before the distribution.

**3. Water from Ist tap after V.A. Kareem Nagar OHT (TNR/833):**

**4. Water from Ist tap after "A" Kaspas OHT (TNR/834):**

**5. Water from Ist tap after "B" Kaspas OHT (TNR/835):**

**6. Water from Ist tap after K.M.NagarOHT (TNR/836):**

**7. Water from Ist tap after Samiyar madam OHT (TNR/837):**

**8. Water from Ist tap after AlagapuraiOHT (TNR/838):**

The above six samples of water are colourless and clear in physical appearance with chlorinous odour (RC: between 1 ppm to 2 ppm).

**RESULTS OF EXAMINATION OF SAMPLES OF WATER**  
**From: The Ambur Municipality, Ambur, Thirupathur District.**  
**Collected by: Thiru.K.Anandan H.I Gr.I**

TNR/833

TNR/834

Date of Collection : 18.05.2022		1 <sup>st</sup> tap after V.A Kareem Nagar OHT	Tap in Mettu Street	Tap in Raha maniya Nagar	1 <sup>st</sup> tap after "A' Kaspa OHT	Maximum permissible limit for drinking water as per BIS 10500/1991
Date of Receipt : 19.05.2022						
Source as per label						
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.I					absent
	Nature of coliform bacteria isolated Results of vibrio test					
Physical Examination	Colour	Colourless			Colourless	Colourless
	Turbidity (Units)	5			5	10
	Smell	Chlorinous (2ppm)			Sl.Chlorinou s (1ppm)	None
	Total Solids	360			290	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	54			40	1000
	Ammoniacal Nitrogen					Nil
	Albuminoid Nitrogen					Nil
	Oxygen absorbed (Tidy's test)	0.0			0.0	-
	Nitrate-Nitrogen					10
	Alkalinity } Phenolphthalein as CaCO <sub>3</sub> } Methyl Orange					-
						600
	Fluoride as Fluorine					1.5
	PH.	8.3			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 megnohms Cm <sup>3</sup> at 20°C)	520			420	-
Microscopical Examination		Amorphous matter			Amorphous matter	

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

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

The sample of Bleaching powder collected from the stock contains only 9.2% of available chlorine content as against the permissible limit of 32% of Chlorine content prescribed for drinking water disinfection purposes as per BIS. It is **Inert and unsatisfactory quality** for water disinfection purpose.

It is advised that action may taken to procure fresh stock of BIS grade bleaching powder having 32-34% of chlorine content or 4-6% sodium hypochlorite solution and used for systematic and uninterrupted chlorination to ensure hygienic safety at all times.

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

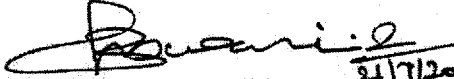
1. Unwanted vegetation noticed in the premises of OHTs at Kareem Nagar, K.M. Nagar, 'B' Kaspaa, Alagapuri and Samiyar Madam GLR should be removed immediately and their surroundings should be kept clean and tidy as per sanitary specifications.
2. Proper fencing/compound wall should be provided to K.M. Nagar OHT, Sanankuppam OHT and 'B' Kaspaa OHT to prevent the entry of strangers/cattle and to prevent the extraneous contamination of drinking water.
3. Stop cock and platform with drain should be provided to all public fountains and especially Marutham Nagar and to prevent wastage of drinking water and the possible vector borne diseases due to the breeding of mosquitoes in the stagnant water.
4. It is advised that health education should be given to the public to prevent the wastage of safe drinking water from the public taps.
5. 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.

**RESULTS OF EXAMINATION OF SAMPLES OF WATER**  
**From: The Ambur Municipality, Ambur, Thirupathur District.**  
**Collected by: Thiru.K.Anandan H.I Gr.I**

TNR/835

Date of Collection : 18.05.2022 Date of Receipt : 19.05.2022 Source as per label		Tap in Pasaverappa Street	Tap in Kamarajar Nagar	1 <sup>st</sup> tap after "B" Kaspas OHT	Tap in Ellai Amman Koil Street	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.I					absent	
	Nature of coliform bacteria isolated Results of vibrio test						
Physical Examination	Colour			Colourless		Colourless	
	Turbidity (Units)			5		10	
	Smell			Sl.Chlorinou s (1ppm)		None	
	Total Solids			290		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			36		1000	
	Ammoniacal Nitrogen					Nil	
	Albuminoid Nitrogen					Nil	
	Oxygen absorbed (Tidy's test)			0.0		-	
	Nitrate-Nitrogen					10	
	Alkalinity } as CaCO <sub>3</sub> }	Phenolphthalein Methyl Orange					-
							600
	Fluoride as Fluorine					1.5	
	PH.			7.9		6.5-8.5	
	Iron as Fe Total			0.05		0.3	
		Ferrous					Nil
	Manganese as Mn.					0.3	
	Qualitative- Nitrite Nitrogen			Nil		Trace	
Sulphate					Present		
Phosphate					Trace		
Toxic Substances							
Electrical Conductivity (Reciprocal megnohms Cm <sup>3</sup> at 20°C)			410		-		
Microscopical Examination						Amorphous matter	

6. 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.

*for*   
24/11/2021  
CHIEF WATER ANALYST  
Chief Water Analysis Laboratory,  
Guindy, Chennai -32  
*9/10/2021*

Copy submitted to: The Director of Public Health and Preventive Medicine,  
Anna Salai, Chennai – 6.  
The Joint Director of Public Health and Preventive Medicine  
(Epidemics), Anna Salai, Chennai -6  
The Commissioner of Municipal Administration, 75, MRC  
Nagar, Santhome High Road, Chennai – 28.  
*Copy to:* The Municipal Engineer, Ambur Municipality, Ambur,  
Thirupathur District.  
The Deputy Director of Health Services, Thirupathur,  
Thirupathur District.  
The Lab and File.

T.S 14/7

**RESULTS OF EXAMINATION OF SAMPLES OF WATER**  
**From: The Ambur Municipality, Ambur, Thirupathur District.**  
**Collected by: Thiru.K.Anandan H.I Gr.I**

TNR/836

Date of Collection : 18.05.2022		Tap in Kavarai Street	1 <sup>st</sup> tap K.M Nagar OHT	Tap in Maruthuva Nagar	Tap in Hanees Manai	Maximum permissible limit for drinking water as per BIS 10500/1991
Date of Receipt : 19.05.2022						
Source as per label						
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.I					absent
	Nature of coliform bacteria Isolated Results of vibrio test					
Physical Examination	Colour		Colourless			Colourless
	Turbidity (Units)		5			10
	Smell		Sl.Chlorinous (1ppm)			None
	Total Solids		290			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		34			1000
	Ammoniacal Nitrogen					Nil
	Albuminoid Nitrogen					Nil
	Oxygen absorbed (Tidy's test)		0.0			-
	Nitrate-Nitrogen					10
	Alkalinity } Phenolphthalein as CaCO <sub>3</sub> } Methyl Orange					-
	Fluoride as Fluorine					600
	PH.		7.8			1.5
	Iron as Fe Total		0.05			6.5-8.5
	Ferrous					0.3
	Manganese as Mn.					Nil
	Qualitative-Nitrite Nitrogen		Nil			0.3
	Sulphate					Trace
	Phosphate					Present
	Toxic Substances					Trace
	Electrical Conductivity (Reciprocal megohms Cm <sup>3</sup> at 20°C)		410			
Microscopical Examination						-
			Amorphous matter			



**RESULTS OF EXAMINATION OF SAMPLES OF WATER**  
**From: The Ambur Municipality, Ambur, Thirupathur District.**  
**Collected by: Thiru.K.Anandan H.I Gr.I**

TNR/837

TNR/838

Date of Collection : 18.05.2022		1 <sup>st</sup> tap after Samiyar Madam OHT	Tap in Perumal Koil Street	Tap in Gangai Amman Koil Street	1 <sup>st</sup> tap after Alagapurai OHT	Maximum permissible limit for drinking water as per BIS 10500/1991
Date of Receipt : 19.05.2022						
Source as per label						
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.1					absent
	Nature of coliform bacteria isolated Results of vibrio test					
Physical Examination	Colour	Colourless			Colourless	Colourless
	Turbidity (Units)	5			5	10
	Smell	Sl.Chlorinous (1ppm)			Sl.Chlorinou s (1ppm)	None
	Total Solids	290			290	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	34			44	1000
	Ammoniacal Nitrogen					Nil
	Albuminoid Nitrogen					Nil
	Oxygen absorbed (Tidy's test)	0.0			0.0	-
	Nitrate-Nitrogen					10
	Alkalinity } Phenolphthalein as CaCO <sub>3</sub> } Methyl Orange					- 600
	Fluoride as Fluorine					1.5
	PH.	7.8			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>2</sup> at 20°C)	410			420	-	

Microscopical Examination

Amorphous matter

Amorphous matter

**RESULTS OF EXAMINATION OF SAMPLES OF WATER**  
**From: The Ambur Municipality, Ambur, Thirupathur District.**  
**Collected by: Thiru.K.Anandan H.I Gr.I**

Date of Collection : 18.05.2022		Tap in Anandha Nagar 2 <sup>nd</sup> Street	Tap in S.K Road			Maximum permissible limit for drinking water as per BIS 10500/1991	
Date of Receipt : 19.05.2022							
Source as per label							
Bacteriological Examination	Total colonies per ml. on agar at 37°C					20	
	MPN of Coliform bacteria per 100 ml.	0	0			0	
	Rapid Test for E.Coli.I					absent	
	Nature of coliform bacteria isolated Results of vibrio test						
Physical Examination	Colour					Colourless	
	Turbidity (Units)					10	
	Smell					None	
	Total Solids					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					1000	
	Ammoniacal Nitrogen					Nil	
	Albuminoid Nitrogen					Nil	
	Oxygen absorbed (Tidy's test)					-	
	Nitrate-Nitrogen					10	
	Alkalinity } as CaCO <sub>3</sub> } Phenolphthalein Methyl Orange						-
							600
	Fluoride as Fluorine					1.5	
	PH.					6.5-8.5	
	Iron as Fe Total						0.3
		Ferrous					Nil
	Manganese as Mn.						0.3
	Qualitative- Nitrite Nitrogen						Trace
Sulphate						Present	
Phosphate						Trace	
Toxic Substances							
Electrical Conductivity (Reciprocal megohms Cm <sup>2</sup> at 20°C)						-	
Microscopical Examination							