



Centro de Biologia Experimental Oceanus Ltda

Laboratory of water analyses

REG.INEA:UN015590/55.11.30
CNPJ 28383198/0001-59 . INSC. MUN. 313818-6 Almirante Cochrane street, 37, Tijuca, CEP 20550-040
- Rio de Janeiro, RJ, Tel-Fax- (55 - 21) 2567-0819 / 2567-3871

CERTIFICATION OF MEASUREMENT FOR WATER'S QUALITY

Nº 55944

ESTABLISHMENT'S DATA	
CORPORATE NAME: C & C TECHNOLOGIES DO BRASIL LTDA	
NICKNAME: C & C TECHNOLOGIES	
ADDRESS: MAURÍCIO SILVA TELES STREET, 95 / 230	
NEIGHBORHOOD: BARRA DA TIJUCA	DISTRICT: RJ/RJ
CITY: RIO DE JANEIRO	CEP:
TELEPHONE: (21) 2408-6006	FAX:

DATA SAMPLE
SHIP: RIG SUPPORTER
HARBOR: GIRASSOL

SAMPLE DATA	
COLLECTION POINT: PRINCIPAL TANK	
SAMPLE ORIGIN: TREATED WATER	
COLLECTION RESPONSABLE NAME: THAIS ROSSINI	VOLUME: 200 mL
SAMPLING HOUR: 18:20	SAMPLING DATE: 12.28.11
ARRIVAL HOUR IN LABORATORY: 19:20	ARRIVAL DATE IN LABORATORY: 12.28.11

ANALYTICAL RESULTS OF THE SAMPLE				
Physico-chemical				
Parameters	Unit	Results ¹	MVA ²⁻³	QL ⁴
pH	-	6,5	6,0 – 9,5	-
Residual Chlorine(Cl ₂)	mg/L	0,04*	0,2 – 5,0	0,01
Turbidity	NTU	2,63	5	0,01
Total Iron (Fe)	mg/L	1,28	0,3	0,01
Chloride	mg/L	13,65	250	1
Hardness	mg/L	31,45	500	2
Total dissolved solids	mg/L	34	1000	2
Color	uH	10	15	5
Conductivity	µS/cm	91,83	-	0,01
Alkalinity	mg/L	5	-	2



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ADOPTED METHODS

Physical and Chemical Analyses:

pH: SMEWW 4500 H B – Eletrometric Method;
Iron: SMEWW 3500 Fe – Phenanthroline Method;
Chloride: SMEWW 4500 - Chloride;
Residual Chlorine: SMEWW 4500 G – Colorimetric Method;
Conductivity: SMWW 2510 B;
Color: SMEWW – 2120 B- Visual Comparison Method;
Turbidity: SMEWW 2130 B – Nephelometric Method;
Hardness: SMEWW 2340 C – EDTA Titrimetric Method;
Total dissolved solids: SMEWW 2540 B;
Alkalinity: SMEWW 2320 B – Titration Method;

REFERENCES

REFERENCES:

- 1- Officers: MS n^o 2914 ANVISA of Health Department of 12 December, 2011. Standard of water potability destined to the human consumption.
- 2- Analytical methodology: Standard Methods for Examination of Water and Wastewater 20th Edition – American Public Health Association – APHA.
- 3- Agriculture Department. National Secretariat of Farming Defense. Methods for Control of Products of Animal Origin and its ingredients. II Methods Physical and Chemical, 1981.

OBSERVATIONS

SUBTITLE:

- 1- Collected water referring results.
 - 2- MS N^o 2914 ANVISA/MS limits
 - 3 - MVA: Maximum value allowed
 - 4 - QL: Quantification limit
- MPN – Most Probable Number / CFU- colony forming units
Note 1: These results restrict only the analyzed water.
Note 2: This report can only be reproduced if complete.
Note 3: The sample's collection follows the described procedures in POP COL – 001.
Note 4: * Notice that the chlorine analysis of water coming from the filtration system is at concentrations below the reference according to MS n^o 2914 ANVISA. These concentrations are normal due to the components of filter system.

ANALYSES FINDING

Report: The analyzed water is not in the limits established for MS N.^o 2914 ANVISA

Rio de Janeiro, January 05th, 2012.

PhD Ronaldo Leão
Technical responsible
CRBio-02339/85



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