



# 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 55957

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

DATA SAMPLE
<b>SHIP:</b> NORTHERN RESOLUTION
<b>HARBOR:</b> NITSHORE

SAMPLE DATA	
<b>COLLECTION POINT:</b> PRINCIPAL TANK	
<b>SAMPLE ORIGIN:</b> TRATED WATER	
<b>COLLECTION RESPONSABLE NAME:</b> THAIS ROSSINI	<b>VOLUME:</b> 2000 mL
<b>SAMPLING HOUR:</b> 15:13	<b>SAMPLING DATE:</b> 12.28.11
<b>ARRIVAL HOUR IN LABORATORY:</b> 19:20	<b>ARRIVAL DATE IN LABORATORY:</b> 12.28.11

ANALYTICAL RESEULTS OF THE SAMPLE				
Physico-chemical				
Parameters	Unit	Results <sup>1</sup>	MVA <sup>2-3</sup>	QL <sup>4</sup>
pH	-	6,6	6,0 – 9,5	-
Residual Chlorine(Cl <sub>2</sub> )	mg/L	0,03*	0,2 – 5,0	0,01
Turbidity	NTU	1,47	5	0,01
Total Iron (Fe)	mg/L	1,33	0,3	0,01
Chloride	mg/L	12,6	250	1
Hardness	mg/L	33,3	500	2
Total dissolved solids	mg/L	50	1000	2
Color	uH	10	15	5
Conductivity	µS/cm	79,11	-	0,01
Alkalinity	mg/L	7	-	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<sup>o</sup> 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<sup>o</sup> 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<sup>o</sup> 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.<sup>o</sup> 2914 ANVISA**

Rio de Janeiro, January 05<sup>th</sup>, 2012.

PhD Ronaldo Leão  
Technical responsible  
CRBio-02339/85



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