Centro de Biologia Experimental Oceanus Ltda
Laboratory of water analyses

REG.INEA:UN015590/55.11.10 CCL NºIN018913
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 N⁰ 62093

ESTABLISHMENT´S DATA	
CORPORATE NAME: C & C TECHNOLOGIES DO BRASIL LTDA	
NICKNAME: C & C TECHNOLOGIES	
ANDRESS: 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: NITSHORE

SAMPLE DATA	
SAMPLE ORIGIN: TRATED WATER	
COLLECTION POINT: WATER FOUNTAIN	
COLLECTION RESPONSABLE NAME: HAMILTON BARBOSA	**VOLUME:** 2100mL
SAMPLING HOUR: 16:35	**SAMPLING DATE:** 05.30.12
ARRIVAL HOUR IN LABORATORY: 18:20	**ARRIVAL DATE IN LABORATORY:** 05.30.12

ANALYTICAL RESEULTS OF THE SAMPLE

Physico-chemical Analysis

Parameters	Unit	Results[1]	MVA[2-3]	QL[4]
pH	-	7,9	6,0 – 9,5	-
Residual Chlorine(Cl2)	mg/L	< 0,01*	0,2 – 5,0	0,01
Turbidity	NTU	2,34	5	0,01
Total Iron (Fe)	mg/L	< 0,047	0,3	0,047
Chloride	mg/L	5,7	250	0,1
Hardness	mg/L	50	500	2
Total dissolved solids	mg/L	158	1000	2
Color	uH	< 5	15	5
Conductivity	µS/cm	92,30	-	0,01
Total alkalinity	mg/L	58	-	0,1

ADOPTED METHODS

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

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REFERENCES

1- Officers: MS n^0 2914 ANVISA of Health Department of 12th 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 Departament. 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 Nº 2914 ANVISA/MS limits
3 - MVA: Maximum value allowed

QL: Quantification limit
NUT – Unit of turbity

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: The sample data provided are the responsibility of the applicant.
Note 5: * Notice that the chlorine analysis of water coming from the filtration system is at concentrations below the reference according to MS nº 2914 ANVISA. These concentrations are normal due to the components of filter system.

ANALYSES FINDING

The analyzed water is in the limits established for MS N.^{0} 2914 ANVISA

Rio de Janeiro, June 05th, 2012.

PhD Ronaldo Leão
Technical responsible
CRBio-02339/85