



Laboratório de Ensaio acreditado
pela Cgcre/Inmetro de acordo com
a ABNT NBR ISO/IEC 17025.



Boletim de Ensaio

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Resp. Téc.: **Carina Casal**

Emitido em: **24/02/2011**

Lab-nº: **10/4048B**

Análise em amostras de solo

Cliente : Fundação Bio Rio / Petrobras – UN-BS
Endereço : Av. Carlos Chagas Filho, nº 791
Cidade Universitária - Rio de Janeiro - RJ
Localização do Projeto : Bacia de Santos
Data da Coleta : 29, 30 e 31.10, 01 e 02/11/2010
Entrega das amostras : 04/11/2010
Início dos ensaios/extração : 04/11/2010
Término dos ensaios : 24/02/2011

INNOLAB do Brasil Ltda.
Rua Sacadura Cabral - 236
Saúde - Rio de Janeiro - RJ
Cep. 20221-161
CNPJ. 04.183.043/0001-00
Tel. (21) 3509-1750
Fax (21) 2233-4621

Projeto : PAI-Projeto de Avaliação de Impactos da Bacia de Santos
Gerente do Projeto : Cristina Falcão

Parâmetro	RC-BS_1_R1 (0-2cm) (mg/kg)	RC-BS_1_R2 (0-2cm) (mg/kg)	RC-BS_1_R3 (0-2cm) (mg/kg)	RC-BS_2_R1 (0-2cm) (mg/kg)	L.Q (mg/kg)	L.D. (mg/kg)
TPH	nd	nd	nd	nd	2	1
Quantidade de amostras (g)	20	20	20	20		
Diluição (N.º vezes)	-	-	-	-		

Parâmetro	RC-BS_2_R2 (0-2cm) (mg/kg)	RC-BS_2_R3 (0-2cm) (mg/kg)	RC-BS_3_R1 (0-2cm) (mg/kg)	RC-BS_3_R2 (0-2cm) (mg/kg)	L.Q (mg/kg)	L.D. (mg/kg)
TPH	nd	nd	nd	nd	2	1
Quantidade de amostras (g)	20	20	20	20		
Diluição (N.º vezes)	-	-	-	-		



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Resp. Téc.: **Carina Casal**

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Parâmetro	RC-BS_3_R3 (0-2cm) (mg/kg)	RC-BS_4_R1 (0-2cm) (mg/kg)	RC-BS_4_R2 (0-2cm) (mg/kg)	RC-BS_4_R3 (0-2cm) (mg/kg)	L.Q (mg/kg)	L.D. (mg/kg)
TPH	nd	nd	nd	nd	2	1
Quantidade de amostras (g)	20	20	20	20		
Diluição (N.º vezes)	-	-	-	-		

Parâmetro	RC-BS_5_R1 (0-2cm) (mg/kg)	RC-BS_5_R2 (0-2cm) (mg/kg)	RC-BS_5_R3 (0-2cm) (mg/kg)	RC-BS_6_R1 (0-2cm) (mg/kg)	L.Q (mg/kg)	L.D. (mg/kg)
TPH	nd	nd	nd	nd	2	1
Quantidade de amostras (g)	20	20	20	20		
Diluição (N.º vezes)	-	-	-	-		



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Resp. Téc.: **Carina Casal**

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Parâmetro	RC-BS_6_R2 (0-2cm) (mg/kg)	RC-BS_6_R3 (0-2cm) (mg/kg)	RC-BS_7_R1 (0-2cm) (mg/kg)	RC-BS_7_R2 (0-2cm) (mg/kg)	L.Q (mg/kg)	L.D. (mg/kg)
TPH	nd	nd	nd	nd	2	1
Quantidade de amostras (g)	20	20	20	20		
Diluição (N.º vezes)	-	-	-	-		

Parâmetro	RC-BS_7_R3 (0-2cm) (mg/kg)	RC-BS_8_R1 (0-2cm) (mg/kg)	RC-BS_8_R2 (0-2cm) (mg/kg)	RC-BS_8_R3 (0-2cm) (mg/kg)	L.Q (mg/kg)	L.D. (mg/kg)
TPH	nd	nd	nd	nd	2	1
Quantidade de amostras (g)	20	20	20	20		
Diluição (N.º vezes)	-	-	-	-		



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Parâmetro	RC-BS_9_R1 (0-2cm) (mg/kg)	RC-BS_9_R2 (0-2cm) (mg/kg)	RC-BS_9_R3 (0-2cm) (mg/kg)	RC-BS_10_R1 (0-2cm) (mg/kg)	L.Q (mg/kg)	L.D. (mg/kg)
TPH	nd	nd	nd	nd	2	1
Quantidade de amostras (g)	20	20	20	20		
Diluição (N.º vezes)	-	-	-	-		

Parâmetro	RC-BS_10_R2 (0-2cm) (mg/kg)	RC-BS_10_R3 (0-2cm) (mg/kg)	RC-BS_11_R1 (0-2cm) (mg/kg)	RC-BS_11_R2 (0-2cm) (mg/kg)	L.Q (mg/kg)	L.D. (mg/kg)
TPH	13	<2	nd	nd	2	1
Quantidade de amostras (g)	20	20	20	20		
Diluição (N.º vezes)	-	-	-	-		



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Parâmetro	RC-BS_11_R3 (0-2cm) (mg/kg)	RC-BS_12_R1 (0-2cm) (mg/kg)	RC-BS_12_R2 (0-2cm) (mg/kg)	RC-BS_12_R3 (0-2cm) (mg/kg)	L.Q (mg/kg)	L.D. (mg/kg)
TPH	nd	nd	nd	nd	2	1
Quantidade de amostras (g)	20	20	20	20		
Diluição (N.º vezes)	-	-	-	-		

Parâmetro	RC-BS_13_R1 (0-2cm) (mg/kg)	RC-BS_13_R2 (0-2cm) (mg/kg)	RC-BS_13_R3 (0-2cm) (mg/kg)	RC-BS_14_R1 (0-2cm) (mg/kg)	L.Q (mg/kg)	L.D. (mg/kg)
TPH	nd	nd	nd	nd	2	1
Quantidade de amostras (g)	20	20	20	20		
Diluição (N.º vezes)	-	-	-	-		



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Parâmetro	RC-BS_14_R2 (0-2cm) (mg/kg)	RC-BS_14_R3 (0-2cm) (mg/kg)	RC-BS_15_R1 (0-2cm) (mg/kg)	RC-BS_15_R2 (0-2cm) (mg/kg)	L.Q (mg/kg)	L.D. (mg/kg)
TPH	nd	nd	nd	nd	2	1
Quantidade de amostras (g)	20	20	20	20		
Diluição (N.º vezes)	-	-	-	-		

Parâmetro	RC-BS_15_R3 (0-2cm) (mg/kg)	RC-BS_16_R1 (0-2cm) (mg/kg)	RC-BS_16_R2 (0-2cm) (mg/kg)	RC-BS_16_R3 (0-2cm) (mg/kg)	L.Q (mg/kg)	L.D. (mg/kg)
TPH	nd	nd	nd	nd	2	1
Quantidade de amostras (g)	20	20	20	20		
Diluição (N.º vezes)	-	-	-	-		



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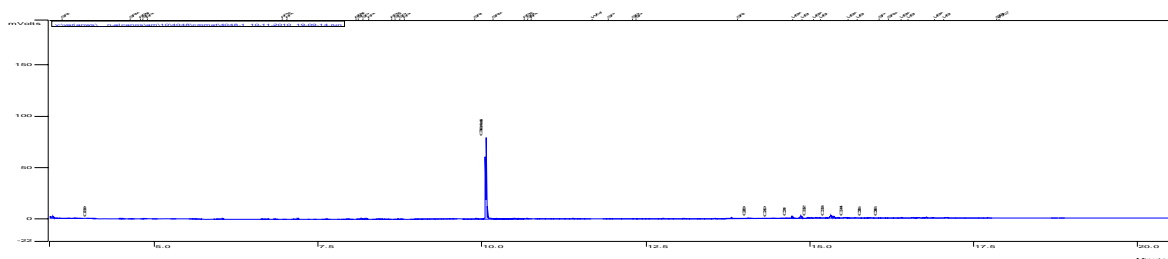
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Resp. Téc.: **Carina Casal**

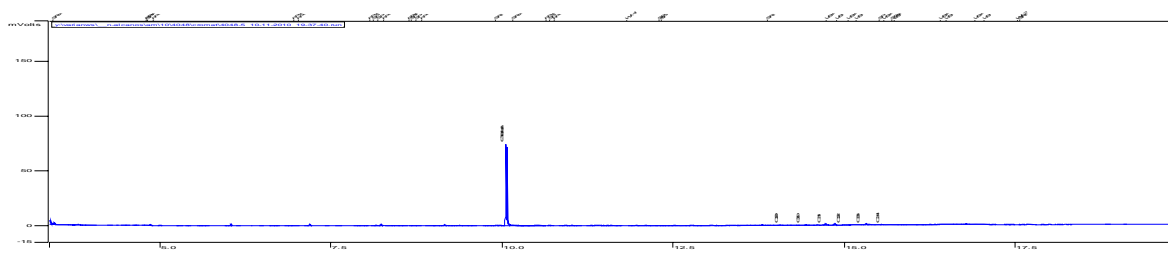
Emitido em: **24/02/2011**

Lab-nº: **10/4048B**

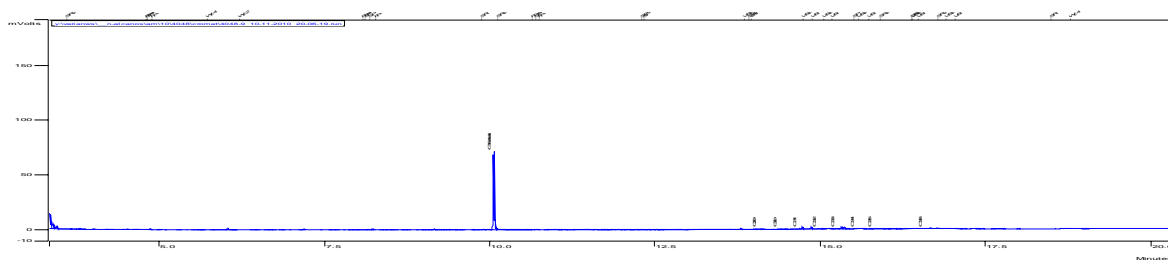
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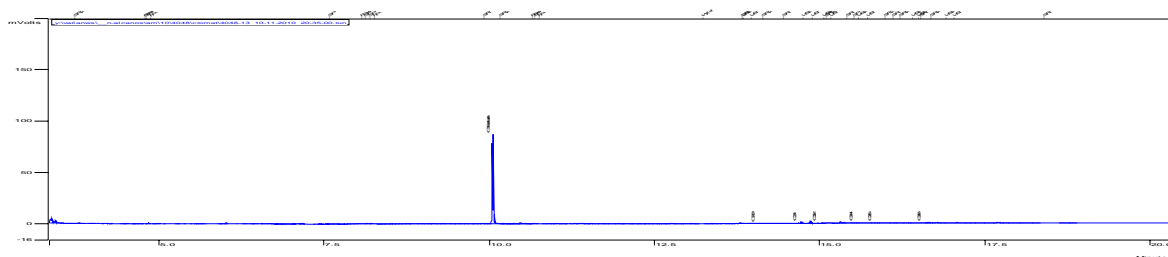
RC-BS_1_R2 (0-2cm)



RC-BS_1_R3 (0-2cm)



RC-BS_2_R1 (0-2cm)



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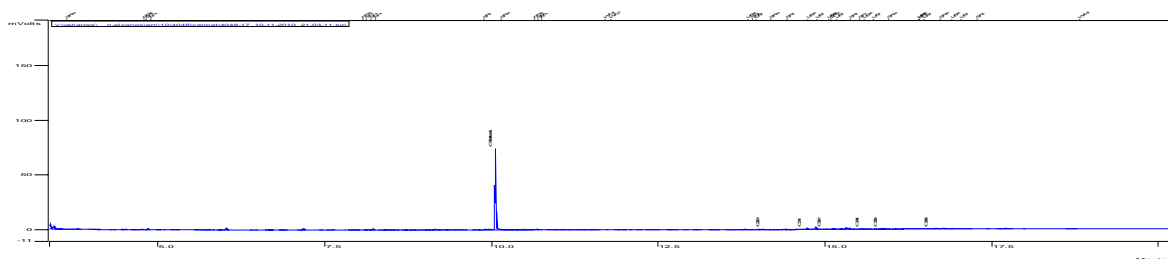
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Resp. Téc.: **Carina Casal**

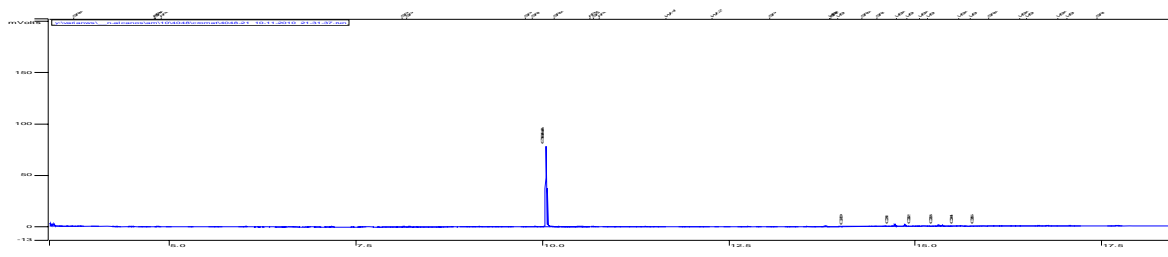
Emitido em: **24/02/2011**

Lab-nº: **10/4048B**

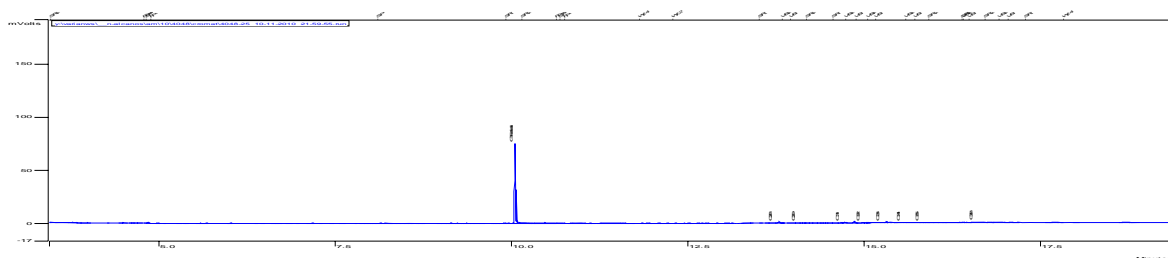
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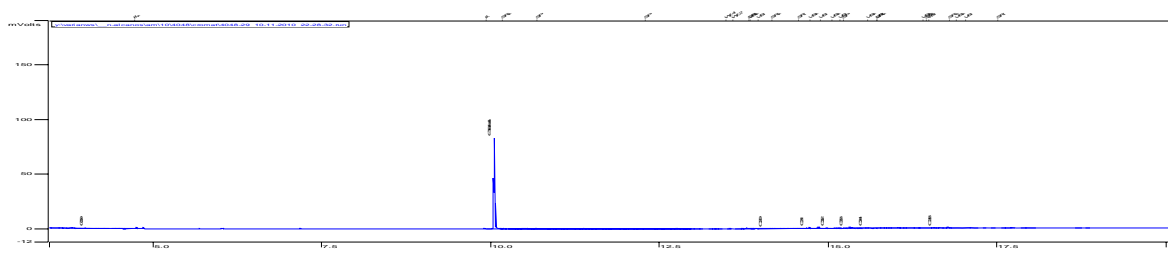
RC-BS_2_R3 (0-2cm)



RC-BS_3_R1 (0-2cm)



RC-BS_3_R2 (0-2cm)



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Boletim de Ensaio

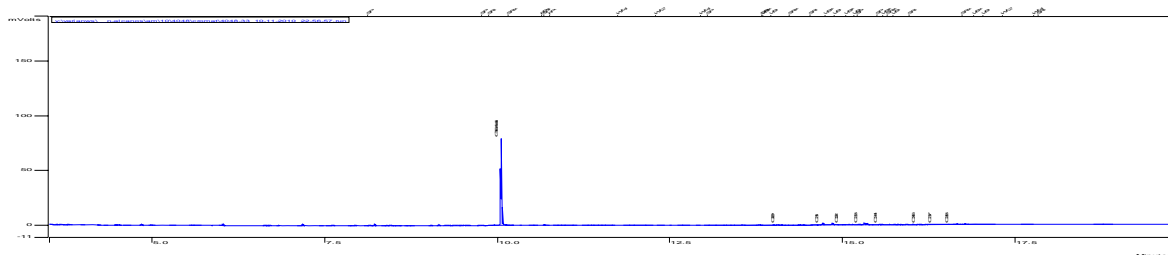
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Resp. Téc.: **Carina Casal**

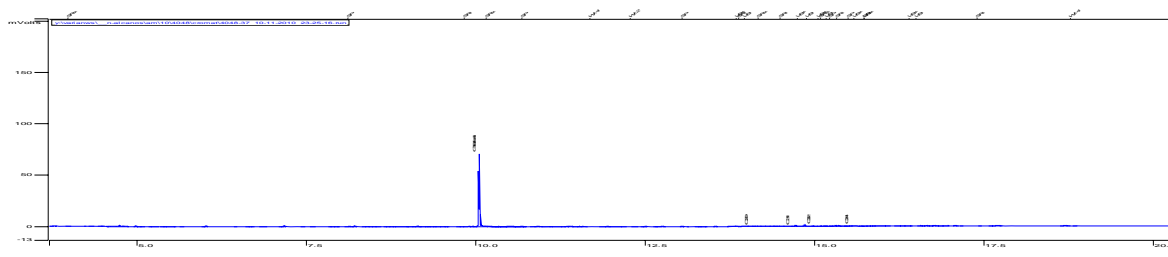
Emitido em: **24/02/2011**

Lab-nº: **10/4048B**

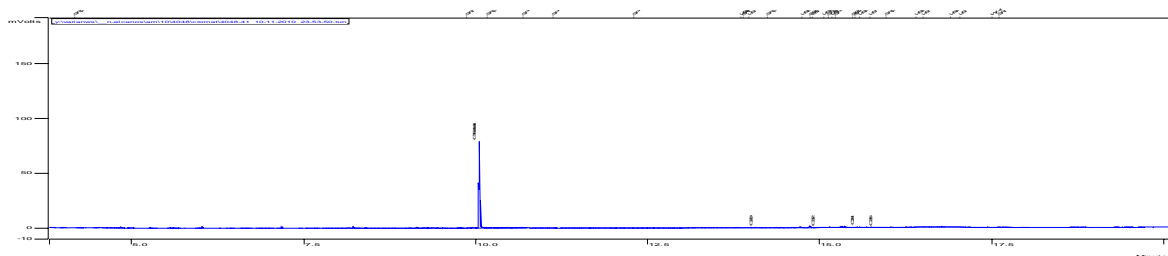
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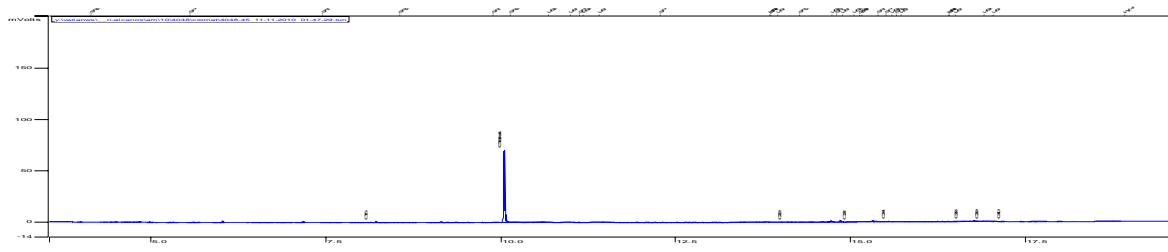
RC-BS_4_R1 (0-2cm)



RC-BS_4_R2 (0-2cm)



RC-BS_4_R3 (0-2cm)



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Boletim de Ensaio

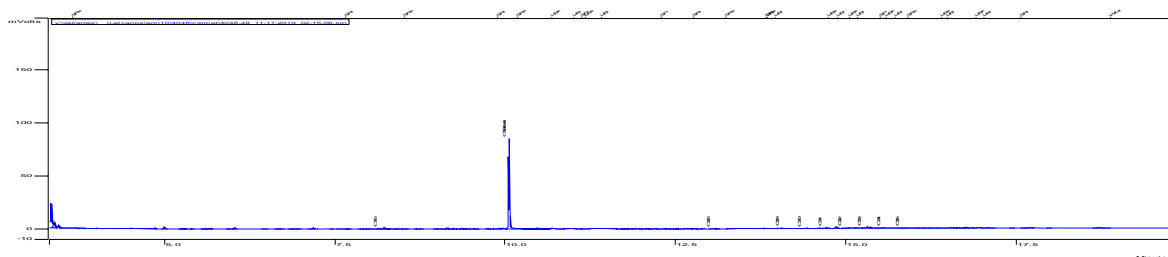
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Resp. Téc.: **Carina Casal**

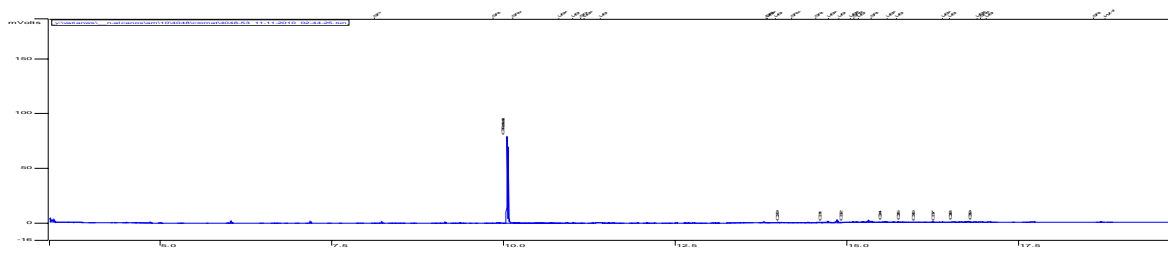
Emitido em: **24/02/2011**

Lab-nº: **10/4048B**

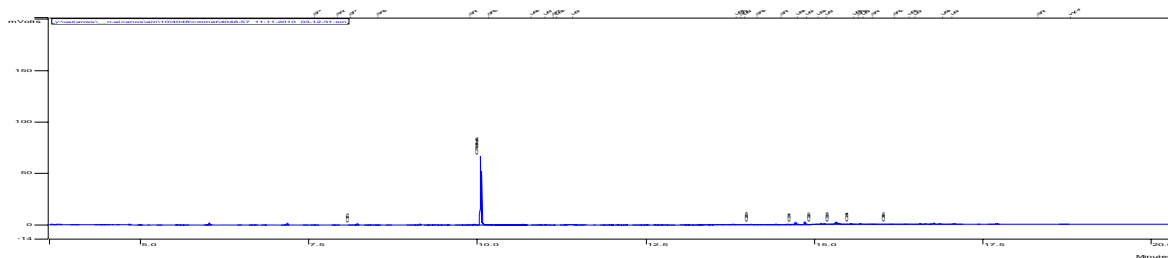
RC-BS_5_R1 (0-2cm)



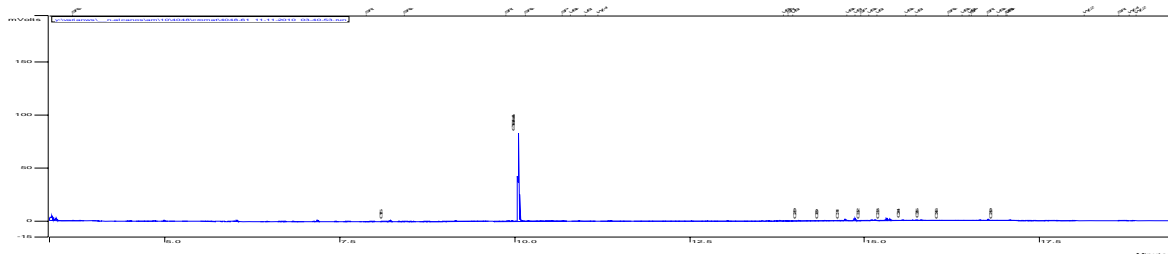
RC-BS_5_R2 (0-2cm)



RC-BS_5_R3 (0-2cm)



RC-BS_6_R1 (0-2cm)



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Boletim de Ensaio

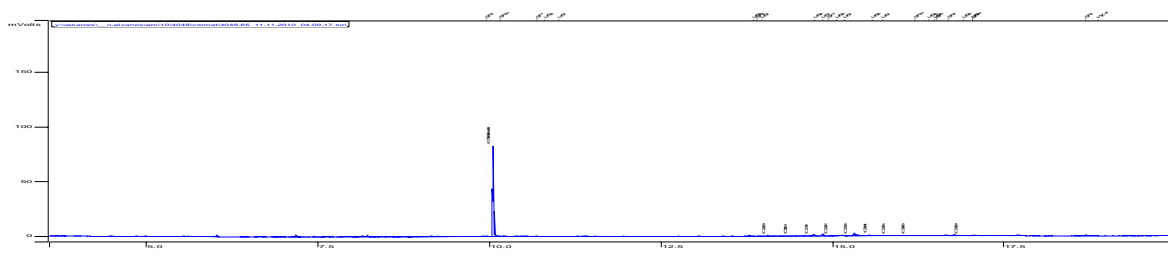
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Resp. Téc.: **Carina Casal**

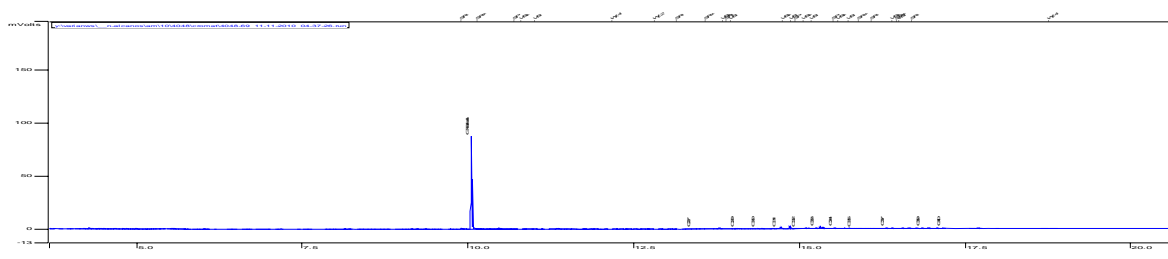
Emitido em: **24/02/2011**

Lab-nº: **10/4048B**

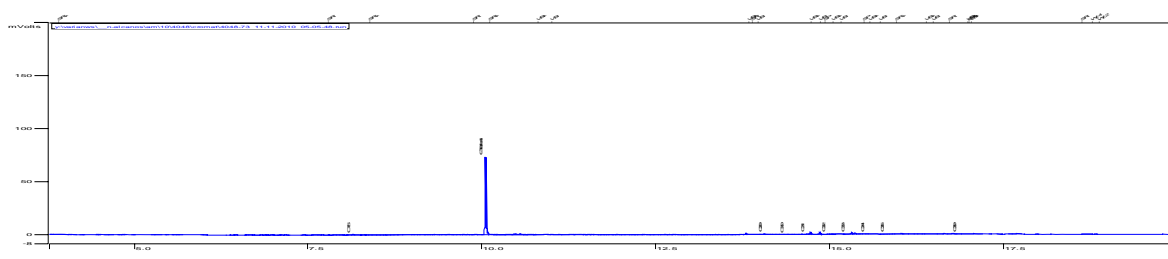
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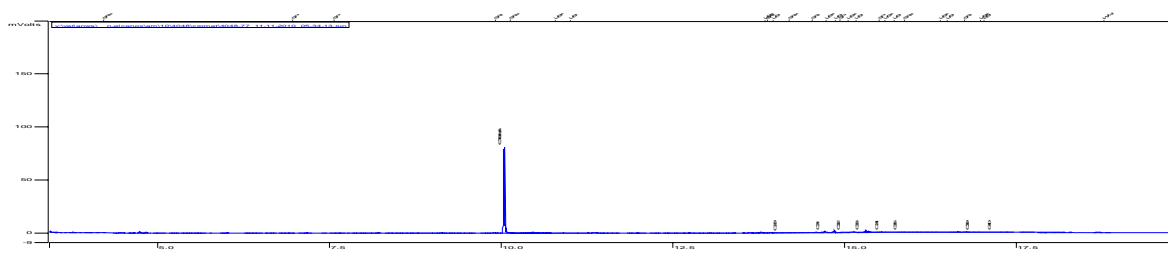
RC-BS_6_R3 (0-2cm)



RC-BS_7_R1 (0-2cm)



RC-BS_7_R2 (0-2cm)



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Boletim de Ensaio

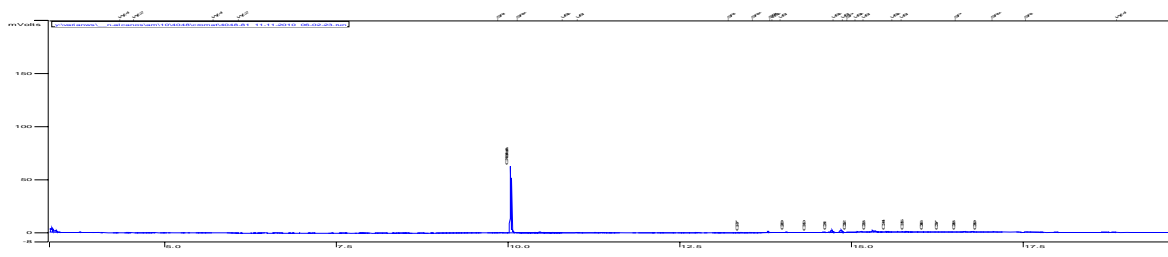
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Resp. Téc.: **Carina Casal**

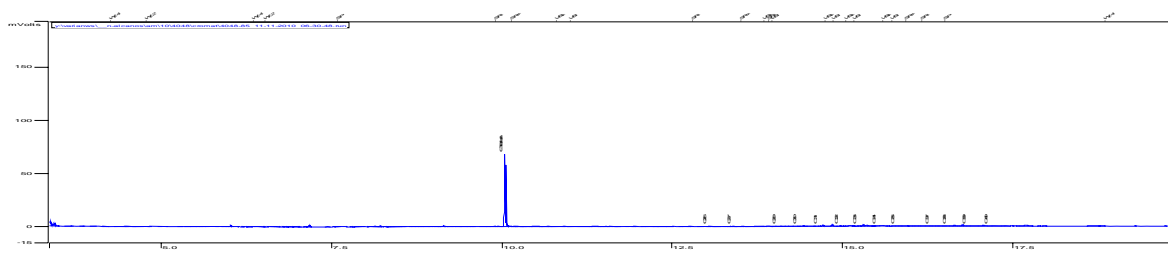
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Lab-nº: **10/4048B**

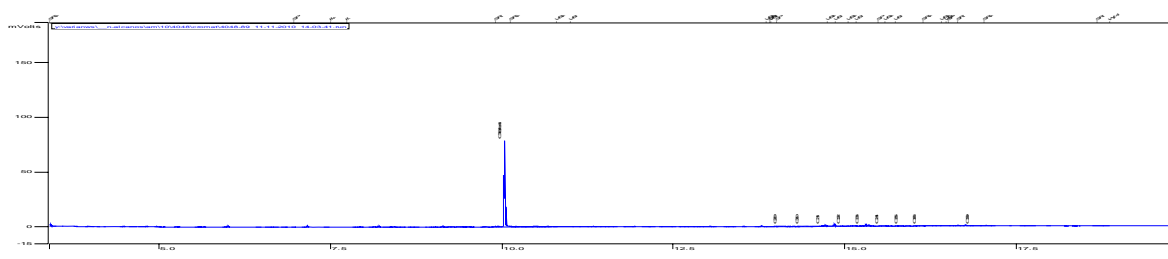
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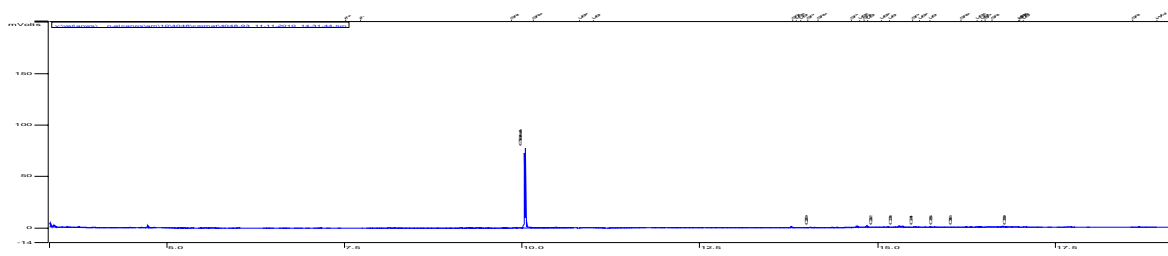
RC-BS_8_R1 (0-2cm)



RC-BS_8_R2 (0-2cm)



RC-BS_8_R3 (0-2cm)



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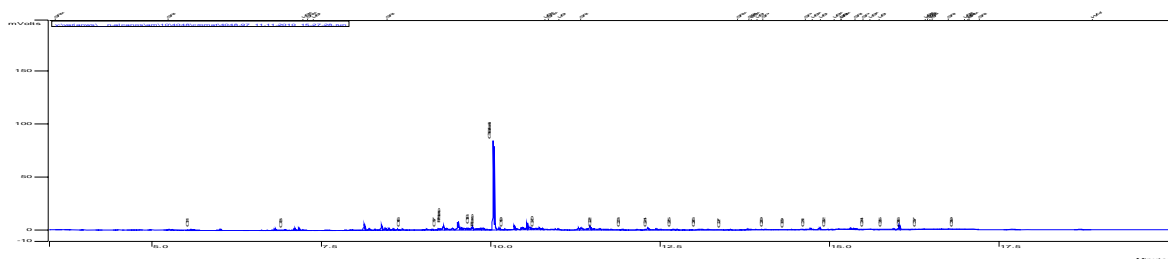
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Resp. Téc.: **Carina Casal**

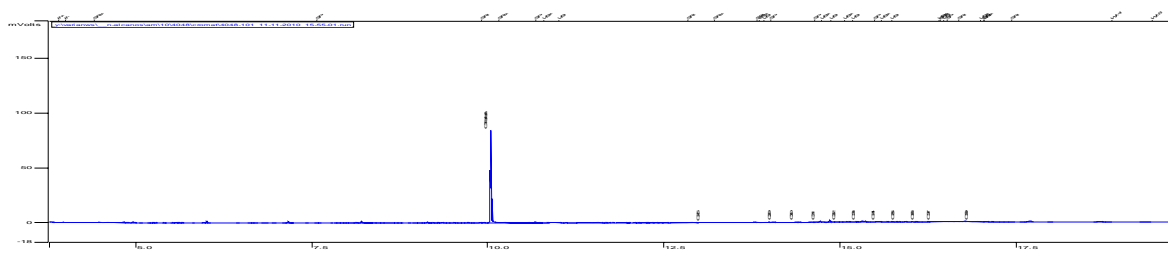
Emitido em: **24/02/2011**

Lab-nº: **10/4048B**

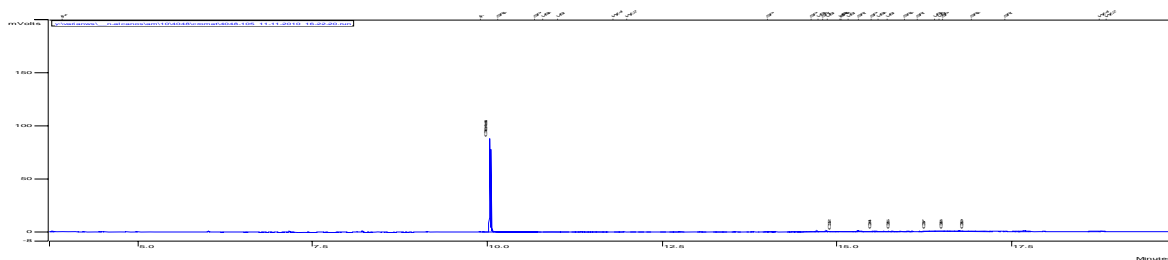
RC-BS_9_R1 (0-2cm)



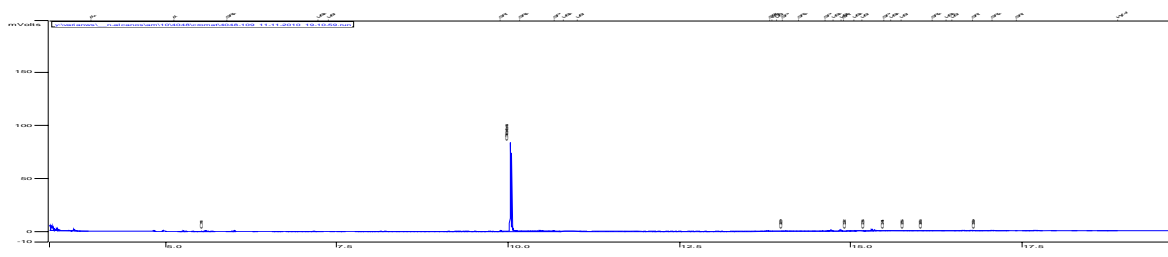
RC-BS_9_R2 (0-2cm)



RC-BS_9_R3 (0-2cm)



RC-BS_10_R1 (0-2cm)



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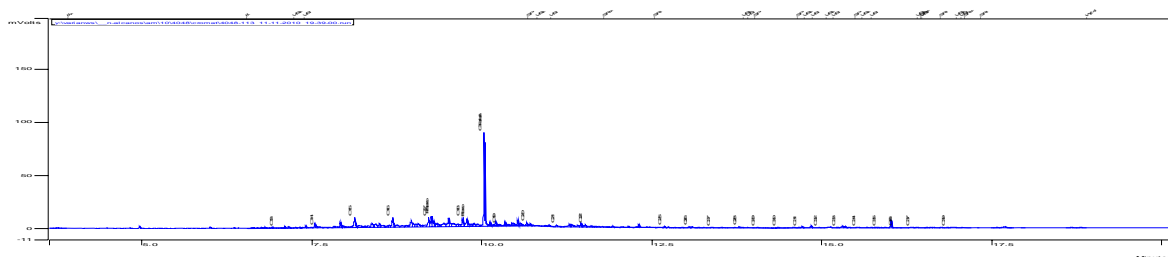
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Resp. Téc.: **Carina Casal**

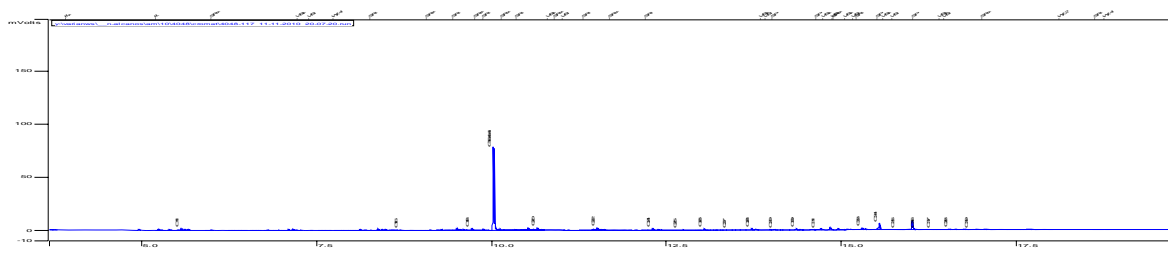
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Lab-nº: **10/4048B**

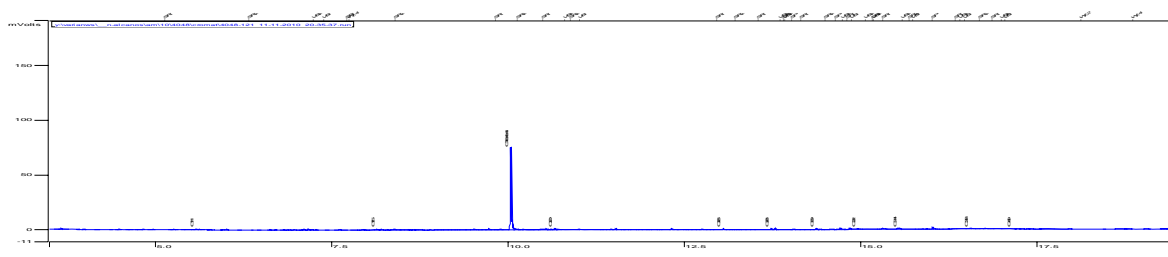
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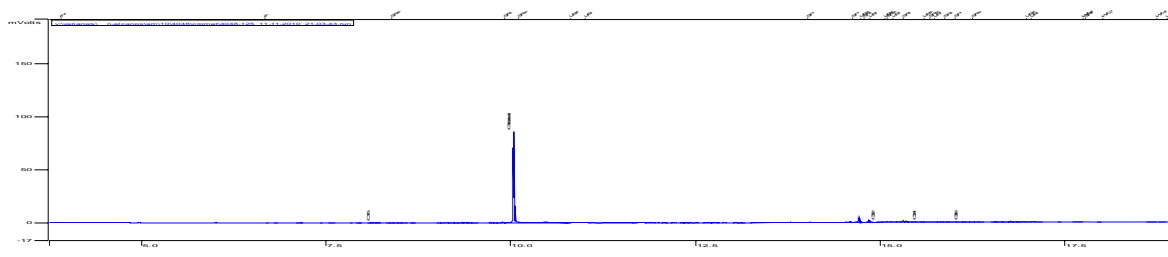
RC-BS_10_R3 (0-2cm)



RC-BS_11_R1 (0-2cm)



RC-BS_11_R2 (0-2cm)



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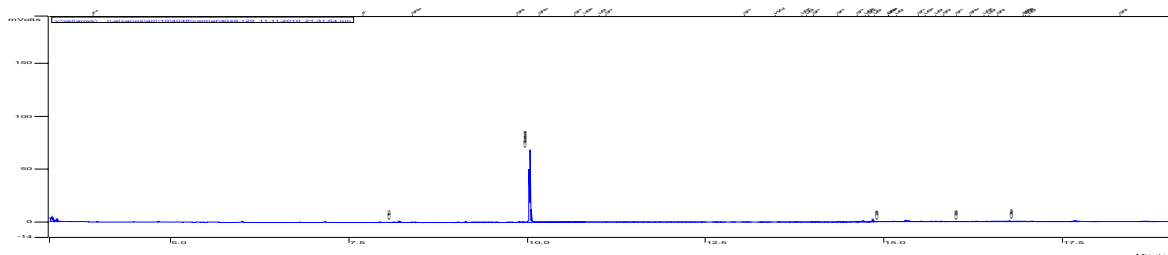
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Resp. Téc.: **Carina Casal**

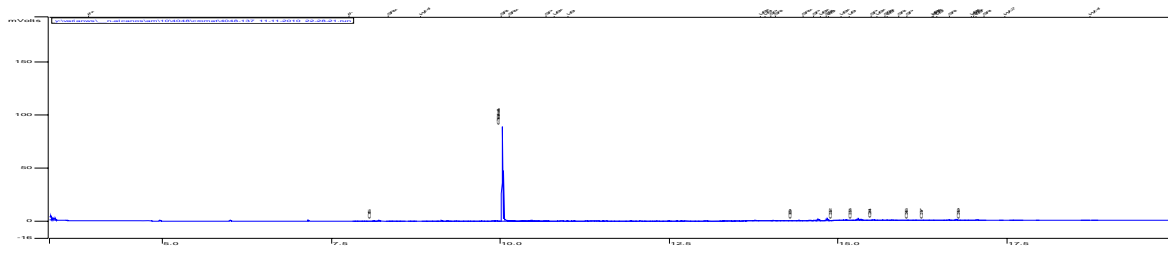
Emitido em: **24/02/2011**

Lab-nº: **10/4048B**

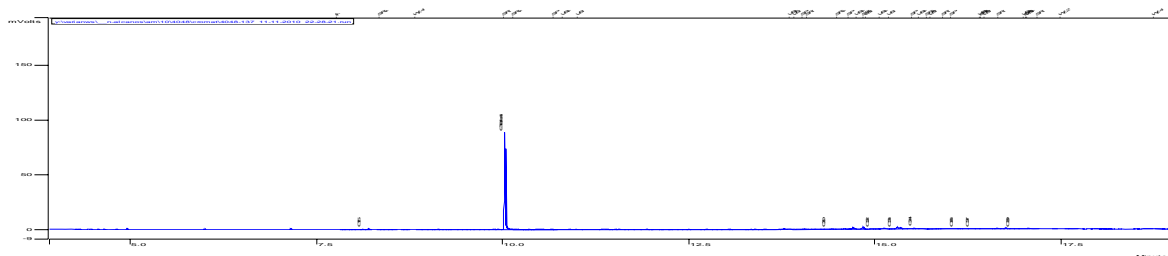
RC-BS_11_R3 (0-2cm)



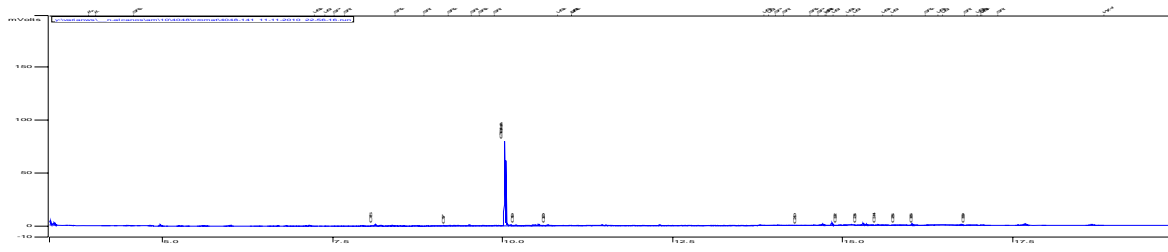
RC-BS_12_R1 (0-2cm)



RC-BS_12_R2 (0-2cm)



RC-BS_12_R3 (0-2cm)



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Boletim de Ensaio

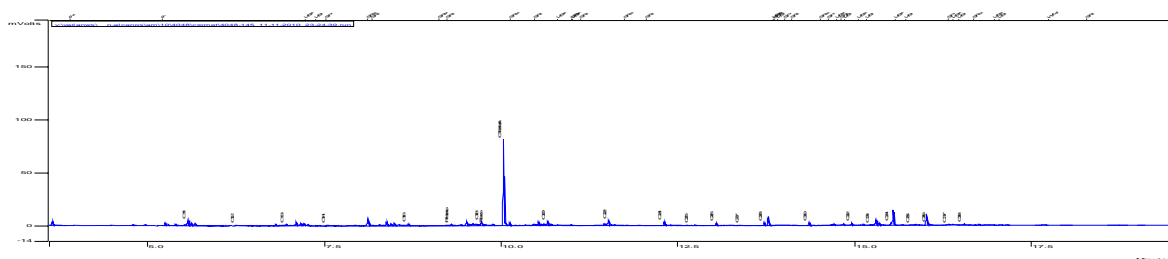
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Resp. Téc.: **Carina Casal**

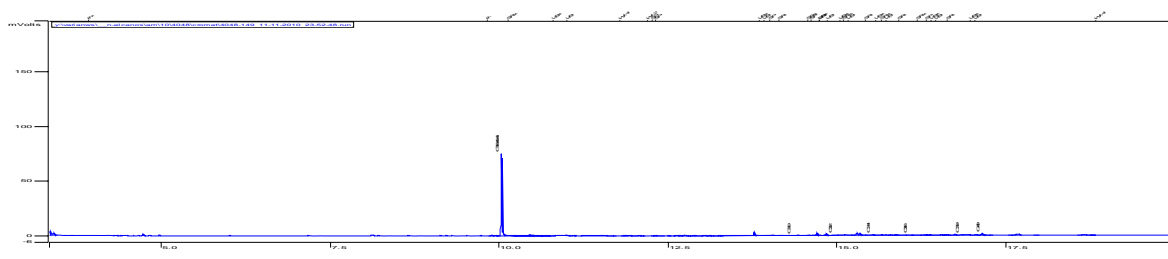
Emitido em: **24/02/2011**

Lab-nº: **10/4048B**

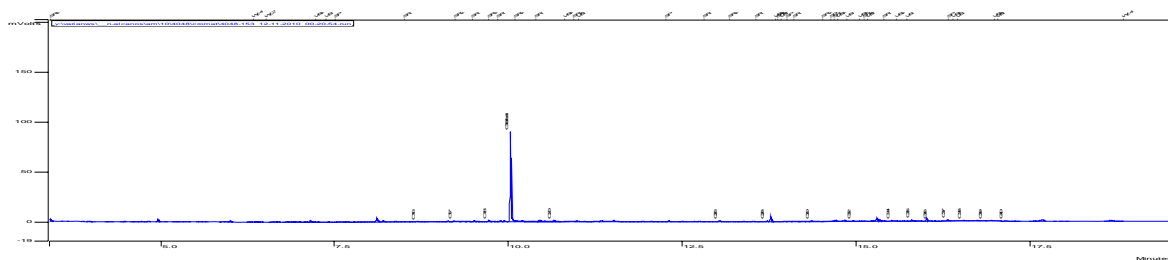
RC-BS_13_R1 (0-2cm)



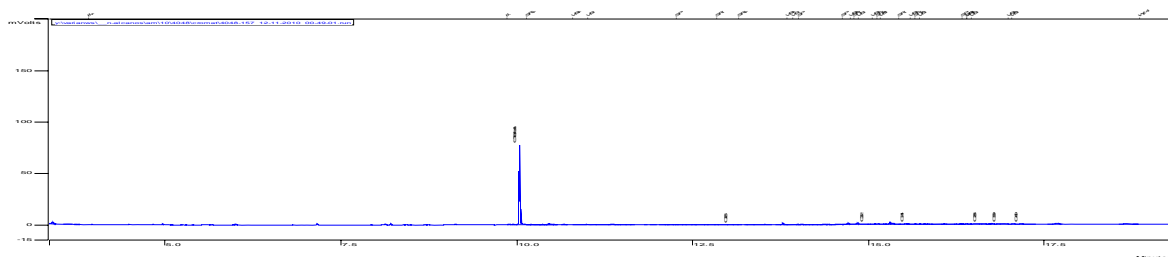
RC-BS_13_R2 (0-2cm)



RC-BS_13_R3 (0-2cm)



RC-BS_14_R1 (0-2cm)



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Boletim de Ensaio

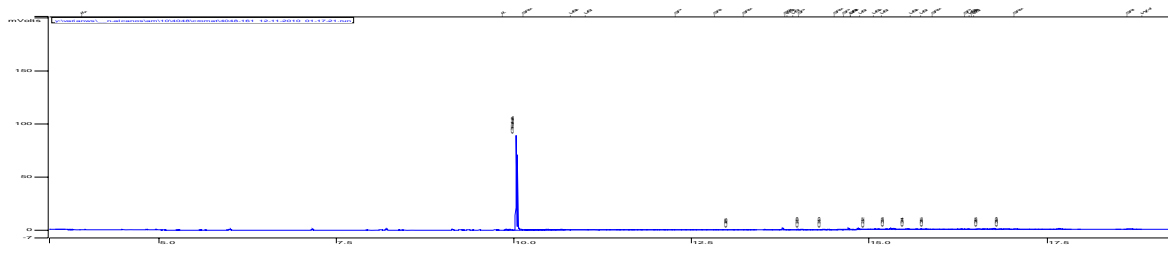
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Resp. Téc.: **Carina Casal**

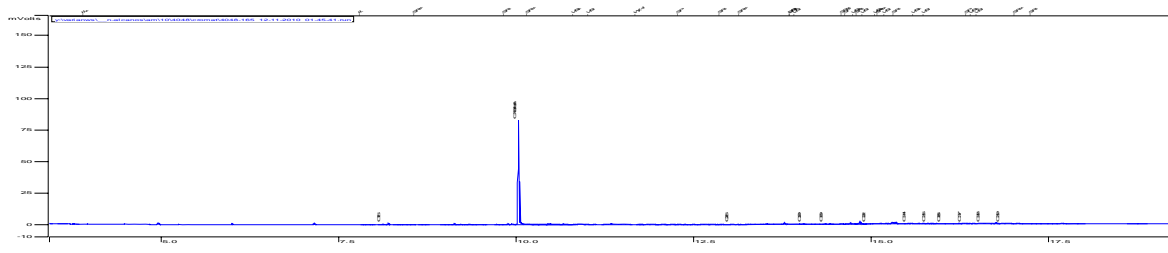
Emitido em: **24/02/2011**

Lab-nº: **10/4048B**

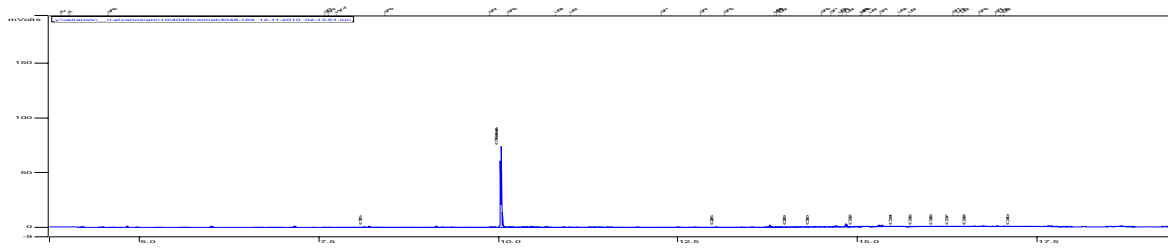
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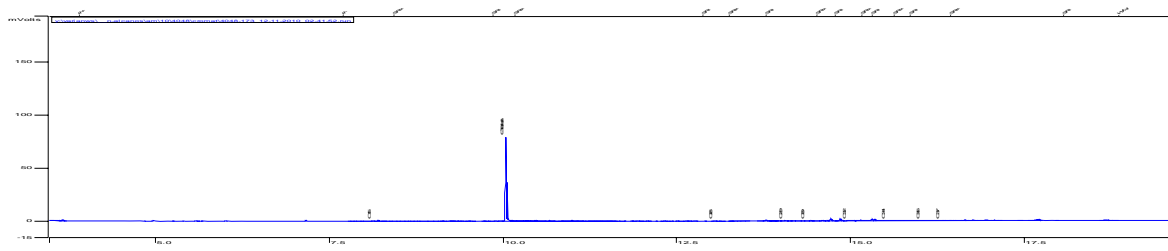
RC-BS_14_R3 (0-2cm)



RC-BS_15_R1 (0-2cm)



RC-BS_15_R2 (0-2cm)



conferido

Boletim de Ensaio

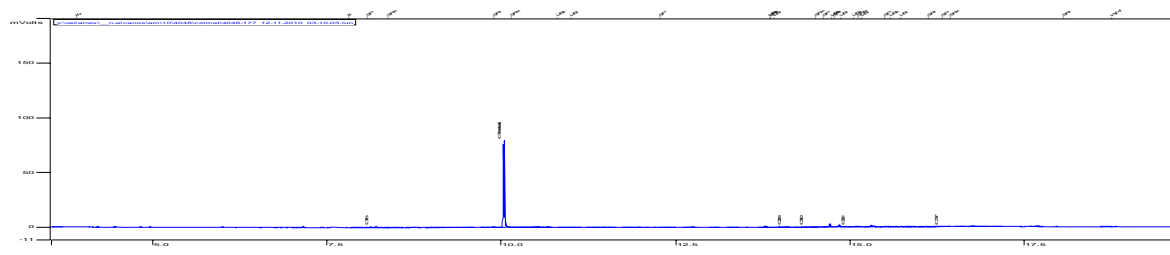
Pág. 18 de 19

Resp. Téc.: **Carina Casal**

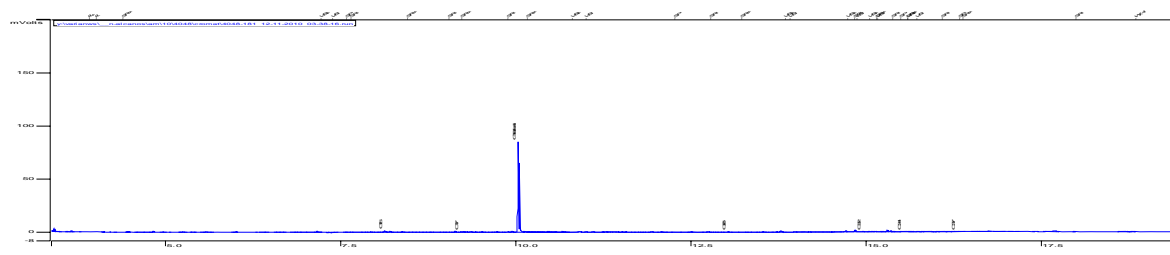
Emitido em: **24/02/2011**

Lab-nº: **10/4048B**

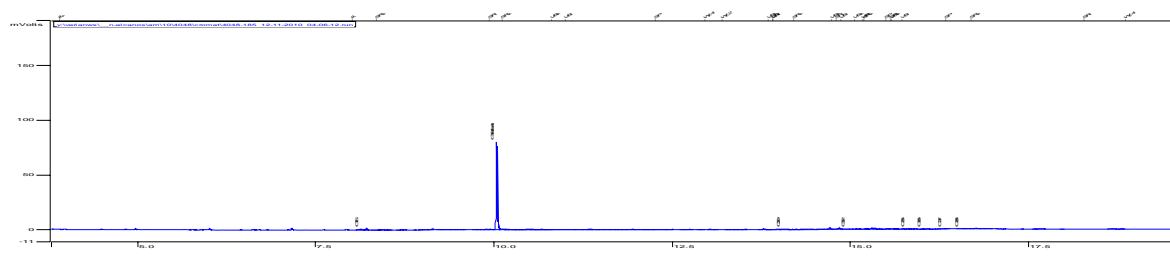
RC-BS_15_R3 (0-2cm)



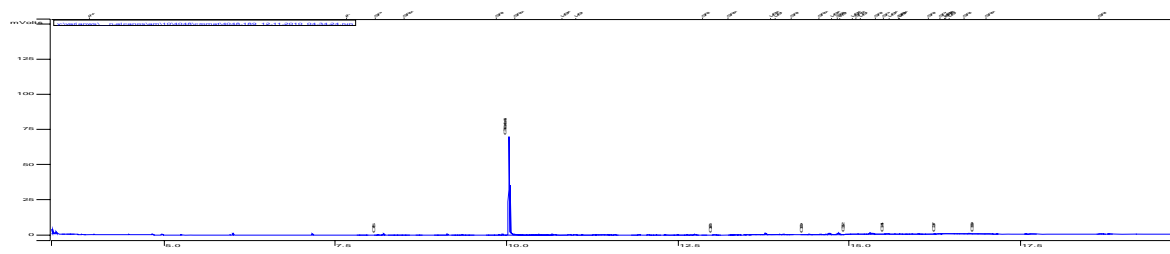
RC-BS_16_R1 (0-2cm)



RC-BS_16_R2 (0-2cm)



RC-BS_16_R3 (0-2cm)





Laboratório de Ensaio acreditado
pela Cgcre/Inmetro de acordo com
a ABNT NBR ISO/IEC 17025.



Boletim de Ensaio

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Resp. Téc.: **Carina Casal**

Emitido em: **24/02/2011**

Lab-nº: **10/4048B**

Padrões de Controle Analítico – PCA

Taxa de Recuperação (Faixa de Aceitação: 70-130%)
(%)


PCA	103
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FM-004-L3A – Rev.00 18/02/2009– Apr. FEV/09

Observações

1. Ref. Método – ISO 16703:2001
2. Nos ensaios são utilizados padrões rastreáveis ao SI (Sistema Internacional de Medidas).
3. Foram utilizados Brancos de Controle conforme metodologia informada conferido


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