



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



## Boletim de Ensaio

Pág. 1 de 24

Resp. Téc.: **Carina Casal**

Emitido em: **15/06/2010**

Lab-nº: **10/1359F**

### 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 : Baía de Santos  
Data da Coleta : 04, 05, 12, 13, 14 e 15/04/2010  
Entrega das amostras : 21/04/2010  
Início dos ensaios/extração : 21/04/2010 14:52  
Término dos ensaios : 15/06/2010

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 Baía de Santos  
Gerente do Projeto : Cristina /Falcão

Parâmetro	RN-BS # 6-R1 (0-2 cm) (µg/kg)	RN-BS # 6-R2 (0-2 cm) (µg/kg)	RN-BS # 6-R3 (0-2 cm) (µg/kg)	RN-BS # 7-R1 (0-2 cm) (µg/kg)	L.Q (µg/kg)	L.D. (µg/kg)
<b>n-Alcanos C8 - C40</b>						
n-C8	27	23	18	20	10	5
n-C9	nd	nd	nd	nd	10	5
n-C10	nd	nd	nd	nd	10	5
n-C11	nd	nd	nd	16	10	5
n-C12	nd	nd	nd	nd	10	5
n-C13	nd	nd	nd	13	10	5
n-C14	nd	nd	nd	nd	10	5
n-C15	nd	<10	nd	51	10	5
n-C16	nd	nd	nd	15	10	5
n-C17	nd	nd	nd	32	10	5
Pristano	nd	nd	<10	81	10	5
n-C18	nd	<10	nd	53	10	5
Fitano	nd	nd	nd	26	10	5
n-C19	<10	<10	nd	nd	10	5
n-C20	<10	<10	nd	11	10	5
n-C21	nd	nd	nd	<10	10	5
n-C22	nd	nd	nd	12	10	5
n-C23	<10	32	nd	11	10	5
n-C24	nd	<10	nd	47	10	5
n-C25	61	46	<10	22	10	5
n-C26	nd	nd	nd	nd	10	5
n-C27	349	136	18	21	10	5
n-C28	19	19	14	17	10	5
n-C29	31	23	15	17	10	5
n-C30	nd	nd	nd	nd	10	5

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Parâmetro	RN-BS # 6-R1 (0-2 cm) (µg/kg)	RN-BS # 6-R2 (0-2 cm) (µg/kg)	RN-BS # 6-R3 (0-2 cm) (µg/kg)	RN-BS # 7-R1 (0-2 cm) (µg/kg)	L.Q (µg/kg)	L.D. (µg/kg)
<b>n-Alcanos C8 - C40</b>						
n-C31	61	36	36	31	10	5
n-C32	135	75	110	90	10	5
n-C33	44	17	nd	37	10	5
n-C34	nd	nd	nd	nd	10	5
n-C35	34	23	12	33	10	5
n-C36	118	168	90	286	10	5
n-C37	13	nd	nd	nd	10	5
n-C38	12	<10	nd	nd	10	5
n-C39	<10	nd	nd	nd	10	5
n-C40	20	<10	<10	nd	10	5



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Parâmetro	RN-BS # 7-R2 (0-2cm) (µg/kg)	RN-BS # 7-R3 (0-2cm) (µg/kg)	RN-BS # 15-R1 (0-2cm) (µg/kg)	RN-BS # 15-R2 (0-2cm) (µg/kg)	L.Q (µg/kg)	L.D. (µg/kg)
<b>n-Alcanos C8 - C40</b>						
n-C8	15	20	17	14	10	5
n-C9	nd	nd	nd	nd	10	5
n-C10	nd	nd	nd	nd	10	5
n-C11	nd	nd	nd	11	10	5
n-C12	nd	nd	nd	nd	10	5
n-C13	nd	nd	nd	nd	10	5
n-C14	nd	nd	nd	nd	10	5
n-C15	nd	<10	21	<10	10	5
n-C16	nd	nd	<10	nd	10	5
n-C17	nd	<10	16	nd	10	5
Pristano	nd	11	30	nd	10	5
n-C18	17	<10	nd	nd	10	5
Fitano	11	<10	17	nd	10	5
n-C19	nd	nd	<10	nd	10	5
n-C20	nd	nd	10	nd	10	5
n-C21	nd	nd	<10	nd	10	5
n-C22	nd	nd	<10	nd	10	5
n-C23	42	<10	20	nd	10	5
n-C24	nd	nd	<10	nd	10	5
n-C25	24	16	14	13	10	5
n-C26	nd	nd	nd	nd	10	5
n-C27	67	35	30	31	10	5
n-C28	<10	12	14	<10	10	5
n-C29	13	16	17	12	10	5
n-C30	nd	nd	nd	nd	10	5



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Resp. Téc.: **Carina Casal**

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Parâmetro	RN-BS # 7-R2 (0-2cm) (µg/kg)	RN-BS # 7-R3 (0-2cm) (µg/kg)	RN-BS # 15-R1 (0-2cm) (µg/kg)	RN-BS # 15-R2 (0-2cm) (µg/kg)	L.Q (µg/kg)	L.D. (µg/kg)
<b>n-Alcanos C8 - C40</b>						
n-C31	21	23	23	21	10	5
n-C32	86	59	69	43	10	5
n-C33	27	19	24	19	10	5
n-C34	nd	nd	nd	nd	10	5
n-C35	21	12	15	14	10	5
n-C36	139	158	199	79	10	5
n-C37	nd	nd	nd	nd	10	5
n-C38	nd	nd	nd	nd	10	5
n-C39	nd	nd	nd	nd	10	5
n-C40	nd	nd	<10	nd	10	5



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Parâmetro	RN-BS # 15-R3 (0-2cm) (µg/kg)	RN-BS # 25-R1 (0-2cm) (µg/kg)	RN-BS # 25-R2 (0-2cm) (µg/kg)	RN-BS # 25-R3 (0-2cm) (µg/kg)	L.Q (µg/kg)	L.D. (µg/kg)
<b>n-Alcanos C8 - C40</b>						
n-C8	18	16	12	<10	10	5
n-C9	nd	nd	nd	nd	10	5
n-C10	nd	nd	nd	<10	10	5
n-C11	nd	<10	17	nd	10	5
n-C12	nd	nd	nd	nd	10	5
n-C13	nd	nd	23	nd	10	5
n-C14	nd	nd	30	nd	10	5
n-C15	nd	10	120	nd	10	5
n-C16	nd	nd	59	nd	10	5
n-C17	nd	nd	91	nd	10	5
Pristano	nd	16	154	nd	10	5
n-C18	nd	nd	102	nd	10	5
Fitano	<10	nd	43	nd	10	5
n-C19	nd	nd	49	nd	10	5
n-C20	nd	12	105	nd	10	5
n-C21	nd	nd	14	nd	10	5
n-C22	nd	nd	37	nd	10	5
n-C23	nd	nd	60	nd	10	5
n-C24	nd	nd	99	nd	10	5
n-C25	nd	16	39	nd	10	5
n-C26	nd	<10	42	nd	10	5
n-C27	<10	30	32	nd	10	5
n-C28	<10	<10	18	nd	10	5
n-C29	16	20	26	11	10	5
n-C30	nd	nd	18	nd	10	5



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Parâmetro	RN-BS # 15-R3 (0-2cm) (µg/kg)	RN-BS # 25-R1 (0-2cm) (µg/kg)	RN-BS # 25-R2 (0-2cm) (µg/kg)	RN-BS # 25-R3 (0-2cm) (µg/kg)	L.Q (µg/kg)	L.D. (µg/kg)
<b>n-Alcanos C8 - C40</b>						
n-C31	25	32	52	21	10	5
n-C32	94	123	166	63	10	5
n-C33	28	nd	nd	nd	10	5
n-C34	nd	12	17	<10	10	5
n-C35	27	nd	nd	nd	10	5
n-C36	86	122	792	46	10	5
n-C37	nd	nd	<10	nd	10	5
n-C38	nd	nd	<10	nd	10	5
n-C39	nd	nd	nd	nd	10	5
n-C40	nd	nd	13	nd	10	5



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Parâmetro	RN-BS # 33-R1 (0-2cm) (µg/kg)	RN-BS # 33-R2 (0-2cm) (µg/kg)	RN-BS # 33-R3 (0-2cm) (µg/kg)	RN-BS # 36-R1 (0-2cm) (µg/kg)	L.Q (µg/kg)	L.D. (µg/kg)
<b>n-Alcanos C8 - C40</b>						
n-C8	nd	nd	nd	<10	10	5
n-C9	nd	nd	nd	nd	10	5
n-C10	nd	nd	nd	nd	10	5
n-C11	nd	11	nd	23	10	5
n-C12	nd	nd	nd	nd	10	5
n-C13	nd	<10	nd	nd	10	5
n-C14	nd	nd	nd	nd	10	5
n-C15	nd	46	<10	11	10	5
n-C16	nd	37	nd	nd	10	5
n-C17	nd	10	nd	nd	10	5
Pristano	nd	21	16	nd	10	5
n-C18	nd	55	<10	<10	10	5
Fitano	nd	22	nd	nd	10	5
n-C19	nd	<10	nd	nd	10	5
n-C20	nd	37	14	nd	10	5
n-C21	nd	<10	nd	nd	10	5
n-C22	nd	15	nd	nd	10	5
n-C23	nd	nd	12	<10	10	5
n-C24	nd	32	<10	<10	10	5
n-C25	nd	19	15	16	10	5
n-C26	nd	15	<10	nd	10	5
n-C27	nd	24	35	37	10	5
n-C28	nd	<10	nd	<10	10	5
n-C29	<10	18	14	15	10	5
n-C30	nd	nd	nd	nd	10	5



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Parâmetro	RN-BS # 33-R1 (0-2cm) (µg/kg)	RN-BS # 33-R2 (0-2cm) (µg/kg)	RN-BS # 33-R3 (0-2cm) (µg/kg)	RN-BS # 36-R1 (0-2cm) (µg/kg)	L.Q (µg/kg)	L.D. (µg/kg)
<b>n-Alcanos C8 - C40</b>						
n-C31	18	43	42	31	10	5
n-C32	101	119	94	123	10	5
n-C33	nd	nd	nd	nd	10	5
n-C34	<10	<10	16	<10	10	5
n-C35	nd	nd	nd	nd	10	5
n-C36	35	294	101	123	10	5
n-C37	nd	nd	nd	nd	10	5
n-C38	nd	nd	nd	nd	10	5
n-C39	nd	nd	nd	nd	10	5
n-C40	nd	14	nd	nd	10	5





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Parâmetro	RN-BS # 36-R2 (0-2cm) (µg/kg)	RN-BS # 36-R3 (0-2cm) (µg/kg)	RN-BS # 39-R1 (0-2cm) (µg/kg)	RN-BS # 39-R2 (0-2cm) (µg/kg)	L.Q (µg/kg)	L.D. (µg/kg)
<b>n-Alcanos C8 - C40</b>						
n-C8	<10	<10	13	12	10	5
n-C9	nd	nd	nd	nd	10	5
n-C10	nd	nd	12	nd	10	5
n-C11	nd	nd	nd	nd	10	5
n-C12	nd	nd	nd	nd	10	5
n-C13	<10	nd	nd	nd	10	5
n-C14	29	nd	nd	nd	10	5
n-C15	20	nd	25	<10	10	5
n-C16	102	nd	<10	nd	10	5
n-C17	95	nd	25	12	10	5
Pristano	202	nd	34	17	10	5
n-C18	311	nd	31	15	10	5
Fitano	86	nd	18	<10	10	5
n-C19	53	nd	12	nd	10	5
n-C20	159	nd	20	nd	10	5
n-C21	31	nd	<10	nd	10	5
n-C22	71	nd	15	nd	10	5
n-C23	60	nd	24	nd	10	5
n-C24	85	nd	21	<10	10	5
n-C25	20	nd	<10	nd	10	5
n-C26	34	nd	<10	nd	10	5
n-C27	nd	nd	nd	nd	10	5
n-C28	23	nd	<10	<10	10	5
n-C29	49	12	19	18	10	5
n-C30	19	nd	13	nd	10	5



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Parâmetro	RN-BS # 36-R2 (0-2cm) (µg/kg)	RN-BS # 36-R3 (0-2cm) (µg/kg)	RN-BS # 39-R1 (0-2cm) (µg/kg)	RN-BS # 39-R2 (0-2cm) (µg/kg)	L.Q (µg/kg)	L.D. (µg/kg)
<b>n-Alcanos C8 - C40</b>						
n-C31	72	22	41	30	10	5
n-C32	243	82	80	117	10	5
n-C33	nd	nd	nd	nd	10	5
n-C34	52	<10	20	27	10	5
n-C35	44	nd	34	39	10	5
n-C36	nd	33	61	164	10	5
n-C37	12	nd	nd	nd	10	5
n-C38	34	nd	<10	nd	10	5
n-C39	nd	nd	nd	nd	10	5
n-C40	18	nd	11	<10	10	5



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Parâmetro	RN-BS # 39-R3 (0-2cm) (µg/kg)	RN-BS # 41-R1 (0-2cm) (µg/kg)	RN-BS # 41-R2 (0-2cm) (µg/kg)	L.Q (µg/kg)	L.D. (µg/kg)
<b>n-Alcanos C8 - C40</b>					
n-C8	nd	<10	<10	10	5
n-C9	nd	nd	nd	10	5
n-C10	nd	<10	nd	10	5
n-C11	nd	nd	nd	10	5
n-C12	nd	nd	nd	10	5
n-C13	nd	nd	nd	10	5
n-C14	nd	<10	nd	10	5
n-C15	nd	nd	<10	10	5
n-C16	nd	nd	nd	10	5
n-C17	nd	nd	nd	10	5
Pristano	nd	nd	nd	10	5
n-C18	nd	nd	nd	10	5
Fitano	nd	nd	nd	10	5
n-C19	nd	11	<10	10	5
n-C20	nd	nd	nd	10	5
n-C21	nd	nd	nd	10	5
n-C22	nd	nd	nd	10	5
n-C23	nd	nd	18	10	5
n-C24	nd	nd	nd	10	5
n-C25	<10	19	31	10	5
n-C26	<10	<10	<10	10	5
n-C27	<10	57	95	10	5
n-C28	<10	21	<10	10	5
n-C29	14	31	14	10	5
n-C30	<10	34	<10	10	5



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Parâmetro	RN-BS # 39-R3 (0-2cm) (µg/kg)	RN-BS # 41-R1 (0-2cm) (µg/kg)	RN-BS # 41-R2 (0-2cm) (µg/kg)	L.Q (µg/kg)	L.D. (µg/kg)
<b>n-Alcanos C8 - C40</b>					
n-C31	26	46	22	10	5
n-C32	93	68	75	10	5
n-C33	24	31	14	10	5
n-C34	<10	21	<10	10	5
n-C35	28	30	26	10	5
n-C36	52	43	92	10	5
n-C37	nd	<10	nd	10	5
n-C38	nd	<10	nd	10	5
n-C39	nd	<10	nd	10	5
n-C40	nd	13	<10	10	5



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Parâmetro	RN-BS # 41-R3 (0-2cm) (µg/kg)	RN-BS # 47-R1 (0-2cm) (µg/kg)	RN-BS # 47-R2 (0-2cm) (µg/kg)	RN-BS # 47-R3 (0-2cm) (µg/kg)	L.Q (µg/kg)	L.D. (µg/kg)
<b>n-Alcanos C8 - C40</b>						
n-C8	<10	<10	nd	<10	10	5
n-C9	nd	nd	nd	nd	10	5
n-C10	nd	nd	nd	nd	10	5
n-C11	nd	nd	nd	nd	10	5
n-C12	nd	<10	nd	nd	10	5
n-C13	nd	<10	nd	nd	10	5
n-C14	nd	16	<10	nd	10	5
n-C15	nd	76	nd	nd	10	5
n-C16	nd	92	nd	nd	10	5
n-C17	nd	84	nd	nd	10	5
Pristano	nd	90	nd	nd	10	5
n-C18	nd	189	<10	nd	10	5
Fitano	nd	69	nd	nd	10	5
n-C19	12	68	17	13	10	5
n-C20	nd	112	<10	nd	10	5
n-C21	nd	49	nd	nd	10	5
n-C22	nd	67	<10	nd	10	5
n-C23	<10	67	13	nd	10	5
n-C24	<10	81	<10	nd	10	5
n-C25	36	54	23	<10	10	5
n-C26	<10	32	12	nd	10	5
n-C27	120	112	69	<10	10	5
n-C28	13	32	15	<10	10	5
n-C29	20	29	21	10	10	5
n-C30	<10	19	<10	nd	10	5



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Parâmetro	RN-BS # 41-R3 (0-2cm) (µg/kg)	RN-BS # 47-R1 (0-2cm) (µg/kg)	RN-BS # 47-R2 (0-2cm) (µg/kg)	RN-BS # 47-R3 (0-2cm) (µg/kg)	L.Q (µg/kg)	L.D. (µg/kg)
<b>n-Alcanos C8 - C40</b>						
n-C31	37	47	48	20	10	5
n-C32	110	101	100	83	10	5
n-C33	18	13	17	<10	10	5
n-C34	<10	<10	10	<10	10	5
n-C35	35	40	28	17	10	5
n-C36	110	836	92	40	10	5
n-C37	nd	nd	nd	nd	10	5
n-C38	nd	<10	nd	nd	10	5
n-C39	nd	nd	nd	nd	10	5
n-C40	<10	27	nd	nd	10	5



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Parâmetro	RN-BS # 52-R1 (0-2cm) (µg/kg)	RN-BS # 52-R2 (0-2cm) (µg/kg)	RN-BS # 52-R3 (0-2cm) (µg/kg)	RN-BS # 64-R1 (0-2cm) (µg/kg)	L.Q (µg/kg)	L.D. (µg/kg)
<b>n-Alcanos C8 - C40</b>						
n-C8	<10	<10	<10	12	10	5
n-C9	nd	nd	nd	nd	10	5
n-C10	nd	nd	nd	nd	10	5
n-C11	nd	nd	nd	nd	10	5
n-C12	nd	nd	nd	nd	10	5
n-C13	nd	nd	nd	nd	10	5
n-C14	nd	nd	nd	nd	10	5
n-C15	nd	nd	nd	nd	10	5
n-C16	nd	nd	nd	nd	10	5
n-C17	nd	nd	nd	nd	10	5
Pristano	nd	nd	nd	nd	10	5
n-C18	nd	nd	nd	nd	10	5
Fitano	nd	nd	nd	nd	10	5
n-C19	<10	13	12	nd	10	5
n-C20	<10	nd	nd	nd	10	5
n-C21	nd	nd	nd	nd	10	5
n-C22	<10	<10	<10	<10	10	5
n-C23	nd	nd	nd	nd	10	5
n-C24	nd	nd	nd	nd	10	5
n-C25	18	22	14	29	10	5
n-C26	<10	nd	<10	nd	10	5
n-C27	41	30	14	93	10	5
n-C28	10	<10	<10	12	10	5
n-C29	17	12	17	15	10	5
n-C30	nd	nd	nd	13	10	5



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## Boletim de Ensaio

Pág. 16 de 24

Resp. Téc.: **Carina Casal**

Emitido em: **15/06/2010**

Lab-nº: **10/1359F**

Parâmetro	RN-BS # 52-R1 (0-2cm) (µg/kg)	RN-BS # 52-R2 (0-2cm) (µg/kg)	RN-BS # 52-R3 (0-2cm) (µg/kg)	RN-BS # 64-R1 (0-2cm) (µg/kg)	L.Q (µg/kg)	L.D. (µg/kg)
<b>n-Alcanos C8 - C40</b>						
n-C31	48	27	31	38	10	5
n-C32	148	100	57	89	10	5
n-C33	44	<10	11	<10	10	5
n-C34	10	nd	nd	<10	10	5
n-C35	38	29	33	30	10	5
n-C36	60	52	45	81	10	5
n-C37	nd	nd	nd	nd	10	5
n-C38	nd	nd	nd	nd	10	5
n-C39	nd	45	nd	nd	10	5
n-C40	nd	nd	nd	<10	10	5





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## Boletim de Ensaio

Pág. 17 de 24

Resp. Téc.: **Carina Casal**

Emitido em: **15/06/2010**

Lab-nº: **10/1359F**

Parâmetro	RN-BS # 64-R2 (0-2cm) (µg/kg)	RN-BS # 64-R3 (0-2cm) (µg/kg)	RN-BS # 65-R1 (0-2cm) (µg/kg)	RN-BS # 65-R2 (0-2cm) (µg/kg)	L.Q (µg/kg)	L.D. (µg/kg)
<b>n-Alcanos C8 - C40</b>						
n-C8	<10	<10	12	11	10	5
n-C9	nd	nd	nd	nd	10	5
n-C10	<10	nd	nd	nd	10	5
n-C11	<10	nd	nd	nd	10	5
n-C12	nd	nd	nd	nd	10	5
n-C13	nd	nd	nd	nd	10	5
n-C14	<10	nd	nd	nd	10	5
n-C15	12	nd	nd	nd	10	5
n-C16	nd	nd	nd	nd	10	5
n-C17	nd	nd	nd	nd	10	5
Pristano	nd	nd	nd	nd	10	5
n-C18	<10	nd	nd	nd	10	5
Fitano	<10	nd	nd	nd	10	5
n-C19	<10	10	nd	nd	10	5
n-C20	nd	nd	nd	nd	10	5
n-C21	nd	nd	nd	nd	10	5
n-C22	<10	nd	nd	nd	10	5
n-C23	nd	nd	nd	nd	10	5
n-C24	15	nd	nd	nd	10	5
n-C25	21	25	25	13	10	5
n-C26	<10	nd	nd	nd	10	5
n-C27	26	40	69	34	10	5
n-C28	15	<10	12	10	10	5
n-C29	29	16	17	13	10	5
n-C30	11	<10	<10	nd	10	5



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## Boletim de Ensaio

Pág. 18 de 24

Resp. Téc.: **Carina Casal**

Emitido em: **15/06/2010**

Lab-nº: **10/1359F**

Parâmetro	RN-BS # 64-R2 (0-2cm) (µg/kg)	RN-BS # 64-R3 (0-2cm) (µg/kg)	RN-BS # 65-R1 (0-2cm) (µg/kg)	RN-BS # 65-R2 (0-2cm) (µg/kg)	L.Q (µg/kg)	L.D. (µg/kg)
<b>n-Alcanos C8 - C40</b>						
n-C31	60	41	27	18	10	5
n-C32	136	96	90	50	10	5
n-C33	20	13	nd	nd	10	5
n-C34	22	13	<10	nd	10	5
n-C35	58	40	34	23	10	5
n-C36	nd	nd	111	69	10	5
n-C37	nd	nd	nd	nd	10	5
n-C38	<10	nd	nd	nd	10	5
n-C39	10	nd	nd	nd	10	5
n-C40	<10	nd	nd	nd	10	5



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## Boletim de Ensaio

Pág. 19 de 24

Resp. Téc.: **Carina Casal**

Emitido em: **15/06/2010**

Lab-nº: **10/1359F**

Parâmetro	RN-BS # 65-R3 (0-2cm) (µg/kg)	RN-BS # 67-R1 (0-2cm) (µg/kg)	RN-BS # 72-R1 (0-2cm) (µg/kg)	RN-BS # 72-R2 (0-2cm) (µg/kg)	L.Q (µg/kg)	L.D. (µg/kg)
<b>n-Alcanos C8 - C40</b>						
n-C8	12	12	<10	<10	10	5
n-C9	nd	nd	nd	nd	10	5
n-C10	nd	nd	nd	nd	10	5
n-C11	nd	nd	nd	nd	10	5
n-C12	nd	nd	nd	nd	10	5
n-C13	nd	nd	nd	nd	10	5
n-C14	nd	nd	nd	nd	10	5
n-C15	nd	<10	nd	nd	10	5
n-C16	nd	nd	nd	nd	10	5
n-C17	nd	nd	nd	nd	10	5
Pristano	nd	<10	nd	nd	10	5
n-C18	nd	nd	nd	nd	10	5
Fitano	nd	nd	nd	nd	10	5
n-C19	nd	nd	nd	nd	10	5
n-C20	nd	nd	nd	nd	10	5
n-C21	nd	nd	nd	nd	10	5
n-C22	nd	nd	nd	nd	10	5
n-C23	nd	nd	nd	nd	10	5
n-C24	nd	<10	nd	nd	10	5
n-C25	28	23	15	13	10	5
n-C26	nd	<10	nd	nd	10	5
n-C27	87	33	30	27	10	5
n-C28	12	14	10	<10	10	5
n-C29	19	25	14	18	10	5
n-C30	<10	<10	nd	nd	10	5



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## Boletim de Ensaio

Pág. 20 de 24

Resp. Téc.: **Carina Casal**

Emitido em: **15/06/2010**

Lab-nº: **10/1359F**

Parâmetro	RN-BS # 65-R3 (0-2cm) (µg/kg)	RN-BS # 67-R1 (0-2cm) (µg/kg)	RN-BS # 72-R1 (0-2cm) (µg/kg)	RN-BS # 72-R2 (0-2cm) (µg/kg)	L.Q (µg/kg)	L.D. (µg/kg)
<b>n-Alcanos C8 - C40</b>						
n-C31	43	46	26	32	10	5
n-C32	183	161	103	68	10	5
n-C33	nd	nd	nd	nd	10	5
n-C34	15	12	<10	<10	10	5
n-C35	51	64	37	35	10	5
n-C36	73	178	64	63	10	5
n-C37	nd	nd	nd	nd	10	5
n-C38	nd	nd	nd	nd	10	5
n-C39	nd	nd	nd	nd	10	5
n-C40	nd	nd	nd	nd	10	5



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## Boletim de Ensaio

Pág. 21 de 24

Resp. Téc.: **Carina Casal**

Emitido em: **15/06/2010**

Lab-nº: **10/1359F**

Parâmetro	RN-BS # 72-R3 (0-2cm) (µg/kg)	RN-BS # 76-R1 (0-2cm) (µg/kg)	RN-BS # 76-R2 (0-2cm) (µg/kg)	RN-BS # 76-R3 (0-2cm) (µg/kg)	L.Q (µg/kg)	L.D. (µg/kg)
<b>n-Alcanos C8 - C40</b>						
n-C8	14	nd	14	<10	10	5
n-C9	nd	nd	nd	nd	10	5
n-C10	nd	nd	nd	nd	10	5
n-C11	nd	nd	nd	nd	10	5
n-C12	nd	nd	nd	nd	10	5
n-C13	nd	nd	nd	nd	10	5
n-C14	nd	nd	nd	nd	10	5
n-C15	nd	<10	nd	nd	10	5
n-C16	nd	nd	nd	nd	10	5
n-C17	nd	nd	nd	nd	10	5
Pristano	nd	<10	nd	<10	10	5
n-C18	nd	nd	nd	nd	10	5
Fitano	nd	nd	nd	nd	10	5
n-C19	nd	nd	nd	nd	10	5
n-C20	nd	nd	nd	nd	10	5
n-C21	nd	nd	nd	nd	10	5
n-C22	nd	nd	nd	nd	10	5
n-C23	nd	nd	nd	nd	10	5
n-C24	nd	nd	nd	nd	10	5
n-C25	<10	<10	<10	14	10	5
n-C26	nd	nd	nd	nd	10	5
n-C27	35	32	35	68	10	5
n-C28	<10	nd	<10	<10	10	5
n-C29	16	12	16	13	10	5
n-C30	<10	<10	<10	<10	10	5



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## Boletim de Ensaio

Pág. 22 de 24

Resp. Téc.: **Carina Casal**

Emitido em: **15/06/2010**

Lab-nº: **10/1359F**

Parâmetro	RN-BS # 72-R3 (0-2cm) (µg/kg)	RN-BS # 76-R1 (0-2cm) (µg/kg)	RN-BS # 76-R2 (0-2cm) (µg/kg)	RN-BS # 76-R3 (0-2cm) (µg/kg)	L.Q (µg/kg)	L.D. (µg/kg)
<b>n-Alcanos C8 - C40</b>						
n-C31	29	20	29	26	10	5
n-C32	52	40	52	62	10	5
n-C33	17	<10	17	18	10	5
n-C34	<10	11	<10	<10	10	5
n-C35	29	22	29	31	10	5
n-C36	65	93	65	75	10	5
n-C37	nd	24	nd	nd	10	5
n-C38	nd	nd	nd	nd	10	5
n-C39	nd	nd	nd	nd	10	5
n-C40	nd	nd	nd	nd	10	5



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## Boletim de Ensaio

Pág. 23 de 24

Resp. Téc.: **Carina Casal**

Emitido em: **15/06/2010**

Lab-nº: **10/1359F**

Parâmetro	RN-BS # 84-R1 (0-2cm) (µg/kg)	RN-BS # 84-R2 (0-2cm) (µg/kg)	RN-BS # 84-R3 (0-2cm) (µg/kg)	L.Q (µg/kg)	L.D. (µg/kg)
<b>n-Alcanos C8 - C40</b>					
n-C8	nd	<10	<10	10	5
n-C9	nd	nd	nd	10	5
n-C10	15	nd	nd	10	5
n-C11	nd	nd	nd	10	5
n-C12	nd	nd	nd	10	5
n-C13	nd	nd	nd	10	5
n-C14	<10	nd	nd	10	5
n-C15	nd	16	nd	10	5
n-C16	nd	nd	nd	10	5
n-C17	<10	37	nd	10	5
Pristano	10	46	<10	10	5
n-C18	<10	29	nd	10	5
Fitano	nd	22	nd	10	5
n-C19	nd	nd	nd	10	5
n-C20	nd	11	nd	10	5
n-C21	nd	<10	nd	10	5
n-C22	nd	10	nd	10	5
n-C23	13	16	nd	10	5
n-C24	nd	nd	nd	10	5
n-C25	17	10	16	10	5
n-C26	<10	<10	nd	10	5
n-C27	67	19	63	10	5
n-C28	14	18	<10	10	5
n-C29	18	19	12	10	5
n-C30	16	13	<10	10	5



Laboratório de Ensaio acreditado  
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a ABNT NBR ISO/IEC 17025.



## Boletim de Ensaio

Pág. 24 de 24

Resp. Téc.: **Carina Casal**

Emitido em: **15/06/2010**

Lab-nº: **10/1359F**

Parâmetro	RN-BS # 84-R1 (0-2cm) (µg/kg)	RN-BS # 84-R2 (0-2cm) (µg/kg)	RN-BS # 84-R3 (0-2cm) (µg/kg)	L.Q (µg/kg)	L.D. (µg/kg)
<b>n-Alcanos C8 - C40</b>					
n-C31	33	40	26	10	5
n-C32	126	32	90	10	5
n-C33	21	29	15	10	5
n-C34	13	13	nd	10	5
n-C35	38	43	31	10	5
n-C36	95	178	145	10	5
n-C37	nd	<10	nd	10	5
n-C38	11	15	nd	10	5
n-C39	nd	nd	nd	10	5
n-C40	69	16	nd	10	5

### Padrões de Controle Analítico – (PCA)

(Faixa de Aceitação: 70-130%)


Taxa de Recuperação (%)	
PCA	76

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

### Observações

1. Ref. Método – ISO 16703:2001
2. Foram utilizados Brancos de Controle conforme metodologia informada conferido

  
José Antônio Pires de Mello  
Diretor  
B. Sc, Eng. Quím. e Quím. Industrial  
CRQ – 03311142 CREA - 791006469

  
CARINA SANTOS CASAL  
Chefe Laboratório  
Químico  
CRQ - 03251114