

!

" # ! ! \$ % ! & ' ! (+) !*+ & ! , " - ./0 + & ,
1 ! ! ! \$ 2 ! 3 6! !4 +! !2 5 , 3 " - ./0 + & ,
\$ &! \$ 7 ' 5 ! () !*+ (! 7 -8 9900 + & ,

! & 2 !

8, 8 B

"

"

"

! " :; 3 "# !! \$< 4 "% 5 4 = 5 > 4 ' 5 ! & ! ' + "% ! 4 5 4 = ' 5 / ' = \$
4 :; 3 "# !! 5 5 4 = ' 5 9 @ 7 = \$ 4 :; 3 "# !! 5 4 5 4 = ' \$. 4 :; 3 "# !! 5 , !
! # ! A ,

8,0 B

8, C B

9, C B

#

8,0 B

8, B
9, C B

#

8,0 B

#

! # ;3"# !! \$< 4 "% 5 4 = 5 > 4'5 ! & ! ' + "% ! 4 = '5 / ' = \$
4 :;3"# !! 45,5 ! ! \$! ' + "% ! 4 = '5 9 @ 7 = \$ 4 :;3"# !! :5, !
! \$! ' + "% ! 4 = '\$. 4 :;3"# !! 5, ! ! #
! A ,

! " ! \$! & ! \$# ! ! ! ! ! \$ # ! ! 99 D% ! .99 D% # !

4 99 D%5

4.99 D%5

% E\$	4	,5	8,C	4 8,F	5F,	8,0	8,/	4 0,F	95.	4	,.5	,.	,,F	F,. 4 /,	5
' E \$	4	,5	9,0	C 4	, 59,0	9,0	9,C	4 95	,	4	, 5	,	,8	,Q	,85
E\$	4	,5	0,. 4	, 5			8,F	4	,C	5					

! ! ' \$! & ! #, ! ! \$

		\$ % &'()*'+ (''	\$, % '()*'+.#)*+ (#'
	G =	# &#/(#'	G = ,08/4 5
	G = J	# 00&(''	G = # &&1(''
G = 4 H & ! 5	G =	,. F4 5	G = K # 233(''
415	G = J	,88F4 5	G = ,89 4 5
	G =	,8F 4 5	G = J ,8/C4 5
	G = .	,CF 4 5	G = . ,CC94 5
	G =	,F 4 5	G = ,8 /4 5
G = 4 ! 5 415	G =	,8//4 5	G = J ,F 94 5
	G = J	, / 4 5	G = ,8/F4 5
	= ??? =	,8F94 5	= ??? = ,/ 04 5
'L+ 4 5	= ??? =.	,F /4 5	= ??? = ,0 4 5
	%G =	" #34('#'	%G = , F
% G = 4 I H & 5 4	%G =	" #51('#'	%G = , C8
	%G =	" #53('#'	%G = , C
	%G = .	" ##2(''	%G = . , 8C
	G 4 = = 5JG	., 04 5	G 4 = = 5 G ., A 5
G 4	G 4 = = 5JG	,00 4 5	G 4 = = 5JG ., 8F 5
5 G 415	G 4 = = 5????	C,9/94 5	
	1 ! & !	, 0.485	1 ! & ! ,8 4 5

1 ! \$! & ! " ! # \$

\$ % '&'()*'+ (''

\$, % '()*'+ (#'

= G G= J
"6 6#
= G G= J
= G G=
= G G=.
= G G=
= G G=
= G ???= J
= JG G=
= JG G= J
= JG G=
= JG G=.
= JG G=
= G G= 4B5
*"86 ???= J
= G G= J
= G G=
= G G=.
= G G=
= G G=
= G G=
= G ??= J
= G G=.
= G G=
= G G=
16 ..#98
=.G G=
=.G G=
=.G ??= J

80,8 4C5
&4 &1&(&'
C, F 4/5
/0,. 0485
/ , 4C5
.., 04F5
., 94F5
8C,99 4.5
8,C 84/5
8 ,9/.4 5
//,F/ 485
.,8 .4/5
/ ,8 485
F0,/ .4C5
8/,/8C4..5
F8,98 4C5
F8,9.04C5
88,/C 4.5
.9,9 4F5
.8,9/ 4F5
08, 485
/,9F84F5
8/,F /4.5
8,..84F5
"53 #20(0'
,/ 4F5
F0, F.4C5
C8, 8.4.5

"6 6#
= G G=7
= G G=
= G G=7
= G G=.
= G G=
= G G=K
= G G=
= G G= J
= G G=
= G G= J
= G G=.
= JG G=
= JG GK
= JG G=.
#86 6"9
= JG G= J
= JG G=
= G G=K
= G G=.
= G G=
= G G= J
= G G=
=.G G=
=.G G=K
=.G G=
= G G=K
= G G=

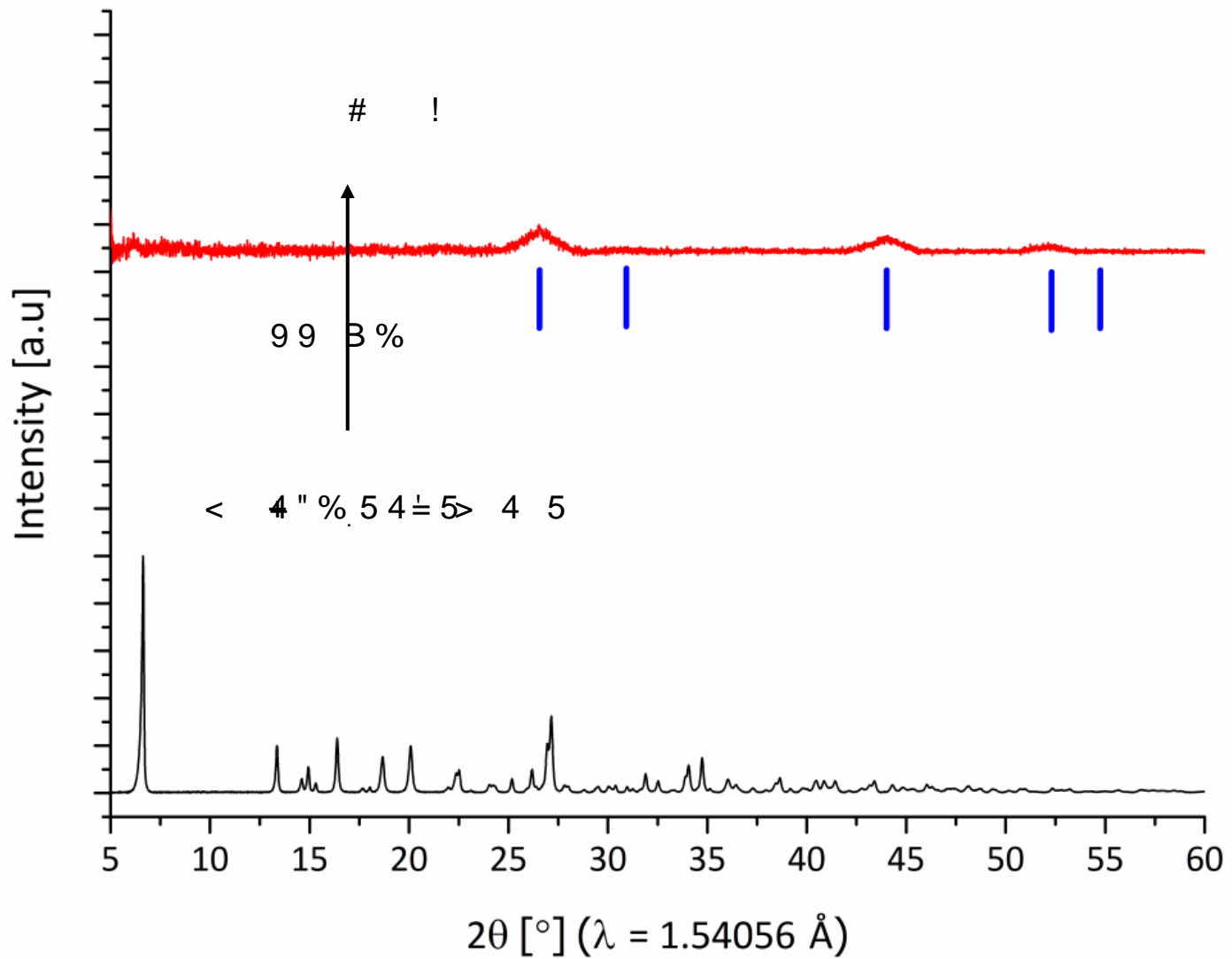
&5 "3/(#'
9,9984.5
8,9 .4C5
C, C.4C5
9C,90 4.5
8F, C 4 5
F/, F94 5
C ,9894 5
F.,0894 5
.8,/0 4C5
,8.F4C5
F , 0/4 5
,F994C5
88,/ .4 5
F/,0 4 5
"53 #/3(5&'
/, /F4C5
F0, . 4.5
F/,9 4 5
C,F.C4C5
.9, / 4C5
FC, 804 5
F ,/. 4 5
F ,8/.4 5
.9, /84C5
0,/CC4C5
F , .4 5
C, 4.5

1 ! \$! & ! " ! # \$

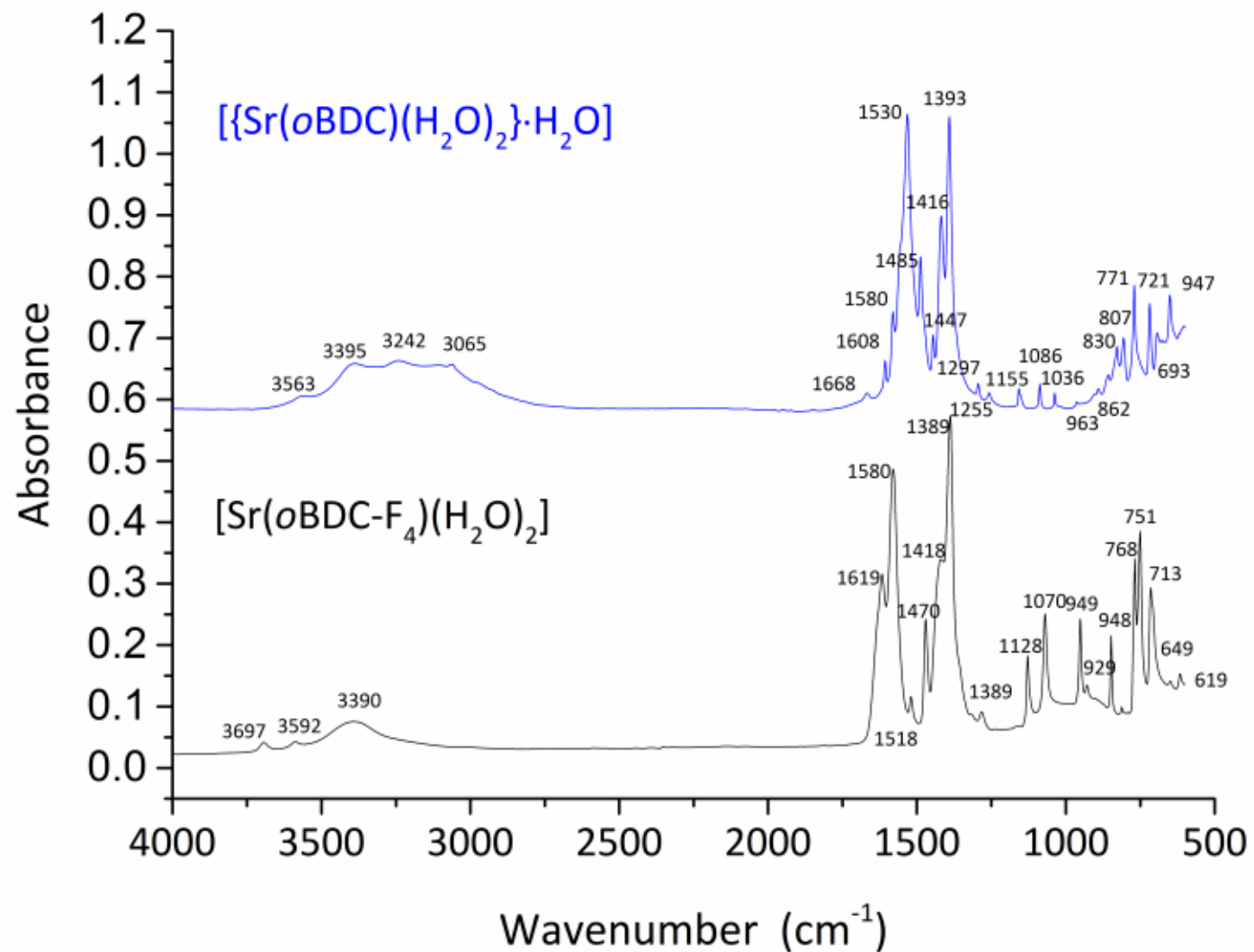
			\$	%	'() * ' +	(" '		\$,	%	'() * ' -) # * +	(# '
= G % G = 4	H & 5 4 B 5	= G % / G =		F , 9 / 4 5		= G % G =				, 8 F 9 4 5	
		= G % F G = .		, 0 9 4 5		= G % F G = .				, 0	
		= G G = 4 ! 5		. 0 , . . 4 . 5		= G G = 4 ! 5				. C , 9 8 4 5	
		G = G 4 5		9 , F . 4 8 5							
G 4	5 G 4 B 5	G = G 4 5		9 , 0 0 4 8 5		G = G 4 5				9 C , 9 . 4 . 5	
		G % F 4 = = . 5 G 4		5 8 F , C F C 4 . 5		G = G 4 ! ! 5				9 8 , C 4 . 5	
						G % F 4 = = . 5 G 4	5			F , F C 4 5	
						G % F 4 = = . 5 G 5				/ , F . 4 5	

,& ; \$! # ! \$! " # ! M 4 3 2 " 5 99,999 9# \$

!!	# !	3 4 1 5	3, 4 1 5	3 \$ \$ 4 1 5		3 4 1 5	3, 4 1 5	3 \$ \$ 4 1 5	
G =		# & # / (# '	, C 0	9, 9 /		G =	, 0 8 / 4 5	, 0 F 8	9, 9 9 9 9 8 .
G = J		# 0 0 & ("'	, 8 9	9, 9 9		G =	# & & 1 ("'	, . C	9, 9 9 9 9 8 .
G =		, . F 4 5	, C 0	9, 9		G = K	# 2 3 3 ("'	, / 9 /	9, 9 9 9 9 8 .
G = J		, 8 8 F 4 5	, C 9	9, 9 F		G =	, 8 9 4 5	, 8	9, 9 9 9 .
G =		, 8 F 4 5	, C 9	9, 9 0		G = J	, 8 / C 4 5	, 8 0 .	9, 9 9 9 9 /
G = .		, C F 4 5	, . 9 9	9, 9 9		G = .	, C C 9 4 5	, C C /	9, 9 9 9 9 8 .
G =		, F 4 5	, C 8 9	9, 9 9		G =	, 8 / 4 5	, 8	9, 9 9 9 9 C
G =		, 8 // 4 5	, C 9	9, 9 C		G = J	, F 9 4 5	, F /	9, 9 9 9 9 8 .
G = J		, / 4 5	, 9 9	9, 9 9		G =	, 8 / F 4 5	, 8 0 .	9, 9 9 9 9 . 0
) I 4		, 8 /	, C 9				, 8 F 8	, 8 / .	
3 2				9, 9 9					9, 9 9 9 /
3 !				9, 9 9 F					9, 9 .
3	M 5 4 N			/ C / , / 0					8 / 9 9 , C 9



! 1 ; ; 3 " # !! \$ # # & ! 4 ; ; 3 " # !! 5 ! # # \$! ! # !
 ! ! !! 9 9 B % ; ; 3 " # !! 5 , ; ; 3 " # !! \$ # \$ " \$! # ! # ! ! ! ; & \$
 \$! 9 9 9 9 9 8 .. 4) ! 5 , 0

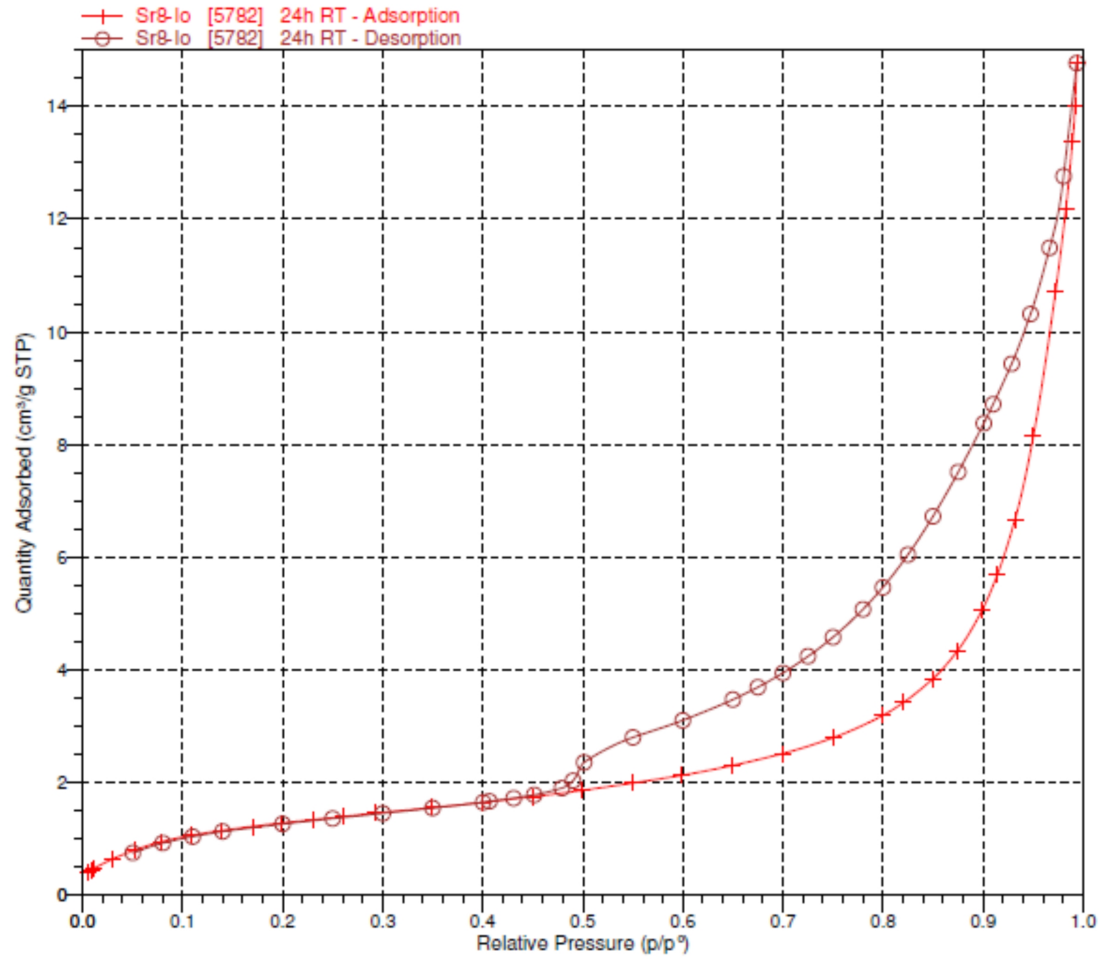


! & 3 13 # ! \$ " 4 # # ! 5 ## # ! 5 ,

! 5 !) \$! ",# #! 4 5 #! #) 4 5 !
! # ! 4 5 ! 99 B% 4 5 ! C9 B% 4 5 ,

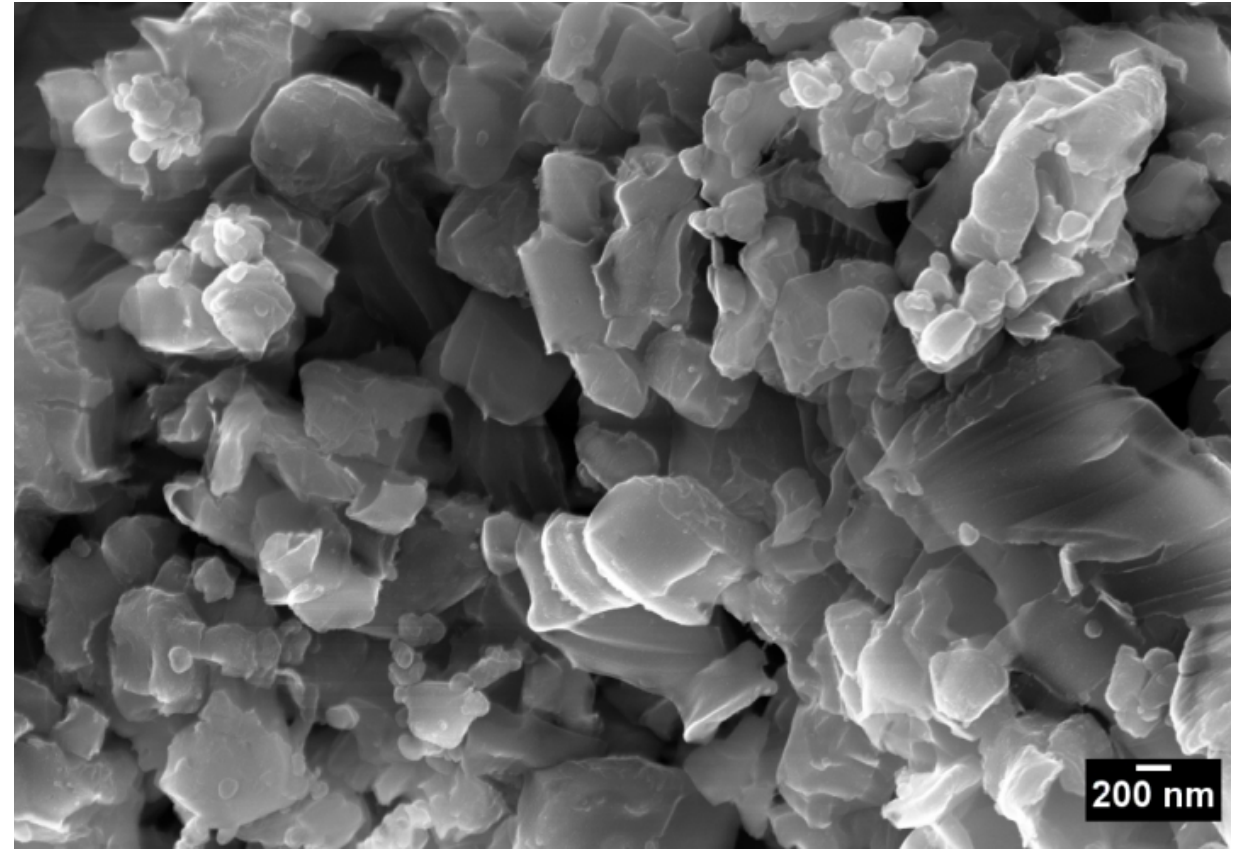
! 5 !) \$! ",# #! 4 5 #! #) 4 5 !
! # ! 4 5 ! 99 B% 4 5 ! C9 B% 4 5 ,

Isotherm Linear Plot



! 1 !) \$! #, # #! 4 5 ! 09 B% 4 5 ! 09 B% 4 5) 4 5 !

! 1 !) \$! #, # #! 4 5 #! #) 4 5 !
! # ! 4 5 ! .9 B% 4 5 09 B% 4 5 ! 09 B% 4 5 .



! 0 2 & 4 " % . 5 4 = 5 > " 4 ,

! 2 2 \$ O + 4 % 5 = 45P? => #54,