Eucalyptus camaldulensis (river red gum) Biogeochemistry: An Innovative Tool for Mineral Exploration in the Curnamona Province and Adjacent Regions

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APPENDIX A

Detrital contamination

Yellow region denotes Spearman Rank Correlation for Yunta N= 12, Bindarrah (Cutana Creek) N=12 and Flying Doctor (Willawillyong Creek N=13), between vegetation (*E. camaldulensis*) and stream sediments for the markers of soil contamination across the study sites.

Yunta	*Al*	*Fe*	*Ti*	*In*	***Al***	***Fe***	***Ti***	***In***
Al	1							
Fe	-0.16	1						
Ti	0.30	0.74	1					
In	0.47	0.46	0.73	1				
Al	**0.80**	**-0.39**	**-0.37**	**-1.00**	1			
Fe	**0.52**	**0.40**	**0.42**	**-0.62**	0.67	1		
Ti	**0.00**	**0.00**	**0.00**	**0.00**	0.00	0.00	1	
In	**0.00**	**0.00**	**0.00**	**0.00**	0.00	0.00	0.00	1

Bindarrah	*Al*	*Fe*	*Ti*	*In*	***Al***	***Fe***	***Ti***	***In***
Al	1							
Fe	-0.90	1						
Ti	-0.87	0.98	1					
In	0.00	0.00	0.00	1				
Al	**0.03**	**0.06**	**-0.07**	**0.00**	**1**			
Fe	**-0.53**	**0.61**	**0.51**	**0.00**	**0.81**	1		
Ti	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.00	1	
In	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.00	0.00	1

Flying Doctor	*Al*	*Fe*	*Ti*	*In*	***Al***	***Fe***	***Ti***	***In***
Al	1							
Fe	0.83	1						
Ti	0.10	0.56	1					
In	0.66	0.57	0.22	1				
Al	**-0.88**	**-0.84**	**0.03**	**-0.75**	1			
Fe	**-0.59**	**-0.26**	**0.59**	**-0.61**	0.35	1		
Ti	**0.00**	**0.00**	**0.00**	**0.00**	0.00	0.00	1	
In	**0.00**	**0.00**	**0.00**	**0.00**	0.00	0.00	0.00	1

Yellow region denotes Spearman Rank Correlations for Willams Creek N=16, Teilta N=13 and Tibooburra (Racecourse Creek N=13), between vegetation (*E. camaldulensis*) and stream sediments for the markers of soil contamination across the study sites.

Williams Creek	*Al*	*Fe*	*Ti*	*In*	***Al***	***Fe***	***Ti***	***In***
Al	1							
Fe	0.93	1						
Ti	0.66	0.80	1					
In	0.00	0.00	0.00	1				
Al	**-0.50**	**-0.31**	**-0.10**	**0.00**	1			
Fe	**0.07**	**0.13**	**0.31**	**0.00**	0.73	1		
Ti	**-0.25**	**0.01**	**0.19**	**0.00**	0.85	0.70	1	
In	**0.00**	**0.00**	**0.00**	**0.00**	0.00	0.00	0.00	1

Teilta	*Al*	*Fe*	*Ti*	*In*	***Al***	***Fe***	***Ti***	***In***
Al	1							
Fe	-0.34	1						
Ti	-0.11	0.33	1					
In	0.00	0.00	0.00	1				
Al	**0.38**	**-0.31**	**0.25**	**0.00**	1			
Fe	**0.57**	**-0.29**	**0.22**	**0.00**	0.95	1		
Ti	**0.90**	**-0.47**	**-0.35**	**0.00**	0.68	0.77	1	
In	**0.00**	**0.00**	**0.00**	**0.00**	0.00	0.00	0.00	1

Tibooburra	**Al**	**Fe**	**Ti**	**In**	**Al**	**Fe**	**Ti**	**In**
Al	**1**							
Fe	**0.648**	**1**						
Ti	**0.942**	**0.807**	**1**					
In	**0.080**	**0.029**	**0.013**	**1**				
Al	**-0.234**	**-0.501**	**-0.354**	**0.064**	**1**			
Fe	**-0.090**	**0.652**	**0.189**	**-0.784**	**-0.363**	**1**		
Ti	**0.229**	**-0.545**	**0.000**	**-0.250**	**0.861**	**-0.294**	**1**	
In	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**1**

APPENDIX B

Organ tissue biogeochemistry

Variations of metal concentration (raw data) within oven dried tissues (leaves) sectors around the *E. camaldulensis* sampled at (Winninninie Creek) Yunta. A=north, B=northeast, C=east and F=southwest.

ELEMENTS	Sb	As	Ba	Br	Ca	Ce	Cs	Cr
UNITS	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
DETECTION LIMIT	0.010	0.050	10.0	0.05	0.05	0.20	0.10	0.30
METHOD	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA
Yunta Leaves A	-0.010	-0.050	23.2	7.78	1.11	-0.20	-0.10	-0.30
Yunta Leaves B	-0.010	0.050	38.8	6.63	1.27	0.23	-0.10	-0.30
Yunta Leaves C	-0.010	0.084	28.3	8.83	1.08	-0.20	-0.10	-0.30
Yunta Leaves F	-0.010	-0.050	22.9	9.54	0.95	-0.20	0.18	-0.30

ELEMENTS	Co	Eu	Au	Hf	Ir	Fe	La	Lu
UNITS	ppm	ppm	ppb	ppm	ppb	%	ppm	ppm
DETECTION LIMIT	0.20	0.020	0.30	0.050	2.0	50.0	0.010	0.002
METHOD	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA
Yunta Leaves A	-0.20	-0.020	-0.30	-0.050	-2.0	-50.0	0.047	-0.002
Yunta Leaves B	-0.20	-0.020	-0.30	-0.050	-2.0	70.0	0.053	-0.002
Yunta Leaves C	0.24	-0.020	-0.30	-0.050	-2.0	80.0	0.059	-0.002
Yunta Leaves F	0.23	0.022	-0.30	-0.050	-2.0	-50.0	0.057	-0.002

ELEMENTS	Mo	K	Rb	Sm	Sc	Se	Ag	Na
UNITS	ppm	%	ppm	ppm	ppm	ppm	ppm	%
DETECTION LIMIT	0.50	0.050	2.00	0.010	0.005	0.50	0.50	10.0
METHOD	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA
Yunta Leaves A	-0.50	0.849	-2.00	0.018	0.016	-0.50	-0.50	1180.0
Yunta Leaves B	-0.50	0.720	-2.00	0.017	0.022	-0.50	-0.50	910.0
Yunta Leaves C	-0.50	0.887	-2.00	0.022	0.023	-0.50	-0.50	1010.0
Yunta Leaves F	-0.50	1.030	2.27	0.019	0.020	-0.50	-0.50	1370.0

ELEMENTS	Ta	Te	Th	W	U	Yb	Zn	Zr
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
DETECTION LIMIT	0.20	0.50	0.10	0.10	0.10	0.010	2.0	20.0
METHOD	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA
Yunta Leaves A	-0.20	-0.50	-0.10	-0.10	-0.10	-0.010	12.9	-20.0
Yunta Leaves B	-0.20	-0.50	-0.10	-0.10	-0.10	-0.010	13.4	-20.0
Yunta Leaves C	-0.20	-0.50	-0.10	-0.10	-0.10	-0.010	17.3	-20.0
Yunta Leaves F	-0.20	-0.50	-0.10	-0.10	-0.10	-0.010	10.0	-20.0

ELEMENTS	Al	Be	Bi	Cd	Cu	Ga	In	Mg
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
DETECTION LIMIT	20	0.1	0.01	0.1	1	0.1	0.01	20
METHOD	ICP-OES	ICP-MS	ICP-MS	ICP-MS	ICP-OES	ICP-MS	ICP-MS	ICP-OES
Yunta Leaves A	46	-0.1	-0.01	-0.1	6	-0.1	-0.01	2185
Yunta Leaves B	47	-0.1	-0.01	-0.1	6	-0.1	-0.01	1895
Yunta Leaves C	77	-0.1	-0.01	-0.1	7	-0.1	-0.01	2200
Yunta Leaves F	44	-0.1	-0.01	-0.1	7	-0.1	-0.01	2237

Continued: Variations of metal concentration (raw data) within oven dried tissues (leaves) sectors around the *E. camaldulensis* sampled at (Winninninie Creek) Yunta. A=north, B=northeast, C=east and F=southwest.

ELEMENTS	Mn	Nb	Nd	Ni	P	Pb	S	Sn
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
DETECTION LIMIT	1	0.05	0.01	1	20	2	10	0.1
METHOD	ICP-OES	ICP-MS	ICP-MS	ICP-OES	ICP-OES	ICP-MS	ICP-OES	ICP-MS
Yunta Leaves A	49	-0.05	0.03	3	851	-2	788	0.1
Yunta Leaves B	55	-0.05	0.03	2	781	-2	869	-0.1
Yunta Leaves C	51	-0.05	0.04	4	853	2	1004	0.2
Yunta Leaves F	69	-0.05	0.02	2	951	-2	822	0.2

ELEMENTS	Sr	Ti	V	Zn
UNITS	ppm	ppm	ppm	ppm
DETECTION LIMIT	0.05	5	2	1
METHOD	ICP-MS	ICP-OES	ICP-OES	ICP-OES
Yunta Leaves A	57.96	-5	-2	17
Yunta Leaves B	51.76	-5	-2	19
Yunta Leaves C	41.98	-5	-2	27
Yunta Leaves F	48.94	-5	-2	16

Variations of metal concentration (raw data) within oven dried tissues (twigs) sectors around the *E. camaldulensis* sampled at (Winninninie Creek) Yunta. A=north, B=northeast, C=east and F=southwest.

ELEMENTS	Sb	As	Ba	Br	Ca	Ce	Cs	Cr
UNITS	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
DETECTION LIMIT	0.010	0.050	10.0	0.05	0.05	0.20	0.10	0.30
METHOD	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA
Yunta Twigs A	-0.010	-0.050	21.0	2.23	1.87	-0.20	-0.10	-0.30
Yunta Twigs B	-0.010	-0.050	24.5	2.64	2.28	-0.20	-0.10	-0.30
Yunta Twigs C	-0.010	-0.050	20.9	3.26	2.44	-0.20	-0.10	-0.30
Yunta Twigs F	-0.010	-0.050	31.0	2.80	2.48	-0.20	-0.10	-0.30

ELEMENTS	Co	Eu	Au	Hf	Ir	Fe	La	Lu
UNITS	ppm	ppm	ppb	ppm	ppb	%	ppm	ppm
DETECTION LIMIT	0.20	0.020	0.30	0.050	2.0	50.0	0.010	0.002
METHOD	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA
Yunta Twigs A	-0.20	-0.020	-0.30	-0.050	-2.0	50.0	0.029	-0.002
Yunta Twigs B	-0.20	-0.020	-0.30	-0.050	-2.0	50.0	0.049	-0.002
Yunta Twigs C	-0.20	-0.020	-0.30	-0.050	-2.0	-50.0	0.046	-0.002
Yunta Twigs F	-0.20	-0.020	-0.30	-0.050	-2.0	-50.0	0.038	-0.002

ELEMENTS	Mo	K	Rb	Sm	Sc	Se	Ag	Na
UNITS	ppm	%	ppm	ppm	ppm	ppm	ppm	%
DETECTION LIMIT	0.50	0.050	2.00	0.010	0.005	0.50	0.50	10.0
METHOD	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA
Yunta Twigs A	-0.50	0.873	2.35	0.018	0.013	-0.50	-0.50	610.0
Yunta Twigs B	-0.50	0.718	-2.00	0.022	0.017	-0.50	-0.50	530.0
Yunta Twigs C	-0.50	0.732	-2.00	0.020	0.017	-0.50	-0.50	560.0
Yunta Twigs F	-0.50	0.775	2.19	0.018	0.016	-0.50	-0.50	550.0

Continued: Variations of metal concentration (raw data) within oven dried tissues (twigs) sectors around the *E. camaldulensis* sampled at (Winninninie Creek) Yunta. A=north, B=northeast, C=east and F=southwest.

ELEMENTS	Ta	Te	Th	W	U	Yb	Zn	Zr
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
DETECTION LIMIT	0.20	0.50	0.10	0.10	0.10	0.010	2.0	20.0
METHOD	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA
Yunta Twigs A	-0.20	-0.50	-0.10	-0.10	-0.10	-0.010	21.1	-20.0
Yunta Twigs B	-0.20	-0.50	-0.10	-0.10	-0.10	-0.010	25.2	-20.0
Yunta Twigs C	-0.20	-0.50	-0.10	-0.10	-0.10	-0.010	26.8	-20.0
Yunta Twigs F	-0.20	-0.50	-0.10	-0.10	-0.10	-0.010	16.9	-20.0

ELEMENTS	Al	Be	Bi	Cd	Cu	Ga	In	Mg
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
DETECTION LIMIT	20	0.1	0.01	0.1	1	0.1	0.01	20
METHOD	ICP-OES	ICP-MS	ICP-MS	ICP-MS	ICP-OES	ICP-MS	ICP-MS	ICP-OES
Yunta Twigs A	40	-0.1	-0.01	-0.1	21	-0.1	-0.01	565
Yunta Twigs B	39	-0.1	-0.01	-0.1	20	-0.1	-0.01	985
Yunta Twigs C	54	-0.1	-0.01	-0.1	19	-0.1	-0.01	1405
Yunta Twigs F	49	-0.1	0.02	-0.1	13	-0.1	-0.01	945

ELEMENTS	Mn	Nb	Nd	Ni	P	Pb	S	Sn
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
DETECTION LIMIT	1	0.05	0.01	1	20	2	10	0.1
METHOD	ICP-OES	ICP-MS	ICP-MS	ICP-OES	ICP-OES	ICP-MS	ICP-OES	ICP-MS
Yunta Twigs A	64	-0.05	0.02	3	2412	-2	371	0.3
Yunta Twigs B	66	-0.05	0.03	10	1704	-2	336	0.2
Yunta Twigs C	73	-0.05	0.04	13	1838	-2	362	0.2
Yunta Twigs F	93	-0.05	0.04	3	1123	-2	385	0.2

ELEMENTS	Sr	Ti	V	Zn
UNITS	ppm	ppm	ppm	ppm
DETECTION LIMIT	0.05	5	2	1
METHOD	ICP-MS	ICP-OES	ICP-OES	ICP-OES
Yunta Twigs A	119.27	-5	-2	22
Yunta Twigs B	97.22	-5	-2	28
Yunta Twigs C	126.75	-5	-2	31
Yunta Twigs F	147.97	-5	-2	22

Variations of metal concentration (raw data) within oven dried tissues (bark and buds) from the *E. camaldulensis* sampled at Yunta (Winninninie Creek). Comp= composite sample.

ELEMENTS	Sb	As	Ba	Br	Ca	Ce	Cs	Cr
UNITS	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
DETECTION LIMIT	0.010	0.050	10.0	0.05	0.05	0.20	0.10	0.30
METHOD	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA
Yunta Bark	-0.010	-0.050	38.3	2.45	7.10	-0.20	-0.10	-0.30
Yunta Bud Comp.	-0.010	-0.050	27.1	8.47	0.87	-0.20	-0.10	-0.30

ELEMENTS	Co	Eu	Au	Hf	Ir	Fe	La	Lu
UNITS	ppm	ppm	ppb	ppm	ppb	%	ppm	ppm
DETECTION LIMIT	0.20	0.020	0.30	0.050	2.0	50.0	0.010	0.002
METHOD	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA
Yunta Bark	-0.20	-0.020	0.43	-0.050	-2.0	-50.0	0.015	-0.002
Yunta Bud Comp.	-0.20	-0.020	-0.30	-0.050	-2.0	-50.0	0.019	-0.002

Continued: Variations of metal concentration (raw data) within oven dried tissues (bark and buds) from the *E. camaldulensis* sampled at Yunta (Winninninie Creek). Comp= composite sample.

ELEMENTS	Mo	K	Rb	Sm	Sc	Se	Ag	Na
UNITS	ppm	%	ppm	ppm	ppm	ppm	ppm	%
DETECTION LIMIT	0.50	0.050	2.00	0.010	0.005	0.50	0.50	10.0
METHOD	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA
Yunta Bark	-0.50	0.285	-2.00	-0.010	-0.005	-0.50	-0.50	250.0
Yunta Bud Comp.	-0.50	1.300	6.22	0.021	0.009	-0.50	-0.50	1120.0

ELEMENTS	Ta	Te	Th	W	U	Yb	Zn	Zr
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
DETECTION LIMIT	0.20	0.50	0.10	0.10	0.10	0.010	2.0	20.0
METHOD	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA
Yunta Bark	-0.20	-0.50	-0.10	-0.10	-0.10	-0.010	5.8	-20.0
Yunta Bud Comp.	-0.20	-0.50	-0.10	-0.10	-0.10	-0.010	14.9	-20.0

ELEMENTS	Al	Be	Bi	Cd	Cu	Ga	In	Mg
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
DETECTION LIMIT	20	0.1	0.01	0.1	1	0.1	0.01	20
METHOD	ICP-OES	ICP-MS	ICP-MS	ICP-MS	ICP-OES	ICP-MS	ICP-MS	ICP-OES
Yunta Bark	-20	-0.1	-0.01	-0.1	1	-0.1	-0.01	421
Yunta Bud Comp.	35	-0.1	-0.01	-0.1	7	-0.1	-0.01	1678

ELEMENTS	Mn	Nb	Nd	Ni	P	Pb	S	Sn
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
DETECTION LIMIT	1	0.05	0.01	1	20	2	10	0.1
METHOD	ICP-OES	ICP-MS	ICP-MS	ICP-OES	ICP-OES	ICP-MS	ICP-OES	ICP-MS
Yunta Bark	17	0.07	-0.01	2	89	-2	152	-0.1
Yunta Bud Comp.	41	-0.05	0.02	2	1536	-2	886	-0.1

ELEMENTS	Sr	Ti	V	Zn
UNITS	ppm	ppm	ppm	ppm
DETECTION LIMIT	0.05	5	2	1
METHOD	ICP-MS	ICP-OES	ICP-OES	ICP-OES
Yunta Bark	427.09	-5	-2	7
Yunta Bud Comp.	49.27	-5	-2	16

Variations of metal concentration (raw data) within oven dried tissues (leaves) sectors around the *E. camaldulensis* sampled at (Cutana Creek) Bindarrah. A=north, B=northeast, C=east and E=south.

ELEMENTS	Sb	As	Ba	Br	Ca	Ce	Cs	Cr
UNITS	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
DETECTION LIMIT	0.010	0.050	10.0	0.05	0.05	0.20	0.10	0.30
METHOD	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA
Bindarrah Leaves A	-0.010	-0.050	21.5	12.10	0.83	0.37	-0.10	-0.30
Bindarrah Leaves B	-0.010	-0.050	19.2	15.00	0.83	-0.20	-0.10	-0.30
Bindarrah Leaves C	-0.010	0.106	21.7	21.00	0.75	0.56	-0.10	-0.30
Bindarrah Leaves E	-0.010	-0.050	41.7	14.80	0.83	0.42	-0.10	-0.30

ELEMENTS	Co	Eu	Au	Hf	Ir	Fe	La	Lu
UNITS	ppm	ppm	ppb	ppm	ppb	%	ppm	ppm
DETECTION LIMIT	0.20	0.020	0.30	0.050	2.0	50.0	0.010	0.002
METHOD	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA
Bindarrah Leaves A	-0.20	-0.020	-0.30	-0.050	-2.0	-50.0	0.053	-0.002
Bindarrah Leaves B	-0.20	-0.020	-0.30	-0.050	-2.0	70.0	0.093	-0.002
Bindarrah Leaves C	-0.20	-0.020	-0.30	-0.050	-2.0	170.0	0.109	0.002
Bindarrah Leaves E	-0.20	-0.020	-0.30	-0.050	-2.0	70.0	0.114	-0.002

ELEMENTS	Mo	K	Rb	Sm	Sc	Se	Ag	Na
UNITS	ppm	%	ppm	ppm	ppm	ppm	ppm	%
DETECTION LIMIT	0.50	0.050	2.00	0.010	0.005	0.50	0.50	10.0
METHOD	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA
Bindarrah Leaves A	-0.50	0.883	-2.00	0.024	0.024	-0.50	-0.50	1900.0
Bindarrah Leaves B	-0.50	0.999	-2.00	0.027	0.046	-0.50	-0.50	2160.0
Bindarrah Leaves C	-0.50	1.050	-2.00	0.036	0.050	-0.50	-0.50	1880.0
Bindarrah Leaves E	-0.50	0.950	-2.00	0.032	0.052	-0.50	-0.50	2080.0

ELEMENTS	Ta	Te	Th	W	U	Yb	Zn	Zr
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
DETECTION LIMIT	0.20	0.50	0.10	0.10	0.10	0.010	2.0	20.0
METHOD	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA
Bindarrah Leaves A	-0.20	-0.50	-0.10	-0.10	-0.10	-0.010	17.4	-20.0
Bindarrah Leaves B	-0.20	-0.50	-0.10	-0.10	-0.10	-0.010	19.9	-20.0
Bindarrah Leaves C	0.20	-0.50	-0.10	-0.10	-0.10	-0.010	22.4	-20.0
Bindarrah Leaves E	-0.20	-0.50	-0.10	-0.10	-0.10	0.010	29.2	-20.0

ELEMENTS	Al	Be	Bi	Cd	Cu	Ga	In	Mg
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
DETECTION LIMIT	20	0.1	0.01	0.1	1	0.1	0.01	20
METHOD	ICP-OES	ICP-MS	ICP-MS	ICP-MS	ICP-OES	ICP-MS	ICP-MS	ICP-OES
Bindarrah Leaves A	60	-0.1	-0.01	-0.1	8	-0.1	-0.01	2166
Bindarrah Leaves B	108	-0.1	-0.01	-0.1	7	-0.1	-0.01	2121
Bindarrah Leaves C	116	-0.1	-0.01	-0.1	8	-0.1	-0.01	2314
Bindarrah Leaves E	127	-0.1	-0.01	-0.1	9	-0.1	-0.01	2200

Continued: Variations of metal concentration (raw data) within oven dried tissues (leaves) sectors around the *E. camaldulensis* sampled at (Cutana Creek) Bindarrah. A=north, B=northeast, C=east and E=south.

ELEMENTS	Mn	Nb	Nd	Ni	P	Pb	S	Sn
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
DETECTION LIMIT	1	0.05	0.01	1	20	2	10	0.1
METHOD	ICP-OES	ICP-MS	ICP-MS	ICP-OES	ICP-OES	ICP-MS	ICP-OES	ICP-MS
Bindarrah Leaves A	62	-0.05	0.04	4	1182	-2	901	0.1
Bindarrah Leaves B	84	-0.05	0.06	2	1122	-2	977	0.2
Bindarrah Leaves C	118	-0.05	0.09	4	1198	-2	1158	0.1
Bindarrah Leaves E	199	-0.05	0.09	4	1095	-2	1080	0.1

ELEMENTS	Sr	Ti	V	Zn
UNITS	ppm	ppm	ppm	ppm
DETECTION LIMIT	0.05	5	2	1
METHOD	ICP-MS	ICP-OES	ICP-OES	ICP-OES
Bindarrah Leaves A	55.58	-5	-2	24
Bindarrah Leaves B	62.45	-5	-2	24
Bindarrah Leaves C	54.00	-5	-2	28
Bindarrah Leaves E	61.01	-5	-2	37

Variations of metal concentration (raw data) within oven dried tissues (twigs) sectors around the *E. camaldulensis* sampled at (Cutana Creek) Bindarrah. A=north, B=northeast, C=east and E=south.

ELEMENTS	Sb	As	Ba	Br	Ca	Ce	Cs	Cr
UNITS	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
DETECTION LIMIT	0.010	0.050	10.0	0.05	0.05	0.20	0.10	0.30
METHOD	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA
Bindarrah Twigs A	-0.010	-0.050	40.3	1.97	2.83	-0.20	-0.10	-0.30
Bindarrah Twigs B	-0.010	-0.050	73.1	2.71	2.59	-0.20	-0.10	-0.30
Bindarrah Twigs C	-0.010	-0.050	40.1	3.69	2.00	0.27	-0.10	-0.30
Bindarrah Twigs E	-0.010	0.059	69.9	2.56	2.52	0.21	-0.10	-0.30

ELEMENTS	Co	Eu	Au	Hf	Ir	Fe	La	Lu
UNITS	ppm	ppm	ppb	ppm	ppb	%	ppm	ppm
DETECTION LIMIT	0.20	0.020	0.30	0.050	2.0	50.0	0.010	0.002
METHOD	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA
Bindarrah Twigs A	-0.20	-0.020	-0.30	-0.050	-2.0	-50.0	0.037	-0.002
Bindarrah Twigs B	-0.20	-0.020	-0.30	-0.050	-2.0	-50.0	0.068	-0.002
Bindarrah Twigs C	-0.20	-0.020	-0.30	-0.050	-2.0	-50.0	0.053	-0.002
Bindarrah Twigs E	-0.20	-0.020	-0.30	-0.050	-2.0	-50.0	0.082	-0.002

ELEMENTS	Mo	K	Rb	Sm	Sc	Se	Ag	Na
UNITS	ppm	%	ppm	ppm	ppm	ppm	ppm	%
DETECTION LIMIT	0.50	0.050	2.00	0.010	0.005	0.50	0.50	10.0
METHOD	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA
Bindarrah Twigs A	-0.50	0.520	-2.00	0.020	0.008	-0.50	-0.50	480.0
Bindarrah Twigs B	-0.50	0.491	-2.00	0.025	0.019	-0.50	-0.50	850.0
Bindarrah Twigs C	-0.50	0.452	2.11	0.026	0.016	-0.50	-0.50	710.0
Bindarrah Twigs E	-0.50	0.470	2.36	0.030	0.015	-0.50	-0.50	630.0

Continued: Variations of metal concentration (raw data) within oven dried tissues (twigs) sectors around the *E. camaldulensis* sampled at (Cutana Creek) Bindarrah. A=north, B=northeast, C=east and E=south.

ELEMENTS	Ta	Te	Th	W	U	Yb	Zn	Zr
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
DETECTION LIMIT	0.20	0.50	0.10	0.10	0.10	0.010	2.0	20.0
METHOD	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA
Bindarrah Twigs A	-0.20	-0.50	-0.10	-0.10	-0.10	-0.010	17.9	-20.0
Bindarrah Twigs B	-0.20	-0.50	-0.10	-0.10	-0.10	-0.010	32.6	-20.0
Bindarrah Twigs C	-0.20	-0.50	-0.10	-0.10	-0.10	-0.010	21.1	-20.0
Bindarrah Twigs E	-0.20	-0.50	-0.10	-0.10	-0.10	-0.010	40.0	-20.0

ELEMENTS	Al	Be	Bi	Cd	Cu	Ga	In	Mg
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
DETECTION LIMIT	20	0.1	0.01	0.1	1	0.1	0.01	20
METHOD	ICP-OES	ICP-MS	ICP-MS	ICP-MS	ICP-OES	ICP-MS	ICP-MS	ICP-OES
Bindarrah Twigs A	40	-0.1	-0.01	-0.1	11	-0.1	-0.01	1086
Bindarrah Twigs B	63	-0.1	-0.01	-0.1	9	-0.1	-0.01	1153
Bindarrah Twigs C	60	-0.1	-0.01	-0.1	9	-0.1	-0.01	1163
Bindarrah Twigs E	51	-0.1	-0.01	0.1	11	-0.1	-0.01	1386

ELEMENTS	Mn	Nb	Nd	Ni	P	Pb	S	Sn
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
DETECTION LIMIT	1	0.05	0.01	1	20	2	10	0.1
METHOD	ICP-OES	ICP-MS	ICP-MS	ICP-OES	ICP-OES	ICP-MS	ICP-OES	ICP-MS
Bindarrah Twigs A	83	-0.05	0.02	3	1982	-2	331	0.2
Bindarrah Twigs B	220	-0.05	0.05	3	2192	-2	400	0.7
Bindarrah Twigs C	230	-0.05	0.05	2	1381	3	419	0.6
Bindarrah Twigs E	562	-0.05	0.05	3	1770	-2	443	0.7

ELEMENTS	Sr	Ti	V	Zn
UNITS	ppm	ppm	ppm	ppm
DETECTION LIMIT	0.05	5	2	1
METHOD	ICP-MS	ICP-OES	ICP-OES	ICP-OES
Bindarrah Twigs A	169.58	-5	-2	19
Bindarrah Twigs B	184.53	-5	-2	37
Bindarrah Twigs C	172.98	-5	-2	24
Bindarrah Twigs E	196.49	-5	-2	49

Variations of metal concentration (raw data) within oven dried tissues (bark, root and buds) from the *E. camaldulensis* sampled at Bindarrah (Cutana Creek). Comp= composite sample.

ELEMENTS	Sb	As	Ba	Br	Ca	Ce	Cs	Cr
UNITS	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
DETECTION LIMIT	0.010	0.050	10.0	0.05	0.05	0.20	0.10	0.30
METHOD	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA
Bindarrah Bark	-0.010	-0.050	62.8	2.98	7.45	-0.20	-0.10	-0.30
Bindarrah Roots	-0.010	0.054	33.1	3.53	1.12	3.01	0.13	1.21
Bindarrah Bud Comp.	-0.020	-0.100	32.2	16.00	1.19	-0.50	-0.20	-0.50

ELEMENTS	Co	Eu	Au	Hf	Ir	Fe	La	Lu
UNITS	ppm	ppm	ppb	ppm	ppb	%	ppm	ppm
DETECTION LIMIT	0.20	0.020	0.30	0.050	2.0	50.0	0.010	0.002
METHOD	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA
Bindarrah Bark	-0.20	-0.020	-0.30	-0.050	-2.0	50.0	0.010	-0.002
Bindarrah Roots	0.33	-0.020	0.57	0.147	-2.0	860.0	1.420	0.016
Bindarrah Bud Comp.	0.63	-0.050	-0.50	-0.100	-5.0	-100.0	0.032	-0.005

Continued: Variations of metal concentration (raw data) within oven dried tissues (bark, root and buds) from the *E. camaldulensis* sampled at Bindarrah (Cutana Creek). Comp= composite sample.

ELEMENTS	Mo	K	Rb	Sm	Sc	Se	Ag	Na
UNITS	ppm	%	ppm	ppm	ppm	ppm	ppm	%
DETECTION LIMIT	0.50	0.050	2.00	0.010	0.005	0.50	0.50	10.0
METHOD	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA
Bindarrah Bark	-0.50	0.247	-2.00	0.015	-0.005	-0.50	-0.50	340.0
Bindarrah Roots	1.36	0.164	-2.00	0.243	0.147	-0.50	0.51	540.0
Bindarrah Bud Comp.	-0.50	1.180	-5.00	0.032	0.026	-1.00	-1.00	3090.0

ELEMENTS	Ta	Te	Th	W	U	Yb	Zn	Zr
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
DETECTION LIMIT	0.20	0.50	0.10	0.10	0.10	0.010	2.0	20.0
METHOD	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA
Bindarrah Bark	-0.20	-0.50	-0.10	-0.10	-0.10	-0.010	11.1	-20.0
Bindarrah Roots	-0.20	-0.50	0.44	-0.10	-0.10	0.114	-2.0	-20.0
Bindarrah Bud Comp.	-0.50	-1.00	-0.20	-0.20	-0.20	-0.020	23.0	-40.0

ELEMENTS	Al	Be	Bi	Cd	Cu	Ga	In	Mg
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
DETECTION LIMIT	20	0.1	0.01	0.1	1	0.1	0.01	20
METHOD	ICP-OES	ICP-MS	ICP-MS	ICP-MS	ICP-OES	ICP-MS	ICP-MS	ICP-OES
Bindarrah Bark	30	-0.1	-0.01	-0.1	2	-0.1	-0.01	1453
Bindarrah Roots	292	-0.1	-0.01	-0.1	3	-0.1	-0.01	527
Bindarrah Bud Comp.	61	-0.1	-0.01	-0.1	13	-0.1	-0.01	2339

ELEMENTS	Mn	Nb	Nd	Ni	P	Pb	S	Sn
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
DETECTION LIMIT	1	0.05	0.01	1	20	2	10	0.1
METHOD	ICP-OES	ICP-MS	ICP-MS	ICP-OES	ICP-OES	ICP-MS	ICP-OES	ICP-MS
Bindarrah Bark	131	0.06	-0.01	3	411	-2	190	0.1
Bindarrah Roots	19	-0.05	0.51	2	153	-2	186	0.2
Bindarrah Bud Comp.	114	-0.05	0.04	3	1949	-2	1428	-0.1

Variations of metal concentration (raw data) within oven dried tissues (leaves) sectors around the *E. camaldulensis* sampled at (Willawillyong Creek) Flying Doctor. A=north, B=northeast, C=east, E=south and H=northwest.

ELEMENTS	Sb	As	Ba	Br	Ca	Ce	Cs
UNITS	ppm	ppm	ppm	ppm	%	ppm	ppm
DETECTION LIMIT	0.010	0.050	10.0	0.05	0.05	0.20	0.10
METHOD	INAA	INAA	INAA	INAA	INAA	INAA	INAA
Flying Doctor Leaves A	-0.010	-0.050	-10.0	10.40	0.83	-0.20	-0.10
Flying Doctor Leaves B	-0.010	-0.050	-10.0	11.90	0.63	0.37	-0.10
Flying Doctor Leaves C	-0.010	0.081	17.4	17.50	0.74	0.44	-0.10
Flying Doctor Leaves E	-0.010	0.055	-10.0	10.70	1.06	-0.20	-0.10
Flying Doctor Leaves H	-0.010	0.070	-10.0	10.20	0.71	0.33	-0.10

ELEMENTS	Cr	Co	Eu	Au	Hf	Ir	Fe
UNITS	ppm	ppm	ppm	ppb	ppm	ppb	%
DETECTION LIMIT	0.30	0.20	0.020	0.30	0.050	2.0	50.0
METHOD	INAA	INAA	INAA	INAA	INAA	INAA	INAA
Flying Doctor Leaves A	-0.30	0.21	-0.020	-0.30	-0.050	-2.0	60.0
Flying Doctor Leaves B	-0.30	-0.20	-0.020	-0.30	-0.050	-2.0	60.0
Flying Doctor Leaves C	-0.30	0.39	-0.020	-0.30	-0.050	-2.0	-50.0
Flying Doctor Leaves E	-0.30	-0.20	-0.020	-0.30	-0.050	-2.0	-50.0
Flying Doctor Leaves H	-0.30	0.22	-0.020	-0.30	-0.050	-2.0	80.0

ELEMENTS	La	Lu	Mo	K	Rb	Sm	Sc
UNITS	ppm	ppm	ppm	%	ppm	ppm	ppm
DETECTION LIMIT	0.010	0.002	0.50	0.050	2.00	0.010	0.005
METHOD	INAA	INAA	INAA	INAA	INAA	INAA	INAA
Flying Doctor Leaves A	0.081	-0.002	-0.50	1.050	-2.00	0.022	0.031
Flying Doctor Leaves B	0.072	-0.002	-0.50	1.250	-2.00	0.024	0.031
Flying Doctor Leaves C	0.058	-0.002	-0.50	1.180	-2.00	0.024	0.023
Flying Doctor Leaves E	0.046	-0.002	-0.50	1.060	-2.00	0.019	0.023
Flying Doctor Leaves H	0.077	-0.002	-0.50	1.030	-2.00	0.025	0.033

ELEMENTS	Se	Ag	Na	Ta	Te	Th	W
UNITS	ppm	ppm	%	ppm	ppm	ppm	ppm
DETECTION LIMIT	0.50	0.50	10.0	0.20	0.50	0.10	0.10
METHOD	INAA	INAA	INAA	INAA	INAA	INAA	INAA
Flying Doctor Leaves A	-0.50	-0.50	1090.0	-0.20	-0.50	-0.10	-0.10
Flying Doctor Leaves B	-0.50	-0.50	990.0	-0.20	-0.50	-0.10	-0.10
Flying Doctor Leaves C	-0.50	-0.50	1330.0	-0.20	-0.50	-0.10	-0.10
Flying Doctor Leaves E	-0.50	-0.50	1030.0	-0.20	-0.50	-0.10	-0.10
Flying Doctor Leaves H	-0.50	-0.50	970.0	-0.20	-0.50	0.11	-0.10

ELEMENTS	U	Yb	Zn	Zr	Al	Be	Bi
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm
DETECTION LIMIT	0.10	0.010	2.0	20.0	20	0.1	0.01
METHOD	INAA	INAA	INAA	INAA	ICP-OES	ICP-MS	ICP-MS
Flying Doctor Leaves A	-0.10	-0.010	18.3	-20.0	89	-0.1	-0.01
Flying Doctor Leaves B	-0.10	-0.010	20.4	-20.0	77	-0.1	-0.01
Flying Doctor Leaves C	-0.10	-0.010	21.9	-20.0	81	-0.1	-0.01
Flying Doctor Leaves E	-0.10	-0.010	31.5	-20.0	65	-0.1	-0.01
Flying Doctor Leaves H	-0.10	-0.010	16.4	-20.0	73	-0.1	-0.01

Continued: Variations of metal concentration (raw data) within oven dried tissues (leaves) sectors around the *E. camaldulensis* sampled at (Willawillyong Creek) Flying Doctor. A=north, B=northeast, C=east, E=south and H=northwest.

ELEMENTS	Cd	Cu	Ga	In	Mg	Mn	Nb
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm
DETECTION LIMIT	0.1	1	0.1	0.01	20	1	0.05
METHOD	ICP-MS	ICP-OES	ICP-MS	ICP-MS	ICP-OES	ICP-OES	ICP-MS
Flying Doctor Leaves A	0.2	8	-0.1	-0.01	1387	44	-0.05
Flying Doctor Leaves B	0.2	8	-0.1	-0.01	1788	29	-0.05
Flying Doctor Leaves C	0.2	6	-0.1	-0.01	1743	29	-0.05
Flying Doctor Leaves E	0.3	7	-0.1	-0.01	1634	78	-0.05
Flying Doctor Leaves H	0.3	9	-0.1	-0.01	1397	43	-0.05

ELEMENTS	Nd	Ni	P	Pb	S	Sn	Sr
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm
DETECTION LIMIT	0.01	1	20	2	10	0.1	0.05
METHOD	ICP-MS	ICP-OES	ICP-OES	ICP-MS	ICP-OES	ICP-MS	ICP-MS
Flying Doctor Leaves A	0.05	2	1200	-2	785	0.1	52.87
Flying Doctor Leaves B	0.05	2	1031	-2	874	0.2	36.73
Flying Doctor Leaves C	0.06	2	1087	-2	908	0.1	39.63
Flying Doctor Leaves E	0.03	2	1063	-2	730	0.1	48.92
Flying Doctor Leaves H	0.04	1	1132	-2	776	0.1	43.02

ELEMENTS	Ti	V	Zn
UNITS	ppm	ppm	ppm
DETECTION LIMIT	5	2	1
METHOD	ICP-OES	ICP-OES	ICP-OES
Flying Doctor Leaves A	-5	-2	24
Flying Doctor Leaves B	-5	-2	23
Flying Doctor Leaves C	-5	-2	31
Flying Doctor Leaves E	-5	-2	37
Flying Doctor Leaves H	-5	-2	25

Variations of metal concentration (raw data) within oven dried tissues (twigs) sectors around the *E. camaldulensis* sampled at (Willawillyong Creek) Flying Doctor. A=north, B=northeast, C=east, E=south and H=northwest.

ELEMENTS	Sb	As	Ba	Br	Ca	Ce	Cs
UNITS	ppm	ppm	ppm	ppm	%	ppm	ppm
DETECTION LIMIT	0.010	0.050	10.0	0.05	0.05	0.20	0.10
METHOD	INAA	INAA	INAA	INAA	INAA	INAA	INAA
Flying Doctor Twigs A	-0.010	-0.050	-10.0	3.68	1.40	0.38	-0.10
Flying Doctor Twigs B	-0.010	-0.050	-10.0	1.63	0.75	-0.20	-0.10
Flying Doctor Twigs C	-0.010	-0.050	-10.0	3.15	1.68	0.36	-0.10
Flying Doctor Twigs E	-0.010	-0.050	-10.0	2.83	1.46	-0.20	-0.10
Flying Doctor Twigs H	-0.010	-0.050	-10.0	1.72	0.82	-0.20	-0.10

Continued: Variations of metal concentration (raw data) within oven dried tissues (twigs) sectors around the *E. camaldulensis* sampled at (Willawillyong Creek) Flying Doctor. A=north, B=northeast, C=east, E=south and H=northwest.

ELEMENTS	Cr	Co	Eu	Au	Hf	Ir	Fe
UNITS	ppm	ppm	ppm	ppb	ppm	ppb	%
DETECTION LIMIT	0.30	0.20	0.020	0.30	0.050	2.0	50.0
METHOD	INAA	INAA	INAA	INAA	INAA	INAA	INAA
Flying Doctor Twigs A	-0.30	-0.20	-0.020	-0.30	-0.050	-2.0	-50.0
Flying Doctor Twigs B	-0.30	-0.20	-0.020	-0.30	-0.050	-2.0	-50.0
Flying Doctor Twigs C	-0.30	-0.20	-0.020	-0.30	-0.050	-2.0	-50.0
Flying Doctor Twigs E	0.50	-0.20	-0.020	-0.30	-0.050	-2.0	50.0
Flying Doctor Twigs H	-0.30	-0.20	-0.020	-0.30	-0.050	-2.0	50.0

ELEMENTS	La	Lu	Mo	K	Rb	Sm	Sc
UNITS	ppm	ppm	ppm	%	ppm	ppm	ppm
DETECTION LIMIT	0.010	0.002	0.50	0.050	2.00	0.010	0.005
METHOD	INAA	INAA	INAA	INAA	INAA	INAA	INAA
Flying Doctor Twigs A	0.077	-0.002	-0.50	0.300	-2.00	0.020	0.018
Flying Doctor Twigs B	0.028	-0.002	-0.50	0.497	-2.00	0.014	0.011
Flying Doctor Twigs C	0.066	-0.002	-0.50	0.532	-2.00	0.022	0.021
Flying Doctor Twigs E	0.092	-0.002	-0.50	0.361	-2.00	0.023	0.026
Flying Doctor Twigs H	0.037	-0.002	-0.50	0.393	-2.00	0.019	0.016

ELEMENTS	Se	Ag	Na	Ta	Te	Th	W
UNITS	ppm	ppm	%	ppm	ppm	ppm	ppm
DETECTION LIMIT	0.50	0.50	10.0	0.20	0.50	0.10	0.10
METHOD	INAA	INAA	INAA	INAA	INAA	INAA	INAA
Flying Doctor Twigs A	-0.50	-0.50	1160.0	-0.20	-0.50	-0.10	-0.10
Flying Doctor Twigs B	-0.50	-0.50	240.0	-0.20	-0.50	-0.10	-0.10
Flying Doctor Twigs C	-0.50	-0.50	520.0	-0.20	-0.50	-0.10	-0.10
Flying Doctor Twigs E	-0.50	-0.50	1000.0	-0.20	-0.50	-0.10	-0.10
Flying Doctor Twigs H	-0.50	-0.50	330.0	-0.20	-0.50	-0.10	-0.10

ELEMENTS	U	Yb	Zn	Zr	Al	Be	Bi
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm
DETECTION LIMIT	0.10	0.010	2.0	20.0	20	0.1	0.01
METHOD	INAA	INAA	INAA	INAA	ICP-OES	ICP-MS	ICP-MS
Flying Doctor Twigs A	-0.10	-0.010	40.2	-20.0	112	-0.1	0.01
Flying Doctor Twigs B	-0.10	-0.010	9.9	-20.0	42	-0.1	-0.01
Flying Doctor Twigs C	-0.10	-0.010	36.2	-20.0	33	-0.1	-0.01
Flying Doctor Twigs E	-0.10	-0.010	41.4	-20.0	52	-0.1	-0.01
Flying Doctor Twigs H	-0.10	-0.010	15.4	-20.0	46	-0.1	-0.01

ELEMENTS	Cd	Cu	Ga	In	Mg	Mn	Nb
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm
DETECTION LIMIT	0.1	1	0.1	0.01	20	1	0.05
METHOD	ICP-MS	ICP-OES	ICP-MS	ICP-MS	ICP-OES	ICP-OES	ICP-MS
Flying Doctor Twigs A	0.5	11	-0.1	-0.01	603	30	-0.05
Flying Doctor Twigs B	0.2	8	-0.1	-0.01	226	17	-0.05
Flying Doctor Twigs C	0.4	6	-0.1	-0.01	418	16	-0.05
Flying Doctor Twigs E	0.3	9	-0.1	-0.01	451	33	-0.05
Flying Doctor Twigs H	0.5	7	-0.1	-0.01	242	16	-0.05

Continued: Variations of metal concentration (raw data) within oven dried tissues (twigs) sectors around the *E. camaldulensis* sampled at (Willawillyong Creek) Flying Doctor. A=north, B=northeast, C=east, E=south and H=northwest.

ELEMENTS	Nd	Ni	P	Pb	S	Sn	Sr
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm
DETECTION LIMIT	0.01	1	20	2	10	0.1	0.05
METHOD	ICP-MS	ICP-OES	ICP-OES	ICP-MS	ICP-OES	ICP-MS	ICP-MS
Flying Doctor Twigs A	0.05	-1	760	-2	285	0.4	110.96
Flying Doctor Twigs B	0.01	2	759	-2	266	0.2	49.96
Flying Doctor Twigs C	0.02	-1	914	-2	317	0.2	78.00
Flying Doctor Twigs E	0.03	1	777	-2	282	0.5	77.85
Flying Doctor Twigs H	0.03	-1	701	-2	269	0.3	64.51

ELEMENTS	Ti	V	Zn
UNITS	ppm	ppm	ppm
DETECTION LIMIT	5	2	1
METHOD	ICP-OES	ICP-OES	ICP-OES
Flying Doctor Twigs A	-5	-2	44
Flying Doctor Twigs B	-5	-2	15
Flying Doctor Twigs C	-5	-2	26

Variations of metal concentration (raw data) within oven dried tissues (bark, fruit and buds) from the *E. camaldulensis* sampled at Flying Doctor (Willawillyong Creek). Comp= composite sample.

ELEMENTS	Sb	As	Ba	Br	Ca	Ce	Cs
UNITS	ppm	ppm	ppm	ppm	%	ppm	ppm
DETECTION LIMIT	0.010	0.050	10.0	0.05	0.05	0.20	0.10
METHOD	INAA	INAA	INAA	INAA	INAA	INAA	INAA
Flying Doctor Bark	-0.010	-0.050	15.4	2.32	7.16	-0.20	-0.10
Flying Doctor Frt Comp.	-0.010	-0.050	-10.0	14.40	1.09	0.52	-0.10
Flying Doctor Bud Comp.	-0.010	-0.050	-10.0	10.40	1.00	-0.20	-0.10

ELEMENTS	Cr	Co	Eu	Au	Hf	Ir	Fe
UNITS	ppm	ppm	ppm	ppb	ppm	ppb	%
DETECTION LIMIT	0.30	0.20	0.020	0.30	0.050	2.0	50.0
METHOD	INAA	INAA	INAA	INAA	INAA	INAA	INAA
Flying Doctor Bark	-0.30	-0.20	-0.020	-0.30	-0.050	-2.0	-50.0
Flying Doctor Frt Comp.	-0.30	-0.20	-0.020	-0.30	-0.050	-2.0	-50.0
Flying Doctor Bud Comp.	-0.30	-0.20	-0.020	-0.30	-0.050	-2.0	-50.0

ELEMENTS	La	Lu	Mo	K	Rb	Sm	Sc
UNITS	ppm	ppm	ppm	%	ppm	ppm	ppm
DETECTION LIMIT	0.010	0.002	0.50	0.050	2.00	0.010	0.005
METHOD	INAA	INAA	INAA	INAA	INAA	INAA	INAA
Flying Doctor Bark	-0.010	-0.002	-0.50	0.098	-2.00	-0.010	-0.005
Flying Doctor Frt Comp.	0.050	-0.002	-0.50	1.420	-2.00	0.025	0.035
Flying Doctor Bud Comp.	-0.010	-0.002	-0.50	1.340	2.07	0.017	0.007

Continued: Variations of metal concentration (raw data) within oven dried tissues (bark, fruit and buds) from the *E. camaldulensis* sampled at Flying Doctor (Willawillyong Creek). Comp= composite sample.

ELEMENTS	Se	Ag	Na	Ta	Te	Th	W
UNITS	ppm	ppm	%	ppm	ppm	ppm	ppm
DETECTION LIMIT	0.50	0.50	10.0	0.20	0.50	0.10	0.10
METHOD	INAA	INAA	INAA	INAA	INAA	INAA	INAA
Flying Doctor Bark	-0.50	-0.50	190.0	-0.20	-0.50	-0.10	-0.10
Flying Doctor Frt Comp.	-0.50	-0.50	2060.0	-0.20	-0.50	-0.10	-0.10
Flying Doctor Bud Comp.	-0.50	-0.50	880.0	-0.20	-0.50	-0.10	-0.10

ELEMENTS	U	Yb	Zn	Zr	Al	Be	Bi
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm
DETECTION LIMIT	0.10	0.010	2.0	20.0	20	0.1	0.01
METHOD	INAA	INAA	INAA	INAA	ICP-OES	ICP-MS	ICP-MS
Flying Doctor Bark	-0.10	-0.010	18.2	-20.0	-20	-0.1	-0.01
Flying Doctor Frt Comp.	-0.10	-0.010	17.0	-20.0	75	-0.1	-0.01
Flying Doctor Bud Comp.	-0.10	-0.010	23.4	-20.0	51	-0.1	-0.01

ELEMENTS	Cd	Cu	Ga	In	Mg	Mn	Nb
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm
DETECTION LIMIT	0.1	1	0.1	0.01	20	1	0.05
METHOD	ICP-MS	ICP-OES	ICP-MS	ICP-MS	ICP-OES	ICP-OES	ICP-MS
Flying Doctor Bark	0.2	2	-0.1	-0.01	944	44	0.09
Flying Doctor Frt Comp.	0.2	6	-0.1	-0.01	1246	42	-0.05
Flying Doctor Bud Comp.	0.4	10	-0.1	-0.01	1794	48	-0.05

Variations of metal concentration (raw data) within oven dried tissues (leaves) sectors around the *E. camaldulensis* sampled at Williams Creek. A=north, B=northeast, C=east, D=southeast, E= south, F=southwest, G=west and H=northwest.

ELEMENTS	Sb	As	Ba	Br	Ca	Ce	Cs
UNITS	ppm	ppm	ppm	ppm	%	ppm	ppm
DETECTION LIMIT	0.010	0.050	10.0	0.05	0.05	0.20	0.10
METHOD	INAA	INAA	INAA	INAA	INAA	INAA	INAA
Williams Crk Leaves A	-0.010	-0.050	51.7	11.50	1.15	0.44	-0.10
Williams Crk Leaves B	-0.010	0.090	45.3	11.20	1.02	0.54	-0.10
Williams Crk Leaves C	-0.010	0.075	44.8	10.60	1.03	0.73	-0.10
Williams Crk Leaves D	-0.010	0.066	51.2	9.77	0.97	0.69	-0.10
Williams Crk Leaves E	-0.010	0.142	29.8	10.90	0.90	0.52	-0.10
Williams Crk Leaves F	-0.010	0.057	44.4	8.30	0.98	0.55	-0.10
Williams Crk Leaves G	-0.010	0.059	32.7	8.73	0.86	0.55	-0.10
Williams Crk Leaves H	-0.010	-0.050	37.0	11.40	0.96	0.56	-0.10

ELEMENTS	Cr	Co	Eu	Au	Hf	Ir	Fe
UNITS	ppm	ppm	ppm	ppb	ppm	ppb	%
DETECTION LIMIT	0.30	0.20	0.020	0.30	0.050	2.0	50.0
METHOD	INAA	INAA	INAA	INAA	INAA	INAA	INAA
Williams Crk Leaves A	-0.30	0.23	-0.020	0.32	-0.050	-2.0	150.0
Williams Crk Leaves B	0.51	0.33	-0.020	-0.30	-0.050	-2.0	210.0
Williams Crk Leaves C	0.35	0.25	-0.020	-0.30	-0.050	-2.0	240.0
Williams Crk Leaves D	0.59	0.30	-0.020	-0.30	-0.050	-2.0	230.0
Williams Crk Leaves E	0.63	0.26	-0.020	-0.30	-0.050	-2.0	220.0
Williams Crk Leaves F	-0.30	0.31	-0.020	-0.30	-0.050	-2.0	200.0
Williams Crk Leaves G	-0.30	0.21	-0.020	-0.30	-0.050	-2.0	140.0
Williams Crk Leaves H	0.71	0.29	-0.020	-0.30	-0.050	-2.0	200.0

ELEMENTS	La	Lu	Mo	K	Rb	Sm	Sc
UNITS	ppm	ppm	ppm	%	ppm	ppm	ppm
DETECTION LIMIT	0.010	0.002	0.50	0.050	2.00	0.010	0.005
METHOD	INAA	INAA	INAA	INAA	INAA	INAA	INAA
Williams Crk Leaves A	0.126	0.003	-0.50	0.956	-2.00	0.033	0.047
Williams Crk Leaves B	0.186	0.002	-0.50	0.993	2.42	0.042	0.072
Williams Crk Leaves C	0.229	0.002	-0.50	0.775	-2.00	0.048	0.088
Williams Crk Leaves D	0.205	0.002	-0.50	0.925	-2.00	0.044	0.078
Williams Crk Leaves E	0.201	0.002	-0.50	0.922	-2.00	0.044	0.076
Williams Crk Leaves F	0.162	-0.002	-0.50	1.190	-2.00	0.037	0.060
Williams Crk Leaves G	0.143	-0.002	-0.50	0.987	-2.00	0.034	0.053
Williams Crk Leaves H	0.188	0.003	-0.50	0.906	-2.00	0.041	0.067

ELEMENTS	Se	Ag	Na	Ta	Te	Th	W
UNITS	ppm	ppm	%	ppm	ppm	ppm	ppm
DETECTION LIMIT	0.50	0.50	10.0	0.20	0.50	0.10	0.10
METHOD	INAA	INAA	INAA	INAA	INAA	INAA	INAA
Williams Crk Leaves A	-0.50	-0.50	30.0	-0.20	-0.50	-0.10	-0.10
Williams Crk Leaves B	-0.50	-0.50	40.0	-0.20	-0.50	0.11	-0.10
Williams Crk Leaves C	-0.50	-0.50	70.0	-0.20	-0.50	-0.10	-0.10
Williams Crk Leaves D	-0.50	-0.50	40.0	-0.20	-0.50	-0.10	-0.10
Williams Crk Leaves E	-0.50	-0.50	40.0	-0.20	-0.50	0.11	-0.10
Williams Crk Leaves F	-0.50	-0.50	80.0	-0.20	-0.50	-0.10	-0.10
Williams Crk Leaves G	-0.50	-0.50	20.0	-0.20	-0.50	-0.10	-0.10
Williams Crk Leaves H	-0.50	-0.50	30.0	-0.20	-0.50	-0.10	-0.10

Continued: Variations of metal concentration (raw data) within oven dried tissues (leaves) sectors around the *E. camaldulensis* sampled at Williams Creek. A=north, B=northeast, C=east, D=southeast, E= south, F=southwest, G=west and H=northwest.

ELEMENTS	U	Yb	Zn	Zr	Al	Be	Bi
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm
DETECTION LIMIT	0.10	0.010	2.0	20.0	20	0.1	0.01
METHOD	INAA	INAA	INAA	INAA	ICP-OES	ICP-MS	ICP-MS
Williams Crk Leaves A	-0.10	-0.010	12.8	-20.0	142	-0.1	-0.01
Williams Crk Leaves B	-0.10	0.016	12.0	-20.0	170	-0.1	-0.01
Williams Crk Leaves C	-0.10	0.018	10.8	-20.0	216	-0.1	-0.01
Williams Crk Leaves D	-0.10	-0.010	13.3	-20.0	186	-0.1	-0.01
Williams Crk Leaves E	-0.10	0.015	11.4	-20.0	204	-0.1	-0.01
Williams Crk Leaves F	-0.10	0.010	12.1	-20.0	149	-0.1	-0.01
Williams Crk Leaves G	-0.10	0.016	10.8	-20.0	118	-0.1	-0.01
Williams Crk Leaves H	-0.10	-0.010	14.2	-20.0	103	-0.1	-0.01

ELEMENTS	Cd	Cu	Ga	In	Mg	Mn	Nb
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm
DETECTION LIMIT	0.1	1	0.1	0.01	20	1	0.05
METHOD	ICP-MS	ICP-OES	ICP-MS	ICP-MS	ICP-OES	ICP-OES	ICP-MS
Williams Crk Leaves A	-0.1	8	-0.1	-0.01	2279	150	-0.05
Williams Crk Leaves B	-0.1	9	-0.1	-0.01	2292	105	-0.05
Williams Crk Leaves C	-0.1	7	-0.1	-0.01	2523	109	-0.05
Williams Crk Leaves D	-0.1	9	-0.1	-0.01	2162	135	-0.05
Williams Crk Leaves E	-0.1	7	-0.1	-0.01	2141	75	-0.05
Williams Crk Leaves F	-0.1	8	-0.1	-0.01	1955	96	-0.05
Williams Crk Leaves G	-0.1	7	-0.1	-0.01	1793	87	-0.05
Williams Crk Leaves H	-0.1	8	-0.1	-0.01	1878	134	-0.05

ELEMENTS	Nd	Ni	P	Pb	S	Sn	Sr
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm
DETECTION LIMIT	0.01	1	20	2	10	0.1	0.05
METHOD	ICP-MS	ICP-OES	ICP-OES	ICP-MS	ICP-OES	ICP-MS	ICP-MS
Williams Crk Leaves A	0.11	2	1287	-2	1179	0.5	59.44
Williams Crk Leaves B	0.13	1	1266	-2	1085	0.3	60.21
Williams Crk Leaves C	0.20	2	1268	-2	998	0.4	55.32
Williams Crk Leaves D	0.17	-1	1394	-2	1065	0.2	55.43
Williams Crk Leaves E	0.13	1	1200	-2	1001	0.2	52.25
Williams Crk Leaves F	0.12	2	1337	-2	1028	-0.1	59.86
Williams Crk Leaves G	0.13	1	1284	-2	1085	-0.1	47.97
Williams Crk Leaves H	0.10	2	1192	-2	1081	0.1	50.25

ELEMENTS	Ti	V	Zn
UNITS	ppm	ppm	ppm
DETECTION LIMIT	5	2	1
METHOD	ICP-OES	ICP-OES	ICP-OES
Williams Crk Leaves A	-5	-2	20
Williams Crk Leaves B	-5	-2	19
Williams Crk Leaves C	6	-2	16
Williams Crk Leaves D	5	-2	22
Williams Crk Leaves E	8	-2	16
Williams Crk Leaves F	-5	-2	18
Williams Crk Leaves G	-5	-2	16
Williams Crk Leaves H	-5	-2	17

Variations of metal concentration (raw data) within oven dried tissues (twigs) sectors around the *E. camaldulensis* sampled at Williams Creek. A=north, B=northeast, C=east, D=southeast, E= south, F=southwest, G=west and H=northwest.

ELEMENTS	Sb	As	Ba	Br	Ca	Ce	Cs
UNITS	ppm	ppm	ppm	ppm	%	ppm	ppm
DETECTION LIMIT	0.010	0.050	10.0	0.05	0.05	0.20	0.10
METHOD	INAA	INAA	INAA	INAA	INAA	INAA	INAA
Williams Crk Twigs A	-0.010	0.053	54.1	3.83	2.04	0.40	-0.10
Williams Crk Twigs B	-0.010	-0.050	54.2	3.48	1.71	0.24	-0.10
Williams Crk Twigs C	-0.010	0.068	52.6	3.14	2.63	0.30	-0.10
Williams Crk Twigs D	-0.010	-0.050	69.4	2.92	2.77	0.40	-0.10
Williams Crk Twigs E	-0.010	-0.050	83.1	4.23	3.51	-0.20	-0.10
Williams Crk Twigs F	-0.010	-0.050	72.0	3.63	2.77	0.31	-0.10
Williams Crk Twigs G	0.015	-0.050	38.2	2.54	2.18	0.25	-0.10
Williams Crk Twigs H	-0.010	-0.050	51.4	3.38	2.59	0.46	-0.10

ELEMENTS	Cr	Co	Eu	Au	Hf	Ir	Fe
UNITS	ppm	ppm	ppm	ppb	ppm	ppb	%
DETECTION LIMIT	0.30	0.20	0.020	0.30	0.050	2.0	50.0
METHOD	INAA	INAA	INAA	INAA	INAA	INAA	INAA
Williams Crk Twigs A	0.34	-0.20	-0.020	0.68	-0.050	-2.0	110.0
Williams Crk Twigs B	0.43	-0.20	-0.020	0.41	-0.050	-2.0	90.0
Williams Crk Twigs C	-0.30	-0.20	-0.020	-0.30	-0.050	-2.0	90.0
Williams Crk Twigs D	0.33	-0.20	-0.020	0.67	-0.050	-2.0	90.0
Williams Crk Twigs E	-0.30	-0.20	-0.020	0.42	-0.050	-2.0	90.0
Williams Crk Twigs F	-0.30	-0.20	-0.020	0.47	-0.050	-2.0	50.0
Williams Crk Twigs G	0.43	-0.20	-0.020	0.88	-0.050	-2.0	80.0
Williams Crk Twigs H	-0.30	-0.20	-0.020	1.31	-0.050	-2.0	70.0

ELEMENTS	La	Lu	Mo	K	Rb	Sm	Sc
UNITS	ppm	ppm	ppm	%	ppm	ppm	ppm
DETECTION LIMIT	0.010	0.002	0.50	0.050	2.00	0.010	0.005
METHOD	INAA	INAA	INAA	INAA	INAA	INAA	INAA
Williams Crk Twigs A	0.124	-0.002	-0.50	0.429	-2.00	0.031	0.037
Williams Crk Twigs B	0.117	-0.002	-0.50	0.349	-2.00	0.027	0.030
Williams Crk Twigs C	0.110	-0.002	-0.50	0.270	-2.00	0.027	0.030
Williams Crk Twigs D	0.094	-0.002	-0.50	0.376	-2.00	0.025	0.024
Williams Crk Twigs E	0.103	-0.002	-0.50	0.242	-2.00	0.028	0.027
Williams Crk Twigs F	0.116	-0.002	-0.50	0.321	-2.00	0.031	0.031
Williams Crk Twigs G	0.098	-0.002	-0.50	0.566	-2.00	0.028	0.029
Williams Crk Twigs H	0.101	0.002	-0.50	0.789	-2.00	0.032	0.028

ELEMENTS	Se	Ag	Na	Ta	Te	Th	W
UNITS	ppm	ppm	%	ppm	ppm	ppm	ppm
DETECTION LIMIT	0.50	0.50	10.0	0.20	0.50	0.10	0.10
METHOD	INAA	INAA	INAA	INAA	INAA	INAA	INAA
Williams Crk Twigs A	-0.50	-0.50	260.0	-0.20	-0.50	-0.10	-0.10
Williams Crk Twigs B	-0.50	-0.50	150.0	-0.20	-0.50	-0.10	-0.10
Williams Crk Twigs C	-0.50	-0.50	140.0	-0.20	-0.50	-0.10	-0.10
Williams Crk Twigs D	-0.50	-0.50	90.0	-0.20	-0.50	-0.10	-0.10
Williams Crk Twigs E	-0.50	-0.50	130.0	-0.20	-0.50	-0.10	-0.10
Williams Crk Twigs F	-0.50	-0.50	350.0	-0.20	-0.50	-0.10	-0.10
Williams Crk Twigs G	-0.50	-0.50	90.0	-0.20	-0.50	-0.10	-0.10
Williams Crk Twigs H	-0.50	-0.50	160.0	-0.20	-0.50	-0.10	-0.10

Continued: Variations of metal concentration (raw data) within oven dried tissues (twigs) sectors around the *E. camaldulensis* sampled at Williams Creek. A=north, B=northeast, C=east, D=southeast, E= south, F=southwest, G=west and H=northwest.

ELEMENTS	U	Yb	Zn	Zr	Al	Be	Bi
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm
DETECTION LIMIT	0.10	0.010	2.0	20.0	20	0.1	0.01
METHOD	INAA	INAA	INAA	INAA	ICP-OES	ICP-MS	ICP-MS
Williams Crk Twigs A	-0.10	-0.010	13.3	-20.0	107	-0.1	-0.01
Williams Crk Twigs B	-0.10	-0.010	14.2	-20.0	102	-0.1	-0.01
Williams Crk Twigs C	-0.10	-0.010	14.5	-20.0	92	-0.1	-0.01
Williams Crk Twigs D	-0.10	0.010	15.4	-20.0	98	-0.1	-0.01
Williams Crk Twigs E	-0.10	0.010	16.7	-20.0	104	-0.1	-0.01
Williams Crk Twigs F	-0.10	-0.010	14.1	-20.0	76	-0.1	-0.01
Williams Crk Twigs G	-0.10	-0.010	11.9	-20.0	164	-0.1	-0.01
Williams Crk Twigs H	-0.10	-0.010	15.7	-20.0	69	-0.1	-0.01

ELEMENTS	Cd	Cu	Ga	In	Mg	Mn	Nb
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm
DETECTION LIMIT	0.1	1	0.1	0.01	20	1	0.05
METHOD	ICP-MS	ICP-OES	ICP-MS	ICP-MS	ICP-OES	ICP-OES	ICP-MS
Williams Crk Twigs A	-0.1	15	-0.1	-0.01	1893	111	-0.05
Williams Crk Twigs B	-0.1	22	-0.1	-0.01	1981	87	-0.05
Williams Crk Twigs C	-0.1	15	-0.1	-0.01	2724	150	-0.05
Williams Crk Twigs D	-0.1	19	-0.1	-0.01	2587	174	-0.05
Williams Crk Twigs E	-0.1	17	-0.1	-0.01	3485	150	-0.05
Williams Crk Twigs F	-0.1	19	-0.1	-0.01	2236	122	0.06
Williams Crk Twigs G	-0.1	21	-0.1	-0.01	1440	87	-0.05
Williams Crk Twigs H	-0.1	21	-0.1	-0.01	1806	161	-0.05

ELEMENTS	Nd	Ni	P	Pb	S	Sn	Sr
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm
DETECTION LIMIT	0.01	1	20	2	10	0.1	0.05
METHOD	ICP-MS	ICP-OES	ICP-OES	ICP-MS	ICP-OES	ICP-MS	ICP-MS
Williams Crk Twigs A	0.11	2	886	-2	441	0.2	154.63
Williams Crk Twigs B	0.11	4	687	-2	409	0.5	124.12
Williams Crk Twigs C	0.11	2	716	-2	424	0.2	192.23
Williams Crk Twigs D	0.11	-1	965	-2	439	0.5	193.44
Williams Crk Twigs E	0.09	8	481	-2	448	0.3	233.34
Williams Crk Twigs F	0.08	1	545	-2	400	0.2	179.94
Williams Crk Twigs G	0.08	2	936	-2	445	0.2	150.01
Williams Crk Twigs H	0.07	-1	1703	-2	488	0.2	150.75

ELEMENTS	Ti	V	Zn
UNITS	ppm	ppm	ppm
DETECTION LIMIT	5	2	1
METHOD	ICP-OES	ICP-OES	ICP-OES
Williams Crk Twigs A	-5	-2	19
Williams Crk Twigs B	-5	-2	19
Williams Crk Twigs C	-5	-2	25
Williams Crk Twigs D	-5	-2	23
Williams Crk Twigs E	-5	-2	26
Williams Crk Twigs F	-5	-2	19
Williams Crk Twigs G	-5	-2	17
Williams Crk Twigs H	-5	-2	26

Variations of metal concentration (raw data) within oven dried tissues (bark, fruit and buds) from the *E. camaldulensis* sampled at Williams Creek. Comp= composite sample.

ELEMENTS	Sb	As	Ba	Br	Ca	Ce	Cs
UNITS	ppm	ppm	ppm	ppm	%	ppm	ppm
DETECTION LIMIT	0.010	0.050	10.0	0.05	0.05	0.20	0.10
METHOD	INAA	INAA	INAA	INAA	INAA	INAA	INAA
Williams Crk Bark	-0.010	-0.050	59.5	1.73	6.91	-0.20	-0.10
Williams Crk Frt Comp.	-0.010	-0.050	46.6	8.92	1.23	0.51	-0.10
Williams Crk Bud Comp.	-0.010	-0.050	36.9	7.70	0.73	0.22	-0.10

ELEMENTS	Cr	Co	Eu	Au	Hf	Ir	Fe
UNITS	ppm	ppm	ppm	ppb	ppm	ppb	%
DETECTION LIMIT	0.30	0.20	0.020	0.30	0.050	2.0	50.0
METHOD	INAA	INAA	INAA	INAA	INAA	INAA	INAA
Williams Crk Bark	-0.30	-0.20	-0.020	1.15	-0.050	-2.0	-50.0
Williams Crk Frt Comp.	0.51	0.30	-0.020	-0.30	-0.050	-2.0	110.0
Williams Crk Bud Comp.	0.30	0.21	-0.020	-0.30	-0.050	-2.0	70.0

ELEMENTS	La	Lu	Mo	K	Rb	Sm	Sc
UNITS	ppm	ppm	ppm	%	ppm	ppm	ppm
DETECTION LIMIT	0.010	0.002	0.50	0.050	2.00	0.010	0.005
METHOD	INAA	INAA	INAA	INAA	INAA	INAA	INAA
Williams Crk Bark	0.011	-0.002	-0.50	0.235	-2.00	0.011	-0.005
Williams Crk Frt Comp.	0.103	-0.002	-0.50	0.917	-2.00	0.027	0.037
Williams Crk Bud Comp.	0.043	-0.002	-0.50	1.160	2.15	0.015	0.017

ELEMENTS	Se	Ag	Na	Ta	Te	Th	W
UNITS	ppm	ppm	%	ppm	ppm	ppm	ppm
DETECTION LIMIT	0.50	0.50	10.0	0.20	0.50	0.10	0.10
METHOD	INAA	INAA	INAA	INAA	INAA	INAA	INAA
Williams Crk Bark	-0.50	-0.50	200.0	-0.20	-0.50	-0.10	-0.10
Williams Crk Frt Comp.	-0.50	-0.50	200.0	-0.20	-0.50	0.10	-0.10
Williams Crk Bud Comp.	-0.50	-0.50	40.0	-0.20	-0.50	-0.10	-0.10

ELEMENTS	U	Yb	Zn	Zr	Al	Be	Bi
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm
DETECTION LIMIT	0.10	0.010	2.0	20.0	20	0.1	0.01
METHOD	INAA	INAA	INAA	INAA	ICP-OES	ICP-MS	ICP-MS
Williams Crk Bark	-0.10	-0.010	6.1	-20.0	-20	-0.1	-0.01
Williams Crk Frt Comp.	-0.10	-0.010	10.1	-20.0	145	-0.1	-0.01
Williams Crk Bud Comp.	-0.10	-0.010	16.4	-20.0	65	-0.1	-0.01

ELEMENTS	Cd	Cu	Ga	In	Mg	Mn	Nb
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm
DETECTION LIMIT	0.1	1	0.1	0.01	20	1	0.05
METHOD	ICP-MS	ICP-OES	ICP-MS	ICP-MS	ICP-OES	ICP-OES	ICP-MS
Williams Crk Bark	-0.1	2	-0.1	-0.01	1338	280	0.08
Williams Crk Frt Comp.	0.3	7	-0.1	-0.01	1991	102	-0.05
Williams Crk Bud Comp.	-0.1	10	-0.1	-0.01	1939	84	-0.05

Continued: Variations of metal concentration (raw data) within oven dried tissues (bark, fruit and buds) from the *E. camaldulensis* sampled at Williams Creek. Comp= composite sample.

ELEMENTS	Nd	Ni	P	Pb	S	Sn	Sr
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm
DETECTION LIMIT	0.01	1	20	2	10	0.1	0.05
METHOD	ICP-MS	ICP-OES	ICP-OES	ICP-MS	ICP-OES	ICP-MS	ICP-MS
Williams Crk Bark	-0.01	-1	217	-2	262	0.2	368.87
Williams Crk Frt Comp.	0.13	2	1554	8	647	0.2	83.46
Williams Crk Bud Comp.	0.04	2	1804	-2	1175	0.2	42.86

ELEMENTS	Ti	V	Zn
UNITS	ppm	ppm	ppm
DETECTION LIMIT	5	2	1
METHOD	ICP-OES	ICP-OES	ICP-OES
Williams Crk Bark	-5	-2	11
Williams Crk Frt Comp.	-5	-2	15
Williams Crk Bud Comp.	-5	-2	22

Variations of metal concentration (raw data) within oven dried tissues (leaves) sectors around the *E. camaldulensis* sampled at Teilta Creek. A=north, C=east and F=southwest, G=west and H=northwest.

ELEMENTS	Sb	As	Ba	Br	Ca	Ce	Cs	Cr
UNITS	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
DETECTION LIMIT	0.010	0.050	10.0	0.05	0.05	0.20	0.10	0.30
METHOD	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA
Teilta Leaves A	-0.010	0.077	-10.0	10.30	0.72	0.30	-0.10	0.65
Teilta Leaves C	-0.010	0.090	23.8	15.30	0.94	-0.20	-0.10	-0.30
Teilta Leaves F	-0.010	0.059	16.1	12.10	0.71	0.36	-0.10	0.55
Teilta Leaves G	-0.010	0.155	11.6	16.70	0.88	0.49	0.10	-0.30
Teilta Leaves H	-0.010	0.081	11.4	16.20	0.75	0.37	-0.10	0.54

ELEMENTS	Co	Eu	Au	Hf	Ir	Fe	La	Lu
UNITS	ppm	ppm	ppb	ppm	ppb	%	ppm	ppm
DETECTION LIMIT	0.20	0.020	0.30	0.050	2.0	50.0	0.010	0.002
METHOD	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA
Teilta Leaves A	-0.20	-0.020	0.65	-0.050	-2.0	150.0	0.114	0.002
Teilta Leaves C	0.32	-0.020	-0.30	-0.050	-2.0	190.0	0.150	0.002
Teilta Leaves F	0.33	-0.020	-0.30	-0.050	-2.0	170.0	0.122	0.002
Teilta Leaves G	0.26	-0.020	-0.30	-0.050	-2.0	200.0	0.167	0.003
Teilta Leaves H	0.36	-0.020	-0.30	-0.050	-2.0	230.0	0.158	-0.002

ELEMENTS	Mo	K	Rb	Sm	Sc	Se	Ag	Na
UNITS	ppm	%	ppm	ppm	ppm	ppm	ppm	%
DETECTION LIMIT	0.50	0.050	2.00	0.010	0.005	0.50	0.50	10.0
METHOD	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA
Teilta Leaves A	-0.50	0.804	3.03	0.028	0.047	-0.50	-0.50	400.0
Teilta Leaves C	-0.50	0.936	3.41	0.035	0.064	-0.50	-0.50	330.0
Teilta Leaves F	-0.50	0.911	4.08	0.029	0.056	-0.50	-0.50	510.0
Teilta Leaves G	-0.50	0.776	2.67	0.040	0.068	-0.50	-0.50	730.0
Teilta Leaves H	-0.50	1.150	4.85	0.037	0.068	-0.50	-0.50	210.0

ELEMENTS	Ta	Te	Th	W	U	Yb	Zn	Zr
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
DETECTION LIMIT	0.20	0.50	0.10	0.10	0.10	0.010	2.0	20.0
METHOD	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA
Teilta Leaves A	-0.20	-0.50	-0.10	-0.10	-0.10	0.012	12.4	-20.0
Teilta Leaves C	-0.20	-0.50	0.14	-0.10	-0.10	-0.010	12.8	-20.0
Teilta Leaves F	-0.20	-0.50	-0.10	-0.10	-0.10	-0.010	12.0	-20.0
Teilta Leaves G	-0.20	-0.50	0.13	-0.10	-0.10	0.014	6.9	-20.0
Teilta Leaves H	-0.20	-0.50	-0.10	-0.10	-0.10	0.018	16.7	-20.0

ELEMENTS	Al	Be	Bi	Cd	Cu	Ga	In	Mg
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
DETECTION LIMIT	20	0.1	0.01	0.1	1	0.1	0.01	20
METHOD	ICP-OES	ICP-MS	ICP-MS	ICP-MS	ICP-OES	ICP-MS	ICP-MS	ICP-OES
Teilta Leaves A	140	-0.1	-0.01	-0.1	8	-0.1	-0.01	2269
Teilta Leaves C	175	-0.1	-0.01	-0.1	9	-0.1	-0.01	2442
Teilta Leaves F	140	-0.1	-0.01	-0.1	8	-0.1	-0.01	2363
Teilta Leaves G	207	-0.1	-0.01	-0.1	9	-0.1	-0.01	2790
Teilta Leaves H	223	-0.1	-0.01	-0.1	11	-0.1	-0.01	2178

Continued: Variations of metal concentration (raw data) within oven dried tissues (leaves) sectors around the *E. camaldulensis* sampled at Teilta Creek. A=north, C=east and F=southwest, G=west and H=northwest.

ELEMENTS	Mn	Nb	Nd	Ni	P	Pb	S	Sn
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
DETECTION LIMIT	1	0.05	0.01	1	20	2	10	0.1
METHOD	ICP-OES	ICP-MS	ICP-MS	ICP-OES	ICP-OES	ICP-MS	ICP-OES	ICP-MS
Teilta Leaves A	36	0.08	0.10	1	1007	-2	853	0.1
Teilta Leaves C	52	0.18	0.13	2	1245	-2	883	0.2
Teilta Leaves F	47	0.11	0.09	2	1023	-2	736	0.1
Teilta Leaves G	34	0.09	0.18	2	1012	-2	800	0.2
Teilta Leaves H	46	-0.05	0.15	8	1778	-2	1087	0.2

ELEMENTS	Sr	Ti	V	Zn
UNITS	ppm	ppm	ppm	ppm
DETECTION LIMIT	0.05	5	2	1
METHOD	ICP-MS	ICP-OES	ICP-OES	ICP-OES
Teilta Leaves A	49.95	-5	-2	19
Teilta Leaves C	64.96	-5	-2	20
Teilta Leaves F	41.51	-5	-2	19
Teilta Leaves G	64.45	-5	-2	17
Teilta Leaves H	49.33	6	-2	22

Variations of metal concentration (raw data) within oven dried tissues (twigs) sectors around the *E. camaldulensis* sampled at Teilta Creek. A=north, C=east and F=southwest, G=west and H=northwest.

ELEMENTS	Sb	As	Ba	Br	Ca	Ce	Cs	Cr
UNITS	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
DETECTION LIMIT	0.010	0.050	10.0	0.05	0.05	0.20	0.10	0.30
METHOD	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA
Teilta Twigs A	-0.010	-0.050	27.3	2.97	1.98	-0.20	-0.10	-0.30
Teilta Twigs C	-0.010	0.061	32.1	3.27	2.71	0.47	-0.10	-0.30
Teilta Twigs F	-0.010	-0.050	29.5	3.65	2.25	0.24	-0.10	-0.30
Teilta Twigs G	-0.010	0.050	20.1	3.99	1.98	-0.20	-0.10	-0.30
Teilta Twigs H	-0.010	-0.050	30.3	2.79	1.64	0.41	-0.10	-0.30

ELEMENTS	Co	Eu	Au	Hf	Ir	Fe	La	Lu
UNITS	ppm	ppm	ppb	ppm	ppb	%	ppm	ppm
DETECTION LIMIT	0.20	0.020	0.30	0.050	2.0	50.0	0.010	0.002
METHOD	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA
Teilta Twigs A	-0.20	-0.020	0.38	-0.050	-2.0	110.0	0.071	-0.002
Teilta Twigs C	-0.20	-0.020	1.03	-0.050	-2.0	110.0	0.084	-0.002
Teilta Twigs F	-0.20	-0.020	0.57	-0.050	-2.0	60.0	0.076	-0.002
Teilta Twigs G	-0.20	-0.020	0.41	-0.050	-2.0	-50.0	0.065	-0.002
Teilta Twigs H	-0.20	-0.020	0.69	-0.050	-2.0	80.0	0.070	-0.002

ELEMENTS	Mo	K	Rb	Sm	Sc	Se	Ag	Na
UNITS	ppm	%	ppm	ppm	ppm	ppm	ppm	%
DETECTION LIMIT	0.50	0.050	2.00	0.010	0.005	0.50	0.50	10.0
METHOD	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA
Teilta Twigs A	-0.50	0.575	2.50	0.020	0.029	-0.50	-0.50	790.0
Teilta Twigs C	-0.50	0.749	2.83	0.025	0.037	-0.50	-0.50	480.0
Teilta Twigs F	-0.50	0.647	-2.00	0.022	0.028	-0.50	-0.50	760.0
Teilta Twigs G	-0.50	0.611	-2.00	0.022	0.026	-0.50	-0.50	890.0
Teilta Twigs H	-0.50	1.120	5.74	0.028	0.029	-0.50	-0.50	300.0

Continued: Variations of metal concentration (raw data) within oven dried tissues (twigs) sectors around the *E. camaldulensis* sampled at Teilta Creek. A=north, C=east and F=southwest, G=west and H=northwest.

ELEMENTS	Ta	Te	Th	W	U	Yb	Zn	Zr
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
DETECTION LIMIT	0.20	0.50	0.10	0.10	0.10	0.010	2.0	20.0
METHOD	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA
Teilta Twigs A	-0.20	-0.50	-0.10	-0.10	-0.10	-0.010	12.4	-20.0
Teilta Twigs C	-0.20	-0.50	-0.10	-0.10	-0.10	-0.010	16.7	-20.0
Teilta Twigs F	-0.20	-0.50	-0.10	-0.10	-0.10	0.013	12.6	-20.0
Teilta Twigs G	-0.20	-0.50	-0.10	-0.10	-0.10	-0.010	9.2	-20.0
Teilta Twigs H	-0.20	-0.50	-0.10	-0.10	-0.10	-0.010	12.8	-20.0

ELEMENTS	Al	Be	Bi	Cd	Cu	Ga	In	Mg
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
DETECTION LIMIT	20	0.1	0.01	0.1	1	0.1	0.01	20
METHOD	ICP-OES	ICP-MS	ICP-MS	ICP-MS	ICP-OES	ICP-MS	ICP-MS	ICP-OES
Teilta Twigs A	107	-0.1	-0.01	-0.1	11	-0.1	-0.01	1234
Teilta Twigs C	91	-0.1	-0.01	-0.1	13	-0.1	-0.01	1257
Teilta Twigs F	96	-0.1	-0.01	-0.1	10	-0.1	-0.01	1308
Teilta Twigs G	89	-0.1	-0.01	-0.1	12	-0.1	-0.01	1610
Teilta Twigs H	121	-0.1	-0.01	-0.1	14	-0.1	-0.01	723

ELEMENTS	Mn	Nb	Nd	Ni	P	Pb	S	Sn
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
DETECTION LIMIT	1	0.05	0.01	1	20	2	10	0.1
METHOD	ICP-OES	ICP-MS	ICP-MS	ICP-OES	ICP-OES	ICP-MS	ICP-OES	ICP-MS
Teilta Twigs A	23	0.25	0.05	-1	1239	-2	369	0.1
Teilta Twigs C	27	0.18	0.05	2	1976	-2	398	0.2
Teilta Twigs F	39	0.14	0.06	12	1544	-2	381	0.2
Teilta Twigs G	18	0.11	0.07	2	1302	-2	385	0.2
Teilta Twigs H	19	0.07	0.08	2	3487	-2	532	0.1

ELEMENTS	Sr	Ti	V	Zn
UNITS	ppm	ppm	ppm	ppm
DETECTION LIMIT	0.05	5	2	1
METHOD	ICP-MS	ICP-OES	ICP-OES	ICP-OES
Teilta Twigs A	148.11	-5	-2	17
Teilta Twigs C	176.59	-5	-2	20
Teilta Twigs F	176.46	-5	-2	18
Teilta Twigs G	187.66	-5	-2	17
Teilta Twigs H	155.76	-5	-2	23

Variations of metal concentration (raw data) within oven dried tissues (bark, roots and buds) from the *E. camaldulensis* sampled at Teilta Creek. Comp= composite sample.

ELEMENTS	Sb	As	Ba	Br	Ca	Ce	Cs	Cr
UNITS	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
DETECTION LIMIT	0.010	0.050	10.0	0.05	0.05	0.20	0.10	0.30
METHOD	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA
Teilta Bark	-0.010	-0.050	33.1	2.51	6.80	-0.20	-0.10	-0.30
Teilta Roots	0.039	0.434	83.4	5.06	1.23	6.68	0.34	7.48
Teilta Bud Comp.	-0.020	-0.100	27.6	11.00	0.92	-0.50	-0.20	-0.50

ELEMENTS	Co	Eu	Au	Hf	Ir	Fe	La	Lu
UNITS	ppm	ppm	ppb	ppm	ppb	%	ppm	ppm
DETECTION LIMIT	0.20	0.020	0.30	0.050	2.0	50.0	0.010	0.002
METHOD	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA
Teilta Bark	-0.20	-0.020	0.39	-0.050	-2.0	-50.0	0.015	-0.002
Teilta Roots	1.50	0.067	-0.50	1.210	-5.0	2610.0	3.220	0.039
Teilta Bud Comp.	-0.50	-0.050	-0.50	-0.100	-5.0	-100.0	0.050	-0.005

ELEMENTS	Mo	K	Rb	Sm	Sc	Se	Ag	Na
UNITS	ppm	%	ppm	ppm	ppm	ppm	ppm	%
DETECTION LIMIT	0.50	0.050	2.00	0.010	0.005	0.50	0.50	10.0
METHOD	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA
Teilta Bark	-0.50	0.158	-2.00	0.012	0.005	-0.50	-0.50	280.0
Teilta Roots	-0.50	0.175	6.02	0.570	0.653	-1.00	-1.00	900.0
Teilta Bud Comp.	-0.50	1.230	7.16	0.022	0.018	-1.00	-1.00	580.0

ELEMENTS	Ta	Te	Th	W	U	Yb	Zn	Zr
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
DETECTION LIMIT	0.20	0.50	0.10	0.10	0.10	0.010	2.0	20.0
METHOD	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA
Teilta Bark	-0.20	-0.50	-0.10	-0.10	-0.10	-0.010	-2.0	-20.0
Teilta Roots	-0.50	-1.00	1.19	-0.10	0.32	0.251	-5.0	62.7
Teilta Bud Comp.	-0.50	-1.00	-0.20	-0.20	-0.20	-0.020	20.8	-40.0

ELEMENTS	Al	Be	Bi	Cd	Cu	Ga	In	Mg
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
DETECTION LIMIT	20	0.1	0.01	0.1	1	0.1	0.01	20
METHOD	ICP-OES	ICP-MS	ICP-MS	ICP-MS	ICP-OES	ICP-MS	ICP-MS	ICP-OES
Teilta Bark	33	-0.1	-0.01	-0.1	2	-0.1	-0.01	1272
Teilta Roots	1447	-0.1	0.02	-0.1	6	0.2	-0.01	1086
Teilta Bud Comp.	64	-0.1	-0.01	-0.1	11	-0.1	-0.01	2464

ELEMENTS	Mn	Nb	Nd	Ni	P	Pb	S	Sn
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
DETECTION LIMIT	1	0.05	0.01	1	20	2	10	0.1
METHOD	ICP-OES	ICP-MS	ICP-MS	ICP-OES	ICP-OES	ICP-MS	ICP-OES	ICP-MS
Teilta Bark	8	0.09	0.02	2	177	-2	157	0.3
Teilta Roots	125	0.13	3.13	3	338	-2	846	1.3
Teilta Bud Comp.	40	0.40	0.03	3	2072	-2	989	0.3

Continued: Variations of metal concentration (raw data) within oven dried tissues (bark, roots and buds) from the *E. camaldulensis* sampled at Teilta Creek. Comp= composite sample.

ELEMENTS	Sr	Ti	V	Zn
UNITS	ppm	ppm	ppm	ppm
DETECTION LIMIT	0.05	5	2	1
METHOD	ICP-MS	ICP-OES	ICP-OES	ICP-OES
Teilta Bark	430.37	-5	-2	5
Teilta Roots	88.16	15	6	9
Teilta Bud Comp.	59.51	-5	-2	22

Variations of metal concentration (raw data) within oven dried tissues (leaves) sectors around the *E. camaldulensis* sampled at (Racecourse Creek) Tibooburra. A=north, B=northeast, C=east, D=southeast and E=south.

ELEMENTS	Sb	As	Ba	Br	Ca	Ce	Cs
UNITS	ppm	ppm	ppm	ppm	%	ppm	ppm
DETECTION LIMIT	0.010	0.050	10.0	0.05	0.05	0.20	0.10
METHOD	INAA	INAA	INAA	INAA	INAA	INAA	INAA
Tibooburra Leaves A	-0.010	0.179	23.5	17.00	0.80	0.27	-0.10
Tibooburra Leaves B	-0.010	0.235	17.0	13.10	0.86	-0.20	-0.10
Tibooburra Leaves C	-0.010	0.173	22.1	16.00	0.88	-0.20	-0.10
Tibooburra Leaves D	-0.010	-0.050	32.6	16.40	1.31	-0.20	-0.10
Tibooburra Leaves E	-0.010	0.064	12.3	13.60	0.80	0.25	-0.10

ELEMENTS	Cr	Co	Eu	Au	Hf	Ir	Fe
UNITS	ppm	ppm	ppm	ppb	ppm	ppb	%
DETECTION LIMIT	0.30	0.20	0.020	0.30	0.050	2.0	50.0
METHOD	INAA	INAA	INAA	INAA	INAA	INAA	INAA
Tibooburra Leaves A	-0.30	0.31	-0.020	-0.30	-0.050	-2.0	90.0
Tibooburra Leaves B	-0.30	0.31	-0.020	0.56	-0.050	-2.0	110.0
Tibooburra Leaves C	0.37	0.32	-0.020	0.68	-0.050	-2.0	120.0
Tibooburra Leaves D	-0.30	0.34	-0.020	-0.30	-0.050	-2.0	100.0
Tibooburra Leaves E	-0.30	0.27	-0.020	0.45	-0.050	-2.0	110.0

ELEMENTS	La	Lu	Mo	K	Rb	Sm	Sc
UNITS	ppm	ppm	ppm	%	ppm	ppm	ppm
DETECTION LIMIT	0.010	0.002	0.50	0.050	2.00	0.010	0.005
METHOD	INAA	INAA	INAA	INAA	INAA	INAA	INAA
Tibooburra Leaves A	0.053	-0.002	-0.50	0.946	-2.00	0.017	0.020
Tibooburra Leaves B	0.056	-0.002	-0.50	0.995	-2.00	0.020	0.023
Tibooburra Leaves C	0.050	-0.002	-0.50	1.140	-2.00	0.022	0.024
Tibooburra Leaves D	0.070	-0.002	-0.50	1.100	-2.00	0.022	0.022
Tibooburra Leaves E	0.043	0.002	-0.50	1.420	3.67	0.021	0.019

ELEMENTS	Se	Ag	Na	Ta	Te	Th	W
UNITS	ppm	ppm	%	ppm	ppm	ppm	ppm
DETECTION LIMIT	0.50	0.50	10.0	0.20	0.50	0.10	0.10
METHOD	INAA	INAA	INAA	INAA	INAA	INAA	INAA
Tibooburra Leaves A	-0.50	-0.50	60.0	-0.20	-0.50	-0.10	-0.10
Tibooburra Leaves B	-0.50	-0.50	20.0	-0.20	-0.50	-0.10	-0.10
Tibooburra Leaves C	-0.50	-0.50	20.0	-0.20	-0.50	-0.10	-0.10
Tibooburra Leaves D	-0.50	-0.50	20.0	-0.20	-0.50	-0.10	-0.10
Tibooburra Leaves E	-0.50	-0.50	20.0	-0.20	-0.50	0.10	-0.10

ELEMENTS	U	Yb	Zn	Zr	Al	Be	Bi
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm
DETECTION LIMIT	0.10	0.010	2.0	20.0	20	0.1	0.01
METHOD	INAA	INAA	INAA	INAA	ICP-OES	ICP-MS	ICP-MS
Tibooburra Leaves A	-0.10	-0.010	17.3	-20.0	73	-0.1	-0.01
Tibooburra Leaves B	-0.10	-0.010	18.2	-20.0	67	-0.1	-0.01
Tibooburra Leaves C	-0.10	-0.010	20.3	-20.0	73	-0.1	-0.01
Tibooburra Leaves D	-0.10	-0.010	20.7	-20.0	83	-0.1	-0.01
Tibooburra Leaves E	-0.10	-0.010	23.9	-20.0	65	-0.1	-0.01

Continued: Variations of metal concentration (raw data) within oven dried tissues (leaves) sectors around the *E. camaldulensis* sampled at (Racecourse Creek) Tibooburra. A=north, B=northeast, C=east, D=southeast and E=south.

ELEMENTS	Cd	Cu	Ga	In	Mg	Mn	Nb
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm
DETECTION LIMIT	0.1	1	0.1	0.01	20	1	0.05
METHOD	ICP-MS	ICP-OES	ICP-MS	ICP-MS	ICP-OES	ICP-OES	ICP-MS
Tibooburra Leaves A	-0.1	7	-0.1	-0.01	2918	126	-0.05
Tibooburra Leaves B	-0.1	6	-0.1	-0.01	2387	112	-0.05
Tibooburra Leaves C	-0.1	6	-0.1	-0.01	2836	111	-0.05
Tibooburra Leaves D	-0.1	7	-0.1	-0.01	3604	240	-0.05
Tibooburra Leaves E	-0.1	8	-0.1	-0.01	2909	164	-0.05

ELEMENTS	Nd	Ni	P	Pb	S	Sn	Sr
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm
DETECTION LIMIT	0.01	1	20	2	10	0.1	0.05
METHOD	ICP-MS	ICP-OES	ICP-OES	ICP-MS	ICP-OES	ICP-MS	ICP-MS
Tibooburra Leaves A	0.05	5	1604	-2	1880	0.2	48.69
Tibooburra Leaves B	0.14	2	1509	-2	1626	0.4	54.12
Tibooburra Leaves C	0.04	2	1735	-2	1656	0.1	63.95
Tibooburra Leaves D	0.04	4	1590	-2	1543	0.3	86.57
Tibooburra Leaves E	0.04	2	2008	-2	1700	0.1	46.38

ELEMENTS	Ti	V	Zn
UNITS	ppm	ppm	ppm
DETECTION LIMIT	5	2	1
METHOD	ICP-OES	ICP-OES	ICP-OES
Tibooburra Leaves A	-5	-2	24
Tibooburra Leaves B	-5	-2	29
Tibooburra Leaves C	-5	-2	27
Tibooburra Leaves D	6	-2	32
Tibooburra Leaves E	-5	-2	31

Variations of metal concentration (raw data) within oven dried tissues (twigs) sectors around the *E. camaldulensis* sampled at (Racecourse Creek) Tibooburra. A=north, B=northeast, C=east, D=southeast and E=south.

ELEMENTS	Sb	As	Ba	Br	Ca	Ce	Cs
UNITS	ppm	ppm	ppm	ppm	%	ppm	ppm
DETECTION LIMIT	0.010	0.050	10.0	0.05	0.05	0.20	0.10
METHOD	INAA	INAA	INAA	INAA	INAA	INAA	INAA
Tibooburra Twigs A	-0.010	-0.050	30.2	1.96	1.99	0.38	-0.10
Tibooburra Twigs B	-0.010	0.062	15.9	2.27	1.30	0.31	-0.10
Tibooburra Twigs C	-0.010	0.057	21.3	2.11	1.55	0.22	-0.10
Tibooburra Twigs D	-0.010	-0.050	14.4	1.77	1.19	-0.20	-0.10
Tibooburra Twigs E	-0.010	-0.050	23.6	1.82	1.84	-0.20	-0.10

ELEMENTS	Cr	Co	Eu	Au	Hf	Ir	Fe
UNITS	ppm	ppm	ppm	ppb	ppm	ppb	%
DETECTION LIMIT	0.30	0.20	0.020	0.30	0.050	2.0	50.0
METHOD	INAA	INAA	INAA	INAA	INAA	INAA	INAA
Tibooburra Twigs A	0.58	-0.20	-0.020	6.41	-0.050	-2.0	50.0
Tibooburra Twigs B	-0.30	-0.20	-0.020	-0.30	-0.050	-2.0	-50.0
Tibooburra Twigs C	-0.30	-0.20	-0.020	-0.30	-0.050	-2.0	50.0
Tibooburra Twigs D	-0.30	-0.20	-0.020	-0.30	-0.050	-2.0	-50.0
Tibooburra Twigs E	-0.30	-0.20	-0.020	-0.30	-0.050	-2.0	-50.0

Continued: Variations of metal concentration (raw data) within oven dried tissues (twigs) sectors around the *E. camaldulensis* sampled at (Racecourse Creek) Tibooburra. A=north, B=northeast, C=east, D=southeast and E=south.

ELEMENTS	La	Lu	Mo	K	Rb	Sm	Sc
UNITS	ppm	ppm	ppm	%	ppm	ppm	ppm
DETECTION LIMIT	0.010	0.002	0.50	0.050	2.00	0.010	0.005
METHOD	INAA	INAA	INAA	INAA	INAA	INAA	INAA
Tibooburra Twigs A	0.080	-0.002	-0.50	0.391	-2.00	0.023	0.013
Tibooburra Twigs B	0.046	-0.002	-0.50	0.448	-2.00	0.016	0.015
Tibooburra Twigs C	0.045	-0.002	-0.50	0.430	-2.00	0.014	0.009
Tibooburra Twigs D	0.036	-0.002	-0.50	0.388	-2.00	0.013	0.010
Tibooburra Twigs E	0.040	-0.002	-0.50	0.439	-2.00	0.017	0.011

ELEMENTS	Se	Ag	Na	Ta	Te	Th	W
UNITS	ppm	ppm	%	ppm	ppm	ppm	ppm
DETECTION LIMIT	0.50	0.50	10.0	0.20	0.50	0.10	0.10
METHOD	INAA	INAA	INAA	INAA	INAA	INAA	INAA
Tibooburra Twigs A	-0.50	-0.50	40.0	-0.20	-0.50	-0.10	-0.10
Tibooburra Twigs B	-0.50	-0.50	50.0	-0.20	-0.50	-0.10	-0.10
Tibooburra Twigs C	-0.50	-0.50	30.0	-0.20	-0.50	-0.10	-0.10
Tibooburra Twigs D	-0.50	-0.50	30.0	-0.20	-0.50	-0.10	-0.10
Tibooburra Twigs E	-0.50	-0.50	40.0	-0.20	-0.50	-0.10	-0.10

ELEMENTS	U	Yb	Zn	Zr	Al	Be	Bi
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm
DETECTION LIMIT	0.10	0.010	2.0	20.0	20	0.1	0.01
METHOD	INAA	INAA	INAA	INAA	ICP-OES	ICP-MS	ICP-MS
Tibooburra Twigs A	-0.10	-0.010	12.4	-20.0	50	-0.1	-0.01
Tibooburra Twigs B	-0.10	-0.010	6.8	-20.0	69	-0.1	-0.01
Tibooburra Twigs C	-0.10	-0.010	7.9	-20.0	83	-0.1	-0.01
Tibooburra Twigs D	-0.10	-0.010	6.4	-20.0	56	-0.1	-0.01
Tibooburra Twigs E	-0.10	-0.010	12.3	-20.0	54	-0.1	-0.01

Variations of metal concentration (raw data) within oven dried tissues (bark and fruit) from the *E. camaldulensis* sampled at Tibooburra (Racecourse Creek). Comp= composite sample.

ELEMENTS	Sb	As	Ba	Br	Ca	Ce	Cs
UNITS	ppm	ppm	ppm	ppm	%	ppm	ppm
DETECTION LIMIT	0.010	0.050	10.0	0.05	0.05	0.20	0.10
METHOD	INAA	INAA	INAA	INAA	INAA	INAA	INAA
Tibooburra Bark N	-0.010	-0.050	27.5	7.27	4.82	-0.20	-0.10
Tibooburra Bark S/E	-0.010	-0.050	29.3	6.05	5.49	-0.20	-0.10
Tibooburra Bark W	-0.010	-0.050	29.7	5.83	4.77	-0.20	-0.10
Tibooburra Frt Comp.	-0.010	0.056	19.3	12.80	0.90	-0.20	-0.10

ELEMENTS	Cr	Co	Eu	Au	Hf	Ir	Fe
UNITS	ppm	ppm	ppm	ppb	ppm	ppb	%
DETECTION LIMIT	0.30	0.20	0.020	0.30	0.050	2.0	50.0
METHOD	INAA	INAA	INAA	INAA	INAA	INAA	INAA
Tibooburra Bark N	-0.30	0.21	-0.020	-0.30	-0.050	-2.0	-50.0
Tibooburra Bark S/E	-0.30	-0.20	-0.020	-0.30	-0.050	-2.0	-50.0
Tibooburra Bark W	-0.30	-0.20	-0.020	-0.30	-0.050	-2.0	-50.0
Tibooburra Frt Comp.	-0.30	-0.20	-0.020	-0.30	-0.050	-2.0	80.0

Continued: Variations of metal concentration (raw data) within oven dried tissues (bark and fruit) from the *E. camaldulensis* sampled at Tibooburra (Racecourse Creek). Comp= composite sample.

ELEMENTS	La	Lu	Mo	K	Rb	Sm	Sc
UNITS	ppm	ppm	ppm	%	ppm	ppm	ppm
DETECTION LIMIT	0.010	0.002	0.50	0.050	2.00	0.010	0.005
METHOD	INAA	INAA	INAA	INAA	INAA	INAA	INAA
Tibooburra Bark N	-0.010	-0.002	-0.50	0.504	2.24	-0.010	-0.005
Tibooburra Bark S/E	-0.010	-0.002	-0.50	0.190	-2.00	0.010	-0.005
Tibooburra Bark W	0.013	-0.002	-0.50	0.175	-2.00	0.010	-0.005
Tibooburra Frt Comp.	0.037	-0.002	-0.50	1.200	2.14	0.015	0.019

ELEMENTS	Se	Ag	Na	Ta	Te	Th	W
UNITS	ppm	ppm	%	ppm	ppm	ppm	ppm
DETECTION LIMIT	0.50	0.50	10.0	0.20	0.50	0.10	0.10
METHOD	INAA	INAA	INAA	INAA	INAA	INAA	INAA
Tibooburra Bark N	-0.50	-0.50	430.0	-0.20	-0.50	-0.10	-0.10
Tibooburra Bark S/E	-0.50	-0.50	300.0	-0.20	-0.50	-0.10	-0.10
Tibooburra Bark W	-0.50	-0.50	820.0	-0.20	-0.50	-0.10	-0.10
Tibooburra Frt Comp.	-0.50	-0.50	60.0	-0.20	-0.50	-0.10	-0.10

ELEMENTS	U	Yb	Zn	Zr	Al	Be	Bi
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm
DETECTION LIMIT	0.10	0.010	2.0	20.0	20	0.1	0.01
METHOD	INAA	INAA	INAA	INAA	ICP-OES	ICP-MS	ICP-MS
Tibooburra Bark N	-0.10	-0.010	12.7	-20.0	41	-0.1	-0.01
Tibooburra Bark S/E	-0.10	-0.010	7.5	-20.0	24	-0.1	-0.01
Tibooburra Bark W	-0.10	-0.010	7.0	-20.0	24	-0.1	-0.01
Tibooburra Frt Comp.	-0.10	-0.010	9.4	-20.0	74	-0.1	-0.01

ELEMENTS	Cd	Cu	Ga	In	Mg	Mn	Nb
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm
DETECTION LIMIT	0.1	1	0.1	0.01	20	1	0.05
METHOD	ICP-MS	ICP-OES	ICP-MS	ICP-MS	ICP-OES	ICP-OES	ICP-MS
Tibooburra Bark N	-0.1	2	-0.1	-0.01	1487	81	0.11
Tibooburra Bark S/E	-0.1	2	-0.1	-0.01	1122	45	0.10
Tibooburra Bark W	-0.1	2	-0.1	-0.01	939	37	0.11
Tibooburra Frt Comp.	-0.1	4	-0.1	-0.01	1509	94	0.07

ELEMENTS	Nd	Ni	P	Pb	S	Sn	Sr
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm
DETECTION LIMIT	0.01	1	20	2	10	0.1	0.05
METHOD	ICP-MS	ICP-OES	ICP-OES	ICP-MS	ICP-OES	ICP-MS	ICP-MS
Tibooburra Bark N	0.03	6	403	-2	312	0.2	372.84
Tibooburra Bark S/E	-0.01	-1	202	-2	241	0.3	356.50
Tibooburra Bark W	-0.01	2	202	-2	234	0.4	377.26
Tibooburra Frt Comp.	0.04	-1	1403	-2	825	0.1	69.57

ELEMENTS	Ti	V	Zn
UNITS	ppm	ppm	ppm
DETECTION LIMIT	5	2	1
METHOD	ICP-OES	ICP-OES	ICP-OES
Tibooburra Bark N	-5	-2	17
Tibooburra Bark S/E	-5	-2	10
Tibooburra Bark W	-5	-2	10
Tibooburra Frt Comp.	-5	-2	15

APPENDIX C

Stream sediment chemistry

Variations of metal concentration (raw data) within stream sediments (75 µm and 300 µm) collected from around the *E. camaldulensis* sampled at (Winninninie Creek) Yunta. A=north, B=northeast, C=east, D=southeast, E=east, F=southwest, G=west and H=northwest.

IDENT	Al	Ba	Ca	Cr	Cu	Fe	K
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm
SCHEME	IC3E	IC3E	IC3E	IC3E	IC3E	IC3E	IC3E
DETECTION LIMIT	10	5	10	2	2	100	10
YUNTA A 0-75UM	75800	420	23700	47	37	42300	20300
YUNTA B 0-75UM	70300	390	18400	44	37	41000	18900
YUNTA C 0-75UM	64200	350	19500	37	39	36800	17300
YUNTA D 0-75UM	69200	390	19500	44	39	38400	18500
YUNTA E 0-75UM	61900	380	18200	48	35	40000	19000
YUNTA F 0-75UM	74000	430	21700	56	45	45900	22800
YUNTA G 0-75UM	75200	440	23000	56	39	46400	23200
YUNTA H 0-75UM	80400	470	19800	62	52	50300	25000
YUNTA A -300UM	47900	330	17000	42	35	48200	13000
YUNTA B -300UM	44700	340	14300	47	40	73700	12300
YUNTA C -300UM	51600	320	19200	39	25	40300	13900
YUNTA D -300UM	40400	310	15900	34	39	41400	11700
YUNTA E -300UM	38800	300	15300	30	28	40300	11200
YUNTA F -300UM	46000	310	20200	32	26	32900	13300
YUNTA G -300UM	47500	310	22000	32	78	30900	13200
YUNTA H -300UM	68500	370	19000	47	105	38800	17900

IDENT	Mg	Mn	Na	Nb	Ni	P	Pb
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm
SCHEME	IC3E	IC3E	IC3E	IC3E	IC3E	IC3E	IC3E
DETECTION LIMIT	10	5	10	5	2	5	5
YUNTA A 0-75UM	11200	600	5100	10	33	450	14
YUNTA B 0-75UM	10200	550	5300	10	32	440	18
YUNTA C 0-75UM	9450	500	5200	10	29	400	6
YUNTA D 0-75UM	10400	550	6000	10	31	460	16
YUNTA E 0-75UM	9550	550	6150	10	29	430	12
YUNTA F 0-75UM	11600	600	4900	8	32	500	12
YUNTA G 0-75UM	11600	650	4750	10	36	460	10
YUNTA H 0-75UM	12300	650	4250	10	37	500	10
YUNTA A -300UM	6700	750	4100	8	47	310	18
YUNTA B -300UM	6200	900	4050	6	72	350	30
YUNTA C -300UM	7400	650	4500	8	37	350	14
YUNTA D -300UM	5650	700	4300	6	43	300	16
YUNTA E -300UM	5450	650	4100	<5	44	250	8
YUNTA F -300UM	6650	650	4300	6	34	290	10
YUNTA G -300UM	6850	600	4250	6	33	290	24
YUNTA H -300UM	10500	600	4450	8	35	380	30

Continued: Variations of metal concentration (raw data) within stream sediments (75 µm and 300 µm) collected from around the *E. camaldulensis* sampled at (Winninninie Creek) Yunta. A=north, B=northeast, C=east, D=southeast, E=east, F=southwest, G=west and H=northwest.

IDENT	S	Ti	V	Zn	Ag	As	Bi
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm
SCHEME	IC3E	IC3E	IC3E	IC3E	IC3M	IC3M	IC3M
DETECTION LIMIT	50	10	2	2	0.1	0.5	0.1
YUNTA A 0-75UM	200	4600	115	94	0.3	9.5	0.4
YUNTA B 0-75UM	150	4800	105	115	0.4	9	0.5
YUNTA C 0-75UM	200	4600	96	80	0.3	9.5	0.4
YUNTA D 0-75UM	150	4650	105	84	0.4	8	0.3
YUNTA E 0-75UM	200	5050	105	72	0.3	8.5	0.4
YUNTA F 0-75UM	200	4550	125	94	0.3	9.5	0.4
YUNTA G 0-75UM	250	4650	130	100	0.4	9	0.4
YUNTA H 0-75UM	200	4850	140	105	0.4	9	0.5
YUNTA A -300UM	100	4500	105	92	0.3	28.5	1.1
YUNTA B -300UM	100	5000	135	94	0.3	46	1.5
YUNTA C -300UM	150	4350	94	74	0.4	20.5	0.6
YUNTA D -300UM	100	4350	92	70	0.3	24.5	1.1
YUNTA E -300UM	50	3200	92	60	0.2	25.5	0.8
YUNTA F -300UM	100	3600	88	68	0.2	14.5	0.6
YUNTA G -300UM	150	3500	86	190	0.4	15	0.5
YUNTA H -300UM	150	4400	105	260	0.5	12.5	0.5

IDENT	Cd	Co	Cs	Ga	In	Mo	Rb
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm
SCHEME	IC3M	IC3M	IC3M	IC3M	IC3M	IC3M	IC3M
DETECTION LIMIT	0.1	0.2	0.1	0.1	0.05	0.1	0.1
YUNTA A 0-75UM	<0.1	18	5.5	23.5	0.1	0.6	105
YUNTA B 0-75UM	0.2	17	4.9	21	0.05	0.6	92
YUNTA C 0-75UM	0.1	16	4	19	0.05	0.5	80
YUNTA D 0-75UM	<0.1	16	4.8	20.5	<0.05	0.6	90
YUNTA E 0-75UM	0.1	16	5	19.5	0.05	0.4	90
YUNTA F 0-75UM	<0.1	18.5	6.5	24.5	0.05	0.5	105
YUNTA G 0-75UM	0.1	20	6.5	26	0.1	0.6	105
YUNTA H 0-75UM	<0.1	20.5	7	26.5	0.1	0.6	110
YUNTA A -300UM	0.2	31.5	3.7	12.5	0.05	0.9	64
YUNTA B -300UM	0.2	46.5	3.5	11.5	0.05	1.1	56
YUNTA C -300UM	0.1	22	3.9	13.5	<0.05	0.6	62
YUNTA D -300UM	<0.1	26	3.3	10.5	0.05	0.7	54
YUNTA E -300UM	0.1	28.5	3.3	10.5	<0.05	0.6	54
YUNTA F -300UM	0.2	17.5	3.7	11.5	<0.05	0.5	64
YUNTA G -300UM	0.1	17.5	3.8	13	<0.05	0.6	64
YUNTA H -300UM	0.1	18	5.5	18	0.1	0.7	90

Continued: Variations of metal concentration (raw data) within stream sediments (75 µm and 300 µm) collected from around the *E. camaldulensis* sampled at (Winninninie Creek) Yunta. A=north, B=northeast, C=east, D=southeast, E=east, F=southwest, G=west and H=northwest.

IDENT	Sb	Se	Sn	Sr	Te	Th	Tl
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm
SCHEME	IC3M	IC3M	IC3M	IC3M	IC3M	IC3M	IC3M
DETECTION LIMIT	0.5	0.5	0.1	0.1	0.2	0.02	0.1
YUNTA A 0-75UM	0.5	<0.5	3.9	130	<0.2	16	0.6
YUNTA B 0-75UM	0.5	<0.5	3.3	120	<0.2	17	0.6
YUNTA C 0-75UM	0.5	0.5	3.1	120	<0.2	16	0.5
YUNTA D 0-75UM	0.5	<0.5	3.1	125	<0.2	15.5	0.5
YUNTA E 0-75UM	0.5	1	3	110	<0.2	16.5	0.6
YUNTA F 0-75UM	0.5	1	3.9	125	<0.2	15	0.6
YUNTA G 0-75UM	0.5	1	3.9	125	<0.2	15	0.6
YUNTA H 0-75UM	0.5	1.5	4.4	120	<0.2	15	0.6
YUNTA A -300UM	1	1	2.2	80	<0.2	14	0.4
YUNTA B -300UM	1.5	<0.5	2.1	72	<0.2	14	0.3
YUNTA C -300UM	0.5	0.5	2.3	88	<0.2	11	0.4
YUNTA D -300UM	1	<0.5	2	66	<0.2	10.5	0.3
YUNTA E -300UM	1	<0.5	1.9	66	<0.2	10	0.3
YUNTA F -300UM	0.5	<0.5	2.2	76	<0.2	9.5	0.5
YUNTA G -300UM	1	<0.5	2.3	82	<0.2	10.5	0.4
YUNTA H -300UM	0.5	<0.5	3.8	105	<0.2	12.5	0.5

IDENT	U	W	Y	Dy	Er	Eu	Gd
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm
SCHEME	IC3M	IC3M	IC3M	IC3R	IC3R	IC3R	IC3R
DETECTION LIMIT	0.02	0.1	0.05	0.02	0.05	0.02	0.05
YUNTA A 0-75UM	2.1	1.6	25	4.7	2.4	1.55	5.5
YUNTA B 0-75UM	2.1	1.5	24.5	4.6	2.2	1.7	5.5
YUNTA C 0-75UM	1.95	1.3	22.5	3.8	1.85	1.4	4.5
YUNTA D 0-75UM	2.1	1.4	23.5	4.1	1.95	1.4	4.9
YUNTA E 0-75UM	2.1	1.5	21	4.4	2	1.75	5
YUNTA F 0-75UM	1.85	1.4	22.5	4.1	2.1	1.7	4.7
YUNTA G 0-75UM	1.7	1.6	23	4.2	2.1	1.5	4.6
YUNTA H 0-75UM	1.8	1.7	22	4.5	2	1.5	4.9
YUNTA A -300UM	1.75	0.9	18.5	3.5	1.65	1.4	4.5
YUNTA B -300UM	1.8	1	18	3.5	1.9	1.55	4.7
YUNTA C -300UM	1.5	1.3	17	3.3	1.5	1.25	3.9
YUNTA D -300UM	1.35	1	15	2.8	1.45	1.25	3.3
YUNTA E -300UM	1.2	0.8	14.5	2.4	1.45	1.1	3.2
YUNTA F -300UM	1.2	1	15.5	2.8	1.55	1.1	3.1
YUNTA G -300UM	1.3	0.9	16.5	3	1.45	1.15	3.4
YUNTA H -300UM	1.55	1.3	20	3.3	1.85	1.35	4.1

Continued: Variations of metal concentration (raw data) within stream sediments (75 µm and 300 µm) collected from around the *E. camaldulensis* sampled at (Winninninie Creek) Yunta. A=north, B=northeast, C=east, D=southeast, E=east, F=southwest, G=west and H=northwest.

IDENT	Ho	Lu	Pr	Tb	Tm	Yb	La
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm
SCHEME	IC3R	IC3R	IC3R	IC3R	IC3R	IC3R	IC3R
DETECTION LIMIT	0.02	0.02	0.05	0.02	0.05	0.05	0.5
YUNTA A 0-75UM	0.88	0.34	9.5	0.69	0.4	2.4	45.5
YUNTA B 0-75UM	0.81	0.38	11	0.68	0.35	2.2	52
YUNTA C 0-75UM	0.74	0.32	9	0.64	0.3	2.2	45.5
YUNTA D 0-75UM	0.79	0.33	9	0.64	0.35	2.4	43
YUNTA E 0-75UM	0.8	0.33	12	0.61	0.35	2.5	49.5
YUNTA F 0-75UM	0.83	0.34	9.5	0.63	0.4	2.5	39.5
YUNTA G 0-75UM	0.76	0.37	9	0.62	0.35	2.4	39.5
YUNTA H 0-75UM	0.85	0.35	9	0.64	0.4	2.6	39.5
YUNTA A -300UM	0.61	0.29	10.5	0.55	0.3	1.85	44.5
YUNTA B -300UM	0.63	0.27	11	0.61	0.3	1.75	46
YUNTA C -300UM	0.57	0.26	8.5	0.5	0.2	1.65	34.5
YUNTA D -300UM	0.55	0.24	8.5	0.48	0.2	1.5	34
YUNTA E -300UM	0.47	0.2	7.5	0.4	0.2	1.45	31.5
YUNTA F -300UM	0.53	0.25	7	0.46	0.25	1.6	29
YUNTA G -300UM	0.54	0.24	7.5	0.46	0.25	1.65	30
YUNTA H -300UM	0.64	0.28	8.5	0.54	0.3	1.85	36

IDENT	Ce	Nd	Sm	Au	Au Dp1
UNITS	ppm	ppm	ppm	ppb	ppb
SCHEME	IC3R	IC3R	IC3R	AA10	AA10
DETECTION LIMIT	0.5	0.02	0.02	1	1
YUNTA A 0-75UM	78	38	8.5	1	<1
YUNTA B 0-75UM	92	42.5	9.5	<1	--
YUNTA C 0-75UM	80	37	8	2	--
YUNTA D 0-75UM	76	35	8	5	--
YUNTA E 0-75UM	88	42	9	1	--
YUNTA F 0-75UM	72	34	7.5	3	--
YUNTA G 0-75UM	68	34.5	7.5	2	--
YUNTA H 0-75UM	70	34.5	7.5	2	--
YUNTA A -300UM	92	38	8	2	--
YUNTA B -300UM	94	40.5	8.5	2	--
YUNTA C -300UM	72	30.5	7	3	--
YUNTA D -300UM	72	30	6.5	2	--
YUNTA E -300UM	66	28	6	<1	--
YUNTA F -300UM	60	25.5	5.5	6	--
YUNTA G -300UM	62	28	6	<1	--
YUNTA H -300UM	68	31.5	7	33	--

Variations of metal concentration (raw data) within stream sediments (75 µm and 300 µm) collected from around the *E. camaldulensis* sampled at (Cutana Creek) Bindarrah. A=north, B=northeast, C=east, D=southeast, E=east, F=southwest, G=west and H=northwest.

IDENT	Al	Ba	Ca	Cr	Cu	Fe	K
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm
SCHEME	IC3E	IC3E	IC3E	IC3E	IC3E	IC3E	IC3E
DETECTION LIMIT	10	5	10	2	2	100	10
BINDARRAH A 0-75UM	86700	340	11000	48	39	47300	19200
BINDARRAH B 0-75UM	86000	340	7900	50	45	48100	19600
BINDARRAH C 0-75UM	80800	330	8600	54	37	53100	17500
BINDARRAH D 0-75UM	67900	320	6200	49	38	46100	16500
BINDARRAH E 0-75UM	62100	310	5450	52	27	44700	15500
BINDARRAH F 0-75UM	61600	310	6500	44	32	42700	15000
BINDARRAH G 0-75UM	76800	320	9350	50	44	48200	17500
BINDARRAH H 0-75UM	76500	320	8450	45	40	45000	17500
BINDARRAH A -300UM	43800	200	4700	70	12	70000	7750
BINDARRAH B -300UM	46700	220	4700	54	15	53500	8300
BINDARRAH C -300UM	37100	175	3900	140	12	136000	6500
BINDARRAH D -300UM	47400	230	4500	44	9	46000	8400
BINDARRAH E -300UM	46100	220	4350	58	18	58700	8000
BINDARRAH F -300UM	52500	250	5100	19	10	20700	9350
BINDARRAH G -300UM	45300	210	4250	20	8	24500	7550
BINDARRAH H -300UM	45500	210	4350	49	13	54000	7850

IDENT	Mg	Mn	Na	Nb	Ni	P	Pb
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm
SCHEME	IC3E	IC3E	IC3E	IC3E	IC3E	IC3E	IC3E
DETECTION LIMIT	10	5	10	5	2	5	5
BINDARRAH A 0-75UM	11400	470	4000	10	28	410	16
BINDARRAH B 0-75UM	11300	550	3700	10	30	600	12
BINDARRAH C 0-75UM	10200	490	4100	10	28	480	28
BINDARRAH D 0-75UM	8100	430	5550	12	22	430	24
BINDARRAH E 0-75UM	7650	430	5150	12	22	430	20
BINDARRAH F 0-75UM	7150	400	5500	12	20	380	14
BINDARRAH G 0-75UM	10000	460	4150	10	27	400	14
BINDARRAH H 0-75UM	10000	440	3950	10	27	430	14
BINDARRAH A -300UM	2400	500	20900	10	11	320	14
BINDARRAH B -300UM	2350	410	23100	8	9	320	8
BINDARRAH C -300UM	1900	850	18600	10	17	400	6
BINDARRAH D -300UM	2000	300	24700	8	9	290	14
BINDARRAH E -300UM	2050	370	23100	8	9	320	6
BINDARRAH F -300UM	2250	220	26300	<5	8	290	12
BINDARRAH G -300UM	1650	180	26000	<5	6	260	10
BINDARRAH H -300UM	1850	340	24700	8	9	310	10

Continued: Variations of metal concentration (raw data) within stream sediments (75 µm and 300 µm) collected from around the *E. camaldulensis* sampled at (Cutana Creek) Bindarrah. A=north, B=northeast, C=east, D=southeast, E=east, F=southwest, G=west and H=northwest.

IDENT	S	Ti	V	Zn	Ag	As	Bi
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm
SCHEME	IC3E	IC3E	IC3E	IC3E	IC3M	IC3M	IC3M
DETECTION LIMIT	50	10	2	2	0.1	0.5	0.1
BINDARRAH A 0-75UM	200	5100	115	100	0.4	5.5	0.4
BINDARRAH B 0-75UM	300	5200	115	105	0.3	5.5	0.4
BINDARRAH C 0-75UM	200	6000	120	100	0.4	6	0.4
BINDARRAH D 0-75UM	200	6100	105	105	0.8	4.5	0.3
BINDARRAH E 0-75UM	100	5950	100	100	0.4	5	0.4
BINDARRAH F 0-75UM	150	5950	96	80	0.3	4	0.3
BINDARRAH G 0-75UM	200	5700	110	92	0.4	5	0.3
BINDARRAH H 0-75UM	200	5050	105	90	0.3	6	0.3
BINDARRAH A -300UM	<50	7250	145	40	0.4	0.5	0.2
BINDARRAH B -300UM	50	5800	115	34	0.3	1.5	0.1
BINDARRAH C -300UM	<50	10600	240	42	0.3	0.5	0.2
BINDARRAH D -300UM	50	5150	98	27	0.4	1	0.2
BINDARRAH E -300UM	<50	6150	120	36	0.3	1	0.1
BINDARRAH F -300UM	50	2350	48	25	0.2	1.5	0.1
BINDARRAH G -300UM	<50	2800	54	17	0.3	<0.5	<0.1
BINDARRAH H -300UM	<50	5700	110	23	0.4	1	0.1

IDENT	Cd	Co	Cs	Ga	In	Mo	Rb
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm
SCHEME	IC3M	IC3M	IC3M	IC3M	IC3M	IC3M	IC3M
DETECTION LIMIT	0.1	0.2	0.1	0.1	0.05	0.1	0.1
BINDARRAH A 0-75UM	0.2	15.5	4.5	26	0.1	0.8	94
BINDARRAH B 0-75UM	0.1	16	4.1	26.5	0.05	0.7	90
BINDARRAH C 0-75UM	0.1	15	3.9	24.5	0.1	0.7	86
BINDARRAH D 0-75UM	0.1	12	3.3	20.5	0.05	0.6	76
BINDARRAH E 0-75UM	0.2	12	3.1	19.5	<0.05	0.5	72
BINDARRAH F 0-75UM	0.1	11.5	2.9	18.5	0.05	0.5	70
BINDARRAH G 0-75UM	0.2	14	3.8	23.5	0.05	0.5	84
BINDARRAH H 0-75UM	<0.1	14	4	22.5	0.05	0.7	84
BINDARRAH A -300UM	<0.1	9.5	0.8	14.5	<0.05	0.2	28.5
BINDARRAH B -300UM	0.1	7	1	15	<0.05	0.6	31
BINDARRAH C -300UM	0.2	12.5	0.7	18.5	<0.05	0.3	24
BINDARRAH D -300UM	<0.1	6	0.8	13.5	<0.05	0.3	30
BINDARRAH E -300UM	0.2	7	0.7	13.5	<0.05	0.2	29.5
BINDARRAH F -300UM	<0.1	4.7	0.9	13	<0.05	0.2	34.5
BINDARRAH G -300UM	<0.1	3.9	0.5	11.5	<0.05	0.3	26.5
BINDARRAH H -300UM	<0.1	6.5	0.7	14	<0.05	0.3	27.5

Continued: Variations of metal concentration (raw data) within stream sediments (75 µm and 300 µm) collected from around the *E. camaldulensis* sampled at (Cutana Creek) Bindarrah. A=north, B=northeast, C=east, D=southeast, E=east, F=southwest, G=west and H=northwest.

IDENT	Sb	Se	Sn	Sr	Te	Th	Tl
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm
SCHEME	IC3M	IC3M	IC3M	IC3M	IC3M	IC3M	IC3M
DETECTION LIMIT	0.5	0.5	0.1	0.1	0.2	0.02	0.1
BINDARRAH A 0-75UM	<0.5	0.5	3.4	145	<0.2	19	0.6
BINDARRAH B 0-75UM	<0.5	0.5	3.5	125	<0.2	20.5	0.6
BINDARRAH C 0-75UM	<0.5	<0.5	3.8	125	<0.2	42.5	0.6
BINDARRAH D 0-75UM	<0.5	0.5	3.2	105	<0.2	37	0.4
BINDARRAH E 0-75UM	<0.5	<0.5	3.1	100	<0.2	39.5	0.3
BINDARRAH F 0-75UM	<0.5	0.5	2.8	105	<0.2	36.5	0.4
BINDARRAH G 0-75UM	<0.5	0.5	3.1	125	<0.2	32	0.6
BINDARRAH H 0-75UM	<0.5	<0.5	3.2	120	<0.2	23	0.6
BINDARRAH A -300UM	<0.5	1	3.6	64	<0.2	39.5	0.2
BINDARRAH B -300UM	<0.5	1	3.3	70	<0.2	18	0.1
BINDARRAH C -300UM	<0.5	1	4.8	54	<0.2	74	0.1
BINDARRAH D -300UM	<0.5	1	2.5	68	<0.2	24	0.1
BINDARRAH E -300UM	<0.5	1	3.4	68	<0.2	30.5	0.2
BINDARRAH F -300UM	<0.5	1	1.4	76	<0.2	11.5	0.2
BINDARRAH G -300UM	<0.5	1	1.6	64	<0.2	10.5	0.2
BINDARRAH H -300UM	<0.5	0.5	2.8	66	<0.2	28.5	0.1

IDENT	U	W	Y	Dy	Er	Eu	Gd
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm
SCHEME	IC3M	IC3M	IC3M	IC3R	IC3R	IC3R	IC3R
DETECTION LIMIT	0.02	0.1	0.05	0.02	0.05	0.02	0.05
BINDARRAH A 0-75UM	2.1	1.2	27	4.9	2.2	1.7	6
BINDARRAH B 0-75UM	2.3	1.3	27	5	2.1	1.6	6
BINDARRAH C 0-75UM	4.2	1.2	34.5	7.5	2.6	3	12
BINDARRAH D 0-75UM	3.6	1.1	30	6.5	2.4	2.6	9.5
BINDARRAH E 0-75UM	3.9	1.2	30	7	2.5	2.7	10.5
BINDARRAH F 0-75UM	3.7	1.2	30.5	6.5	2.6	2.4	9.5
BINDARRAH G 0-75UM	3.3	1.3	29.5	6.5	2.6	2.5	9.5
BINDARRAH H 0-75UM	2.3	1.3	25.5	4.8	2.1	1.75	6.5
BINDARRAH A -300UM	3.1	0.2	21.5	5.5	1.95	2	9
BINDARRAH B -300UM	1.9	0.5	15	3.5	1.4	1.25	5.5
BINDARRAH C -300UM	6.5	0.1	39.5	12	3.7	4	19.5
BINDARRAH D -300UM	2.2	0.4	16	3.9	1.45	1.6	6.5
BINDARRAH E -300UM	3	0.3	20.5	5.5	1.75	1.7	8.5
BINDARRAH F -300UM	1.25	0.4	10	2.3	1.05	0.94	3.3
BINDARRAH G -300UM	1.2	0.4	9.5	2	0.9	0.85	3
BINDARRAH H -300UM	2.3	0.3	16.5	4.3	1.5	1.6	8

Continued: Variations of metal concentration (raw data) within stream sediments (75 µm and 300 µm) collected from around the *E. camaldulensis* sampled at (Cutana Creek) Bindarrah. A=north, B=northeast, C=east, D=southeast, E=east, F=southwest, G=west and H=northwest.

IDENT	Ho	Lu	Pr	Tb	Tm	Yb	La
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm
SCHEME	IC3R	IC3R	IC3R	IC3R	IC3R	IC3R	IC3R
DETECTION LIMIT	0.02	0.02	0.05	0.02	0.05	0.05	0.5
BINDARRAH A 0-75UM	0.95	0.35	11.5	0.72	0.35	2.3	54
BINDARRAH B 0-75UM	0.84	0.34	12	0.83	0.35	2.2	58
BINDARRAH C 0-75UM	1.2	0.34	27.5	1.45	0.4	2.5	140
BINDARRAH D 0-75UM	1.05	0.34	22.5	1.2	0.35	2.3	110
BINDARRAH E 0-75UM	1.15	0.37	24	1.2	0.35	2.3	120
BINDARRAH F 0-75UM	1.05	0.33	21.5	1.2	0.35	2.4	110
BINDARRAH G 0-75UM	1.05	0.32	21	1.1	0.4	2.4	100
BINDARRAH H 0-75UM	0.86	0.31	13	0.76	0.3	2.3	64
BINDARRAH A -300UM	0.81	0.25	23.5	1.1	0.25	1.7	105
BINDARRAH B -300UM	0.53	0.16	13.5	0.64	0.2	1.4	58
BINDARRAH C -300UM	1.5	0.39	52	2.3	0.4	2.5	220
BINDARRAH D -300UM	0.63	0.17	16	0.74	0.2	1.3	70
BINDARRAH E -300UM	0.79	0.2	20.5	0.98	0.2	1.6	88
BINDARRAH F -300UM	0.35	0.13	7.5	0.4	0.15	0.95	34
BINDARRAH G -300UM	0.3	0.11	7.5	0.4	0.1	0.75	33
BINDARRAH H -300UM	0.67	0.16	19	0.9	0.2	1.25	80

IDENT	Ce	Nd	Sm	Au	Au Dp1
UNITS	ppm	ppm	ppm	ppb	ppb
SCHEME	IC3R	IC3R	IC3R	AA10	AA10
DETECTION LIMIT	0.5	0.02	0.02	1	1
BINDARRAH A 0-75UM	100	43	9	2	--
BINDARRAH B 0-75UM	105	47	10	<1	--
BINDARRAH C 0-75UM	240	110	20.5	5	--
BINDARRAH D 0-75UM	200	86	17.5	2	--
BINDARRAH E 0-75UM	220	92	18.5	1	--
BINDARRAH F 0-75UM	200	84	17	1	--
BINDARRAH G 0-75UM	180	80	16.5	6	--
BINDARRAH H 0-75UM	115	50	10.5	2	--
BINDARRAH A -300UM	185	86	16.5	2	--
BINDARRAH B -300UM	105	46	9.5	6	--
BINDARRAH C -300UM	410	185	35.5	<1	--
BINDARRAH D -300UM	125	56	11	<1	--
BINDARRAH E -300UM	160	74	15	2	--
BINDARRAH F -300UM	62	27	6	1	--
BINDARRAH G -300UM	60	26.5	5	2	--
BINDARRAH H -300UM	145	70	14.5	2	--

Variations of metal concentration (raw data) within stream sediments (75 µm and 300 µm) collected from around the *E. camaldulensis* sampled at (Willawillyong Creek) Flying Doctor, Broken Hill. A=north, B=northeast, C=east, D=southeast, E=east, F=southwest, G=west and H=northwest.

IDENT	Al	Ba	Ca	Cr	Cu	Fe	K
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm
SCHEME	IC3E	IC3E	IC3E	IC3E	IC3E	IC3E	IC3E
DETECTION LIMIT	10	5	10	2	2	100	10
FLYING DR A 0-75UM	65200	320	9850	36	48	37100	16400
FLYING DR B 0-75UM	81600	350	8500	47	68	44300	19400
FLYING DR C 0-75UM	78600	310	20400	47	60	39300	18400
FLYING DR D 0-75UM	82500	360	7900	47	68	43300	20100
FLYING DR E 0-75UM	82200	360	9150	46	62	42700	19500
FLYING DR F 0-75UM	79500	360	7550	45	68	41800	18900
FLYING DR G 0-75UM	83500	380	8750	49	74	45000	21400
FLYING DR H 0-75UM	82100	370	8300	45	66	44000	20000
FLYING DR A -300UM	53900	320	9600	34	35	34100	15500
FLYING DR B -300UM	61300	330	8750	40	54	39400	16800
FLYING DR C -300UM	65000	280	16200	46	62	39000	17300
FLYING DR D -300UM	68500	350	8800	41	54	40100	19100
FLYING DR E -300UM	64800	330	9550	44	56	40400	18400
FLYING DR F -300UM	59500	360	9750	31	46	31800	16900
FLYING DR G -300UM	70100	370	9000	49	76	44300	20600
FLYING DR H -300UM	66500	350	9050	44	60	39700	19200

IDENT	Mg	Mn	Na	Nb	Ni	P	Pb
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm
SCHEME	IC3E	IC3E	IC3E	IC3E	IC3E	IC3E	IC3E
DETECTION LIMIT	10	5	10	5	2	5	5
FLYING DR A 0-75UM	6550	3550	4650	10	21	700	850
FLYING DR B 0-75UM	8750	2700	3850	10	29	550	1150
FLYING DR C 0-75UM	9250	1650	3100	8	27	700	850
FLYING DR D 0-75UM	8850	2350	4000	10	28	500	1050
FLYING DR E 0-75UM	9100	2300	3600	10	27	550	1100
FLYING DR F 0-75UM	8350	2900	4550	10	28	470	1050
FLYING DR G 0-75UM	9400	1950	4100	10	30	460	1250
FLYING DR H 0-75UM	9000	3200	4450	10	28	470	1250
FLYING DR A -300UM	5650	3200	6800	10	17	550	600
FLYING DR B -300UM	6850	2750	5750	10	21	500	900
FLYING DR C -300UM	8800	1450	2450	8	26	800	900
FLYING DR D -300UM	7950	3150	4900	10	24	550	1050
FLYING DR E -300UM	8350	2550	4050	10	27	600	1100
FLYING DR F -300UM	6200	4150	7400	8	21	470	900
FLYING DR G -300UM	9050	2300	4250	10	29	480	1400
FLYING DR H -300UM	8050	3650	5450	10	25	480	1200

Continued: Variations of metal concentration (raw data) within stream sediments (75 µm and 300 µm) collected from around the *E. camaldulensis* sampled at (Willawillyong Creek) Flying Doctor, Broken Hill. A=north, B=northeast, C=east, D=southeast, E=east, F=southwest, G=west and H=northwest.

IDENT	S	Ti	V	Zn	Ag	As	Bi
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm
SCHEME	IC3E	IC3E	IC3E	IC3E	IC3M	IC3M	IC3M
DETECTION LIMIT	50	10	2	2	0.1	0.5	0.1
FLYING DR A 0-75UM	550	4950	84	2150	1.6	13.5	0.4
FLYING DR B 0-75UM	450	4900	105	2850	2.1	18	0.3
FLYING DR C 0-75UM	800	3850	90	2150	1.5	12.5	0.4
FLYING DR D 0-75UM	400	4600	105	2700	1.9	16	0.4
FLYING DR E 0-75UM	450	4400	100	2700	1.9	15	0.4
FLYING DR F 0-75UM	300	4750	100	2900	2.1	14	0.4
FLYING DR G 0-75UM	450	4650	110	3150	1.9	18	0.5
FLYING DR H 0-75UM	350	4750	105	3250	2.4	17.5	0.5
FLYING DR A -300UM	400	4250	72	1500	1.4	10	0.3
FLYING DR B -300UM	300	4700	88	2050	1.9	5.5	0.4
FLYING DR C -300UM	950	3700	90	2200	2	13	0.4
FLYING DR D -300UM	450	4100	94	2650	2	12.5	0.4
FLYING DR E -300UM	500	4050	94	2700	2.3	13	0.4
FLYING DR F -300UM	250	3300	76	2400	2.6	10.5	0.4
FLYING DR G -300UM	500	4350	105	3200	2.8	16.5	0.3
FLYING DR H -300UM	300	4150	92	2950	2.4	15.5	0.3

IDENT	Cd	Co	Cs	Ga	In	Mo	Rb
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm
SCHEME	IC3M	IC3M	IC3M	IC3M	IC3M	IC3M	IC3M
DETECTION LIMIT	0.1	0.2	0.1	0.1	0.05	0.1	0.1
FLYING DR A 0-75UM	7	12.5	3	20	<0.05	0.5	80
FLYING DR B 0-75UM	10.5	15.5	3.7	25	0.1	0.7	96
FLYING DR C 0-75UM	9	14	3.7	23.5	0.05	0.6	96
FLYING DR D 0-75UM	11	15.5	4	25	0.1	0.7	105
FLYING DR E 0-75UM	11	16	3.9	25	0.05	0.7	105
FLYING DR F 0-75UM	10.5	15.5	3.6	23.5	0.05	0.8	96
FLYING DR G 0-75UM	11.5	16	4	26.5	0.1	0.9	105
FLYING DR H 0-75UM	11.5	16	4	26	0.05	0.6	100
FLYING DR A -300UM	5.5	11.5	2.5	17	0.05	0.6	76
FLYING DR B -300UM	9	13	3	18.5	0.05	0.4	76
FLYING DR C -300UM	11.5	13.5	3.7	21.5	0.05	0.7	78
FLYING DR D -300UM	11	14.5	3.6	21	0.1	0.6	86
FLYING DR E -300UM	12	15.5	3.6	22.5	0.05	2.3	80
FLYING DR F -300UM	9	12.5	2.9	19.5	0.05	0.4	78
FLYING DR G -300UM	13.5	17	4.2	25	0.1	0.6	94
FLYING DR H -300UM	12	15	3.8	23	0.05	0.5	88

Continued: Variations of metal concentration (raw data) within stream sediments (75 µm and 300 µm) collected from around the *E. camaldulensis* sampled at (Willawillyong Creek) Flying Doctor, Broken Hill. A=north, B=northeast, C=east, D=southeast, E=east, F=southwest, G=west and H=northwest.

IDENT	Sb	Se	Sn	Sr	Te	Th	Tl
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm
SCHEME	IC3M	IC3M	IC3M	IC3M	IC3M	IC3M	IC3M
DETECTION LIMIT	0.5	0.5	0.1	0.1	0.2	0.02	0.1
FLYING DR A 0-75UM	9.5	0.5	2.7	105	<0.2	33	0.6
FLYING DR B 0-75UM	10	0.5	3.7	115	<0.2	24.5	0.5
FLYING DR C 0-75UM	6.5	<0.5	2.8	185	<0.2	13.5	0.6
FLYING DR D 0-75UM	9	<0.5	3.3	115	<0.2	17.5	0.6
FLYING DR E 0-75UM	9	<0.5	3.3	120	<0.2	16	0.7
FLYING DR F 0-75UM	9.5	0.5	3.3	110	<0.2	22	0.6
FLYING DR G 0-75UM	10	<0.5	3.6	125	<0.2	15.5	0.7
FLYING DR H 0-75UM	11.5	<0.5	3.8	120	<0.2	18.5	0.7
FLYING DR A -300UM	7.5	0.5	2	96	<0.2	20	0.5
FLYING DR B -300UM	9	1	2.3	96	<0.2	17	0.6
FLYING DR C -300UM	6.5	1.5	2.8	145	<0.2	11	0.6
FLYING DR D -300UM	9	<0.5	2.6	100	<0.2	13.5	0.5
FLYING DR E -300UM	9	1	3.1	110	<0.2	12	0.7
FLYING DR F -300UM	11.5	1	2.5	96	<0.2	12	0.6
FLYING DR G -300UM	12	2	3.7	110	<0.2	13.5	0.7
FLYING DR H -300UM	11.5	1	3	100	<0.2	14	0.7

IDENT	U	W	Y	Dy	Er	Eu	Gd
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm
SCHEME	IC3M	IC3M	IC3M	IC3R	IC3R	IC3R	IC3R
DETECTION LIMIT	0.02	0.1	0.05	0.02	0.05	0.02	0.05
FLYING DR A 0-75UM	3.6	3	28.5	6	2.5	1.75	7.5
FLYING DR B 0-75UM	2.9	2.5	27.5	5	2.4	1.7	6.5
FLYING DR C 0-75UM	1.8	2.4	22	3.7	1.85	1.3	4.1
FLYING DR D 0-75UM	2.3	2.5	26	4.5	2.2	1.55	4.8
FLYING DR E 0-75UM	2	2.4	24	4.2	2.1	1.4	4.6
FLYING DR F 0-75UM	2.5	3.1	26.5	4.8	2.3	1.55	6
FLYING DR G 0-75UM	2.2	2.4	24.5	4.2	1.9	1.5	4.3
FLYING DR H 0-75UM	2.5	3.4	27	4.5	2.1	1.55	5
FLYING DR A -300UM	2.3	1.5	23	4.3	2.1	1.35	4.8
FLYING DR B -300UM	2.3	2.5	23	4.4	2.1	1.3	4.3
FLYING DR C -300UM	1.45	2.5	18.5	3.7	1.6	1.1	3.4
FLYING DR D -300UM	1.75	2.3	20	3.5	1.55	1.4	3.6
FLYING DR E -300UM	1.7	2.3	20	3.7	1.65	1.35	3.5
FLYING DR F -300UM	1.7	1.6	17.5	3.5	1.55	1.3	3.6
FLYING DR G -300UM	1.95	2.4	21	4	2.1	1.4	4.2
FLYING DR H -300UM	1.9	2.3	20	3.7	1.7	1.45	3.7

Continued: Variations of metal concentration (raw data) within stream sediments (75 µm and 300 µm) collected from around the *E. camaldulensis* sampled at (Willawillyong Creek) Flying Doctor, Broken Hill. A=north, B=northeast, C=east, D=southeast, E=east, F=southwest, G=west and H=northwest.

IDENT	Ho	Lu	Pr	Tb	Tm	Yb	La
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm
SCHEME	IC3R	IC3R	IC3R	IC3R	IC3R	IC3R	IC3R
DETECTION LIMIT	0.02	0.02	0.05	0.02	0.05	0.05	0.5
FLYING DR A 0-75UM	0.97	0.36	17	0.93	0.35	2.5	86
FLYING DR B 0-75UM	0.96	0.31	13.5	0.84	0.35	2.4	68
FLYING DR C 0-75UM	0.75	0.27	7.5	0.58	0.35	2	36
FLYING DR D 0-75UM	0.84	0.33	9.5	0.67	0.35	2.3	47
FLYING DR E 0-75UM	0.82	0.33	9.5	0.66	0.35	2.1	44.5
FLYING DR F 0-75UM	0.86	0.34	12	0.74	0.40	2.3	58
FLYING DR G 0-75UM	0.81	0.34	8.5	0.59	0.35	2.2	41
FLYING DR H 0-75UM	0.91	0.37	10	0.67	0.35	2.4	49
FLYING DR A -300UM	0.85	0.35	11	0.61	0.35	2.5	48.5
FLYING DR B -300UM	0.88	0.33	9	0.59	0.35	2.2	41
FLYING DR C -300UM	0.67	0.25	6.5	0.46	0.30	1.9	27.5
FLYING DR D -300UM	0.66	0.32	7.5	0.49	0.30	1.9	33
FLYING DR E -300UM	0.72	0.29	7.5	0.52	0.30	2.2	31
FLYING DR F -300UM	0.65	0.26	7.5	0.48	0.30	1.75	32
FLYING DR G -300UM	0.81	0.33	8.5	0.54	0.30	2.3	34.5
FLYING DR H -300UM	0.78	0.32	8.5	0.54	0.35	2.2	35

IDENT	Ce	Nd	Sm	Au	Au Dp1
UNITS	ppm	ppm	ppm	ppb	ppb
SCHEME	IC3R	IC3R	IC3R	AA10	AA10
DETECTION LIMIT	0.5	0.02	0.02	1	1
FLYING DR A 0-75UM	150	66	13	5	--
FLYING DR B 0-75UM	115	52	11	4	--
FLYING DR C 0-75UM	66	29	6	1	--
FLYING DR D 0-75UM	84	37	8	1	--
FLYING DR E 0-75UM	82	35.5	7.5	2	--
FLYING DR F 0-75UM	100	45.5	9.5	4	--
FLYING DR G 0-75UM	70	34	7.5	9	12
FLYING DR H 0-75UM	82	39	8.5	2	--
FLYING DR A -300UM	88	38.5	8	<1	--
FLYING DR B -300UM	74	33	7	<1	--
FLYING DR C -300UM	52	23.5	5	2	--
FLYING DR D -300UM	62	28.5	6	4	8
FLYING DR E -300UM	56	27.5	5.5	10	6
FLYING DR F -300UM	58	26	5.5	3	2
FLYING DR G -300UM	66	29.5	6.5	2	5
FLYING DR H -300UM	64	30.5	6.5	4	--

Variations of metal concentration (raw data) within stream sediments (75 µm and 300 µm) collected from around the *E. camaldulensis* sampled at Williams Creek. A=north, B=northeast, C=east, D=southeast, E=east, F=southwest, G=west and H=northwest.

IDENT	Al	Ba	Ca	Cr	Cu	Fe	K
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm
SCHEME	IC3E	IC3E	IC3E	IC3E	IC3E	IC3E	IC3E
DETECTION LIMIT	10	5	10	2	2	100	10
WILLIAMS CR A 0-75UM	41600	330	3050	37	20	24100	10400
WILLIAMS CR B 0-75UM	35700	300	2550	30	28	19900	9600
WILLIAMS CR C 0-75UM	44100	320	3150	35	22	22300	11000
WILLIAMS CR D 0-75UM	42100	300	2750	33	19	22200	10400
WILLIAMS CR E 0-75UM	49500	370	4150	37	28	25200	11800
WILLIAMS CR F 0-75UM	52100	360	4500	35	28	24800	12400
WILLIAMS CR G 0-75UM	49500	350	3750	37	26	25900	11800
WILLIAMS CR H 0-75UM	48500	330	2900	28	30	22000	11900
WILLIAMS CR A -300UM	19300	260	1150	14	14	13200	6250
WILLIAMS CR B -300UM	21400	250	1500	16	21	13600	6900
WILLIAMS CR C -300UM	22900	270	1650	20	17	15000	7200
WILLIAMS CR D -300UM	20900	260	1250	17	15	14500	6650
WILLIAMS CR E -300UM	23200	270	2100	17	20	16000	7300
WILLIAMS CR F -300UM	26200	290	2450	17	21	16500	7850
WILLIAMS CR G -300UM	23900	260	1550	22	18	15600	7400
WILLIAMS CR H -300UM	29700	280	1950	21	22	17300	8950

IDENT	Mg	Mn	Na	Nb	Ni	P	Pb
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm
SCHEME	IC3E	IC3E	IC3E	IC3E	IC3E	IC3E	IC3E
DETECTION LIMIT	10	5	10	5	2	5	5
WILLIAMS CR A 0-75UM	3000	330	3200	12	13	185	14
WILLIAMS CR B 0-75UM	2450	250	3450	12	10	140	12
WILLIAMS CR C 0-75UM	3200	250	3550	12	13	175	16
WILLIAMS CR D 0-75UM	3050	250	3400	10	11	180	8
WILLIAMS CR E 0-75UM	3550	310	3450	12	15	195	12
WILLIAMS CR F 0-75UM	3850	290	3500	10	18	190	14
WILLIAMS CR G 0-75UM	3600	320	3250	12	15	230	18
WILLIAMS CR H 0-75UM	3450	240	3450	10	13	195	12
WILLIAMS CR A -300UM	1450	140	1200	6	10	100	10
WILLIAMS CR B -300UM	1700	140	1600	<5	10	110	14
WILLIAMS CR C -300UM	1800	165	1450	6	11	140	14
WILLIAMS CR D -300UM	1600	140	1300	6	9	120	12
WILLIAMS CR E -300UM	1900	175	1550	6	10	130	8
WILLIAMS CR F -300UM	2200	175	1750	8	11	170	12
WILLIAMS CR G -300UM	1800	160	1450	6	10	155	12
WILLIAMS CR H -300UM	2300	190	1900	6	11	175	10

Continued: Variations of metal concentration (raw data) within stream sediments (75 µm and 300 µm) collected from around the *E. camaldulensis* sampled at Williams Creek. A=north, B=northeast, C=east, D=southeast, E=east, F=southwest, G=west and H=northwest.

IDENT	S	Ti	V	Zn	Ag	As	Bi
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm
SCHEME	IC3E	IC3E	IC3E	IC3E	IC3M	IC3M	IC3M
DETECTION LIMIT	50	10	2	2	0.1	0.5	0.1
WILLIAMS CR A 0-75UM	150	6600	72	49	0.4	3	0.3
WILLIAMS CR B 0-75UM	100	5700	60	42	0.4	2.5	0.3
WILLIAMS CR C 0-75UM	150	5250	66	44	0.6	3	0.3
WILLIAMS CR D 0-75UM	150	5750	66	49	0.4	3	0.3
WILLIAMS CR E 0-75UM	200	5950	76	54	0.4	3.5	0.3
WILLIAMS CR F 0-75UM	250	5050	72	54	0.4	4	0.3
WILLIAMS CR G 0-75UM	200	6150	76	60	0.4	1	0.3
WILLIAMS CR H 0-75UM	200	4400	66	45	0.3	3	0.2
WILLIAMS CR A -300UM	150	2200	36	26	0.2	2.5	0.3
WILLIAMS CR B -300UM	150	2550	38	21	0.2	2	0.2
WILLIAMS CR C -300UM	150	2500	41	23	0.3	3	0.2
WILLIAMS CR D -300UM	150	2800	40	21	0.3	3	0.2
WILLIAMS CR E -300UM	200	2850	44	28	0.2	2.5	0.2
WILLIAMS CR F -300UM	200	2850	46	25	0.3	3	0.2
WILLIAMS CR G -300UM	150	2750	42	22	0.3	2	0.2
WILLIAMS CR H -300UM	150	2850	47	28	0.3	3.5	0.2

IDENT	Cd	Co	Cs	Ga	In	Mo	Rb
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm
SCHEME	IC3M	IC3M	IC3M	IC3M	IC3M	IC3M	IC3M
DETECTION LIMIT	0.1	0.2	0.1	0.1	0.05	0.1	0.1
WILLIAMS CR A 0-75UM	<0.1	7	2	11	<0.05	0.4	47.5
WILLIAMS CR B 0-75UM	<0.1	5.5	1.8	10	<0.05	0.3	43
WILLIAMS CR C 0-75UM	<0.1	6	2.2	11	<0.05	0.4	50
WILLIAMS CR D 0-75UM	<0.1	6	2	11	<0.05	0.3	48
WILLIAMS CR E 0-75UM	<0.1	8	2.4	13	<0.05	0.4	56
WILLIAMS CR F 0-75UM	0.1	8.5	2.6	14.5	<0.05	0.4	62
WILLIAMS CR G 0-75UM	<0.1	8.5	2.4	14	<0.05	0.3	56
WILLIAMS CR H 0-75UM	<0.1	6.5	2.4	13	<0.05	0.3	56
WILLIAMS CR A -300UM	<0.1	4.5	1.3	7	<0.05	0.2	29.5
WILLIAMS CR B -300UM	<0.1	3.8	1.4	7	<0.05	0.2	29.5
WILLIAMS CR C -300UM	<0.1	4.6	1.6	8	<0.05	0.3	32.5
WILLIAMS CR D -300UM	<0.1	4.1	1.4	7	<0.05	0.2	29.5
WILLIAMS CR E -300UM	<0.1	4.8	1.6	7.5	<0.05	0.2	32
WILLIAMS CR F -300UM	0.1	5	1.6	8.5	<0.05	0.2	34.5
WILLIAMS CR G -300UM	<0.1	4.9	1.5	8	<0.05	0.2	34
WILLIAMS CR H -300UM	<0.1	5.5	1.9	9	<0.05	0.2	39.5

Continued: Variations of metal concentration (raw data) within stream sediments (75 µm and 300 µm) collected from around the *E. camaldulensis* sampled at Williams Creek. A=north, B=northeast, C=east, D=southeast, E=east, F=southwest, G=west and H=northwest.

IDENT	Sb	Se	Sn	Sr	Te	Th	Tl
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm
SCHEME	IC3M	IC3M	IC3M	IC3M	IC3M	IC3M	IC3M
DETECTION LIMIT	0.5	0.5	0.1	0.1	0.2	0.02	0.1
WILLIAMS CR A 0-75UM	<0.5	<0.5	2.2	76	<0.2	23.5	0.3
WILLIAMS CR B 0-75UM	<0.5	<0.5	1.7	70	<0.2	18	0.3
WILLIAMS CR C 0-75UM	<0.5	<0.5	2.2	80	<0.2	18.5	0.3
WILLIAMS CR D 0-75UM	<0.5	<0.5	2	76	<0.2	20	0.3
WILLIAMS CR E 0-75UM	<0.5	<0.5	2.1	88	<0.2	20.5	0.4
WILLIAMS CR F 0-75UM	0.5	<0.5	2.3	94	<0.2	17	0.4
WILLIAMS CR G 0-75UM	<0.5	<0.5	2.3	84	<0.2	23	0.3
WILLIAMS CR H 0-75UM	0.5	<0.5	2.1	82	<0.2	13.5	0.4
WILLIAMS CR A -300UM	<0.5	<0.5	1.1	40.5	<0.2	6.5	0.2
WILLIAMS CR B -300UM	<0.5	0.5	0.9	40.5	<0.2	7.5	0.2
WILLIAMS CR C -300UM	<0.5	0.5	1	43	<0.2	7	0.2
WILLIAMS CR D -300UM	<0.5	<0.5	1	41	<0.2	8.5	0.2
WILLIAMS CR E -300UM	<0.5	<0.5	1.1	44	<0.2	8.5	0.2
WILLIAMS CR F -300UM	<0.5	<0.5	1.1	48	<0.2	8	0.2
WILLIAMS CR G -300UM	0.5	0.5	1.2	43	<0.2	8.5	0.2
WILLIAMS CR H -300UM	0.5	1	1.4	52	<0.2	9	0.3

IDENT	U	W	Y	Dy	Er	Eu	Gd
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm
SCHEME	IC3M	IC3M	IC3M	IC3R	IC3R	IC3R	IC3R
DETECTION LIMIT	0.02	0.1	0.05	0.02	0.05	0.02	0.05
WILLIAMS CR A 0-75UM	3	1	27	4.9	2.4	1.35	1.35
WILLIAMS CR B 0-75UM	2.4	1.2	22.5	3.8	1.8	1.1	1.1
WILLIAMS CR C 0-75UM	2.3	0.8	22.5	3.6	1.9	1.1	1.1
WILLIAMS CR D 0-75UM	2.6	1	24.5	3.7	1.9	1.1	1.1
WILLIAMS CR E 0-75UM	2.7	1	26.5	4.4	2.2	1.3	1.3
WILLIAMS CR F 0-75UM	2.3	1.1	24	4.1	1.9	1.2	1.2
WILLIAMS CR G 0-75UM	2.8	1.1	28.5	4.7	2.4	1.4	1.4
WILLIAMS CR H 0-75UM	1.8	0.9	20	3.4	1.55	1.2	1.2
WILLIAMS CR A -300UM	1.1	0.7	9.5	1.75	0.8	0.59	1.9
WILLIAMS CR B -300UM	1.05	0.5	10	1.75	0.95	0.67	2
WILLIAMS CR C -300UM	1.1	0.8	10	1.9	0.75	0.66	2.1
WILLIAMS CR D -300UM	1.3	0.7	10.5	1.95	1	0.66	2.1
WILLIAMS CR E -300UM	1.3	1	12.5	2.4	1.2	0.73	2.2
WILLIAMS CR F -300UM	1.25	1.1	10.5	2.1	1.05	0.7	2.4
WILLIAMS CR G -300UM	1.3	0.5	11.5	2.2	1.1	0.69	2.1
WILLIAMS CR H -300UM	1.25	1.1	12	2.4	1.1	0.78	2.5

Continued: Variations of metal concentration (raw data) within stream sediments (75 µm and 300 µm) collected from around the *E. camaldulensis* sampled at Williams Creek. A=north, B=northeast, C=east, D=southeast, E=east, F=southwest, G=west and H=northwest.

IDENT	Ho	Lu	Pr	Tb	Tm	Yb	La
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm
SCHEME	IC3R	IC3R	IC3R	IC3R	IC3R	IC3R	IC3R
DETECTION LIMIT	0.02	0.02	0.05	0.02	0.05	0.05	0.5
WILLIAMS CR A 0-75UM	0.91	0.4	11.5	0.74	0.4	2.7	58
WILLIAMS CR B 0-75UM	0.77	0.31	9	0.58	0.35	2.2	47
WILLIAMS CR C 0-75UM	0.76	0.33	9.5	0.58	0.35	2.2	46.5
WILLIAMS CR D 0-75UM	0.8	0.35	9.5	0.61	0.35	2.4	49
WILLIAMS CR E 0-75UM	0.81	0.39	10.5	0.7	0.35	2.5	52
WILLIAMS CR F 0-75UM	0.73	0.35	9	0.58	0.4	2.2	46
WILLIAMS CR G 0-75UM	0.9	0.36	11.5	0.73	0.4	2.4	60
WILLIAMS CR H 0-75UM	0.62	0.27	7.5	0.47	0.3	1.95	37.5
WILLIAMS CR A -300UM	0.3	0.13	4	0.28	0.15	1.05	18.5
WILLIAMS CR B -300UM	0.37	0.18	4.4	0.28	0.15	1.1	20.5
WILLIAMS CR C -300UM	0.36	0.14	4.2	0.26	0.15	1.05	19.5
WILLIAMS CR D -300UM	0.38	0.16	4.8	0.33	0.2	1.15	21.5
WILLIAMS CR E -300UM	0.44	0.21	4.8	0.32	0.2	1.3	21.5
WILLIAMS CR F -300UM	0.4	0.16	4.9	0.3	0.15	1.1	22
WILLIAMS CR G -300UM	0.4	0.18	4.9	0.31	0.2	1.15	21.5
WILLIAMS CR H -300UM	0.42	0.16	5	0.31	0.2	1.35	23

IDENT	Ce	Nd	Sm	Au	Au Dp1
UNITS	ppm	ppm	ppm	ppb	ppb
SCHEME	IC3R	IC3R	IC3R	AA10	AA10
DETECTION LIMIT	0.5	0.02	0.02	1	1
WILLIAMS CR A 0-75UM	98	45.5	9	8	11
WILLIAMS CR B 0-75UM	80	35	7	5	--
WILLIAMS CR C 0-75UM	82	34.5	7.5	1	--
WILLIAMS CR D 0-75UM	80	38	8	5	--
WILLIAMS CR E 0-75UM	96	40.5	8	3	--
WILLIAMS CR F 0-75UM	80	35	7	7	4
WILLIAMS CR G 0-75UM	105	45.5	9	5	--
WILLIAMS CR H 0-75UM	62	28.5	5.5	<1	--
WILLIAMS CR A -300UM	35	14	2.8	3	--
WILLIAMS CR B -300UM	33.5	15.5	3.2	2	<1
WILLIAMS CR C -300UM	31.5	15.5	3.1	1	--
WILLIAMS CR D -300UM	36.5	17.5	3.1	2	--
WILLIAMS CR E -300UM	37	17	3.6	2	--
WILLIAMS CR F -300UM	42.5	17	3.5	2	--
WILLIAMS CR G -300UM	38.5	17.5	3.6	4	--
WILLIAMS CR H -300UM	41	18.5	3.8	1	--

Variations of metal concentration (raw data) within stream sediments (75 µm and 300 µm) collected from around the *E. camaldulensis* sampled at (Teilta Creek) Teilta. A=north, B=northeast, C=east, D=southeast, E=east, F=southwest, G=west and H=northwest.

IDENT	Al	Ba	Ca	Cr	Cu	Fe	K
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm
SCHEME	IC3E	IC3E	IC3E	IC3E	IC3E	IC3E	IC3E
DETECTION LIMIT	10	5	10	2	2	100	10
TEILTA A 0-75UM	35200	300	6100	33	22	26900	10300
TEILTA B 0-75UM	34100	310	5800	47	20	35100	10000
TEILTA C 0-75UM	38400	320	6800	38	27	30200	11100
TEILTA D 0-75UM	34900	310	6250	46	23	35400	10300
TEILTA E 0-75UM	49800	340	7150	28	29	26200	13500
TEILTA F 0-75UM	37000	310	5850	33	21	27100	10900
TEILTA G 0-75UM	34300	310	4900	35	26	28200	10200
TEILTA H 0-75UM	36800	300	5900	32	24	26700	10700
TEILTA A -300UM	14200	195	1300	10	14	15500	5000
TEILTA B -300UM	13900	200	1350	10	12	18600	5000
TEILTA C -300UM	16000	195	1900	10	20	14600	5500
TEILTA D -300UM	13400	180	1600	10	38	14300	4750
TEILTA E -300UM	19000	200	2350	12	20	13700	6350
TEILTA F -300UM	14000	180	1450	9	7	12400	5000
TEILTA G -300UM	16100	195	1750	10	11	13300	5550
TEILTA H -300UM	14400	190	1500	11	19	15900	4950

IDENT	Mg	Mn	Na	Nb	Ni	P	Pb
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm
SCHEME	IC3E	IC3E	IC3E	IC3E	IC3E	IC3E	IC3E
DETECTION LIMIT	10	5	10	5	2	5	5
TEILTA A 0-75UM	4650	460	4550	14	10	260	10
TEILTA B 0-75UM	4050	600	4550	6	13	240	16
TEILTA C 0-75UM	4500	490	4750	16	13	300	16
TEILTA D 0-75UM	4150	600	4650	10	11	270	16
TEILTA E 0-75UM	5850	340	4900	10	14	280	8
TEILTA F 0-75UM	4400	440	4800	14	9	260	10
TEILTA G 0-75UM	3850	480	4550	16	10	260	10
TEILTA H 0-75UM	4300	430	4600	14	12	240	8
TEILTA A -300UM	1550	140	2050	<5	9	120	14
TEILTA B -300UM	1600	170	2100	<5	11	120	14
TEILTA C -300UM	1850	155	2450	<5	10	145	14
TEILTA D -300UM	1650	155	2050	<5	8	115	14
TEILTA E -300UM	2200	160	2450	<5	7	160	10
TEILTA F -300UM	1600	125	2150	<5	8	120	14
TEILTA G -300UM	1750	150	2500	<5	8	135	10
TEILTA H -300UM	1600	160	2200	<5	9	120	10

Continued: Variations of metal concentration (raw data) within stream sediments (75 µm and 300 µm) collected from around the *E. camaldulensis* sampled at (Teilta Creek) Teilta. A=north, B=northeast, C=east, D=southeast, E=east, F=southwest, G=west and H=northwest.

IDENT	S	Ti	V	Zn	Ag	As	Bi
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm
SCHEME	IC3E	IC3E	IC3E	IC3E	IC3M	IC3M	IC3M
DETECTION LIMIT	50	10	2	2	0.1	0.5	0.1
TEILTA A 0-75UM	100	8450	64	68	0.7	5.5	0.3
TEILTA B 0-75UM	100	7300	54	76	0.3	3	0.4
TEILTA C 0-75UM	200	9400	74	74	0.6	5	0.3
TEILTA D 0-75UM	150	9000	64	84	0.5	1.5	0.4
TEILTA E 0-75UM	150	4900	66	58	0.5	4.5	0.3
TEILTA F 0-75UM	100	8550	66	66	0.5	4.5	0.4
TEILTA G 0-75UM	100	9900	70	78	0.5	5.5	0.4
TEILTA H 0-75UM	150	7950	66	62	0.5	4.5	0.3
TEILTA A -300UM	<50	1800	28	25	<0.1	4	0.3
TEILTA B -300UM	100	2000	31	35	<0.1	5	0.3
TEILTA C -300UM	100	2100	30	38	0.1	3	0.2
TEILTA D -300UM	100	2250	28	74	<0.1	1.5	0.2
TEILTA E -300UM	100	1900	31	44	<0.1	3	0.2
TEILTA F -300UM	50	1650	26	22	<0.1	2.5	0.2
TEILTA G -300UM	100	1950	28	28	0.1	3.5	0.2
TEILTA H -300UM	100	2100	29	25	<0.1	3	0.3

IDENT	Cd	Co	Cs	Ga	In	Mo	Rb
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm
SCHEME	IC3M	IC3M	IC3M	IC3M	IC3M	IC3M	IC3M
DETECTION LIMIT	0.1	0.2	0.1	0.1	0.05	0.1	0.1
TEILTA A 0-75UM	<0.1	8	1.9	10.5	<0.05	0.4	45.5
TEILTA B 0-75UM	<0.1	9	1.8	11.5	<0.05	0.3	42
TEILTA C 0-75UM	<0.1	9	1.9	11	<0.05	0.4	48.5
TEILTA D 0-75UM	<0.1	9.5	1.9	12.5	<0.05	0.2	45.5
TEILTA E 0-75UM	<0.1	8.5	2.7	12.5	<0.05	0.3	62
TEILTA F 0-75UM	<0.1	8.5	2	11	<0.05	0.4	48
TEILTA G 0-75UM	<0.1	8.5	1.8	10	<0.05	0.4	44
TEILTA H 0-75UM	<0.1	8	2	11	<0.05	0.4	47
TEILTA A -300UM	<0.1	3.9	1.2	5.5	<0.05	0.2	0.2
TEILTA B -300UM	0.1	4.5	1.1	4.9	<0.05	0.3	0.3
TEILTA C -300UM	<0.1	4	1.2	5.5	<0.05	0.2	0.2
TEILTA D -300UM	0.1	3.2	1.1	4.6	<0.05	0.1	0.1
TEILTA E -300UM	<0.1	3.9	1.4	6.5	<0.05	0.2	0.2
TEILTA F -300UM	<0.1	3.2	1.1	4.8	<0.05	0.1	0.1
TEILTA G -300UM	<0.1	4	1.3	5.5	<0.05	0.2	0.2
TEILTA H -300UM	<0.1	3.9	1.1	5.5	<0.05	0.2	0.2

Continued: Variations of metal concentration (raw data) within stream sediments (75 µm and 300 µm) collected from around the *E. camaldulensis* sampled at (Teilta Creek) Teilta. A=north, B=northeast, C=east, D=southeast, E=east, F=southwest, G=west and H=northwest.

IDENT	Sb	Se	Sn	Sr	Te	Th	Tl
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm
SCHEME	IC3M	IC3M	IC3M	IC3M	IC3M	IC3M	IC3M
DETECTION LIMIT	0.5	0.5	0.1	0.1	0.2	0.02	0.1
TEILTA A 0-75UM	<0.5	<0.5	2.2	74	<0.2	35.5	0.2
TEILTA B 0-75UM	<0.5	<0.5	1.7	74	<0.2	68	0.3
TEILTA C 0-75UM	<0.5	<0.5	2.1	82	<0.2	43.5	0.3
TEILTA D 0-75UM	<0.5	<0.5	1.9	80	<0.2	70	0.3
TEILTA E 0-75UM	<0.5	<0.5	1.9	92	<0.2	18	0.3
TEILTA F 0-75UM	<0.5	<0.5	2.1	74	<0.2	33	0.3
TEILTA G 0-75UM	<0.5	<0.5	2.3	72	<0.2	39.5	0.3
TEILTA H 0-75UM	<0.5	<0.5	1.8	74	<0.2	34	0.3
TEILTA A -300UM	<0.5	0.5	0.5	24.5	<0.2	5	0.1
TEILTA B -300UM	<0.5	1	0.4	25	<0.2	5.5	0.1
TEILTA C -300UM	<0.5	1.5	0.7	28	<0.2	6.5	0.2
TEILTA D -300UM	<0.5	<0.5	0.6	23	<0.2	6.5	0.1
TEILTA E -300UM	<0.5	0.5	0.6	32.5	<0.2	5.5	0.2
TEILTA F -300UM	<0.5	<0.5	0.5	22.5	<0.2	5.5	0.1
TEILTA G -300UM	<0.5	<0.5	0.8	28	<0.2	5.5	0.1
TEILTA H -300UM	<0.5	<0.5	0.5	24.5	<0.2	6	0.2

IDENT	U	W	Y	Dy	Er	Eu	Gd
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm
SCHEME	IC3M	IC3M	IC3M	IC3R	IC3R	IC3R	IC3R
DETECTION LIMIT	0.02	0.1	0.05	0.02	0.05	0.02	0.05
TEILTA A 0-75UM	4.1	1.2	28	5.5	2.3	1.6	7.5
TEILTA B 0-75UM	7.5	0.2	46	10	3.7	2.7	15.5
TEILTA C 0-75UM	5.5	1.1	34.5	7	2.8	2.1	10
TEILTA D 0-75UM	7.5	0.3	47.5	10	3.9	2.9	16
TEILTA E 0-75UM	2.2	0.7	20	3.5	1.7	1.2	4.6
TEILTA F 0-75UM	4	1.2	29	5.5	2.3	1.6	7.5
TEILTA G 0-75UM	4.4	1.2	31.5	6	2.5	1.75	8.5
TEILTA H 0-75UM	3.8	1.4	28.5	5.5	2.2	1.65	7.5
TEILTA A -300UM	0.86	0.3	6	1.2	0.55	0.39	1.4
TEILTA B -300UM	0.94	0.3	6.5	1.3	0.65	0.5	1.6
TEILTA C -300UM	0.89	0.4	7	1.4	0.55	0.49	1.8
TEILTA D -300UM	0.8	0.2	6	1.2	0.6	0.43	1.6
TEILTA E -300UM	0.85	0.5	7	1.3	0.6	0.54	1.45
TEILTA F -300UM	0.85	0.3	6	1.35	0.5	0.53	1.7
TEILTA G -300UM	0.87	0.3	6.5	1.45	0.7	0.54	1.55
TEILTA H -300UM	0.97	0.3	7	1.3	0.7	0.47	1.55

Continued: Variations of metal concentration (raw data) within stream sediments (75 µm and 300 µm) collected from around the *E. camaldulensis* sampled at (Teilta Creek) Teilta. A=north, B=northeast, C=east, D=southeast, E=east, F=southwest, G=west and H=northwest.

IDENT	Ho	Lu	Pr	Tb	Tm	Yb	La
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm
SCHEME	IC3R	IC3R	IC3R	IC3R	IC3R	IC3R	IC3R
DETECTION LIMIT	0.02	0.02	0.05	0.02	0.05	0.05	0.5
TEILTA A 0-75UM	0.94	0.32	18	0.96	0.4	2.3	92
TEILTA B 0-75UM	1.6	0.6	36.5	1.8	0.6	4	185
TEILTA C 0-75UM	1.2	0.47	24	1.25	0.45	2.9	125
TEILTA D 0-75UM	1.6	0.57	39	1.95	0.55	3.8	195
TEILTA E 0-75UM	0.73	0.32	10	0.6	0.3	1.9	52
TEILTA F 0-75UM	0.94	0.37	17.5	0.91	0.4	2.5	88
TEILTA G 0-75UM	1.1	0.44	19.5	1.05	0.45	2.7	98
TEILTA H 0-75UM	0.96	0.37	18	0.91	0.35	2.6	90
TEILTA A -300UM	0.21	0.1	3.1	0.17	0.1	0.65	13.5
TEILTA B -300UM	0.25	0.1	3.3	0.18	0.1	0.65	13.5
TEILTA C -300UM	0.25	0.11	3.9	0.24	0.1	0.7	16.5
TEILTA D -300UM	0.22	0.08	3.6	0.2	0.1	0.7	15.5
TEILTA E -300UM	0.25	0.12	3.4	0.18	0.1	0.75	14.5
TEILTA F -300UM	0.23	0.09	3.5	0.21	0.1	0.65	14.5
TEILTA G -300UM	0.27	0.11	3.4	0.21	0.1	0.75	15
TEILTA H -300UM	0.28	0.12	3.7	0.23	0.1	0.75	15.5

IDENT	Ce	Nd	Sm	Au	Au Dp1
UNITS	ppm	ppm	ppm	ppb	ppb
SCHEME	IC3R	IC3R	IC3R	AA10	AA10
DETECTION LIMIT	0.5	0.02	0.02	1	1
TEILTA A 0-75UM	155	70	13	2	--
TEILTA B 0-75UM	320	145	27.5	3	--
TEILTA C 0-75UM	210	92	18	2	--
TEILTA D 0-75UM	350	150	28.5	3	--
TEILTA E 0-75UM	90	37	7.5	1	--
TEILTA F 0-75UM	150	68	13	3	--
TEILTA G 0-75UM	170	74	15.5	2	--
TEILTA H 0-75UM	160	68	13.5	2	<1
TEILTA A -300UM	21	11.5	2.3	5	--
TEILTA B -300UM	24.5	11.5	2.7	2	--
TEILTA C -300UM	29	14	2.9	5	4
TEILTA D -300UM	25.5	13	2.6	1	--
TEILTA E -300UM	21.5	12.5	2.5	3	--
TEILTA F -300UM	26	12.5	2.7	1	--
TEILTA G -300UM	25	12.5	2.6	1	--
TEILTA H -300UM	26.5	13	2.9	1	--

Variations of metal concentration (raw data) within stream sediments (75 µm and 300 µm) collected from around the *E. camaldulensis* sampled at (Racecourse Creek) Tibooburra. A=north, B=northeast, C=east, D=southeast, E=east, F=southwest, G=west and H=northwest.

IDENT	Al	Ba	Ca	Cr	Cu	Fe	K
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm
SCHEME	IC3E	IC3E	IC3E	IC3E	IC3E	IC3E	IC3E
DETECTION LIMIT	10	5	10	2	2	100	10
TIBOOBURRA A 0-75UM	64600	370	8700	43	25	31300	14500
TIBOOBURRA B 0-75UM	43000	310	8550	39	16	23100	10600
TIBOOBURRA C 0-75UM	58400	350	8150	40	20	30100	13800
TIBOOBURRA D 0-75UM	63000	370	8600	39	18	31100	14600
TIBOOBURRA E 0-75UM	48200	330	8350	33	23	23200	11800
TIBOOBURRA F 0-75UM	62300	360	8300	33	22	28100	13900
TIBOOBURRA G 0-75UM	42000	330	7900	22	21	19000	11600
TIBOOBURRA H 0-75UM	53300	350	7200	28	24	24700	12800
TIBOOBURRA A -300UM	44400	380	10400	15	19	21200	17100
TIBOOBURRA B -300UM	45100	420	9650	16	15	21100	18100
TIBOOBURRA C -300UM	43300	380	9450	17	10	21800	16600
TIBOOBURRA D -300UM	46300	420	9750	16	16	21000	18600
TIBOOBURRA E -300UM	48400	430	9600	16	17	21800	18400
TIBOOBURRA F -300UM	42900	370	10400	15	7	23100	16700
TIBOOBURRA G -300UM	37500	340	8350	8	14	17100	15200
TIBOOBURRA H -300UM	42200	380	9450	15	17	21500	16500

IDENT	Mg	Mn	Na	Nb	Ni	P	Pb
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm
SCHEME	IC3E	IC3E	IC3E	IC3E	IC3E	IC3E	IC3E
DETECTION LIMIT	10	5	10	5	2	5	5
TIBOOBURRA A 0-75UM	7450	410	5200	16	17	550	10
TIBOOBURRA B 0-75UM	4350	340	4700	14	12	650	14
TIBOOBURRA C 0-75UM	6450	370	5450	16	16	600	8
TIBOOBURRA D 0-75UM	7150	410	5450	16	17	600	12
TIBOOBURRA E 0-75UM	4850	330	4950	14	11	550	12
TIBOOBURRA F 0-75UM	6900	390	5300	16	15	600	10
TIBOOBURRA G 0-75UM	3400	270	6200	10	8	700	8
TIBOOBURRA H 0-75UM	5200	330	5400	14	11	550	10
TIBOOBURRA A -300UM	4000	310	11300	10	9	290	6
TIBOOBURRA B -300UM	3350	300	11100	10	9	310	10
TIBOOBURRA C -300UM	3750	310	10400	10	10	300	16
TIBOOBURRA D -300UM	3800	310	11100	10	9	310	16
TIBOOBURRA E -300UM	4400	310	10000	10	9	340	12
TIBOOBURRA F -300UM	3700	350	10900	10	8	310	12
TIBOOBURRA G -300UM	2000	250	10600	6	7	220	14
TIBOOBURRA H -300UM	3550	310	10600	10	9	290	14

Continued: Variations of metal concentration (raw data) within stream sediments (75 µm and 300 µm) collected from around the *E. camaldulensis* sampled at (Racecourse Creek) Tibooburra. A=north, B=northeast, C=east, D=southeast, E=east, F=southwest, G=west and H=northwest.

IDENT	S	Ti	V	Zn	Ag	As	Mo
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm
SCHEME	IC3E	IC3E	IC3E	IC3E	IC3M	IC3M	IC3M
DETECTION LIMIT	50	10	2	2	0.1	0.5	0.1
TIBOOBURRA A 0-75UM	200	4900	80	68	0.5	5	0.5
TIBOOBURRA B 0-75UM	200	5900	66	56	0.6	3	0.4
TIBOOBURRA C 0-75UM	150	5450	78	70	0.5	4	0.4
TIBOOBURRA D 0-75UM	200	5100	80	74	0.7	3	0.5
TIBOOBURRA E 0-75UM	150	5200	64	56	0.6	2.5	0.4
TIBOOBURRA F 0-75UM	200	4650	74	70	0.5	4	0.4
TIBOOBURRA G 0-75UM	50	3850	54	46	0.3	2.5	0.3
TIBOOBURRA H 0-75UM	150	4550	66	66	0.5	3	0.3
TIBOOBURRA A -300UM	50	1700	45	36	0.3	3	0.3
TIBOOBURRA B -300UM	50	1700	45	39	0.4	2.5	0.3
TIBOOBURRA C -300UM	100	1750	46	36	0.4	2.5	0.3
TIBOOBURRA D -300UM	100	1850	45	37	0.4	2.5	0.2
TIBOOBURRA E -300UM	100	2250	50	44	0.4	3.5	0.3
TIBOOBURRA F -300UM	50	1700	49	38	0.5	3.5	0.3
TIBOOBURRA G -300UM	100	850	32	25	0.3	2.5	0.3
TIBOOBURRA H -300UM	100	1700	46	31	0.5	3	0.2

IDENT	Bi	Cd	Co	Cs	Ga	In	Th
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm
SCHEME	IC3M	IC3M	IC3M	IC3M	IC3M	IC3M	IC3M
DETECTION LIMIT	0.1	0.1	0.2	0.1	0.1	0.05	0.02
TIBOOBURRA A 0-75UM	0.3	<0.1	10.5	4.4	18	<0.05	22
TIBOOBURRA B 0-75UM	0.2	<0.1	7	2.5	12	<0.05	22.5
TIBOOBURRA C 0-75UM	0.3	<0.1	9	3.6	15.5	0.05	22
TIBOOBURRA D 0-75UM	0.3	<0.1	10	3.9	16.5	0.05	22.5
TIBOOBURRA E 0-75UM	0.2	<0.1	7.5	2.8	12.5	<0.05	17.5
TIBOOBURRA F 0-75UM	0.3	<0.1	9.5	4.1	17	<0.05	18
TIBOOBURRA G 0-75UM	0.2	<0.1	5.5	2	10.5	<0.05	17.5
TIBOOBURRA H 0-75UM	0.2	<0.1	8	3.1	14	<0.05	17.5
TIBOOBURRA A -300UM	0.2	<0.1	6.5	2.6	12.5	0.05	14
TIBOOBURRA B -300UM	0.2	<0.1	6.5	2.5	11.5	<0.05	16
TIBOOBURRA C -300UM	0.4	<0.1	7	2.5	11.5	<0.05	27
TIBOOBURRA D -300UM	0.2	<0.1	6.5	2.8	13	<0.05	12
TIBOOBURRA E -300UM	0.2	<0.1	7	3.2	13.5	<0.05	10.5
TIBOOBURRA F -300UM	0.2	<0.1	7.5	2.3	12	<0.05	30.5
TIBOOBURRA G -300UM	0.1	<0.1	4.8	1.5	9.5	<0.05	7
TIBOOBURRA H -300UM	0.3	0.2	7	2.5	12	<0.05	20.5

Continued: Variations of metal concentration (raw data) within stream sediments (75 µm and 300 µm) collected from around the *E. camaldulensis* sampled at (Racecourse Creek) Tibooburra. A=north, B=northeast, C=east, D=southeast, E=east, F=southwest, G=west and H=northwest.

IDENT	Rb	Sb	Se	Sn	Sr	Te	Eu
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm
SCHEME	IC3M	IC3M	IC3M	IC3M	IC3M	IC3M	IC3R
DETECTION LIMIT	0.1	0.5	0.5	0.1	0.1	0.2	0.02
TIBOOBURRA A 0-75UM	74	<0.5	0.5	3.3	140	<0.2	1.4
TIBOOBURRA B 0-75UM	47.5	<0.5	<0.5	2.7	120	<0.2	1.25
TIBOOBURRA C 0-75UM	68	<0.5	<0.5	3.2	135	<0.2	1.25
TIBOOBURRA D 0-75UM	72	<0.5	<0.5	3.3	140	<0.2	1.2
TIBOOBURRA E 0-75UM	52	<0.5	<0.5	2.9	120	<0.2	1.2
TIBOOBURRA F 0-75UM	68	<0.5	1	3.4	130	<0.2	1.35
TIBOOBURRA G 0-75UM	48.5	<0.5	<0.5	2.2	125	<0.2	1.05
TIBOOBURRA H 0-75UM	60	<0.5	<0.5	4.5	125	<0.2	1.1
TIBOOBURRA A -300UM	64	<0.5	1	2.6	210	<0.2	1.1
TIBOOBURRA B -300UM	60	<0.5	<0.5	1.9	195	<0.2	0.96
TIBOOBURRA C -300UM	60	<0.5	0.5	2.3	195	<0.2	1.05
TIBOOBURRA D -300UM	66	<0.5	1	2.1	200	<0.2	0.92
TIBOOBURRA E -300UM	68	<0.5	<0.5	2.5	185	<0.2	1.05
TIBOOBURRA F -300UM	56	<0.5	<0.5	2.4	200	<0.2	0.94
TIBOOBURRA G -300UM	48.5	<0.5	1	1.3	195	<0.2	0.74
TIBOOBURRA H -300UM	58	<0.5	<0.5	2.6	195	<0.2	0.98

IDENT	Tl	U	W	Y	Dy	Er	Yb
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm
SCHEME	IC3M	IC3M	IC3M	IC3M	IC3R	IC3R	IC3R
DETECTION LIMIT	0.1	0.02	0.1	0.05	0.02	0.05	0.05
TIBOOBURRA A 0-75UM	0.4	3.4	2.4	27	4.6	2.4	2.5
TIBOOBURRA B 0-75UM	0.3	4.3	1.6	36.5	5.5	3	3.9
TIBOOBURRA C 0-75UM	0.4	3.5	2.8	29.5	4.6	2.4	2.9
TIBOOBURRA D 0-75UM	0.4	3.2	2.5	28.5	4.3	2.3	2.6
TIBOOBURRA E 0-75UM	0.3	3.3	1.3	29	4.2	2.4	2.9
TIBOOBURRA F 0-75UM	0.4	3.2	1.6	27.5	4.2	2.3	2.6
TIBOOBURRA G 0-75UM	0.2	3	1.3	28.5	4.2	2.3	2.7
TIBOOBURRA H 0-75UM	0.4	3.3	1.4	26.5	4	2.1	2.6
TIBOOBURRA A -300UM	0.3	1.75	1.2	13.5	2.5	1.25	1.35
TIBOOBURRA B -300UM	0.4	1.9	1	13	2.3	1.2	1.5
TIBOOBURRA C -300UM	0.4	2.1	1.3	14.5	2.9	1.35	1.55
TIBOOBURRA D -300UM	0.3	1.85	1.1	13	2.3	1.1	1.4
TIBOOBURRA E -300UM	0.3	1.8	1.1	13.5	2.3	1.25	1.45
TIBOOBURRA F -300UM	0.2	2.2	1.2	16.5	2.5	1.3	1.75
TIBOOBURRA G -300UM	0.3	1.3	0.7	9	1.6	0.75	0.95
TIBOOBURRA H -300UM	0.3	2	1.3	13.5	2.5	1.1	1.4

Continued: Variations of metal concentration (raw data) within stream sediments (75 µm and 300 µm) collected from around the *E. camaldulensis* sampled at (Racecourse Creek) Tibooburra. A=north, B=northeast, C=east, D=southeast, E=east, F=southwest, G=west and H=northwest.

IDENT	Gd	Ho	Lu	Pr	Tb	Tm
UNITS	ppm	ppm	ppm	ppm	ppm	ppm
SCHEME	IC3R	IC3R	IC3R	IC3R	IC3R	IC3R
DETECTION LIMIT	0.05	0.02	0.02	0.05	0.02	0.05
TIBOOBURRA A 0-75UM	4.6	0.93	0.39	9	0.68	0.4
TIBOOBURRA B 0-75UM	5.5	1.1	0.59	9.5	0.74	0.6
TIBOOBURRA C 0-75UM	4.8	1	0.4	9.5	0.66	0.45
TIBOOBURRA D 0-75UM	4.6	0.88	0.38	9.5	0.68	0.45
TIBOOBURRA E 0-75UM	4.2	0.91	0.42	8.5	0.62	0.45
TIBOOBURRA F 0-75UM	4.2	0.84	0.37	8	0.59	0.4
TIBOOBURRA G 0-75UM	4	0.84	0.41	7.5	0.55	0.4
TIBOOBURRA H 0-75UM	3.9	0.79	0.42	7.5	0.55	0.4
TIBOOBURRA A -300UM	2.3	0.5	0.21	5	0.32	0.2
TIBOOBURRA B -300UM	2.2	0.45	0.22	5	0.33	0.2
TIBOOBURRA C -300UM	2.6	0.5	0.22	5.5	0.38	0.25
TIBOOBURRA D -300UM	2.2	0.47	0.22	5	0.34	0.25
TIBOOBURRA E -300UM	2.3	0.42	0.18	5	0.33	0.2
TIBOOBURRA F -300UM	2.6	0.51	0.2	5.5	0.33	0.2
TIBOOBURRA G -300UM	1.5	0.3	0.11	3.6	0.2	0.15
TIBOOBURRA H -300UM	2.4	0.43	0.19	5	0.34	0.2

IDENT	La	Ce	Nd	Sm	Au	Au Dp1
UNITS	ppm	ppm	ppm	ppm	ppb	ppb
SCHEME	IC3R	IC3R	IC3R	IC3R	AA10	AA10
DETECTION LIMIT	0.5	0.5	0.02	0.02	1	1
TIBOOBURRA A 0-75UM	48	84	35	7.5	7	--
TIBOOBURRA B 0-75UM	48	84	38	8.5	14	21
TIBOOBURRA C 0-75UM	49	82	37	7.5	3	--
TIBOOBURRA D 0-75UM	50	90	36.5	7.5	1	--
TIBOOBURRA E 0-75UM	43.5	72	33.5	7	1	--
TIBOOBURRA F 0-75UM	42.5	72	33	6.5	2	--
TIBOOBURRA G 0-75UM	38	66	30	7	I.S.	I.S.
TIBOOBURRA H 0-75UM	38.5	68	29	6	I.S.	I.S.
TIBOOBURRA A -300UM	24.5	45	18	3.8	<1	--
TIBOOBURRA B -300UM	23	45.5	16.5	4	<1	--
TIBOOBURRA C -300UM	24.5	44	19	4.5	3	--
TIBOOBURRA D -300UM	23.5	40.5	17.5	3.4	<1	--
TIBOOBURRA E -300UM	23	39.5	18	3.9	<1	--
TIBOOBURRA F -300UM	26	45.5	20	4.3	<1	--
TIBOOBURRA G -300UM	17	33	12	2.5	<1	--
TIBOOBURRA H -300UM	23.5	42	18	4	3	--

APPENDIX D

DATA SHEET REFERENCE

CHEMICAL CHARACTERISTICS

Element: Atkins, P.W. (1940). Chemistry: molecules, matter and change. – 3rd ed. Peter. W. Atkins, Loretta L. Jones. pp 886.

Symbol: Atkins, P.W. (1940). Chemistry: molecules, matter and change. – 3rd ed. Peter. W. Atkins, Loretta L. Jones. pp 886.

Atomic number: Atkins, P.W. (1940). Chemistry: molecules, matter and change. – 3rd ed. Peter. W. Atkins, Loretta L. Jones. pp 886.

Atomic mass: Atkins, P.W. (1940). Chemistry: molecules, matter and change. – 3rd ed. Peter. W. Atkins, Loretta L. Jones. pp 886.

Oxidation state(s): Alloway, B.J. (1995). Heavy metals in soil. Blackie Academic & Professional. London.

Electronic configuration: Atkins, P.W. (1940). Chemistry: molecules, matter and change. – 3rd ed. Peter. W. Atkins, Loretta L. Jones. pp 886.

Affinity: Levinson, A.A. (1980). Introduction to exploration geochemistry 2nd ed. Applied Pub. Wilmette.

GEOCHEMICAL CHARACTERISTICS

Estimated average Continental Crustal abundance: Albarède, F. (2003). Geochemistry: An introduction. The press syndicate of the University of Cambridge. Cambridge, United Kingdom.

Reimann, C. and de Caritat, P. (1998). Chemical elements in the environment: Factsheets for the geochemist and environmental scientist. Springer. Verlag Berlin ; Heidelberg and New York.

Estimated average Ocean abundance: Albarède, F. (2003). Geochemistry: An introduction. The press syndicate of the University of Cambridge. Cambridge, United Kingdom.

Reimann, C. and de Caritat, P. (1998). Chemical elements in the environment: Factsheets for the geochemist and environmental scientist. Springer. Verlag Berlin ; Heidelberg and New York.

Typical minerals/ore minerals: Levinson, A.A. (1980). Introduction to exploration geochemistry 2nd ed. Applied Pub. Wilmette.

Reimann, C. and de Caritat, P. (1998). Chemical elements in the environment: Factsheets for the geochemist and environmental scientist. Springer. Verlag Berlin ; Heidelberg and New York.

Possible primary host minerals: Wedepohl, K.H. (1969-1978). Handbook of geochemistry. Springer. Berlin ; Heidelberg and New York.

Geochemical barriers: Levinson, A.A. (1980). Introduction to exploration geochemistry 2nd ed. Applied Pub. Wilmette.

Reimann, C. and de Caritat, P. (1998). Chemical elements in the environment: Factsheets for the geochemist and environmental scientist. Springer. Verlag Berlin ; Heidelberg and New York.

Element is a pathfinder for: Boyle, R.W. (1974). Elemental association in mineral deposits and indicator elements of interest in geochemical prospecting (revised). Geological Survey of Canada Paper 74-45: 1-40.

Element association in mineral deposits: Boyle, R.W. (1974). Elemental association in mineral deposits and indicator elements of interest in geochemical prospecting (revised). Geological Survey of Canada Paper 74-45: 1-40.

AMDEL, (2003). Mineral service price guide: Analytical chemistry; mineralogy and mineral processing. (unpublished report).

Dunn, C. E., (2007). Handbook of Exploration and Environmental Geochemistry series (M. Hale, series editor), Volume 9. Amsterdam, Elsevier.

BIOGEOCHEMICAL CHARACTERISTICS

Estimated average plant abundance: Dunn, C.E., Scagel, R., Hall, G.E.M., Cohen, D., Catt, P. and Lintern, M. (1995). Applied biogeochemistry in mineral exploration and environmental studies (short course), The Association of Exploration Geochemists, 25th Anniversary: 1970-1995.

Estimated *E. camaldulensis* (leaves) abundance: This Ph.D. Thesis.

Available form: Campbell, N.A. (1996). Biology. Benjamin-Cummings Publishing Company California. U.S.A.

Dunn, C.E., Scagel, R., Hall, G.E.M., Cohen, D., Catt, P. and Lintern, M. (1995). Applied biogeochemistry in mineral exploration and environmental studies (short course), The Association of Exploration Geochemists, 25th Anniversary: 1970-1995.

Kabata-Pendias, A. and Pendias, H. (1991). Trace elements in soils and plants 2nd edition. CRC Press, U.S.A.

Marschner, H. (1995). *Mineral Nutrition of Higher Plants*. Academic Press Limited. London.

Physiological role: Dunn, C.E., Scagel, R., Hall, G.E.M., Cohen, D., Catt, P. and Lintern, M. (1995). Applied biogeochemistry in mineral exploration and environmental studies (short course), The Association of Exploration Geochemists, 25th Anniversary: 1970-1995.

Dunn, C. E., (2007). Handbook of Exploration and Environmental Geochemistry series (M. Hale, series editor), Volume 9. Amsterdam, Elsevier.

Reimann, C. and de Caritat, P. (1998). Chemical elements in the environment: Factsheets for the geochemist and environmental scientist. Springer. Verlag Berlin ; Heidelberg and New York.

Interaction among elements in plants: Dunn, C.E., Scagel, R., Hall, G.E.M., Cohen, D., Catt, P. and Lintern, M. (1995). Applied biogeochemistry in mineral exploration and environmental studies (short course), The Association of Exploration Geochemists, 25th Anniversary: 1970-1995.

Kabata-Pendias, A. and Pendias, H. (1991). Trace elements in soils and plants 2nd edition. CRC Press, U.S.A.

Biological impacts: Alloway, B.J. (1995). Heavy metals in soil. Blackie Academic & Professional. London.

Environmental pathways: Reimann, C. and de Caritat, P. (1998). Chemical elements in the environment: Factsheets for the geochemist and environmental scientist. Springer. Verlag Berlin ; Heidelberg and New York.

Environmental mobility: Brooks, R.R. (1972). *Geobotany and Biogeochemistry in Mineral Exploration.* Harper&Row, pp 231.

Suggested analytical methods: Dunn, C.E., Scagel, R., Hall, G.E.M., Cohen, D., Catt, P. and Lintern, M. (1995). Applied biogeochemistry in mineral exploration and environmental studies (short course), The Association of Exploration Geochemists, 25th Anniversary: 1970-1995

Geochemical characteristics of selected elements used throughout this thesis

CHEMICAL CHARACTERISTICS

Element: Sodium.
Symbol: Na.
Atomic number: 11.
Atomic mass: 22.9898.
Oxidation state(s): (+1), and -1 in NH_3 liquid.
Electronic configuration: (Ne)$3S^1$.
Affinity: Lithophile.

GEOCHEMICAL CHARACTERISTICS

Estimated average Continental Crustal abundance: 2.37 ppm.
Estimated average Ocean abundance: 1.08×10^7 ($\mu g\ 1^{-1}$).
Typical minerals/ore minerals: The most common compound is sodium chloride, but it also occurs in many minerals, among which are cryolite (Na_3AlF_6), albite ($NaAlSi_3O_8$), halite (NaCl), soda (Na_2CO_3), and many major rock forming minerals (plaigiclase, amphiboles, pyroxenes and micas).
Possible primary host minerals: Many major rock forming minerals such as albitic feldspars, the amphiboles and pyroxenes, but less so in the micas.
Geochemical barriers: N/A.
Element is a pathfinder for: Using the K_2O/Na_2O ratio maybe useful in assessing the proximity to gold, silver, copper and base metal mineralisation in epigenetic deposits.
Element association in mineral deposits: Is frequently enriched in wall-rock alteration zones associated with some gold deposits, pegamatites and base metal deposits.

BIOGEOCHEMICAL CHARACTERISTICS

Estimated average plant abundance: 150 ppm.
Estimated *E. camaldulensis* leaves (Pinnacles) average concentration: 1234 ppm.
Estimated *E. camaldulensis* leaves (Tibooburra) average concentration: 162 ppm.
Available form(s): Na^+.
Physiological role: C-4 generation of PEP step.
Interaction among elements in plants: Unspecified towards K.
Biological impacts: Sodium is essential to all animals, and this has been recognised since prehistoric times. Although it is considered non-toxic, too much salt in the diet has been linked to high blood pressure under certain circumstances. The WHO International Standard is 200mg/l.
Environmental pathways: Sea spray, road salting, wastewater, soap, textile, petroleum and mineral weathering.
Environmental mobility: Oxidising conditions very low to immobile, acid conditions low, neutral-alkaline conditions low and reducing conditions low.
Suggested analytical methods: INNA, XRF and ICP-OES.

CHEMICAL CHARACTERISTICS

Element: Magnesium.
Symbol: Mg.
Atomic number: 12.
Atomic mass: 24.312.
Oxidation state(s): (+2).
Electronic configuration: (Ne)$3S^2$.
Affinity: Lithophile.

GEOCHEMICAL CHARACTERISTICS

Estimated average Continental Crustal abundance: 2.65 ppm.
Estimated average Ocean abundance: 1.26×10^6 ($\mu g\ 1^{-1}$).
Typical minerals/ore minerals: Oxides and hydroxides; periclase (MgO), brucite ($Mg(OH)_2$)**,** carbonates; dolomite ($CaMg(CO_3)_2$), magnesite ($MgCO_3$), silicates; olivine (Mg, $Fe)_2SiO_4$, pyrope ($Mg_3Al_2(SiO_4)_3$), sulphates; kieserite ($MgSO_4$ - H_2O) and phosphates; eosphorite (Mn, $Fe)AlPO_4(OH)_2$ - H_2O).
Possible primary host minerals: Is hosted predominantly in amphiboles, micas, magnesian tephroite, manganese-humites and clinopyroxene.
Geochemical barriers: N/A.
Element is a pathfinder for: Not a diagnostic indicator element except for elevated concentrations of the element itself.
Element association in mineral deposits: Is characteristic element of intermediate, basic and ultrabasic igneous, metamorphic rocks and sedimentary carbonate rocks especially those containing dolomite.

BIOGEOCHEMICAL CHARACTERISTICS

Estimated average plant abundance: 100 - 500 ppm.
Estimated *E. camaldulensis* leaves (Pinnacles) average concentration: 1431 ppm.
Estimated *E. camaldulensis* leaves (Tibooburra) average concentration: 2064 ppm.
Available form(s): Mg^{2+}.
Physiological role: Chlorophyll, protein and DNA synthesis.
Interaction among elements in plants: Antagonistic towards Mn, Zn and Cu, and Unspecified towards Ca and K.
Biological impacts: Magnesium is involved in the synthesis of protein, and it is an important co-factor in > 300 enzymatic reactions in the human body. The WHO International standard for an adult (daily requirement) of magnesium is approximately 0.3 g day-1.
Environmental pathways: Rock weathering, sea spray, fertilisers and liming (dolomite).
Environmental mobility: Oxidising conditions high, acid conditions high, neutral-alkaline conditions high and reducing conditions high.
Suggested analytical methods: XRF and ICP-OES.

CHEMICAL CHARACTERISTICS

Element: Aluminium.
Symbol: Al.
Atomic number: 13.
Atomic mass: 26.9815.
Oxidation state(s): +3.
Electronic configuration: $(Ne)3s^2 3p^1$.
Affinity: Lithophile.

GEOCHEMICAL CHARACTERISTICS

Estimated average Continental Crustal abundance: 8.36 %.
Estimated average Ocean abundance: 1.62×10^{-1} (µg 1-1).
Typical minerals/ore minerals: Gibbsite ($AlOH_3$), boehmite ($AlO(OH)$), sillimanite (Al_2SiO_5) and kaolinite ($Al_2SiO_2O_5(OH)_4$).
Possible primary host minerals: Feldspars, micas, and clay minerals.
Geochemical barriers: pH e.g. solubility increases at pH<5.5.
Element is a pathfinder for: Bauxite and clay deposits.
Element association in mineral deposits: N/A.

BIOGEOCHEMICAL CHARACTERISTICS

Estimated average plant abundance: 80 ppm.
Estimated *E. camaldulensis* leaves (Pinnacles) average concentration: 296 ppm.
Estimated *E. camaldulensis* leaves (Tibooburra) average concentration: 93 ppm.
Available form(s): N/A.
Physiological role: micro-nutrient: Enzyme co-factor, aids to control colloidal cell properties and may stimulate growth.
Interaction among elements in plants: Antagonistic towards Mg and K, synergistic with Mo and unspecified towards Ca, P, Mn and Cu.
Biological impacts: Aluminium has no known biological role for humans. It can be accumulated in the body from daily intake. At one time was suggested as a potential factor in Alzheimer's disease (senile dementia). The WHO International standard for drinking water is 0.2 mg/l.
Environmental pathways: Geogenic and anthropogenic dust (clays minerals), also found as minerals such as bauxite and cryolite and Al smelting (Bayer process).
Environmental mobility: Oxidising conditions very low to immobile, acid conditions very low to immobile, neutral-alkaline conditions very low to immobile and reducing conditions very low to immobile.
Suggested analytical methods: XRF and ICP-OES.

CHEMICAL CHARACTERISTICS

Element: Silicon.
Symbol: Si.
Atomic number: 14.
Atomic mass: 28.09.
Oxidation state(s): (+4).
Electronic configuration: $(Ne)3s^2 3p^2$.
Affinity: Lithophile.

GEOCHEMICAL CHARACTERISTICS

Estimated average Continental Crustal abundance: 27.61 %.
Estimated average Ocean abundance: 2.81×10^3 ($\mu g\ 1^{-1}$).
Typical minerals/ore minerals: all silicates, quartz (SiO_2), muscovite $KAl_2(AlSi_3O_{10})(F, OH)_2$ olivine ($(Mg_1Fe)_2SiO_4$) and orthoclase ($KAlSi_3O_8$).
Possible host minerals: N/A.
Geochemical barriers: N/A.
Element is a pathfinder for: Prospecting for silicate deposits is generally achieved through geological principles; the direct analysis of Si will then define the commercial importance of the deposit.
Element association in mineral deposits: Is limited to gold in which silicon has been found as inclusions.

BIOGEOCHEMICAL CHARACTERISTICS

Estimated average plant abundance: 1000 ppm.
Estimated *E. camaldulensis* leaves (Pinnacles) average concentration: 1684 ppm.
Estimated *E. camaldulensis* leaves (Tibooburra) average concentration: Not assayed for.
Available form: N/A.
Physiological role: Infuses into the epidermal and vascular tissues, to provide internal strength and aids in the reduction of water loss, and hinders fungal infection.
Interaction among elements in plants: Antagonistic towards P and B, and unspecified towards Mn.
Biological impacts: Silicon is essential for many organisms and is mainly found in connective tissues and skin. While crystalline silica (silicon dioxide) can cause respiratory problems International Standard for drinking water N/A, but silicon is mainly present in drinking water as silicic acid which is not harmful to human health.
Environmental pathways: Silicon is the main component of glass, cement, ceramics, and most semiconductor devices; it is also an important component of some steels and a major ingredient in bricks.
Environmental mobility: Oxidising conditions low, acidic conditions low, neutral-alkaline conditions low and reducing conditions low.
Suggested analytical methods: ICP-OES and XRF.

CHEMICAL CHARACTERISTICS

Element: Phosphorus.
Symbol: P.
Atomic number: 15.
Atomic mass: 30.9738.
Oxidation state(s): (+5) others -3, -2, 0, +2 and +3.
Electronic configuration: $(Ne)3S^2 3p^3$.
Affinity: Lithophile.

GEOCHEMICAL CHARACTERISTICS

Estimated average Continental Crustal abundance: 873 ppm.
Estimated average Ocean abundance: 6.00×10^1 ($\mu g\ 1^{-1}$).
Typical minerals/ore minerals: Apatite ($Ca_5(PO_4, CO3)_3(F, OH, Cl)$, monazite ((Ce, La, Nd, Th)(PO4, SiO_4)) and xenotime (YPO_4).
Possible primary host minerals: Many major rock forming minerals olivine, garnets, amphiboles, pyroxenes, micas and feldspars.
Geochemical barriers: pH.
Element is a pathfinder for: Phosphorus is a good indicator of phosphate deposits.
Element association in mineral deposits: N/A.

BIOGEOCHEMICAL CHARACTERISTICS

Estimated average plant abundance: 100 - 400 ppm.
Estimated *E. camaldulensis* leaves (Pinnacles) average concentration: 1136 ppm.
Estimated *E. camaldulensis* leaves (Tibooburra) average concentration: 905 ppm.
Available form(s): $H_2PO_4^-$, HPO_4^{2-}.
Physiological role: Nucleic acids and P-esters.
Interaction among elements in plants: Antagonistic towards Mn, Mo and B, and Unspecified towards Ca, Fe and Zn.
Biological impacts: Phosphorus is a key component of biological molecules such as DNA and RNA. Phosphorus is a component of bones, teeth, and many other compounds required for life. The WHO International Standard is 800 mg.
Environmental pathways: Agriculture, wastewater, detergents and geogenic dust.
Environmental mobility: Oxidising conditions low, acid conditions low, neutral-alkaline conditions low and reducing conditions low.
Suggested analytical methods: XRF and ICP-OES.

CHEMICAL CHARACTERISTICS

Element: Sulphur.
Symbol: S.
Atomic number: 16.
Atomic mass: 32.064.
Oxidation state(s): (-2, 0 and +6) others -1, +1, +2, +3, +4 and +5.
Electronic configuration: $(Ne)3S^2 3P^4$.
Affinity: Chalcophile.

GEOCHEMICAL CHARACTERISTICS

Estimated average Continental Crustal abundance: 238 ppm.
Estimated average Ocean abundance: 8.63×10^5 ($\mu g\ 1^{-1}$).
Typical minerals/ore minerals: Many sulphide and sulphate minerals such as iron pyrites, galena, sphalerite, cinnabar, stibnite, jarosite, gypsum, epsom salts, celestite and barite. Sulphur also occurs in natural gas and crude oils.
Possible primary host minerals: Biotite, hornblende and sulphides.
Geochemical barriers: Reduction (sulphide formation with many metals), sulphate precipitation with some ions (e.g. Ba and Ca).
Element is a pathfinder for: The isotope S^{34} can be used to identify sulphate bearing metallic deposits, as the S^{34} content may increase as the sulphide-bearing ore bodies are approached.
Element association in mineral deposits: Gypsum and anhydrite deposits, massive sulphides and other deposits containing pyrite, pyrrhotite and other sulphides, native sulphur associated with cap rocks of salt domes, diapers and volcanism.

BIOGEOCHEMICAL CHARACTERISTICS

Estimated average plant abundance: 200 - 1500 ppm.
Estimated *E. camaldulensis* leaves (Pinnacles) average concentration: 1045 ppm.
Estimated *E. camaldulensis* leaves (Tibooburra) average concentration: 629 ppm.
Available form(s): SO_4^{2-}.
Physiological role: Cysteine, methionine and redox reactions.
Interaction among elements in plants: Antagonistic towards Mo and Zn.
Biological impacts: Sulphur is essential to life. It is a minor constituent of fats, body fluids, and skeletal minerals. Sulphur dust irritates eyes and eyelids, and in higher concentrations it can kill quickly by interfering with respiration.
Environmental pathways: Sulphur is a component of black gunpowder (a mixture of potassium nitrate, KNO_3, carbon, and sulphur). It is used in the vulcanisation of natural rubber, as a fungicide, and as a fumigant. Sulphur compounds are used in the bleaching of paper products and as a preservative in dried fruits and wine.
Environmental mobility: Oxidising conditions high, acid conditions high, neutral-alkaline conditions high and reducing conditions very low to immobile.
Suggested analytical methods: ICP-OES and XRF.

CHEMICAL CHARACTERISTICS

Element: Chlorine.
Symbol: Cl.
Atomic number: 6.
Atomic mass: 35.45.
Oxidation state(s): ±1, +3, +5, +7).
Electronic configuration: $(Ne)3s^2 3p^5$.
Affinity: Lithophile and atmophile.

GEOCHEMICAL CHARACTERISTICS

Estimated average Continental Crustal abundance: 180 ppm.
Estimated average Ocean abundance: 1.89×10^7 ($\mu g\ 1^{-1}$).
Typical minerals/ore minerals: Common chloride minerals include halite (NaCl), sylvite (KCl) and carnallite ($KMgCl_3 \cdot 6(H_2O)$.
Possible host minerals: Biotite, amphiboles and apatite.
Geochemical barriers: Evaporation: predominately in regions of rapid evaporation of ground waters, and is associated with salinisation, and the formation of gypsum.
Element is a pathfinder for: Chloride brines rising from springs and faults are common in regions containing epigenetic polymetallic mineral deposits. High chloride concentration in ultrabasic and basic intrusives may be suggestive of Ni-Co-Cu sulphide deposits. In arid regions chlorine tends to concentrate in the oxidised zone of Ag, Cu, Hg and Pb deposits.
Element association in mineral deposits: N/A.

BIOGEOCHEMICAL CHARACTERISTICS

Estimated average plant abundance: 2000 ppm.
Estimated *E. camaldulensis* leaves (Pinnacles) average concentration: 5029 ppm.
Estimated *E. camaldulensis* leaves (Tibooburra) average concentration: Not assayed for.
Available form: Cl^{-1}.
Physiological role: Enzymes, osmotic functions and regulates stomata movement.
Interaction among elements in plants: Unspecified towards Ca.
Biological impacts: Essential for plants and animals. International Standard WHO for drinking water is 250mg/l.
Environmental pathways: Utilised to ensure drinking water is safe. Widely used in the production of paper products, textiles, petroleum products, medicines, antiseptics, insecticides, solvents, paints and plastics. Used for the extraction of bromine
Environmental mobility: Oxidising conditions very high, acidic conditions very high, neutral-alkaline conditions very high and reducing conditions very high.
Suggested analytical methods: INAA and XRF.

CHEMICAL CHARACTERISTICS

Element: Potassium.
Symbol: K.
Atomic number: 19.
Atomic mass: 39.102.
Oxidation state(s): (+1), (-1 in NH_3 liquid).
Electronic configuration: (Ar)$4s^1$.
Affinity: Lithophile.

GEOCHEMICAL CHARACTERISTICS

Estimated average Continental Crustal abundance: 15772 ppm.
Estimated average Ocean abundance: 3.89×10^{15} ($\mu g\ 1^{-1}$).
Typical minerals/ore minerals: Major rock forming minerals, also found in ancient lakes and sea beds as sylvite (KCl), carnallite ($KMgCl_3.6H_2O$) and langbeinite ($K_2Mg_2(SO_4)^3$.
Possible primary host minerals: Largely hosted by feldspars and micas.
Geochemical barriers: N/A.
Element is a pathfinder for: Using the K_2O/Na_2O ratio maybe useful in assessing the proximity to gold, silver, copper and base metal mineralisation in epigenetic deposits.
Element association in mineral deposits: Is frequently enriched in wall-rock alteration zones associated with certain gold deposits, pegmatites and base metal deposits.

BIOGEOCHEMICAL CHARACTERISTICS

Estimated average plant abundance: 1000 - 3000 ppm.
Estimated *E. camaldulensis* leaves (Pinnacles) average concentration: 11370 ppm.
Estimated *E. camaldulensis* leaves (Tibooburra) average concentration: 9727 ppm.
Available form(s): K^+.
Physiological role: Micro-nutrient major cytoplasmic cation and for protein synthesis.
Interaction among elements in plants: Antagonistic towards Mn, Mo and B.
Biological impacts: Potassium salts are essential for both animals and plants. The potassium cation (K^+) is the major cation in intracellular (inside cells) fluids (sodium is the main extracellular cation). It is essential for nerve and heart function. A diet containing reasonable amounts of vegetables contains all the potassium necessary.
Environmental pathways: Geogenic dust, and through the application of fertiliser.
Environmental mobility: Oxidising conditions low, acid conditions low, neutral-alkaline conditions low and reducing conditions low.
Suggested analytical methods: XRF, ICP-OES and INAA.

CHEMICAL CHARACTERISTICS

Element: Calcium.
Symbol: Ca.
Atomic number: 20.
Atomic mass: 40.08.
Oxidation state(s): (+2).
Electronic configuration: $(Ar)4s^2$.
Affinity: Lithophile.

GEOCHEMICAL CHARACTERISTICS

Estimated average Continental Crustal abundance: 2.40 (%).
Estimated average Ocean abundance: 4.14×10^5 ($\mu g\ 1^{-1}$).
Typical minerals/ore minerals: Calcium carbonate ($CaCO_3$), gypsum ($CaSO_4.2H_2O$), fluorite (CaF_2) and apatite $Ca_5(PO_4)_3(OH,F,Cl)$.
Possible primary host minerals: Carbonates, feldspars, amphiboles and pyroxenes.
Geochemical barriers: Fe-oxides.
Element is a pathfinder for: Ca and Sr in soils in alkaline environments with the assaying of Au, As and Sb, is recommended as an exploration method for concealed epithermal Au deposits.
Element association in mineral deposits: N/A.

BIOGEOCHEMICAL CHARACTERISTICS

Estimated average plant abundance: 10 000 ppm.
Estimated *E. camaldulensis* leaves (Pinnacles) average concentration: 9759 ppm.
Estimated *E. camaldulensis* leaves (Tibooburra) average concentration: 12679 ppm.
Available form: Ca^{+2}.
Physiological role: Essential element (cell wall and membrane stability).
Interaction among elements in plants: Antagonistic towards Mn, B, Zn, Cu, and unspecified towards K.
Biological impacts: Calcium phosphide (Ca_3P_2) is very toxic to aquatic organisms. A daily intake of 1,000 milligrams of calcium is recommended, levels greater than this may lead to development of kidney stones and sclerosis of kidneys and blood vessels.
Environmental pathways: Mining activities, rock weathering, cement and lime factories. Calcium phosphide is used to kill rodents and used in explosives and fireworks.
Environmental mobility: Oxidising conditions high, acidic conditions high, neutral-alkaline conditions high and reducing conditions high.
Suggested analytical methods: XRF, INAA and ICP-OES.

CHEMICAL CHARACTERISTICS

Element: Scandium.
Symbol: Sc.
Atomic number: 21
Atomic mass: 44.96.
Oxidation state(s): (+3)
Electronic configuration: (Ar)$3d^1 4s^2$.
Affinity: Lithophile.

GEOCHEMICAL CHARACTERISTICS

Estimated average Continental Crustal abundance: 22 ppm.
Estimated average Ocean abundance: 6.00×10^{-4} ($\mu g\ 1^{-1}$).
Typical minerals/ore minerals: Thorveitite ($Sc_2Si_2O_7$), pretulite ($ScPO_4$), bazzite ($Be_3(Sc,Fe)2Al_6O_{18}$ and kolbeckite ($ScPO_4.2H_2O$).
Possible primary host minerals: Pyroxenes, amphiboles, garnets, biotite, xenotime, zircon and monazite.
Geochemical barriers: N/A.
Element is a pathfinder for: For other rare earth elements, P, F, and other elements in associated deposits (e.g. Th, Nb and U).
Element association in mineral deposits: Rare-earth-elements, Li, Rb, Cs, Be, Nb, Ta, Zr, B, Th, U and F in pegmatites. Rare-earth-elements, Th, P, Zr, Fe and Cu in monazite veins. Rare-earth-elements, Th, Ba, Sr, P, F and C in carbonatites. Rare-earth-elements, U, P and F in phosphorites and rare-earth-elements, Au, Ti, Sn, Zr and Th in placer deposits.

BIOGEOCHEMICAL CHARACTERISTICS

Estimated average plant abundance: 0.02 ppm.
Estimated *E. camaldulensis* leaves (Pinnacles) average concentration: Not assayed for.
Estimated *E. camaldulensis* leaves (Tibooburra) average concentration: 0.036 ppm.
Available form: As the complexes $Sc(H_2O)_6^{+3}$ and $Sc(H_2O)_5OH^{+2}$.
Physiological role: Not essential to both plant and animals.
Interaction among elements in plants: N/A
Biological impacts: Scandium has no biological role, only trace amount reach the food chain the average person's daily intake is less than 0.1 micogram. Scanduim is most dangerous in our working environment were gasses can be inhaled, which can result in lung embolisms.
Environmental pathways: U production, windblown geogenic dust.
Environmental mobility: N/A.
Suggested analytical methods: ICP-MS (water), INAA and ICP-OES.

CHEMICAL CHARACTERISTICS

Element: Chromium.
Symbol: Cr.
Atomic number: 24
Atomic mass: 51.938.
Oxidation state(s): (+3 and +6)
Electronic configuration: $(Ar)3d^5 4s^1$.
Affinity: Lithophile.

GEOCHEMICAL CHARACTERISTICS

Estimated average Continental Crustal abundance: 119 ppm.
Estimated average Ocean abundance: 2.08×10^{-1} ($\mu g\ 1^{-1}$).
Typical minerals/ore minerals: Chromite ($FeCr_2O_4$) and crocoite ($PbCrO_4$).
Possible primary host minerals: Amphiboles, pyroxenes, micas, spinels and garnets.
Geochemical barriers: Mechanical: due to changes in the velocity of water and air flow, resulting in the precipitation of heavy minerals and the formation of placer deposits.
Element is a pathfinder for: Chromite, platinum, and other ultramafic deposits.
Element association in mineral deposits: Plutonic association (ultramafic rocks) Cr-Co-Ni-Cu and platinum in ultramafic rocks.

BIOGEOCHEMICAL CHARACTERISTICS

Estimated average plant abundance: 1.5 ppm.
Estimated *E. camaldulensis* leaves (Pinnacles) average concentration: Not assayed for.
Estimated *E. camaldulensis* leaves (Tibooburra) average concentration: 0.55 ppm.
Available form: Cr^{+3} and Cr^{+4}.
Physiological role: An essential trace element to a wide array of plants, and at low levels there is some evidence of a stimulatory effect on plant growth.
Interaction among elements in plants: Unknown.
Biological impacts: Cr^{+3} is required in trace amounts for sugar and lipid metabolism in humans and its deficiency can possibly cause impared glucose intolerance.
Environmental pathways: Geogenic dust, chemical industry, Cu smelting, combustion of natural gases and some P-fertilisers.
Environmental mobility: Oxidising conditions very low, acidic conditions very low, neutral-alkaline conditions very low and reducing conditions very low.
Suggested analytical methods: XRF, ICP-MS (water) and ICP-OES.

CHEMICAL CHARACTERISTICS

Element: Manganese.
Symbol: Mn.
Atomic number: 25.
Atomic mass: 54.938.
Oxidation state(s): (+2), others -3, -2, -1, 0, +1, +3, +4, +5, +6 and +7.
Electronic configuration: $(Ar)3d^5 4S^2$.
Affinity: Lithophile.

GEOCHEMICAL CHARACTERISTICS

Estimated average Continental Crustal abundance: 852 ppm.
Estimated average Ocean abundance: $1.92x10^{-1}$ ($\mu g\ 1^{-1}$).
Typical minerals/ore minerals: Oxides and hydroxides; pyrolusite (MnO_2), manganite (MnO(OH)), carbonates and rhodochrosite ($MnCO_3$).
Possible primary host minerals: Largely hosted in garnets, olivine, pyroxenes, amphiboles, micas, calcite and dolomite.
Geochemical barriers: pH: precipitation of Mn-Fe oxides, hydroxides and oxy-hydroxides.
Element is a pathfinder for: General indicator of certain types of Pb-Zn-Ag deposits, Ba-Ag vein deposits, porphyry copper and gold veins.
Element association in mineral deposits: N/A.

BIOGEOCHEMICAL CHARACTERISTICS

Estimated average plant abundance: 200 ppm.
Estimated *E. camaldulensis* leaves (Pinnacles) average concentration: 157 ppm.
Estimated *E. camaldulensis* leaves (Tibooburra) average concentration: 141 ppm.
Available form(s): Mn^{2+}.
Physiological role: Respiration/photolysis and enzyme cofactor.
Interaction among elements in plants: Antagonistic towards Mg, K, N, Co, Na, Fe, B and Cu. Unspecified towards Ca, P, Si and Zn.
Biological impacts: Manganese compounds are essential to life. They are essential for the action of some enzymes.
Environmental pathways: Rock weathering, windblown dust, as a fungicide and through mining and smelting from steel production.
Environmental mobility: Oxidising conditions very low to immobile, acid conditions low, neutral-alkaline conditions low and reducing conditions low.
Suggested analytical methods: XRF, ICP-MS and ICP-OES.

CHEMICAL CHARACTERISTICS

Element: Iron.
Symbol: Fe.
Atomic number: 26.
Atomic mass: 58.847.
Oxidation state(s): (+2 and +3), -2, -1, 0, +1, +4, +5 and +6.
Electronic configuration: $(Ar)3d^6 4s^2$.
Affinity: Chalcophile and siderophile.

GEOCHEMICAL CHARACTERISTICS

Estimated average Continental Crustal abundance: 5.13 ppm.
Estimated average Ocean abundance: 5.59×10^{-2} ($\mu g\ 1^{-1}$).
Typical minerals/ore minerals: Scorodite $Fe^{3+}AsO_4 \cdot 2(H_2O)$**,** magnetite ($Fe_3O_4$), ilmenite ($FeTiO_3$), hematite ($Fe_2O_3$), goethite (FeO(OH)), pyrite (FeS_2), and Fe occurs in a number of complex sulphides.
Possible primary host minerals: Olivines, pyroxenes, amphiboles, micas and garnets ($A_3B_2(SiO_4)_3$) where A = Fe^{2+}, Mn^{2+}, Mg^{2+} or Ca^{2+}; and B = Al^{3+}, Fe^{3+}, Cr^{3+} and Ti^{3+}.
Geochemical barriers: pH increase: precipitation as Fe oxides, hydroxides, oxy-hydroxides, oxidation and minor elements are also often co-precipitated with or adsorbed onto iron-oxides.
Element is a pathfinder for: The occurrence of limonite and other iron-oxides with soils, tills and stream sediments are a reflection of iron deposits and iron bearing rocks.
Element association in mineral deposits: N/A.

BIOGEOCHEMICAL CHARACTERISTICS

Estimated average plant abundance: 150 ppm.
Estimated *E. camaldulensis* leaves (Pinnacles) average concentration: 104 ppm.
Estimated *E. camaldulensis* leaves (Tibooburra) average concentration: 90 ppm.
Available form(s): Fe^{2+} and Fe^{3+}.
Physiological role: Chloroplasts, respiratory enzymes and phosphorylation.
Interaction among elements in plants: Antagonistic towards Mg, Co, Si, Zn and Cu. Unspecified towards Ca, P, S, N, Mn and B.
Biological impacts: Iron is an essential part of haemoglobin that transports oxygen through our bodies. The WHO (International standards) for drinking water is 0.2 mg/l.
Environmental pathways: Rock weathering, geogenic dust, pigments and sewage treatment.
Environmental mobility: Oxidising conditions very low to immobile, acidic conditions low, neutral-alkaline conditions low and reducing conditions low.
Suggested analytical methods: INAA, XRF, ICP-OES and ICP-MS.

CHEMICAL CHARACTERISTICS

Element: Cobalt.
Symbol: Co.
Atomic number: 27.
Atomic mass: 58.93
Oxidation state(s): (+2 and +3)
Electronic configuration: (Ar)$3d^7 4s^2$.
Affinity: Siderophile.

GEOCHEMICAL CHARACTERISTICS

Estimated average Continental Crustal abundance: 25 ppm.
Estimated average Ocean abundance: 2.00×10^{-3} ($\mu g\ l^{-1}$).
Typical minerals/ore minerals: Cobaltite ((Co,Fe)AsS), erythrite ($CO_3(AsO_4)_2.8H_2O$), smaltite ($(Co,Ni)As_{2\text{-}2.5}$) and linnaeite ($(CoNi)_3S_4$).
Possible primary host minerals: Pyroxenes, amphiboles, olivine, micas, garnet, pyrite and sphalerite.
Geochemical barriers: pH, adsorption and sulphides.
Element is a pathfinder for: All deposits in which it occurs e.g. vein-type deposits and for platinum in ultramafic rocks.
Element association in mineral deposits: Hydrothermal Sulphide ores (general associations) Cu-Pb-Zn-Mo-Au-Ag-As-Hg-Sb-Se-Te-Co-Ni-U-V-Bi-Cd, (precious metals) Au-Ag-Cu-Co-As, (associated with mafic rocks) Ni-Cu-Pt-Co and Sedimentary associations (manganese oxides) Co-Ni-Mo-Zn-W-As-Ba-V.

BIOGEOCHEMICAL CHARACTERISTICS

Estimated average plant abundance: 0.2 ppm.
Estimated *E. camaldulensis* leaves (Pinnacles) average concentration: Not assayed for.
Estimated *E. camaldulensis* leaves (Tibooburra) average concentration: 0.23 ppm.
Available form: Co^{+2}.
Physiological role: Coenzyme.
Interaction among elements in plants: Antagonistic towards Mn and Fe.
Biological impacts: Co is a central atom in vitamin B12, doses greater than 25mg/day are toxic. Co-dust is carcinogenic.
Environmental pathways: Through Ni, Ag, Pb, Cu and Fe mining and processing, coal combustion, geogenic dust and fertilisers.
Environmental mobility: Oxidising conditions medium, acidic conditions high, neutral-alkaline conditions very low and reducing conditions very low.
Suggested analytical methods: ICP-OES, ICP-MS and INAA.

CHEMICAL CHARACTERISTICS

Element: Copper.
Symbol: Cu.
Atomic number: 29.
Atomic mass: 65.37.
Oxidation state(s): (+2), -1, 0, +3 and +4.
Electronic configuration: $(Ar)3d^{10}4s^{1}$.
Affinity: Chalcophile.

GEOCHEMICAL CHARACTERISTICS

Estimated average Continental Crustal abundance: 24 ppm.
Estimated average Ocean abundance: 2.00×10^{-1} ($\mu g\ 1^{-1}$).
Typical minerals/ore minerals: Chalcopyrite ($CuFeS_2$), bornite (Cu_5FeS_4), native copper (Cu), fukuchilite (Cu_3FeS_8), cuprite (Cu_2O) and malachite ($(Cu_2(CO_3)(OH)_2$).
Possible primary host minerals: Pyroxenes, amphiboles, magnetite and biotite.
Geochemical barriers: Sulphide, adsorption (clays, Fe-Mn oxides and organic matter).
Element is a pathfinder for: All types of deposits in which it occurs such as skarn-type copper bodies, porphyry copper deposits, massive sulphide deposits and the massive Cu-Pb-Zn deposits in volcanic and sedimentary terranes.
Element association in mineral deposits: Plutonic associations (ultramafic rocks) Cr-Co-Ni-Cu, Hydrothermal Sulphide ores (general associations) Cu-Pb-Zn-Mo-Au-Ag-As-Hg-Sb-Se-Te-Co-Ni-U-V-Bi-Cd, (porphyry copper deposits) Cu-Mo-Re-Te-Au, (precious metals) Au-Ag-Cu-Co-As, (associated with mafic rocks) Ni-Cu-Pt-Co, Sedimentary associations (Black shales) U-Cu-Pb-Zn-Cd-Ag-Au-V-Mo-Ni-As-Bi-Sb, (red bed, continental) U-V-Se-As-Mo-Pb-Cu and (red bed, volcanic origin) Cu-Pb-Zn-Ag-V-Se.

BIOGEOCHEMICAL CHARACTERISTICS

Estimated average plant abundance: 10 ppm.
Estimated *E. camaldulensis* leaves (Pinnacles) average concentration: 6 ppm.
Estimated *E. camaldulensis* leaves (Tibooburra) average concentration: 4 ppm.
Available form(s): Cu^{+1}, Cu^{+2}.
Physiological role: Micro-nutrient (enzymes, coenzymes and phosphorylation).
Interaction among elements in plants: Antagonistic towards Mg, Fe, Mo and Zn. Synergistic with N and unspecified towards Ca and Mn.
Biological impacts: A trace element that is essential for human health (required for normal metabolic processes). The International Standard WHO for drinking water is 2 mg/l.
Environmental pathways: Copper is released into the environment by both natural sources and human activities. Examples of natural sources are wind-blown dust, decaying vegetation, and forest fires.
Environmental mobility: Oxidising conditions medium, acidic conditions high, neutral-alkaline conditions very low to immobile and reducing conditions very low to immobile.
Suggested analytical methods: ICP-OES, ICP-MS and XRF.

CHEMICAL CHARACTERISTICS

Element: Zinc.
Symbol: Zn.
Atomic number: 30.
Atomic mass: 65.37.
Oxidation state(s): (+2) others +1.
Electronic configuration: $(Ar)3d^{10}4s^2$.
Affinity: Chalcophile.

GEOCHEMICAL CHARACTERISTICS

Estimated average Continental Crustal abundance: 73 ppm.
Estimated average Ocean abundance: $3.79x10^{-1}(\mu g\ 1^{-1})$.
Typical minerals/ore minerals: Sphalerite (ZnS, cubic), wurtzite (ZnS, hexagonal), smithonite ($ZnSO_4$) and zincite (ZnO).
Possible primary host minerals: Pyroxenes, amphiboles, micas, garnets and magnetite.
Geochemical barriers: pH, reducing hydrogen sulfide, adsorption (clays, Fe-Mn oxides and organic matter), and coprecipitation by high abundances of carbonate and phosphate in waters.
Element is a pathfinder for: Pb deposits, Pb-Ag deposits, some fluorite deposits, most polymetallic sulphide deposits, skarn and porphyry copper deposits.
Element association in mineral deposits: Hydrothermal Sulphide ores (general association) Cu-Pb-Zn-Mo-Au-Ag-As-Hg-Sb-Se-Te-Co-Ni-U-V-Bi-Cd, (Complex sulphides) Hg-As-Sb-Se-Ag-Zn-Cd-Pb, (Base metal deposits) Pb-Zn-Cd-Ba, Sedimentary associations (Black shales) U-Cu-Pb-Zn-Cd-Ag-Au-V-Mo-Ni-As-Bi-Sb, (Manganese oxides) Co-Ni-Mo-Zn-W-As-Ba-V and (Red beds, volcanic origin) Cu-Pb-Zn-Ag-V-Se.

BIOGEOCHEMICAL CHARACTERISTICS

Estimated average plant abundance: 20 - 100 ppm.
Estimated *E. camaldulensis* leaves (Pinnacles) average concentration: 52 ppm.
Estimated *E. camaldulensis* leaves (Tibooburra) average concentration: 22 ppm.
Available form(s): Zn^{2+} and $Zn(OH)_2$.
Physiological role: Enzyme cofactors and chlorophyll synthesis.
Interaction among elements in plants: Antagonistic towards S and Fe. Unspecified towards Ca, Mg, P and Mn.
Biological impacts: An essential trace element, which is non-toxic but carcinogenic in excess.
Environmental pathways: Zn smelters, combustion, traffic (tyre wear), wastewater, geogenic dust and sewage sludge.
Environmental mobility: Oxidising conditions high, acid conditions high, neutral-alkaline conditions very low to immobile and reducing conditions-very low to immobile.
Suggested analytical methods: ICP-OES and XRF.

CHEMICAL CHARACTERISTICS

Element: Arsenic.
Symbol: As.
Atomic number: 33.
Atomic mass: 74.9222.
Oxidation state(s): +3, +5, -3.
Electronic configuration: $(Ar)3d^{10}4s^{2}4p^{3}$.
Affinity: Chalcophile.

GEOCHEMICAL CHARACTERISTICS

Estimated average Continental Crustal abundance: 1.8 ppm.
Estimated average Ocean abundance: 1.72×10^{0} (µg 1-1).
Typical minerals/ore minerals: Arsenopyrite (FeAsS), allemonite (AsSb), orpiment (As_2S_3) and realgar (AsS).
Possible primary host minerals: Feldspar, magnetite, ilmenite and pyroxene.
Geochemical barriers: Occurrence of sulphide, adsorption of Ferric oxides (limonite).
Element is a pathfinder for: Maybe useful for gold, nickel and cobalt deposits and possibly for tin and tungsten.
Element association in mineral deposits: Hydrothermal Sulphide ores (general association) Cu-Pb-Zn-Mo-Au-Ag-As-Hg-Sb-Se-Te-Co-Ni-U-V-Bi-Cd, (Complex sulphides) Hg-As-Sb-Se-Ag-Zn-Cd-Pb, (Low temperature sulphides) Bi-Sb-As, (Precious metals) Au-Ag-Cu-Co-As, Sedimentary associations (Black shales) U-Cu-Pb-Zn-Cd-Ag-Au-V-Mo-Ni-As-Bi-Sb, (Manganese oxides) Co-Ni-Mo-Zn-W-As-Ba-V and (Red beds, continental) U-V-Se-As-Mo-Pb-Cu.

BIOGEOCHEMICAL CHARACTERISTICS

Estimated average plant abundance: 0.1 ppm.
Physiological role: may enhance root growth.
Estimated *E. camaldulensis* leaves (Pinnacles) average concentration: 2 ppm.
Estimated *E. camaldulensis* leaves (Tibooburra) average concentration: 0.5 ppm.
Available form(s): N/A.
Interaction among elements in plants: Antagonistic towards S, Si, Mn, and Zn. Synergistic with Mg.
Biological impacts: Essential element in diet (humans). International standards WHO for drinking water is 0.01 mg/l.
Environmental pathways: Anthropogenically derived through mining operations, smelting of metals and fossil fuels.
Environmental mobility: Oxidising conditions medium, acidic conditions medium, neutral-alkaline medium and reducing conditions very low-immobile.
Suggested analytical methods: HG-ICPMS, ICP-MS and INAA.

CHEMICAL CHARACTERISTICS

Element: Bromine.
Symbol: Br.
Atomic number: 35.
Atomic mass: 79.90.
Oxidation state(s): (±1 and +5)
Electronic configuration: $(Ar)3d^{10}4s^{2}4p^{5}$.
Affinity: Lithophile.

GEOCHEMICAL CHARACTERISTICS

Estimated average Continental Crustal abundance: N/A.
Estimated average Ocean abundance: 6.70×10^{4} (µg 1-1).
Typical minerals/ore minerals: Bromargyrite (AgBr) and carnallite ($KMg(Cl,Br)_3.6H_2O$).
Possible primary host minerals: biotite, apatite, amphiboles, eudialyte and sodalite.
Geochemical barriers: Evaporation: predominately in regions of rapid evaporation of ground waters, and is associated with salinisation, and the formation of gypsum.
Element is a pathfinder for: In hot arid regions bromine tends to concentrate in oxidised zones of Ag, Cu, Hg and Pb deposits when the element is bound as the insoluble bromargyrite.
Element association in mineral deposits: Are commonly associated with the emplacement of mineral deposits.

BIOGEOCHEMICAL CHARACTERISTICS

Estimated average plant abundance: 4 ppm.
Estimated *E. camaldulensis* leaves (Pinnacles) average concentration: Not assayed for.
Estimated *E. camaldulensis* leaves (Tibooburra) average concentration: 11.41 ppm.
Available form: Br^{-}.
Physiological role: Can substitute for part of the Cl^{-} requirements of plants.
Interaction among elements in plants: Unknown.
Biological impacts: Not essential for humans.
Environmental pathways: Bromine is used in industry to make organobromo compounds, which are used in the production of insecticides, fire extinguishers and to make pharmaceuticals.
Environmental mobility: Oxidising conditions very high, acidic conditions very high, neutral-alkaline very high and reducing conditions very high.
Suggested analytical methods: IC (ion chromatography) and INAA.

CHEMICAL CHARACTERISTICS

Element: Rubidium.
Symbol: Rb.
Atomic number: 37.
Atomic mass: 85.47.
Oxidation state(s): +1.
Electronic configuration: (Kr) $5s^1$.
Affinity: Lithophile.

GEOCHEMICAL CHARACTERISTICS

Estimated average Continental Crustal abundance: 58 ppm.
Estimated average Ocean abundance: 1.24×10^2 ($\mu g\ 1^{-1}$).
Typical minerals/ore minerals: It occurs naturally in the minerals leucite, pollucite and zinnwaldite.
Possible primary host minerals: Can substitute for K in potassium minerals such as; lepidolites, biotite, feldspar, carnallite, and may replace Cs in pollucite.
Geochemical barriers: Adsorption.
Element is a pathfinder for: Maybe possible to use rubidium as an indicator of pegmatites, rare element granites, greisens, and potash-enriched zones associated with polymetallic mineralisation.
Element association in mineral deposits: Plutonic association (pegmatites) Li-Rb-Cs-Be-rare-earth-elements-Nb-Ta-U-Th-Zr-Hf-Sc, and Sedimentary association (evaporites) Li-Rb-Cs-Sr-Br-I-B.

BIOGEOCHEMICAL CHARACTERISTICS

Estimated average plant abundance: 50 ppm.
Estimated *E. camaldulensis* leaves (Pinnacles) average concentration: 2 ppm.
Estimated *E. camaldulensis* leaves (Tibooburra) average concentration: 4 ppm.
Available form: N/A.
Physiological role: Partial analog for potassium.
Interaction among elements in plants: Antagonistic P, K, Fe and Zn.
Biological impacts: Not essential for plants or animals.
Environmental pathways: Used in the manufacture of photocells and in the removal of residual gases from vacuum tubes. Rubidium salts are used in glasses and ceramics and in fireworks to give them a purple colour.
Environmental mobility: Oxidising conditions low, acidic conditions low, neutral-alkaline conditions low and reducing conditions very low.
Suggested analytical methods: INAA and XRF.

CHEMICAL CHARACTERISTICS

Element: Strontium.
Symbol: Sr.
Atomic number: 38.
Atomic mass: 87.62.
Oxidation state(s): (+2).
Electronic configuration: $(Kr)5s^2$.
Affinity: Lithophile.

GEOCHEMICAL CHARACTERISTICS

Estimated average Continental Crustal abundance: 325 ppm.
Estimated average Ocean abundance: $8.00x10^3(\mu g\ 1^{-1})$.
Typical minerals/ore minerals: Strontianite ($SrCO_3$), and celestite ($SrSO_4$).
Possible primary host minerals: Micas, feldspars, gypsum, calcite and dolomite.
Geochemical barriers: N/A.
Element is a pathfinder for: N/A.
Element association in mineral deposits: Sedimentary association (Evaporites) Li-Rb-Cs-Sr-Br-I-B.

BIOGEOCHEMICAL CHARACTERISTICS

Estimated average plant abundance: 50 ppm.
Estimated *E. camaldulensis* leaves (Pinnacles) average concentration: 46 ppm.
Estimated *E. camaldulensis* leaves (Tibooburra) average concentration: 69 ppm.
Available form(s): N/A.
Physiological role: No known biological role, however can act as an analog for Ca such as structural support.
Interaction among elements in plants: Antagonistic towards Ca and P.
Biological impacts: Strontium-90 is highly radiotoxic and can destroy bone marrow and cause cancer.
Environmental pathways: Weathering, geogenic dust and radiogenic Sr from nuclear tests and accidents.
Environmental mobility: Oxidising conditions high, acid conditions high, neutral-alkaline conditions high and reducing conditions high.
Suggested analytical methods: XRF, ICP-OES and ICP-MS.

CHEMICAL CHARACTERISTICS

Element: Silver.
Symbol: Ag.
Atomic number: 47.
Atomic mass: 107.870.
Oxidation state(s): +1 (0, +2, +3).
Electronic configuration: $(Kr)4d^{10}5s^{1}$.
Affinity: Chalcophile.

GEOCHEMICAL CHARACTERISTICS

Estimated average Continental Crustal abundance: 0.06 ppm.
Estimated average Ocean abundance: 2.37 x 10-2 (µg 1-1).
Typical minerals/ore minerals: Native silver (Ag), argentite (Ag_2S), tetrahedrite $(Cu,Fe,Zn,Ag)_{12}Sb_4S_{13}$, and Ag-bearing galena.
Possible primary host minerals: Galena, sphalerite, chalcopyrite, and the majority of silicates values not exceeding (0.5 ppm).
Geochemical barriers: Presence of sulphides, pH, adsorption to organic matter and Fe and Mn oxides.
Element is a pathfinder for: Au-Ag veins, some types of U deposits, and some types of porphyry Cu deposits.
Element association in mineral deposits: Hydrothermal Sulphide ores (general association) Cu-Pb-Zn-Mo-Au-Ag-As-Hg-Sb-Se-Te-Co-Ni-U-V-Bi-Cd, (Complex sulphides) Hg-As-Sb-Se-Ag-Zn-Cd-Pb, (Precious metals) Au-Ag-Cu-Co-As-Au-Ag-Te-Hg. Sedimentary associations (Black shales) U-Cu-Pb-Zn-Cd-Ag-Au-V-Mo-Ni-As-Bi-Sb, (Phosphorites) U-V-Mo-Ni-Ag-Pb-F-rare earth elements and (Red beds, volcanic origin) Cu-Pb-Zn-Ag-V-Se.

BIOGEOCHEMICAL CHARACTERISTICS

Estimated average plant abundance: 0.2 ppm.
Estimated *E. camaldulensis* leaves (Pinnacles) average concentration: 0.1 ppm.
Estimated *E. camaldulensis* leaves (Tibooburra) average concentration: Not assayed for.
Available form(s): N/A.
Physiological role: No known physiological role.
Interaction among elements in plants: Unknown.
Biological impacts: Ag^{+1} monovalent form toxic to micro-organisms, algae and fish.
Environmental pathways: Anthropogenically derived sewage sludge and municipal waste.
Environmental mobility: Oxidising conditions medium, acidic conditions high, neutral-alkaline conditions very low-immobile and reducing conditions very low-immobile.
Suggested analytical methods: GF-AAS, INAA and ICP-MS.

CHEMICAL CHARACTERISTICS

Element: Cadmium.
Symbol: Cd.
Atomic number: 48.
Atomic mass: 112.40.
Oxidation state(s): (+2), +1.
Electronic configuration: $(Kr)4d^{10}5s^2$.
Affinity: Chalcophile.

GEOCHEMICAL CHARACTERISTICS

Estimated average Continental Crustal abundance: 0.1 ppm.
Estimated average Ocean abundance: 6.74×10^{-2} ($\mu g\ 1^{-1}$).
Typical minerals/ore minerals: Greenockite (CdS), octavite ($CdCO_3$), cadmoselite (CdSe) and cadmium oxide (CdO).
Possible primary host minerals: In association with zinc ores, usually 0.1-0.5 % is present in zinc blende (sphalerite) and calamine (zinc spar, smithsonite), biotite and pyroxenes.
Geochemical barriers: Fe-oxides and clays.
Element is a pathfinder for: Pb, however in some deposits the enrichment of Fe, Cu, Ag, Au, Ba, Sr, B, F, As, Sb, Bi, Mo, Ga, In, Tl, Ge, Hg, Co, Ni and Sn may indicate cadmium rich deposits.
Element association in mineral deposits: Hydrothermal Sulphide ores (general association) Cu-Pb-Zn-Mo-Au-Ag-As-Hg-Sb-Se-Te-Co-Ni-U-V-Bi-Cd, (Complex sulphides) Hg-As-Sb-Se-Ag-Zn-Cd-Pb, (Base metal deposits) Pb-Zn-Cd-Ba, and Sedimentary associations (Black shales) U-Cu-Pb-Zn-Cd-Ag-Au-V-Mo-Ni-As-Bi-Sb.

BIOGEOCHEMICAL CHARACTERISTICS

Estimated average plant abundance: 0.05 ppm.
Estimated *E. camaldulensis* leaves (Pinnacles) average concentration: 0.3 ppm.
Estimated *E. camaldulensis* leaves (Tibooburra) average concentration: Below detection limit.
Available form: N/A.
Physiological role: Not essential to both plants and animals.
Interaction among elements in plants: Antagonistic towards Ca, P and K. Unspecified towards Fe, Mn and Zn.
Biological impacts: Cadmium is toxic and classified as carcinogenic and teratogenic. International Standard WHO for drinking water is 0.003mg/l.
Environmental pathways: Approximately 25,000 tons of cadmium a year is released into the environment. About half of this is released into rivers through the weathering of rocks, while some is released into the atmosphere through forest fires and volcanoes. The rest of the cadmium is released through human activities, such as the production of artificial phosphate fertilizers, Ni-Cd batteries and pigments.
Environmental mobility: Oxidising conditions medium, acidic conditions medium, neutral-alkaline conditions medium and reducing conditions very low to immobile.
Suggested analytical methods: ICP-MS, AAS, ICP-OES and XRF.

CHEMICAL CHARACTERISTICS

Element: Antimony.
Symbol: Sb.
Atomic number: 51.
Atomic mass: 121.75.
Oxidation state(s): ±3, 5.
Electronic configuration: (Kr) $4d^{10}5s^{2}5p^{3}$.
Affinity: Chalcophile.

GEOCHEMICAL CHARACTERISTICS

Estimated average Continental Crustal abundance: $2x10^{-1}$ milligrams per kilogram.
Estimated average Ocean abundance: 1.22×10^{-1} ($\mu g\ 1^{-1}$).
Typical minerals/ore minerals: Native antimony but usually obtained from the ores stibnite (Sb_2S_3), and valentinite (Sb_2O_3).
Possible host minerals: Galena, sphalerite, pyrite and other sulphide. Can also occur with ilmenite and Mg-olivine.
Geochemical barriers: Sulphide, and adsorption by Fe-Mn oxides.
Element is a pathfinder for: Certain types of polymetallic mineralisation.
Element association in mineral deposits: Hydrothermal Sulphide ores (general association) Cu-Pb-Zn-Mo-Au-Ag-As-Hg-Sb-Se-Te-Co-Ni-U-V-Bi-Cd, (Complex sulphides) Hg-As-Sb-Se-Ag-Zn-Cd-Pb, (Low temperature sulphides) Bi-Sb-As and Sedimentary associations (Black shales) U-Cu-Pb-Zn-Cd-Ag-Au-V-Mo-Ni-As-Bi-Sb.

BIOGEOCHEMICAL CHARACTERISTICS

Estimated average plant abundance: 0.1 ppm.
Estimated *E. camaldulensis* leaves (Pinnacles) average concentration: 0.4 ppm.
Estimated *E. camaldulensis* leaves (Tibooburra) average concentration: below detection limit.
Available form: N/A.
Physiological role: No known physiological role.
Interaction among elements in plants: N/A.
Biological impacts: Not essential for plants or animals. International Standard WHO for drinking water is 0.005 mg/l.
Environmental pathways: Used in the semiconductor industry, for the production of diodes, infrared detectors, and as an alloy this metalloid increases leads hardness and strength. Also used in matches, medicine, plumbing, internal combustion of engines.
Environmental mobility: Oxidising conditions low, acidic conditions low, neutral-alkaline conditions low and reducing conditions very low.
Suggested analytical methods: INAA, ICP-MS and XRF.

CHEMICAL CHARACTERISTICS

Element: Cesium.
Symbol: Cs.
Atomic number: 55.
Atomic mass: 132.91.
Oxidation state(s): ±3, 5.
Electronic configuration: (Xe) $6S^1$.
Affinity: Lithophile.

GEOCHEMICAL CHARACTERISTICS

Estimated average Continental Crustal abundance: 2.6 ppm.
Estimated average Ocean abundance: 3.00×10^{-1} ($\mu g\ 1^{-1}$).
Typical primary minerals/ore minerals: Cesium occurs in pollucite (a hydrated caesium silicate of aluminium $2Cs_2O.2Al_2O_3.9SiO_2.H_2O$). Cesium can also be found in rhodizite, a borate mineral containing aluminium, caesium, beryllium and sodium. Also cesium can be found in some potassium ores.
Possible host minerals: K-feldspar and micas.
Geochemical barriers: N/A.
Element is a pathfinder for: Tends to increase in concentration in the potash-rich alteration zones associated with Au, Ag and polymetallic mineralisation.
Element association in mineral deposits: Plutonic associations (pegmatites) Li-Rb-Cs-Be-rare-earth-elements-Nb-Ta-U-Th-Zr-Hf-Sc, and Sedimentary Associations (Evaporites) Li-Rb-Cs-Sr-Br-I-B.

BIOGEOCHEMICAL CHARACTERISTICS

Estimated average plant abundance: 0.2 ppm.
Estimated *E. camaldulensis* leaves (Pinnacles) average concentration: 0.01 ppm.
Estimated *E. camaldulensis* leaves (Tibooburra) average concentration: Below detection limit.
Available form: N/A.
Physiological role: No physiological role.
Interaction among elements in plants: N/A.
Biological impacts: Not essential for plants or animals.
Environmental pathways: Used in formate-based drilling fluids for the oil industry, atomic clocks, photoelectric cells, medical field to treat certain types of cancer and well-logging devices (to measure the thickness of strata).
Environmental mobility: Oxidising conditions low, acidic conditions low, neutral-alkaline conditions low and reducing conditions very low.
Suggested analytical methods: INAA, ICP-MS and XRF.

CHEMICAL CHARACTERISTICS

Element: Barium.
Symbol: Ba.
Atomic number: 56.
Atomic mass: 137.34.
Oxidation state(s): (+2).
Electronic configuration: $(Xe)6s^2$.
Affinity: Lithophile.

GEOCHEMICAL CHARACTERISTICS

Estimated average Continental Crustal abundance: 390 (ppm).
Estimated average Ocean abundance: 1.17×10^1 (µg 1-1).
Typical minerals/ore minerals: Barite ($BaSO_4$), witherite ($BaCo_3$) and hollandite ($Ba_2Mn_8O_{16}$).
Possible primary host minerals: K-feldspar, mica and calcite.
Geochemical barriers: Presence of sulphate, carbonates and adsorption (soil surfaces).
Element is a pathfinder for: Pb-Zn-Ag veins, carbonatites and economic granitic geochemical provinces.
Element association in mineral deposits: Plutonic associations (granitic rocks) Ba-Li-W-Mo-Sn-Zr-Hf-U-Th-Ti, Hydrothermal sulphide ores (base metal deposits) Pb-Zn-Cd-Ba, and Sedimentary association (Manganese oxides) Co-Ni-Mo-Zn-W-As-Ba-V.

BIOGEOCHEMICAL CHARACTERISTICS

Estimated average plant abundance: 40 ppm.
Estimated *E. camaldulensis* leaves (Pinnacles) average concentration: 19 ppm.
Estimated *E. camaldulensis* leaves (Tibooburra) average concentration: 39 ppm.
Available form(s): N/A.
Physiological role: Non-essential.
Interaction among elements in plants: Antagonistic towards Ca, Mg and S.
Biological impacts: Barium and all its compounds that are soluble are toxic. International Standards WHO for drinking water is 0.3 mg/l.
Environmental pathways: Enters the air through mining and refining processes, some barium compounds that are released during industrial processes dissolve easily in water and are found in lakes, rivers and streams.
Environmental mobility: Oxidising conditions low, acidic conditions low, neutral-alkaline conditions low and reducing conditions very low-immobile.
Suggested analytical methods: XRF, INNA, ICP-OES and ICP-MS.

CHEMICAL CHARACTERISTICS

Element: Lanthanum.
Symbol: La.
Atomic number: 57.
Atomic mass: 138.91.
Oxidation state(s): (+3).
Electronic configuration: $(Xe)5d^16S^2$.
Affinity: Lithophile.

GEOCHEMICAL CHARACTERISTICS

Estimated average Continental Crustal abundance: 57 ppm.
Estimated average Ocean abundance: $3.88x10^{-3}$ ($\mu g\ 1^{-1}$).
Typical minerals/ore minerals: Lanthanum is not found in nature as the free element. Lanthanum is found in the ores monazite sand [(Ce, La, Nd and Th)PO_4] and bastnaesite [(Ce, La.)$(CO_3)F$], ores containing small amounts of all the rare earth elements. Other ores include allanite $(Ca, Ce, La, Y)_2(Al, Fe)_3(SiO_4)_3(OH)$.
Possible primary host minerals: Largely hosted in biotite, apatite, pyroxenes and feldspars. Occurs predominantly in allanite in microcline pegmatite, and some secondary arsenates may contain lanthanum in retzian-(La).
Geochemical barriers: Mechanical.
Element is a pathfinder for: May possibly be used in seeking uranium deposits e.g. (North Carolina).
Element association in mineral deposits: Plutonic association (Alkaline rocks) Ti-Nb-Ta-Zr-rare-earth-elements-F-P, Pegmatites (Li-Rb-Cs-Be-rare-earth-elements-Nb-Ta-U-Th-Zr-Hf-Sc), Sedimentary association (Phosphorites) U-V-Mo-Ni-Ag-Pb-F-rare-earth-elements, and (Placers and sands) Au-Pt-Sn-Nb-Ta-Zr-Hf-Th-rare-earth-elements-Ti.

BIOGEOCHEMICAL CHARACTERISTICS

Estimated average plant abundance: 0.2 ppm.
Estimated *E. camaldulensis* leaves (Pinnacles) average concentration: 0.08 ppm.
Estimated *E. camaldulensis* leaves (Tibooburra) average concentration: 0.4 ppm.
Available form(s): N/A.
Physiological role: Recent studies suggest that La maybe directly or indirectly involved in the ion transport within plants, and affects plant growth by regulating the uptake and distribution of elements that influence the plant cells physiology and biochemistry.
Interaction among elements in plants: Synergistic towards Se, Co, V and Tc.
Biological impacts: Lanthanum has no known biological role, but both the element and its compounds are moderately toxic.
Environmental pathways: Geogenic dust and mining through the process of alkaline rocks.
Environmental mobility: Oxidising conditions very low to immobile, acid conditions very low to immobile, neutral-alkaline conditions very low to immobile and reducing conditions very low to immobile.
Suggested analytical methods: ICP-OES, ICP-MS and INAA.

CHEMICAL CHARACTERISTICS

Element: Cerium.
Symbol: Ce.
Atomic number: 58.
Atomic mass: 140.12.
Oxidation state(s): (+3), +4.
Electronic configuration: $(Xe)4f^{12}5d^{10}6s^2$.
Affinity: Lithophile.

GEOCHEMICAL CHARACTERISTICS

Estimated average Continental Crustal abundance: 42 ppm.
Estimated average Ocean abundance: 7.01×10^{-4} ($\mu g\ 1^{-1}$).
Typical minerals/ore minerals: Monazite ($(Ce, La, Th, Nd, Y)PO_4$), bastnaesite ($(Ce, La, Y)CO_3F$), cerite $(Ca, Fe)Ce_3Si_3O_{12}.H_2O$, and xenotime ($(Y, Ce)PO_4$).
Possible host minerals: Apatite, allanite, sphene, fluorite, and feldspars.
Geochemical barriers: pH and mechanical due to changes in the velocity of water flow and/or air movement, and is responsible for the precipitation of heavy metals. Plays a major role in the development of placer deposits.
Element is a pathfinder for: Other rare earth elements and Th in carbonatites; and other elements in associated deposits such as Ti or Sn in placers.
Element association in mineral deposits: Plutonic associations (alkaline rocks) Ti-Nb-Ta-Zr-rare-earth-elements-F-P, (pegmatites) Li-Rb-Cs-Be-rare-earth-elements-Nb-Ta-U-Th-Zr-Hf-Sc; Sedimentary associations (phosphorites) U-V-Mo-Ni-Ag-Pb-F-rare-earth-elements, and (placers and sands) Au-Pt-Sn-Nb-Ta-Zr-Hf-Th-rare-earth-elements-Ti.

BIOGEOCHEMICAL CHARACTERISTICS

Estimated average plant abundance: 0.5 ppm.
Estimated *E. camaldulensis* leaves (Pinnacles) average concentration: 0.5 ppm.
Estimated *E. camaldulensis* leaves (Tibooburra) average concentration: 0.2 ppm.
Available form: N/A.
Physiological role: Non-essential.
Interaction among elements in plants: Unknown.
Biological impacts: Cerium enters the environment in many different places, but mainly by petrol-producing industries. It also enter the environment through municipal waste were it will gradually accumulate in soils and soil water which will eventually result in increased concentrations in humans, animals and soil particles.
Environmental pathways: Found in household items such as colour televisions, fluorescent lamps, energy-saving lamps and glasses, it is also used in the production of catalysers and as a polishing abrasive for glass.
Environmental mobility: Oxidising conditions very low to immobile, acidic conditions very low to immobile, neutral-alkaline conditions very low to immobile and reducing conditions very low to immobile.
Suggested analytical methods: XRF, INAA, ICP-OES and ICP-MS (aqueous solutions).

CHEMICAL CHARACTERISTICS

Element: Praseodymium.
Symbol: Pr.
Atomic number: 59.
Atomic mass: 140.91.
Oxidation state(s): (+4), +3.
Electronic configuration: $(Xe)4f^{3}6S^{2}$.
Affinity: Lithophile

GEOCHEMICAL CHARACTERISTICS

Estimated average Continental Crustal abundance: 5 ppm.
Estimated average Ocean abundance: 7.72×10^{-4} ($\mu g\ 1^{-1}$).
Typical minerals/ore minerals: Found in the rare earth minerals monazite ((Pr, Nd, Ce, La)(PO_4SiO_4)) and bastnäsite (Ce, La, Pr)CO_3(F,OH).
Possible host minerals: Apatite, pyroxenes, biotite, zircons and feldspars.
Geochemical barriers: Mechanical.
Element is a pathfinder for: Best indicator for its own deposits.
Element association in mineral deposits: Plutonic associations (alkaline rocks) Ti-Nb-Ta-Zr-rare-earth-elements-F-P, (pegmatites) Li-Rb-Cs-Be-rare-earth-elements-Nb-Ta-U-Th-Zr-Hf-Sc, Sedimentary associations (phosphorites) U-V-Mo-Ni-Ag-Pb-F-rare-earth-elements, and (placers and sands) Au-Pt-Sn-Nb-Ta-Zr-Hf-Th-rare-earth-elements-Ti.

BIOGEOCHEMICAL CHARACTERISTICS

Estimated average plant abundance: 0.04 ppm.
Estimated *E. camaldulensis* leaves (Pinnacles) average concentration: 0.02 ppm.
Estimated *E. camaldulensis* leaves (Tibooburra) average concentration: Not assayed for.
Available form: N/A.
Physiological role: No physiological role.
Interaction among elements in plants: N/A.
Biological impacts: Not essential for plants or animals.
Environmental pathways: Cigarettes lighter flints, carbon electrodes for arc lighting, and gives glass a yellow colour.
Environmental mobility: Oxidising conditions very low, acidic conditions very low, neutral-alkaline conditions very low and reducing conditions very low.
Suggested analytical methods: ICP-MS.

CHEMICAL CHARACTERISTICS

Element: Neodymium.
Symbol: Nd.
Atomic number: 60.
Atomic mass: 144.24.
Oxidation state(s): (+3), others +2, +4.
Electronic configuration: $(Xe)4f^46S^2$.
Affinity: Lithophile.

GEOCHEMICAL CHARACTERISTICS

Estimated average Continental Crustal abundance: 20 ppm.
Estimated average Ocean abundance: $2.60x10^{-3}$ ($\mu g\ 1^{-1}$).
Typical minerals/ore minerals: The principal sources of most lanthanides are the minerals monazite ((Ce, La, Nd, Th)(PO_4, SiO_4)) and bastnaesite ((Ce, La, Nd)CO_3(F, OH), cerite ((Ce, La, Nd)$_9$(Mg, Fe)Si_7(O, OH, F)$_{28}$) and allanite ((Ca, Ce, La, Nd)$_2FeAl_2OSiO_{11}$(OH).
Possible primary host minerals: Biotite, apatite, pyroxenes, feldspars and zircons.
Geochemical barriers: Mechanical.
Element is a pathfinder for: May possibly be used in seeking uranium deposits e.g. (North Carolina).
Element association in mineral deposits: Plutonic association (Alkaline rocks) Ti-Nb-Ta-Zr-rare-earth-elements-F-P, Pegmatites (Li-Rb-Cs-Be-rare-earth-elements-Nb-Ta-U-Th-Zr-Hf-Sc), Sedimentary association (Phosphorites) U-V-Mo-Ni-Ag-Pb-F-rare-earth-elements, and (Placers and sands) Au-Pt-Sn-Nb-Ta-Zr-Hf-Th-rare-earth-elements-Ti.

BIOGEOCHEMICAL CHARACTERISTICS

Estimated average plant abundance: 0.2 ppm.
Estimated *E. camaldulensis* leaves (Pinnacles) average concentration: 0.08 ppm.
Estimated *E. camaldulensis* leaves (Tibooburra) average concentration: 0.4 ppm.
Available form(s): N/A.
Physiological role: No biological role.
Interaction among elements in plants: N/A.
Biological impacts: Compounds are encountered rarely by most people; however compounds should be regarded as highly toxic although initial evidence suggests the danger is limited. Neodymium compounds are skin and eye irritants.
Environmental pathways: Windblown dust and the weathering of rare earth minerals.
Environmental mobility: Oxidising conditions very low to immobile, acid conditions very low to immobile, neutral-alkaline conditions very low to immobile and reducing conditions very low to immobile.
Suggested analytical methods: ICP-MS.

CHEMICAL CHARACTERISTICS

Element: Samarium.
Symbol: Sm.
Atomic number: 62.
Atomic mass: 150.35.
Oxidation state(s): (+3) others +2.
Electronic configuration: $(Xe)4f^6 6s^2$.
Affinity: Lithophile.

GEOCHEMICAL CHARACTERISTICS

Estimated average Continental Crustal abundance: 3.9 ppm.
Estimated average Ocean abundance: 5.10×10^{-4} ($\mu g\ 1^{-1}$).
Typical minerals/ore minerals: Monazite ((Ce, La, Nd, Th, Sm)(PO4, SiO_4)), bastnaesite ((Ce, La, Sm)CO_3(F, OH)) cerite ((Ce, La, Sm)$_9$(Mg, Fe) Si_7(O, OH, F)$_{28}$) and allanite ((Ca, CE, La, Sm)$_2FeAl_2OSi_3O_{11}$(OH)).
Possible primary host minerals: Biotite, apatite, feldspars, zircon and pyroxenes.
Geochemical barriers: Mechanical.
Element is a pathfinder for: N/A.
Element association in mineral deposits: Plutonic Association (Alkaline rocks) Ti-Nb-Ta-Zr-rare-earth-elements-F-P, Pegmatites (Li-Rb-Cs-Be-rare-earth-elements-Nb-Ta-U-Th-Zr-Hf-Sc), Sedimentary Association (Phosphorites) U-V-Mo-Ni-Ag-Pb-F-rare-earth-elements, (Placers and sands) Au-Pt-Sn-Nb-Ta-Zr-Hf-Th-rare-earth-elements-Ti.

BIOGEOCHEMICAL CHARACTERISTICS

Estimated average plant abundance: 0.04 ppm.
Estimated *E. camaldulensis* leaves (Pinnacles) average concentration: 0.02 ppm.
Estimated *E. camaldulensis* leaves (Tibooburra) average concentration: 0.3 ppm.
Available form(s): N/A.
Physiological role: No known biological role, but may stimulate metabolism.
Interaction among elements in plants: N/A.
Biological impacts: Samarium has no biological role but is said to have a low toxicity.
Environmental pathways: Geogenic dust, and mining through the processing of alkaline rocks.
Environmental mobility: Oxidising conditions very low to immobile, acid conditions very low to immobile, neutral-alkaline conditions very low to immobile and reducing conditions very low to immobile.
Suggested analytical methods: ICP-MS and INAA.

CHEMICAL CHARACTERISTICS

Element: Gadolinium.
Symbol: Gd.
Atomic number: 64.
Atomic mass: 157.25.
Oxidation state(s): +3.
Electronic configuration: $(Xe)4f^{7}5d^{1}6S^{2}$.
Affinity: Lithophile.

GEOCHEMICAL CHARACTERISTICS

Estimated average Continental Crustal abundance: 3.6 ppm.
Estimated average Ocean abundance: 7.94×10^{-4} ($\mu g\ 1^{-1}$).
Typical minerals/ore minerals: Found in the rare earth minerals monazite ((Pr, Nd, Ce, La)(PO_4SiO_4)), bastnäsite (Ce, La, Pr)CO_3(F,OH) and gadolinite $(Ce,La,Nd,Y)_2FeBe_2Si_2O_{10}$.
Possible host minerals: Feldspar, zircons, apatite, allanite and sphene.
Geochemical barriers: Mechanical.
Element is a pathfinder for: Best indicator for its own deposits.
Element association in mineral deposits: Plutonic associations (alkaline rocks) Ti-Nb-Ta-Zr-rare-earth-elements-F-P, (pegmatites) Li-Rb-Cs-Be-rare-earth-elements-Nb-Ta-U-Th-Zr-Hf-Sc, Sedimentary associations (phosphorites) U-V-Mo-Ni-Ag-Pb-F-rare-earth-elements, (placers and sands) Au-Pt-Sn-Nb-Ta-Zr-Hf-Th-rare-earth-elements-Ti.

BIOGEOCHEMICAL CHARACTERISTICS

Estimated average plant abundance: 0.04 ppm.
Estimated *E. camaldulensis* leaves (Pinnacles) average concentration: 0.01 ppm.
Estimated *E. camaldulensis* leaves (Tibooburra) average concentration: Not assayed for.
Available form: N/A.
Physiological role: No physiological role.
Interaction among elements in plants: N/A.
Biological impacts: Not essential for plants or animals.
Environmental pathways: Used in control rods for nuclear reactors and power plants, electronic components and CD and computer memory.
Environmental mobility: Oxidising conditions very low, acidic conditions very low, neutral-alkaline conditions very low and reducing conditions very low.
Suggested analytical methods: ICP-MS.

CHEMICAL CHARACTERISTICS

Element: Gold.
Symbol: Au.
Atomic number: 79.
Atomic mass: 196.967.
Oxidation state(s): (+3 and +1)
Electronic configuration: $(Xe)4f^{14}5d^{10}6S^{1}$.
Affinity: Siderophile.

GEOCHEMICAL CHARACTERISTICS

Estimated average Continental Crustal abundance: 164 ppm.
Estimated average Ocean abundance: 9.854×10^{-6} ($\mu g\ 1^{-1}$).
Typical minerals/ore minerals: Native Au and Au tellurides sylvanite ((Ag, Au)Te_4), krennerite (Au_2Te), petzite (Ag_3AuTe_2) and AuPb (Sb,Bi)$Te_{2\text{-}3}S6$.
Possible primary host minerals: Native gold in quartz, tellurides and silver.
Geochemical barriers: Mechanical.
Element is a pathfinder for: Porphyry copper deposits.
Element association in mineral deposits: Hydrothermal Sulphide ores (general association) Cu-Pb-Zn-Mo-Au-Ag-As-Hg-Sb-Se-Te-Co-Ni-U-V-Bi-Cd, (porphyry copper deposits) Cu-Mo-Re-Te-Au, (precious metals) Au-Ag-Cu-Co-As and (precious metals) Au-Ag-Te-Hg, Sedimentary associations (Black shales) U-Cu-Pb-Zn-Cd-Ag-Au-V-Mo-Ni-As-Bi-Sb, and (Placer and sands) Au-Pt-Sn-Mb-Ta-Zr-Hf-Th-rare-earth-elements-Ti.

BIOGEOCHEMICAL CHARACTERISTICS

Estimated average plant abundance: 0.2 ppb.
Estimated *E. camaldulensis* leaves (Pinnacles) average concentration: 0.97 ppb.
Estimated *E. camaldulensis* leaves (Tibooburra) average concentration: 0.21 ppb.
Available form: $AuCl_2^{2-}$, $AuBr_4^-$, AuI_2^-, $Au(CN)_2^-$, $Au(CNS)_4^-$ and $Au(S_2O_3)_2^{3-}$.
Physiological role: Non-essential.
Interaction among elements in plants: Unknown.
Biological impacts: Au^{3+} complexes are toxic to plants and animals.
Environmental pathways: Gold mining and smelting, the smelting of other metals, wear of catalysts and dentistry.
Environmental mobility: Oxidising conditions medium, acidic conditions high, neutral-alkaline conditions very low to immobile and reducing conditions very low to immobile.
Suggested analytical methods: ICP-MS, INAA and GF-AAS.

CHEMICAL CHARACTERISTICS

Element: Mercury.
Symbol: Hg.
Atomic number: 80.
Atomic mass: 200.59.
Oxidation state(s): (+2 and +1)
Electronic configuration: $(Xe)4f^{14}5d^{10}6S^{2}$.
Affinity: Chalcophile.

GEOCHEMICAL CHARACTERISTICS

Estimated average Continental Crustal abundance: 23.1 ppm.
Estimated average Ocean abundance: 1.40×10^{-3} ($\mu g\ 1^{-1}$).
Typical minerals/ore minerals: Cinnabar (HgS) and native (Hg).
Possible primary host minerals: Amphiboles, aegirine, sphene, sphalerite, tetrahedrite, tennatite and other sulphides.
Geochemical barriers: Sulphide and adsorption (by organic matter).
Element is a pathfinder for: Complex sulphide deposits (Pb-Zn-Ag) and certain types of Au deposits (e.g. carlin-type).
Element association in mineral deposits: Hydrothermal Sulphide ores (general association) Cu-Pb-Zn-Mo-Au-Ag-As-Hg-Sb-Se-Te-Co-Ni-U-V-Bi-Cd, (complex sulphides) Hg-As-Sb-Se-Ag-Zn-Cd-Pb and (precious metals) Au-Ag-Te-Hg.

BIOGEOCHEMICAL CHARACTERISTICS

Estimated average plant abundance: 0.1 ppm
Estimated *E. camaldulensis* leaves (Pinnacles) average concentration: Not assayed for.
Estimated *E. camaldulensis* leaves (Tibooburra) average concentration: Not assayed for.
Available form: Unkonwn.
Physiological role: Highly toxic in both the liquid and gaseous form and can cause problems with the central nervous system if absorbed.
Interaction among elements in plants: Thought to be antagonistic towards Se.
Biological impacts: Non-essential to both plants and animals.
Environmental pathways: Volcanic dust, thermometeres, detonators (open-cast mining), crude oil and coal combustion
Environmental mobility: Oxidising conditions medium, acidic conditions high, neutral-alkaline conditions very low to immobile and reducing conditions very low to immobile.
Suggested analytical methods: CV-AAS.

CHEMICAL CHARACTERISTICS

Element: Lead.
Symbol: Pb.
Atomic number: 82.
Atomic mass: 207.19.
Oxidation state(s): (+2), +4.
Electronic configuration: $(Xe)4f^{14}5d^{10}6s^{2}6p^{2}$.
Affinity: Chalcophile.

GEOCHEMICAL CHARACTERISTICS

Estimated average Continental Crustal abundance: 12.6 ppb.
Estimated average Ocean abundance: 5.00×10^{-4} ($\mu g\ 1^{-1}$).
Typical minerals/ore minerals: Galena (PbS), anglesite ($PbSO_4$) and cerussite ($PbCO_3$).
Possible host minerals: In association with calcite, dolomite, sphalerite, pyrite and other sulphide minerals. Also maybe associated with K-feldspars, plagioclase, micas, zircon and magnetite.
Geochemical barriers: Sulphide, carbonate, sulphate, adsorption and pH.
Element is a pathfinder for: Pb and Zn, however in some deposits the enrichment of Cd, Ag, Cu, Ba, As and Sb which may indicate lead rich deposits.
Element association in mineral deposits: Hydrothermal Sulphide ores (general association) Cu-Pb-Zn-Mo-Au-Ag-As-Hg-Sb-Se-Te-Co-Ni-U-V-Bi-Cd, (Complex sulphides) Hg-As-Sb-Se-Ag-Zn-Cd-Pb, (Base metal deposits) Pb-Zn-Cd-Ba, Sedimentary associations (Black shales) U-Cu-Pb-Zn-Cd-Ag-Au-V-Mo-Ni-As-Bi-Sb and (Red beds, continental) U-V-Se-As-Mo-Pb-Cu.

BIOGEOCHEMICAL CHARACTERISTICS

Estimated average plant abundance: 1 ppm.
Estimated *E. camaldulensis* leaves (Pinnacles) average concentration: 32 ppm.
Estimated *E. camaldulensis* leaves (Tibooburra) average concentration: below detection limit.
Available form: N/A.
Physiological role: Not essential to both plants and animals.
Interaction among elements in plants: Antagonistic towards Ca, S and Zn.
Biological impacts: Lead is toxic and a poison that can damage nervous connections (especially in young children) and cause blood and brain disorders. International Standard WHO for drinking water is 0.01mg/l.
Environmental pathways: Lead particles emitted as halides (PbBrCl, 2PbBrCl and $PbCl_2$). Lead particles are emitted from mines and smelters mainly in the form of $PbSO_4$, $PbO.PbSO_4$ and PbS.
Environmental mobility: Oxidising conditions low, acidic conditions low, neutral-alkaline conditions low and reducing conditions very low.
Suggested analytical methods: ICP-MS, AAS, ICP-OES and XRF.

APPENDIX E

Racecourse creek (Tibooburra) *E. camaldulensis* biogeochemical survey raw data

Variations of Sb, As, Ba, Br and Ca concentration (raw data) within oven dried tissues (leaves) from the *E. camaldulensis* sampled along (Raceourse Creek) Tibooburra.

ELEMENTS	Eastings	Northings	Cum Dist	Sb ppm	As ppm	Ba ppm	Br ppm	Ca ppm
DETECTION LIMIT			km	0.020	0.050	10.00	0.05	500.000
METHOD				INAA	INAA	INAA	INAA	INAA
1	598621	6742653	0.000	-0.020	-0.050	25.20	20.60	10900
3	598614	6742622	0.035	-0.020	-0.050	50.20	5.56	15900
4	598621	6742574	0.084	-0.020	-0.050	49.00	5.78	12900
5	598662	6742503	0.166	-0.020	-0.050	55.90	6.27	10300
6	598710	6742412	0.264	-0.020	-0.050	79.60	4.89	22000
7	598765	6742297	0.397	-0.020	-0.050	42.90	11.10	8320
8	598736	6742283	0.429	-0.020	0.091	52.70	9.36	12900
10	598735	6742235	0.477	-0.020	0.115	44.80	4.95	10600
13	598716	6742148	0.575	-0.020	0.156	41.90	12.40	17000
14	598724	6742131	0.594	-0.020	0.100	61.30	13.30	14800
15	598738	6742088	0.639	-0.020	0.102	26.50	12.70	10000
16	598737	6742044	0.683	-0.020	0.068	35.70	16.90	11400
19	598738	6741987	0.749	-0.020	0.120	41.30	10.80	9380
22	598740	6741959	0.787	-0.020	0.164	58.00	7.95	14000
29	598730	6741899	0.897	-0.020	0.168	38.20	10.00	9100
32	598703	6741868	0.951	-0.020	0.151	44.30	6.81	13400
37	598673	6741815	1.045	-0.020	0.180	44.50	12.30	15700
40	598673	6741756	1.128	-0.020	0.233	62.40	8.24	8570
41	598656	6741736	1.165	-0.020	0.271	30.80	11.90	8680
43	598650	6741712	1.190	-0.020	0.151	32.70	14.80	8720
46	598638	6741658	1.273	-0.020	0.124	57.00	6.99	12700
48	598636	6741635	1.300	-0.020	0.101	44.60	9.61	9460
49	598634	6741600	1.338	-0.020	0.146	39.60	8.73	10700
52	598629	6741563	1.379	-0.020	0.310	57.60	18.40	15000
54	598629	6741536	1.410	-0.020	0.113	42.50	12.60	13300
55	598617	6741525	1.440	-0.020	0.180	28.70	16.10	10300
58	598603	6741494	1.503	-0.020	0.063	41.30	8.50	15000
59	598600	6741453	1.544	-0.020	0.068	49.30	11.10	16900
61	598603	6741405	1.601	-0.020	0.092	44.20	11.50	15300
67	598590	6741348	1.685	-0.020	0.109	31.10	13.40	10500
70	598583	6741275	1.775	-0.020	0.095	45.30	11.30	11100
72	598562	6741252	1.806	-0.020	0.075	45.20	11.40	10000
73	598548	6741192	1.868	-0.020	0.069	35.20	14.70	8420
76	598537	6741150	1.943	-0.020	-0.050	33.80	7.53	9690
79	598529	6741136	1.985	-0.020	0.080	28.60	6.64	8110
82	598523	6741106	2.034	-0.020	0.096	55.10	9.36	13000
85	598530	6741074	2.102	-0.020	-0.050	20.70	6.46	10000
88	598558	6741036	2.154	-0.020	-0.050	22.30	9.90	11800
91	598549	6740994	2.212	-0.020	0.053	36.90	7.50	10400
94	598535	6740958	2.259	-0.020	0.153	45.60	9.59	11700

Continued: Variations of Sb, As, Ba, Br and Ca concentration (raw data) within oven dried tissues (leaves) from the *E. camaldulensis* sampled along (Raceourse Creek) Tibooburra.

ELEMENTS	Eastings	Northings	Cum Dist	Sb ppm	As ppm	Ba ppm	Br ppm	Ca ppm
DETECTION LIMIT			km	0.020	0.050	10.00	0.05	500
METHOD				INAA	INAA	INAA	INAA	INAA
97	598549	6740903	2.321	-0.020	0.063	34.10	11.70	12500
98	598559	6740892	2.336	-0.020	-0.050	29.80	8.12	8010
100	598572	6740842	2.388	-0.020	0.070	33.50	10.90	6860
103	598599	6740805	2.436	-0.020	0.078	44.70	10.80	13300
106	598595	6740777	2.492	-0.020	-0.050	48.40	7.18	13900
108	598619	6740753	2.529	-0.020	0.101	38.10	11.20	12400
109	598621	6740718	2.564	-0.020	0.056	30.50	7.45	7830
112	598648	6740675	2.615	-0.020	0.141	82.30	5.30	17300
115	598638	6740612	2.680	-0.020	0.177	39.00	4.10	12300
118	598617	6740582	2.721	-0.020	0.104	68.80	7.60	10900
121	598613	6740533	2.785	-0.020	0.064	44.40	5.11	11100
123	598591	6740490	2.837	-0.020	0.061	47.70	11.10	12300
124	598584	6740452	2.875	-0.020	-0.050	23.80	10.90	6980
125	598595	6740426	2.903	-0.020	-0.050	55.10	11.40	14000
127	598614	6740376	2.958	-0.020	-0.050	48.90	10.10	10700
130	598628	6740322	3.017	-0.020	0.098	59.50	18.20	12100
133	598625	6740285	3.056	-0.020	-0.050	27.90	9.85	10500
139	598644	6740243	3.127	-0.020	-0.050	88.50	26.80	16100
141	598638	6740179	3.197	-0.020	-0.050	41.30	22.90	9850
143	598653	6740128	3.253	-0.020	0.051	38.70	17.30	10300
145	598649	6740081	3.302	-0.020	0.078	53.50	19.00	14800
148	598651	6740022	3.362	-0.020	-0.050	28.80	13.00	12200
151	598662	6739981	3.411	-0.020	0.070	48.10	8.98	12900
154	598672	6739881	3.514	-0.020	-0.050	69.70	16.50	17200
157	598693	6739821	3.579	-0.020	-0.050	73.60	12.30	18300
158	598707	6739784	3.618	-0.020	-0.050	41.50	14.80	11100
160	598732	6739726	3.683	-0.020	0.057	39.80	11.40	15400
161	598754	6739699	3.718	-0.020	-0.050	33.40	15.50	13100
163	598767	6739663	3.756	-0.020	-0.050	53.20	14.10	21100
164	598784	6739651	3.777	-0.020	-0.050	32.60	17.80	7650
165	598817	6739641	3.812	-0.020	0.082	33.20	9.85	14800
166	598842	6739629	3.839	-0.020	0.090	22.60	13.70	7370
168	598890	6739606	3.893	-0.020	0.073	21.20	10.60	10700
169	598899	6739598	3.905	-0.020	0.095	20.10	8.40	10000
172	598929	6739586	4.030	-0.020	-0.050	18.30	10.60	7960
175	598963	6739556	4.192	-0.020	0.075	17.40	5.43	15100
178	598978	6739521	4.259	-0.020	0.063	25.30	15.00	9030
180	599012	6739490	4.309	-0.020	-0.050	38.60	9.05	14400
181	599029	6739489	4.326	-0.020	0.073	22.00	9.52	10200
184	599046	6739420	4.419	-0.020	-0.050	37.60	14.00	16900
187	599061	6739398	4.477	-0.020	0.112	35.40	13.50	13900
190	599044	6739355	4.530	-0.020	-0.050	20.70	16.70	11100
196	599007	6739274	4.638	-0.020	-0.050	23.20	23.30	6950
199	598995	6739230	4.686	-0.020	-0.050	28.80	14.30	9820
202	598975	6739202	4.741	-0.020	-0.050	37.40	1.06	11500
205	598944	6739174	4.787	-0.020	0.067	31.90	10.70	12900
208	598926	6739126	4.839	-0.020	-0.050	44.00	12.50	12600
211	598914	6739041	4.934	-0.020	0.091	35.20	12.40	9560
214	598899	6738992	4.993	-0.020	0.068	38.30	12.00	11400
217	598881	6738907	5.082	-0.020	-0.050	49.10	11.30	14600

Continued: Variations of Sb, As, Ba, Br and Ca concentration (raw data) within oven dried tissues (leaves) from the *E. camaldulensis* sampled along (Raceourse Creek) Tibooburra.

ELEMENTS	Eastings	Northings	Cum Dist	Sb ppm	As ppm	Ba ppm	Br ppm	Ca ppm
DETECTION LIMIT			km	0.020	0.050	10.00	0.05	500
METHOD				INAA	INAA	INAA	INAA	INAA
219	598825	6738868	5.141	-0.020	-0.050	28.50	17.50	10300
221	598830	6738795	5.274	-0.020	-0.050	24.10	16.80	8630
223	598846	6738755	5.333	-0.020	-0.050	48.00	11.10	12500
225	598886	6738719	5.389	-0.020	0.054	36.70	8.06	10100
226	598900	6738706	5.408	-0.020	0.055	31.80	7.27	14100
229	598917	6738672	5.455	-0.020	0.092	31.80	13.50	10800
232	598894	6738594	5.540	-0.020	-0.050	36.80	12.40	10100
234	598868	6738516	5.661	-0.020	-0.050	46.50	8.27	9190

Variations of Ce, Cs, Cr, Co and Eu concentration (raw data) within oven dried tissues (leaves) from the *E. camaldulensis* sampled along (Raceourse Creek) Tibooburra.

ELEMENTS	Eastings	Northings	Cum Dist	Ce ppm	Cs ppm	Cr ppm	Co ppm	Eu ppm
DETECTION LIMIT			km	0.500	0.100	0.500	0.200	0.050
METHOD				INAA	INAA	INAA	INAA	INAA
1	598621	6742653	0.000	-0.500	-0.100	-0.500	-0.200	-0.050
3	598614	6742622	0.035	-0.500	-0.100	-0.500	-0.200	-0.050
4	598621	6742574	0.084	-0.500	-0.100	-0.500	-0.200	-0.050
5	598662	6742503	0.166	-0.500	-0.100	0.516	0.201	-0.050
6	598710	6742412	0.264	-0.500	-0.100	-0.500	-0.200	-0.050
7	598765	6742297	0.397	-0.500	-0.100	-0.500	-0.200	-0.050
8	598736	6742283	0.429	-0.500	-0.100	-0.500	-0.200	-0.050
10	598735	6742235	0.477	-0.500	-0.100	-0.500	-0.200	-0.050
13	598716	6742148	0.575	-0.500	-0.100	-0.500	-0.200	-0.050
14	598724	6742131	0.594	-0.500	-0.100	-0.500	-0.200	-0.050
15	598738	6742088	0.639	-0.500	-0.100	-0.500	-0.200	-0.050
16	598737	6742044	0.683	-0.500	-0.100	-0.500	-0.200	-0.050
19	598738	6741987	0.749	-0.500	-0.100	-0.500	-0.200	-0.050
22	598740	6741959	0.787	-0.500	-0.100	-0.500	-0.200	-0.050
29	598730	6741899	0.897	-0.500	-0.100	-0.500	-0.200	-0.050
32	598703	6741868	0.951	-0.500	-0.100	-0.500	-0.200	-0.050
37	598673	6741815	1.045	-0.500	-0.100	-0.500	-0.200	-0.050
40	598673	6741756	1.128	-0.500	-0.100	-0.500	-0.200	-0.050
41	598656	6741736	1.165	-0.500	-0.100	-0.500	-0.200	-0.050
43	598650	6741712	1.190	-0.500	-0.100	-0.500	-0.200	-0.050
46	598638	6741658	1.273	-0.500	-0.100	-0.500	-0.200	-0.050
48	598636	6741635	1.300	-0.500	-0.100	-0.500	-0.200	-0.050
49	598634	6741600	1.338	-0.500	-0.100	-0.500	-0.200	-0.050
52	598629	6741563	1.379	-0.500	-0.100	-0.500	-0.200	-0.050
54	598629	6741536	1.410	-0.500	-0.100	-0.500	-0.200	-0.050
55	598617	6741525	1.440	-0.500	-0.100	-0.500	-0.200	-0.050
58	598603	6741494	1.503	-0.500	-0.100	-0.500	-0.200	-0.050
59	598600	6741453	1.544	-0.500	-0.100	-0.500	-0.200	-0.050
61	598603	6741405	1.601	-0.500	-0.100	-0.500	-0.200	-0.050
67	598590	6741348	1.685	-0.500	-0.100	-0.500	-0.200	-0.050
70	598583	6741275	1.775	-0.500	-0.100	-0.500	-0.200	-0.050
72	598562	6741252	1.806	-0.500	-0.100	-0.500	-0.200	-0.050
73	598548	6741192	1.868	-0.500	-0.100	-0.500	-0.200	-0.050
76	598537	6741150	1.943	-0.500	-0.100	-0.500	-0.200	-0.050
79	598529	6741136	1.985	-0.500	-0.100	-0.500	-0.200	-0.050
82	598523	6741106	2.034	-0.500	-0.100	-0.500	-0.200	-0.050
85	598530	6741074	2.102	-0.500	-0.100	-0.500	-0.200	-0.050
88	598558	6741036	2.154	-0.500	-0.100	-0.500	-0.200	-0.050
91	598549	6740994	2.212	-0.500	-0.100	-0.500	-0.200	-0.050
94	598535	6740958	2.259	-0.500	-0.100	-0.500	-0.200	-0.050
97	598549	6740903	2.321	-0.500	-0.100	-0.500	-0.200	-0.050
98	598559	6740892	2.336	-0.500	-0.100	-0.500	-0.200	-0.050
100	598572	6740842	2.388	-0.500	-0.100	-0.500	-0.200	-0.050
103	598599	6740805	2.436	-0.500	-0.100	-0.500	-0.200	-0.050
106	598595	6740777	2.492	-0.500	-0.100	-0.500	-0.200	-0.050
108	598619	6740753	2.529	-0.500	-0.100	-0.500	-0.200	-0.050
109	598621	6740718	2.564	-0.500	-0.100	-0.500	-0.200	-0.050
112	598648	6740675	2.615	-0.500	-0.100	-0.500	-0.200	-0.050
115	598638	6740612	2.680	-0.500	-0.100	-0.500	-0.200	-0.050
118	598617	6740582	2.721	-0.500	-0.100	-0.500	-0.200	-0.050

Continued: Variations of Ce, Cs, Cr, Co and Eu concentration (raw data) within oven dried tissues (leaves) from the *E. camaldulensis* sampled along (Raceourse Creek) Tibooburra.

ELEMENTS	Eastings	Northings	Cum Dist	Ce ppm	Cs ppm	Cr ppm	Co ppm	Eu ppm
DETECTION LIMIT			km	0.500	0.100	0.500	0.200	0.050
METHOD				INAA	INAA	INAA	INAA	INAA
121	598613	6740533	2.785	-0.500	-0.100	-0.500	-0.200	-0.050
123	598591	6740490	2.837	-0.500	-0.100	-0.500	-0.200	-0.050
124	598584	6740452	2.875	-0.500	-0.100	-0.500	-0.200	-0.050
125	598595	6740426	2.903	-0.500	-0.100	-0.500	-0.200	-0.050
127	598614	6740376	2.958	-0.500	-0.100	-0.500	-0.200	-0.050
130	598628	6740322	3.017	-0.500	-0.100	-0.500	-0.200	-0.050
133	598625	6740285	3.056	-0.500	-0.100	-0.500	-0.200	-0.050
139	598644	6740243	3.127	-0.500	-0.100	-0.500	-0.200	-0.050
141	598638	6740179	3.197	-0.500	-0.100	-0.500	-0.200	-0.050
143	598653	6740128	3.253	-0.500	-0.100	-0.500	-0.200	-0.050
145	598649	6740081	3.302	-0.500	-0.100	-0.500	0.255	-0.050
148	598651	6740022	3.362	-0.500	-0.100	-0.500	-0.200	-0.050
151	598662	6739981	3.411	-0.500	-0.100	-0.500	-0.200	-0.050
154	598672	6739881	3.514	-0.500	-0.100	-0.500	-0.200	-0.050
157	598693	6739821	3.579	-0.500	-0.100	-0.500	-0.200	-0.050
158	598707	6739784	3.618	-0.500	-0.100	-0.500	-0.200	-0.050
160	598732	6739726	3.683	-0.500	-0.100	0.525	-0.200	-0.050
161	598754	6739699	3.718	-0.500	-0.100	-0.500	-0.200	-0.050
163	598767	6739663	3.756	-0.500	-0.100	-0.500	-0.200	-0.050
164	598784	6739651	3.777	-0.500	-0.100	-0.500	-0.200	-0.050
165	598817	6739641	3.812	-0.500	-0.100	-0.500	-0.200	-0.050
166	598842	6739629	3.839	-0.500	-0.100	-0.500	-0.200	-0.050
168	598890	6739606	3.893	-0.500	-0.100	-0.500	-0.200	-0.050
169	598899	6739598	3.905	-0.500	-0.100	-0.500	-0.200	-0.050
172	598929	6739586	4.030	-0.500	-0.100	-0.500	-0.200	-0.050
175	598963	6739556	4.192	-0.500	-0.100	-0.500	-0.200	-0.050
178	598978	6739521	4.259	-0.500	-0.100	-0.500	-0.200	-0.050
180	599012	6739490	4.309	-0.500	-0.100	-0.500	-0.200	-0.050
181	599029	6739489	4.326	-0.500	-0.100	-0.500	-0.200	-0.050
184	599046	6739420	4.419	-0.500	-0.100	-0.500	-0.200	-0.050
187	599061	6739398	4.477	-0.500	-0.100	-0.500	-0.200	-0.050
190	599044	6739355	4.530	-0.500	-0.100	-0.500	-0.200	-0.050
196	599007	6739274	4.638	-0.500	-0.100	-0.500	-0.200	-0.050
199	598995	6739230	4.686	-0.500	-0.100	0.519	-0.200	-0.050
202	598975	6739202	4.741	-0.500	-0.100	-0.500	-0.200	-0.050
205	598944	6739174	4.787	-0.500	-0.100	-0.500	-0.200	-0.050
208	598926	6739126	4.839	-0.500	-0.100	-0.500	-0.200	-0.050
211	598914	6739041	4.934	0.526	-0.100	-0.500	-0.200	-0.050
214	598899	6738992	4.993	-0.500	-0.100	-0.500	-0.200	-0.050
217	598881	6738907	5.082	-0.500	-0.100	-0.500	-0.200	-0.050
219	598825	6738868	5.141	-0.500	-0.100	-0.500	-0.200	-0.050
221	598830	6738795	5.274	-0.500	-0.100	-0.500	-0.200	-0.050
223	598846	6738755	5.333	-0.500	-0.100	-0.500	-0.200	-0.050
225	598886	6738719	5.389	-0.500	-0.100	-0.500	-0.200	-0.050
226	598900	6738706	5.408	-0.500	-0.100	-0.500	-0.200	-0.050
229	598917	6738672	5.455	-0.500	-0.100	-0.500	-0.200	-0.050
232	598894	6738594	5.540	-0.500	-0.100	0.623	-0.200	-0.050
234	598868	6738516	5.661	-0.500	-0.100	-0.500	-0.200	-0.050

Variations of Au, Hf, Ir, Fe and La concentration (raw data) within oven dried tissues (leaves) from the *E. camaldulensis* sampled along (Raceourse Creek) Tibooburra.

ELEMENTS	Eastings	Northings	Cum Dist	Au ppb	Hf ppm	Ir ppb	Fe ppm	La ppm
DETECTION LIMIT			km	0.500	0.050	1.00	20.0	0.020
METHOD				INAA	INAA	INAA	INAA	INAA
1	598621	6742653	0.000	-0.500	-0.050	-1.00	146.0	0.122
3	598614	6742622	0.035	-0.500	-0.050	-1.00	95.7	0.118
4	598621	6742574	0.084	-0.500	-0.050	-1.00	112.0	0.155
5	598662	6742503	0.166	-0.500	-0.050	-1.00	122.0	0.175
6	598710	6742412	0.264	-0.500	-0.050	-1.00	139.0	0.141
7	598765	6742297	0.397	-0.500	-0.050	-1.00	115.0	0.113
8	598736	6742283	0.429	-0.500	-0.050	-1.00	98.9	0.104
10	598735	6742235	0.477	-0.500	-0.050	-1.00	116.0	0.155
13	598716	6742148	0.575	-0.500	-0.050	-1.00	111.0	0.106
14	598724	6742131	0.594	-0.500	-0.050	-1.00	138.0	0.133
15	598738	6742088	0.639	-0.500	-0.050	-1.00	100.0	0.104
16	598737	6742044	0.683	-0.500	-0.050	-1.00	114.0	0.125
19	598738	6741987	0.749	-0.500	-0.050	-1.00	94.0	0.096
22	598740	6741959	0.787	-0.500	-0.050	-1.00	96.0	0.089
29	598730	6741899	0.897	-0.500	-0.050	-1.00	57.8	0.059
32	598703	6741868	0.951	-0.500	-0.050	-1.00	96.4	0.098
37	598673	6741815	1.045	-0.500	-0.050	-1.00	94.3	0.094
40	598673	6741756	1.128	-0.500	-0.050	-1.00	80.5	0.080
41	598656	6741736	1.165	-0.500	-0.050	-1.00	84.6	0.102
43	598650	6741712	1.190	-0.500	-0.050	-1.00	94.8	0.093
46	598638	6741658	1.273	-0.500	-0.050	-1.00	78.8	0.081
48	598636	6741635	1.300	-0.500	-0.050	-1.00	73.1	0.083
49	598634	6741600	1.338	-0.500	-0.050	-1.00	91.6	0.096
52	598629	6741563	1.379	-0.500	-0.050	-1.00	68.3	0.131
54	598629	6741536	1.410	-0.500	-0.050	-1.00	100.0	0.096
55	598617	6741525	1.440	-0.500	-0.050	-1.00	89.2	0.072
58	598603	6741494	1.503	-0.500	-0.050	-1.00	84.0	0.070
59	598600	6741453	1.544	-0.500	-0.050	-1.00	109.0	0.087
61	598603	6741405	1.601	-0.500	-0.050	-1.00	87.6	0.080
67	598590	6741348	1.685	-0.500	-0.050	-1.00	124.0	0.100
70	598583	6741275	1.775	-0.500	-0.050	-1.00	132.0	0.107
72	598562	6741252	1.806	-0.500	-0.050	-1.00	117.0	0.097
73	598548	6741192	1.868	-0.500	-0.050	-1.00	92.6	0.100
76	598537	6741150	1.943	-0.500	-0.050	-1.00	83.7	0.089
79	598529	6741136	1.985	-0.500	-0.050	-1.00	76.7	0.064
82	598523	6741106	2.034	-0.500	-0.050	-1.00	84.1	0.071
85	598530	6741074	2.102	-0.500	-0.050	-1.00	87.6	0.084
88	598558	6741036	2.154	-0.500	-0.050	-1.00	101.0	0.079
91	598549	6740994	2.212	-0.500	-0.050	-1.00	131.0	0.109
94	598535	6740958	2.259	-0.500	-0.050	-1.00	167.0	0.145
97	598549	6740903	2.321	-0.500	-0.050	-1.00	88.6	0.073
98	598559	6740892	2.336	-0.500	-0.050	-1.00	91.7	0.055
100	598572	6740842	2.388	-0.500	-0.050	-1.00	83.1	0.051
103	598599	6740805	2.436	-0.500	-0.050	-1.00	85.2	0.087
106	598595	6740777	2.492	-0.500	-0.050	-1.00	93.8	0.078
108	598619	6740753	2.529	-0.500	-0.050	-1.00	106.0	0.115
109	598621	6740718	2.564	-0.500	-0.050	-1.00	85.4	0.085
112	598648	6740675	2.615	-0.500	-0.050	-1.00	81.9	0.093
115	598638	6740612	2.680	-0.500	-0.050	-1.00	83.2	0.078
118	598617	6740582	2.721	-0.500	-0.050	-1.00	104.0	0.118

Continued: Variations of Au, Hf, Ir, Fe and La concentration (raw data) within oven dried tissues (leaves) from the *E. camaldulensis* sampled along (Raceourse Creek) Tibooburra.

ELEMENTS	Eastings	Northings	Cum Dist	Au ppb	Hf ppm	Ir ppb	Fe ppm	La ppm
DETECTION LIMIT			km	0.500	0.050	1.00	20.0	0.020
METHOD				INAA	INAA	INAA	INAA	INAA
121	598613	6740533	2.785	-0.500	-0.050	-1.00	108.0	0.115
123	598591	6740490	2.837	-0.500	-0.050	-1.00	81.9	0.066
124	598584	6740452	2.875	-0.500	-0.050	-1.00	67.4	0.072
125	598595	6740426	2.903	-0.500	-0.050	-1.00	90.3	0.112
127	598614	6740376	2.958	-0.500	-0.050	-1.00	127.0	0.130
130	598628	6740322	3.017	-0.500	-0.050	-1.00	121.0	0.130
133	598625	6740285	3.056	-0.500	-0.050	-1.00	116.0	0.101
139	598644	6740243	3.127	-0.500	-0.050	-1.00	113.0	0.098
141	598638	6740179	3.197	-0.500	-0.050	-1.00	95.4	0.074
143	598653	6740128	3.253	-0.500	-0.050	-1.00	94.3	0.087
145	598649	6740081	3.302	-0.500	-0.050	-1.00	87.6	0.098
148	598651	6740022	3.362	-0.500	-0.050	-1.00	93.2	0.088
151	598662	6739981	3.411	-0.500	-0.050	-1.00	128.0	0.149
154	598672	6739881	3.514	-0.500	-0.050	-1.00	104.0	0.146
157	598693	6739821	3.579	-0.500	-0.050	-1.00	138.0	0.171
158	598707	6739784	3.618	-0.500	-0.050	-1.00	146.0	0.167
160	598732	6739726	3.683	-0.500	-0.050	-1.00	140.0	0.154
161	598754	6739699	3.718	-0.500	-0.050	-1.00	135.0	0.149
163	598767	6739663	3.756	-0.500	-0.050	-1.00	95.3	0.098
164	598784	6739651	3.777	-0.500	-0.050	-1.00	129.0	0.126
165	598817	6739641	3.812	-0.500	-0.050	-1.00	146.0	0.104
166	598842	6739629	3.839	-0.500	-0.050	-1.00	116.0	0.104
168	598890	6739606	3.893	-0.500	-0.050	-1.00	106.0	0.077
169	598899	6739598	3.905	-0.500	-0.050	-1.00	147.0	0.122
172	598929	6739586	4.030	-0.500	-0.050	-1.00	116.0	0.120
175	598963	6739556	4.192	-0.500	-0.050	-1.00	131.0	0.117
178	598978	6739521	4.259	-0.500	-0.050	-1.00	138.0	0.117
180	599012	6739490	4.309	-0.500	-0.050	-1.00	103.0	0.087
181	599029	6739489	4.326	-0.500	-0.050	-1.00	107.0	0.096
184	599046	6739420	4.419	-0.500	-0.050	-1.00	102.0	0.095
187	599061	6739398	4.477	-0.500	-0.050	-1.00	145.0	0.143
190	599044	6739355	4.530	-0.500	-0.050	-1.00	132.0	0.120
196	599007	6739274	4.638	-0.500	-0.050	-1.00	152.0	0.152
199	598995	6739230	4.686	-0.500	-0.050	-1.00	190.0	0.165
202	598975	6739202	4.741	-0.500	-0.050	-1.00	141.0	0.130
205	598944	6739174	4.787	-0.500	-0.050	-1.00	155.0	0.160
208	598926	6739126	4.839	-0.500	-0.050	-1.00	142.0	0.134
211	598914	6739041	4.934	-0.500	-0.050	-1.00	191.0	0.213
214	598899	6738992	4.993	-0.500	-0.050	-1.00	110.0	0.123
217	598881	6738907	5.082	-0.500	-0.050	-1.00	105.0	0.164
219	598825	6738868	5.141	-0.500	-0.050	-1.00	120.0	0.139
221	598830	6738795	5.274	-0.500	-0.050	-1.00	139.0	0.139
223	598846	6738755	5.333	-0.500	-0.050	-1.00	144.0	0.157
225	598886	6738719	5.389	-0.500	-0.050	-1.00	110.0	0.097
226	598900	6738706	5.408	-0.500	-0.050	-1.00	132.0	0.133
229	598917	6738672	5.455	-0.500	-0.050	-1.00	120.0	0.127
232	598894	6738594	5.540	-0.500	-0.050	-1.00	131.0	0.124
234	598868	6738516	5.661	-0.500	-0.050	-1.00	77.3	0.097

Variations of Lu, Mo, K, Rb and Sm concentration (raw data) within oven dried tissues (leaves) from the *E. camaldulensis* sampled along (Raceourse Creek) Tibooburra.

ELEMENTS	Eastings	Northings	Cum Dist	Lu ppm	Mo ppm	K ppm	Rb ppm	Sm ppm
DETECTION LIMIT			km	0.002	0.500	500	2.00	0.010
METHOD				INAA	INAA	INAA	INAA	INAA
1	598621	6742653	0.000	-0.002	-0.500	6410	-2.00	0.031
3	598614	6742622	0.035	-0.002	-0.500	7370	2.19	0.028
4	598621	6742574	0.084	-0.002	-0.500	9140	5.57	0.032
5	598662	6742503	0.166	-0.002	-0.500	10300	10.40	0.031
6	598710	6742412	0.264	-0.002	-0.500	7600	2.72	0.030
7	598765	6742297	0.397	-0.002	-0.500	8900	4.03	0.029
8	598736	6742283	0.429	0.002	-0.500	8380	3.69	0.023
10	598735	6742235	0.477	-0.002	-0.500	10000	5.01	0.030
13	598716	6742148	0.575	-0.002	-0.500	8130	3.65	0.028
14	598724	6742131	0.594	-0.002	-0.500	8610	4.39	0.032
15	598738	6742088	0.639	-0.002	-0.500	10000	3.13	0.023
16	598737	6742044	0.683	-0.002	0.596	10200	2.53	0.026
19	598738	6741987	0.749	-0.002	-0.500	9470	6.88	0.025
22	598740	6741959	0.787	-0.002	-0.500	9700	3.19	0.025
29	598730	6741899	0.897	-0.002	-0.500	10900	5.12	0.018
32	598703	6741868	0.951	-0.002	-0.500	10200	2.29	0.022
37	598673	6741815	1.045	-0.002	-0.500	6700	-2.00	0.022
40	598673	6741756	1.128	-0.002	-0.500	7200	-2.00	0.023
41	598656	6741736	1.165	-0.002	-0.500	9370	-2.00	0.023
43	598650	6741712	1.190	-0.002	-0.500	10000	-2.00	0.024
46	598638	6741658	1.273	-0.002	-0.500	9500	2.27	0.021
48	598636	6741635	1.300	-0.002	-0.500	7730	2.12	0.023
49	598634	6741600	1.338	-0.002	-0.500	9010	3.72	0.024
52	598629	6741563	1.379	-0.002	-0.500	8620	-2.00	0.027
54	598629	6741536	1.410	-0.002	-0.500	6160	-2.00	0.025
55	598617	6741525	1.440	-0.002	-0.500	8070	2.11	0.023
58	598603	6741494	1.503	-0.002	-0.500	7410	2.11	0.020
59	598600	6741453	1.544	-0.002	-0.500	8800	-2.00	0.027
61	598603	6741405	1.601	-0.002	-0.500	9390	3.24	0.020
67	598590	6741348	1.685	-0.002	-0.500	9210	3.10	0.023
70	598583	6741275	1.775	-0.002	-0.500	8830	2.02	0.027
72	598562	6741252	1.806	-0.002	-0.500	9740	-2.00	0.025
73	598548	6741192	1.868	-0.002	-0.500	10100	3.82	0.023
76	598537	6741150	1.943	-0.002	-0.500	8540	2.84	0.022
79	598529	6741136	1.985	-0.002	-0.500	10700	2.07	0.019
82	598523	6741106	2.034	-0.002	-0.500	9410	-2.00	0.020
85	598530	6741074	2.102	-0.002	-0.500	7550	2.09	0.021
88	598558	6741036	2.154	-0.002	-0.500	8850	-2.00	0.022
91	598549	6740994	2.212	-0.002	-0.500	7650	2.50	0.029
94	598535	6740958	2.259	-0.002	-0.500	8480	-2.00	0.035
97	598549	6740903	2.321	-0.002	-0.500	9810	3.45	0.023
98	598559	6740892	2.336	-0.002	-0.500	6160	2.50	0.022
100	598572	6740842	2.388	-0.002	-0.500	8090	2.67	0.019
103	598599	6740805	2.436	-0.002	-0.500	6060	-2.00	0.022
106	598595	6740777	2.492	-0.002	-0.500	6500	2.22	0.021
108	598619	6740753	2.529	-0.002	-0.500	7010	2.18	0.026
109	598621	6740718	2.564	-0.002	-0.500	8690	2.41	0.020
112	598648	6740675	2.615	-0.002	-0.500	6620	2.51	0.024
115	598638	6740612	2.680	-0.002	-0.500	6010	4.21	0.020
118	598617	6740582	2.721	-0.002	-0.500	6190	3.83	0.028

Continued: Variations of Lu, Mo, K, Rb and Sm concentration (raw data) within oven dried tissues (leaves) from the *E. camaldulensis* sampled along (Raceourse Creek) Tibooburra.

ELEMENTS	Eastings	Northings	Cum Dist	Lu ppm	Mo ppm	K ppm	Rb ppm	Sm ppm
DETECTION LIMIT			km	0.002	0.500	500	2.00	0.010
METHOD				INAA	INAA	INAA	INAA	INAA
121	598613	6740533	2.785	-0.002	-0.500	7700	3.08	0.029
123	598591	6740490	2.837	-0.002	-0.500	9280	4.23	0.018
124	598584	6740452	2.875	-0.002	-0.500	9830	5.96	0.018
125	598595	6740426	2.903	-0.002	-0.500	7200	3.02	0.025
127	598614	6740376	2.958	-0.002	-0.500	11100	3.61	0.029
130	598628	6740322	3.017	-0.002	-0.500	9200	3.37	0.034
133	598625	6740285	3.056	-0.002	-0.500	10000	4.68	0.024
139	598644	6740243	3.127	-0.002	-0.500	10500	4.50	0.024
141	598638	6740179	3.197	-0.002	-0.500	6470	-2.00	0.021
143	598653	6740128	3.253	-0.002	-0.500	6680	-2.00	0.031
145	598649	6740081	3.302	-0.002	-0.500	10900	5.78	0.030
148	598651	6740022	3.362	-0.002	-0.500	7610	5.93	0.024
151	598662	6739981	3.411	-0.002	-0.500	8040	4.44	0.034
154	598672	6739881	3.514	-0.002	-0.500	12300	7.93	0.033
157	598693	6739821	3.579	-0.002	-0.500	9270	4.68	0.037
158	598707	6739784	3.618	-0.002	-0.500	11400	2.72	0.039
160	598732	6739726	3.683	-0.002	-0.500	7670	3.32	0.036
161	598754	6739699	3.718	-0.002	-0.500	9920	4.09	0.032
163	598767	6739663	3.756	-0.002	-0.500	8150	2.21	0.028
164	598784	6739651	3.777	-0.002	-0.500	12400	2.22	0.034
165	598817	6739641	3.812	-0.002	-0.500	6520	-2.00	0.032
166	598842	6739629	3.839	-0.002	-0.500	9740	2.37	0.033
168	598890	6739606	3.893	-0.002	-0.500	8370	-2.00	0.028
169	598899	6739598	3.905	-0.002	-0.500	9640	2.42	0.030
172	598929	6739586	4.030	-0.002	-0.500	13700	3.05	0.033
175	598963	6739556	4.192	-0.002	-0.500	5520	-2.00	0.030
178	598978	6739521	4.259	-0.002	-0.500	10800	2.40	0.032
180	599012	6739490	4.309	-0.002	-0.500	5780	-2.00	0.029
181	599029	6739489	4.326	-0.002	-0.500	7260	2.07	0.026
184	599046	6739420	4.419	-0.002	-0.500	11700	2.08	0.029
187	599061	6739398	4.477	-0.002	-0.500	5810	2.43	0.032
190	599044	6739355	4.530	-0.002	-0.500	10900	5.62	0.033
196	599007	6739274	4.638	-0.002	-0.500	12100	4.16	0.036
199	598995	6739230	4.686	-0.002	-0.500	10500	3.33	0.039
202	598975	6739202	4.741	-0.002	-0.500	12000	7.63	0.035
205	598944	6739174	4.787	-0.002	-0.500	8830	2.38	0.039
208	598926	6739126	4.839	-0.002	-0.500	9110	2.62	0.036
211	598914	6739041	4.934	-0.002	-0.500	12100	3.99	0.046
214	598899	6738992	4.993	-0.002	-0.500	10100	-2.00	0.033
217	598881	6738907	5.082	-0.002	-0.500	10200	2.94	0.037
219	598825	6738868	5.141	-0.002	-0.500	13200	2.64	0.035
221	598830	6738795	5.274	-0.002	-0.500	10600	2.87	0.036
223	598846	6738755	5.333	-0.002	-0.500	9720	-2.00	0.037
225	598886	6738719	5.389	-0.002	-0.500	9930	2.35	0.027
226	598900	6738706	5.408	-0.002	-0.500	9650	-2.00	0.034
229	598917	6738672	5.455	-0.002	-0.500	9120	-2.00	0.034
232	598894	6738594	5.540	-0.002	-0.500	10500	5.50	0.032
234	598868	6738516	5.661	-0.002	-0.500	11500	2.95	0.027

Variations of Sc, Se, Ag, Na and Ta concentration (raw data) within oven dried tissues (leaves) from the *E. camaldulensis* sampled along (Raceourse Creek) Tibooburra.

ELEMENTS	Eastings	Northings	Cum Dist	Sc ppm	Se ppm	Ag ppm	Na ppm	Ta ppm
DETECTION LIMIT			km	0.005	0.100	0.100	10.0	0.100
METHOD				INAA	INAA	INAA	INAA	INAA
1	598621	6742653	0.000	0.045	-0.100	-0.100	416.0	-0.100
3	598614	6742622	0.035	0.037	-0.100	-0.100	70.9	-0.100
4	598621	6742574	0.084	0.036	-0.100	-0.100	684.0	-0.100
5	598662	6742503	0.166	0.041	-0.100	-0.100	27.4	-0.100
6	598710	6742412	0.264	0.049	-0.100	-0.100	105.0	-0.100
7	598765	6742297	0.397	0.038	-0.100	-0.100	804.0	-0.100
8	598736	6742283	0.429	0.033	-0.100	-0.100	192.0	-0.100
10	598735	6742235	0.477	0.035	-0.100	-0.100	59.4	-0.100
13	598716	6742148	0.575	0.038	-0.100	-0.100	1140.0	-0.100
14	598724	6742131	0.594	0.043	-0.100	-0.100	409.0	-0.100
15	598738	6742088	0.639	0.032	-0.100	-0.100	1220.0	-0.100
16	598737	6742044	0.683	0.034	-0.100	-0.100	26.4	-0.100
19	598738	6741987	0.749	0.027	-0.100	-0.100	73.1	-0.100
22	598740	6741959	0.787	0.028	-0.100	-0.100	131.0	-0.100
29	598730	6741899	0.897	0.015	-0.100	-0.100	11.5	-0.100
32	598703	6741868	0.951	0.030	-0.100	-0.100	104.0	-0.100
37	598673	6741815	1.045	0.030	-0.100	-0.100	657.0	-0.100
40	598673	6741756	1.128	0.029	0.200	-0.100	28.1	-0.100
41	598656	6741736	1.165	0.032	-0.100	-0.100	1270.0	-0.100
43	598650	6741712	1.190	0.035	-0.100	-0.100	27.6	-0.100
46	598638	6741658	1.273	0.023	0.135	-0.100	25.5	-0.100
48	598636	6741635	1.300	0.023	-0.100	-0.100	18.3	-0.100
49	598634	6741600	1.338	0.029	-0.100	-0.100	77.1	-0.100
52	598629	6741563	1.379	0.022	-0.100	-0.100	1040.0	-0.100
54	598629	6741536	1.410	0.034	-0.100	-0.100	19.2	-0.100
55	598617	6741525	1.440	0.028	-0.100	-0.100	894.0	-0.100
58	598603	6741494	1.503	0.021	-0.100	-0.100	280.0	-0.100
59	598600	6741453	1.544	0.034	-0.100	-0.100	66.7	-0.100
61	598603	6741405	1.601	0.029	-0.100	-0.100	58.5	-0.100
67	598590	6741348	1.685	0.038	-0.100	-0.100	30.1	-0.100
70	598583	6741275	1.775	0.043	0.124	-0.100	155.0	-0.100
72	598562	6741252	1.806	0.037	-0.100	-0.100	55.4	-0.100
73	598548	6741192	1.868	0.031	-0.100	-0.100	278.0	-0.100
76	598537	6741150	1.943	0.028	-0.100	-0.100	252.0	-0.100
79	598529	6741136	1.985	0.024	-0.100	-0.100	21.1	-0.100
82	598523	6741106	2.034	0.027	-0.100	-0.100	44.3	-0.100
85	598530	6741074	2.102	0.031	-0.100	-0.100	29.9	-0.100
88	598558	6741036	2.154	0.032	-0.100	-0.100	109.0	-0.100
91	598549	6740994	2.212	0.045	-0.100	-0.100	627.0	-0.100
94	598535	6740958	2.259	0.052	-0.100	-0.100	394.0	-0.100
97	598549	6740903	2.321	0.027	-0.100	-0.100	36.3	-0.100
98	598559	6740892	2.336	0.028	-0.100	-0.100	1990.0	-0.100
100	598572	6740842	2.388	0.025	-0.100	-0.100	431.0	-0.100
103	598599	6740805	2.436	0.030	-0.100	-0.100	102.0	-0.100
106	598595	6740777	2.492	0.029	-0.100	-0.100	25.9	-0.100
108	598619	6740753	2.529	0.034	-0.100	-0.100	25.1	-0.100
109	598621	6740718	2.564	0.025	-0.100	-0.100	18.1	-0.100
112	598648	6740675	2.615	0.029	-0.100	-0.100	246.0	-0.100
115	598638	6740612	2.680	0.028	-0.100	-0.100	297.0	-0.100
118	598617	6740582	2.721	0.035	0.129	-0.100	31.9	-0.100

Continued: Variations of Sc, Se, Ag, Na and Ta concentration (raw data) within oven dried tissues (leaves) from the *E. camaldulensis* sampled along (Raceourse Creek) Tibooburra.

ELEMENTS	Eastings	Northings	Cum Dist	Sc ppm	Se ppm	Ag ppm	Na ppm	Ta ppm
DETECTION LIMIT			km	0.005	0.100	0.100	10.0	0.100
METHOD				INAA	INAA	INAA	INAA	INAA
121	598613	6740533	2.785	0.038	0.323	-0.100	97.9	-0.100
123	598591	6740490	2.837	0.025	-0.100	-0.100	114.0	-0.100
124	598584	6740452	2.875	0.018	-0.100	-0.100	278.0	-0.100
125	598595	6740426	2.903	0.029	-0.100	-0.100	203.0	-0.100
127	598614	6740376	2.958	0.042	-0.100	-0.100	34.4	-0.100
130	598628	6740322	3.017	0.041	-0.100	-0.100	882.0	-0.100
133	598625	6740285	3.056	0.039	-0.100	-0.100	28.4	-0.100
139	598644	6740243	3.127	0.035	-0.100	-0.100	44.1	-0.100
141	598638	6740179	3.197	0.029	-0.100	-0.100	17.7	-0.100
143	598653	6740128	3.253	0.032	-0.100	-0.100	487.0	-0.100
145	598649	6740081	3.302	0.029	-0.100	-0.100	58.9	-0.100
148	598651	6740022	3.362	0.029	-0.100	-0.100	22.9	-0.100
151	598662	6739981	3.411	0.042	-0.100	-0.100	71.8	-0.100
154	598672	6739881	3.514	0.032	-0.100	-0.100	28.2	-0.100
157	598693	6739821	3.579	0.044	-0.100	-0.100	26.9	-0.100
158	598707	6739784	3.618	0.053	-0.100	-0.100	30.9	-0.100
160	598732	6739726	3.683	0.047	-0.100	-0.100	29.3	-0.100
161	598754	6739699	3.718	0.044	-0.100	-0.100	34.3	-0.100
163	598767	6739663	3.756	0.031	-0.100	-0.100	106.0	-0.100
164	598784	6739651	3.777	0.042	-0.100	-0.100	50.3	-0.100
165	598817	6739641	3.812	0.041	0.182	-0.100	128.0	-0.100
166	598842	6739629	3.839	0.036	-0.100	-0.100	576.0	-0.100
168	598890	6739606	3.893	0.034	0.145	-0.100	953.0	-0.100
169	598899	6739598	3.905	0.044	0.145	-0.100	128.0	-0.100
172	598929	6739586	4.030	0.037	-0.100	-0.100	31.0	-0.100
175	598963	6739556	4.192	0.041	-0.100	-0.100	63.2	-0.100
178	598978	6739521	4.259	0.047	-0.100	-0.100	64.1	-0.100
180	599012	6739490	4.309	0.035	-0.100	-0.100	927.0	-0.100
181	599029	6739489	4.326	0.033	-0.100	-0.100	526.0	-0.100
184	599046	6739420	4.419	0.033	0.209	-0.100	30.9	-0.100
187	599061	6739398	4.477	0.046	-0.100	-0.100	1550.0	-0.100
190	599044	6739355	4.530	0.040	-0.100	-0.100	30.6	-0.100
196	599007	6739274	4.638	0.052	-0.100	-0.100	133.0	-0.100
199	598995	6739230	4.686	0.065	-0.100	-0.100	1090.0	-0.100
202	598975	6739202	4.741	0.042	-0.100	-0.100	175.0	-0.100
205	598944	6739174	4.787	0.047	0.194	-0.100	1120.0	-0.100
208	598926	6739126	4.839	0.047	-0.100	-0.100	949.0	-0.100
211	598914	6739041	4.934	0.064	-0.100	-0.100	27.3	-0.100
214	598899	6738992	4.993	0.034	-0.100	-0.100	65.3	-0.100
217	598881	6738907	5.082	0.034	-0.100	-0.100	23.9	-0.100
219	598825	6738868	5.141	0.040	-0.100	-0.100	92.9	-0.100
221	598830	6738795	5.274	0.045	-0.100	-0.100	31.1	-0.100
223	598846	6738755	5.333	0.051	-0.100	-0.100	895.0	-0.100
225	598886	6738719	5.389	0.031	-0.100	-0.100	29.4	-0.100
226	598900	6738706	5.408	0.040	-0.100	-0.100	25.7	-0.100
229	598917	6738672	5.455	0.037	-0.100	-0.100	66.1	-0.100
232	598894	6738594	5.540	0.045	-0.100	-0.100	66.1	-0.100
234	598868	6738516	5.661	0.027	-0.100	-0.100	16.5	-0.100

Variations of Te, Th, W, U and Yb concentration (raw data) within oven dried tissues (leaves) from the *E. camaldulensis* sampled along (Raceourse Creek) Tibooburra.

ELEMENTS	Eastings	Northings	Cum Dist	Te ppm	Th ppm	W ppm	U ppm	Yb ppm
DETECTION LIMIT			km	0.500	0.020	0.200	0.100	0.010
METHOD				INAA	INAA	INAA	INAA	INAA
1	598621	6742653	0.000	-0.500	0.044	-0.200	-0.100	-0.010
3	598614	6742622	0.035	-0.500	0.023	-0.200	-0.100	-0.010
4	598621	6742574	0.084	-0.500	0.041	-0.200	-0.100	-0.010
5	598662	6742503	0.166	-0.500	0.034	-0.200	-0.100	0.015
6	598710	6742412	0.264	-0.500	0.035	-0.200	-0.100	0.016
7	598765	6742297	0.397	-0.500	0.035	-0.200	-0.100	-0.010
8	598736	6742283	0.429	-0.500	0.032	-0.200	-0.100	-0.010
10	598735	6742235	0.477	-0.500	0.028	-0.200	-0.100	-0.010
13	598716	6742148	0.575	-0.500	0.038	-0.200	-0.100	-0.010
14	598724	6742131	0.594	-0.500	0.049	-0.200	-0.100	-0.010
15	598738	6742088	0.639	-0.500	-0.020	-0.200	-0.100	-0.010
16	598737	6742044	0.683	-0.500	0.027	-0.200	-0.100	-0.010
19	598738	6741987	0.749	-0.500	-0.020	-0.200	-0.100	0.016
22	598740	6741959	0.787	-0.500	-0.020	-0.200	-0.100	-0.010
29	598730	6741899	0.897	-0.500	-0.020	-0.200	-0.100	-0.010
32	598703	6741868	0.951	-0.500	0.022	-0.200	-0.100	-0.010
37	598673	6741815	1.045	-0.500	0.034	-0.200	-0.100	-0.010
40	598673	6741756	1.128	-0.500	-0.020	-0.200	-0.100	-0.010
41	598656	6741736	1.165	-0.500	0.041	-0.200	-0.100	0.020
43	598650	6741712	1.190	-0.500	0.034	-0.200	-0.100	-0.010
46	598638	6741658	1.273	-0.500	-0.020	-0.200	-0.100	-0.010
48	598636	6741635	1.300	-0.500	-0.020	-0.200	-0.100	-0.010
49	598634	6741600	1.338	-0.500	0.036	-0.200	-0.100	-0.010
52	598629	6741563	1.379	-0.500	0.023	-0.200	-0.100	-0.010
54	598629	6741536	1.410	-0.500	0.028	-0.200	-0.100	-0.010
55	598617	6741525	1.440	-0.500	0.028	-0.200	-0.100	-0.010
58	598603	6741494	1.503	-0.500	-0.020	-0.200	-0.100	-0.010
59	598600	6741453	1.544	-0.500	-0.020	-0.200	-0.100	0.012
61	598603	6741405	1.601	-0.500	0.031	-0.200	-0.100	-0.010
67	598590	6741348	1.685	-0.500	0.024	-0.200	-0.100	-0.010
70	598583	6741275	1.775	-0.500	0.040	-0.200	-0.100	-0.010
72	598562	6741252	1.806	-0.500	0.044	-0.200	-0.100	-0.010
73	598548	6741192	1.868	-0.500	0.032	-0.200	-0.100	-0.010
76	598537	6741150	1.943	-0.500	0.022	-0.200	-0.100	0.014
79	598529	6741136	1.985	-0.500	0.027	-0.200	-0.100	-0.010
82	598523	6741106	2.034	-0.500	0.024	-0.200	-0.100	0.010
85	598530	6741074	2.102	-0.500	0.028	-0.200	-0.100	-0.010
88	598558	6741036	2.154	-0.500	0.030	-0.200	-0.100	-0.010
91	598549	6740994	2.212	-0.500	0.045	-0.200	-0.100	0.012
94	598535	6740958	2.259	-0.500	0.029	-0.200	-0.100	-0.010
97	598549	6740903	2.321	-0.500	0.025	-0.200	-0.100	0.012
98	598559	6740892	2.336	-0.500	0.021	-0.200	-0.100	0.018
100	598572	6740842	2.388	-0.500	-0.020	-0.200	-0.100	-0.010
103	598599	6740805	2.436	-0.500	0.023	-0.200	-0.100	-0.010
106	598595	6740777	2.492	-0.500	0.024	-0.200	-0.100	-0.010
108	598619	6740753	2.529	-0.500	0.031	-0.200	-0.100	-0.010
109	598621	6740718	2.564	-0.500	-0.020	-0.200	-0.100	0.010
112	598648	6740675	2.615	-0.500	-0.020	-0.200	-0.100	-0.010
115	598638	6740612	2.680	-0.500	0.028	-0.200	-0.100	-0.010
118	598617	6740582	2.721	-0.500	0.032	-0.200	-0.100	-0.010

Continued: Variations of Te, Th, W, U and Yb concentration (raw data) within oven dried tissues (leaves) from the *E. camaldulensis* sampled along (Raceourse Creek) Tibooburra.

ELEMENTS	Eastings	Northings	Cum Dist	Te ppm	Th ppm	W ppm	U ppm	Yb ppm
DETECTION LIMIT			km	0.500	0.020	0.200	0.100	0.010
METHOD				INAA	INAA	INAA	INAA	INAA
121	598613	6740533	2.785	-0.500	0.038	-0.200	-0.100	-0.010
123	598591	6740490	2.837	-0.500	0.027	-0.200	-0.100	-0.010
124	598584	6740452	2.875	-0.500	0.022	-0.200	-0.100	-0.010
125	598595	6740426	2.903	-0.500	-0.020	-0.200	-0.100	-0.010
127	598614	6740376	2.958	-0.500	0.044	-0.200	-0.100	-0.010
130	598628	6740322	3.017	-0.500	0.038	-0.200	-0.100	-0.010
133	598625	6740285	3.056	-0.500	0.037	-0.200	-0.100	-0.010
139	598644	6740243	3.127	-0.500	0.036	-0.200	-0.100	-0.010
141	598638	6740179	3.197	-0.500	0.028	-0.200	-0.100	-0.010
143	598653	6740128	3.253	-0.500	0.035	-0.200	-0.100	-0.010
145	598649	6740081	3.302	-0.500	0.033	-0.200	-0.100	-0.010
148	598651	6740022	3.362	-0.500	0.029	-0.200	-0.100	-0.010
151	598662	6739981	3.411	-0.500	0.052	-0.200	-0.100	-0.010
154	598672	6739881	3.514	-0.500	0.023	-0.200	-0.100	-0.010
157	598693	6739821	3.579	-0.500	0.053	-0.200	-0.100	-0.010
158	598707	6739784	3.618	-0.500	0.049	-0.200	-0.100	0.012
160	598732	6739726	3.683	-0.500	0.048	-0.200	-0.100	-0.010
161	598754	6739699	3.718	-0.500	0.040	-0.200	-0.100	0.014
163	598767	6739663	3.756	-0.500	0.023	-0.200	-0.100	-0.010
164	598784	6739651	3.777	-0.500	0.041	-0.200	-0.100	-0.010
165	598817	6739641	3.812	-0.500	0.040	-0.200	-0.100	-0.010
166	598842	6739629	3.839	-0.500	0.041	-0.200	-0.100	0.012
168	598890	6739606	3.893	-0.500	0.028	-0.200	0.127	0.011
169	598899	6739598	3.905	-0.500	0.040	-0.200	-0.100	-0.010
172	598929	6739586	4.030	-0.500	0.031	-0.200	-0.100	-0.010
175	598963	6739556	4.192	-0.500	0.048	-0.200	-0.100	0.011
178	598978	6739521	4.259	-0.500	0.034	-0.200	-0.100	0.015
180	599012	6739490	4.309	-0.500	-0.020	-0.200	-0.100	-0.010
181	599029	6739489	4.326	-0.500	0.027	-0.200	-0.100	-0.010
184	599046	6739420	4.419	-0.500	0.030	-0.200	-0.100	-0.010
187	599061	6739398	4.477	-0.500	0.030	-0.200	-0.100	-0.010
190	599044	6739355	4.530	-0.500	0.045	-0.200	-0.100	-0.010
196	599007	6739274	4.638	-0.500	0.045	-0.200	-0.100	0.017
199	598995	6739230	4.686	-0.500	0.062	-0.200	-0.100	0.023
202	598975	6739202	4.741	-0.500	0.031	-0.200	-0.100	-0.010
205	598944	6739174	4.787	-0.500	0.049	-0.200	-0.100	-0.010
208	598926	6739126	4.839	-0.500	0.036	-0.200	-0.100	-0.010
211	598914	6739041	4.934	-0.500	0.051	-0.200	-0.100	-0.010
214	598899	6738992	4.993	-0.500	0.043	-0.200	-0.100	-0.010
217	598881	6738907	5.082	-0.500	0.040	-0.200	-0.100	0.011
219	598825	6738868	5.141	-0.500	0.030	-0.200	-0.100	-0.010
221	598830	6738795	5.274	-0.500	0.038	-0.200	-0.100	0.014
223	598846	6738755	5.333	-0.500	0.039	-0.200	-0.100	0.013
225	598886	6738719	5.389	-0.500	0.036	-0.200	-0.100	-0.010
226	598900	6738706	5.408	-0.500	0.029	-0.200	-0.100	-0.010
229	598917	6738672	5.455	-0.500	0.046	-0.200	-0.100	-0.010
232	598894	6738594	5.540	-0.500	0.056	-0.200	-0.100	-0.010
234	598868	6738516	5.661	-0.500	0.028	-0.200	-0.100	-0.010

Variations of Zr, Al, Cd, Cu and Mg concentration (raw data) within oven dried tissues (leaves) from the *E. camaldulensis* sampled along (Raceourse Creek) Tibooburra.

ELEMENTS	Eastings	Northings	Cum Dist	Zr ppm	Al ppm	Cd ppm	Cu ppm	Mg ppm
DETECTION LIMIT			km	10.00	20	0.1	1	20
METHOD				INAA	ICP-OES	ICP-MS	ICP-OES	ICP-OES
1	598621	6742653	0.000	-10.00	119	-0.1	3	3413
3	598614	6742622	0.035	-10.00	115	-0.1	3	2904
4	598621	6742574	0.084	-10.00	99	-0.1	4	2109
5	598662	6742503	0.166	-10.00	104	-0.1	4	2740
6	598710	6742412	0.264	-10.00	122	-0.1	8	3925
7	598765	6742297	0.397	-10.00	122	-0.1	6	2583
8	598736	6742283	0.429	-10.00	80	-0.1	4	2754
10	598735	6742235	0.477	-10.00	96	-0.1	7	2246
13	598716	6742148	0.575	-10.00	78	-0.1	3	2288
14	598724	6742131	0.594	-10.00	80	-0.1	5	3923
15	598738	6742088	0.639	-10.00	69	-0.1	2	2211
16	598737	6742044	0.683	-10.00	89	-0.1	3	1768
19	598738	6741987	0.749	-10.00	166	-0.1	6	2899
22	598740	6741959	0.787	-10.00	55	-0.1	3	2250
29	598730	6741899	0.897	-10.00	51	-0.1	6	2875
32	598703	6741868	0.951	-10.00	91	-0.1	4	2557
37	598673	6741815	1.045	-10.00	74	-0.1	4	2703
40	598673	6741756	1.128	-10.00	82	-0.1	2	2345
41	598656	6741736	1.165	-10.00	81	-0.1	4	1949
43	598650	6741712	1.190	-10.00	77	-0.1	6	2763
46	598638	6741658	1.273	-10.00	61	-0.1	3	1792
48	598636	6741635	1.300	-10.00	76	-0.1	7	2705
49	598634	6741600	1.338	-10.00	71	-0.1	6	2327
52	598629	6741563	1.379	-10.00	56	-0.1	8	2462
54	598629	6741536	1.410	-10.00	88	-0.1	4	2522
55	598617	6741525	1.440	-10.00	100	-0.1	6	2221
58	598603	6741494	1.503	-10.00	51	-0.1	6	2496
59	598600	6741453	1.544	-10.00	77	-0.1	5	2026
61	598603	6741405	1.601	-10.00	74	-0.1	3	2434
67	598590	6741348	1.685	-10.00	87	-0.1	6	2457
70	598583	6741275	1.775	-10.00	120	-0.1	5	1952
72	598562	6741252	1.806	-10.00	110	-0.1	5	1941
73	598548	6741192	1.868	-10.00	95	-0.1	3	3114
76	598537	6741150	1.943	-10.00	82	-0.1	4	1884
79	598529	6741136	1.985	-10.00	66	-0.1	2	1795
82	598523	6741106	2.034	-10.00	81	-0.1	2	3495
85	598530	6741074	2.102	-10.00	84	-0.1	2	1813
88	598558	6741036	2.154	-10.00	94	-0.1	2	2219
91	598549	6740994	2.212	-10.00	133	-0.1	3	1997
94	598535	6740958	2.259	-10.00	113	-0.1	2	2413
97	598549	6740903	2.321	-10.00	61	-0.1	2	2284
98	598559	6740892	2.336	-10.00	62	-0.1	2	2214
100	598572	6740842	2.388	-10.00	74	-0.1	4	2691
103	598599	6740805	2.436	-10.00	78	-0.1	4	3319
106	598595	6740777	2.492	-10.00	71	-0.1	3	2553
108	598619	6740753	2.529	-10.00	67	-0.1	2	2434
109	598621	6740718	2.564	-10.00	53	-0.1	3	2168
112	598648	6740675	2.615	-10.00	82	-0.1	4	2722
115	598638	6740612	2.680	-10.00	64	-0.1	3	2867
118	598617	6740582	2.721	-10.00	97	-0.1	3	2549

Continued: Variations of Zr, Al, Cd, Cu and Mg concentration (raw data) within oven dried tissues (leaves) from the *E. camaldulensis* sampled along (Raceourse Creek) Tibooburra.

ELEMENTS	Eastings	Northings	Cum Dist	Zr ppm	Al ppm	Cd ppm	Cu ppm	Mg ppm
DETECTION LIMIT			km	10.00	20	0.1	1	20
METHOD				INAA	ICP-OES	ICP-MS	ICP-OES	ICP-OES
121	598613	6740533	2.785	-10.00	81	-0.1	3	2915
123	598591	6740490	2.837	-10.00	49	-0.1	3	1842
124	598584	6740452	2.875	-10.00	48	-0.1	3	2371
125	598595	6740426	2.903	-10.00	75	-0.1	3	2463
127	598614	6740376	2.958	-10.00	93	-0.1	3	2869
130	598628	6740322	3.017	-10.00	103	-0.1	3	2700
133	598625	6740285	3.056	-10.00	94	-0.1	4	3023
139	598644	6740243	3.127	-10.00	136	-0.1	4	2766
141	598638	6740179	3.197	-10.00	61	-0.1	3	3036
143	598653	6740128	3.253	-10.00	81	-0.1	2	2780
145	598649	6740081	3.302	-10.00	57	-0.1	4	2340
148	598651	6740022	3.362	-10.00	65	-0.1	2	3182
151	598662	6739981	3.411	-10.00	78	-0.1	3	3203
154	598672	6739881	3.514	-10.00	55	-0.1	7	2863
157	598693	6739821	3.579	-10.00	112	-0.1	4	2523
158	598707	6739784	3.618	-10.00	191	-0.1	5	2329
160	598732	6739726	3.683	-10.00	159	-0.1	4	3064
161	598754	6739699	3.718	-10.00	153	-0.1	2	2256
163	598767	6739663	3.756	-10.00	191	-0.1	5	2639
164	598784	6739651	3.777	-10.00	206	-0.1	3	2568
165	598817	6739641	3.812	-10.00	172	-0.1	3	3554
166	598842	6739629	3.839	-10.00	102	-0.1	3	2881
168	598890	6739606	3.893	-10.00	120	-0.1	3	2404
169	598899	6739598	3.905	-10.00	190	-0.1	3	2400
172	598929	6739586	4.030	-10.00	116	-0.1	4	1984
175	598963	6739556	4.192	-10.00	139	-0.1	2	2905
178	598978	6739521	4.259	-10.00	181	-0.1	3	2597
180	599012	6739490	4.309	-10.00	110	-0.1	3	2611
181	599029	6739489	4.326	-10.00	119	-0.1	3	2788
184	599046	6739420	4.419	-10.00	148	-0.1	3	1516
187	599061	6739398	4.477	-10.00	179	-0.1	3	3228
190	599044	6739355	4.530	-10.00	140	-0.1	3	2725
196	599007	6739274	4.638	-10.00	186	-0.1	3	1984
199	598995	6739230	4.686	-10.00	222	-0.1	4	3102
202	598975	6739202	4.741	-10.00	149	-0.1	3	2202
205	598944	6739174	4.787	-10.00	202	-0.1	4	2766
208	598926	6739126	4.839	-10.00	211	-0.1	4	3222
211	598914	6739041	4.934	-10.00	262	-0.1	6	2388
214	598899	6738992	4.993	-10.00	152	-0.1	5	2758
217	598881	6738907	5.082	-10.00	130	-0.1	4	2738
219	598825	6738868	5.141	-10.00	121	-0.1	5	2044
221	598830	6738795	5.274	-10.00	174	-0.1	3	2931
223	598846	6738755	5.333	-10.00	194	-0.1	4	2822
225	598886	6738719	5.389	-10.00	131	-0.1	4	2921
226	598900	6738706	5.408	-10.00	193	-0.1	4	2871
229	598917	6738672	5.455	-10.00	149	-0.1	3	3024
232	598894	6738594	5.540	-10.00	195	-0.1	4	1765
234	598868	6738516	5.661	-10.00	103	-0.1	4	2625

Variations of Mn, Nd, Ni, P and Pb concentration (raw data) within oven dried tissues (leaves) from the *E. camaldulensis* sampled along (Raceourse Creek) Tibooburra.

ELEMENTS	Eastings	Northings	Cum Dist	Mn ppm	Nd ppm	Ni ppm	P ppm	Pb ppm
DETECTION LIMIT			km	1	0.01	1	20	2
METHOD				ICP-OES	ICP-MS	ICP-OES	ICP-OES	ICP-MS
1	598621	6742653	0.000	164	0.08	3	1558	-2
3	598614	6742622	0.035	264	0.10	4	1161	-2
4	598621	6742574	0.084	179	0.12	4	1522	-2
5	598662	6742503	0.166	268	0.13	3	1146	-2
6	598710	6742412	0.264	223	0.10	2	1123	-2
7	598765	6742297	0.397	142	0.11	3	1665	-2
8	598736	6742283	0.429	126	0.08	2	1437	-2
10	598735	6742235	0.477	171	0.12	3	2297	-2
13	598716	6742148	0.575	186	0.08	2	1018	-2
14	598724	6742131	0.594	142	0.09	2	1482	-2
15	598738	6742088	0.639	97	0.07	2	1050	-2
16	598737	6742044	0.683	179	0.10	2	1000	-2
19	598738	6741987	0.749	290	0.10	5	1694	-2
22	598740	6741959	0.787	123	0.06	2	970	-2
29	598730	6741899	0.897	104	0.05	3	1546	-2
32	598703	6741868	0.951	245	0.07	3	1596	-2
37	598673	6741815	1.045	241	0.07	2	1718	-2
40	598673	6741756	1.128	95	0.07	1	1301	-2
41	598656	6741736	1.165	108	0.08	2	1496	-2
43	598650	6741712	1.190	188	0.07	2	1243	-2
46	598638	6741658	1.273	148	0.07	2	1452	-2
48	598636	6741635	1.300	189	0.08	3	3166	-2
49	598634	6741600	1.338	171	0.07	2	2189	-2
52	598629	6741563	1.379	344	0.11	3	2032	-2
54	598629	6741536	1.410	150	0.08	3	973	-2
55	598617	6741525	1.440	127	0.08	3	1050	-2
58	598603	6741494	1.503	169	0.06	2	1596	-2
59	598600	6741453	1.544	100	0.09	2	1766	-2
61	598603	6741405	1.601	88	0.06	3	1612	-2
67	598590	6741348	1.685	73	0.08	4	1385	-2
70	598583	6741275	1.775	140	0.10	2	924	-2
72	598562	6741252	1.806	140	0.09	4	1478	-2
73	598548	6741192	1.868	148	0.09	4	1177	-2
76	598537	6741150	1.943	157	0.08	2	1686	-2
79	598529	6741136	1.985	75	0.05	2	1337	-2
82	598523	6741106	2.034	120	0.07	2	1005	-2
85	598530	6741074	2.102	125	0.06	2	1057	-2
88	598558	6741036	2.154	89	0.07	2	1129	-2
91	598549	6740994	2.212	96	0.11	3	1048	-2
94	598535	6740958	2.259	116	0.11	3	778	-2
97	598549	6740903	2.321	113	0.05	4	1255	-2
98	598559	6740892	2.336	96	0.05	3	922	-2
100	598572	6740842	2.388	95	0.11	5	1035	-2
103	598599	6740805	2.436	105	0.07	4	1268	-2
106	598595	6740777	2.492	70	0.07	3	1099	-2
108	598619	6740753	2.529	239	0.10	2	841	-2
109	598621	6740718	2.564	124	0.07	4	831	-2
112	598648	6740675	2.615	176	0.08	3	1058	-2
115	598638	6740612	2.680	115	0.05	4	670	-2
118	598617	6740582	2.721	246	0.10	3	861	-2

Continued: Variations of Mn, Nd, Ni, P and Pb concentration (raw data) within oven dried tissues (leaves) from the *E. camaldulensis* sampled along (Raceourse Creek) Tibooburra.

ELEMENTS	Eastings	Northings	Cum Dist	Mn ppm	Nd ppm	Ni ppm	P ppm	Pb ppm
DETECTION LIMIT			km	1	0.01	1	20	2
METHOD				ICP-OES	ICP-MS	ICP-OES	ICP-OES	ICP-MS
121	598613	6740533	2.785	124	0.09	2	1123	-2
123	598591	6740490	2.837	72	0.05	3	669	-2
124	598584	6740452	2.875	246	0.06	2	999	-2
125	598595	6740426	2.903	228	0.10	2	742	-2
127	598614	6740376	2.958	190	0.10	2	1342	-2
130	598628	6740322	3.017	600	0.12	2	1255	-2
133	598625	6740285	3.056	126	0.09	3	1574	-2
139	598644	6740243	3.127	110	0.11	5	710	-2
141	598638	6740179	3.197	112	0.05	4	856	-2
143	598653	6740128	3.253	200	0.07	4	920	-2
145	598649	6740081	3.302	280	0.08	4	808	-2
148	598651	6740022	3.362	146	0.09	3	721	-2
151	598662	6739981	3.411	287	0.13	3	983	-2
154	598672	6739881	3.514	317	0.15	4	877	-2
157	598693	6739821	3.579	381	0.13	4	1519	-2
158	598707	6739784	3.618	211	0.14	6	1425	-2
160	598732	6739726	3.683	214	0.15	4	905	-2
161	598754	6739699	3.718	411	0.13	4	837	-2
163	598767	6739663	3.756	188	0.08	4	965	-2
164	598784	6739651	3.777	87	0.11	3	866	-2
165	598817	6739641	3.812	226	0.12	3	972	-2
166	598842	6739629	3.839	134	0.10	3	1124	-2
168	598890	6739606	3.893	124	0.09	4	735	-2
169	598899	6739598	3.905	133	0.10	3	725	-2
172	598929	6739586	4.030	165	0.12	3	1026	-2
175	598963	6739556	4.192	184	0.10	2	654	-2
178	598978	6739521	4.259	71	0.12	3	884	-2
180	599012	6739490	4.309	159	0.09	3	901	-2
181	599029	6739489	4.326	119	0.12	3	855	-2
184	599046	6739420	4.419	183	0.09	3	846	-2
187	599061	6739398	4.477	148	0.13	3	1015	-2
190	599044	6739355	4.530	169	0.11	5	736	-2
196	599007	6739274	4.638	121	0.14	3	986	-2
199	598995	6739230	4.686	79	0.16	2	1075	-2
202	598975	6739202	4.741	111	0.12	2	890	-2
205	598944	6739174	4.787	194	0.15	4	1119	-2
208	598926	6739126	4.839	179	0.15	4	1418	-2
211	598914	6739041	4.934	210	0.20	5	1214	-2
214	598899	6738992	4.993	187	0.13	5	1840	-2
217	598881	6738907	5.082	389	0.15	3	1000	-2
219	598825	6738868	5.141	153	0.11	3	1106	-2
221	598830	6738795	5.274	229	0.14	3	1805	-2
223	598846	6738755	5.333	151	0.14	4	1525	-2
225	598886	6738719	5.389	270	0.10	3	1059	-2
226	598900	6738706	5.408	147	0.14	4	1121	-2
229	598917	6738672	5.455	153	0.12	3	1541	-2
232	598894	6738594	5.540	140	0.11	3	1081	-2
234	598868	6738516	5.661	93	0.08	3	953	-2

Variations of S, Sr and Zn concentration (raw data) within oven dried tissues (leaves) from the *E. camaldulensis* sampled along (Raceourse Creek) Tibooburra.

ELEMENTS	Eastings	Northings	Cum Dist	S ppm	Sr ppm	Zn ppm
DETECTION LIMIT			km	10	0.05	1
METHOD				ICP-OES	ICP-MS	ICP-OES
1	598621	6742653	0.000	1206	70.26	34
3	598614	6742622	0.035	1019	113.04	15
4	598621	6742574	0.084	1027	94.30	38
5	598662	6742503	0.166	857	76.02	22
6	598710	6742412	0.264	1100	191.84	20
7	598765	6742297	0.397	1066	63.06	16
8	598736	6742283	0.429	1074	92.26	23
10	598735	6742235	0.477	1025	74.50	35
13	598716	6742148	0.575	941	131.02	29
14	598724	6742131	0.594	1007	113.88	26
15	598738	6742088	0.639	1035	65.66	11
16	598737	6742044	0.683	1142	83.41	16
19	598738	6741987	0.749	1228	63.49	37
22	598740	6741959	0.787	1066	90.99	19
29	598730	6741899	0.897	1028	54.13	28
32	598703	6741868	0.951	1084	93.49	28
37	598673	6741815	1.045	959	115.15	14
40	598673	6741756	1.128	1002	80.60	14
41	598656	6741736	1.165	948	60.58	23
43	598650	6741712	1.190	1104	55.59	18
46	598638	6741658	1.273	993	105.83	23
48	598636	6741635	1.300	1165	61.45	25
49	598634	6741600	1.338	993	66.46	37
52	598629	6741563	1.379	1080	92.24	22
54	598629	6741536	1.410	1122	97.55	22
55	598617	6741525	1.440	1163	70.95	26
58	598603	6741494	1.503	1103	104.33	24
59	598600	6741453	1.544	994	156.03	21
61	598603	6741405	1.601	913	113.25	20
67	598590	6741348	1.685	1012	73.96	29
70	598583	6741275	1.775	982	83.15	18
72	598562	6741252	1.806	1080	77.24	17
73	598548	6741192	1.868	1291	49.60	14
76	598537	6741150	1.943	1036	58.40	15
79	598529	6741136	1.985	927	65.14	18
82	598523	6741106	2.034	883	86.76	16
85	598530	6741074	2.102	883	62.34	20
88	598558	6741036	2.154	1203	111.13	13
91	598549	6740994	2.212	1189	65.17	19
94	598535	6740958	2.259	987	86.29	16
97	598549	6740903	2.321	1270	89.50	18
98	598559	6740892	2.336	1143	64.27	14
100	598572	6740842	2.388	1124	47.75	22
103	598599	6740805	2.436	1065	97.40	22
106	598595	6740777	2.492	977	111.61	19
108	598619	6740753	2.529	939	73.06	12
109	598621	6740718	2.564	1021	53.15	16
112	598648	6740675	2.615	1227	125.01	36
115	598638	6740612	2.680	972	82.27	19
118	598617	6740582	2.721	988	79.64	16

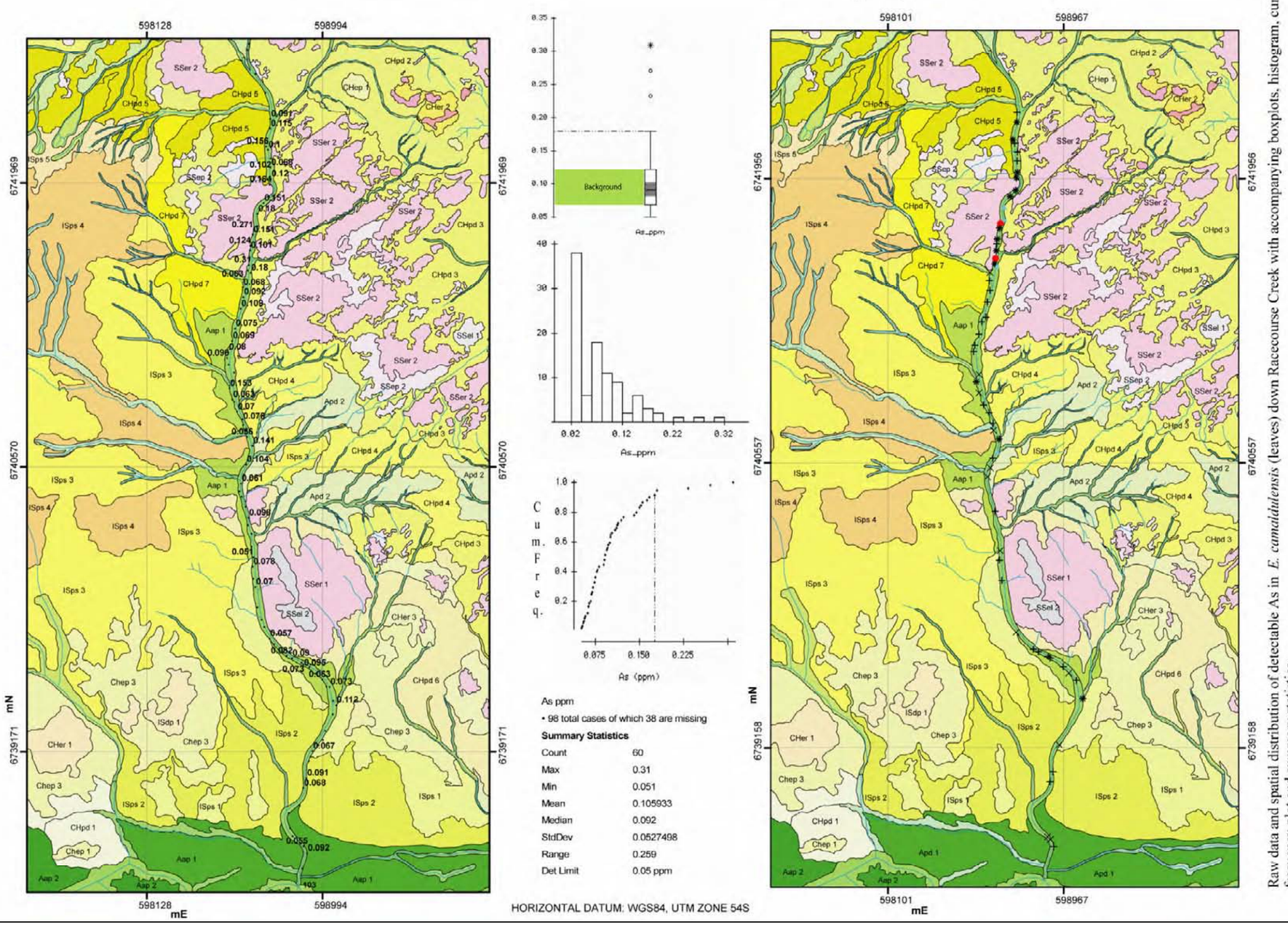
Variations of S, Sr and Zn concentration (raw data) within oven dried tissues (leaves) from the *E. camaldulensis* sampled along (Raceourse Creek) Tibooburra.

ELEMENTS	Eastings	Northings	Cum Dist	S ppm	Sr ppm	Zn ppm
DETECTION LIMIT			km	10	0.05	1
METHOD				ICP-OES	ICP-MS	ICP-OES
121	598613	6740533	2.785	1110	72.51	20
123	598591	6740490	2.837	805	84.80	13
124	598584	6740452	2.875	1166	40.29	15
125	598595	6740426	2.903	1000	102.57	13
127	598614	6740376	2.958	1167	74.91	18
130	598628	6740322	3.017	1230	86.07	25
133	598625	6740285	3.056	1093	74.61	29
139	598644	6740243	3.127	1203	116.64	80
141	598638	6740179	3.197	1104	88.03	18
143	598653	6740128	3.253	1206	70.20	19
145	598649	6740081	3.302	1092	100.95	25
148	598651	6740022	3.362	1069	73.25	16
151	598662	6739981	3.411	1037	74.65	21
154	598672	6739881	3.514	996	95.92	25
157	598693	6739821	3.579	1013	101.55	23
158	598707	6739784	3.618	1118	54.31	41
160	598732	6739726	3.683	1024	92.76	23
161	598754	6739699	3.718	958	74.45	26
163	598767	6739663	3.756	1027	165.70	39
164	598784	6739651	3.777	1084	49.25	29
165	598817	6739641	3.812	1445	98.48	17
166	598842	6739629	3.839	1229	46.05	27
168	598890	6739606	3.893	1404	64.91	28
169	598899	6739598	3.905	1231	67.70	23
172	598929	6739586	4.030	1314	47.54	29
175	598963	6739556	4.192	1044	99.43	19
178	598978	6739521	4.259	1267	57.23	28
180	599012	6739490	4.309	1107	86.69	21
181	599029	6739489	4.326	1464	65.12	26
184	599046	6739420	4.419	1256	102.26	26
187	599061	6739398	4.477	1113	107.09	39
190	599044	6739355	4.530	968	78.89	22
196	599007	6739274	4.638	1234	42.13	35
199	598995	6739230	4.686	1165	61.46	41
202	598975	6739202	4.741	990	63.00	30
205	598944	6739174	4.787	1176	85.61	33
208	598926	6739126	4.839	1270	78.75	30
211	598914	6739041	4.934	1189	53.11	29
214	598899	6738992	4.993	1282	70.35	33
217	598881	6738907	5.082	1105	88.60	22
219	598825	6738868	5.141	1100	63.18	30
221	598830	6738795	5.274	1270	58.14	41
223	598846	6738755	5.333	1143	90.40	60
225	598886	6738719	5.389	1114	66.26	53
226	598900	6738706	5.408	1550	103.95	28
229	598917	6738672	5.455	1169	77.65	27
232	598894	6738594	5.540	869	52.63	21
234	598868	6738516	5.661	1153	51.49	23

APPENDIX F

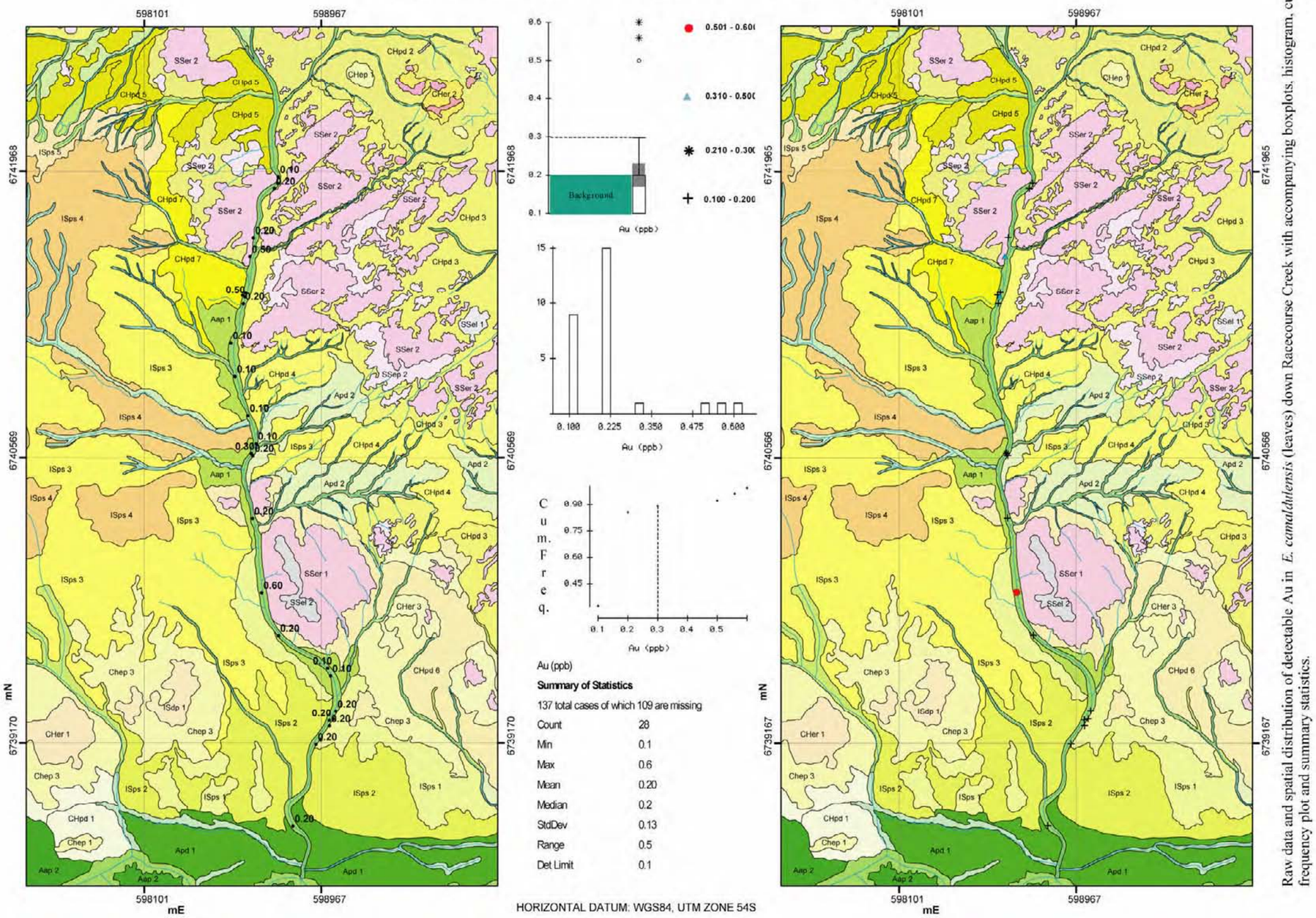
Racecourse creek (Tibooburra) *E. camaldulensis* biogeochemical maps

E. camaldulensis (leaves) Biogeochemistry
Racecourse Creek Tibooburra W/NSW - (As)



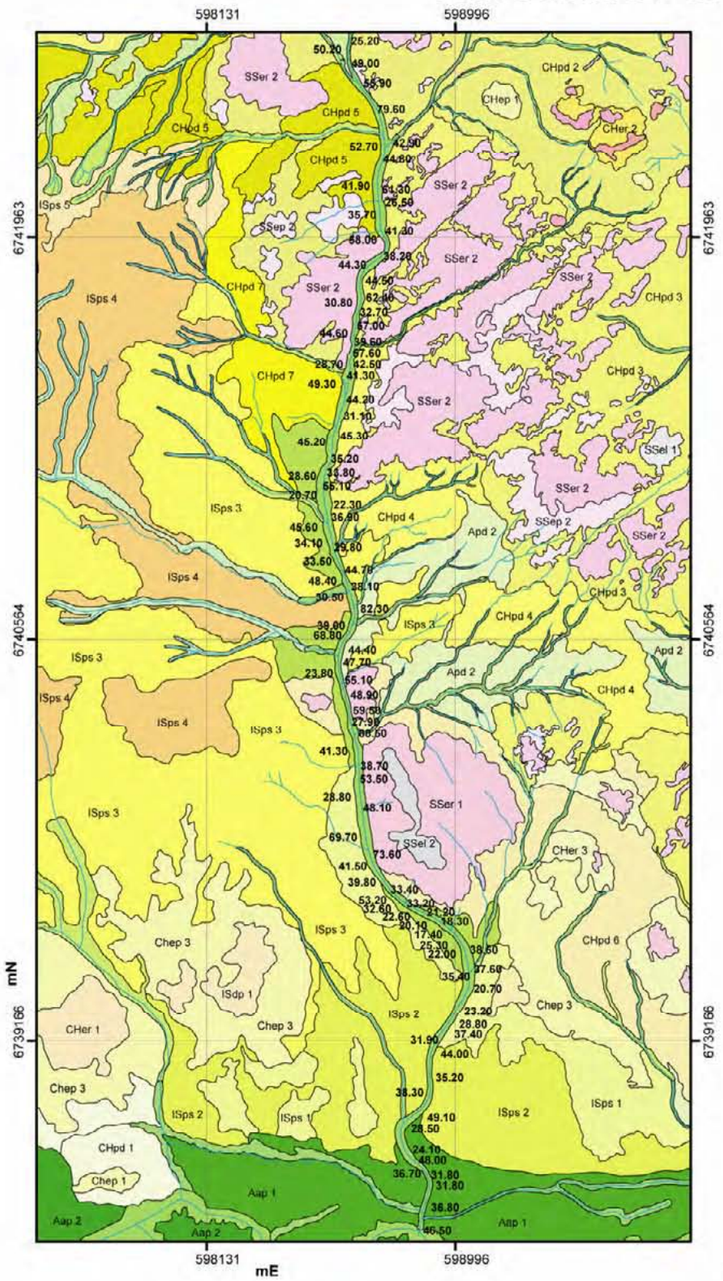
Raw data and spatial distribution of detectable As in *E. camaldulensis* (leaves) down Racecourse Creek with accompanying boxplots, histogram, cumulative frequency plot and summary statistics.

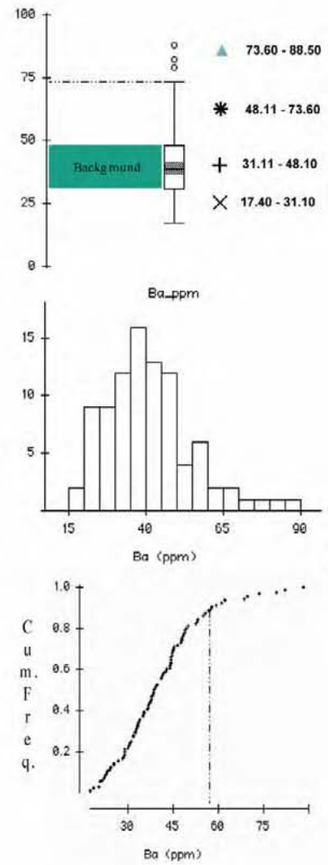
E. camaldulensis (leaves) Biogeochemistry
Racecourse Creek Tibooburra W/NSW - (Au)



Raw data and spatial distribution of detectable Au in *E. camaldulensis* (leaves) down Racecourse Creek with accompanying boxplots, histogram, cumulative frequency plot and summary statistics.

E. camaldulensis (leaves) Biogeochemistry
Racecourse Creek Tibooburra W/NSW - (Ba)

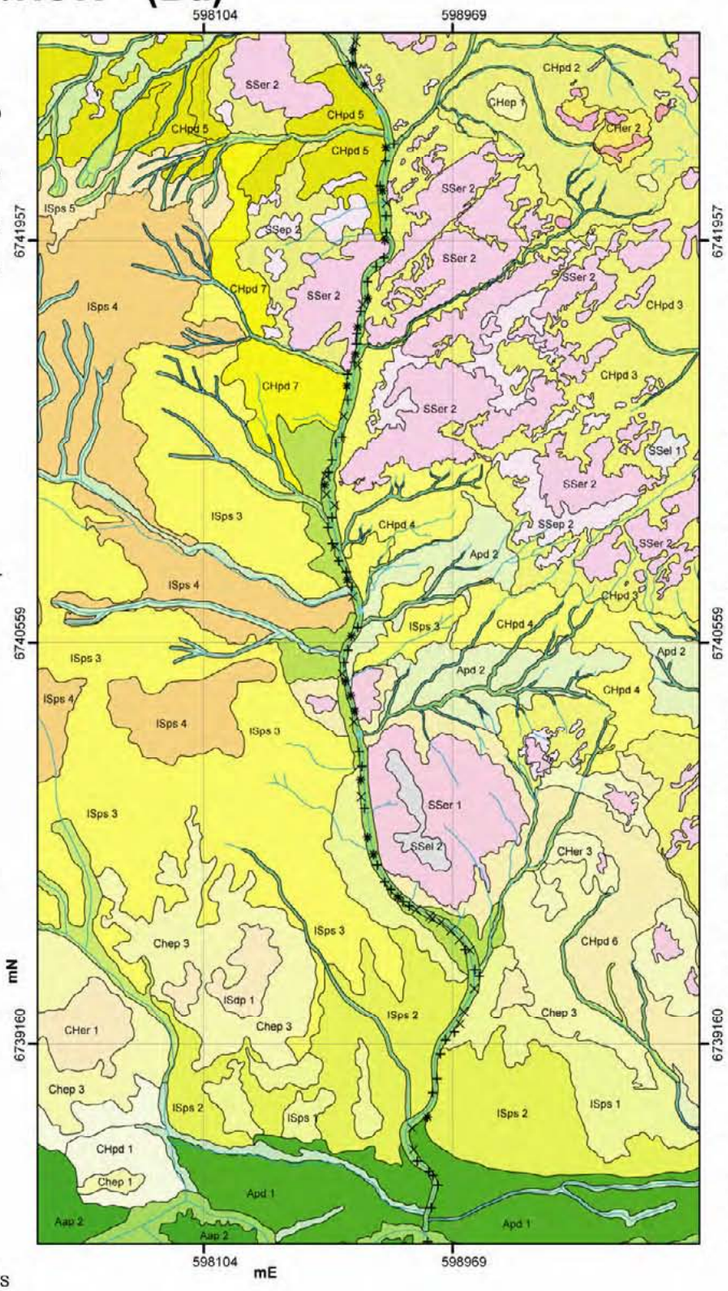




Ba ppm

Summary Statistics

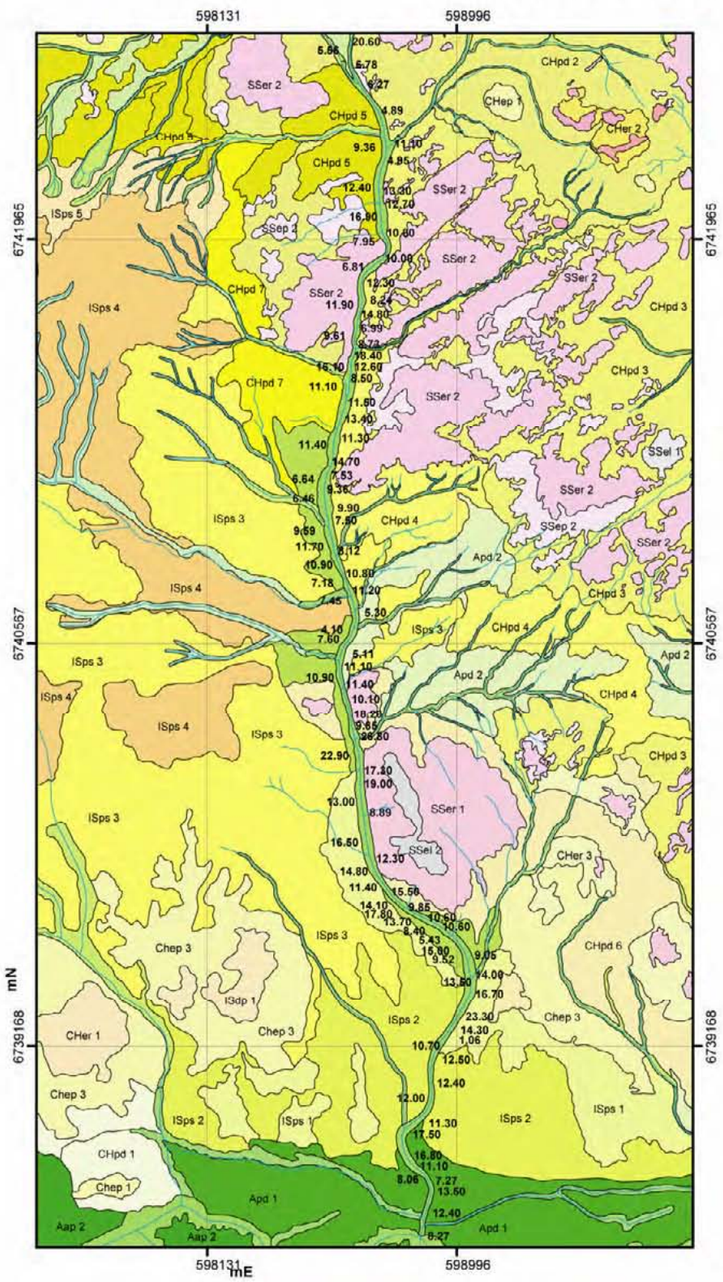
Count	98
Max	88.5
Min	17.4
Mean	40.8796
Median	38.85
StdDev	14.2142
Range	71.1
Det Limit	10 ppm

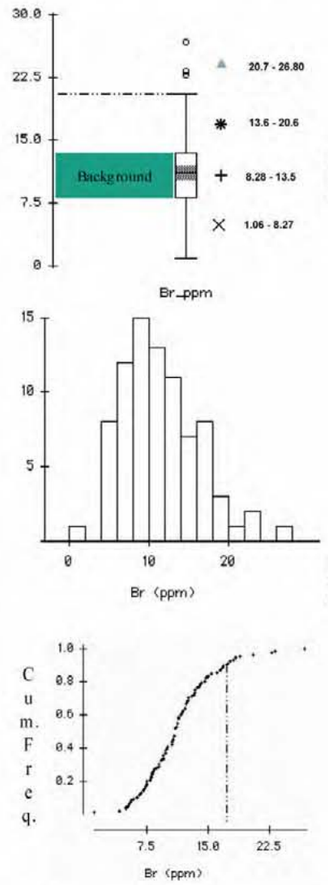


Raw data and spatial distribution of detectable Ba in *E. camaldulensis* (leaves) down Racecourse Creek with accompanying boxplots, histogram, cumulative frequency plot and summary statistics.

HORIZONTAL DATUM: WGS84, UTM ZONE 54S

E. camaldulensis (leaves) Biogeochemistry
Racecourse Creek Tibooburra W/NSW - (Br)

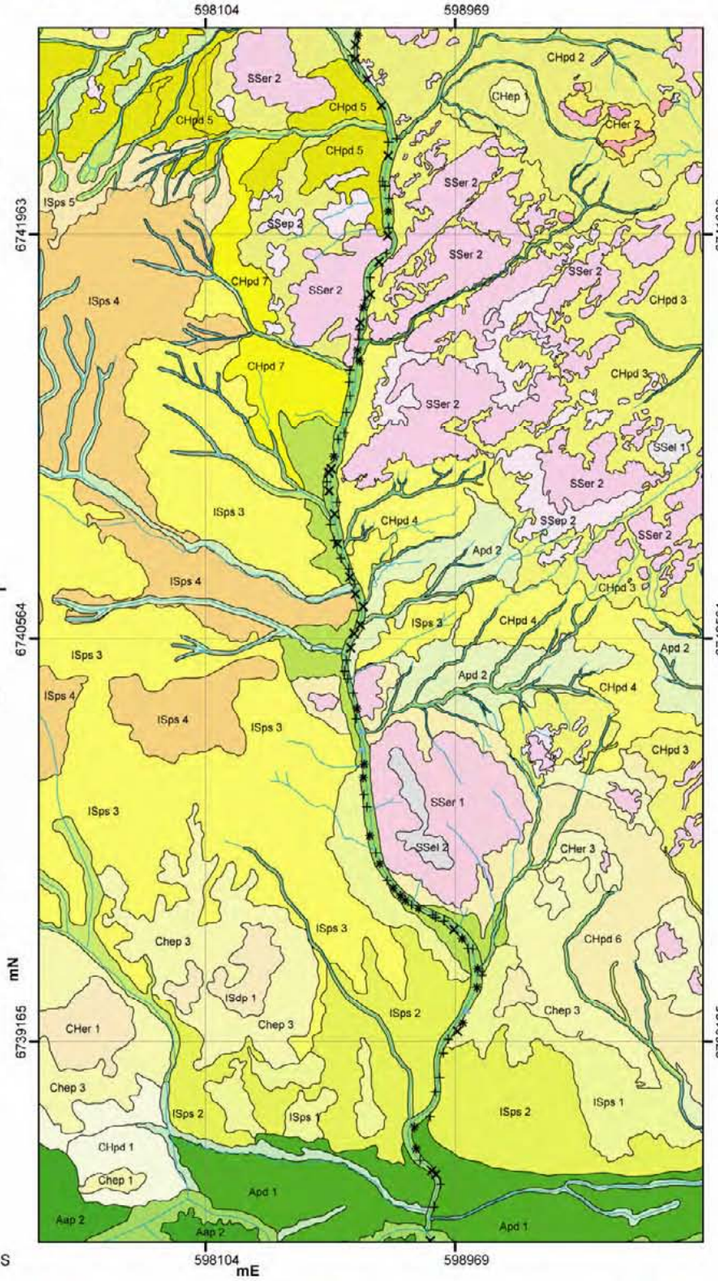




m

Summary Statistics

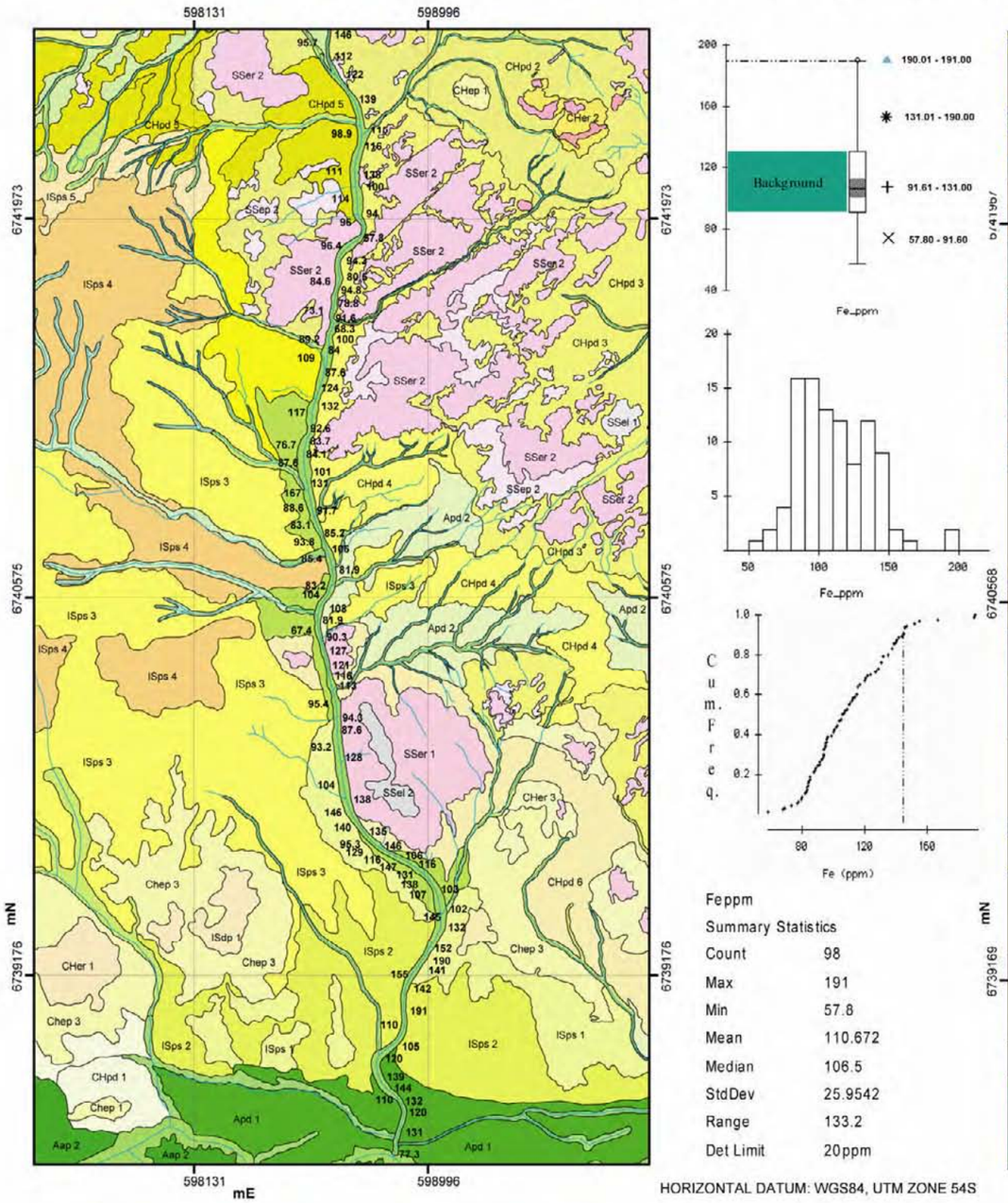
Count	98
Max	26.8
Min	1.06
Mean	11.4094
Median	11.1
StdDev	4.3915
Range	25.74
Det Limit	0.05 ppm

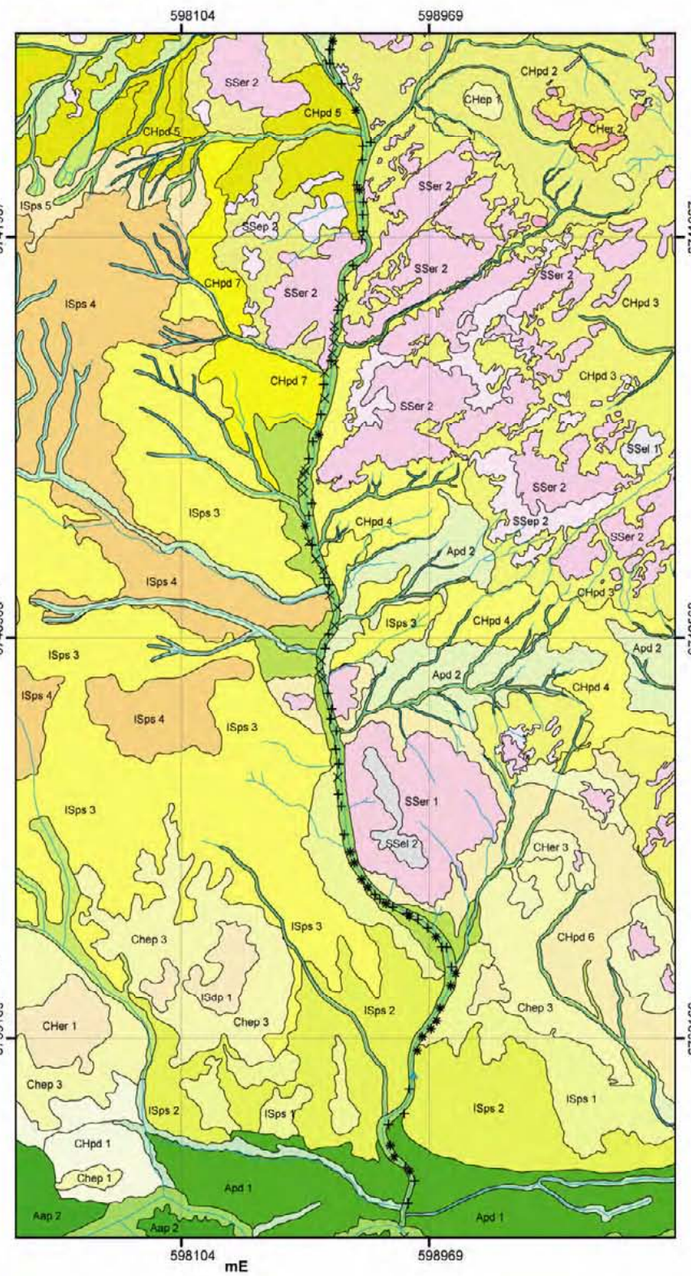


HORIZONTAL DATUM: WGS84, UTM ZONE 54S

Raw data and spatial distribution of detectable Br in *E. camaldulensis* (leaves) down Racecourse Creek with accompanying boxplots, histogram, cumulative frequency plot and summary statistics.

E. camaldulensis (leaves) Biogeochemistry
Racecourse Creek Tibooburra W/NSW - (Fe)





Feppm

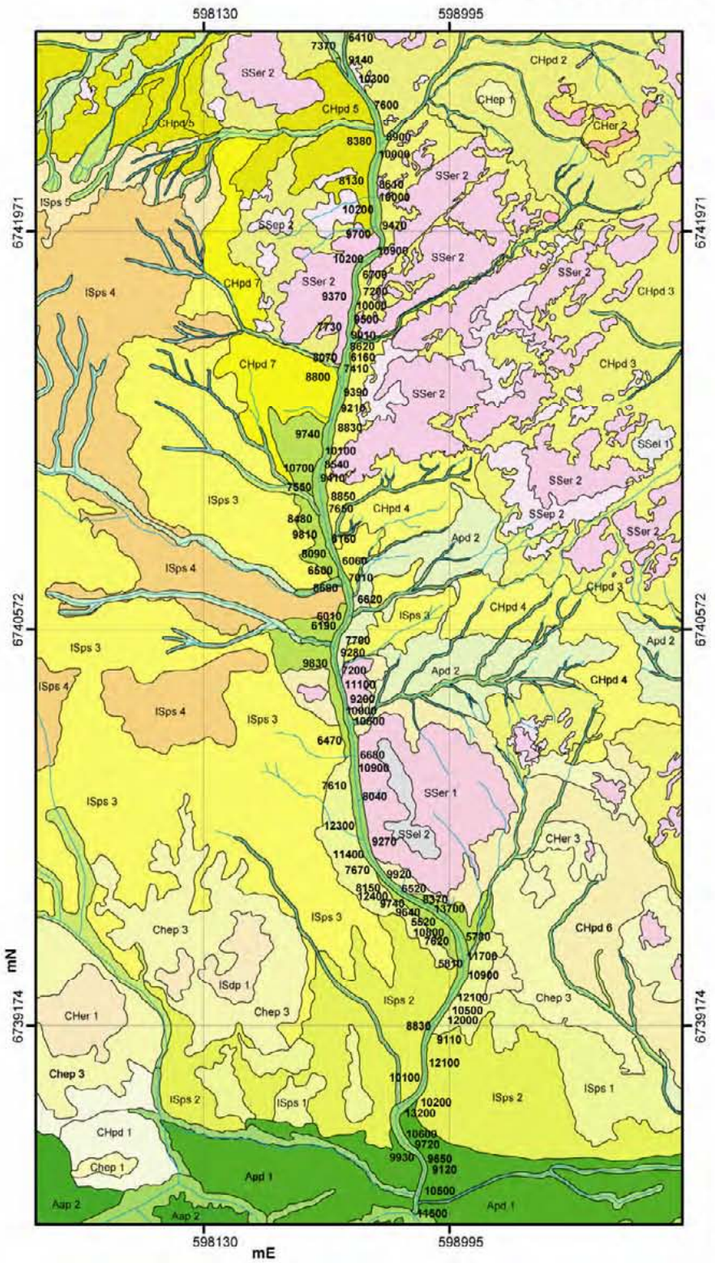
Summary Statistics

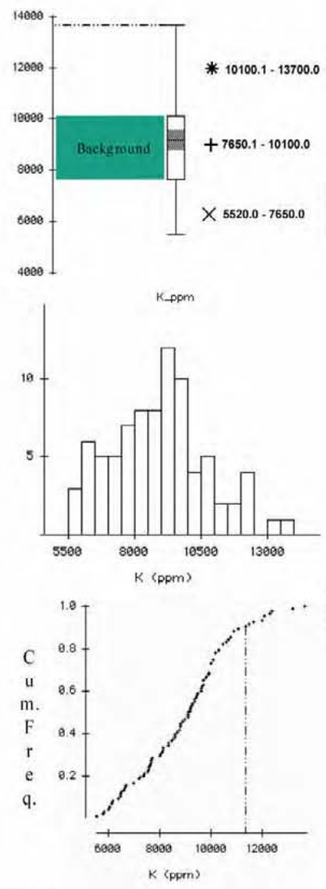
Count	98
Max	191
Min	57.8
Mean	110.672
Median	106.5
StdDev	25.9542
Range	133.2
Det Limit	20ppm

HORIZONTAL DATUM: WGS84, UTM ZONE 54S

Raw data and spatial distribution of detectable Fe in *E. camaldulensis* (leaves) down Racecourse Creek with accompanying boxplots, histogram, cumulative frequency plot and summary statistics.

E. camaldulensis (leaves) Biogeochemistry
Racecourse Creek Tibooburra W/NSW - (K)

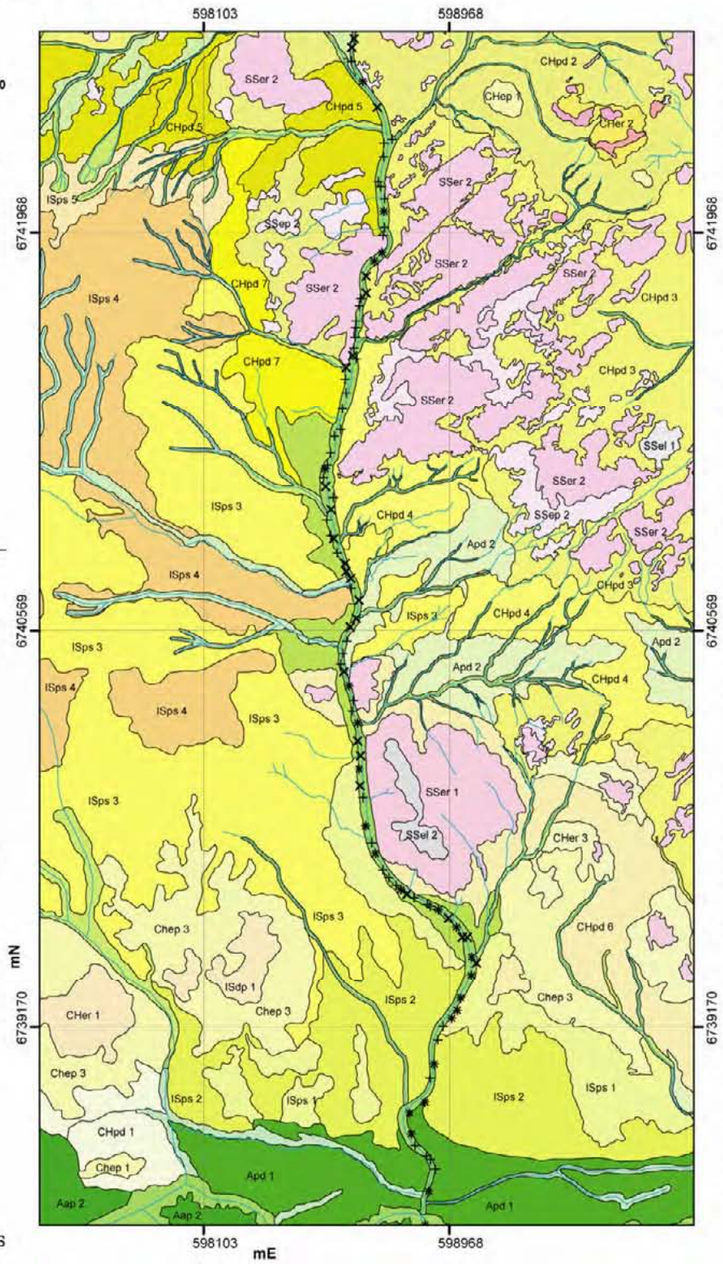




K ppm

Summary Statistics

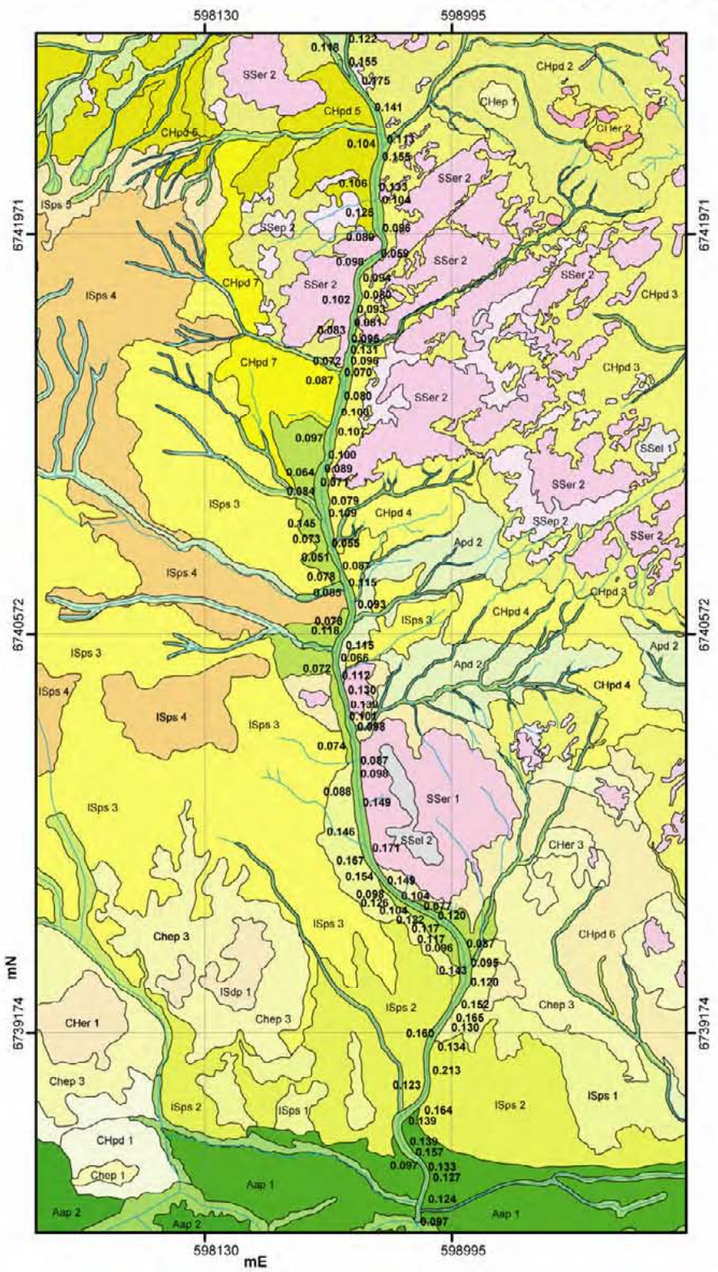
Count	98
Max	13700
Min	5520
Mean	9020.31
Median	9170
StdDev	1797.78
Range	8180
Det Limit	500 ppm

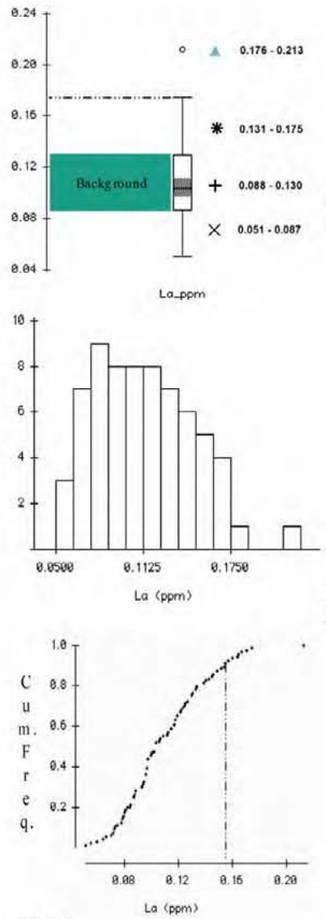


HORIZONTAL DATUM: WGS84, UTM ZONE 54S

Raw data and spatial distribution of detectable K in *E. camaldulensis* (leaves) down Racecourse Creek with accompanying boxplots, histogram, cumulative frequency plot and summary statistics.

E. camaldulensis (leaves) Biogeochemistry
Racecourse Creek Tibooburra W/NSW - (La)



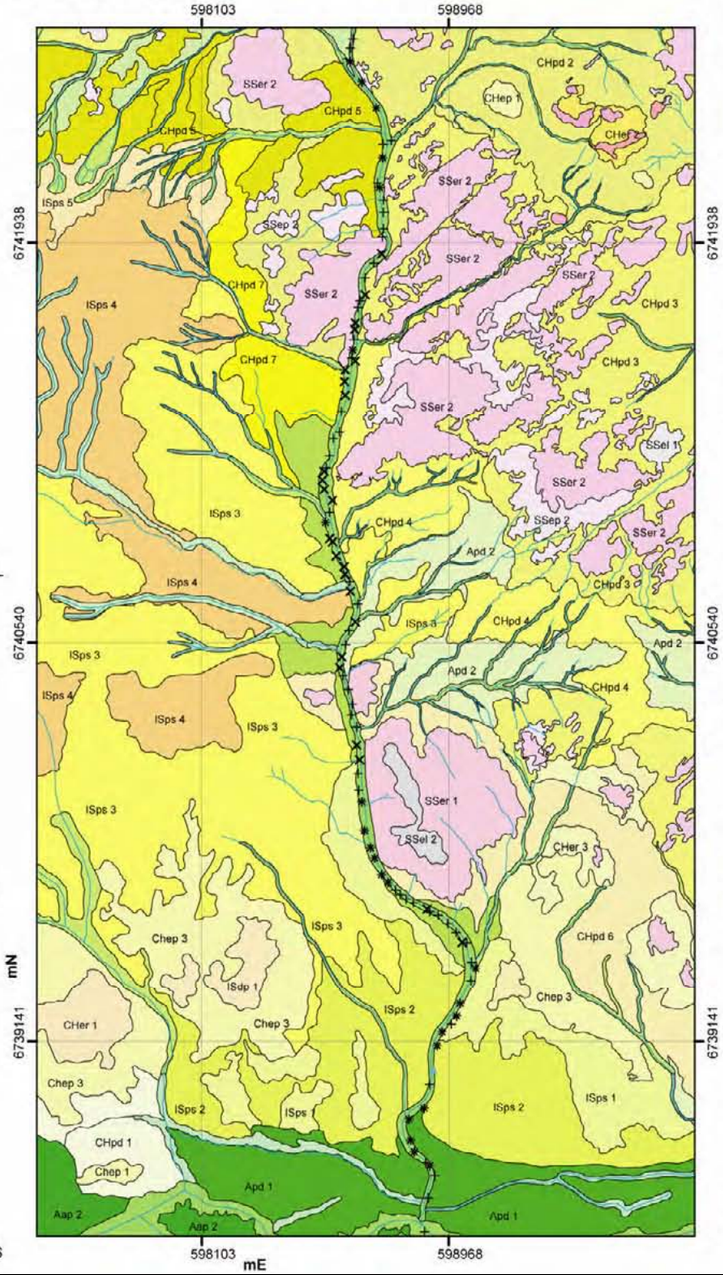


Lappm

Summary Statistics

Count	98
Max	0.213
Min	0.051
Mean	0.110439
Median	0.104
StdDev	0.0308291
Range	0.162
Det Limit	0.02ppm

HORIZONTAL DATUM: WGS84, UTM ZONE 54S



Raw data and spatial distribution of detectable La in *E. camaldulensis* (leaves) down Racecourse Creek with accompanying boxplots, histogram, cumulative frequency plot and summary statistics.