

Transition metal availability to speleothems controlled by organic binding ligands

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Supplementary Information

The Supplementary Information includes:

- Table S-1
- Figure S-1

Supplementary Table

Table S-1 Results of AdCSV measurements on cave water samples.

Sample name	Date	Rep	Method	pH	Cu [nM]	L [nM]	error	logK	error	[Cu _{XIN}]	Cu ²⁺ [nM]	Cu' [nM]
WP1-1	18/10/2016	1	unfiltered	8.3	2.72	56.4	9.6	13.8	0.10	4.5E-05	7.7E-07	4.5E-05
WP1-1	20/04/2017	1	unfiltered	8	3.50	42.4	7.8	13.8	0.12	8.3E-05	1.3E-06	8.4E-05
WP1-1	20/04/2017	2	unfiltered	8	3.50	38.0	7.6	14.2	0.16	4.5E-05	7.1E-07	4.6E-05
WP1-1	20/04/2017	3	filtered	8	3.50	39.8	10.7	14.1	0.21	7.6E-05	1.2E-06	7.7E-05
WP1-2	18/10/2016	1	unfiltered	7.9	1.88	41.6	8.3	13.9	0.12	3.8E-05	6.3E-07	3.8E-05
WP1-2	18/10/2016	2	unfiltered	7.9	1.88	69.7	19.5	13.7	0.17	3.1E-05	5.1E-07	3.1E-05
WP1-2	16/11/2016	1	unfiltered	8.3	0.45	57.1	10.9	13.6	0.12	1.2E-05	2.0E-07	1.2E-05
WP1-2	21/03/2017	1	unfiltered	8.1	25.91	79.7	20.3	14.2	0.21	6.2E-05	8.4E-07	6.3E-05
WP1-2	21/03/2017	2	filtered	8.1	25.91	42.7	7.9	15.3	0.31	5.6E-05	7.6E-07	5.7E-05
WP1-2	20/04/2017	1	unfiltered	8.1	5.75	49.4	14.2	13.9	0.24	1.2E-04	1.5E-06	1.2E-04
WP1-2	20/04/2017	2	unfiltered	8.1	5.75	19.1	4.4	14.9	0.26	4.6E-05	5.9E-07	4.7E-05
WP1-2	20/04/2017	3	filtered	8.1	5.75	18.3	4.1	14.6	0.22	8.6E-05	1.1E-06	8.7E-05
WP1-3	18/10/2016	1	unfiltered	8.1	0.93	32.0	12.0	13.4	0.20	7.6E-05	1.2E-06	7.7E-05
WP1-3	16/11/2016	1	unfiltered	8.3	1.36	49.7	9.2	13.8	0.14	4.5E-05	4.9E-07	4.5E-05
WP1-3	16/11/2016	2	unfiltered	8.3	1.36	57.1	12.3	13.6	0.16	1.8E-05	2.0E-07	1.8E-05
WP1-3	15/12/2016	1	unfiltered	8.2	0.69	50.6	9.1	13.7	0.11	2.3E-05	2.7E-07	2.3E-05
WP1-3	21/03/2017	1	unfiltered	8.1	8.76	59.0	8.3	13.8	0.11	8.8E-05	1.4E-06	8.9E-05
WP1-3	21/03/2017	2	unfiltered	8.1	8.76	33.9	9.3	14.6	0.22	5.2E-05	8.2E-07	5.2E-05



WP1-3	20/04/2017	1	unfiltered	8	4.38	57.3	19.3	13.7	0.24	1.3E-04	1.8E-06	1.4E-04
WP1-3	20/04/2017	2	unfiltered	8	4.38	59.0	10.0	13.8	0.15	1.0E-04	1.4E-06	1.1E-04
WP1-3	20/04/2017	3	filtered	8	4.38	46.6	19.2	13.6	0.27	2.0E-04	2.7E-06	2.0E-04
WP Stream	21/03/2017	1	unfiltered	8	21.48	41.3	5.4	14.8	0.14	1.2E-04	1.8E-06	1.2E-04
WP Stream	21/03/2017	2	unfiltered	8	21.48	36.7	4.8	15.0	0.22	1.0E-04	1.6E-06	1.0E-04
WP Stream	21/03/2017	3	filtered	8	21.48	31.4	4.6	15.2	0.27	8.2E-05	1.3E-06	8.3E-05
CC1	Mar-15	1	unfiltered	7.7	1.89	53.4	8.0	14.0	0.10	2.8E-05	4.0E-07	2.9E-05
CC1	Mar-15	2	unfiltered	7.7	1.89	29.3	5.7	14.0	0.12	5.3E-05	7.3E-07	5.3E-05
DC Pool	Mar-15	1	unfiltered	7.9	1.89	54.0	8.9	13.9	0.10	3.3E-05	4.4E-07	3.4E-05
DC Pool	Mar-15	2	unfiltered	7.9	1.89	62.8	10.7	13.9	0.10	3.0E-05	3.9E-07	3.0E-05
DC2	Mar-15	1	unfiltered	7.9	1.10	23.4	1.3	13.9	0.42	3.4E-02	5.7E-04	3.5E-02
HC3	Mar-15	1	unfiltered	7.7	2.20	21.1	6.1	13.7	0.21	1.5E-04	2.2E-06	1.5E-04
HC3	Mar-15	2	unfiltered	7.7	2.20	56.7	21.6	13.8	0.24	4.8E-05	7.0E-07	4.9E-05
HC4	Mar-15	1	unfiltered	7.6	6.46	32.2	10.9	14.0	0.24	1.7E-04	2.8E-06	1.7E-04
HC4	Mar-15	2	unfiltered	7.6	6.46	15.8	3.4	14.5	0.22	1.2E-04	2.0E-06	1.2E-04
HC5	Mar-15	1	unfiltered	7.7	1.89	55.0	12.7	13.8	0.16	4.0E-05	5.6E-07	4.1E-05
HC5	Mar-15	2	unfiltered	7.7	1.89	50.7	12.4	13.5	0.16	8.4E-05	1.2E-06	8.5E-05
NB3	Mar-15	1	unfiltered	7.8	48.50	66.7	6.7	15.4	0.23	5.5E-05	1.0E-06	5.6E-05
NB3	Mar-15	2	unfiltered	7.8	48.50	69.6	4.9	15.1	0.14	1.0E-04	1.9E-06	1.0E-04

Supplementary Figure

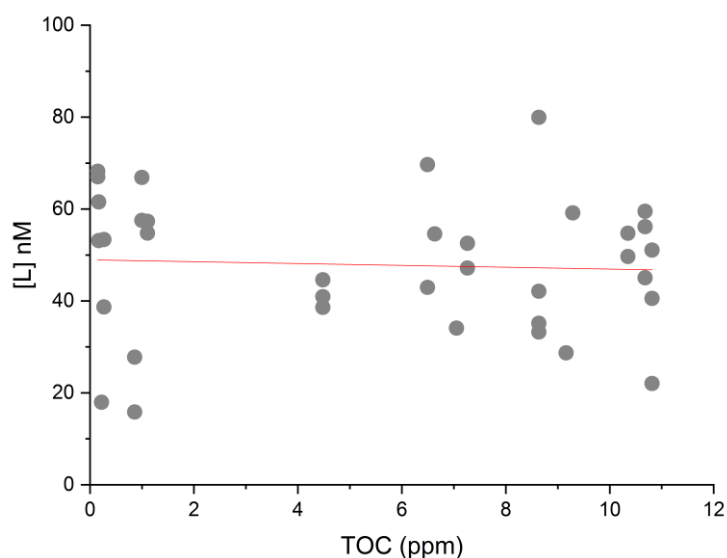


Figure S-1 Scatter plot and linear regression of total organic carbon (TOC) concentration vs. Cu-binding ligand concentration. Data show no correlation.

