

## Article

# Atmospheric Deposition around the Industrial Areas of Milazzo and Priolo Gargallo (Sicily–Italy) – Part B: Trace Elements

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## Supplementary materials

**Table S1.** VWM concentrations ( $\mu\text{g L}^{-1}$ ) for trace elements in both the study areas. Elements with \* are relative to the unfiltered aliquot.

VWM concentrations ( $\mu\text{g L}^{-1}$ )	MEL	SIR	ARP	AUG	PAL	PRI	GAB	LUC	PAV	ARC	MIL
Li	0.088	0.146	0.118	0.117	0.064	0.109	0.134	0.092	0.086	0.121	0.184
Li *	0.131	0.188	0.152	0.144	0.097	0.141	0.179	0.148	0.136	0.152	0.243
Difference (%)	50	29	28	23	52	29	34	60	58	26	32
Al	14.223	17.272	18.259	14.587	22.713	14.784	17.080	14.412	14.394	13.931	14.426
Al *	143.682	101.841	70.822	60.536	85.529	47.222	82.166	92.488	96.039	114.664	99.689
Difference (%)	910	490	288	315	277	219	381	542	567	723	591
Ti	0.099	0.068	0.118	0.112	0.160	0.153	0.071	0.147	0.085	0.102	0.045
Ti *	1.471	1.112	0.345	0.233	0.518	0.314	0.635	0.467	0.753	0.570	0.446
Difference (%)	1387	1532	194	108	223	105	793	217	786	458	897
V	0.620	0.683	0.686	0.671	0.548	0.613	0.717	0.472	0.524	0.829	0.615
V *	0.795	0.828	0.744	0.738	0.611	0.678	0.776	0.580	0.650	1.053	0.682
Difference (%)	28	21	8	10	11	11	8	23	24	27	11
Cr	0.040	0.052	0.057	0.055	0.034	0.046	0.083	0.033	0.044	0.086	0.050
Cr *	0.145	0.217	0.136	0.116	0.086	0.095	0.183	0.134	0.143	0.198	0.157
Difference (%)	264	313	139	110	150	106	120	305	225	130	217
Mn	2.257	1.258	1.180	1.325	2.372	1.674	2.289	2.579	2.870	2.158	2.468
Mn *	3.698	2.314	1.583	2.215	3.294	2.296	3.061	3.695	4.884	2.929	3.203
Difference (%)	64	84	34	67	39	37	34	43	70	36	30

Fe	3.744	2.096	2.885	4.734	4.886	3.318	4.483	3.321	4.519	3.864	2.182
Fe *	86.867	51.792	25.781	24.078	23.414	14.571	41.254	49.144	38.771	80.386	32.061
Difference (%)	2220	2371	794	409	379	339	820	1380	758	1980	1369
Co	0.031	0.020	0.021	0.019	0.032	0.033	0.030	0.031	0.042	0.034	0.031
Co *	0.057	0.037	0.027	0.026	0.043	0.036	0.042	0.048	0.062	0.051	0.044
Difference (%)	84	85	29	41	34	9	37	55	48	53	41
Ni	0.301	0.220	0.196	0.272	0.126	0.296	0.496	0.177	0.207	0.522	0.187
Ni *	0.362	0.239	0.237	0.240	0.191	0.284	0.435	0.295	0.273	0.557	0.249
Difference (%)	20	9	21	-12	51	-4	-12	66	32	7	33
Cu	0.649	1.331	0.807	1.020	0.678	1.275	2.215	3.371	1.622	1.148	0.898
Cu *	0.947	2.012	0.889	1.015	0.805	1.206	2.033	4.424	1.849	1.133	0.980
Difference (%)	46	51	10	0	19	-5	-8	31	14	-1	9
Zn	10.927	7.564	4.760	7.470	9.214	13.344	14.916	7.306	11.374	12.065	12.393
Zn *	21.735	13.202	6.609	10.884	15.864	23.585	20.488	10.246	15.833	15.650	18.291
Difference (%)	99	75	39	46	72	77	37	40	39	30	48
As	0.077	0.075	0.064	0.070	0.063	0.077	0.118	0.069	0.073	0.083	0.080
As *	0.095	0.090	0.070	0.076	0.078	0.086	0.155	0.081	0.096	0.104	0.094
Difference (%)	23	20	9	9	23	11	31	17	31	25	18
Se	0.131	0.128	0.136	0.117	0.112	0.132	0.124	0.117	0.126	0.123	0.133
Se *	0.206	0.237	0.235	0.209	0.205	0.276	0.242	0.266	0.298	0.255	0.296
Difference (%)	58	86	73	79	82	109	95	128	137	107	122
Rb	0.216	0.227	0.245	0.203	0.162	0.247	0.220	0.175	0.163	0.200	0.234
Rb *	0.237	0.222	0.216	0.175	0.169	0.216	0.222	0.202	0.193	0.206	0.250
Difference (%)	10	-2	-12	-14	4	-12	1	15	19	3	7
Sr	10.834	15.353	13.826	13.664	11.142	11.396	16.861	14.642	13.199	18.772	23.969
Sr *	11.898	19.784	14.651	14.624	9.866	13.208	18.354	19.513	14.858	17.220	29.662
Difference (%)	10	29	6	7	-11	16	9	33	13	-8	24
Mo	0.108	0.194	0.104	0.173	0.123	0.099	0.153	0.101	0.159	0.343	0.172
Mo *	0.179	0.221	0.151	0.204	0.175	0.143	0.174	0.153	0.186	0.205	0.202
Difference (%)	65	14	46	17	42	45	14	51	17	-40	18
Cd	0.016	0.012	0.010	0.011	0.009	0.017	0.019	0.013	0.020	0.017	0.015
Cd *	0.018	0.014	0.009	0.013	0.009	0.017	0.020	0.013	0.021	0.018	0.015
Difference (%)	12	17	-8	23	0	-2	6	3	4	5	-3
Sb	0.046	0.096	0.059	0.066	0.065	0.064	0.088	0.049	0.057	0.107	0.105
Sb *	0.025	0.060	0.038	0.026	0.042	0.051	0.055	0.041	0.042	0.086	0.093
Difference (%)	-45	-37	-35	-60	-35	-20	-37	-16	-26	-20	-12
Cs	0.003	0.002	0.002	0.002	0.002	0.003	0.003	0.003	0.002	0.002	0.002
Cs *	0.007	0.005	0.004	0.003	0.004	0.004	0.005	0.007	0.006	0.006	0.005
Difference (%)	154	111	79	35	109	42	86	109	155	129	143
Ba	3.478	4.388	3.352	10.848	2.353	2.567	5.881	1.591	3.073	4.142	6.446
Ba *	4.420	5.499	4.009	12.789	2.949	2.883	6.170	2.045	3.929	4.549	7.462
Difference (%)	27	25	20	18	25	12	5	29	28	10	16

Tl	0.013	0.010	0.010	0.008	0.009	0.009	0.019	0.022	0.018	0.018	0.015
Tl *	0.013	0.011	0.010	0.009	0.009	0.010	0.019	0.023	0.019	0.019	0.018
Difference (%)	-2	13	1	5	-5	8	0	3	3	2	17
Pb	0.161	0.063	0.103	0.080	0.066	0.169	0.300	0.092	0.257	0.149	0.249
Pb *	0.267	0.190	0.179	0.163	0.146	0.198	0.477	0.165	0.393	0.265	0.525
Difference (%)	66	200	74	103	119	18	59	79	53	78	111
U	0.002	0.003	0.002	0.002	0.003	0.003	0.002	0.002	0.001	0.003	0.002
U *	0.005	0.006	0.003	0.004	0.004	0.004	0.003	0.003	0.004	0.004	0.003
Difference (%)	115	122	43	43	32	51	40	76	192	36	48

**Table S2.** Average crust enrichment factor ( $EF_{\text{crust}}$ ) for 23 trace elements at all the sampling sites. Enrichment values refer to the filtered aliquot; enrichment values refer to the unfiltered aliquot.

ID		Se	Sb	Zn	B	Cd	Cu	Mo	Sr	As	Tl	Ni	V	Pb	Mn	Ba	Li	Co	Rb	Cr	Cs	Al	Fe	Ti
MEL	Filtered	490	71	85	72	54	21	28	9.3	13	6.4	7.4	3.8	5.2	2.7	1.5	1.0	1.2	0.7	0.4	0.2	0.06	0.05	0.01
	Unfiltered	541	41	100	150	41	15	30	6.7	11	3.9	5.1	3.4	3.6	1.5	1.3	1.0	0.9	0.4	0.8	0.2	0.25	0.35	0.09
SIR	Filtered	338	90	35	45	25	31	26	10	7.7	2.6	3.1	3.1	0.8	2.2	1.3	1.0	0.6	0.4	0.4	0.1	0.05	0.02	0.01
	Unfiltered	410	69	38	98	16	23	24	9.3	6.9	2.0	2.1	2.6	1.5	0.6	1.4	1.0	0.5	0.3	0.8	0.1	0.19	0.23	0.03
ARP	Filtered	417	68	35	50	30	25	21	10	8.8	3.6	3.2	4.2	2.9	1.3	1.3	1.0	0.7	0.6	0.5	0.1	0.06	0.02	0.01
	Unfiltered	476	46	27	112	18	15	22	7.3	6.8	2.7	2.4	3.3	2.5	0.6	1.1	1.0	0.5	0.4	0.6	0.1	0.17	0.17	0.02
AUG	Filtered	326	57	44	43	30	26	27	8.7	7.7	2.5	4.1	2.8	1.4	2.0	3.2	1.0	0.6	0.4	0.4	0.1	0.04	0.03	0.01
	Unfiltered	459	45	51	139	25	16	26	7.6	6.7	2.1	2.9	2.8	2.1	1.4	3.3	1.0	0.5	0.3	0.5	0.1	0.16	0.18	0.02
PAL	Filtered	545	127	79	71	39	21	34	12	14	6.4	3.2	4.4	1.9	1.7	1.2	1.0	1.0	0.6	0.4	0.2	0.09	0.05	0.02
	Unfiltered	767	60	87	240	27	17	54	8.4	12	3.9	3.3	3.5	2.5	1.6	1.0	1.0	0.9	0.4	0.5	0.2	0.20	0.16	0.04
PRI	Filtered	523	92	84	58	53	37	22	9.2	13	4.8	5.9	3.7	3.1	1.0	1.2	1.0	0.8	0.9	0.4	0.2	0.08	0.04	0.02
	Unfiltered	732	57	114	170	41	26	27	8.1	11	3.7	4.4	3.3	3.3	1.3	1.1	1.0	0.9	0.6	0.6	0.2	0.20	0.14	0.04
GAB	Filtered	320	73	65	39	35	28	21	11	11	4.7	5.6	3.1	3.3	2.2	1.8	1.0	0.7	0.4	0.5	0.1	0.05	0.03	0.01
	Unfiltered	408	45	60	83	30	19	19	9.5	11	3.7	3.8	2.5	4.6	0.9	1.5	1.0	0.6	0.3	0.8	0.1	0.18	0.20	0.03
LUC	Filtered	408	61	45	54	33	77	22	12	9.5	7.6	2.8	2.5	1.9	2.1	0.7	1.0	0.8	0.4	0.3	0.2	0.05	0.03	0.02
	Unfiltered	556	38	44	145	25	55	22	10	6.8	5.2	2.8	2.1	1.8	1.2	0.6	1.0	0.6	0.3	0.5	0.2	0.17	0.18	0.03
PAV	Filtered	446	73	72	60	58	38	32	13	10	7.1	4.2	3.0	5.2	2.6	1.2	1.0	1.2	0.4	0.4	0.1	0.05	0.05	0.01
	Unfiltered	612	38	68	141	44	25	25	10	8.3	4.8	3.1	2.3	4.8	2.5	1.0	1.0	1.1	0.3	0.6	0.2	0.22	0.22	0.04
ARC	Filtered	382	93	60	41	34	27	49	12	8.5	4.7	8.6	4.2	1.5	2.1	1.2	1.0	0.8	0.4	0.7	0.1	0.04	0.04	0.01
	Unfiltered	453	93	47	111	24	15	30	11	7.7	3.6	4.7	3.9	2.0	0.8	1.2	1.0	0.6	0.3	0.8	0.1	0.19	0.33	0.03
MIL	Filtered	237	56	33	32	20	8.9	17	10	5.9	3.0	1.5	1.7	2.2	0.7	1.0	1.0	0.4	0.3	0.2	0.1	0.03	0.01	0.00
	Unfiltered	330	53	41	73	17	7.6	16	9.0	5.1	2.7	1.5	1.5	3.5	0.6	0.9	1.0	0.4	0.2	0.5	0.1	0.17	0.12	0.02