Table S5. Melt inclusions composition from Bronze Age metallurgical slags of South Ural

№	Object	Sample	Analyses	Concentration, wt. %									Total	Characteristic
				Cu	Fe	As	Sn	Ni	Pb	Ag	S	Se		
1.	Turganik	P25-3sh-1	19196e	92.41	5.95	1.47	–	–	–	–	–	–	99.83	Droplet in glass
2.			19196t	97.16	–	2.81	–	–	–	–	–	–	99.97	Droplet in glass
3.			19196p	86.10	5.03	8.73	–	–	–	–	–	–	99.85	Droplet in glass
4.		P25-6sh	19198b	85.33	2.45	11.31	–	0.19	–	–	–	–	99.28	Inclusions core
5.			19198c	78.53	3.40	–	–	–	–	–	18.24	–	100.16	Inclusions periphery
6.			19198j	74.48	3.33	22.51	–	0.16	–	–	–	–	100.48	Non-oxidized droplets core
7.			19198l	79.86	4.00	16.25	–	–	–	–	–	–	100.12	Droplet in glass
8.	Kamenny Ambar	717-171	717-171-1*	99.77	0.06	–	0.06	0.08	–	–	–	–	99.94	Droplet in glass
9.			717-171-2	99.25	0.51	–	–	0.04	–	–	–	–	99.80	Droplet in glass
10.			717-171-3	98.88	0.92	–	–	0.04	–	–	–	–	99.84	Droplet in glass
11.			717-171-4	98.74	1.03		0.03	0.05	–	–	–	–	99.85	Droplet in glass
12.	Ustye	161y-1677	15225a	18.12	39.31	40.00	–	2.85	–	–	–	–	100.27	Inclusions periphery
13.			15225b	67.69	7.69	1.58	–	–	–	–	23.17	–	100.13	Inclusions core
14.		161y-3261	16097n	70.37	0.36	0.84	25.13	0.16	2.38	–	0.60	–	99.84	Microinclusions in droplet
15.			16097o	96.36	0.18	–	2.44	0.20	–	–	–	–	99.18	Droplet core
16.		161y-5132	16095f	99.20	–	–	–	–	–	–	–	–	99.20	Copper droplet
17.		161y-8216	16098o	66.84	3.05	–	28.97	0.22	–	–	–	–	99.08	Non-oxidized droplets core
18.		161y-9187	16106f	9.13	1.02	45.43	–	44.11	–	–	–	–	99.69	Two-phase inclusion, phase 1
19.			16106g	86.15	1.14	11.88	–	0.57	–	–	–	–	99.74	Two-phase inclusion, phase 2
20.			16106h**	68.55	3.68	24.19	–	1.79	–	–	0.91	–	99.73	One-phase inclusion
21.		161y-10472	15224a	6.84	0.49	–	–	–	–	92.67	–	–	100.00	Inclusion in oxidized droplet
22.			15224c	94.15	5.31	0.68	–	–	–	–	–	–	100.14	Non-oxidized droplets core
23.			15224f	69.51	1.58	29.68	–	–	–	–	–	–	100.77	One-phase inclusion
24.			15224h	5.10	88.38	6.41	–	–	–	–	–	–	99.89	One-phase inclusion
25.			15224j	88.14	4.30	5.74	–	1.66	–	–	–	–	99.84	One-phase inclusion in fayalite
26.		161y-10656	16107a	70.92	0.45	28.51	–	–	–	–	–	–	99.88	Inclusions core
27.			16107b	91.47	0.16	7.77	–	0.78	–	–	–	–	100.18	Inclusions base
28.			16107n	90.96	2.56	5.94	–	–	–	–	0.35	–	99.81	One-phase inclusion
29.		161y-10864	16105a	94.03	2.43	2.33	–	–	–	–	1.17	–	99.96	Inclusions core
30.			16105b	76.90	3.57	–	–	–	–	–	18.95	0.58	100.00	Inclusions periphery
31.			16105s	71.96	0.47	27.65	–	–	–	–	–	–	100.08	Two-phase inclusion, light phase
32.			16105t	91.22	0.52	7.33	–	0.81	–	–	–	–	99.88	Two-phase inclusion, dark phase
33.			16105v	71.83	0.79	27.22	–	–	–	–	–	–	99.84	Arsenic droplet
34.			16105w	75.48	0.55	23.38	–	0.20	–	–	1.01	–	100.62	Arsenic droplet
35.			16105x	78.03	1.84	1.46	–	–	–	–	17.42	1.13	99.88	Inclusions periphery
36.	Sarym-Sakly	w641-10-23	16125e	73.74	4.48	–	–	–	–	–	21.78	–	100.00	Inclusion in glass
37.		w641-30-55	16127h	41.05	26.68	–	–	–	–	–	31.97	–	99.69	Inclusion in glass
38.			16127m	55.07	16.40	–	–	–	–	–	27.08	0.62	99.17	Inclusion in glass
39.		w641-30-85	16129b	28.12	40.77	–	–	–	–	–	30.27	–	99.16	Non-oxidized droplets core
40.			16129f	76.04	2.30	0.66	–	–	–	–	21.00	–	100.00	Non-oxidized droplets core
41.			16129u	50.62	20.42	–	–	0.37	–	–	28.59	–	100.00	Two-phase inclusion, base
42.	Levoberezhnoe (Sintashta II)	Sin II 264	17179i	68.00	8.10	–	–	–	–	–	23.90	–	100.00	Inclusion in glass
43.			17179k	89.92	5.97	4.11	–	–	–	–	–	–	100.00	Inclusion in olivine crystal
44.		Sin II 529	17178a	72.53	4.95	0.24	–	0.58	–	–	21.45	–	99.75	Two-phase inclusion, periphery
45.			17178b	30.14	3.13	38.19		28.54	–	–		–	100.00	Two-phase inclusion, core

46.			17178f	74.83	4.33	0.57		–	–	–	19.95	–	99.68	Three-phase inclusion, phase 1
47.			17178g	77.82	2.95	15.64	–	–	–	–	3.59	–	100.00	Three-phase inclusion, phase 2
48.			17178h	34.78	4.77	36.50	–	23.96	–	–	–	–	100.00	Three-phase inclusion, phase 3
49.			17178k	59.66	13.35	0.82	–	0.32	–	–	25.15	–	99.30	Three-phase inclusion, base
50.			17178l	68.73	7.77	0.35	–	0.18	–	–	22.96	–	100.00	Three-phase inclusion, lamellaes
51.			17178m	27.69	20.25	35.48	–	9.96	–	–	6.63	–	100.00	Three-phase inclusion, interstices
52.		Sin II 709	17177a	68.85	0.49	30.36	–	0.29	–	–	–	–	100.00	Two-phase inclusion, phase 1
53.			17177b	78.81	0.71	–	–	–	–	–	19.79	–	99.31	Two-phase inclusion, phase 2
54.			17177o	95.41	4.59	–	–	–	–	–	–	–	100.00	Inclusion in glass
55.			17177p	83.35	5.90	9.56	–	0.91	–	–	–	–	99.71	Inclusion in glass
56.	Katsbakh 1	w937-20-15	16124e	96.88	2.63	–	–	–	–	–	–	–	99.51	Inclusion in glass
57.			16124h	5.39	–	–	–	–	–	94.02	–	–	99.41	Inclusion in oxidized droplet
58.			16124o	99.68	–	–	–	–	–	–	–	–	99.68	One-phase inclusion
59.	Katsbakh 6	w889-45-15	16128b	60.28	7.69	–	–	–	–	–	31.04	–	99.01	Sulfide fragment
60.	Rodnikovoe	P87-1sh-1	19199a	97.02	3.20	–	–	–	–	–	–	–	100.22	Inclusion in glass
61.			19199i	70.27	0.59	–	–	–	–	0.30	28.09	–	99.24	Sulfide droplet, core
62.			19199j	78.65	0.48	–	–	–	–	0.60	20.85	–	100.58	Sulfide droplet, periphery
63.			19199m	95.28	2.97	–	–	–	1.80	–	–	–	100.06	Inclusion in glass
64.	Ivanovskoe	P89ш-1	19195a	100.14	–	–	–	–	–	–	–	–	100.14	Two-phase inclusion, core
65.			19195b	81.33	0.21	–	–	–	–	–	18.91	–	100.45	Two-phase inclusion, periphery
66.			19195f	99.89	–	–	–	–	–	–	–	–	99.89	Copper droplet
67.		P89sh-6	19197a	97.98	1.27	–	–	–	–	–	–	–	99.25	Copper droplet
68.			19197c	80.30	0.61	–	–	–	–	–	18.45	0.79	100.14	Sulfide droplet
69.	Ordynsky Ovrag	P-22-1sh	19129c	99.65	0.35	–	–	–	–	–	–	–	100.00	Inclusions base
70.			19129b	79.33	0.64	–	–	–	–	–	20.03	–	100.00	Microinclusions in droplet
71.			19129d	76.50	1.96	–	–	–	–	–	21.54	–	100.00	Two-phase inclusion, light phase
72.			19129e	71.24	5.40	–	–	–	–	–	23.35	–	100.00	Two-phase inclusion, dark phase
73.			19129s	78.53	1.29	–	–	–	–	–	20.18	–	100.00	Two-phase inclusion, light phase
74.			19129t	72.64	4.81	–	–	–	–	–	22.55	–	100.00	Two-phase inclusion, dark phase
75.		P-22-2sh	19128n	99.95	0.18	–	–	–	–	–	–	–	100.13	Inclusions core
76.			19128o	80.21	0.53	–	–	–	–	–	19.12	–	99.86	Inclusions periphery
77.			19128a	79.65	–	–	–	–	–	–	20.26	–	99.91	Droplet
78.			19128b	68.43	0.12	–	–	–	–	–	31.25	–	99.80	Droplet
79.	Kzyloba	P81-1sh-1	19200d	93.97	2.67	–	–	2.86	–	–	–	–	99.50	Two-phase inclusion, core
80.			19200e	76.87	3.19	–	–	–	–	–	19.04	–	99.10	Two-phase inclusion, periphery
81.			19200k	92.73	4.98	–	–	2.29	–	–	–	–	100.00	Inclusion in glass

Note. Analyses were carried out using VEGA3 TESCAN SEM electron microscope (operator I.A. Blinov) in Institute of Mineralogy SU FRC MG UB RAS, dash – element is not detected. Composition also contains: * – Zn 0.02 wt.%, ** – Cr 0.23 wt.%, Sb 0.38 wt.%.