

Table A1. Direct comparison of the oxide formation rates (M+16 or M+32) for all testes TCEs in O₂ (blue) and N₂O (orange) measuring mode. All relative formations rates refere to the absolute sensitivity in CPS of the respective element measured in the used gas modes.

Sc	45Sc [N ₂ O]		signal intensity / CPS	relative formation rate
	M	45 → 45 Sc [N ₂ O]	1069889	1.0
	M+16	45 → 61 [N ₂ O]	16132394	15.1
	M+32	45 → 77 [N ₂ O]		
	45Sc [O ₂]		signal intensity / CPS	relative formation rate
	M	45 → 45 Sc [O ₂]	1774847	1.0
Ga	71Ga [N ₂ O]		signal intensity / CPS	relative formation rate
	M	71 → 71 Ga [N ₂ O]	6153751	1.0
	M+16	71 → 87 [N ₂ O]	10	0.0
	M+32	71 → 103 [N ₂ O]	0	0.0
	71Ga [O ₂]		signal intensity / CPS	relative formation rate
	M	71 → 71 Ga [O ₂]	3176213	1.0
Ge	72Ge [N ₂ O]		signal intensity / CPS	relative formation rate
	M	72 → 72 Ge [N ₂ O]	24844	1.0
	M+16	72 → 88 [N ₂ O]	2037113	82.0
	M+32	72 → 104 [N ₂ O]	647	0.0
	72Ge [O ₂]		signal intensity / CPS	relative formation rate
	M	72 → 72 Ge [O ₂]	155416	1.0
Y	89Y [N ₂ O]		signal intensity / CPS	relative formation rate
	M	89 → 89 Y [N ₂ O]	18318	1.0
	M+16	89 → 105 [N ₂ O]	18574605	1014.0
	M+32	89 → 121 [N ₂ O]	161490	8.8
	89Y [O ₂]		signal intensity / CPS	relative formation rate
	M	89 → 89 Y [O ₂]	70568	1.0
Nb	93Nb [N ₂ O]		signal intensity / CPS	relative formation rate
	M	93 → 93 Nb [N ₂ O]	32957	1.0
	M+16	93 → 109 [N ₂ O]	116815	3.5
	M+32	93 → 125 [N ₂ O]	6348283	192.6
	93Nb [O ₂]		signal intensity / CPS	relative formation rate
	M	93 → 93 Nb [O ₂]	37613	1.0
In	115In [N ₂ O]		signal intensity / CPS	relative formation rate
	M	115 → 115 In [N ₂ O]	18159581	1.0
	M+16	115 → 131 [N ₂ O]	7353	0.0
	M+32	115 → 147 [N ₂ O]	33	0.0
	115In [O ₂]		signal intensity / CPS	relative formation rate
	M	115 → 115 In [O ₂]	8057527	1.0
Te	130Te [N ₂ O]		signal intensity / CPS	relative formation rate
	M	130 → 130 Te [N ₂ O]	1103858	1.0
	M+16	130 → 146 [N ₂ O]	55272	0.1
	M+32	130 → 162 [N ₂ O]	30	0.0
	130Te [O ₂]		signal intensity / CPS	relative formation rate
	M	130 → 130 Te [O ₂]	423613	1.0
La	139La [N ₂ O]		signal intensity / CPS	relative formation rate
	M	139 → 139 La [N ₂ O]	14282	1.0
	M+16	139 → 155 [N ₂ O]	19019640	1331.7
	M+32	139 → 171 [N ₂ O]	3614	0.3
	139La [O ₂]		signal intensity / CPS	relative formation rate
	M	139 → 139 La [O ₂]	30001	1.0
Ce	140Ce [N ₂ O]		signal intensity / CPS	relative formation rate
	M	140 → 140 Ce [N ₂ O]	12358	1.0
	M+16	140 → 156 [N ₂ O]	15510441	1255.1
	M+32	140 → 172 [N ₂ O]	141486	11.4
	140Ce [O ₂]		signal intensity / CPS	relative formation rate
	M	140 → 140 Ce [O ₂]	9410	1.0
Ce	M+16	140 → 156 [O ₂]	7579911	805.6
	M+32	140 → 172 [O ₂]	938153	99.7

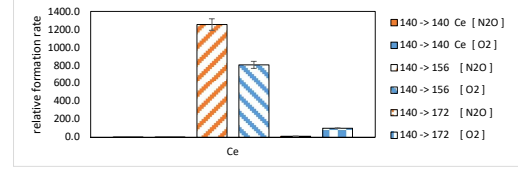
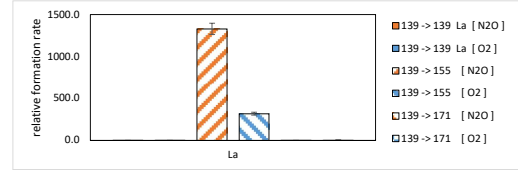
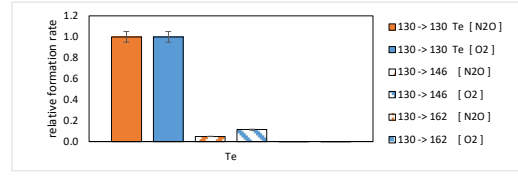
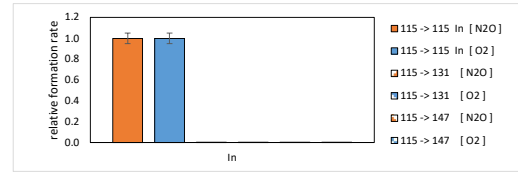
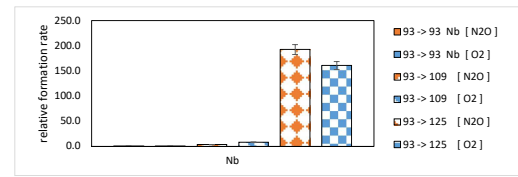
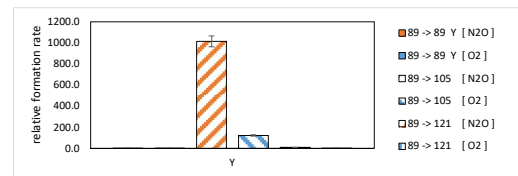
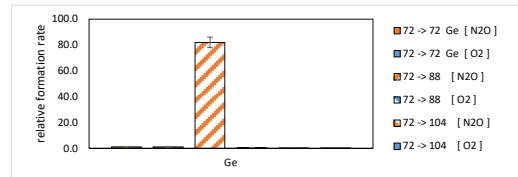
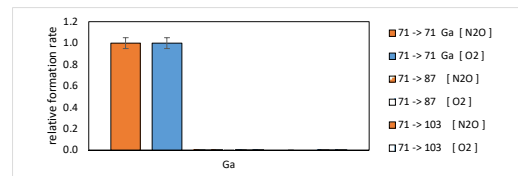
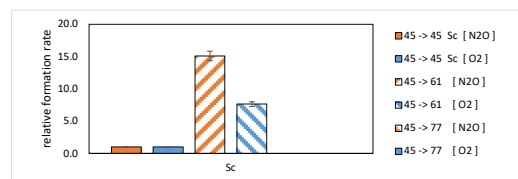


Table A1. Direct comparison of the oxide formation rates (M+16 or M+32) for all testes TCEs in O₂ (blue) and N₂O (orange) measuring mode. All relative formations rates refere to the absolute sensitivity in CPS of the respective element measured in the used gas modes.

Pr	141Pr [N ₂ O]		signal intensity / CPS	relative formation rate
	M	141 -> 141 Pr [N ₂ O]	33711	1.0
	M+16	141 -> 157 [N ₂ O]	22807886	676.6
	M+32	141 -> 173 [N ₂ O]	16658	0.5
	141Pr [O ₂]		signal intensity / CPS	relative formation rate
	M	141 -> 141 Pr [O ₂]	11186	1.0
Nd	146Nd [N ₂ O]		signal intensity / CPS	relative formation rate
	M	146 -> 146 Nd [N ₂ O]	12318	1.0
	M+16	146 -> 162 [N ₂ O]	4293402	348.5
	M+32	146 -> 178 [N ₂ O]	1054	0.1
	146Nd [O ₂]		signal intensity / CPS	relative formation rate
	M	146 -> 146 Nd [O ₂]	2963	1.0
Sm	147Sm [N ₂ O]		signal intensity / CPS	relative formation rate
	M	147 -> 147 Sm [N ₂ O]	31473	1.0
	M+16	147 -> 163 [N ₂ O]	3810819	121.1
	M+32	147 -> 179 [N ₂ O]	167	0.0
	147Sm [O ₂]		signal intensity / CPS	relative formation rate
	M	147 -> 147 Sm [O ₂]	41441	1.0
Eu	153Eu [N ₂ O]		signal intensity / CPS	relative formation rate
	M	153 -> 153 Eu [N ₂ O]	221531	1.0
	M+16	153 -> 169 [N ₂ O]	13528714	61.1
	M+32	153 -> 185 [N ₂ O]	601	0.0
	153Eu [O ₂]		signal intensity / CPS	relative formation rate
	M	153 -> 153 Eu [O ₂]	4383964	1.0
Gd	157Gd [N ₂ O]		signal intensity / CPS	relative formation rate
	M	157 -> 157 Gd [N ₂ O]	258936	1.0
	M+16	157 -> 173 [N ₂ O]	3951367	15.3
	M+32	157 -> 189 [N ₂ O]	5560	0.0
	157Gd [O ₂]		signal intensity / CPS	relative formation rate
	M	157 -> 157 Gd [O ₂]	129179	1.0
Tb	159Tb [N ₂ O]		signal intensity / CPS	relative formation rate
	M	159 -> 159 Tb [N ₂ O]	207742	1.0
	M+16	159 -> 175 [N ₂ O]	24454622	117.7
	M+32	159 -> 191 [N ₂ O]	222239	1.1
	159Tb [O ₂]		signal intensity / CPS	relative formation rate
	M	159 -> 159 Tb [O ₂]	44819	1.0
Dy	160Dy [N ₂ O]		signal intensity / CPS	relative formation rate
	M	160 -> 160 Dy [N ₂ O]	95369	1.0
	M+16	160 -> 176 [N ₂ O]	5857463	61.4
	M+32	160 -> 192 [N ₂ O]	7633	0.1
	160Dy [O ₂]		signal intensity / CPS	relative formation rate
	M	160 -> 160 Dy [O ₂]	40989	1.0
Ho	165Ho [N ₂ O]		signal intensity / CPS	relative formation rate
	M	165 -> 165 Ho [N ₂ O]	2327108	1.0
	M+16	165 -> 181 [N ₂ O]	21608615	9.3
	M+32	165 -> 197 [N ₂ O]	62440	0.0
	165Ho [O ₂]		signal intensity / CPS	relative formation rate
	M	165 -> 165 Ho [O ₂]	73482	1.0
Er	166Er [N ₂ O]		signal intensity / CPS	relative formation rate
	M	166 -> 166 Er [N ₂ O]	931392	1.0
	M+16	166 -> 182 [N ₂ O]	6949446	7.5
	M+32	166 -> 198 [N ₂ O]	69031	0.1
	166Er [O ₂]		signal intensity / CPS	relative formation rate
	M	166 -> 166 Er [O ₂]	29122	1.0

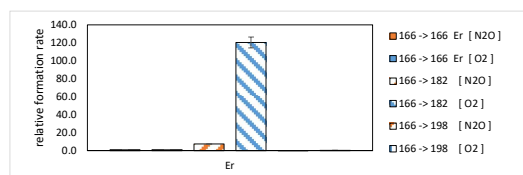
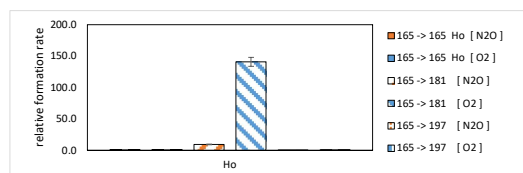
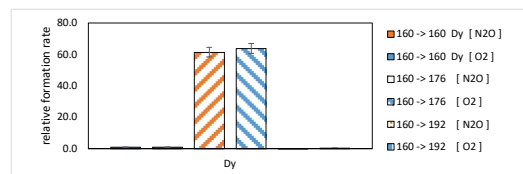
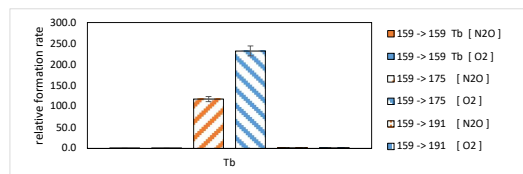
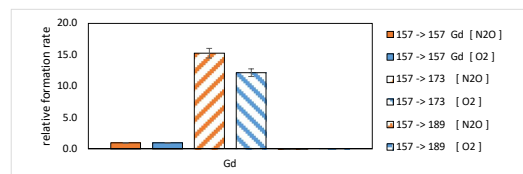
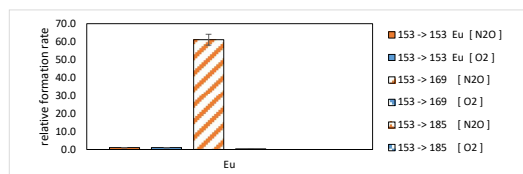
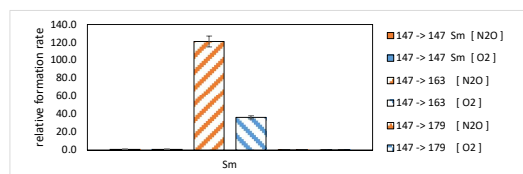
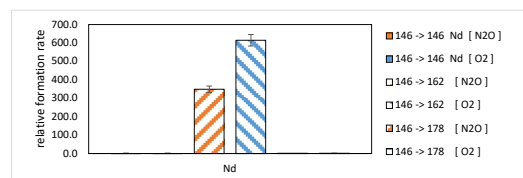
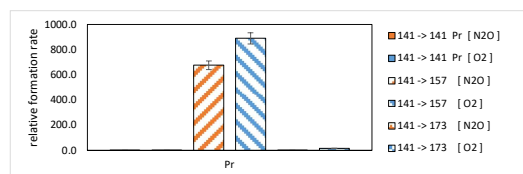


Table A1. Direct comparison of the oxide formation rates (M+16 or M+32) for all testes TCEs in O2 (blue) and N2O (orange) measuring mode. All relative formations rates refere to the absolute sensitivity in CPS of the respective element measured in the used gas modes.

Tm	169Tm [N2O]		signal intensitiy / CPS	relative formation rate
	M	169 -> 169 Tm [N2O]	4467115	1.0
	M+16	169 -> 185 [N2O]	18115412	4.1
	M+32	169 -> 201 [N2O]	44419	0.0
	169Tm [O2]		signal intensitiy / CPS	relative formation rate
	M	169 -> 169 Tm [O2]	1966202	1.0
Yb	172Yb [N2O]		signal intensitiy / CPS	relative formation rate
	M	172 -> 172 Yb [N2O]	2028789	1.0
	M+16	172 -> 188 [N2O]	3137144	1.5
	M+32	172 -> 204 [N2O]	33	0.0
	172Yb [O2]		signal intensitiy / CPS	relative formation rate
	M	172 -> 172 Yb [O2]	1942956	1.0
Lu	175Lu [N2O]		signal intensitiy / CPS	relative formation rate
	M	175 -> 175 Lu [N2O]	252316	1.0
	M+16	175 -> 191 [N2O]	19520366	77.4
	M+32	175 -> 207 [N2O]	640869	2.5
	175Lu [O2]		signal intensitiy / CPS	relative formation rate
	M	175 -> 175 Lu [O2]	186253	1.0
Ta	181Ta [N2O]		signal intensitiy / CPS	relative formation rate
	M	181 -> 181 Ta [N2O]	59843	1.0
	M+16	181 -> 197 [N2O]	157456	2.6
	M+32	181 -> 213 [N2O]	2401596	40.1
	181Ta [O2]		signal intensitiy / CPS	relative formation rate
	M	181 -> 181 Ta [O2]	36000	1.0
Ta	M+16	181 -> 197 [O2]	324556	9.0
	M+32	181 -> 213 [O2]	7458950	207.2

