A review of the structural architecture of tellurium oxycompounds

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TABLE 8. Structures with neso [$Te^{4+}X_3$] (Fig. 5*a*) not incorporated into a larger structural unit and no additional anions or water. *N* = number of symmetry distinct Te sites. SG = space group.

#	ICSD #	Compound	*N*	SG	*a* / Å	*b* / Å	*c* / Å	α, β, γ / °	Reference
1	4317	$Li_2[TeO_3]$	1	*C*2/*c*	5.06(9)	9.56(6)	13.72(7)	90, 95.4, 90	Folger (1975*a*)
2	100693	$Na_2[TeO_3]$	1	*P*2$_1$/*a*	6.882	10.315	4.961	90, 91.66, 90	Masse *et al.* (1980)
3	100694	$Ag_2[TeO_3]$	1	*P*2$_1$/*a*	7.004	10.547	4.917	90, 91.44, 90	Masse *et al.* (1980)
4	200965	$Tl_2[TeO_3]$	1	*Pban*	16.60(1)	11.078(6)	5.238(3)	90, 90, 90	Frit and Mercurio (1980)
5	169995	$AgTl[TeO_3]$	1	*Iba*2	14.708(7)	10.745(6)	5.166(3)	90, 90, 90	Linda *et al.* (2010)
6	65640	$K_2[TeO_3]$	1	$P\bar{3}$	6.279(2)	6.279(2)	7.069	90, 90, 120	Andersen *et al.* (1989)
7	59164	$Cs_2[TeO_3]$	1	*P*321	6.790(1)	6.790(1)	7.972(1)	90, 90, 120	Loopstra and Goubitz (1986)
8	38223	$Rb_2[TeO_3]$	1	*C*2/*m*	11.24	6.48	7.49	90, 90, 90	Thümmel and Hoppe (1974)
9	260226	$Ca[TeO_3]$-α	5	*P*4$_3$	12.1070(10)	12.1070(10)	11.0911(18)	90, 90, 90	Stöger *et al.* (2009)
10	260228	$Ca[TeO_3]$-β	18	*P*1	25.6620(4)	10.2426(2)	11.3327(2)	107.218(1), 110.245(2), 33.019(1)	Stöger *et al.* (2009)
11	260233	$Ca[TeO_3]$-β’	9	$P\bar{1}$	25.6215(5)	10.3933(2)	11.2481(2)	108.604(9), 112.393(13), 32.319(1)	Stöger *et al.* (2009)
12	182023	$Sr[TeO_3]$-ε	1	*P*2$_1$/*c*	6.7759(1)	7.2188(1)	8.6773(2)	90, 126.4980(7), 90	Stöger *et al.* (2011*a*)
13	74396	$Sr[TeO_3]$	6	*P*1	8.890(2)	11.850(2)	5.832(1)	91.36(2), 91.04(42), 69.69(2)	Elerman (1993)
14	172562	$Sr[TeO_3]$	6	*C*2/*c*	28.1239(7)	5.90642(13)	28.4385(7)	90, 114.230(2), 90	Dityat'yev *et al.* (2006)
15	240967	$Sr[TeO_3]$	6	*C*2	28.151(6)	5.897(1)	15.261(3)	90, 122.09(3), 90	Zavodnik *et al.* (2007)
16	4320	$Ba[TeO_3]$	1	*P*2$_1$/*m*	4.633(8)	5.952(10)	7.308(12)	90, 111.19(20), 90	Folger (1975*b*)
17	10107	$Ba[TeO_3]$	3	*Pnma*	14.784(2)	6.129(1)	12.350(2)	90, 90, 90	Kocak *et al.* (1979*a*)
18	4317	$Pb[TeO_3]$	1	*P*4$_1$	5.304(3)	5.304(3)	11.900(6)	90, 90, 90	Sciau *et al.* (1986)
19	240921	$Pb[TeO_3]$	3	*C*2/*c*	26.555(5)	4.593(1)	17.598(4)	90, 106.97(3), 90	Zavodnik *et al.* (2008)

20	60067	$Cd[TeO_3]$	1	$P2_1/c$	7.790(1)	11.253(2)	7.418(1)	90, 113.5(1), 90	Kramer and Brandt (1985)
21	-	$Sc_2[TeO_3]_3$	3	$P2_1/n$	5.2345(3)	24.3958(15)	6.8636(4)	90, 106.948(2), 90	Song *et al.* (2014)
22	69737	$Ce[TeO_3]_2$	2	$P2_1/n$	7.0197(8)	11.0434(8)	7.3327(1)	90, 108.007(8), 90	Lopez *et al.* (1991)
23	69738	$Th[TeO_3]_2$	2	$P2_1/n$	7.1954(1)	11.2183(6)	7.4638(8)	90, 108.063(3), 90	Lopez *et al.* (1991)
24	90383	$Pu[TeO_3]_2$	2	$P2_1/n$	6.9937(1)	11.0014(2)	7.3404(2)	90, 107.98(2), 90	Krishnan *et al.* (2000)

TABLE 9. Structures with neso [$Te^{4+}X_3$] (Fig. 5*a*) not incorporated into a larger structural unit, but with additional anions or water.

#	ICSD #	Compound (Mineral name)	Fig# (whole str)	*N*	SG	*a* / Å	*b* / Å	*c*/ Å	α, β, γ / °	Reference
25	38036	$Li_3[TeO_3](OH)$		1	*P*2$_1$/*m*	6.771(2)	6.309(2)	5.433(2)	90, 113.20(1), 90	Cachau-Herreillat *et al.* (1983)
26	8008	$Na_2[TeO_3]\cdot 5H_2O$		1	*C*2/*c*	13.468(2)	7.426(1)	17.545(3)	90, 97.79(2), 90	Philippot *et al*. (1979*b*)
27	24781	$KNa[TeO_3]\cdot 3H_2O$		1	*P*31*c*	6.550(3)	6.550(3)	8.980(4)	90, 90, 120	Daniel *et al.* (1982)
28	2384	$K_2[TeO_3]\cdot 3H_2O$		1	*Pnma*	8.895(6)	6.964(3)	12.385(7)	90, 90, 90	Johansson and Lindqvist (1978)
29	48114	$MgTeO_3\cdot 6H_2O$ $\equiv [Mg(H_2O)_6][TeO_3]$		1	*R*3	9.029(5)	9.029(5)	8.979(9)	90, 90, 120	Andersen *et al.* (1984)
30	182022	$Sr[TeO_3]\cdot H_2O$		1	*P*2$_1$/*c*	7.7669(5)	7.1739(4)	8.3311(5)	90, 107.210(1), 90	Stöger *et al.* (2011*a*)
31	15013	$Ba[TeO_3]\cdot H_2O$		1	*P*2$_1$/*a*	8.58(2)	7.53(2)	7.70(2)	90, 106.03(2), 90	Nielsen *et al.* (1971)
32	422547	$Sr_3[TeO_3]_2Cl_2$		1	*Fd*$\bar{3}$*m*	15.5391(4)	15.5391(4)	15.5391(4)	90, 90, 90	Stöger *et al.* (2011*b*)
33	422548	$Ba_3[TeO_3]_2Cl_2$		1	*Fd*$\bar{3}$*m*	16.688(2)	16.688(2)	16.688(2)	90, 90, 90	Stöger *et al.* (2011*b*)
34	422549	$Ba_3[TeO_3]_2Br_{1.64}Cl_{0.36}$		1	*Fd*$\bar{3}$*m*	16.8072(3)	16.8072(3)	16.8072(3)	90, 90, 90	Stöger *et al.* (2011*b*)
35	424288	$Pb_3[TeO_3]Cl_4$		1	*Pna*2$_1$	7.427(4)	15.993(8)	8.483(4)	90, 90, 90	Zhang *et al.* (2012*b*)
36	95844	$Ho[TeO_3]Cl$		1	*Pnma*	7.3025(5)	6.9654(5)	9.0518(7)	90, 90, 90	Meier and Schleid (2002)
37	419383	$Nd_5[TeO_3]_2O_4Cl_3$	17	1	*C*2/*m*	12.7061(9)	5.6270(4)	10.0897(8)	90, 90.784(3), 90	Zitzer and Schleid (2009)
38	420167	$Na_2Lu_3[TeO_3]_4I_3$		2	*P*2/*c*	9.2169(5)	5.5271(3)	16.6437(9)	90, 90.218(4), 90	Zitzer and Schleid (2010)
39	170649	$Nd_4Cu^{1+}[TeO_3]_5Cl_3$		5	*I*2	17.719(8)	5.663(2)	19.390(12)	90, 103.573(3), 90	Shen and Mao (2005)
40	85725	$Bi_2[TeO_3]_2O$		4	*Pbcn*	22.78239(40)	5.5140(1)	22.1198(4)	90, 90, 90	Mercurio *et al.* (1998)
41	36446	$Bi_2[TeO_3]O_2$ (Smirnite)		1	*Abm*2	11.602(2)	16.461(3)	5.523(1)	90, 90, 90	Mercurio *et al.* (1983)
42	-	$Ca_6[TeO_3]_5(NO_3)_2$		5	*P*2$_1$/*c*	15.492(2)	5.6145(7)	39.338(4)	90, 142.480(5), 90	Stöger and Weil (2013)

43	-	$Ca_5[TeO_3]_4(NO_3)_2(H_2O)_2$		4	*Cc*	25.258(3)	5.7289(7)	17.0066(19)	90, 124.377(2), 90	Stöger and Weil (2013)
44	-	$Sc_2[TeO_3][SeO_3][SeO_4]$		1	$P2_1/c$	6.5345(12)	10.970(2)	12.559(2)	90, 102.699(10), 90	Song *et al.* (2014)
45	418559	$La_2[Si_6O_{13}][TeO_3]_2$		1	$P2_1/c$	14.766(9)	7.318(4)	8.099(5)	90, 103.051(11), 90	Kong *et al.* (2008)
46	417641	$La_4[Si_{5.2}Ge_{2.8}O_{18}][TeO_3]_4$		4	$P\bar{3}$	8.150(5)	12.892(8)	14.320(8)	106.132(9), 90.045(5), 104.270(5)	Kong *et al.* (2008)

TABLE 10. Structures with neso $Te^{4+}X_3$ (Fig. 5*a*) as part of a larger structural unit that is a finite cluster or infinite chain. Non-Te cations are in 1-fold or linear 2-fold coordination (*L*), tetrahedral (*T*) or octahedral (*M*); *Y* = anion not bound to Te.

#	ICSD #	Compound (Mineral name)	Fig# (whole str)	Structural unit	*N*	SG	*a* / Å	*b* / Å	*c* / Å	α, β, γ / °	Reference
47	61673	$HgTeO_3 \equiv [Hg_2(TeO_3)_2]$		cluster $[L_2(TeX_3)_2]$	2	$P\bar{1}$	6.139(1)	7.361(8)	7.459(3)	84.76(3), 65.72(4), 87.11(2)	Kramer and Brandt (1986)
48	418184	$Cd_4V_2^{5+}Te_3^{4+}O_{15} \equiv Cd_4[VO_3][(VO_3)(TeO_3)](TeO_3)_2$		cluster $[TY_3(TeX_3)]$	3	$P2_12_12_1$	5.3993(4)	16.0478(11)	16.2349(11)	90, 90, 90	Jiang *et al.* (2008)
49	423574	$Pb_2[Pd^{2+}Cl_2(TeO_3)_2]$		cluster $[MY_2(TeX_3)_2]$	1	$P2_1/c$	8.145(2)	5.4447(15)	13.140(3)	90, 124.444(11), 90	Zhang *et al.* (2011*c*)
50	78917	$Bi_2WTe_2O_{10} \equiv Bi_2[WO_4(TeO_3)_2]$		cluster $[MY_4(TeX_3)_2]$	1	$C2/c$	12.4972(7)	5.6413(3)	12.2705(6)	90, 91.38(3), 90	Champarnaud-Mesjard *et al.* (1996*b*)
51	249540	$Nd_2W_2Te_2O_{13} \equiv Nd_2[W_2O_7(TeO_3)_2]$		cluster $[M_2Y_7(TeX_3)_2]$	2	$P\bar{1}$	6.647(3)	6.905(3)	11.525(5)	90.307(7), 98.116(6), 93.658(10)	Jiang *et al.* (2007*a*)
52	86665	$K_4[Mo_6Te_2O_{24}]\cdot 6H_2O$	17	cluster $[M_6Y_{18}(TeX_3)_2]$	1	$P2_1/c$	9.878(3)	9.724(4)	15.301(3)	90, 108.57(2), 90	Balraj and Vidyasagar (1998)
53	86664	$Rb_4[Mo_6Te_2O_{24}]\cdot 6H_2O$		cluster $[M_6Y_{18}(TeX_3)_2]$	1	$P2_1/c$	10.0564(14)	9.877(8)	15.724(3)	90, 109.988(11), 90	Balraj and Vidyasagar (1998)
54	421720	$Cs_6Na_2[W_6Mo_3S_4O_{20}(H_2O)_3(W_9TeO_{33})]\cdot 11.7H_2O$		cluster $[M_{18}Y_{57}(TeX_3))]$	1	$P\bar{1}$	13.1317(3)	13.9622(3)	20.4728(5)	87.225(1), 88.578(1), 81.947(1)	Sokolov *et al.* (2010)
55	421721	$Cs_{7.15}Na_{1.85}[W_6Mo_3S_4O_{20}(H_2O)_2Cl(W_9TeO_{33})]\cdot 11.2H_2O$	17	cluster $[M_{18}Y_{57}(TeX_3))]$	1	$P\bar{1}$	12.5031(5)	13.0244(5)	25.9327(11)	81.688(2), 79.962(2), 63.984(1)	Sokolov *et al.* (2010)

56	423852	$K_8Na_2Pd_3[W_9TeO_{33}]\cdot 2.51H_2O$		cluster $[Q_3M_{18}Y_{60}(TeX_3)_2]$	1	$P\bar{4}2_1m$	16.9647(7)	16.9647(7)	13.8221(10)	90, 90, 90	Gao *et al.* (2012)
57	280674	$K_9Na[Cu_3W_{18}Te_2O_{66}(H_2O)_3]\cdot 16H_2O$		cluster $[P_3M_{18}Y_{63}(TeX_3)_2]$	1	$P\bar{4}2_1m$	16.6529(9)	16.6529(9)	14.0180(11)	90, 90, 90	Kortz *et al.* (2001)
58	110049	$[N(CH_3)_4]_2Na_6[Ni(H_2O)_2(Ni(H_2O)_3)_2(WO_2)(W_9TeO_{33})_2]\cdot 23H_2O$	17	cluster $[M_{22}Y_{70}(TeX_3)_2]$	1	$P\bar{1}$	12.512(3)	13.547(3)	16.959(3)	70.51(3), 83.47(3), 64.59(3)	Limanski *et al.* (2003)
59	110050	$[N(CH_3)_4]_2Na_6[Zn(H_2O)_2)(Zn(H_2O)_3)_2(WO_2)(W_9TeO_{33})_2]\cdot 26H_2O$		cluster $[M_{22}Y_{70}(TeX_3)_2]$	1	$P\bar{1}$	12.608(2)	13.642(3)	17.010(3)	70.74(2), 83.72(2), 64.49(2)	Limanski *et al.* (2003)
60	182758	$K_{14}Mo_{12}V_{12}O_{69}[TeO_3]\cdot 2.27H_2O$		cluster $[T_3M_{21}Y_{69}(TeX_3)_2]$	2	$C2/m$	23.2791(7)	13.3972(4)	29.3216(8)	90, 93.479(2), 90	Corella-Ochoa *et al.* (2011)
61	182759	$K_{10}[V_4(Mo_{17}V_3\square)O_{74}][TeO_3]\cdot 15H_2O$		cluster $[T_4M_{21}Y_{74}(TeX_3)]$	1	*Pnma*	15.3491(2)	21.2977(2)	25.9883(2)	90, 90, 90	Corella-Ochoa *et al.* (2011)
62	263037	$(NH_4)[H(Ru_4^{4+}O_6(H_2O)_9)_2(Fe^{3+}(H_2O)_2)_2(W_9TeO_{33})_2]\cdot 36H_2O$		cluster $[M_{28}Y_{111}(TeX_3)_2]$	1	$P\bar{1}$	12.7905(18)	14.7398(18)	15.741(2)	100.136(9), 100.385(9), 97.790(8)	Kalinina *et al.* (2012)
63	203064	$Hg_2TeO_3 \equiv [Hg_2(TeO_3)]$ (Magnolite)		chain $[L_2(TeX_3)]$	1	*Pbm*2	5.958(1)	10.576(2)	3.749(1)	90, 90, 90	Grice (1989)
64	416233	$BaZn(TeO_3)Cl_2 \equiv Ba_2[Zn_2Cl_3(TeO_3)]Cl$		chain $[T_2Y_3(TeX_3)_2]$	2	*Pnma*	12.345(4)	5.6458(19)	19.186(7)	90, 90, 90	Jiang *et al.* (2006)
65	170644	$Dy[CuCl(TeO_3)_2]$	17	chain $[PY(TeX_3)_2]$	2	$P2_1/c$	5.3918(14)	14.932(4)	9.110(3)	90, 98.685(2), 90	Shen and Mao (2005)
66	170645	$Er[CuCl(TeO_3)_2]$		chain $[PY(TeX_3)_2]$	2	$P2_1/c$	5.3845(4)	14.9040(12)	9.1079(5)	90, 98.684(3), 90	Shen and Mao (2005)
67	170646	$Er[CuBr(TeO_3)_2]$		chain $[PY(TeX_3)_2]$	2	$P2_1/c$	5.392(2)	14.918(6)	9.317(4)	90, 97.670(4), 90	Shen and Mao (2005)
68	380285	$YbCu_2^{2+}Cu^{1+}(TeO_3)_4Cl_6 \equiv Yb_3[Cu^{2+}Cl_2(TeO_3)_2]_2[Cu^{1+}Cl_2]$	17	chain $[PY_2(TeX_3)_2]$	2	$P2/c$	13.396(3)	5.5598(5)	16.506(3)	90, 126.61(3), 90	Zhang *et al.* (2010*a*)

69	413007	$LaNbTeO_6 \equiv La[NbO_3(TeO_3)]$		chain $[MY_3(TeX_3)]$	2	$P\bar{1}$	6.7842(6)	7.4473(6)	10.7519(9)	79.649(1), 76.920(2), 89.923(2)	Ok *et al.* (2003)
70	281061	$Tl_2[(UO_2)(TeO_3)_2]$-β		chain $[MY_2(TeX_3)_2]$	2	$P2_1/n$	5.4766(4)	8.2348(6)	20.849(2)	90, 92.329(1), 90	Almond and Albrecht Schmitt (2002)
71	281062	$Sr_3(UO_2)(TeO_3)_4 \equiv Sr_3[(UO_2)(TeO_3)_2](TeO_3)_2$		chain $[MY_2(TeX_3)_2]$	2	$C2/c$	20.540(1)	5.6547(3)	13.1009(8)	90, 94.417(1), 90	Almond and Albrecht Schmitt (2002)
72	419113	$Yb_2[Cu_3Cl_4(TeO_3)_4]$	18	chain $[P_2MY_4(TeX_3)_4]$	2	$P\bar{1}$	5.4626(1)	8.1505(2)	9.1556(2)	97.712(2), 91.628(2), 102.209(2)	Zhang *et al.* (2010*a*)
73	82641	$Bi_2W_3Te_2O_{16} \equiv Bi_2[W_3O_{10}(TeO_3)_2]$		chain $[M_3Y_{10}(TeX_3)_2]$	1	$C2/c$	21.28709(80)	5.5708(3)	12.8349(5)	90, 124.08(3), 90	Champarnaud-Mesjard *et al.* (1996*a*)

TABLE 11. Structures with neso $Te^{4+}X_3$ (Fig. 5*a*) as part of a larger structural unit that is a layer. Non-Te cations are in square planar 4-fold coordination (*Q*), tetrahedral (*T*), 5-fold coordination (*P*), octahedral (*M*) or 7-/8-fold bipyramidal coordination (*U*); *Y*, *Z* = anion not bound to Te.

#	ICSD #	Compound (Mineral name)	Fig# (whole str)	Structural unit	*N*	SG	*a* / Å	*b* / Å	*c* / Å	α, β, γ / °	Reference
74	1102	$Cu(TeO_3)(NH_3)(H_2O)$ ≡ $[Cu(NH_3)(TeO_3)](H_2O)$	18	layer $[QY(TeX_3)]$	1	*C*2/*c*	12.988(4)	7.333(1)	10.022(3)	90, 97.18(3), 90	Johansson and Lindqvist (1977)
75	414411	$Bi[Cu_3O_2(TeO_3)_3]Cl$	18	layer $[Q_3Y_2(TeX_3)_3]$	1	*Pcmn*	6.3719(8)	9.8524(12)	14.358(2)	90, 90, 90	Becker and Mats (2005)
76	-	$Ca[Cu_{10}(TeO_3)_4(AsO_4)_4(OH)_2]·4H_2O$ (Juabite)	18	layer $[Q_{10}(TY_4)_4(TeX_3)_4]$	2	$P\bar{1}$	8.9925(2)	10.1291(7)	8.9971(2)	102.668(5), 92.490(6), 70.434(5)	Kampf and Mills (2011)
77	261180	$Sr_2V^{5+}_4Te_2O_{16}·H_2O$ ≡ $Sr_2[V_2O_5(TeO_3)]_2·H_2O$	18	layer $[PT(TeX_3)Y_5]$	1	*C*2/*c*	21.019(11)	5.102(2)	16.401(8)	90, 118.617(8), 90	Zhang *et al.* (2010*b*)
78	85922	$Na[Ga(TeO_3)_2]$	18	layer $[M(TeX_3)_2]$	2	*Pcab*	7.8402(4)	10.3265(5)	13.3696(7)	90, 90, 90	Miletich and Pertlik (1998)
79	240939	$Na[Fe(TeO_3)_2]$		layer $[M(TeX_3)_2]$	2	*Pcab*	7.8530(15)	10.448(2)	13.438(3)	90, 90, 90	Weil and Stöger (2008*a*)
80	-	$Fe^{3+}_2Te_4O_9(OH)_3Cl$ ≡ $[Fe_2(TeO_2OH)_3(TeO_3)]Cl$ (Rodalquilarite)	19	layer $[M(TeX_3)_2]$	2	$P\bar{1}$	5.11290(10)	6.6481(2)	9.0079(6)	73.347(5), 78.053(5), 76.709(5)	Kampf and Mills (2011)
81	245637	$[(Fe^{2+}Fe^{3+}_4)(TeO_3)_6]Cl_2$		layer $[P_2M_3(TeX_3)_6]$	3	$P\bar{1}$	4.901(6)	10.381(5)	9.256(8)	105.61(6), 104.32(7), 90.43(7)	Becker and Johnsson (2007)
82	9402	$V^{4+}TeO_4$-α ≡ $[VO(TeO_3)]$	19	layer $[MY(TeX_3)]$	1	*P*2₁/*c*	5.099(2)	4.934(2)	12.672(4)	90, 105.85(5), 90	Meunier *et al.* (1972)
83	279576	$[InCl(TeO_3)]$	19	layer $[MY(TeX_3)]$	1	*P*2₁/*c*	8.2596(4)	6.8752(3)	7.1394(3)	90, 103.121(3), 90	Gaudin *et al.* (2001)
84	420301	$[InBr(TeO_3)]$		layer $[MY(TeX_3)]$	1	*P*2₁/*c*	8.5607(12)	6.8855(9)	7.2229(11)	90, 103.160(17), 90	Ajaz *et al.* (2009)
85	56218	$[BiI(TeO_3)]$		layer $[MY(TeX_3)]$	1	*P*2₁/*c*	9.073(2)	7.105(1)	8.025(2)	90, 104.67(3), 90	Wilk *et al.* (1998)

86	-	$YV^{5+}Te_2O_8 \equiv Y[VO_2(TeO_3)](TeO_3)$		layer [$MY(TeX_3)$]	4	*C*2/*m*	7.9396(10)	7.5625(10)	21.282(2)	90, 90.010(10), 90	Kim *et al.* (2014*a*)
87	183605	$BaMo_2^{6+}TeO_9 \equiv Ba[Mo_2O_6(TeO_3)]$		layer [$M_2Y_3(TeX_3)_2$]	2	*Pca*2$_1$	14.8683(2)	5.6636(1)	17.6849(3)	90, 90, 90	Zhang *et al.* (2011*b*)
88	249325	$LiV_3^{5+}Te_2O_{12} \equiv Li[(V^{5+}O_2)_3(TeO_3)_2]$	19	layer [$M_3Y_6(TeX_3)_2$]	2	$P\bar{1}$	6.2370(4)	7.2005(5)	10.7066(8)	92.868(4), 92.743(5), 105.524(4)	Johnston and Harrison (2007)
89	-	$(NH_4)V^{4+}V^{5+}TeO_7 \equiv (NH_4)[(V^{4+}O)V^{5+}O_3(TeO_3)]$		layer [$(MY)TZ_3(TeX_3)$]	1	*Pna*2$_1$	18.945(2)	7.0277(8)	5.4402(6)	90, 90, 90	Harrison (2014)
90	82387	$Cs_3V_2^{4+}V_2^{5+}Te_2O_{14}Cl \equiv Cs_3[(V^{4+}O)V^{5+}O_3(TeO_3)]_2Cl$		layer [$(PY)TZ_3(TeX_3)$]	1	*Pnnm*	23.608(8)	6.825(9)	5.4908(13)	90, 90, 90	Marrot and Savariault (1996)
91	6	$[Al_2(TeO_3)(SO_4)(OH)_2]$	19	layer [$M(TeX_3)(TY_4)Z_2$]	1	*P*2$_1$/*m*	7.013(2)	9.539(4)	4.880(2)	90, 92.65(3), 90	Johansson and Lindqvist (1976)
92	96911	$[Ni_5Cl_2(TeO_3)_4]$	19	layer [$M_5Y_2(TeX_3)_4$]	2	*C*2/*c*	19.5674(2)	5.2457(1)	16.3084(1)	90, 125.289(1), 90	Johnsson *et al.* (2003)
93	96912	$[Ni_5Br_2(TeO_3)_4]$		layer [$M_5Y_2(TeX_3)_4$]	2	*C*2/*c*	20.2554(11)	5.2498(3)	16.3005(9)	90, 124.937(1), 90	Johnsson *et al.* (2003)
94	416967	$[Co_5Br_2(TeO_3)_4]$		layer [$M_5Y_2(TeX_3)_4$]	2	*C*2/*c*	20.4408(10)	5.2760(2)	16.4710(7)	90, 124.790(5), 90	Becker *et al.* (2007*a*)
95	416968	$[Co_5Cl_2(TeO_3)_4]$		layer [$M_5Y_2(TeX_3)_4$]	2	*C*2/*c*	19.7947(18)	5.2800(4)	16.4884(16)	90, 125.073(11), 90	Becker *et al.* (2007*a*)
96	240886	$[(Co_{3.62}Mg_{1.38})Cl_2(TeO_3)_4]$		layer [$M_5Y_2(TeX_3)_4$]	2	*C*2/*c*	19.8551(11)	5.2584(2)	16.4637(10)	90, 125.3607(7), 90	Takagi *et al.* (2007)
97	162428	$[CoZnCl_2(TeO_3)]$	20	layer [$PTY_2(TeX_3)$]	1	*Pccn*	10.5560(3)	15.8985(4)	7.7296(2)	90, 90, 90	Kashi *et al.* (2008)
98	241121	$[Zn_2Br_2(TeO_3)]$		layer [$PTY_2(TeX_3)$]	1	*Pccn*	10.5446(2)	16.0928(2)	7.7242(1)	90, 90, 90	Zhang and Johnsson (2008)
99	281324	$[Zn_2Cl_2(TeO_3)]$		layer [$PTY_2(TeX_3)$]	1	*Pccn*	10.4467(9)	15.4969(13)	7.6471(6)	90, 90, 90	Johnsson and Törnroos (2003*a*)
100	391095	$[CuZnCl_2(TeO_3)]$		layer [$PTY_2(TeX_3)$]	1	*Pccn*	10.1897(8)	15.5389(12)	7.4512(6)	90, 90, 90	Johnsson and Törnroos (2003*b*)

101	415797	[$Co_2Br_2(TeO_3)$]		layer [$PTY_2(TeX_3)$]	1	*Pccn*	10.5180(7)	15.8629(9)	7.7732(5)	90, 90, 90	Becker *et al.* (2006*a*)
102	415798	[$Co_2Cl_2(TeO_3)$]	20	layer [$M_2(TeX_3)Y_2$]	1	$P2_1/m$	5.0472(6)	6.6325(9)	8.5264(10)	90, 109.36(1), 90	Becker *et al.* (2006*a*)
103	414443	[$Cu_3Br_2(TeO_3)_2$]		layer [$P_2QY_2(TeX_3)_2$]	1	*A*2/*m*	8.1999(16)	6.2781(9)	9.3186(18)	90. 107.39(2), 90	Becker *et al.* (2005)
104	86662	$(NH_4)_2Mo_3TeO_{12}$ ≡ $(NH_4)_2[Mo_3O_9(TeO_3)]$		layer [$M_3Y_9(TeX_3)$]	1	$P6_3$	7.332(2)	7.332(2)	12.028(4)	90, 90, 120	Balraj and Vidyasagar (1998)
105	86663	$Cs_2Mo_3TeO_{12}$ ≡ $Cs_2[Mo_3O_9(TeO_3)]$	20	layer [$M_3Y_9(TeX_3)$]	1	$P6_3$	7.3956(10)	7.3956(10)	12.186(2)	90, 90, 120	Balraj and Vidyasagar (1998)
106	97507	$Rb_2W_3TeO_{12}$ ≡ $Rb_2[W_3O_9(TeO_3)]$		layer [$M_3Y_9(TeX_3)$]	1	*P*31*c*	7.2980(2)	7.2980(2)	12.0640(2)	90, 90, 120	Goodey *et al.* (2003)
107	420407	$Ag_6W_3Te_4O_{16}$ ≡ $Ag_6[W_2Te_2O_{12}][WTe_2O_8]$	20	layer [$M_2Y_6(TeX_3)_2$] and chain [$MY_2(TeX_3)_2$]	2	*C*2/*c*	29.792(9)	6.7016(19)	9.534(3)	90, 91.745(6), 90	Zhou *et al.* (2009)
108	100460	$Pb_2[(UO_2)(TeO_3)_3]$	20	layer [$UY_2(TeX_3)_2$]	3	$P2_1/n$	11.605(4)	13.389(17)	6.981(1)	90, 91.23(3), 90	Brandstätter (1981)
109	414064	$K_2[(UO_2)_3O_2(TeO_3)_2]$	20	layer [$U_2MY_8(TeX_3)_2$]	1	$P\bar{1}$	6.7989(5)	7.0123(5)	7.8965(6)	101.852(1), 102.974(1), 100.081(1)	Woodward *et al.* (2004)
110	414063	$Rb_2[(UO_2)_3O_2(TeO_3)_2]$		layer [$U_2MY_8(TeX_3)_2$]	1	$P\bar{1}$	7.0101(6)	7.0742(6)	8.0848(7)	105.509(2), 101.760(2), 99.456(2)	Woodward *et al.* (2004)
111	414062	$Cs_2[(UO_2)_3O_2(TeO_3)_2]$		layer [$U_2MY_8(TeX_3)_2$]	1	$P\bar{1}$	7.0007(5)	7.5195(6)	8.4327(6)	109.301(1), 100.573(1), 99.504(1)	Woodward *et al.* (2004)
112	153175	$K_4[(UO_2)_5O_5(TeO_3)_2]$		layer [$U_4MY_{15}(TeX_3)_2$]	1	$P\bar{1}$	6.8514(5)	7.1064(5)	11.3135(8)	99.642(1), 93.591(1), 100.506(1)	Woodward and Albrecht Schmitt (2005)

TABLE 12. Structures with neso $Te^{4+}X_3$ (Fig. 5*a*) as part of a larger structural unit that is a framework. Non-Te cations are in square planar 4-fold coordination (*Q*), tetrahedral (*T*, *T'*), 5-fold coordination (*P*), octahedral (*M*, *M'*) or 7-/8-fold bipyramidal coordination (*U*); *Y*, *Z* = anions not bound to Te.

#	ICSD #	Compound (Mineral name)	Fig# (whole str)	Structural unit	*N*	SG	*a* / Å	*b* / Å	*c* / Å	α, β, γ / °	Reference
113	261174	$Ga_2[TeO_3]_3$-α ≡ $[(Ga_{2.67}□_{0.33})(TeO_3)_4]$		framework $[T_3(TeX_3]_4]$	1	$I\bar{4}3d$	10.5283(15)	10.5283(15)	10.5283(15)	90, 90, 90	Kong *et al.* (2010)
114	263062	$[(Ga_2Zn)(TeO_3)_4]$	21	framework $[T_3(TeX_3]_4]$	1	$I\bar{4}3d$	10.5974(8)	10.5974(8)	10.5974(8)	90, 90, 90	Lee *et al.* (2012)
115	407752	$SrCu(TeO_3)_2$ ≡ $Sr_3[Cu_3(TeO_3)_6]□$		framework $[Q(TeX_3)_2]$	1	$P4_132$	12.4757(5)	12.4757(5)	12.4757(5)	90, 90, 90	Müller-Buschbaum and Wulff (1997)
116	87752	$Pb_3[(Cu_{2.67}Sb_{0.33})(TeO_3)_6]Cl$ (Choloalite)	21	framework $[Q(TeX_3)_2]$	1	$P4_132$	12.520(4)	12.520(4)	12.520(4)	90, 90, 90	Lam *et al.* (1999)
117	14168	$[Cu(TeO_3)]$ (Balyakinite)	21	framework $[P(TeX_3)]$	2	*Pnma*	7.604(6)	5.837(4)	12.705(6)	90, 90, 90	Lindqvist (1972*a*)
118	16937	$[Zn(TeO_3)]$		framework $[P(TeX_3)]$	1	*Pbca*	7.36	6.38	12.32	90, 90, 90	Hanke (1967)
119	100418	$CuTeO_3{\cdot}2H_2O$ ≡ $[Cu(H_2O)_2(TeO_3)]$ (Teineite)	21	framework $[PY_2(TeX_3)]$	1	$P2_12_12_1$	6.634(4)	9.597(5)	7.428(4)	90, 90, 90	Effenberger (1977)
120	21012	$LiV^{5+}TeO_5$ ≡ $Li[VO_2(TeO_3)]$		framework $[PY_2(TeX_3)]$	1	$P2_12_12_1$	9.509(5)	8.335(5)	5.285(5)	90, 90, 90	Darriet (1973)
121	171407	$[(Cu^{2+}_6Cl_4)(Mo^{6+}_2O_8)(TeO_3)_2]$ $\cdot H_2O$	21	framework $[(P_2Y_8)\ (Q_6Z_4)(TeX_3)_2]$	1	$P\bar{1}$	6.1393(15)	6.386(2)	12.005(3)	81.75(4), 85.76(3), 86.18(3)	Takagi *et al.* (2006*b*)
122	65201	$[Cu_7(TeO_3)_2(SO_4)(OH)_6]$		framework $[P_2Q_5(TeX_3)_2(TY_4)Z_6]$	1	$P\bar{1}$	7.389(1)	7.638(1)	7.662(2)	75.17(1), 75.90(1), 84.19(1)	Pertlik and Zemann (1988*a*)
123	260278	$[Ge(TeO_3)_2]$		framework $[M(TeX_3)_2]$	1	$P2_1/n$	5.2201(8)	6.9730(13)	7.3252(15)	90, 91.66(2), 90	Boukharrata *et al.* (2009)

124	261176	$HLi_2[Ga_3(TeO_3)_6]\cdot6H_2O$		framework $[M(TeX_3)_2]$	1	$R\bar{3}$	9.2149(11)	9.2149(11)	25.730(8)	90, 90, 120	Kong *et al.* (2010)
125	280536	$NaGa(TeO_3)_2\cdot2.4H_2O \equiv Na_3[Ga_3(TeO_3)_6]\cdot7.2H_2O$		framework $[M(TeX_3)_2]$	1	$P\bar{3}1c$	9.216(7)	9.216(7)	16.711(15)	90, 90, 120	Bhuvanesh and Halasyamani (2001)
126	280794	$K[Ga(TeO_3)_2]\cdot1.8H_2O$	21	framework $[M(TeX_3)_2]$	3	$P\bar{1}$	8.8361(6)	9.1648(6)	9.9531(7)	115.395(1), 93.973(1), 116.011(1)	Ok and Halasyamani (2001)
127	261177	$Li_6[Ga_{8.67}(H_2O)_2(TeO_3)_{14}]$		framework $[M_9Y_2(TeX_3)_{14}]$	3	$R\bar{3}$	11.3343(4)	11.3343(4)	26.7992(15)	90, 90, 120	Kong *et al.* (2010)
128	8283	$[Fe^{3+}_2(TeO_3)_3]$		framework $[M_2(TeX_3)_3]$	3	*Pnma*	9.505(4)	7.503(9)	11.003(9)	90, 90, 90	Astier *et al.* (1979)
129	417291	$[Fe^{3+}_2(TeO_3)_3]$		framework $[M_2(TeX_3)_3]$	2	*Pnma*	7.8024(1)	17.7501(3)	5.2805(1)	90, 90, 90	van der Lee and Astier (2007)
130	36394	$[In_2(TeO_3)_3]$		framework $[M_2(TeX_3)_3]$	2	*Pbnm*	5.443(2)	8.079(3)	18.236(5)	90, 90, 90	Philippot *et al.* (1978)
131	24434	$Na_2[Zn_2(TeO_3)_3]$	22	framework $[M_2(TeX_3)_3]$	1	$P6_3/m$	9.395(1)	9.395(1)	7.733(1)	90, 90, 120	Miletich (1995*b*)
132	43014	$NaH[Zn_2(TeO_3)_3]\cdot2.67H_2O$		framework $[M_2(TeX_3)_3]$	1	$P6_3/m$	9.41(2)	9.41(2)	7.64(2)	90, 90, 120	Matzat (1968)
133	80439	$Na_2[Zn_2(TeO_3)_3]\cdot2.97H_2O$		framework $[M_2(TeX_3)_3]$	1	$P6_3/m$	9.395(1)	9.395(1)	7.733(1)	90, 90, 120	Miletich (1995*b*)
134	80440	$Na_2[Co_2(TeO_3)_3]\cdot2.97H_2O$		framework $[M_2(TeX_3)_3]$	1	$P6_3/m$	9.372(1)	9.372(1)	7.729(2)	90, 90, 120	Miletich (1995*b*)
135	79848	$Mg_{0.45}[(Fe^{3+}_{1.12}Zn_{0.80}Mn_{0.08})(TeO_3)_3]\cdot4.08H_2O$ ≈ $Mg_{0.5}[(Zn^{2+}Fe^{3+})(TeO_3)_3]\cdot4.5H_2O$ (Zemannite)		framework $[M_2(TeX_3)_3]$	1	$P6_3/m$	9.404(2)	9.404(2)	7.636(4)	90, 90, 120	Miletich (1995*a*)
136	261175	$[Ga_2(TeO_3)_3]$-β		framework $[M_2(TeX_3)_3]$	1	$P6_3/m$	9.2291(18)	9.2291(18)	7.488(2)	90, 90, 120	Kong *et al.* (2010)

137	9259	$Fe_2^{3+}(TeO_3)_3 \cdot H_2O$ ≡ $[Fe_2(H_2O)(TeO_3)_3]$ (Emmonsite)	22	framework $[M_2Y(TeX_3)_3]$	3	$P\bar{1}$	7.90(1)	8.00(1)	7.62(1)	96.73(17), 95.00(17), 84.47(17)	Pertlik (1972*b*)
138	240957	$Ga_2(TeO_3)_3 \cdot 3H_2O$ ≡ $[Ga_2(H_2O)_3(TeO_3)_3]$		framework $[M_2Y_3(TeX_3)_3]$	1	*R*3*c*	9.5404(13)	9.5404(13)	20.3472(19)	90, 90,120	Weil and Stöger (2007*b*)
139	281044	$Nb_3Te_4O_{15}Cl$ ≡ $[Nb_3O_3(TeO_3)_4]Cl$		framework $[M_3Y_3(TeX_3)_4]$	4	*C*2/*c*	18.9944(7)	7.8314(3)	21.1658(8)	90, 106.640(1), 90	Ok and Halasyamani (2002*b*)
140	500	$[Co(TeO_3)]$	22	framework $[M(TeX_3)]$	1	*Pnma*	6.0169(3)	7.5147(4)	5.3266(2)	90, 90, 90	Kohn *et al.* (1976)
141	182007	$[Ni(TeO_3)]$		framework $[M(TeX_3)]$	1	*Pnma*	5.9588(1)	7.5028(1)	5.2143(1)	90, 90, 90	Martinez-Lope *et al.* (2011)
142	29338	$[Cu(TeO_3)]$ (high *P*)		framework $[M(TeX_3)]$	1	*Pmcn*	7.270(4)	5.640(3)	5.983(3)	90, 90, 90	Philippot and Maurin (1976*b*)
143	241141	$[Fe^{3+}F(TeO_3)]$		framework $[MY(TeX_3)]$	1	$P2_1/n$	5.0667(7)	5.0550(7)	12.3975(15)	90, 97.630(13), 90	Laval *et al.* (2008)
144	97532	$V_2^{5+}Te_2O_9$ ≡ $[(VO_2)(VO)(TeO_3)_2]$		framework $[(MY_2)(PZ)(TeX_3)_2]$	2	$P2_1/c$	7.2475(14)	9.4901(19)	10.073(2)	90, 94.45(3), 90	Xiao *et al.* (2003)
145	6310	$Fe^{3+}(TeO_3)(OH) \cdot H_2O$ ≡ $[Fe_2^{3+}(OH)_2(H_2O)(TeO_3)_2] \cdot H_2O$ (Sonoraite)		framework $[M_2Y_3(TeX_3)_2]$	2	$P2_1/c$	10.984(2)	10.268(2)	7.917(2)	90, 108.49(2), 90	Donnay *et al.* (1970)
146	202318	$Ta_2Te_2O_9$ ≡ $[Ta_2O_3(TeO_3)_2]$		framework $[M_2Y_3(TeX_3)_2]$	2	$P2_1/c$	7.096(3)	7.486(3)	14.614(3)	90, 103.01(4), 90	Martinez-Carrera *et al.* (1987)
147	67573	$Sb_2^{5+}Te_2O_9$ ≡ $[Sb_2O_3(TeO_3)_2]$	22	framework $[M_2Y_3(TeX_3)_2]$	4	$P2_1/c$	21.79(1)	4.849(1)	14.574(9)	90, 109.21(3), 90	Alonso *et al.* (1992)
148	281268	$Na_2[W_2O_6(TeO_3)]$		framework $[M_2Y_6(TeX_3)]$	4	*Ia*	13.1394(5)	7.3202(3)	31.4435(11)	90, 95.027(1), 90	Goodey *et al.* (2002)
149	167525	$K_3V_5Te_4O_{20} \cdot 4H_2O$ ≡ $K_3[(V^{4+}O)_4(V^{5+}O_4)(TeO_3)_4] \cdot 4H_2O$	22	framework $[(MY)_4(TZ_4)(TeX_3)_4]$	2	*Pmmn*	16.8856(7)	7.5479(11)	8.9037(4)	90, 90, 90	He *et al.* (2010)

150	240327	$[Ni_{11}(TeO_3)_{10}Cl_2]$		framework $[M_{11}Y_2(TeX_3)_{10}]$	5	$P\bar{1}$	9.281(3)	9.423(3)	10.113(3)	100.218(1), 99.068(4), 115.880(2)	Jiang and Mao (2006*b*)
151	240326	$[Ni_7(TeO_3)_6Cl_2]$		framework $[M_7Y_2(TeX_3)_6]$	1	$R\bar{3}$	11.151(4)	11.151(4)	13.450(6)	90, 90,120	Jiang and Mao (2006*b*)
152	293	$Ni_3(TeO_3)_2(OH)_2 \equiv [Ni_6(TeO_3)_4(OH)_3](OH)$		framework $[M_6Y_3(TeX_3)_4]$	2	*P*6$_3$*mc*	12.993(6)	12.993(6)	4.958(3)	90, 90, 120	Perez *et al*. (1976)
153	294	$Co_3(TeO_3)_2(OH)_2 \equiv [Co_6(TeO_3)_4(OH)_3](OH)$	22	framework $[M_6Y_3(TeX_3)_4]$	2	*P*6$_3$*mc*	13.034(6)	13.034(6)	5.016(3)	90, 90, 120	Perez *et al*. (1976)
154	420434	$[Ga_2Mo^{6+}O_4(TeO_3)_2]$		framework $[M_3Y_4(TeX_3)_2]$	2	*Pnma*	8.751(4)	6.066(2)	15.130(7)	90, 90, 90	Kong *et al.* (2009)
155	422199	$KNb_3Te_2O_{12} \equiv K[Nb_3O_6(TeO_3)_2]$		framework $[M_3Y_6(TeX_3)_2]$	1	*Pbcm*	4.0047(14)	14.903(6)	17.461(7)	90, 90, 90	Gu *et al.* (2011)
156	422201	$RbNb_3Te_2O_{12} \equiv Rb[Nb_3O_6(TeO_3)_2]$		framework $[M_3Y_6(TeX_3)_2]$	1	*Pbcm*	4.005(7)	14.83(3)	17.53(3)	90, 90, 90	Gu *et al.* (2011)
157	422200	$KTa_3Te_2O_{12} \equiv K[Ta_3O_6(TeO_3)_2]$		framework $[M_3Y_6(TeX_3)_2]$	1	*Pbcm*	3.941(2)	14.972(8)	17.477(10)	90, 90, 90	Gu *et al.* (2011)
158	422202	$RbTa_3Te_2O_{12} \equiv Rb[Ta_3O_6(TeO_3)_2]$		framework $[M_3Y_6(TeX_3)_2]$	1	*Pbcm*	3.937(3)	14.979(10)	17.548(12)	90, 90, 90	Gu *et al.* (2011)
159	249958	$[Ni_3(MoO_4)(TeO_3)_2]$		framework $[M_3(TY_4)(TeX_3)_2]$	2	$P2_12_12_1$	4.9475(2)	10.1781(5)	17.5579(10)	90, 90, 90	Zhang *et al.* (2009*b*)
160	416145	$[Co_7(TeO_3)_4Br_6]$		framework $[M_7Y_6(TeX_3)_4]$	2	*C*2/*c*	20.6532(5)	8.5633(2)	14.7262(5)	90, 124.897(3), 90	Becker *et al.* (2006*b*)
161	8282	$[Fe^{3+}_2(TeO_3)O_2]$		framework $[M_2Y_2(TeX_3)]$	1	$P2_1/c$	7.665(2)	4.934(3)	10.815(3)	90, 103.10(2), 90	Astier *et al.* (1979)
162	-	$[Co_2(H_2O)(SO_4)(TeO_3)]$		framework $[M_2Y(TZ_4)(TeX_3)]$	1	*Pbcm*	7.483(5)	10.181(8)	8.458(6)	90, 90, 90	Tang *et al.* (2014)
163	-	$[Mn_2(H_2O)(SO_4)(TeO_3)]$		framework $[M_2Y(TZ_4)(TeX_3)]$	1	*Pbcm*	7.661(12)	10.523(18)	8.703(14)	90, 90, 90	Tang *et al.* (2014)
164	261700	$[Zn_2(MoO_4)(TeO_3)]$		framework $[MT(T'Y_4)(TeX_3)]$	1	$P2_1$	5.178(4)	8.409(6)	7.241(5)	90, 99.351(8), 90	Nguyen *et al.* (2011)
165	419697	$Fe^{3+}_3(TeO_3)_3OCl \equiv [Fe_3O(TeO_3)_3]Cl$	23	framework $[M_3Y(TeX_3)]$	3	$P2_1/c$	4.9188(1)	16.2572(3)	12.9323(2)	90, 110.018(1), 90	Zhang *et al.* (2009*a*)

166	97506	$K_2W_3TeO_{12}$ ≡ $K_2[W_3O_9(TeO_3)]$		framework $[M_3Y_9(TeX_3)]$	1	$P2_1/n$	7.3224(13)	11.669(2)	12.708(2)	90, 90.421(3), 90	Goodey *et al.* (2003)
167	249583	$Ni_3Mo_2TeO_{11}$ ≡ $[Ni_6(Mo_4O_{16})(TeO_3)_2]$		framework $[M_6(M'_4Y_{16})(TeX_3)_2]$	1	$C2/m$	9.562(3)	8.756(3)	10.082(3)	90, 103.228(7), 90	Jiang *et al.* (2007*b*)
168	84704	Mo_5TeO_{16} ≡ $[(Mo_2^{5+}Mo_2^{5+})O_{13}(TeO_3)]$	23	framework $[M_5Y_{13}(TeX_3)]$	1	$P2_1/c$	10.0344(9)	14.430(1)	8.1599(5)	90, 90.780(6), 90	Vallar and Goreaud (1997)
169	405107	$Ba_2Nb_6Te_2O_{21}$ ≡ $Ba_2[Nb_6O_{15}(TeO_3)_2]$		framework $[M_6Y_{15}(TeX_3)_2]$	1	$C2/m$	16.699(3)	5.671(2)	9.611(2)	90, 96.92(2), 90	Müller-Buschbaum and Wedel (1996)
170	405108	$Ba_2Ta_6Te_2O_{21}$ ≡ $Ba_2[Ta_6O_{15}(TeO_3)_2]$		framework $[M_6Y_{15}(TeX_3)_2]$	1	$C2/m$	16.655(8)	5.667(2)	9.576(4)	90, 96.64(7),90	Müller-Buschbaum and Wedel (1996)
171	412561	$Na_4[(UO_2)_3(TeO_3)_5]$	23	framework $[(UY_2)_3(TeX_3)_5]$	3	$I2_13$	16.8969(5)	16.8969(5)	16.8969(5)	90, 90, 90	Almond *et al.* (2002)

TABLE 13. Structures with neso $Te^{4+}X_{4–5}$ as part of the structural unit. Non-Te cations are in tetrahedral (*T*), 5-fold coordination (*P*) or octahedral (*M*); *Y*, *Z* = anions not bound to Te.

#	ICSD #	Compound (Mineral name)	Fig# (Te only)	Fig# (whole str)	Structural unit	*N*	SG	*a* / Å	*b* / Å	*c* / Å	α, β, γ / °	Reference
172	68186	$K[Cu_7(TeO_4)(SO_4)_5]Cl$ (Nabokoite)	4*b*	23	layer $[M_7(TeX_4)(TY_4)_5]$	1	*P*4/*ncc*	9.833(1)	9.833(1)	20.5910(20)	90, 90, 90	Pertlik and Zemann (1988*b*)
173	16392	$[Te(S_2O_7)_2]$	4*c*	24	cluster $[T_2Y_3(TeX_4)]$	1	*Cc*	10.604(4)	8.524(3)	12.052(4)	90, 102.20(3), 90	Einstein and Willis (1981)
174	420436	$In_2Mo^{6+}Te_2O_{10}$ ≡ $In_2[MoO_3(TeO_4)](TeO_3)$	4*c*		cluster $[MY_3(TeX_4)]$	2	*P*2$_1$/*n*	12.002(10)	5.380(4)	12.719(10)	90, 93.894(13), 90	Kong *et al.* (2009)
175	182757	$(NH_4)_9K[V^{4+}_4V^{5+}_8Mo^{6+}_{12}O_{65}(TeO_4)(TeO_3)_2]\cdot27H_2O$	4*c* + 4*a*	24	cluster $[M_{24}Y_{65}(TeX_4)(TeX_3)_2]$	3	*C*2/*c*	50.9979(13)	13.6827(3)	31.7935(8)	90, 117.550(3), 90	Corella-Ochoa *et al.* (2011)
176	170714	$BaV^{5+}_2TeO_8$ ≡ $Ba_2[(VO_2)_4(TeO_4)_2]$	4*c*	24	chain (double) $[(PY_2)_2(TY_2)_2(TeX_4)_2]$	1	*P*2$_1$/*n*	9.6380(8)	5.6665(3)	13.8866(11)	90, 107.642(4), 90	Hou *et al.* (2005)
177	261179	$SrV^{5+}_2TeO_8$ ≡ $Sr_4[V_8O_{18}(TeO_4)_2(TeO_3)_2]$	4*c*		chain (double) $[P_2T_6Y_{18}(TeX_4)_2(TeX_3)_2]$	4	$P\bar{1}$	10.196(4)	11.085(5)	13.995(6)	84.27(2), 70.453(15), 73.136(16)	Zhang *et al.* (2010*b*)
178	87978	$(NH_4)_4[Mo_6O_{18}(TeO_4)]\cdot2H_2O$	4*c*		chain $[M_6Y_{18}(TeX_4)]$	1	*C*2/*c*	21.354(10)	7.761(2)	15.508(10)	90, 119.34(5), 90	Balraj and Vidyasagar (1999*a*)
179	87979	$Rb_4[Mo_6O_{18}(TeO_4)]\cdot2H_2O$	4*c*		chain $[M_6Y_{18}(TeX_4)]$	1	*C*2/*c*	21.4100(50)	7.757(2)	15.507(7)	90, 119.68(3), 90	Balraj and Vidyasagar (1999*a*)
180	281698	$BaNbTePO_8$ ≡ $Ba[NbO(PO_3)(TeO_4)]$	4*c*	24	layer $[MY(TZ_3)(TeX_4)]$	1	*Pbca*	6.7351(9)	7.554(1)	27.455(4)	90, 90, 90	Ok *et al.* (2004)
181	93794	$CdMo^{6+}TeO_6$ ≡ $[Cd(MoO_2)(TeO_4)]$	4*c*	24	layer $[M(TY_2)(TeX_4)]$	1	$P\bar{4}2m$	5.2840(1)	5.2840(1)	9.0595(2)	90, 90, 90	Laligant (2001)

182	93795	$CoMo^{6+}TeO_6$ ≡ $[Co(MoO_2)(TeO_4)]$	4*c*		layer $[M(TY_2)(TeX_4)]$	1	$P2_12_12$	5.2545(1)	5.0653(1)	8.8589(2)	90, 90, 90	Laligant (2001)
183	163978	$Mn^{2+}Mo^{6+}TeO_6$ ≡ $[Mn(MoO_2)(TeO_4)]$	4*c*		layer $[M(TY_2)(TeX_4)]$	1	$P2_12_12$	5.2941(3)	5.1350(3)	8.9544(5)	90, 90, 90	Doi *et al.* (2009)
184	163981	$ZnMo^{6+}TeO_6$ ≡ $[Zn(MoO_2)(TeO_4)]$	4*c*		layer $[M(TY_2)(TeX_4)]$	1	$P2_12_12$	5.2630(2)	5.0426(3)	8.9105(4)	90, 90, 90	Doi *et al.* (2009)
185	184714	$MgMo^{6+}TeO_6$ ≡ $[Mg(MoO_2)(TeO_4)]$	4*c*		layer $[M(TY_2)(TeX_4)]$	1	$P2_12_12$	5.0378(1)	5.2691(1)	8.8985(2)	90, 90, 90	Zhang *et al.* (2012*a*)
186	281503	$BaMo_2^{6+}TeO_9$ ≡ $Ba[Mo_2O_5(TeO_4)]$	4*c*		layer $[M_2Y_5(TeX_4)]$	1	$P2_1$	5.5407(5)	7.4651(7)	8.8448(9)	90, 90.841(2), 90	Ra *et al.* (2003)
187	281502	$BaW_2^{6+}TeO_9$ ≡ $Ba[W_2O_5(TeO_4)]$	4*c*		layer $[M_2Y_5(TeX_4)]$	1	$P2_1$	5.490(2)	7.446(3)	8.887(3)	90, 90.370(6), 90	Ra *et al.* (2003)
188	90109	$Rb_2\ Mo_2^{6+}Te(PO_4)_2O_6$ ≡ $Rb_2[Mo_2P_2O_{10}(TeO_4)]$	4*c*		framework $[M_2T_2Y_{10}(TeX_4)]$	1	*Pbcn*	12.544(1)	8.9340(4)	11.3222(9)	90, 90, 90	Guesdon and Raveau (2000)
189	90110	$Tl_2\ Mo_2^{6+}Te(PO_4)_2O_6$ ≡ $Tl_2[Mo_2P_2O_{10}(TeO_4)]$	4*c*		framework $[M_2T_2Y_{10}(TeX_4)]$	1	*Pbcn*	12.503(2)	8.912(2)	11.300(2)	90, 90, 90	Guesdon and Raveau (2000)
190	90111	$Cs_2Mo_2^{6+}Te(PO_4)_2O_6$ ≡ $Cs_2[Mo_2P_2O_{10}(TeO_4)]$	4*c*		framework $[M_2T_2Y_{10}(TeX_4)]$	1	*Pbcn*	12.3670(8)	9.4907(6)	11.515(4)	90, 90, 90	Guesdon and Raveau (2000)
191	59328	$Mn^{2+}V_2^{4+}TeO_7$ ≡ $[MnV_2^{4+}O_3(TeO_4)]$	4*c*		framework $[MM'PY_3(TeX_4)]$	1	$P\bar{1}$	6.712(2)	6.892(2)	7.855(2)	94.27(2), 114.47(2), 114.79(2)	Feger and Kolis (1998*b*)
192	418558	$Zn_3V_2^{5+}TeO_{10}$ ≡ $[Zn_3(VO_3)_2(TeO_4)]$	4*c*	24	framework $[MP_2(TY_3)_2(TeX_4)]$	1	$P2_1/c$	5.2629(5)	30.534(3)	5.5054(5)	90, 98.653(5), 90	Jiang *et al.* (2008)
193	25104	$Co_6^{2+}Te_5O_{16}$ ≡ $[Co_6(TeO_4)(TeO_3)_4]$	4*c* + 4*a*		framework $[M_6(TeX_4)(TeX_3)_4]$	4	*Pnma*	11.032	10.295	12.876	90, 90, 90	Trömel and Scheller (1976)
194	380522	$Co_3^{2+}Te_2(PO_4)_2O_2(OH)_4$ ≡ $[Co_3(PO_2)_2(TeO_3(OH)_2)_2]$	4*e*		framework $[M_3T_2Y_4(TeX_5)_2]$	1	$C2/m$	19.4317(10)	6.0249(3)	4.7788(2)	90, 103.139(5), 90	Zimmermann *et al.* (2011)

TABLE 14. Structures with soro dimers $Te_2^{4+}X_{5–9}$ as part of the structural unit. Non-Te cations are in plane-triangular coordination (*D*), square planar 4-fold (*Q*), tetrahedral (*T*, *T'*), 5-fold coordination (*P*), octahedral (*M*, *M'*) or 7-/8-fold bipyramidal coordination (*U*); *Y*, *Z* = anions not bound to Te.

#	ICSD #	Compound (Mineral name)	Fig# (Te only)	Fig# (whole str)	Structural unit	*N*	SG	*a* / Å	*b* / Å	*c* / Å	α, β, γ / º	Reference
195	59166	$Cs_2[Te_2O_5]$	8*a*	25		2	*Pbca*	12.102(1)	12.092(2)	10.760(2)	90, 90, 90	Loopstra and Goubitz (1986)
196	424209	$Ba_3[Te_2O_5](TeO_3)Br_2$	8*a* + 4*a*			3	*Pnma*	12.6226(8)	5.9663(4)	18.1112(12)	90, 90, 90	Stöger and Weil (2012)
197	171247	$Nd_2[Te_2O_5](TeO_3)(MoO_4)$	8*a* + 4*a*			2	*Pnma*	17.7014(15)	11.3590(11)	5.3230(4)	90, 90, 90	Shen *et al.* (2005)
198	173747	$TiTeO_3F_2 \equiv [Ti_2OF_4(Te_2O_5)]$	8*a*	25	chain $[M_2Y_5(Te_2X_5)]$	1	*Pnma*	7.3917(12)	16.369(3)	6.4886(8)	90, 90, 90	Laval and Boukharrata (2009)
199	173748	$V^{4+}{}_2Te_2O_7F_2 \equiv [(VO)_2F_2(Te_2O_5)]$	8*a*		layer $[(MY)_2Z_2(Te_2X_5)]$	1	$P\bar{1}$	4.882(2)	5.112(2)	7.243(3)	108.17(3), 91.64(2), 92.63(2)	Laval and Boukharrata (2009)
200	245635	$Fe_8Cu_3Te_{12}O_{32}Cl_{10} \equiv [(Fe^{2+}Fe^{3+}{}_7)(Te_2O_5)_4(TeO_3)_4](Cu^{1+}{}_3Cl_8)Cl_2$	8*a* + 4*a*	25	layer $[M_8(Te_2X_5)_4(TeX_3)_4]$	2	*Pmmn*	20.697(7)	9.996(4)	4.994(2)	90, 90, 90	Becker and Johnsson (2007)
201	89978	$[Cu_2(Te_2O_5)Cl_2]$	8*a*	25	framework $[P_2Y_2(Te_2X_5)]$	1	$P\bar{4}$	7.6209(3)	7.6209(3)	6.3200(4)	90, 90, 90	Johnsson *et al.* (2000)
202	89979	$[Cu_2(Te_2O_5)Br_2]$	8*a*		framework $[P_2Y_2(Te_2X_5)]$	1	$P\bar{4}$	7.8355(2)	7.8355(2)	6.3785(2)	90, 90, 90	Johnsson *et al.* (2000)
203	9255	$V^{5+}{}_2Te_2O_9 \equiv [(VO_2)_2(Te_2O_5)]$	8*a*		framework $[(PY_2)_2(Te_2X_5)]$	1	*Fdd*2	28.01(1)	6.794(5)	7.218(5)	90, 90, 90	Darriet and Galy (1973)
204	1	$Cr^{3+}{}_2Te_4O_{11} \equiv [Cr_2(Te_2O_5)(TeO_3)_2]$	8*a* + 4*a*		framework $[M_2(Te_2X_5)(TeX_3)_2]$	2	$P2_1/c$	7.016(3)	7.545(3)	9.728(3)	90, 99.69(5), 90	Meunier *et al.* (1976)
205	413823	$Ni_{3.4}[Ni_{30}(Te_2O_5)_6(TeO_3)_{20}]Br_{14.8}$	8*a* + 4*a*		framework $[M_{30}(Te_2X_5)_6(TeX_3)_{20}]$	3	$Im\bar{3}$	17.5077(9)	17.5077(9)	17.5077(9)	90, 90, 90	Johnsson *et al.* (2004)

206	413825	$Ni_{4.5}[Ni_{30}(Te_2O_5)_6(TeO_3)_{20}]Cl_{18.45}$	8*a* + 4*a*		framework $[M_{30}(Te_2X_5)_6(TeX_3)_{20}]$	3	$Im\bar{3}$	17.5443(5)	17.5077(9)	17.5077(9)	90, 90, 90	Johnsson *et al.* (2004)
207	416333	$Ho_{11}[Te_2O_6]_2(TeO_3)_{12}Cl$	8*b* + 4*a*			8	$P\bar{1}$	5.5152(3)	11.9354(6)	18.3463(9)	100.814(3), 95.443(3), 100.175(3)	Meier and Schleid (2006*a*)
208	73442	$Pb[(UO_2)(Te_2O_6)]$ (Moctezumite)	8*b*		chain $[UY_2(Te_2X_6)]$	2	$P2_1/c$	7.813(5)	7.061(2)	13.775(4)	90, 93.71(2), 90	Swihart *et al.* (1993)
209	248271	$(NH_4)_2WTe_2O_8$ ≡ $(NH_4)_2[WO_2(Te_2O_6)]$ (5.09 GP*a*)	8*b*	25	layer $[MY_2(Te_2X_6)]$	2	$P2_1$	6.443(1)	6.883(1)	9.301(1)	90, 98.8(2), 90	Grzechnik *et al.* (2010)
210	261602	$InV^{5+}Te_2O_8$ ≡ $[In(VO_2)(Te_2O_6)]$	8*b*		layer $[MTY_2(Te_2X_6)]$	2	$P2_1/n$	7.8967(16)	5.1388(10)	16.711(3)	90, 94.22(3) ,90	Lee *et al.* (2011)
211	34597	$Fe^{3+}{}_2Te_2O_6(SO_4)\cdot 3H_2O$ ≡ $[Fe_2(H_2O)_2(SO_4)(Te_2O_6)]\cdot H_2O$ (Poughite)	8*b*	25	layer $[M_2Y_2(TZ_4)(Te_2X_6)]$	2	$P2_1nb$	9.6967(7)	14.2676(4)	7.8748(2)	90, 90, 90	Kampf and Mills (2011)
212	416653	$Sr[Cu_2Cl(Te_2O_6)]Cl$	8*b*		framework $[Q_2Y(Te_2X_6)]$	2	$P2_1$	7.215(2)	7.2759(15)	8.239(2)	90, 96.56(4), 90	Takagi *et al.* (2006*c*)
213	85786	$Ba[Cu_2Cl(Te_2O_6)]Cl$	8*b*		framework $[Q_2Y(Te_2X_6)]$	2	$P2_1$	7.434(2)	7.448(2)	8.271(2)	90, 97.42(3), 90	Feger and Kolis (1998*c*)
214	281171	$Pb_3Te_2O_6Cl_2$ ≡ $Pb_6[Te_2O_6](TeO_3)_2Cl_2$	8*c*			2	$C2/m$	16.4417(11)	5.6295(4)	10.8894(7)	90, 103.013(1), 90	Porter and Halasyamani (2003)
215	248131	$Pb_6[Te_2O_6](TeO_3)_2Br_2$	8*c*			2	$C2/m$	16.9151(9)	5.6813(3)	11.0623(6)	90, 104.046(1), 90	Weil and Stöger (2010)
216	4319	$Ca_2(Te_2O_4)[CO_3]_2$ ≡ $Ca_2[(CO_2)_2(Te_2O_6)]$ (Mroseite)	8*c*	26	cluster $[(DY_2)_2(Te_2X_6)]$	1	$Pbca$	6.988(15)	11.201(10)	10.566(10)	90, 90, 90	Fischer *et al.* (1975)
217	280886	$NaV^{5+}TeO_5$ ≡ $Na_2[(VO_2)_2(Te_2O_6)]$	8*c*		chain $[(TY_2)_2(Te_2X_6)]$	1	$P2_1/c$	5.8840(2)	11.3760(3)	6.8190(2)	90, 103.0680(17), 90	Rozier *et al.* (2002)

218	280885	$KV^{5+}TeO_5 \equiv K_2[(VO_2)_2(Te_2O_6)]$	8*c*		chain $[(TY_2)_2(Te_2X_6)]$	1	$P2_1/c$	6.3870(3)	11.6150(8)	6.8840(3)	90, 105.100(3), 90	Rozier *et al.* (2002)
219	417774	$AgV^{5+}TeO_5 \equiv Ag_2[(VO_2)_2(Te_2O_6)]$	8*c*		chain $[(TY_2)_2(Te_2X_6)]$	1	$P2_1/c$	5.8659(1)	11.3798(2)	6.8078(1)	90, 102.733(1), 90	Pitzschke and Jansen (2007)
220	261183	$Ba_2V^{5+}{}_2Te_2O_{11} \equiv Ba_2[(VO_2)(VO_3)(Te_2O_6)]$	8*c*		chain $[(TY_2)(TY_3)(Te_2X_6)]$	1	$P2_1/m$	7.5076(9)	7.6687(8)	9.5710(12)	90, 93.568(13), 90	Zhang *et al.* (2010*b*)
221	412560	$Tl_2(UO_2)Te_2O_6$-α ≡ $Tl_4[(UO_2)_2(Te_2O_6)(TeO_3)_2]$	8*c*	26	layer $[(UY_2)_2(Te_2X_6)(TeX_3)_2]$	2	$P\bar{1}$	7.4054(9)	7.9268(9)	8.944(1)	94.122(2), 107.438(2), 107.180(2)	Almond *et al.* (2002)
222	19021	$V^{4+}TeO_4$-β (high-*T*) ≡ $[(VO)_2(Te_2O_6)]$	8*c*	26	layer $[(PY)_2(Te_2X_6)]$	1	$P2_1/c$	4.379(2)	13.502(4)	5.446(2)	90, 91.72(5), 90	Meunier *et al.* (1973)
223	260257	$NiV^{5+}{}_2Te_2O_{10} = [Ni(VO_2)_2(Te_2O_6)]$	8*c*		framework $[M(M'Y_2)_2(Te_2X_6)]$	1	$P\bar{1}$	4.7961(2)	6.3747(3)	6.5643(5)	84.651(2), 69.490(3), 72.011(4)	Zhang and Johnsson (2009)
224	415255	$BaMo_2Te_2O_{11}\cdot H_2O \equiv Ba[Mo_2O_4(Te_2O_7)]\cdot H_2O$	8*d*		layer $[M_2Y_4(Te_2X_7)]$	2	$P2_12_12_1$	7.4034(12)	7.4932(8)	18.567(2)	90, 90, 90	Hou *et al.* (2006)
225	-	$TeO(As^{5+}O_3OH)$ (-I) ≡ $[(AsOH)_2(Te_2O_8)]$	8*e*	26	chain (double) $[(TY)_2(Te_2X_8)]$	1	$P2_1/c$	7.4076(10)	5.9596(7)	9.5523(11)	90, 102.589(8), 90	Weil (2014)
226	416032	$Ba_2TeO(PO_4)_2 \equiv Ba_4[(PO_2)_2(PO_3)_2(Te_2O_8)]$	8*e*		chain (double) $[(TY_2)_2(TY_3)_2(Te_2X_8)]$	1	$P\bar{1}$	6.9461(16)	7.3970(17)	8.887(2)	76.843(4), 79.933(4), 75.688(4)	Ok and Halasyamani (2006)
227	248226	$Te_2O(PO_4)_2 \equiv [P_2(Te_2O_9)]$	8*f*		framework $[T_2(Te_2X_9)]$	2	Cc	5.3819(7)	13.6990(19)	9.5866(12)	90, 103.682(2), 90	Kim *et al.* (2010)

TABLE 15. Structures with soro or cyclo $Te_m^{4+}X_n$ (m > 2) as part of the structural unit. Non-Te cations are in square planar 4-fold (*Q*), tetrahedral (*T*), or octahedral (*M*) coordination; *Y* = anions not bound to Te.

#	ICSD #	Compound (Mineral name)	Fig# (Te only)	Fig# (whole str)	Structural unit	*N*	SG	*a* / Å	*b* / Å	*c* / Å	α, β, γ / °	Reference
228	88996	$Sr_3[Te_3O_8](TeO_3)$	8*g* + 5*a*			8	*P*1	7.531(1)	9.240(1)	9.546(2)	98.07(1), 109.55(1), 102.19(1)	Dytyatyev and Dolgikh (1999)
229	37069	$Ba_3[Te_3O_8](TeO_3)$	8*g* + 5*a*			4	$P\bar{1}$	9.4245(5)	9.9759(9)	7.8877(4)	110.58(1), 103.27(1), 97.80(1)	Hottentot and Loopstra (1983)
230	417616	$BaLa_2[Te_3O_8](TeO_3)_2$	8*g* + 5*a*			3	*C*2/*c*	19.119(3)	5.9923(5)	13.2970(19)	90, 107.646(8), 90	Jiang *et al.* (2007*c*)
231	413664	$Dy_2[Te_3O_8](Te_2O_5)$	8*g* + 8*a*	26		5	$P\bar{1}$	6.9812(5)	8.6371(7)	10.5846(9)	89.058(8), 86.842(8), 75.106(8)	Meier and Schleid (2005)
232	413665	$Ho_2[Te_3O_8](Te_2O_5)$	8*g* + 8*a*			5	$P\bar{1}$	6.9543(5)	8.6268(7)	10.5672(9)	89.003(8), 86.810(8), 75.049(8)	Meier and Schleid (2005)
233	413666	$Er_2[Te_3O_8](Te_2O_5)$	8*g* + 8*a*			5	$P\bar{1}$	6.9285(5)	8.6173(7)	10.5507(9)	88.912(8), 86.778(8), 74.991(8)	Meier and Schleid (2005)
234	413667	$Tm_2[Te_3O_8](Te_2O_5)$	8g + 8a			5	$P\bar{1}$	6.9039(5)	8.6082(7)	10.5351(9)	88.823(8), 86.746(8), 74.934(8)	Meier and Schleid (2005)
235	413668	$Yb_2[Te_3O_8](Te_2O_5)$	8*g* + 8*a*			5	$P\bar{1}$	6.8804(5)	8.6001(7)	10.5205(9)	88.745(8), 86.713(8), 74.876(8)	Meier and Schleid (2005)

236	413669	$Lu_2[Te_3O_8](Te_2O_5)$	8*g* + 8*a*			5	$P\bar{1}$	6.8632(5)	8.5957(6)	10.5083(7)	88.716(6), 86.671(6), 74.838(6)	Meier and Schleid (2005)
237	418855	$Y_2[Te_3O_8](Te_2O_5)$	8*g* + 8*a*			5	$P\bar{1}$	6.9516(5)	8.6235(7)	10.5749(9)	89.004(8), 86.843(8), 75.038(8)	Höss *et al.* (2008)
238	418557	$Sr_4[Te_3O_8]Cl_4$	8*g*			3	*C*2/*m*	16.301(2)	5.7469(5)	17.109(2)	90, 109.648(4), 90	Jiang and Mao (2008)
239	171245	$La_2[Te_3O_8](MoO_4)$	8*g*			2	*Pnma*	7.315(6)	11.711(9)	13.602(11)	90, 90, 90	Shen *et al.* (2005)
240	171758	$Na_2Mo_3Te_3O_{16} \equiv Na_2[Mo_3O_8(Te_3O_8)]$	8*g*	26	chain $[M_3Y_8(Te_3X_8)]$	2	I2	7.3373(10)	11.2668(16)	8.2369(18)	90, 97.387(3), 90	Chi *et al.* (2006)
241	420405	$Ag_2Mo_3Te_3O_{16} \equiv Ag_2[Mo_3O_8(Te_3O_8)]$	8*g*		chain $[M_3Y_8(Te_3X_8)]$	2	*I*2	7.398(6)	11.296(8)	8.245(10)	90, 97.730(11), 90	Zhou *et al.* (2009)
242	418681	$Ca[Co_2Cl_2(Te_3O_8)]$	8*g*		layer $[M_2Y_2(Te_3X_8)]$	3	$P2_1/c$	6.537(2)	9.088(2)	19.500(9)	90, 113.36(4), 90	Takagi *et al.* (2009)
243	418682	$Sr[Co_2Cl_2(Te_3O_8)]$	8*g*		layer $[M_2Y_2(Te_3X_8)]$	3	$P2_1/c$	6.5814(11)	9.0505(10)	18.809(4)	90, 107.199(19), 90	Takagi *et al.* (2009)
244	418683	$Sr[Ni_2Cl_2(Te_3O_8)]$	8*g*		layer $[M_2Y_2(Te_3X_8)]$	3	$P2_1/c$	6.645(5)	8.892(4)	19.075(15)	90, 108.11(9), 90	Takagi *et al.* (2009)
245	10034	$Nb_2Te_3O_{11} \equiv [Nb_2O_3(Te_3O_8)]$	8*g*	27	framework $[M_2Y_3(Te_3X_8)]$	2	$P2_12_12$	7.700(2)	15.700(3)	3.979(1)	90, 90, 90	Galy and Lindqvist (1979)
246	170917	$NaNb_3Te_4O_{16} \equiv Na[Nb_3O_5(Te_3O_8)(TeO_3)]$	8*g*		framework $[M_3Y_5(Te_3X_8)(TeX_3)]$	4	$P2_1/m$	6.6126(13)	7.4736(15)	14.034(3)	90, 102.98(3), 90	Ok and Halasyamani (2005)

247	170916	$Na_{1.4}Nb_3Te_{4.9}O_{18}$ ≡ $Na_{1.4}[Nb_3O_4(Te_{2.9}O_8)(TeO_3)_2]$	8*g*	27	framework $[(MY)(M_2Y_3)(Te_3X_8)(TeX_3)_2]$	5	*C*2/*m*	32.377(5)	7.4541(11)	6.5649(9)	90, 95.636(5), 90	Ok and Halasyamani (2005)
248	420079	$Dy_2(TeO_3)_3$ ≡ $Dy_4[Te_3O_9](TeO_3)$	8*h*	27		6	$P2_1/c$	13.7308(9)	5.3852(3)	22.7513(14)	90, 99.021(4), 90	Meier *et al.* (2009)
249	-	$Te_3O_3(AsO_4)_2$ ≡ $[As_2(Te_3O_{11})]$	8*i*	27	layer $[T_2(Te_3X_{11})]$	3	$P\bar{1}$	6.5548(4)	7.6281(6)	15.0464(15)	140.212(6), 102.418(9), 77.346(5)	Weil (2014)
250	26536	$Na_2Te_2O_5·2H_2O$ ≡ $Na_4[Te_4O_{10}]·4H_2O$	8*j*			2	$P\bar{1}$	11.632(3)	5.613(2)	6.193(2)	102.51(1), 93.14(1), 92.23(1)	Daniel *et al.* (1981)
251	2397	$(NH_4)_2Te_2O_5·2H_2O$ ≡ $(NH_4)_4[Te_4O_{10}]·4H_2O$	8*j*			2	$P2_1/c$	10.357(3)	11.000(3)	8.178(2)	90, 93.23(1), 90	Johansson (1978)
252	417712	$Sc_2Te_5O_{13}$ ≡ $Sc_4[Te_4O_{10}](Te_3O_8)_2$	8*j* + 8*g*			5	$P\bar{1}$	6.6067(5)	8.5528(7)	10.4110(9)	86.732(8), 86.264(8), 74.021(8)	Höss and Schleid (2007*b*)
253	171007	$Ca_2[Cu(Te_4O_{10})]Cl_2$	8*j*		layer $[Q(Te_4X_{10})]$	2	$P\bar{1}$	5.421(2)	7.266(3)	8.717(5)	71.60(6), 79.26(6), 77.63(5)	Takagi and Johnsson (2005)
254	170647	$Sm_2Mn^{2+}Te_5O_{13}Cl_2$ ≡ $Sm_4[Mn_2(Te_4O_{10})(Te_3O_8)_2]Cl_4$	8*j* + 8*g*		framework $[M_2(Te_4X_{10})(Te_3X_8)_2]$	5	$P2_1/n$	15.202(4)	5.5801(13)	17.982(4)	90, 104.286(3), 90	Shen and Mao (2005)
255	170648	$Dy_2Cu^{2+}Te_5O_{13}Br_2$ ≡ $Dy_4[Cu_2(Te_4O_{10})(Te_3O_8)_2]Br_4$	8*j*+ 8*g*		framework $[M_2(Te_4X_{10})(Te_3X_8)_2]$	5	$P2_1/n$	15.397(4)	5.4637(13)	17.838(5)	90, 104.577(2), 90	Shen and Mao (2005)
256	413651	$La_2[Te_4O_{11}]$	8*k*	27		2	*C*2/*c*	12.8413(8)	5.2831(3)	16.4532(9)	90, 105.981(7), 90	Meier and Schleid (2004)
257	413652	$Ce_2[Te_4O_{11}]$	8*k*			2	*C*2/*c*	12.7634(8)	5.2562(3)	16.3908(9)	90, 105.990(7), 90	Meier and Schleid (2004)

258	413655	$Pr_2[Te_4O_{11}]$	8*k*			2	*C*2/*c*	12.7501(8)	5.2346(3)	16.3279(9)	90, 105.997(7), 90	Meier and Schleid (2004)
259	413654	$Nd_2[Te_4O_{11}]$	8*k*			2	*C*2/*c*	12.6520(8)	5.2137(3)	16.2864(9)	90, 106.023(7), 90	Meier and Schleid (2004)
260	413653	$Sm_2[Te_4O_{11}]$	8*k*			2	*C*2/*c*	12.5609(8)	5.1758(3)	16.2407(9)	90, 106.045(7), 90	Meier and Schleid (2004)
261	413656	$Eu_2[Te_4O_{11}]$	8*k*			2	*C*2/*c*	12.5242(8)	5.1629(3)	16.1613(9)	90, 106.068(7), 90	Meier and Schleid (2004)
262	413657	$Gd_2[Te_4O_{11}]$	8*k*			2	*C*2/*c*	12.4918(8)	5.1507(3)	16.1326(9)	90, 106.096(7), 90	Meier and Schleid (2004)
263	413658	$Tb_2[Te_4O_{11}]$	8*k*			2	*C*2/*c*	12.4563(8)	5.1330(3)	16.0985(9)	90, 106.102(7), 90	Meier and Schleid (2004)
264	413659	$Dy_2[Te_4O_{11}]$	8*k*			2	*C*2/*c*	12.4136(8)	5.1174(3)	16.0462(9)	90, 106.131(7), 90	Meier and Schleid (2004)
265	413660	$Ho_2[Te_4O_{11}]$	8*k*			2	*C*2/*c*	12.3827(8)	5.1063(3)	16.0238(9)	90, 106.159(7), 90	Meier and Schleid (2004)
266	413661	$Er_2[Te_4O_{11}]$	8*k*			2	*C*2/*c*	12.3605(8)	5.0952(3)	15.9981(9)	90, 106.170(7), 90	Meier and Schleid (2004)
267	413662	$Tm_2[Te_4O_{11}]$	8*k*			2	*C*2/*c*	12.3412(8)	5.0785(3)	15.9704(9)	90, 106.178(7), 90	Meier and Schleid (2004)

268	413663	$Yb_2[Te_4O_{11}]$	8*k*			2	*C*2/*c*	12.3264(8)	5.0671(3)	15.9390(9)	90, 106.184(7), 90	Meier and Schleid (2004)
269	170699	$Lu_2[Te_4O_{11}]$	8*k*			2	*C*2/*c*	12.2953(8)	5.0596(3)	15.9134(9)	90, 106.202(7), 90	Höss *et al.* (2005)
270	418854	$Y_2[Te_4O_{11}]$	8*k*			2	*C*2/*c*	12.3876(8)	5.1068(3)	16.0193(9)	90, 106.154(7), 90	Höss *et al.* (2008)
271	418629	$Ba_2[Cu_2(Te_4O_{11})]Br_2$	8*k*	28	layer $[Q_2(Te_4X_{11})]$	4	$C\bar{1}$	10.9182(19)	15.119(2)	9.433(2)	90.148(15), 106.733(18) 89.930(13)	Takagi *et al.* (2008)
272	85785	$Ba_4[Cu^{2+}{}_2(Te_4O_{11})]_2(Cu^{1+}{}_4Cl_8)$	8*k*		layer $[Q_2(Te_4X_{11})]$	4	$P\bar{1}$	9.275(2)	12.135(2)	9.263(2)	98.23(3), 108.35(3), 110.90(3)	Feger and Kolis (1998*c*)
273	417179	$[Co_5(Te_4O_{11})Cl_4]$	8*k*		layer $[M_5Y_4(Te_4X_{11})]$	4	$P\bar{1}$	8.2226(8)	10.2967(12)	10.3114(11)	110.80(1), 97.95(1), 98.26(1)	Becker *et al.* (2007*b*)
274	155852	$[Cu_4(Te_5O_{12})Cl_4]$	8*l*	28	framework $[Q_4Y_4(Te_5X_{12})]$	2	*P*4/*n*	11.3474(16)	11.3474(16)	6.3319(9)	90, 90, 90	Takagi *et al.* (2006*a*)
275	249541	$Nd_5MoTe_7O_{23}Cl_3 \equiv Nd_5(MoO_4)[Te_5O_{13}](TeO_3)_2Cl_3$	8*m* + 4*a*			4	*C*2/*m*	7.6400(8)	18.1961(16)	18.2082(19)	90, 97.042(6), 90	Jiang *et al.* (2007*a*)
276	249542	$Nd_5WTe_7O_{23}Cl_3 \equiv Nd_5(WO_4)[Te_5O_{13}](TeO_3)_2Cl_3$	8*m* + 4*a*			4	*C*2/*m*	7.635(3)	18.211(6)	18.217(9)	90, 96.866(6), 90	Jiang *et al.* (2007*a*)
277	249544	$Pr_5MoTe_7O_{23}Cl_3 \equiv Pr_5(MoO_4)[Te_5O_{13}](TeO_3)_2Cl_3$	8*m* + 4*a*			4	*C*2/*m*	7.6400(15)	18.200(4)	18.210(4)	90, 97.04(3), 90	Jiang *et al.* (2007*a*)
278	249545	$Pr_5WTe_7O_{23}Cl_3 \equiv Pr_5(WO_4)[Te_5O_{13}](TeO_3)_2Cl_3$	8*m* + 4*a*			4	*C*2/*m*	7.669(2)	18.261(6)	18.324(6)	90, 97.037(1), 90	Jiang *et al.* (2007*a*)

279	90371	$Nb_2Te_4O_{13}$ ≡ $[Nb_8O_8(Te_{10}O_{26})(TeO_3)_6]$	8*o* + 4*a*	28	framework $[M_8Y_8(Te_{10}X_{26})(TeX_3)_6]$	8	$P\bar{1}$	7.5609(6)	12.697(1)	12.736(1)	116.050(1), 90.192(1), 90.031(2)	Blanchandin *et al.* (2000*b*)
280	280004	$(NH_4)_6Mo_8Te_8O_{43}\cdot H_2O$ ≡ $(NH_4)_6[(MoO_3)_6(Te_6O_{12})(TeO_3)_2](Mo_2O_7)\cdot H_2O$	8*n* + 4*a*	28	layer $[(MY_3)_6(Te_6X_{12})(TeX_3)_2]$	2	$P\bar{3}$	12.124(4)	12.124(4)	8.130(3)	90, 90, 120	Balraj and Vidyasagar (1999*b*)

TABLE 16. Structures with ino $Te^{4+}{}_mX_n$ chains as part of the structural unit. Non-Te cations are in 3-fold (*D*), square planar 4-fold (*Q*), tetrahedral (*T*), 5-fold coordination (*P*) or octahedral (*M*) coordination; *Y* = anions not bound to Te. * = bridging oxygens positionally disordered so that average structure is *einer*.

#	ICSD #	Compound (Mineral name)	Fig# (Te only)	Fig# (whole str)	Structural unit	*N*	SG	*a* / Å	*b* / Å	*c* / Å	α, β, γ / °	Reference
281	69063	Mo_5TeO_{16} ≡ $[(Mo^{5+}_2Mo^{6+}_3)O_{13}(TeO_3)]$ (high *T*)	9*c**		framework $[M_5Y_{13}(TeX_3)]$	1	*Pm*2*a*	20.010(1)	4.0650(2)	7.2254(4)	90, 90, 90	Forestier and Goreaud (1991)
282	63031	$AgTeO_2(NO_3)$ ≡ $Ag_2[Te_2O_4](NO_3)_2$	9*a*			1	*Pbcn*	5.667(2)	14.202(8)	5.232(2)	90, 90, 90	Olsson *et al.* (1988)
283	168639	$Pb_3TeO_4Cl_2$ ≡ $Pb_2[(Pb_{0.5}Te_{0.5})_2O_4]Cl_2$ (Telluroperite)	9*a*	29		1	*Bmmb*	5.5649(6)	5.5565(6)	12.4750(14)	90, 90, 90	Kampf *et al.* (2010f)
284	2542	$[Cu(Te_2O_5)]$ (Rajite)	9*b*		framework $[Q(Te_2X_5)]$	2	$P2_1/c$	6.871(2)	9.322(2)	7.602(2)	90, 109.08(1), 90	Hanke *et al.* (1973)
285	83400	$Nd[Te_2O_5]Br$	9*b*			2	*F*222	8.0148(4)	7.9766(4)	17.3334(9)	90, 90, 90	Tarasov *et al.* (1996)
286	249539	$Nd_2[Te_2O_5](Te_2O_5)(MoO_4)$	9*b* + 8*a*			4	$P\bar{1}$	6.9494(18)	9.931(3)	10.116(3)	89.719(7), 72.531(6), 86.593(7)	Jiang *et al.* (2007*a*)
287	249543	$Pr_2[Te_2O_5](Te_2O_5)(MoO_4)$	9*b* + 8*a*			4	$P\bar{1}$	6.9894(18)	9.964(3)	10.157(3)	89.669(7), 72.434(6), 86.546(7)	Jiang *et al.* (2007*a*)
288	94349	$[Ga_2(Te_2O_5)(Te_2O_6)]$	9*b* + 8*b*		framework $[PT(Te_2X_5)(Te_2X_6)]$	4	*P*1	5.125(1)	6.559(1)	8.173(2)	75.06(2), 89.25(2), 69.62(2)	Dutreilh *et al.* (2001)
289	290265	$[InF(Te_2O_5)]$	9*b*		framework $[MY(Te_2X_5)]$	2	$C222_1$	6.964(2)	11.300(3)	13.088(4)	90, 90, 90	Boukharrata *et al.* (2013)

290	413008	$La_4Ta_2Te_6O_{23}$ ≡ $La_4[Ta_2O_6(Te_2O_{5.4})(TeO_3)_2][Te_2O_{5.6}]$	9*c* + 9*c* + 4*a*	29	chain $[M_2Y_6(Te_2X_6)(TeX_3)_2]$ and $[Te_2X_6]$	4	*C*2/*c*	23.4676(17)	12.1291(9)	7.6416(6)	90, 101.258(1), 90	Ok *et al.* (2003)
291	281059	$K[(UO_2)(Te_2O_5(OH))]$	9*c*		layer $[MY_2(Te_2X_6)]$	1	*Cmcm*	7.9993(5)	8.7416(6)	11.4413(8)	90, 90, 90	Almond and Albrecht Schmitt (2002)
292	160677	UO_2TeO_3 ≡ $[(UO_2)_2(Te_2O_6)]$ (Schmitterite)	9*c*	29	layer $[(UY_2)_2(Te_2X_6)]$	1	*Pca*2$_1$	10.163(1)	5.361(1)	7.865(1)	90, 90, 90	Bindi and Pratesi (2007)
293	281060	$Tl_3[(UO_2)_2(Te_2O_5(OH))(Te_2O_6)]\cdot 2H_2O$	9*c* + 9*c*	29	layer $[(UY_2)_2(Te_2X_6)(Te_2X_6)]$	2	*Pbam*	10.0623(8)	23.024(2)	7.9389(6)	90, 90, 90	Almond and Albrecht Schmitt (2002)
294	-	$In_2[NbO_2(TeO_3)]_2[Te_2O_6]$	9*c* + 4*a*	29	layer $[MY_2(TeX_3)]$ and chain $[Te_2X_6]$	2	*Pca*2$_1$	7.6361(1)	10.8298(1)	7.6564(1)	90, 90, 90	Kim *et al.* (2014*b*)
295	92298	$Bi_2[NbO_2(TeO_3)]_2[Te_2O_6]$	9*c* + 4*a*		layer $[MY_2(TeX_3)]$ and chain $[Te_2X_6]$	2	*Pbca*	5.6109(7)	8.1277(8)	31.2050(30)	90, 90, 90	Blanchandin *et al.* (2000*a*)
296	422204	$Cs_3[Nb_9O_{20}(Te_2O_6)(TeO_3)_2]$	9*c*	29	layer $[M_9Y_{20}(Te_2X_6)(TeX_3)_2]$	2	*Cmcm*	37.124(14)	10.667(4)	7.470(3)	90, 90, 90	Gu *et al.* (2011)
297	202451	$CuTeO_3$ ≡ $[Cu_2(Te_2O_6)]$	9*c*		framework $[P_2(Te_2X_6)]$	1	*P*2$_1$/*n*	5.214(1)	9.108(2)	5.965(1)	90, 95.06(1), 90	Pertlik (1987)
298	173863	$TlV^{5+}TeO_5$ ≡ $Tl_2[(VO_2)_2(Te_2O_6)]$	9*c*		framework $[(MY_2)_2(Te_2X_6)]$	1	*Pna*2$_1$	7.313(2)	8.747(2)	7.887(2)	90, 90, 90	Grzechnik *et al.* (2009)
299	-	$TeO(As^{5+}O_3OH)$ (-II) ≡ $[(AsOH)_2(Te_2O_8)]$	9*d*		layer $[(TY)_2(Te_2X_8)]$	1	*P*2$_1$/*c*	6.2962(4)	4.7041(3)	13.9446(8)	90, 94.528(3), 90	Weil (2014)
300	201413	$TeO(Se^{4+}O_3)$ ≡ $[Se_2(Te_2O_8)]$	9*d*		framework $[D_2(Te_2X_8)]$	2	*P*1	4.356(4)	6.701(4)	7.385(3)	116.79(4), 106.78(8), 90.71(8)	Delage *et al.* (1982)

301	280531	$TeO(Se^{4+}O_3) \equiv [Se_2(Te_2O_8)]$	9*d*		framework $[D_2(Te_2X_8)]$	1	*Ia*	4.3568(9)	12.465(3)	6.7176(15)	90, 90.825(4), 90	Porter *et al.* (2001)
302	72709	$Bi_2Te_4O_{11} \equiv Bi_4[Te_4O_{10}](TeO_3)_4$ (Chekhovichite)	9*e* + 5*a*			4	$P2_1/n$	6.9909(3)	7.9593(3)	18.8963(8)	90, 95.176(3), 90	Rossell *et al.* (1992)
303	88010	$Na_2MoTe_4O_{12} \equiv Na_2[MoO_2(Te_4O_{10})]$	9*e*		chain $[MY_2(Te_4X_{10})]$	2	$C2/c$	17.3410(40)	5.8262(11)	11.268(2)	90, 104.38(2), 90	Balraj and Vidyasagar (1999*b*)
304	88009	$Na_2WTe_4O_{12} \equiv Na_2[WO_2(Te_4O_{10})]$	9*e*		chain $[MY_2(Te_4X_{10})]$	2	$C2/c$	17.3480(30)	5.7755(10)	11.269(3)	90, 104.33(2), 90	Balraj and Vidyasagar (1999*b*)
305	420406	$Ag_2MoTe_4O_{12} \equiv Ag_2[MoO_2(Te_4O_{10})]$	9*e*		chain $[MY_2(Te_4X_{10})]$	2	$C2/c$	17.598(4)	5.8063(7)	11.3908(16)	90, 104.276(10), 90	Zhou *et al.* (2009)
306	245636	$Fe_8Te_{12}O_{32}Cl_3Br_3 \equiv [(Fe^{2+}{}_2Fe^{3+}{}_6)(Te_4O_{10})(Te_2O_5)_2(TeO_3)_4]Cl_3Br_3$	9*e* + 8*a* + 4*a*	30	layer (double) $[M_8(Te_4X_{10})(Te_2X_5)_2(TeX_3)_4]$	6	$P2_1/c$	9.921(3)	5.0109(5)	36.7749(10)	90, 90.710(8), 90	Becker and Johnsson (2007)
307	391211	$HoTe_2O_5Cl \equiv Ho_2[Te_4O_{10}]Cl_2$	9*f*			4	$P\bar{1}$	7.6207(6)	7.9679(6)	10.1036(8)	100.987(4), 99.358(4), 91.719(4)	Meier and Schleid (2003*a*)
308	66917	$Na_2Te_2O_5 \equiv Na_4[Te_4O_{10}]$	9*g*			2	$C2/c$	23.465(6)	4.877(1)	9.691(2)	90, 102.81(1), 90	Tagg *et al.* (1997)
309	35345	$K_2Te_2O_5 \cdot 3H_2O \equiv K_4[Te_4O_{10}] \cdot 6H_2O$	9*g*			2	$P2_1/c$	8.007(6)	6.283(3)	19.007(13)	90, 102.32(6), 90	Andersen and Moret (1983)
310	73991	$Mn^{2+}Te_2O_5 \equiv Mn[Mn(Te_4O_{10})]$ (Mn-dominant denningite)	9*g*	30	framework $[M(Te_4X_{10})]$	1	$P4_2/nbc$	8.761(1)	8.761(1)	12.990(2)	90, 90, 90	Miletich (1993)
311	86226	$Mn[Cu(Te_4O_{10})]$	9*g*		framework $[M(Te_4X_{10})]$	1	$P4_2/nbc$	8.727(2)	8.727(2)	12.822(4)	90, 90, 90	Miletich (1991)

312	83844	$K_2Te_2O_5$ ≡ $K_4[Te_4O_{10}]$	9*h*			2	*P*2$_1$/*a*	5.454(1)	15.142(1)	7.713(1)	90, 93.71(1), 90	Becker *et al.* (1997)
313	261182	$Ba_2V^{5+}Te_4O_{12}(OH)$ ≡ $Ba_2[VO_3(Te_4O_9(OH))]$	9*i*		chain [$TY_3(Te_4X_{10})$]	4	*P*2$_1$/*n*	10.7661(7)	7.3084(3)	16.5883(14)	90, 94.763(6), 90	Zhang *et al.* (2010*b*)
314	158974	$(NH_4)_2WTe_2O_8$ ≡ $(NH_4)_4[(WO_2)_2(Te_4O_{12})]$	9*j*		layer [$(MY_2)_2(Te_4X_{12})$]	2	*P*2$_1$	6.9716(9)	7.0279(9)	9.4593(13)	90, 99.188(2), 90	Kim *et al.* (2007*a*)
315	26533	$NiTe_2O_5$ ≡ $[Ni_4(Te_6O_{14})(TeO_3)_2]$	9*k* + 4*a*		framework [$M_4(Te_6X_{14})(TeX_3)_2$]	3	*Pnma*	8.868(5)	12.126(6)	8.452(5)	90, 90, 90	Platte and Trömel (1981)
316	200372	$Pb_2Te_3O_8$ ≡ $Pb_8[Te_6O_{16}](Te_3O_8)_2$	9*l* + 8*g*	30		4	*Amam*	18.83(2)	7.14(1)	19.37(2)	90, 90, 90	Dewan *et al.* (1978)
317	424305	$Mg_2Te_3O_8$ ≡ $[Mg_4(Te_6O_{16})]$	9*m*		framework [$M_4(Te_6X_{16})$]	2	*C*2/*c*	12.6030(7)	5.2254(3)	11.6331(7)	90, 98.696(1), 90	Lin *et al.* (2013)
318	82490	$Mn_2Te_3O_8$ ≡ $[Mn_4(Te_6O_{16})]$ (Spiroffite)	9*m*	30	framework [$M_4(Te_6X_{16})$]	2	*C*2/*c*	12.870(2)	5.3813(5)	11.888(2)	90, 98.22(1), 90	Cooper and Hawthorne (1996)
319	50702	$Co_2Te_3O_8$ ≡ $[Co_4(Te_6O_{16})]$	9*m*		framework [$M_4(Te_6X_{16})$]	2	*C*2/*c*	12.690(1)	5.211(2)	11.632(2)	90, 98.98(1), 90	Feger *et al.* (1999)
320	50703	$Ni_2Te_3O_8$ ≡ $[Ni_4(Te_6O_{16})]$	9*m*		framework [$M_4(Te_6X_{16})$]	2	*C*2/*c*	12.407(1)	5.207(1)	11.509(1)	90, 98.723(9), 90	Feger *et al.* (1999)
321	50704	$Cu_2Te_3O_8$ ≡ $[Cu_4(Te_6O_{16})]$	9*m*		framework [$M_4(Te_6X_{16})$]	2	*C*2/*c*	11.8368(8)	5.266(2)	12.2419(8)	90, 100.316(6), 90	Feger *et al.* (1999)
322	50705	$Zn_2Te_3O_8$ ≡ $[Zn_4(Te_6O_{16})]$ (Zincospiroffite)	9*m*		framework [$M_4(Te_6X_{16})$]	2	*C*2/*c*	12.681(2)	5.200(2)	11.786(2)	90, 99.60(1), 90	Feger *et al.* (1999)
323	417292	$Fe_3Te_4O_{12}$ ≡ $[Fe^{2+}{}_2Fe^{3+}{}_4(Te_6O_{18})(TeO_3)_2]$	9*n* + 4*a*		framework [$M_6(Te_6X_{18})(TeX_3)_2$]	4	*P*2$_1$/*c*	9.1312(2)	7.3554(2)	15.7379(3)	90, 107.95(1), 90	van der Lee and Astier (2007)

324	412807	$Te_3O_3(PO_4)_2 \equiv [P_4(Te_6O_{22})]$	9*o*		framework $[T_4(Te_6X_{22})]$	3	$P2_1/c$	12.375(2)	7.317(1)	9.834(1)	90, 98.04(4), 90	Mayer and Weil (2003)
325	413059	$Ca_4Te_5O_{14} \equiv Ca_8[Te_8O_{22}](TeO_3)_2$	9*p* + 4*a*		chain $[Te_8X_{22}]$	5	*Pbca*	10.9536(16)	16.556(2)	15.779(2)	90, 90, 90	Weil (2004*b*)
326	168978	$Bi_3Te_4O_{10}Cl_5 \equiv Bi_3[Te_2O_4](TeO_3)_2Cl_5$	10*a* + 4*a*	30	chain (double) $[Te_2X_4]$	2	$C2/m$	15.372(3)	4.1004(7)	13.301(2)	90, 98.336(5), 90	Kyung *et al.* (2010)
327	171335	$Cd_7Te_7O_{17}Cl_8 \equiv Cd_7[Te_5O_{12}](Te_2O_5)Cl_8$	10*b* + 9*b*		chain (double) $[Te_5X_{12}]$	7	$Pca2_1$	14.4725(8)	6.7259(4)	28.0249(14)	90, 90, 90	Jiang and Mao (2006*a*)
328	421383	$Fe^{3+}Te_3O_7Cl \equiv [Fe_2(Te_6O_{14})]Cl_2$	10*c*		layer $[M_2(Te_6X_{14})]$	3	$P2_1/c$	10.7938(5)	7.3586(4)	10.8714(6)	90, 111.041(5), 90	Zhang *et al.* (2011*a*)
329	421384	$Fe^{3+}Te_3O_7Br \equiv [Fe_2(Te_6O_{14})]Br_2$	10*c*		layer $[M_2(Te_6X_{14})]$	3	$P2_1/c$	11.0339(1)	7.3643(1)	10.8892(1)	90, 109.598(1), 90	Zhang *et al.* (2011*a*)
330	150779	$Tl_2Te_3O_7 \equiv Tl_4[Te_6O_{14}]$	10*d*	30	chain (double) $[Te_6X_{14}]$	3	$P\bar{1}$	6.839(1)	7.432(1)	9.920(2)	92.00(3), 108.95(3), 112.85(3)	Jeansannetas *et al.* (1997)
331	25021	$Fe^{3+}{}_2Te_4O_{11} \equiv [Fe_4(Te_6O_{16})(Te_2O_6)]$	10*e* + 8*c*		framework $[M_2P_2(Te_6X_{16})(Te_2X_6)]$	4	$P2_1/c$	11.88(1)	6.95(1)	14.13(1)	90, 123.73(50), 90	Pertlik (1972*a*)
332	75338	$Na_2Te_4O_9 \equiv Na_4[Te_8O_{18}]$	10*f*		chain (double) $[Te_8X_{18}]$	4	$P\bar{1}$	7.336(1)	10.449(1)	6.876(1)	90.11(1), 110.95(1), 69.52(1)	Tagg *et al.* (1994)
333	100151	$Te_4O_5(PO_4)_2 \equiv [P_2(PO)_2(Te_8O_{24})]$	10*g*		layer $[T_4Y_2(Te_8X_{24})]$	4	$P2_1/n$	20.076(3)	4.650(1)	11.220(1)	90, 92.99(1), 90	Mayer and Pupp (1977)
334	171334	$Cd_4Te_6O_{13}Cl_6 \equiv Cd_2[Te_6O_{13}](Cd_2Cl_6)$	10*h*		chain (quadruple) $[Te_6X_{13}]$	6	$P\bar{1}$	7.9203(4)	9.9079(5)	13.9864(3)	75.406(10), 74.172(10), 89.981(14)	Jiang and Mao (2006*a*)

TABLE 17. Structures with phyllo $Te_m^{4+}X_n$ layers as part of the structural unit. Non-Te cations are in 3-fold (*D*), tetrahedral (*T*), octahedral (*M*) or bipyramidal 7/8-fold (*U*) coordination; *Y* = anions not bound to Te.

#	ICSD #	Compound (Mineral name)	Fig# (Te only)	Fig# (whole str)	Structural unit	*N*	SG	*a* / Å	*b* / Å	*c* / Å	α, β, γ / °	Reference
335	83418	$Bi_{10}Te_2O_{17}Br_4$ ≡ $Bi_{10}[TeO_2]_2O_{13}Br_4$	11*a*	31		1	*Pmm*2	3.9698(5)	3.9580(5)	18.782(3)	90, 90, 90	Dolgikh *et al.* (1996)
336	88673	$NdTe_2O_5Cl$ ≡ $Nd[TeO_2]_2OCl$	11*a*			1	*P*4/*mmm*	4.0373(1)	4.0373(1)	8.7912(3)	90, 90, 90	Nikiforov *et al.* (1999)
337	245593	$Bi_{0.87}[Te_2O_{4.9}]Cl_{0.87}$ (ideally $Bi[Te_2O_5]Cl$)	11*b*			1	$R\bar{3}$	4.10793(4)	4.10793(4)	31.1273(4)	90, 90, 120	Berdonosov *et al.* (2007)
338	39505	$Bi_{1.93}[TeO_3][TeO_2]OBr_{1.8}$ (ideally $BiTeO_3Br$)	11*c* + 11*a*	31		2	*P*4/*nmm*	4.064(1)	4.064(1)	26.91(1)	90, 90, 90	Kholodkovskaya *et al.* (1991)
339	413417	$(Cu^{1+}Cl_2)[Sb^{3+}TeO_3]$	11*d*			3	*C*2/*m*	20.426(4)	4.0924(7)	10.845(2)	90, 101.93(2), 90	Becker *et al.* (2003)
340	32608	$[Te_2O_3OH](NO_3)$	11*e*	31		1	*Pnma*	14.607(1)	8.801(1)	4.4633(4)	90, 90, 90	Anderson *et al.* (1980)
341	26844	TeO_2 (Tellurite)	11*e*			1	*Pbca*	12.035(6)	5.464(3)	5.607(3)	90, 90, 90	Beyer (1967)
342	79508	$Bi_4Te_2O_9Br_2$ ≡ $Bi_4[Te_2O_5]O_4Br_2$	11*f*			2	*Pmm*2	5.5231(8)	5.5511(8)	9.735(1)	90, 90, 90	Kholodkovskaya *et al.* (1996)
343	26451	$Li_2[Te_2O_5]$	11*g*	31		2	$P2_1/n$	10.355(3)	4.702(1)	10.860(3)	90, 110.13(1), 90	Cachau-Herreillat *et al.* (1981)
344	90837	$(Te_2O_3)(SO_4)$ ≡ $[(SO_2)(Te_2O_5)]$	11*g*	31	layer $[TY_2(Te_2X_5)]$	1	$Pnm2_1$	8.8798(7)	6.937(1)	4.6535(3)	90, 90, 90	Ahmed *et al.* (2000)
345	24831	$(Te_2O_3)(PO_3OH)$ ≡ $(POOH)[Te_2O_5]$	11*g*		layer $[TY_2(Te_2X_5)]$	2	$Pca2_1$	10.239(1)	7.018(1)	7.933(1)	90, 90, 90	Alcock and Harrison (1982)
346	171017	$[Mg(Te_2O_5)]$	11*g*		framework $[M(Te_2X_5)]$	1	*Pbcn*	7.2391(9)	10.6580(10)	5.9880(6)	90, 90, 90	Weil (2005*b*)

347	280967	$[Mn(Te_2O_5)]$-β	11*g*		framework $[M(Te_2X_5)]$	1	*Pbcn*	7.3114(4)	10.9216(6)	6.1711(3)	90, 90, 90	Johnston and Harrison (2002)
348	73	$MoTe_2O_7 \equiv [(MoO_2)(Te_2O_5)]$	11*g*	31	framework $[MY_2(Te_2X_5)]$	2	$P2_1/c$	4.286(3)	8.618(3)	15.945(5)	90, 95.68(1), 90	Arnaud *et al.* (1976)
349	249538	$La_2[Te_3O_7]_2(WO_4)$	11*h*		layer $[Te_3X_7]$	1	$P\bar{3}c1$	6.8415(4)	6.8415(4)	19.958(2)	90, 90, 120	Jiang *et al.* (2007*a*)
350	100139	$Fe^{3+}(Te_2O_5)(OH) \equiv [Fe_2(OH)_2(Te_4O_{10})]$ (Mackayite)	11*i*	32	framework $[M_2Y_2(Te_4X_{10})]$	1	$I4_1/acd$	11.80(1)	11.80(1)	15.10(1)	90, 90, 90	Pertlik and Gieren (1977)
351	26452	$Li_2Te_2O_5 \equiv Li_4[Te_4O_{10}]$	11*j*		layer $[Te_4X_{10}]$	2	*Pnaa*	5.194(1)	8.170(2)	24.165(5)	90, 90, 90	Cachau-Herreillat *et al.* (1981)
352	260041	$CaTe_2O_5 \equiv Ca_2[Te_4O_{10}]$	11*k*	32	layer $[Te_4X_{10}]$	2	$P2_1/c$	9.382(2)	5.7095(14)	11.132(3)	90, 115.109(4), 90	Weil and Stöger (2008*b*)
353	86782	$Tl_2Te_2O_5 \equiv Tl_4[Te_4O_{10}]$	11*k*		layer $[Te_4X_{10}]$	2	$P2_1/n$	7.119(1)	12.138(2)	8.439(2)	90, 114.28(3), 90	Jeansannetas *et al.* (1998)
354	83843	$K_2Te_4O_9 \equiv K_4[Te_8O_{18}]$	11*l*		layer $[Te_8X_{18}]$	4	$P2_1/c$	7.572(1)	17.821(3)	7.829(1)	90, 108.62(1), 90	Becker *et al.* (1997)
355	201059	$(NH_4)_2Te_4O_9 \equiv (NH_4)_4[Te_8O_{18}]$	11*l*		layer $[Te_8X_{18}]$	4	$P2_1/c$	7.980(1)	18.450(2)	7.926(2)	90, 117.30, 90	Benmiloud *et al.* (1981)
356	280792	$K_2Te_4O_9{\cdot}3.2H_2O \equiv K_4[Te_8O_{18}]{\cdot}6.4H_2O$	11*m*	32	layer $[Te_8X_{18}]$	8	*P*1	7.5046(5)	10.7097(8)	10.7159(8)	60.849(1), 69.918(1), 85.968(1)	Ok and Halasyamani (2001)
357	261915	$(NH_4)Rb[Te_4O_9]{\cdot}2H_2O \equiv (NH_4)_4Rb_4[Te_{16}O_{36}]{\cdot}8H_2O$	11*n*		layer $[Te_{16}X_{36}]$	4	*I*2/*a*	18.9990(10)	6.7318(4)	21.1835(11)	90, 101.887(4), 90	Friese *et al.* (2011)
358	418573	$(NH_4)Cs[Te_4O_9]{\cdot}2H_2O \equiv (NH_4)_4Cs_4[Te_{16}O_{36}]{\cdot}8H_2O$	11*n*		layer $[Te_{16}X_{36}]$	4	*I*2/*a*	18.9880(12)	6.7633(4)	21.476(2)	90, 102.346(1), 90	Kim and Halasyamani (2008)

359	424208	$Ba_6[Te_{10}O_{25}]Br_2$	11*o*		layer $[Te_{40}X_{100}]$	10	*Aea*2	11.4707(9)	31.140(2)	18.3216(14)	90, 90, 90	Stöger and Weil (2012)
360	249328	$[Zn(Te_6O_{13})]$	12*a*	32	framework $[M(Te_6X_{13})]$	2	$R\bar{3}$	10.1283(9)	10.1283(9)	18.948(3)	90, 90, 120	Nawash *et al.* (2007)
361	417293	$[Fe(Te_6O_{13})]$	12*a*		framework $[M(Te_6X_{13})]$	2	$R\bar{3}$	10.1663(1)	10.1663(1)	18.933(1)	90, 90, 120	van der Lee and Astier (2007)
362	-	$[Mg(Te_6O_{13})]$	12*a*		framework $[M(Te_6X_{13})]$	2	$R\bar{3}$	10.1676(2)	10.1676(2)	18.9701(3)	90, 90, 120	Shirkhanlou and Weil (2013)
363	201784	$(Te_3O_5)(Se^{4+}O_3) \equiv [(SeO)_2(Te_6O_{14})]$	12*b*		layer $[(DY)_2(Te_6X_{14})]$	3	$P\bar{1}$	4.854(1)	6.902(2)	11.515(2)	102.02(2), 100.80(1), 69.84 (2)	Pico *et al.* (1986)

TABLE 18. Structures with tecto $Te^{4+}_{m}X_n$ frameworks as part of the structural unit. Non-Te cations are in tetrahedral (*T*), octahedral (*M*) or 7–8 (*U*) coordination; *Y* = anions not bound to Te.

#	ICSD #	Compound (Mineral name)	Fig# (Te only)	Fig# (whole str)	Structural unit	*N*	SG	*a* / Å	*b* / Å	*c* / Å	α, β, γ / °	Reference
364	62897	TeO_2 (Paratellurite)	12*c*			1	$P4_32_12$	4.810(1)	4.810(1)	7.613(2)	90, 90, 90	Kondratyuk *et al*. (1987)
365	90733	TeO_2-γ	12*c*			1	$P2_12_12_1$	4.898(3)	8.576(4)	4.351(2)	90, 90, 90	Champarnaud -Mesjard *et al*. (2000)
366	92444	$Pr_2[Te_2O_6]O$	12*d*	32		1	$Fd\bar{3}m$	10.6718(9)	10.6718(9)	10.6718(9)	90, 90, 90	Weber and Schleid (2000)
367	280793	$K[Ga(Te_6O_{14})]$	12*e*		framework $[M(Te_6X_{14})]$	1	$Pa\bar{3}$	10.9267(3)	10.9267(3)	10.9267(3)	90, 90, 90	Ok and Halasyamani (2001)
368	9080	$[(UO_2)(Te_3O_7)]$ (Cliffordite)	12*f*	32	framework $[UY_2(Te_3X_7)]$	1	$Pa\bar{3}$	11.370(3)	11.370(3)	11.370(3)	90, 90, 90	Galy and Meunier (1971)
369	9077	$[Sn(Te_3O_8)]$	12*g*	33	framework $[M(Te_3X_8)]$	1	$Ia\bar{3}$	11.144(3)	11.144(3)	11.144(3)	90, 90, 90	Meunier and Galy (1971)
370	9078	$[Hf(Te_3O_8)]$	12*g*		framework $[M(Te_3X_8)]$	1	$Ia\bar{3}$	11.291(3)	11.291(3)	11.291(3)	90, 90, 90	Meunier and Galy (1971)
371	9079	$[Zr(Te_3O_8)]$	12*g*		framework $[M(Te_3X_8)]$	1	$Ia\bar{3}$	11.303(3)	11.303(3)	11.303(3)	90, 90, 90	Meunier and Galy (1971)
372	98902	$[Ti(Te_3O_8)]$ (Winstanleyite)	12*g*		framework $[M(Te_3X_8)]$	1	$Ia\bar{3}$	10.965(1)	10.965(1)	10.965(1)	90, 90, 90	Bindi and Cipriani (2003)
373	87735	$[(Fe^{3+}_{0.67}Te^{6+}_{0.33})(Te_3O_8)]$ (Walfordite)	12*g*		framework $[M(Te_3X_8)]$	1	$Ia\bar{3}$	11.011(5)	11.011(5)	11.011(5)	90, 90, 90	Back *et al*. (1999)

374	59167	$Cs_2[Te_4O_9]$	12*h*			2	$I\bar{4}2d$	10.783(1)	10.783(1)	20.599(4)	90, 90, 90	Loopstra and Goubitz (1986)
375	51417	$Pb[Te_5O_{11}]$	12*i*	33		5	*C*2/*c*	18.959(4)	4.414(1)	25.7980(60)	90, 98,12(1), 90	Oufkir *et al.* (2001)

TABLE 19. Hydrogen-bonded adducts of neutral $Te^{6+}(OH)_6$ molecules (octahedral: Fig. 4*h*).

#	ICSD #	Compound (Mineral name)	Fig# (whole str)	*N*	SG	*a* / Å	*b* / Å	*c* / Å	α, β, γ / °	Reference
376	2390	$[Te(OH)_6]$ (cub)		1	$Fd\bar{3}c$	15.705(3)	15.705(3)	15.705(3)	90, 90, 90	Falck and Lindqvist (1978)
377	2878	$[Te(OH)_6]$ (mon)		2	$P2_1/n$	6.495(1)	9.320(1)	11.393(1)	90, 133.88(1), 90	Lindqvist (1970)
378	42	$NaF·[Te(OH)_6]$		1	*R*3	6.025(3)	6.025(3)	13.486(5)	90, 90, 120	Allmann (1976)
379	313	$(KF)_2·[Te(OH)_6]$	34	1	*Pcab*	9.610(4)	8.999(6)	8.547(5)	90, 90, 90	Allmann and Haase (1976)
380	68299	$(CsCl)_2·[Te(OH)_6]$		1	$P2_1/n$	7.651(2)	21.790(10)	6.689(2)	90, 113.85(3), 90	Averbuch-Pouchot and Durif (1992)
381	423652	$(RbCl)_3·[Te(OH)_6]$		1	$R\bar{3}c$	14.4392(8)	14.4392(8)	10.4301(16)	90, 90, 120	Mahlmeister and Irran (2012)
382	16432	$Na_2(SO_4)·[Te(OH)_6]$		1	*Cc*	5.459(5)	10.306(7)	15.349(10)	90, 94.73(5), 90	Zilber *et al.* (1980*b*)
383	16431	$K_2(SO_4)·[Te(OH)_6]$		2	$P\bar{1}$	6.243(2)	6.647(2)	13.405(2)	73.14(5), 103.05(5), 116.97(5)	Zilber *et al.* (1980*a*)
384	154512	$K_2(SeO_4)·[Te(OH)_6]$		1	*C2/c*	11.572(9)	6.437(7)	13.938(1)	90, 106.07(7), 90	Dammak *et al.* (2006)
385	50669	$K_2(SeO_4)·[Te(OH)_6]$		1	*Cc*	11.552(2)	6.432(1)	13.919(2)	90, 105.92, 90	Dammak *et al.* (1999)
386	26367	$(NH_4)_2(SO_4)·[Te(OH)_6]$		1	*Cc*	13.741(8)	6.631(2)	11.405(7)	90, 106.75(5), 90	Zilber *et al.* (1981)
387	27188	$Tl_2(SO_4)·[Te(OH)_6]$		2	$P2_1/a$	12.053(5)	7.205(1)	12.354(6)	90, 110.85(5), 90	Zilber *et al.* (1982)
388	54472	$Rb_2(SO_4)·[Te(OH)_6]$		1	$P2_1/a$	11.454(5)	6.658(4)	13.636(4)	90, 107.08(2), 90	Dammak *et al.* (1998)
389	245147	$Rb_{1.25}K_{0.75}(SO_4) · [Te(OH)_6]$		2	$P2_1/a$	11.3411(6)	6.5819(2)	13.5730(8)	90, 106.86(1), 90	Chabchoub *et al.* (2006)

390	151605	$Rb_{1.12}(NH_4)_{0.88}(SO_4)\cdot[Te(OH)_6]$		2	*P*2$_1$/*a*	11.438(5)	6.643(4)	13.700(4)	90, 106.896(2), 90	Ktari *et al.* (2002)
391	151926	$(NH_4)_{1.16}K_{0.84}(SO_4)\cdot[Te(OH)_6]$		2	*P*2$_1$/*c*	14.929(5)	6.558(1)	11.325(1)	90, 120.17(2), 90	Ktari *et al.* (2004)
392	152720	$(NH_4)_2(SeO_4)\cdot[Te(OH)_6]$		2	*P*2$_1$/*c*	13.822(3)	6.737(1)	11.625(2)	90, 106.88(3), 90	Litaiem *et al.* (2005)
393	152760	$Rb_2(SO_4)_{0.5}(SeO_4)_{0.5}\cdot[Te(OH)_6]$		2	*P*2$_1$/*c*	13.640(3)	6.668(1)	11.504(2)	90, 107.19(2), 90	Abdelhedi *et al.* (2005)
394	157371	$Rb_2(SeO_4)\cdot[Te(OH)_6]$		2	*P*2$_1$/*c*	13.781(2)	6.791(3)	11.713(2)	90, 107.23(2), 90	Dammak *et al.* (2007)
395	164138	$Tl_2(SeO_4)\cdot[Te(OH)_6]$		2	*P*2$_1$/*c*	12.358(3)	7.231(1)	11.986(2)	90, 111.092(2), 90	Ktari *et al.* (2009)
396	236180	$CsK(SeO_4)_{0.68}(SO_4)_{0.32}\cdot[Te(OH)_6]$		1	*P*2$_1$/*n*	12.6480(2)	6.6588(1)	12.7529(2)	90, 106.747(1), 90	Djemel *et al.* (2012)
397	245146	$CsK(SO_4)\cdot[Te(OH)_6]$		2	*Pn*	12.5463(6)	6.5765(2)	12.6916(7)	90, 106.53(2), 90	Chabchoub *et al.* (2006)
398	93016	$Cs_2(SO_4)\cdot[Te(OH)_6]$		1	*R*3	7.4790(3)	7.4790(3)	16.6370(6)	90, 90, 120	Dammak *et al.* (2001)
399	30853	$K_2(NO_3)_2(H_2O)_2\cdot[Te(OH)_6]$		1	*P*2$_1$/*a*	13.34(1)	7.160(5)	6.939(5)	90, 100.14(1), 90	Averbuch-Pouchot (1984)
400	421581	$(Cs_{3.5}Rb_{0.5})(SeO_3)_{1.7}(SO_3)_{0.3}\cdot[Te(OH)_6]_3$		2	*Pccn*	19.758(1)	9.464(1)	14.056(1)	90, 90, 90	Djemel *et al.* (2010)
401	47138	$K(IO_3)\cdot[Te(OH)_6]$		1	*Pn*2$_1$*a*	8.702(2)	6.719(1)	14.279(3)	90, 90, 90	Podlahova *et al.* (1984)
402	35647	$K_2(IO_3)_2\cdot[Te(OH)_6]$	34	1	$R\bar{3}$	6.482(5)	6.482(5)	25.664(8)	90, 90, 120	Averbuch-Pouchot (1983)
403	35646	$(NH_4)(IO_3)(H_2O)\cdot[Te(OH)_6]$		1	$P\bar{1}$	10.97(1)	6.916(5)	6.550(4)	88.84(5), 90.81(5), 104.48(5)	Averbuch-Pouchot (1983)

404	15270	$Ag_4(PO_3OH)_2\cdot[Te(OH)_6]$		1	$P2_1/n$	5.950(3)	20.52(1)	5.829(3)	90, 119.89(5), 90	Durif and Averbuch-Pouchot (1981)
405	8038	$(NH_4)_4(PO_3OH)_2\cdot[Te(OH)_6]$		1	$P\bar{1}$	11.51(1)	6.484(3)	6.329(4)	118.15(1), 105.80(1), 84.36(1)	Durif *et al.* (1979)
406	8039	$Na_2(PO_3OH)(H_2O)\cdot[Te(OH)_6]$		1	$P6_3$	5.908(3)	5.908(3)	15.09(1)	90, 90, 120	Durif *et al.* (1979)
407	23295	$Na_3(PO_3OH)(PO_2(OH)_2)\cdot[Te(OH)_6]$		1	$P6_322$	7.883(5)	7.883(5)	10.863(9)	90, 90, 120	Averbuch-Pouchot (1980)
408	100512	$Tl_2(PO_2(OH)_2)_2\cdot[Te(OH)_6]$		1	$P2_1/n$	6.285(5)	14.74(1)	7.844(5)	90, 113.38(1), 90	Averbuch-Pouchot and Durif (1981)
409	100579	$Rb_3(PO_3OH)(PO_2(OH)_2)\cdot[Te(OH)_6]$		1	$P2_1/a$	12.26(1)	7.059(3)	8.225(3)	90, 90.32(5), 90	Averbuch-Pouchot *et al.* (1979)
410	100690	$Cs_2(PO_3OH)\cdot[Te(OH)_6]$		1	$P2_1/n$	8.204(5)	18.416(9)	6.995(5)	90, 89.89(5), 90	Averbuch-Pouchot *et al.* (1980)
411	100691	$Cs_4(PO_3OH)(PO_2(OH)_2)_2\cdot[Te(OH)_6]$		1	$P2_1/m$	9.591(6)	13.163(9)	8.367(5)	90, 106.27(5), 90	Averbuch-Pouchot *et al.* (1980)
412	152986	$(NH_4)_3(PO_3OH)(PO_2(OH)_2)\cdot[Te(OH)_6]$		1	Pn	15.604(2)	6.3121(6)	9.805(1)	90, 105.34(1), 90	Kikuta *et al.* (2005)
413	36051	$K_3(P_2O_6(OH))(H_2O)\cdot[Te(OH)_6]$		2	$P\bar{1}$	15.98(8)	7.226(5)	6.253(5)	109.49(6), 84.34(7), 101.83(7)	Averbuch-Pouchot and Durif (1983)
414	66698	$(NH_4)_4(P_2O_5(OH)_2)_2\cdot[Te(OH)_6]$		1	$P2_1/c$	6.243(1)	11.154(3)	7.862(2)	90, 107.48(2), 90	Averbuch-Pouchot (1988*b*)
415	74034	$Cs_2(P_2O_5(OH)_2)\cdot[Te(OH)_6]$		1	$C2/c$	20.518(7)	8.372(3)	16.652(6)	90, 106.55(3), 90	Averbuch-Pouchot and Durif (1993*b*)
416	26365	$[Na_3(P_3O_9)]_2(H_2O)_6\cdot[Te(OH)_6]$		1	$P6_3/m$	11.67(1)	11.67(1)	12.12(1)	90, 90, 120	Boudjada *et al.* (1981*a*)
417	26366	$K_3(P_3O_9)(H_2O)_2\cdot[Te(OH)_6]$		1	$P2_1/c$	15.61(4)	7.456(2)	14.84(4)	90, 108.01(5), 90	Boudjada *et al.* (1981*b*)

418	32538	$Rb_3(P_3O_9)(H_2O)\cdot[Te(OH)_6]$		1	$P2_1/a$	15.56(1)	8.358(3)	13.72(1)	90, 113.27(5), 90	Boudjada and Durif (1982)
419	35436	$(NH_4)_6(P_3O_9)_2\cdot[Te(OH)_6]$		1	$R\bar{3}$	11.16(1)	11.16(1)	17.86(1)	90, 90, 120	Boujada *et al.* (1983)
420	62756	$K_3Na_3(P_3O_9)_2\cdot[Te(OH)_6]$		1	$C2/c$	18.42(1)	10.644(5)	12.348(8)	90, 119.76(5), 90	Averbuch-Pouchot and Durif (1987*b*)
421	62986	$K_3Na_3(P_3O_9)_2\cdot[Te(OH)_6]$		1	$R\bar{3}c$	10.640(4)	10.640(4)	32.160(20)	90, 90, 120	Marsh (1988)
422	63136	$Cs_3(P_3O_9)(H_2O)\cdot[Te(OH)_6]$		1	$P2_1/c$	7.279(2)	13.984(8)	17.071(4)	90, 90.42(2), 90	Averbuch-Pouchot (1988*a*)
423	32637	$(NH_4)_4(P_4O_{12})(H_2O)_2\cdot[Te(OH)_6]$		1	$P\bar{1}$	11.845(6)	8.554(5)	7.433(5)	66.28(5), 95.91(5), 76.00(5)	Durif *et al.* (1982)
424	62752	$K_4(P_4O_{12})(H_2O)_2\cdot[Te(OH)_6]$		1	$C2/c$	9.731(5)	11.43(1)	17.16(1)	90, 99.45(5), 90	Averbuch-Pouchot and Durif (1987*a*)
425	65791	$(NH_4)_6(P_6O_{18})(H_2O)_2\cdot[Te(OH)_6]$		1	$P\bar{1}$	9.899(4)	11.042(7)	7.632(9)	109.53(6), 106.74(6), 100.91(4)	Averbuch-Pouchot and Durif (1990)
426	69573	$K_6(P_6O_{18})(H_2O)_3\cdot[Te(OH)_6]_2$		1	$R\bar{3}c$	13.084(5)	13.084(5)	34.800(20)	90, 90, 120	Averbuch-Pouchot and Durif (1991)
427	69574	$Rb_6(P_6O_{18})(H_2O)_4\cdot[Te(OH)_6]_4$		1	$P\bar{1}$	11.222(8)	8.077(6)	11.731(9)	111.11(2), 104.66(2), 83.25(2)	Averbuch-Pouchot and Durif (1991)
428	72923	$(NH_4)_8(P_8O_{24})(H_2O)_2\cdot[Te(OH)_6]$		1	$P\bar{1}$	15.146(6)	11.049(6)	12.189(6)	117.15(4), 109.72(4), 90.54(4)	Averbuch-Pouchot and Durif (1993*a*)
429	73242	$K_8(P_8O_{24})(H_2O)_2\cdot[Te(OH)_6]$		1	$P\bar{1}$	11.315(9)	10.67(1)	7.547(3)	108.72(5), 100.30(2), 66.80(5)	Schuelke *et al.* (1993)
430	78920	$(C(NH_2)_3)_{12}(P_{12}O_{36})(H_2O)_{24}\cdot[Te(OH)_6]_{12}$	34	2	$R\bar{3}$	15.854(9)	15.854(9)	51.259(20)	90, 90, 120	Averbuch-Pouchot and Schuelke (1996)

431	203185	$(CO(NH_2)_2)_2 \cdot [Te(OH)_6]$	34	1	*C*2/*c*	14.815(8)	8.882(5)	10.020(5)	90, 129.15(5), 90	Averbuch-Pouchot and Durif (1989)

TABLE 20. Structures with neso $Te^{6+}X_n$ anions (Fig. 4*f*,*g*,*h* for *n* = 4, 5, 6 respectively) that is not part of larger structural unit.

#	ICSD #	Compound (Mineral name)	Fig# (whole str)	*N*	SG	*a* / Å	*b* / Å	*c* / Å	α, β, γ / °	Reference
432	88059	$Cs_2[TeO_4]$	35	1	*Pnam*	8.5057(4)	11.7034(4)	6.6788(3)	90, 90, 90	Weller *et al.* (1999)
433	202076	$Cs_2K_2[TeO_5]$		1	$P4_2/mnm$	9.162(1)	9.162(1)	9.592(1)	90, 90, 90	Untenecker and Hoppe (1986*a*)
434	69634	$Rb_6[TeO_5][TeO_4]$	35	2	*C*2/*c*	12.075(7)	12.663(5)	11.053(6)	90, 123.1(1), 90	Wisser and Hoppe (1990*a*)
435	8127	$(NH_4)_2[TeO_2(OH)_4]$		1	*C*2/*m*	8.019(2)	6.568(1)	6.352(2)	90, 103.89(2), 90	Johansson *et al.* (1979)
436	65978	$K_3Na_2Li[TeO_6]$		1	*Cc*	9.283(1)	11.874(2)	6.787(1)	90, 93.8(1), 90	Wisser and Hoppe (1990*b*)
437	202071	$K_3Li_3[TeO_6]$		1	*Pnma*	11.695(2)	5.987(1)	9.689(2)	90, 90, 90	Untenecker and Hoppe (1986*b*)
438	202073	$K_4Na_2[TeO_6]$		1	$P2_1/a$	7.255(2)	9.833(1)	6.665(2)	90, 122.74(2), 90	Untenecker and Hoppe (1986*c*)
439	202327	$KNa_5[TeO_6]$	35	1	$P6_3/mmc$	6.568(1)	6.568(1)	11.310(3)	90, 90, 120	Untenecker and Hoppe (1987*b*)
440	23941	$K[TeO(OH)_5]\cdot H_2O$		1	$P2_1/c$	8.26(4)	6.20(3)	12.83(5)	90, 108.0(3), 90	Raman (1964)
441	68405	$Na[TeO(OH)_5]$		1	$Fm\bar{3}m$	7.79	7.79	7.79	90, 90, 90	Kratochvil (1986)
442	421175	$Sr_3[TeO_6]$		8	$F\bar{1}$	16.5338(2)	16.6308(2)	16.7112(2)	90.031(2), 90.035(2), 90.137(1)	Stöger *et al.* (2010)
443	421174	$Ba_3[TeO_6]$		5	$I4_1/a$	19.3878(10)	19.3878(10)	34.909(2)	90, 90, 90	Stöger *et al.* (2010)
444	40247	$Li_6[TeO_6]$	35	1	$R\bar{3}$	7.9199(6)	7.9199(6)	6.9644(7)	90, 90, 120	Wisser and Hoppe (1989)
445	37135	$Tl_6[TeO_6]$		1	$R\bar{3}$	9.5722(3)	9.5722(3)	9.3434(3)	90, 90, 120	Frit *et al.* (1983)

446	425155	$Li_4Zn[TeO_6]$		1	*C*2/*m*	5.2114(3)	8.9288(4)	5.1768(3)	90, 110.783(3), 90	Nalbandyan *et al.* (2013)
447	240968	$Ag_2[TeO_2(OH)_4]$		1	*Fdd*2	15.5845(18)	6.4186)7)	8.8790(10)	90, 90, 90	Weil (2007*a*)
448	425091	$Pb_5[TeO_6]O_2$	35	1	$P2_1/n$	7.4426(2)	12.0107(3)	10.6567(2)	90, 91.040(1), 90	Artner and Weil (2013)
449	425092	$Pb_6Cd[TeO_6]O_4$		1	$C222_1$	9.1206(2)	11.5674(3)	11.3113(3)	90, 90, 90	Artner and Weil (2013)
450	240875	$Y_2[TeO_6]$		1	$P2_12_12_1$	5.2456(4)	9.0361(7)	9.9312(8)	90, 90, 90	Höss and Schleid (2007*a*)
451	62134	$La_2[TeO_6]$		1	$P2_12_12_1$	5.510(1)	9.441(2)	10.387(3)	90, 90, 90	Trömel *et al.* (1987)
452	412447	$Gd_2[TeO_6]$		1	$P2_12_12_1$	5.3252(4)	9.1603(8)	10.0460(9)	90, 90, 90	Meier and Schleid (2003*b*)
453	417711	$Sc_2[TeO_6]$	35	2	*P*321	8.7406(7)	8.7406(7)	4.7985(4)	90, 90, 120	Höss and Schleid (2007*b*)
454	62135	$Yb_2[TeO_6]$		2	*P*321	8.974(2)	8.974(2)	5.103(1)	90, 90, 90	Trömel *et al.* (1987)
455	60260	$In_2[TeO_6]$		2	*P*321	8.883(4)	8.883(4)	4.823(2)	90, 90, 120	Frit (1975)
456	4321	$Tl^{3+}{}_2[TeO_6]$		2	*P*321	9.070(3)	9.070(3)	4.984(2)	90, 90, 120	Frit *et al.* (1975)

TABLE 21. Structures with neso $Te^{6+}X_6$ (Fig. 4*h*) as part of a larger structural unit that is a finite cluster. Non-Te cations are in square planar 4-fold coordination (*Q*), tetrahedral (*T*), or octahedral (*M*) coordination; *Y* = anions not bound to Te; *R* = organic functional groups such as CH_3.

#	ICSD #	Compound (Mineral name)	Fig# (whole str)	Structural unit	*N*	SG	*a* / Å	*b* / Å	*c* / Å	α, β, γ / °	Reference
457	163658	$((CH_3)_2Si–Si(CH_3)_2)_3[TeO_6]$	36	cluster $[(R_2T–TR_2)_3(TeX_6)]$	1	$P2_1/c$	11.779(5)	11.026(3)	14.524(6)	90, 97.20(3), 90	Driess *et al.* (1999)
458	417112	$Na_5[Cu^{3+}(TeO_4(OH)_2)_2]·16H_2O$		cluster $[Q(TeX_6)_2]$	1	$P\bar{1}$	5.9260(8)	8.9435(18)	12.530(2)	98.404(19), 99.175(17), 93.824(15)	Al Ansari *et al.* (2007)
459	65308	$(Na_{4.36}H_{0.64})[Cu^{3+}(TeO_4(OH)_2)_2]·16H_2O$		cluster $[Q(TeX_6)_2]$	1	$P\bar{1}$	5.922(4)	8.939(2)	12.528(2)	98.45(1), 99.11(3), 93.82(4)	Levason *et al.* (1988)
460	412266	$Na_5[Ag^{3+}(TeO_4(OH)_2)_2]·16H_2O$		cluster $[Q(TeX_6)_2]$	1	$P\bar{1}$	5.8884(11)	8.9324(12)	12.561(2)	98.219(6), 97.964(9), 93.238(14)	Hector *et al.* (2002)
461	59349	$Na_5[Au^{3+}(TeO_4(OH)_2)_2]·16H_2O$	36	cluster $[Q(TeX_6)_2]$	1	$P\bar{1}$	9.003(2)	12.643(3)	5.937(1)	98.41(2), 93.13(2), 97.95(2)	Levason and Webster (1998)
462	71156	$K_6Na_2[Pt^{4+}(OH)_2(TeO_5OH)_2]·12H_2O$		cluster $[MY_2(TeX_6)_2]$	1	$C2/m$	21.099(11)	6.778(3)	9.041(4)	90, 92.10(4), 90	Levason *et al.* (1991)
463	78359	$Rb_2Na_4[Os^{6+}O_2(TeO_4(OH)_2)_2]·16H_2O$		cluster $[MY_2(TeX_6)_2]$	2	$C2/c$	10.737(3)	25.333(4)	10.910(3)	90, 108.51(2), 90	Levason *et al.* (1994)
464	412265	$Na_6[Ru^{6+}O_2(TeO_4(OH)_2)_2]·16H_2O$		cluster $[MY_2(TeX_6)_2]$	1	$P\bar{1}$	6.9865(1)	8.7196(2)	11.7395(2)	74.0085(8), 79.9541(8), 88.5138(11)	Hector *et al.* (2002)
465	71155	$K_2Na_8[Pd^{4+}{}_2Te_4O_{18}(OH)_6]·20H_2O$	36	cluster $[M_2(TeX_6)_4]$	2	$P\bar{1}$	7.403(1)	11.929(2)	12.429(2)	100.28(1), 104.92(1), 92.23(1)	Levason *et al.* (1991)
466	73089	$Li_6[Mo_6TeO_{24}]·18H_2O$		cluster $[M_6Y_{18}(TeX_6)]$	1	$P\bar{1}$	10.417(1)	10.586(1)	10.708(1)	61.08(1), 60.44(1), 73.95(1)	Robl and Frost (1993*a*)

467	73306	$Na_6[Mo_6TeO_{24}]\cdot 22H_2O$		cluster $[M_6Y_{18}(TeX_6)]$	1	$P\bar{1}$	10.3089(9)	10.567(1)	11.0632(9)	90.120(7), 115.220(6), 105.195(7)	Robl and Frost (1993*d*)
468	60665	$Na_6[W_6TeO_{24}]\cdot 22H_2O$		cluster $[M_6Y_{18}(TeX_6)]$	1	$P\bar{1}$	10.269(2)	10.575(2)	11.104(5)	90.95(3), 115.13(4), 104.96(2)	Schmidt *et al.* (1986)
469	67954	$Rb_6[Mo_6TeO_{24}]\cdot 10H_2O$		cluster $[M_6Y_{18}(TeX_6)]$	1	$P\bar{1}$	9.6340(13)	9.7256(12)	10.5618(13)	97.556(10), 113.445(9), 102.075(10)	Robl and Frost (1993*e*)
470	73091	$(NH_4)_2Na_4[Mo_6TeO_{24}]\cdot 16H_2O$		cluster $[M_6Y_{18}(TeX_6)]$	1	$P\bar{1}$	10.753(1)	10.742(1)	10.898(1)	96.259(9), 118.556(7), 113.355(8)	Robl and Frost (1993*b*)
471	415730	$(Ce(H_2O)_4)_2[Mo_6TeO_{24}]\cdot 3H_2O$		cluster $[M_6Y_{18}(TeX_6)]$	1	$P2_1/n$	10.128(2)	14.194(3)	10.373(2)	90, 99.84(3), 90	Gao *et al.* (2006)
472	415731	$(Nd(H_2O)_4)_2[Mo_6TeO_{24}]\cdot 3H_2O$		cluster $[M_6Y_{18}(TeX_6)]$	1	$P2_1/n$	10.112(2)	14.133(3)	10.424(2)	90, 99.98(3), 90	Gao *et al.* (2006)
473	418140	$(La(H_2O)_7)_2[Mo_6TeO_{24}]\cdot 6H_2O$		cluster $[M_6Y_{18}(TeX_6)]$	1	$P\bar{1}$	9.683(14)	10.377(16)	11.769(17)	98.39(2), 101.21(2), 114.01(2)	Yan *et al.* (2008)
474	414132	$(La(H_2O)_6)_2[Mo_6TeO_{24}]\cdot 6H_2O$		cluster $[M_6Y_{18}(TeX_6)]$	1	$P\bar{1}$	9.396(2)	10.188(2)	10.694(2)	101.64(3), 108.09(3), 106.50(3)	Drewes *et al.* (2004*b*)
475	418138	$(Ce(H_2O)_6)_2[Mo_6TeO_{24}]\cdot 6H_2O$	36	cluster $[M_6Y_{18}(TeX_6)]$	1	$P\bar{1}$	9.351(7)	10.181(8)	10.627(8)	101.651(10), 107.923(10), 106.734(9)	Yan *et al.* (2008)
476	414133	$(Ce(H_2O)_7)_2[Mo_6TeO_{24}]\cdot 7H_2O$		cluster $[M_6Y_{18}(TeX_6)]$	1	$P\bar{1}$	9.626(2)	10.285(2)	11.632(2)	97.72(3), 101.27(3), 114.33(3)	Drewes *et al.* (2004*b*)
477	418078	$(Pr(H_2O)_7)_2[Mo_6TeO_{24}]\cdot 6H_2O$		cluster $[M_6Y_{18}(TeX_6)]$	1	$P\bar{1}$	9.628(8)	10.297(8)	11.653(9)	97.677(11), 101.48(10), 114.274(10)	Yan *et al.* (2008)
478	414134	$(Pr(H_2O)_7)_2[Mo_6TeO_{24}]\cdot 8H_2O$		cluster $[M_6Y_{18}(TeX_6)]$	1	$P\bar{1}$	9.569(2)	10.230(2)	11.572(2)	98.01(3), 101.29(3), 114.13(3)	Drewes *et al.* (2004*b*)

479	39623	$(Nd(H_2O)_6)_2[Mo_6TeO_{24}]\cdot 6H_2O$		cluster $[M_6Y_{18}(TeX_6)]$	1	$P\bar{1}$	9.413(2)	10.268(2)	10.692(2)	101.59(2), 108.03(2), 106.98(2)	Grigor'ev *et al.* (1992)
480	413414	$(Nd(H_2O)_7)_2[Mo_6TeO_{24}]\cdot 5H_2O$		cluster $[M_6Y_{18}(TeX_6)]$	1	$P\bar{1}$	9.5427(19)	10.151(2)	10.503(2)	95.97(3), 104.48(3), 112.92(3)	Charushnikova *et al.* (2005)
481	414135	$(Nd(H_2O)_7)_2[Mo_6TeO_{24}]\cdot 8H_2O$		cluster $[M_6Y_{18}(TeX_6)]$	1	$P\bar{1}$	9.569(2)	10.236(2)	11.563(2)	98.30(3), 101.21(3), 114.17(3)	Drewes *et al.* (2004*b*)
482	418876	$(Sm(H_2O)_5)_2[Mo_6TeO_{24}]\cdot 6H_2O$		cluster $[M_6Y_{18}(TeX_6)]$	1	$P\bar{1}$	8.9533(18)	9.3365(19)	10.458(2)	72.32(3), 77.02(3), 70.40(3)	Liu *et al.* (2008)
483	418139	$(Sm(H_2O)_7)_2[Mo_6TeO_{24}]\cdot 6H_2O$		cluster $[M_6Y_{18}(TeX_6)]$	1	$P\bar{1}$	9.562(3)	10.248(3)	11.642(3)	97.960(3), 101.498(4), 114.319(3)	Yan *et al.* (2008)
484	418877	$(Eu(H_2O)_7)_2[Mo_6TeO_{24}]\cdot 5H_2O$		cluster $[M_6Y_{18}(TeX_6)]$	1	$P\bar{1}$	9.5490(5)	10.2479(5)	11.6300(1)	97.907(1), 101.474(1), 114.429(1)	Liu *et al.* (2008)
485	250243	$(Eu(H_2O)_6)_2[Mo_6TeO_{24}]\cdot 6H_2O$		cluster $[M_6Y_{18}(TeX_6)]$	1	$P\bar{1}$	9.263(4)	10.267(3)	11.332(5)	102.04(3), 106.3(4), 113.77(3)	Charushnikova *et al.* (2004)
486	415192	$(Ho(H_2O)_6)_2[Mo_6TeO_{24}]\cdot 10H_2O$		cluster $[M_6Y_{18}(TeX_6)]$	1	$P\bar{1}$	9.219(2)	10.016(2)	11.963(2)	94.15(3), 99.78(3), 116.91(3)	Drewes and Krebs (2005)
487	415193	$(Yb(H_2O)_6)_2[Mo_6TeO_{24}]\cdot 10H_2O$		cluster $[M_6Y_{18}(TeX_6)]$	1	$P\bar{1}$	9.208(2)	9.977(2)	11.915(2)	94.30(3), 99.53(3), 116.94(3)	Drewes and Krebs (2005)
488	413866	$K_6(Eu(H_2O)_7)_2[Mo_6TeO_{24}]_2\cdot 16H_2O$		cluster $[M_6Y_{18}(TeX_6)]$	2	$P\bar{1}$	10.602(2)	11.231(2)	16.781(3)	91.88(3), 106.06(3), 113.48(3)	Drewes *et al.* (2004*a*)
489	413867	$K_6(Gd(H_2O)_7)_2[Mo_6TeO_{24}]_2\cdot 16H_2O$		cluster $[M_6Y_{18}(TeX_6)]$	2	$P\bar{1}$	11.235(2)	16.779(3)	19.659(4)	71.51(3), 81.88(3), 88.14(3)	Drewes *et al.* (2004*a*)

490	84310	$(Co(H_2O)_6)_3[Mo_6TeO_{24}]$		cluster $[M_6Y_{18}(TeX_6)]$	1	$R\bar{3}c$	17.902(4)	17.902(4)	19.686(3)	90, 90, 120	Lorenzo-Luis *et al.* (1997)
491	84309	$(Ni(H_2O)_6)_3[Mo_6TeO_{24}]$		cluster $[M_6Y_{18}(TeX_6)]$	1	$R\bar{3}c$	17.906(5)	17.906(5)	19.458(5)	90, 90, 120	Lorenzo-Luis *et al.* (1997)
492	415245	$(NH_4)_2(Mn(H_2O)_3)_2[Mo_6TeO_{24}]\cdot H_2O$	36	cluster $[M_6Y_{18}(TeX_6)]$	1	$Pa\bar{3}$	14.1477(16)	14.1477(16)	14.1477(16)	90, 90, 90	Gao *et al.* (2006)
493	415246	$(NH_4)_2(Co(H_2O)_3)_2[Mo_6TeO_{24}]\cdot H_2O$		cluster $[M_6Y_{18}(TeX_6)]$	1	$Pa\bar{3}$	14.0513(16)	14.0513(16)	14.0513(16)	90, 90, 90	Gao *et al.* (2006)
494	415247	$((NH_4)_2(Ni(H_2O)_3)_2[Mo_6TeO_{24}]\cdot H_2O$		cluster $[M_6Y_{18}(TeX_6)]$	1	$Pa\bar{3}$	13.9743(16)	13.9743(16)	13.9743(16)	90, 90, 90	Gao *et al.* (2006)
495	415248	$(NH_4)_2(Cu(H_2O)_3)_2[Mo_6TeO_{24}]\cdot H_2O$		cluster $[M_6Y_{18}(TeX_6)]$	1	$Pa\bar{3}$	14.0087(16)	14.0087(16)	14.0087(16)	90, 90, 90	Gao *et al.* (2006)
496	415249	$(NH_4)_2(Zn(H_2O)_3)_2[Mo_6TeO_{24}]\cdot H_2O$		cluster $[M_6Y_{18}(TeX_6)]$	1	$Pa\bar{3}$	14.0409(16)	14.0409(16)	14.0409(16)	90, 90, 90	Gao *et al.* (2006)
497	416157	$(NH_4)_2(Ni(H_2O)_3)_2[W_6TeO_{24}]\cdot H_2O$		cluster $[M_6Y_{18}(TeX_6)]$	1	$Pa\bar{3}$	14.0518(4)	14.0518(4)	14.0518(4)	90, 90, 90	Gao *et al.* (2007)
498	73090	$Li_6[Mo_6TeO_{24}](H_2O)_{18}\cdot[Te(OH)_6]$		cluster $[M_6Y_{18}(TeX_6)]$	2	$P2_1/n$	9.941(3)	23.448(10)	17.649(4)	90, 91.36(4), 90	Robl and Frost (1993*a*)
499	73128	$Cs_6[Mo_6TeO_{24}](H_2O)_2\cdot[Te(OH)_6]_2$		cluster $[M_6Y_{18}(TeX_6)]$	2	$P\bar{1}$	10.866(1)	10.956(1)	11.055(1)	118.83(1), 106.22(1), 100.00(1)	Robl and Frost (1993*c*)
500	67955	$Rb_6[Mo_6TeO_{24}](H_2O)_6\cdot[Te(OH)_6]_2$	36	cluster $[M_6Y_{18}(TeX_6)]$	2	$C2/c$	18.864(3)	10.09(1)	21.265(3)	90, 115.90(1), 90	Robl and Frost (1993*e*)
501	424571	$K_5(NH_4)[Mo_6TeO_{24}](H_2O)_6\cdot[Te(OH)_6]$		cluster $[M_6Y_{18}(TeX_6)]$	2	$C2/c$	18.6841(1)	10.0513(1)	21.1065(1)	90, 116.495(1), 90	Ayed and Haddad (2013)
502	2148	$(NH_4)_6[Mo_6TeO_{24}](H_2O)_7\cdot[Te(OH)_6]$		cluster $[M_6Y_{18}(TeX_6)]$	2	$A2/a$	21.3039(16)	9.9386(9)	18.6587(13)	90, 115.568(7), 90	Evans (1974)

TABLE 22. Structures with neso $Te^{6+}X_6$ (Fig. 4*h*) as part of larger structural unit that is a chain or layer. Non-Te cations are in linear 2-fold (*L*), square planar 4-fold (*Q*), tetrahedral (*T*), 5-fold coordination (*P*) or octahedral (*M*) coordination (*U*); *Y* = anions not bound to Te.

#	ICSD #	Compound (Mineral name)	Fig# (whole str)	Structural unit	*N*	SG	*a* / Å	*b* / Å	*c* / Å	α, β, γ / °	Reference
503	412798	$[Hg(TeO_2(OH)_4)]$		chain $[L(TeX_6)]$	1	$Pna2_1$	10.5491(17)	6.0706(9)	8.0654(13)	90, 90, 90	Weil (2004*a*)
504	412799	$[(Hg_2)^{2+}(TeO_2(OH)_4)]\cdot[Te(OH)_6]\cdot 2H_2O$		chain $[L_2(TeX_6)]$	2	$P\bar{1}$	5.7522(6)	6.8941(10)	8.5785(10)	90.394(8), 103.532(11), 93.289(8)	Weil (2004*a*)
505	73259	$K_2[Cu(TeO_4(OH)_2)]\cdot H_2O$	37	chain $[Q(TeX_6)]$	1	Cc	9.589(2)	6.235(1)	12.014(3)	90, 90.44(2), 90	Effenberger and Tillmanns (1993)
506	-	$MgCuTeO_4(OH)_2\cdot 6H_2O \equiv (Mg(H_2O)_6)[Cu(TeO_4(OH)_2)]$ (Raisaite)	37	chain $[Q(TeX_6)]$	1	$C2/c$	9.9078(2)	10.1325(3)	9.8375(2)	90, 91.839(2), 90	Pekov *et al.* (2016)
507	416931	$Ag_4[Cu(TeO_6)]$		chain $[Q(TeX_6)]$	1	$C2/c$	11.3021(8)	9.6875(6)	5.7082(5)	90, 99.301(7), 90	Klein *et al.* (2007)
508	187561	$Tl_4[Cu(TeO_6)]$	37	chain $[Q(TeX_6)]$	1	$P\bar{1}$	5.8629(8)	8.7848(11)	9.2572(12)	66.046(1), 74.201(1), 79.254(2)	Yeon *et al.* (2012*a*)
509	419431	$(NH_4)_2V^{5+}{}_2TeO_8(OH)_2 \equiv (NH_4)_2[(VO_2)_2(TeO_4(OH)_2)]$		chain $[(PY_2)_4(TeX_6)_2]$	2	$P2_1/n$	8.9112(18)	15.151(3)	15.187(3)	90, 97.91(3), 90	Yun *et al.* (2010)
510	170637	$Na_2[Cu_2(TeO_6)]$		layer $[Q_2(TeX_6)]$	1	$C2/m$	5.7059(6)	8.6751(9)	5.9380(6)	90, 113.740(2), 90	Xu *et al.* (2005)
511	421466	$NaTl_3[Cu_4(TeO_6)_2]$		layer $[Q_2(TeX_6)]$	1	$C2/m$	12.9800(17)	9.3455(12)	5.2335(7)	90, 104.276(2), 90	Yeon *et al.* (2011*b*)
512	81607	$[Cu_2(TeO_4(OH)_2)]$ (Frankhawthorneite)	37	layer $[Q_2(TeX_6)]$	1	$P2_1/n$	9.107(4)	5.213(1)	4.605(2)	90, 98.74(3), 90	Grice and Roberts (1995)
513	168637	$Pb[Cu_2(TeO_6)]\cdot H_2O$ (Paratimroseite)	37	layer $[Q_2(TeX_6)]$	1	$P2_12_12_1$	5.1943(4)	9.6198(10)	11.6745(11)	90, 90, 90	Kampf *et al.* (2010*e*)

514	172071	$Sr_2[Cu_2(TeO_6)]Br_2$		layer [$Q_2(TeX_6)$]	1	$P2_1/c$	9.422(3)	5.1788(17)	9.388(3)	90, 94.92(3), 90	Takagi and Johnsson (2006)
515	-	$Pb_2[Cu_4(TeO_5OH)_2](SO_4){\cdot}H_2O$ (Bairdite)		layer [$Q_2(TeX_6)$]	1	$P2_1/c$	14.3126(10)	5.2267(3)	9.4878(5)	90, 106.815(7), 90	Kampf *et al.* (2013*c*)
516	81604	$Pb[Cu_3(OH)_2(TeO_6)]$ (Khinite-3*T*)	37	layer [$Q_3Y_2(TeX_6)$]	1	$P3_2$	5.765(2)	5.765(2)	18.0009(90)	90, 90, 120	Burns *et al.* (1995)
517	164134	$Pb[Cu_3(OH)_2(TeO_6)]$ (Khinite-4*O*)		layer [$Q_3Y_2(TeX_6)$]	1	*Fdd*2	5.749(10)	10.0176(14)	24.022(3)	90, 90, 90	Cooper *et al.* (2008)
518	290105	$Pb_3[Cu(TeO_5OH)](CO_3)(OH)$ (Agaite)	38	layer [$P(TeX_6)$]	1	$Pca2_1$	10.6522(7)	9.1630(5)	9.6011(7)	90, 90, 90	Kampf *et al.* (2013*b*)
519	88788	$Na_{1.8}[(Sn_{0.9}Te_{0.1})(TeO_6)]$		layer [$M(TeX_6)$]	1	$P\bar{3}1c$	5.3416(1)	5.3416(1)	10.6991(3)	90, 90, 120	Woodward *et al.* (1999)
520	88789	$Na_2[Ge(TeO_6)]$		layer [$M(TeX_6)$]	1	$P\bar{3}1c$	5.09580(5)	5.09580(5)	10.6325(1)	90, 90, 120	Woodward *et al.* (1999)
521	88790	$Sr[Ge(TeO_6)]$		layer [$M(TeX_6)$]	1	*P*312	5.06566(3)	5.06566(3)	5.40394(5)	90, 90, 120	Woodward *et al.* (1999)
522	164936	$La[Cr(TeO_6)]$		layer [$M(TeX_6)$]	1	$P\bar{3}$	5.159	5.159	10.376	90, 90, 120	Kasper (1969)
523	164937	$Pr[Cr(TeO_6)]$		layer [$M(TeX_6)$]	1	$P\bar{3}$	5.145	5.145	10.182	90, 90, 120	Kasper (1969)
524	164938	$Nd[Cr(TeO_6)]$		layer [$M(TeX_6)$]	1	$P\bar{3}$	5.14	5.14	10.117	90, 90, 120	Kasper (1969)
525	164939	$Sm[Cr(TeO_6)]$		layer [$M(TeX_6)$]	1	$P\bar{3}$	5.129	5.129	9.993	90, 90, 120	Kasper (1969)
526	164940	$Eu[Cr(TeO_6)]$		layer [$M(TeX_6)$]	1	$P\bar{3}$	5.125	5.125	9.93	90, 90, 120	Kasper (1969)
527	164941	$Gd[Cr(TeO_6)]$		layer [$M(TeX_6)$]	1	$P\bar{3}$	5.122	5.122	9.871	90, 90, 120	Kasper (1969)
528	164942	$Tb[Cr(TeO_6)]$		layer [$M(TeX_6)$]	1	$P\bar{3}$	5.116	5.116	9.812	90, 90, 120	Kasper (1969)

529	164943	$Dy[Cr(TeO_6)]$		layer [$M(TeX_6)$]	1	$P\bar{3}$	5.111	5.111	9.751	90, 90, 120	Kasper (1969)
530	164944	$Ho[Cr(TeO_6)]$		layer [$M(TeX_6)$]	1	$P\bar{3}$	5.107	5.107	9.688	90, 90, 120	Kasper (1969)
531	164945	$Er[Cr(TeO_6)]$		layer [$M(TeX_6)$]	1	$P\bar{3}$	5.103	5.103	9.647	90, 90, 120	Kasper (1969)
532	164946	$Tm[Cr(TeO_6)]$		layer [$M(TeX_6)$]	1	$P\bar{3}$	5.096	5.096	9.603	90, 90, 120	Kasper (1969)
533	164947	$Yb[Cr(TeO_6)]$		layer [$M(TeX_6)$]	1	$P\bar{3}$	5.093	5.093	9.56	90, 90, 120	Kasper (1969)
534	164948	$Y[Cr(TeO_6)]$		layer [$M(TeX_6)$]	1	$P\bar{3}$	5.105	5.105	9.693	90, 90, 120	Kasper (1969)
535	169994	$La[Fe^{3+}(TeO_6)]$		layer [$M(TeX_6)$]	1	$P\bar{3}1c$	5.2049(1)	5.2049(1)	10.3457(2)	90, 90, 120	Phatak *et al.* (2010)
536	88791	$Ba[Ge(TeO_6)]$		layer [$M(TeX_6)$]	1	$P312$	5.09496(3)	5.09496(3)	11.57963(9)	90, 90, 120	Woodward *et al.* (1999)
537	-	$Pb_2[Al(TeO_6)]Cl$ (Backite)	38	layer [$M(TeX_6)$]	1	$P312$	5.0441(7)	5.0441(7)	9.4210(19)	90, 90, 120	Tait *et al.* (2014)
538	181980	$Na_{1.97}[Ni_2(TeO_6)]$		layer [$M_2(TeX_6)$]	1	$P6_3/mcm$	5.2074(1)	5.2074(1)	11.1558(4)	90, 90, 120	Evstigneeva *et al.* (2011)
539	181981	$Na_{1.95}[Zn_2(TeO_6)]$		layer [$M_2(TeX_6)$]	1	$P6_322$	5.2796(2)	5.2796(2)	11.2941(4)	90, 90, 120	Evstigneeva *et al.* (2011)
540	245537	$Na_2[Co_2(TeO_6)]$		layer [$M_2(TeX_6)$]	1	$P6_322$	5.2889(1)	5.2889(1)	11.2149(4)	90, 90, 120	Viciu *et al.* (2007)
541	76868	$(Mg(H_2O)_6)[Cu_2(TeO_6)]$ (Leisingite)	38	layer [$M_2(TeX_6)$]	1	$P\bar{3}1m$	5.316(3)	5.316(3)	9.719(2)	90, 90, 120	Margison *et al.* (1997)
542	-	$[Cu_6(TeO_4(OH)_2)(OH)_7]Cl$ (Mojaveite)	38	layer [$M_3P_3Y_7(TeX_6)$]	1	$R3$	8.316(2)	8.316(2)	13.202(6)	90, 90, 120	Mills *et al.* (2014*a*)
543	290104	$Pb_3[Cu_6(TeO_6)(OH)_6](OH)Cl_5$ (Fuettererite)	38	layer [$P_6Y_6(TeX_6)$]	1	$R\bar{3}$	8.4035(12)	8.4035(12)	44.681(4)	90, 90, 120	Kampf *et al.* (2013*a*)

544	168638	$Pb_2[((U,Te)O_2)(TeO_6)]$ (Markcooperite)		layer $[MX_2(TeX_6)]$	1	$P2_1/c$	5.722(2)	7.7478(2)	7.889(2)	90, 90.833(5), 90	Kampf *et al.* (2010*d*)
545	380500	$Pb_2[(UO_2)(TeO_6)]$	38	layer $[MX_2(TeX_6)]$	1	$P2_1/c$	5.7420(13)	7.7891(18)	7.9284(19)	90, 90.703(2), 90	Ling *et al.* (2011)
546	170172	$ThV^{5+}_2TeO_{10}\cdot 2H_2O \equiv Th[(VO_2)_2(TeO_6)]\cdot 2H_2O$		layer $[(PY_2)(TY_2)(TeX_6)]$	1	*Pbca*	12.2961(7)	11.5593(7)	13.0950(8)	90, 90, 90	Sullens and Albrecht Schmitt (2005)
547	405153	$Ba_2Nb_2TeO_{10} \equiv Ba_2[Nb_2O_4(TeO_6)]$	39	layer $[M_2Y_4(TeX_6)]$	1	*Pbca*	7.242(4)	12.433(3)	9.932(3)	90, 90, 90	Müller-Buschbaum and Wedel (1996*a*)

TABLE 23. Structures with neso $Te^{6+}X_6$ (Fig. 4*h*) as part of larger structural unit that is a framework. Non-Te cations are in square planar 4-fold coordination (*Q*), tetrahedral (*T*, *T'*), or octahedral (*M*) coordination; *Y*, *Z* = anions not bound to Te.

#	ICSD #	Compound (Mineral name)	Fig# (whole str)	Structural unit	*N*	SG	*a* / Å	*b* / Å	*c* / Å	α, β, γ / °	Reference
548	98672	$[Hg^{2+}_3(TeO_6)]$	39	framework $[L_3(TeX_6)]$	2	$Ia\bar{3}$	13.3808(6)	13.3808(6)	13.3808(6)	90, 90, 90	Weil (2003*a*)
549	168005	$Ca_3[Zn_3(TeO_6)_2]$ (Yafsoanite)	39	framework $[T_3(TeX_6)_2]$	1	$Ia\bar{3}d$	12.6350(7)	12.6350(7)	12.6350(7)	90, 90, 90	Mills *et al.* (2010)
550	409395	$Na_3[(Fe^{3+}_{1.5}Al_{1.5})(TeO_6)_2]$		framework $[T_3(TeX_6)_2]$	1	$Ia\bar{3}d$	12.391(2)	12.391(2)	12.391(2)	90, 90, 90	Wedel and Sugiyama (1999)
551	418645	$Na_3[Ga_3(TeO_6)_2]$		framework $[T_3(TeX_6)_2]$	1	$Ia\bar{3}d$	12.3604(14)	12.3604(14)	12.3604(14)	90, 90, 90	Frau *et al.* (2008)
552	159728	$Nd_3[Li_{3.05}((Te_{0.975}Sb_{0.025})O_6)_2]$		framework $[T_{3+x}(TeX_6)_2]$	1	$Ia\bar{3}d$	12.55576(12)	12.55576(12)	12.55576(12)	90, 90, 90	O'Callaghan *et al.* (2008)
553	159732	$Nd_3[Li_4((Te_{0.5}Sb_{0.5})O_6)_2]$		framework $[T_{3+x}(TeX_6)_2]$	1	$Ia\bar{3}d$	12.62138(12)	12.62138(12)	12.62138(12)	90, 90, 90	O'Callaghan *et al.* (2008)
554	171641	$LaV^{5+}_3TeO_{12}\cdot 3H_2O \equiv La[(VO_2)_3(TeO_6)]\cdot 3H_2O$		framework $[(TY_2)_3(TeX_6)]$	1	$R3c$	9.4577(16)	9.4577(16)	23.455(7)	90, 90, 120	Sivakumar *et al.* (2006)
555	85574	$Pb_3[Zn_3(TeO_6)(AsO_4)_2]$ (Dugganite)	39	framework $[T_3(TeX_6)(T'Y_4)_2]$	1	$P321$	8.460(2)	8.460(2)	5.206(2)	90, 90, 120	Lam *et al.* (1998)
556	168003	$Pb_3[Zn_3(TeO_6)(PO_4)_2]$ (Kuksite)		framework $[T_3(TeX_6)(T'Y_4)_2]$	1	$P321$	8.392(1)	8.392(1)	5.204(1)	90, 90, 120	Mills *et al.* (2010)
557	1322	$[Be_4O(TeO_6)]$	39	framework $[T_4Y(TeX_6)]$	1	$F\bar{4}3m$	7.5770(4)	7.5770(4)	7.5770(4)	90, 90, 90	Trömel *et al.* (1977)
558	405329	$Pb[Cu_3O(TeO_6)]$		framework $[Q_3Y(TeX_6)]$	1	$Pnma$	10.4881(11)	6.3528(14)	8.8134(14)	90, 90, 90	Wedel and Müller-Buschbaum (1996)
559	82481	$Cu_3TeO_6\cdot 2H_2O \equiv [Cu_3(H_2O)_2(TeO_6)]$ (Jensenite)	39	framework $[Q3Y_2(TeX_6)]$	1	$P2_1/n$	9.224(2)	9.180(1)	7.600(1)	90, 102.38(1), 90	Grice *et al.* (1996)

560	168636	$Pb_2[Cu_5(TeO_6)_2](OH)_2$ (Timroseite)	40	framework [$Q_5(TeX_6)_2$]	1	$P2_1nm$	5.2000(2)	9.6225(4)	11.5340(5)	90, 90, 90	Kampf *et al.* (2010*e*)
561	89821	$[Zn_6Cu_3(TeO_6)_2(OH)_6]\cdot(Ag_xPb_yCl_{x+2y})$ (Quetzalcoatlite)	40	framework [$Q_3T_6Y_6(TeX_6)_2$]	1	$P\bar{3}1m$	10.145(1)	10.145(1)	4.9925(9)	90, 90, 120	Burns *et al.* (2000)
562	405782	$Pb_2[Co(TeO_6)]$		framework [$M(TeX_6)$]	1	$I4/mmm$	5.6611(5)	5.6611(5)	8.0036(7)	90, 90, 90	Müller-Buschbaum and Wedel (1997)
563	88702	$Sr_2[Cu(TeO_6)]$		framework [$M(TeX_6)$]	1	$I4/m$	5.4308(1)	5.4308(1)	8.4664(3)	90, 90, 90	Iwanaga *et al.* (1999)
564	88703	$Ba_2[Cu(TeO_6)]$		framework [$M(TeX_6)$]	1	$I4/m$	5.5903(1)	5.5903(1)	8.6426(3)	90, 90, 90	Iwanaga *et al.* (1999)
565	174388	$NaLa[Mg(TeO_6)]$		framework [$M(TeX_6)$]	1	$P2_1/m$	5.5679(3)	5.5564(2)	7.8669(4)	90, 90.036(6), 90	Knapp (2006)
566	35085	$Ca_3TeO_6 \equiv Ca_2[Ca(TeO_6)]$		framework [$M(TeX_6)$]	1	$P2_1/n$	5.5782(8)	5.7998(9)	8.017(1)	90, 90.217(5), 90	Burckhardt *et al.* (1982)
567	35084	$Cd_3TeO_6 \equiv Cd_2[Cd(TeO_6)]$		framework [$M(TeX_6)$]	1	$P2_1/n$	5.4986(3)	5.6383(3)	8.0191(5)	90, 90.00(5), 90	Burckhardt *et al.* (1982)
568	89017	$Na_2[Sn(TeO_6)]$		framework [$M(TeX_6)$]	1	$P2_1/n$	5.40361(5)	5.46152(5)	7.69288(7)	90, 90.034(3), 90	Park *et al.* (1999)
569	153001	$Ca_2[Co(TeO_6)]$	40	framework [$M(TeX_6)$]	1	$P2_1/n$	5.4569(2)	5.5904(2)	7.7399(2)	90, 90.239(2), 90	Augsburger *et al.* (2005)
570	153002	$Sr_2[Co(TeO_6)]$		framework [$M(TeX_6)$]	1	$P2_1/n$	5.6417(2)	5.6063(2)	7.9234(2)	90, 90.117(4), 90	Augsburger *et al.* (2005)
571	414435	$Sr_2[Ca(TeO_6)]$		framework [$M(TeX_6)$]	1	$P2_1/n$	5.79919(8)	5.83756(8)	8.21749(12)	90, 90.1945(7), 90	Prior *et al.* (2005)
572	73845	$CaPr[Li(TeO_6)]$		framework [$M(TeX_6)$]	1	$P2_1/n$	5.512(2)	5.646(2)	7.806(2)	90, 90.04(3), 90	Lopez *et al.* (1993*a*)
573	73846	$SrPr[Li(TeO_6)]$		framework [$M(TeX_6)$]	1	$P2_1/n$	5.598(7)	5.594(6)	7.929(7)	90, 90.04(3), 90	Lopez *et al.* (1993*a*)

574	67852	$SrEu[Li(TeO_6)]$		framework [$M(TeX_6)$]	1	$P2_1/n$	5.562(3)	5.643(3)	7.860(5)	90, 90.1(8), 90	Lopez *et al.* (1993*b*)
575	91792	$Sr_2[Ni(TeO_6)]$		framework [$M(TeX_6)$]	2	$C2/m$	7.9174(4)	7.8765(4)	7.916(1)	90, 90.378(1), 90	Iwanaga *et al.* (2000)
576	246112	$Ba_2[Ca(TeO_6)]$		framework [$M(TeX_6)$]	1	$Fm\bar{3}m$	8.39460(6)	8.39460(6)	8.39460(6)	90, 90, 90	Fu *et al.* (2008)
577	67851	$BaLa[Li(TeO_6)]$		framework [$M(TeX_6)$]	1	$Fm\bar{3}m$	8.036(2)	8.036(2)	8.036(2)	90, 90, 90	Lopez *et al.* (1993*b*)
578	73844	$BaPr[Li(TeO_6)]$		framework [$M(TeX_6)$]	1	$Fm\bar{3}m$	8.028(2)	8.028(2)	8.028(2)	90, 90, 90	Lopez *et al.* (1993*a*)
579	86138	$Pb_2[Mg(TeO_6)]$		framework [$M(TeX_6)$]	1	$Fm\bar{3}m$	7.9976(5)	7.9976(5)	7.9976(5)	90, 90, 90	Baldinozzi *et al.* (1998)
580	90841	$Ba_2[Bi_{0.667}(TeO_6)]$		framework [$M(TeX_6)$]	1	$Fm\bar{3}m$	8.4836(2)	8.4836(2)	8.4836(2)	90, 90, 90	Park and Woodward (2000)
581	90842	$Ba_3[Bi_2O_3(TeO_6)]$	40	framework [$M(TeX_6)$]	1	$P\bar{3}c1$	6.18313(6)	6.18313(6)	14.8645(2)	90, 90, 120	Park and Woodward (2000)
582	169192	$Pb_2[Co(TeO_6)]$		framework [$M(TeX_6)$]	1	$R\bar{3}$	5.6742(4)	5.6742(4)	13.8519(5)	90, 90, 120	Ivanov *et al.* (2010*b*)
583	246109	$Ba_2[Sr(TeO_6)]$		framework [$M(TeX_6)$]	1	$R\bar{3}$	6.0879(6)	6.0879(6)	14.7971(15)	90, 90, 120	Fu *et al.* (2008)
584	407802	$Ba_2[Mn(TeO_6)]$		framework [$M(TeX_6)$]	1	$R\bar{3}m$	5.817(8)	5.817(8)	14.244(3)	90, 90, 120	Wulff *et al.* (1998)
585	168923	$Ba_2[Co(TeO_6)]$	40	framework [$M(TeX_6)$]	2	$P\bar{3}m1$	5.8020(3)	5.8020(3)	14.2705(7)	90, 90, 120	Ivanov *et al.* (2010*a*)
586	25005	$Ba_2[Ni(TeO_6)]$		framework [$M(TeX_6)$]	2	$R\bar{3}m$	5.797	5.797	28.595	90, 90, 120	Köhl *et al.* (1972)
587	6240	$Ba_2[Cu(TeO_6)]$		framework [$M(TeX_6)$]	2	$P\bar{1}$	5.723(2)	5.861(2)	10.195(7)	107.77(2), 106.24(2), 60.71(2)	Köhl and Reinen (1974)
588	40265	$Li_2[Sn(TeO_6)]$	40	framework [$M(TeX_6)$]	1	$Pnn2$	5.192(2)	4.927(2)	8.513(5)	90, 90, 90	Choisnet *et al.* (1989)

589	72743	$Li_2[Ti(TeO_6)]$		framework [$M(TeX_6)$]	1	*Pnn*2	5.0743(2)	4.9067(2)	8.4083(4)	90, 90, 90	Crosnier *et al.* (1992)
590	72744	$(H_{1.68}Li_{0.32})[Ti(TeO_6)]$		framework [$M(TeX_6)$]	1	*Pnnm*	5.0098(5)	4.7020(3)	8.6118(3)	90, 90, 90	Crosnier *et al.* (1992)
591	72745	$(H_{1.68}Li_{0.32})[Ti(TeO_6)]$		framework [$M(TeX_6)$]	1	$P4_2nm$	4.6861(1)	4.6861(1)	8.8707(3)	90, 90, 90	Crosnier *et al.* (1992)
592	263127	$Pb_6[Co_9(TeO_6)_5]$	41	framework [$M_9(TeX_6)_5$]	2	$P6_322$	10.3915(1)	10.3915(1)	13.6273(2)	90, 90, 120	Artner and Weil (2012)
593	408315	$Pb_6[Ni_9(TeO_6)_5]$		framework [$M_9(TeX_6)_5$]	2	$P6_322$	10.2579(10)	10.2579(10)	13.554(5)	90, 90, 120	Wedel *et al.* (1998)
594	24794	$[Cr^{3+}_2(TeO_6)]$		framework [$M_2(TeX_6)$]	1	$P4_2/mnm$	4.456(2)	4.456(2)	9.014(3)	90, 90, 90	Kunnmann *et al.* (1968)
595	24795	$[Fe^{3+}_2(TeO_6)]$		framework [$M_2(TeX_6)$]	1	$P4_2/mnm$	4.601(2)	4.601(2)	9.081(3)	90, 90, 90	Kunnmann *et al.* (1968)
596	78346	$[Ga_2(TeO_6)]$		framework [$M_2(TeX_6)$]	1	$P4_2/mnm$	4.5594(3)	4.5594(3)	8.970(1)	90, 90, 90	Berand and Range (1994)
597	262046	$Li[Mn^{2+}Mn^{3+}(TeO_6)]$		framework [$M_2(TeX_6)$]	2	*P*1	5.1077(1)	8.5707(1)	5.0589(1)	92.515(1), 92.092(2), 89.818(2)	Pospelov *et al.* (2011)
598	59384	$Na_3[(Mn^{2+}_3Mn^{3+})(TeO_6)_2]$	41	framework [$M_2(TeX_6)$]	2	*Pnma*	9.384(2)	9.182(2)	10.997(3)	90, 90, 90	Feger and Kolis (1998*a*)
599	240377	$[Ni_3(TeO_6)]$		framework [$M_3(TeX_6)$]	1	*R*3	5.1087(8)	5.1087(8)	13.767(2)	90, 90, 120	Becker and Berger (2006*a*)
600	202648	$[Li_2Zr(TeO_6)]$	41	framework [$M_3(TeX_6)$]	1	*R*3	5.172(2)	5.172(2)	13.847(6)	90, 90, 120	Choisnet *et al.* (1988)
601	88785	$[Li_2Ge(TeO_6)]$		framework [$M_3(TeX_6)$]	1*	*R*3	5.00795(5)	5.00795(5)	14.3422(2)	90, 90, 120	Woodward *et al.* (1999)
602	9089	$[Mg_3(TeO_6)]$	41	framework [$M_3(TeX_6)$]	2	$R\bar{3}$	8.615(3)	8.615(3)	10.315(3)	90, 90, 120	Schulz and Bayer (1971)

603	245054	[$Mn_3(TeO_6)$]		framework [$M_3(TeX_6)$]	2	$R\bar{3}$	8.8673(10)	8.8673(10)	10.6729(12)	90, 90, 120	Weil (2006*a*)
604	407801	[$(Mn_{2.79}Cu_{0.21})(TeO_6)$]		framework [$M_3(TeX_6)$]	2	$R\bar{3}$	8.8262(8)	8.8262(8)	10.687(2)	90, 90, 120	Wulff *et al.* (1998)
605	183621	[$(Cd_2Mn)(TeO_6)$]		framework [$M_3(TeX_6)$]	2	$R\bar{3}$	9.0814(1)	9.0814(1)	10.9749(2)	90, 90, 120	Ivanov *et al.* (2012*a*)
606	183802	[$Co_3(TeO_6)$]		framework [$M_3(TeX_6)$]	2	*C*2/*c*	14.8113(2)	8.8394(3)	10.3589(3)	90, 94.834(6), 90	Ivanov *et al.* (2012*b*)
607	245056	[$Zn_3(TeO_6)$]		framework [$M_3(TeX_6)$]	2	*C*2/*c*	14.8898(8)	8.8341(5)	10.3457(5)	90, 92.990(1), 90	Weil (2006*b*)
608	407956	[$Cu_5Zn_4(TeO_6)_3$]		framework [$M_3(TeX_6)$]	3	*C*2	14.8343(15)	8.8012(7)	10.375(2)	90, 93.272(15), 90	Müller-Buschbaum and Wulff (1998)
609	1529	[$Cu_3(TeO_6)$] (Mcalpineite)	41	framework [$M_3(TeX_6)$]	1	$Ia\bar{3}$	9.537(1)	9.537(1)	9.537(1)	90, 90, 90	Falck *et al.* (1978*a*)
610	245061	[$(Cu_2Co)(TeO_6)$]		framework [$M_3(TeX_6)$]	1	$Ia\bar{3}$	9.5677(5)	9.5677(5)	9.5677(5)	90, 90, 90	Becker and Berger (2006*b*)
611	407958	[$(Cu_{1.5}Co_{1.5})(TeO_6)$]		framework [$M_3(TeX_6)$]	1	$Ia\bar{3}$	9.5702(5)	9.5702(5)	9.5702(5)	90, 90, 90	Müller-Buschbaum and Wulff (1998)
612	407957	[$(Cu_{1.5}Zn_{1.5})(TeO_6)$]		framework [$M_3(TeX_6)$]	1	$Ia\bar{3}$	9.5565(5)	9.5565(5)	9.5565(5)	90, 90, 90	Müller-Buschbaum and Wulff (1998)
613	416231	$Ba_3[Zn_6(Si_2O_7)_2(TeO_6)]$	41	framework [$M_4T_2(TeX_6)(T'_2Y_7)_2$]	1	*C*2/*m*	15.975(5)	11.505(4)	5.142(2)	90, 107.437(5), 90	Jiang and Mao (2006*c*)
614	247820	[$Y_6(TeO_6)O_6$]		framework [$M_6Y_6(TeX_6)$]	1	$R\bar{3}$	9.77142(1)	9.77142(1)	9.31773(2)	90, 90, 120	Noguera *et al.* (2012)
615	245526	[$In_6(TeO_6)O_6$]		framework [$M_6Y_6(TeX_6)$]	1	$R\bar{3}$	9.4407(2)	9.4407(2)	8.9943(3)	90, 90, 120	Choisnet *et al.* (2007)

616	37134	$[Tl^{3+}_6(TeO_6)O_6]$		framework $[M_6Y_6(TeX_6)]$	1	$R\bar{3}$	9.645(2)	9.645(2)	9.421(2)	90, 90, 120	Frit *et al.* (1983)
617	-	$Na_5Co^{2+}_{15.5}(TeO_6)_6 \equiv Na_{2.5}(Na_{2.5}Co_{1.5})[Co_{14}(TeO_6)_6]$		framework $[M_6N(TeX_6)_3]$	1	$P6_3/m$	9.359(3)	9.359(3)	9.096(8)	90, 90, 120	Shan *et al.* (2014)
618	406562	$[Co^{2+}_8(TeO_6)(AsO_4)_2O_2]$	42	framework $[M_6T_2Y_2(T'Z_4)_2(TeX_6)]$	1	*Cmca*	6.020(1)	23.763(5)	8.481(2)	90, 90, 90	Staack and Müller-Buschbaum (1997)

TABLE 24. Structures with soro or cyclo finite clusters $Te^{6+}_m X_n$. Non-Te cations are in square planar 4-fold coordination (*Q*), tetrahedral (*T*), octahedral (*M*) or are U^{6+} in 7-/8-fold bipyramidal coordination (*U*); *Y* = anions not bound to Te.

#	ICSD #	Compound (Mineral name)	Fig# (Te only)	Fig# (whole str)	Structural unit	*N*	SG	*a* / Å	*b* / Å	*c* / Å	α, β, γ / º	Reference
619	100797	$Ba_3[Te_2O_9]$	13*a*			1	*P*6$_3$/*mmc*	5.8603(1)	5.8603(1)	14.3037(6)	90, 90, 120	Jacobson *et al.* (1981)
620	9409	$Ba_3[Fe^{3+}((Fe^{3+}Te^{6+})O_9)]$	13*a*		framework [*M*(*M*TeO$_9$)]	1	*P*6$_3$/*mmc*	5.770(1)	5.770(1)	14.207(2)	90, 90, 120	Harari *et al.* (1972)
621	202326	$Li_4TeO_5 \equiv Li_8[Te_2O_{10}]$	13*b*	42		1	$P\bar{1}$	5.186(1)	7.765(1)	5.120(1)	101.96(1), 101.89(1), 107.58(1)	Untenecker and Hoppe (1987*a*)
622	202325	$Na_4TeO_5 \equiv Na_8[Te_2O_{10}]$	13*b*			1	$P\bar{1}$	5.714(4)	8.462(6)	5.563(4)	101.31(5), 102.22(6), 109.25(6)	Untenecker and Hoppe (1987*a*)
623	417353	$Ag_4TeO_5 \equiv Ag_8[Te_2O_{10}]$	13*b*			1	*C*2/*c*	16.271(2)	6.0874(10)	11.4373(16)	90, 106.73(1), 90	Weil (2007*b*)
624	60259	$K_4[Te_2O_6(OH)_4]\cdot 5H_2O$	13*b*			1	*Immm*	12.92(7)	17.45(10)	6.87(4)	90, 90, 90	Zikmund (1967)
625	417435	$K_4[Te_2O_6(OH)_4]\cdot 8H_2O$	13*b*			1	*C*2/*c*	15.5957(8)	6.8768(3)	17.8096(9)	90, 113.334(1), 90	Churakov *et al.* (2007)
626	417440	$Rb_4[Te_2O_6(OH)_4]\cdot 10H_2O$	13*b*			1	$P\bar{1}$	7.0501(6)	8.3549(7)	9.4037(7)	101.802(2), 98.106(2), 94.518(2)	Churakov *et al.* (2007)
627	417438	$Cs_3[Te_2O_5(OH)_5]\cdot 4H_2O$	13*b*			1	$P\bar{1}$	6.8715(1)	7.4018(1)	8.4593(2)	89.717(1), 101.497(1), 111.706(1)	Churakov *et al.* (2007)
628	417441	$Cs_4[Te_2O_4(OH)_4]\cdot 8H_2O$	13*b*			1	$P\bar{1}$	6.5889(2)	8.6943(3)	9.4875(3)	95.695(1), 99.797(1), 101.247(1)	Churakov *et al.* (2007)

629	4438	$K_4Na_2[Te_2O_8(OH)_2]\cdot14H_2O$	13*b*			1	*I*2/*m*	8.06(1)	7.05(1)	21.40(2)	90, 93.0(5), 90	Lindqvist (1969)
630	1393	$K_7Na[Te_2O_6(OH)_4]_2\cdot12H_2O$	13*b*			1	*Immm*	13.023(6)	17.605(6)	6.876(5)	90, 90, 90	Kratochvil *et al.* (1978)
631	163647	$((CH_3)_3Si)_8[Te_2O_{10}]$	13*b*	42		2	$P2_1/n$	10.878(2)	22.395(3)	19.826(2)	90, 96.84(10), 90	Driess *et al.* (1999)
632	32617	$(C(NH_2)_3)_4[Te_2O_6(OH)_4]$	13*b*			2	$P\bar{1}$	17.486(4)	8.459(7)	7.134(8)	107.42(2), 83.95(2), 103.14(2)	Fuchs *et al.* (1982)
633	417436	$K_6[Te_2O_6(OH)_4](TeO_2(OH)_4)\cdot12H_2O$	13*b* + 4*h*	42		2	$P\bar{1}$	7.9992(2)	9.2855(2)	9.8970(2)	101.817(1), 105.025(1), 95.070(1)	Churakov *et al.* (2007)
634	417437	$Cs_2[Te_2O_4(OH)_6]\cdot(Te(OH)_6)$	13*b* + 4*h*			2	$P\bar{1}$	6.8530(18)	7.2169(19)	9.013(2)	66.974(4), 85.588(4), 65.790(4)	Churakov *et al.* (2007)
635	168635	$Pb_6[Te_2O_{10}](CO_3)Cl_2\cdot H_2O$ (Thorneite)	13*b*	42		1	*C*2/*c*	21.305(1)	11.059(1)	7.564(1)	90, 101.112(4), 90	Kampf *et al.* (2010*c*)
636	240209	$K_3[Ga(Te_2O_8(OH)_2)]\cdot H_2O$	13*b*		chain $[T(Te_2X_{10})]$	2	$P\bar{1}$	7.4369(9)	7.4903(9)	11.4128(15)	84.071(2), 75.065(2), 62.227(2)	Yu *et al.* (2004)
637	187562	$Tl^{1+}_6[Cu^{2+}(Te_2O_{10})]$	13*b*		chain $[Q(Te_2X_{10})]$	1	*Pnma*	10.8628(6)	11.4962(7)	10.7238(6)	90, 90, 90	Yeon *et al.* (2012*a*)
638	416841	$(NH_4)_2V^{5+}TeO_6(OH)\cdot H_2O \equiv (NH_4)_4[(V^{5+}O_2)_2(Te_2O_8(OH)_2)]\cdot2H_2O$	13*b*	42	chain $[(MY_2)_2(Te_2X_{10})]$	1	$P2_1/n$	7.3843(15)	17.111(3)	7.3916(15)	90, 118.88(3), 90	Kim *et al.* (2007*b*)
639	-	$Ca_2[Cu_2(Te_2O_{10})]\cdot2H_2O$ (Eckhardite)	13*b*	43	layer $[M_2(Te_2X_{10})]$	1	$P2_1/n$	8.1606(8)	5.3076(6)	11.4412(15)	90, 101.549(7), 90	Kampf *et al.* (2013*d*)
640	380499	$Ag[(UO_2)(Te_2O_8(OH)_2)]$	13*b*		layer $[(UY_2)_2(Te_2X_{10})]$	1	*Pbca*	7.0849(19)	11.986(3)	13.913(4)	90, 90, 90	Ling *et al.* (2011)
641	240208	$K_2[Ga_2(Te_2O_{10})]\cdot2H_2O$	13*b*	43	framework $[T_2(Te_2X_{10})]$	1	*I*2/*a*	10.315(5)	10.438(4)	10.646(5)	90, 108.680(11), 90	Yu *et al.* (2004)

642	107306	$Pb_{10}[Te_2O_8(OH)_3]_2(TeO_2(OH)_4)_2(SO_4)\cdot5H_2O$ (Schieffelinite)	13*c* + 4*h*			2	*C*222	9.6581(3)	19.5833(7)	10.5027(7)	90, 90, 90	Kampf *et al.* (2012)
643	107321	$Pb_{10}[Te_2O_8(OH)_3]_2(TeO_2(OH)_4)_2(Cr^{6+}O_4)\cdot5H_2O$ (Chromschieffelinite)	13*c* + 4*h*			2	*C*222	9.6646(3)	19.4962(8)	10.5101(7)	90, 90, 90	Kampf *et al.* (2012)
644	51492	$K_2[Te_4O_8(OH)_{10}]$	13*d*			2	$P2_1/c$	5.592(1)	8.283(2)	16.255(3)	90, 99.62(3), 90	An *et al.* (2001)
645	417439	$K_{8.5}(H_3O)_{0.5}[Te_6O_{18}(OH)_9]\cdot17H_2O$	13*e*			6	*C*2	23.2050(12)	12.9094(7)	15.1923(8)	90, 110.198(1), 90	Churakov *et al.* (2007)

TABLE 25. Structures with infinite ino, phyllo or tecto anions $Te_m^{6+}X_n$. Non-Te cations are in linear 2-fold coordination (*L*), 3-fold (*D*), square planar 4-fold coordination (*Q*), octahedral (*M*) or prismatic (*N*) 6-fold coordination; *Y* = anions not bound to Te.

#	ICSD #	Compound (Mineral name)	Fig# (Te only)	Fig# (whole str)	Structural unit	*N*	SG	*a* / Å	*b* / Å	*c* / Å	α, β, γ / °	Reference
646	1108	$Na_2TeO_4 \equiv Na_4[Te_2O_8]$	13*f*			1	*Pbcn*	5.798(6)	12.24(1)	5.214(5)	90, 90, 90	Kratochvil and Jensovsky (1977)
647	1492	$Na_2TeO_4 \equiv Na_4[Te_2O_8]$	13*f*			2	$P2_1/c$	10.632(5)	5.161(2)	13.837(11)	90, 103.27(4), 90	Daniel *et al.* (1977*b*)
648	8097	$CaTeO_4 \equiv Ca_2[Te_2O_8]$	13*f*			1	*Pbcn*	5.231(1)	12.676(2)	4.977(1)	90, 90, 90	Hottentot and Loopstra (1979)
649	8098	$SrTeO_4 \equiv Sr_2[Te_2O_8]$	13*f*			1	*Pbcn*	5.574(2)	13.114(3)	5.001(1)	90, 90, 90	Hottentot and Loopstra (1979)
650	X	$Pb[(W_{0.56}Te_{0.44})O_4]$ (Te-rich raspite)	13*f*	43		1	$P2_1/a$	13.621(3)	5.019(1)	5.586(1)	90, 107.979(5), 90	Andrade *et al.* (2014)
651	21100	$KTeO_3(OH) \equiv K_2[Te_2O_6(OH)_2]$	13*f*			1	$P2_1/a$	6.4981(5)	11.696(1)	5.1210(3)	90, 93.861(6), 90	Lindqvist (1972*b*)
652	10445	$(NH_4)TeO_3(OH) \equiv (NH_4)_2[Te_2O_6(OH)_2]$	13*f*			1	$P\bar{1}$	5.149(2)	7.095(3)	7.349(3)	123.27(2), 111.79(2), 70.85(2)	Benmiloud *et al.* (1980)
653	34601	$KTeO_2(OH)_3 \equiv K_2[Te_2O_4(OH)_6]$	13*g*			2	$P4_2/m$	7.82	7.82	7.36	90, 90, 90	Lammers and Zemann (1965)
654	412232	$NaBiTeO_5 \equiv Na_2Bi_2[Te_2O_{10}]$	13*g*	43		2	$P2_1/c$	7.2645(5)	9.8048(6)	6.2718(4)	90, 106.819(1), 90	Ok and Halasyamani (2002*a*)
655	168000	$Pb_2TeO_5 \equiv Pb_4[Te_2O_{10}]$ (Ottoite)	13*g*	43		1	*I*2/*a*	7.5353(6)	5.7142(5)	10.8981(12)	90, 91.330(6), 90	Kampf *et al.* (2010*a*)

656	98671	$Hg^{2+}_2TeO_5 \equiv Hg_4[Te_2O_{10}]$	13*g*		framework $[L_2D_2(Te_2X_{10})]$	1	*Pna*2$_1$	7.3462(16)	5.8635(12)	9.969(2)	90, 90, 90	Weil (2003*a*)
657	418903	$Ag_3TeO_4I \equiv Ag_9[Te_3O_{12}]I_3$	13*h*			3	*P*2$_1$/*c*	19.6597(2)	7.1240(4)	13.3598(3)	90, 97.795(2), 90	Pitzschke *et al.* (2008)
658	55451	$K_2[Te_3O_8(OH)_4]$	13*i*	43		2	*Fdd*2	14.844(12)	21.752(19)	6.495(15)	90, 90, 90	Minimol and Vidyasagar (2003)
659	200499	$(NH_4)_2[Te_3O_8(OH)_4]$	13*i*			2	*Fdd*2	16.541(3)	20.467(4)	6.431(1)	90, 90, 90	Moret *et al.* (1979)
660	414464	$Ag_2TeO_4 \equiv Ag_6[Te_3O_{12}]$	13*i*			2	*C*2/*c*	9.0588(9)	9.2456(8)	13.6230(12)	90, 91.758(12), 90	Klein *et al.* (2005*a*)
661	171006	$Ag_2[Hg_2(Te_3O_{12})]$	13*i*		layer $[L_2(Te_3X_{12})]$	2	*P*2$_1$/*n*	6.4664(6)	6.1623(5)	13.0851(11)	90, 94.548(2), 90	Weil (2005*a*)
662	1485	$Li_2TeO_4 \equiv Li_8[Te_4O_{12}]$	13*j*			1	*P*4$_1$22	6.045(3)	6.045(3)	8.290(2)	90, 90, 90	Daniel *et al.* (1977*a*)
663	168001	$Pb_6[Cu(Te_4O_{18}(OH)_2)]$ (Housleyite)	13*k*	44	layer $[Q(Te_3X_{12})]$	2	*P*2$_1$/*n*	7.8552(5)	10.4836(7)	11.0426(8)	90, 95.547(2), 90	Kampf *et al.* (2010*b*)
664	88786	$Na_2[(GeTe)O_6]$	14*a*	44	layer $[(MTe)X_6]$	1	$R\bar{3}$	5.10118(4)	5.10118(4)	15.9590(2)	90, 90, 120	Woodward *et al.* (1999)
665	88787	$Na_2[(TiTe)O_6]$	14*a*		layer $[(MTe)X_6]$	1	$R\bar{3}$	5.2201(2)	5.2201(2)	15.8375(6)	90, 90, 120	Woodward *et al.* (1999)
666	-	$Pb_2[(Fe^{3+}Te^{6+})O_6][AlSi_3O_8]$ (Burckhardtite)	14*a*		layer $[(MTe)X_6]$	1	$P\bar{3}1m$	5.2566(5)	5.2566(5)	13.0221(10)	90, 90, 120	Christy *et al.* (2014)
667	407960	$Sr[(Mn^{4+}Te^{6+})O_6]$	14*b*		layer $[(NTe)X_6]$	1	$P\bar{6}2m$	5.1425(9)	5.1425(9)	5.384(2)	90, 90, 120	Wulff and Müller-Buschbaum (1998)
668	2129	$[TeO_2(OH)_2]$	14*c*	44		1	*P*2$_1$/*c*	5.884(2)	4.844(1)	5.224(1)	90, 116.98(2), 90	Moret *et al.* (1974)

669	6239	$(Bi_2O_2)[TeO_4]$	14*c*			1	*Cmca*	5.319(4)	16.599(11)	5.318(4)	90, 90, 90	Frit and Jaymes (1974)
670	1671	$[Cu(TeO_4)]$	14*c*		framework [Q(TeX_4)]	1	$P2_1/n$	5.500(2)	10.327(7)	4.704(2)	90. 90.0(1), 90	Falck *et al.* (1978*b*)
671	245873	$Ca_5[Te_3O_{14}]$	14*d*	44		2	*Cmca*	10.4267(2)	10.3907(2)	10.4702(2)	90, 90, 90	Fu and Ijdo (2008)
672	93346	$[(Co^{2+}Te^{6+})O_4]$	14*e*			1	$P2_1/c$	6.192(3)	4.671(3)	5.567(2)	90, 124.07(2), 90	Isasi (2001)
673	93345	$[(Ni^{2+}Te^{6+})O_4]$	14*e*			1	$P2_1/c$	6.102(3)	4.647(1)	5.547(5)	90, 123.44(7), 90	Isasi (2001)
674	68372	$[TeO_3]$	14*f*			1	$R\bar{3}c$	4.901(2)	4.901(2)	13.030(4)	90, 90, 120	Dušek and Loub (1988)
675	391382	$Na_2[Te_2O_7]$	14*g*			2	*Imma*	7.2278(5)	10.0991(7)	7.4403(5)	90, 90, 90	Meier and Schleid (2006*b*)
676	416281	$Ag_2[Te_2O_7]$	14*g*			2	*Imma*	7.266(2)	10.1430(9)	7.6021(17)	90, 90, 90	Klein *et al.* (2006)
677	405781	$Pb_3[Fe^{3+}{}_2Te_2O_{12}]$	14*h*	44		4	*Cc*	9.866(3)	15.332(4)	7.172(2)	90, 111.34(3), 90	Müller-Buschbaum and Wedel (1997)

TABLE 26. Structures containing both Te^{4+} and Te^{6+}. Non-Te cations are in linear 2-fold coordination (*L*), 5-fold coordination (*P*) or octahedral (*M*); *Y* = anions not bound to Te. Given the diversity of Te polymerizations, structural unit dimensionality is shown even when Te is the only cation present. Topology of polymers is shown in Figs 15–16.

#	ICSD #	Compound (Mineral name)	Fig# (Te only)	Fig# (whole str)	Structural unit	*N*	SG	*a* / Å	*b* / Å	*c* / Å	α, β, γ / °	Reference
678	413745	$[Co^{2+}{}_6(Te^{6+}O_6)(Te^{4+}O_3)_2Cl_2]$	4*h* + 4*a*		framework $[M_6Y_2(TeX_6)(TeX_3)_2]$	2	$P4_2/mbc$	8.3871(7)	8.3871(7)	18.5634(19)	90, 90, 90	Becker and Johnsson (2004)
679	81439	$Bi[(Bi^{3+}Te^{4+})Te^{6+}O_8]$	15*a*		chain $[(PTe^{4+})Te^{6+}X_8]$	2	$C2/c$	12.792(3)	5.559(1)	10.283(2)	90, 114.48(3), 90	Thomas *et al.* (1996)
680	413057	$Cd_2Te^{4+}Te^{6+}O_7 \equiv Cd_4[Te^{4+}Te^{6+}{}_2O_{11}](Te^{4+}O_3)$	15*b* + 4*a*		chain $[Te^{4+}Te^{6+}{}_2X_{11}]$	4	$P\bar{1}$	7.4328(7)	8.3346(6)	9.9898(8)	87.005(6), 78.843(8), 77.210(8)	Weil (2004*b*)
681	413058	$Cd_2Te^{4+}{}_2Te^{6+}O_9 \equiv Cd_4[Te^{4+}{}_2Te^{6+}{}_2O_{12}](Te^{4+}O_3)_2$	15*c* + 4*a*	45	chain $[Te^{4+}{}_2Te^{6+}{}_2X_{12}]$	3	$P2_1/c$	9.3039(7)	7.3196(5)	13.2479(7)	90, 122.914(4), 90	Weil (2004*b*)
682	8205	$(NH_4)[Te^{4+}Te^{6+}O_5(OH)]$	15*d*		layer $[Te^{4+}Te^{6+}X_6]$	2	*Pnma*	7.340(2)	5.546(1)	13.164(3)	90, 90, 90	Philippot *et al.* (1979*a*)
683	8017	$Ba[Te^{4+}Te^{6+}O_6]$	15*d*		layer $[Te^{4+}Te^{6+}X_6]$	2	*Cmcm*	5.569(2)	12.796(4)	7.320(3)	90, 90, 90	Kocak *et al.* (1979*b*)
684	415472	$Ag_2[Te^{4+}Te^{6+}O_6]$ (-II)	15*d*		layer $[Te^{4+}Te^{6+}X_6]$	2	$P2_1/m$	5.4562(5)	7.4009(7)	6.9122(7)	90, 101.237(2), 90	Klein *et al.* (2005*b*)
685	-	$[Te^{4+}Te^{6+}O_4(OH)_2]$	15*e*	45	layer $[Te^{4+}Te^{6+}X_6]$	2	$Pna2_1$	12.0512(8)	8.0267(5)	4.7268(3)	90, 90, 90	Pollitt and Weil (2014)
686	415471	$Ag_2[Te^{4+}Te^{6+}O_6]$ (-I)	15*f*		layer $[Te^{4+}Te^{6+}X_6]$	2	$P2_1/n$	5.9099(5)	11.6831(8)	8.0305(7)	90, 100.424(7), 90	Klein *et al.* (2005*b*)
687	417354	$Ag_2[Te^{4+}Te^{6+}O_6]$ (-III)	15*g*		layer $[Te^{4+}Te^{6+}X_6]$	2	$P2_1/c$	6.4255(10)	6.9852(11)	13.204(2)	90, 90.090(3), 90	Weil (2007*b*)

688	261937	$Sr[Cu(Te^{4+}Te^{6+}O_7)]$	15*h*	45	layer $[P(Te^{4+}Te^{6+}X_7)]$	2	*Pbcm*	7.1464(7)	15.0609(15)	5.4380(5)	90, 90, 90	Yeon *et al.* (2011*a*)
689	261938	$Pb[Cu(Te^{4+}Te^{6+}O_7)]$	15*h*		layer $[P(Te^{4+}Te^{6+}X_7)]$	2	*Pbcm*	7.2033(5)	15.0468(10)	5.4691(4)	90, 90, 90	Yeon *et al.* (2011*a*)
690	404297	$Ba[Cu(Te^{4+}Te^{6+}O_7)]$	15*h*		layer $[P(Te^{4+}Te^{6+}X_7)]$	2	*Ama*2	5.4869(8)	15.4120(8)	7.2066(4)	90, 90, 90	Sedello and Müller-Buschbaum (1996)
691	262408	$Ba[Mg(Te^{4+}Te^{6+}O_7)]$	15*h*		layer $[P(Te^{4+}Te^{6+}X_7)]$	2	*Ama*2	5.558(2)	15.215(6)	7.307(3)	90, 90, 90	Yeon *et al.* (2012*b*)
692	262409	$Ba[Zn(Te^{4+}Te^{6+}O_7)]$	15*h*		layer $[P(Te^{4+}Te^{6+}X_7)]$	2	*Ama*2	5.5498(4)	15.3161(11)	7.3098(5)	90, 90, 90	Yeon *et al.* (2012*b*)
693	412797	$[Hg^{2+}{}_2(Te^{4+}Te^{6+}O_7)]$ (-β)	15*h*	45	framework $[L_2(Te^{4+}Te^{6+}X_7)]$	4	*Aba*2	7.4405(12)	23.713(4)	13.522(2)	90, 90, 90	Weil (2003*b*)
694	412800	$[Hg^{2+}{}_2(Te^{4+}Te^{6+}O_7)]$ (-α)	15*h*		framework $[L_2(Te^{4+}Te^{6+}X_7)]$	3	*C*2/*c*	12.910(4)	7.407(2)	13.256(4)	90, 112.044(5), 90	Weil (2003*b*)
695	1885	$[Te^{4+}{}_3Te^{6+}O_9]$	15*i*	45	framework $[Te^{4+}{}_3Te^{6+}X_9]$	2	$R\bar{3}$	9.320(5)	9.320(5)	14.486(5)	90, 90, 120	Lindqvist *et al.* (1975)
696	2523	$[Te^{4+}Te^{6+}O_5]$	16*a*	45	framework $[Te^{4+}Te^{6+}X_5]$	2	$P2_1$	5.3680(7)	4.6959(8)	7.9551(11)	90, 104.82(1), 90	Lindqvist and Moret (1973)
697	100661	$Ca[Te^{4+}{}_2Te^{6+}O_8]$ (Carlfriesite)	16*b*	46	framework $[Te^{4+}{}_2Te^{6+}X_8]$	2	*C*2/*c*	12.576(2)	5.662(3)	9.994(2)	90, 115.56(3), 90	Effenberger *et al.* (1978)
698	240868	$Sr[Te^{4+}{}_2Te^{6+}O_8]$	16*c*		framework $[Te^{4+}{}_2Te^{6+}X_8]$	2	$P4_2/m$	6.8321(3)	6.8321(3)	6.7605(5)	90, 90, 90	Weil and Stöger (2007*a*)
699	415473	$Ag_2[Te^{4+}{}_2Te^{6+}{}_2O_{11}]$	16*d*	46	framework $[Te^{4+}{}_2Te^{6+}{}_2X_{11}]$	4	$P\bar{1}$	7.287(4)	7.388(3)	9.686(7)	95.67(3), 94.10(3), 119.40(3)	Klein *et al.* (2005*b*)

700	59168	$Cs_2[Te^{4+}Te^{6+}_3O_{12}]$	16*e*		framework $[Te^{4+}Te^{6+}{}_3X_{12}]$	2	$R\bar{3}m$	7.2921(4)	7.2921	18.332(2)	90, 90, 120	Loopstra and Goubitz (1986)
701	1728	$K_2[Te^{4+}Te^{6+}_3O_{12}]$	16*f*		framework $[Te^{4+}Te^{6+}{}_3X_{12}]$	5	*C*2/*m*	12.360(4)	7.248(2)	11.967(4)	90, 105.68(2), 90	Daniel *et al.* (1978)
702	23395	$(Na_{1.6}Ag_{0.4})[Te^{4+}_2Te^{6+}_3O_{14}]$	16*g*	46	framework $[Te^{4+}{}_2Te^{6+}{}_3X_{14}]$	6	$P2_1/c$	6.333(2)	24.681(8)	7.308(2)	90, 110.84(2), 90	Loeksmanto *et al.* (1980)
703	171254	$Rb_4[Te^{4+}{}_3Te^{6+}{}_5O_{23}]$	16*h*		framework $[Te^{4+}{}_3Te^{6+}{}_5X_{23}]$	8	$Pna2_1$	19.793(4)	14.664(4)	7.292(4)	90, 90, 90	Minimol and Vidyasagar (2005)