

Structure and hydrogen bonding of the hydrated selenite and selenate ions in aqueous solution

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Supplementary Material

Table S1. Concentrations ($\text{mol}\cdot\text{dm}^{-3}$) of the aqueous selenite and selenate solutions used in the LAXS and EXAFS measurements; L denotes LAXS study and E EXAFS study.

Sample	$[\text{SeO}_x^{2-}]$	$[\text{Na}^+]$	[water]	$\rho/\text{g}\cdot\text{cm}^{-3}$	μ/cm^{-1}	pH	Method
Na_2SeO_3 in water	1.5006	3.0012	49.207	1.170	10.27	12.0	L
Na_2SeO_3 in water	0.500	1.000				12.0	E
NaHSeO_3 in water	0.500	0.500				5.0	E
H_2SeO_3 in water	0.500					1.0	E
Na_2SeO_4 in water	1.5066	3.0132	50.277	1.190	10.33	12.0	L
Na_2SeO_4 in water	0.500	1.000				12.0	E
NaHSeO_4 in water	0.500	0.500				1.0	E

Table S2. Summary of Se-O bond distances solid state structures of selenite ion, hydrogenselenite ion, selenous acid, selenate ion, hydrogenselenate ion and selenic acid from the Inorganic Crystal Structure Database (ICSD) and Cambridge Structure Database (CSD). References in red are not included in the average value.

ICSD/	CSD code	d(Se-O)/Å	Reference Formula of compound
Selenite ion, SeO₃²⁻			
	VEXCAD	1.676 Å	Wiechoczek, M.; Jones, P. G. Z. <i>Naturforsch., Teil B</i> 2006 , 61, 1401. (C ₄ H ₁₂ N) ₂ (SeO ₃)
	TUYMOP	1.686 Å	Havlicek, D.; Chudoba, V.; Nemec, I.; Cisarova, I.; Micka, Z. <i>J. Mol. Struct.</i> 2002 , 606, 101. (C ₄ H ₁₂ N ₂)(SeO ₃)·H ₂ O
	YASHAC	1.687 Å	Todd, M. J.; Harrison, W. T. A. <i>Acta Crystallogr., Sect. E</i> 2005 , 61, o1538. (C ₃ H ₁₂ N ₂)(SeO ₃)·H ₂ O
	BAYBUZ	1.689 Å	Chudoba, V.; Micka, Z.; Havlicek, D.; Cisarova, I.; Nemec, I.; Robinson, W. T. <i>J. Solid State Chem.</i> 2003 , 170, 390. (C ₄ H ₁₄ N ₂)(SeO ₃)·H ₂ O
	420179	1.691 Å	Burns, W. L.; Ibers, J. A. <i>J. Solid State Chem.</i> 2009 , 182, 1457-1461. Cs(UO ₂)(SeO ₃)(HSeO ₃)·3H ₂ O
	BAYCEK	1.692 Å	Chudoba, V.; Micka, Z.; Havlicek, D.; Cisarova, I.; Nemec, I.; Robinson, W. T. <i>J. Solid State Chem.</i> 2003 , 170, 390. (C ₃ H ₁₂ N ₂)(SeO ₃)·2H ₂ O
	167531	1.692 Å	Chang Hong Young; Kim Sun Woo; Shiv Halasyamani, P. <i>Chem. Mat.</i> 2010 , 22, 3241-3250. Tl ₂ (MoO ₃) ₃ SeO ₃
	280981	1.698 Å	Wickleder, M. S. <i>Acta Crystallogr., Sect. E</i> 2002 , 58, 103-104. Na ₂ SeO ₃
	VEXCEH	1.698 Å	Wiechoczek, M.; Jones, P. G. Z. <i>Naturforsch., Teil B</i> 2006 , 61, 1401. (C ₄ H ₁₂ N) ₂ (SeO ₃)·1.5H ₂ O
	184743	1.698 Å	Kong Fang; Hu Chunli; Xu Xiang; Zhou Tianhua; Mao Jianggao <i>Dalton Trans.</i> 2012 , 41, 5687-5695. Rb ₄ Mo ₅ O ₁₅ (SeO ₃) ₂ (H ₂ O) ₂
	184742	1.700 Å	Kong Fang; Hu Chunli; Xu Xiang; Zhou Tianhua; Mao Jianggao <i>Dalton Trans.</i> 2012 , 41, 5687-5695. K ₄ Mo ₅ O ₁₅ (SeO ₃) ₂ (H ₂ O) ₂
	BAYCIO	1.700 Å	Chudoba, V.; Micka, Z.; Havlicek, D.; Cisarova, I.; Nemec, I.; Robinson, W. T. <i>J. Solid State Chem.</i> 2003 , 170, 390. (C ₂ H ₁₀ N ₂)(SeO ₃)
	184744	1.701 Å	Kong Fang; Hu Chunli; Xu Xiang; Zhou Tianhua; Mao Jianggao <i>Dalton Trans.</i> 2012 , 41, 5687-5695. Rb ₄ Mo ₅ O ₁₅ (SeO ₃) ₂ (H ₂ O) ₂
	167530	1.710 Å	Chang Hong Young; Kim Sun Woo; Shiv Halasyamani, P. <i>Chem. Mat.</i> 2010 , 22, 3241-3250.



Mean 1.691 Å/9

Hydrogenselenite ion, HSeO_3^-

ZOKZEE	1.640+1.760 Å	de Matos Gomes, E.; Matos Beja, A.; Paixao, J. A.; de Veiga, L. A.; Ramos Silva, M.; Martin-Gil, J.; Martin-Gil, F. J. Z. <i>Kristallogr.</i> 1995 , 210, 929. $(\text{C}_{10}\text{H}_{16}\text{N})(\text{HSeO}_3)\cdot\text{H}_2\text{SeO}_3$
WAGVOR	1.650+1.719 Å	Huili Chen, Wei Gao, Miaoli Zhu, Hongfei Gao, Jinfang Xue, Yingqi Li <i>Chem. Commun.</i> 2010 , 46, 8389.
XUJDUB	1.652+1.787 Å	Lukevics, E.; Arsenyan, P.; Shestakova, I.; Domracheva, I.; Kanepe, I.; Belyakov, S.; Popelis, J.; Pudova, O. <i>Appl. Organomet. Chem.</i> 2002 , 16, 228. $(\text{C}_6\text{H}_{16}\text{NO}_3)(\text{HSeO}_3)$
202718	1.653+1.801 Å	Micka, Z.; Danek, M.; Loub, J.; Strauch, B.; Podlahova, J.; Hasek, J. J. <i>Solid State Chem.</i> 1988 , 77, 306-315. $\text{Cs}(\text{HSeO}_3)$
ADAVAC	1.654+1.791 Å	de Matos Gomes, E.; Nogueira, E.; Fernandes, I.; Belsley, M.; Paixao, J. A.; Matos Beja, A.; Ramos Silva, M.; Martin-Gil, J.; Martin-Gil, F.; Mano, J. F. <i>Acta Crystallogr., Sect. B</i> 2001 , 57, 828. $(\text{C}_6\text{H}_{15}\text{N}_4\text{O}_2)(\text{HSeO}_3)\cdot 0.15\text{H}_2\text{O}$
73332	1.657+1.757 Å	Loub, J.; Micka, Z.; Podlahova, J.; Maly, K.; Kopf, J. <i>Coll. Czech. Chem. Commun.</i> 1992 , 57, 2309-2314. $\text{Na}(\text{HSeO}_4)\cdot 3\text{H}_2\text{SeO}_3$
RESNEI	1.657+1.768 Å	Paixao, J. A.; Matos Beja, A.; Ramos Silva, M.; de Matos Gomes, E.; Martin-Gil, J.; Martin-Gil, F. J. <i>Acta Crystallogr., Sect. C</i> 1997 , 53, 1113. $(\text{C}_{13}\text{H}_{14}\text{N}_3)(\text{HSeO}_3)\cdot\text{H}_2\text{O}$
JIVWEQ	1.658+1.784 Å	Nemec, I.; Cisarova, I.; Micka, Z. J. <i>Solid State Chem.</i> 1998 , 140, 71. $(\text{C}_2\text{H}_6\text{NO}_2)(\text{HSeO}_3)\cdot\text{C}_2\text{H}_5\text{NO}_2$
8255	1.659+1.791 Å	Chomnilpan, S.; Liminga, R. <i>Acta Crystallogr., Sect. B</i> 1979 , 35, 3011-3013. $\text{Li}(\text{HSeO}_3)$
202266	1.659+1.783 Å	Hiltunen, L.; Holsa, J.; Micka, Z. J. <i>Solid State Chem.</i> 1987 , 68, 307-313. $\text{Cs}(\text{HSeO}_4)\cdot 2\text{H}_2\text{SeO}_3$
DEHQOX	1.659+1.758 Å	Jun-Jieh Wang; Tessier, C. T.; Holm, R. H. <i>Inorg. Chem.</i> 2006 , 45, 2979. $(\text{C}_8\text{H}_{20}\text{N})(\text{HSeO}_3)$
XORBUB	1.659+1.769 Å	Nemec, I. Chudoba, V.; Havlicek, D.; Cisarova, I.; Micka, Z. J. <i>Solid State Chem.</i> 2001 , 161, 312. $(\text{C}_6\text{H}_{16}\text{N}_2)(\text{HSeO}_3)_2$
403078	1.660+1.782 Å	Eichhorn, K. D.; Kek, S. Z. <i>Kristallogr.</i> 1997 , 212, 724-731. $\text{Li}(\text{HSeO}_3)$
EKIBAB	1.667+1.763 Å	Ritchie, L. K.; Harrison, W. T. A. <i>Acta Crystallogr., Sect. E</i> 2001 , 59, o1296. $(\text{C}_2\text{H}_7\text{N}_4\text{O})(\text{HSeO}_3)$
CADMAX	1.667+1.778 Å	Gharzaryan, V. V.; Fleck, M.; Petrosyan, A. M. <i>Proc. of SPIE - Int. Conf. Las. Phys.</i> 2011 , 7998,

	79980F.	
KELKAO	1.668+1.765 Å	Paixao, J. A.; Silva, M. R.; Beja, A. M.; Eusebio, E. <i>Polyhedron</i> 2006 , 25, 2021. (C ₁₁ H ₁₃ N ₂ O ₂)(HSeO ₃)
250286	1.670+1.749 Å	Krivovichev, S. V.; Tananaev, I. G.; Kahlenberg, V.; Myasoedov, B. F. <i>Dokl. Akad. Nauk</i> 2005 , 403, 349-352. ((C ₅ H ₁₁)NH ₃)(UO ₂)(SeO ₄)(HSeO ₃)
62335	1.671+1.781 Å	Bannova, I. I.; Vinogradova, I. S.; Kuz'min, A. M.; Rozhdestvenskaya, I. V.; Usov, O. A. <i>Kristallografiya</i> 1987 , 32N, 83-85. Rb(HSeO ₃)
171372	1.672+1.761 Å	Weil, M. <i>Acta Crystallogr., Sect. E</i> 2006 , 62, i38-i40. NH ₄ (HSeO ₃)
62289	1.676+1.750 Å	Rider, E. E.; Sarin, V. A.; Bydanov, N. N.; Vinogradova, I. S. <i>Kristallografiya</i> 1986 , 31N, 264-269. Na(DSeO ₃)
62288	1.679+1.746 Å	Rider, E. E.; Sarin, V. A.; Bydanov, N. N.; Vinogradova, I. S. <i>Kristallografiya</i> 1986 , 31N, 264-269. Na(HSeO ₃)
420179	1.679+1.767 Å	Burns, W. L.; Ibers, J. A. <i>J. Solid State Chem.</i> 2009 , 182, 1457-1461. Cs(UO ₂)(SeO ₃)(HSeO ₃)·3H ₂ O
KELKAO01	1.679+1.763 Å	Paixao, J. A.; Silva, M. R.; Beja, A. M.; Eusebio, E. <i>Polyhedron</i> 2006 , 25, 2021. (C ₁₁ H ₁₃ N ₂ O ₂)(HSeO ₃)
Mean	1.663+1.768 Å/23	(Mean 1.698 Å/23)
Selenous acid, H ₂ SeO ₃		
ZOKZEE	1.612+1.739 Å	de Matos Gomes, E.; Matos Beja, A.; Paixao, J. A.; de Veiga, L. A.; Ramos Silva, M.; Martin-Gil, J.; Martin-Gil, F. J. <i>Z. Kristallogr.</i> 1995 , 210, 929. (C ₁₀ H ₁₆ N)(HSeO ₃)·H ₂ SeO ₃
73332	1.618+1.735 Å	Loub, J.; Micka, Z.; Podlahova, J.; Maly, K.; Kopf, J. <i>Coll. Czech. Chem. Commun.</i> 1992 , 57, 2309-2314. Na(HSeO ₄)·3H ₂ SeO ₃
NIRSIQ	1.622+1.735 Å	Paixao, J. A.; Matos Beja, A.; Ramos Silva, M.; Alte da Veiga, L.; Martin-Gil, J.; Martin-Gil, F.; de Matos Gomes, E. <i>Z. Kristallogr. - New Cryst. Struct.</i> 1997 , 212, 51. C ₃ H ₁₁ NO ₂ ·H ₂ SeO ₃
202266	1.632+1.748 Å	Hiltunen, L.; Holsa, J.; Micka, Z. <i>J. Solid State Chem.</i> 1987 , 68, 307-313. Cs(HSeO ₄)·2H ₂ SeO ₃
71786	1.666+1.740 Å	Baran, J.; Lis, T.; Marchewka, M.; Ratajczak, H. <i>J. Mol. Struct.</i> 1991 , 250, 13-45. Na ₂ SeO ₄ ·H ₂ SeO ₃
Mean	1.621+1.739 Å/4	(Mean 1.700 Å/4)

Selenate ion, SeO ₄ ²⁻		
73411	1.600 Å	Fabry, J.; Brecewzski, T. <i>Acta Crystallogr., Sect. C</i> 1993 , 49, 1724-1727. Tl ₂ SeO ₄
OKOKUV01	1.608 Å	Custelcean, R.; Bock, A.; Moyer, B. A. <i>J. Am. Chem. Soc.</i> 2010 , 132, 7177.
OKOKUV	1.612 Å	Custelcean, R.; Bock, A.; Moyer, B. A. <i>J. Am. Chem. Soc.</i> 2010 , 132, 7177.
WULSAY03	1.615 Å	Wen Zhang; Li-Zhuang Chen; Ren-Gen Xiong; Nakamura, T.; Huang, S. D. <i>J. Am. Chem. Soc.</i> 2009 , 131, 12544.
419775	1.617 Å	Grzechnik, A.; Brecewzski, T.; Friese, K. <i>J. Solid State Chem.</i> 2008 , 181, 2914-2917. Tl ₂ SeO ₄
99382	1.618 Å	Friese, K.; Goeta, A. E.; Leech, M. A.; Howard, J. A. K.; Madariaga, G.; Perez-Mato, J. M.; Brecewzski, T. <i>J. Solid State Chem.</i> 2004 , 177, 1127-1136. Tl ₂ SeO ₄
21047	1.620 Å	Kruglik, A. I.; Simonov, V. I.; Yuzvak, V. I. <i>Kristallografiya</i> 1973 , 18N, 287-292. (NH ₄)NaSeO ₄ ·2H ₂ O
157371	1.620 Å	Dammak, M.; Litaïem, H.; Gravereau, P.; Mhiri, T.; Kolsi, A. W. <i>J. Alloys Compd.</i> 2007 , 442, 316-319. Rb ₂ SeO ₄ ·Te(OH) ₆
419338	1.621 Å	Ghedia, S.; Dinnebier, R.; Jansen, M. <i>Solid State Sci.</i> 2009 , 11, 72-76. Rb ₂ SeO ₄
14298	1.622 Å	Kalman, A.; Stephens, J. S.; Cruickshank, D. W. J. <i>Acta Crystallogr., Sect. B</i> 1970 , 26, 1451-1454. K ₂ SeO ₄
107620	1.622 Å	Malchus, M.; Jansen, M. Z. <i>Naturforsch., Teil B</i> 1998 , 53, 704-710. (N(CH ₃) ₄) ₂ SeO ₄
200539	1.622 Å	Nozik, Y. Z.; Fykin, L. E.; Duderov, V. Y.; Muradyan, L. A.; Rostuntseva, A. I. <i>Kristallografiya</i> 1978 , 23N, 617-619. Na(NH ₄)SeO ₄ ·2H ₂ O
73464	1.624 Å	Fabry, J.; Brecewzski, T.; Petricek, V. <i>Acta Crystallogr., Sect. B</i> 1993 , 49, 826-832. K ₃ Na(SeO ₄) ₂
81688	1.624 Å	Gonzalez-Silgo, C.; Solans, X.; Ruiz-Perez, C.; Martinez-Sarrion, M. L.; Mestres, L. <i>Ferroelectrics</i> 1996 , 177, 191-199. K ₂ SeO ₄
99383	1.625 Å	Friese, K.; Goeta, A. E.; Leech, M. A.; Howard, J. A. K.; Madariaga, G.; Perez-Mato, J. M.; Brecewzski, T. <i>J. Solid State Chem.</i> 2004 , 177, 1127-1136. Tl ₂ SeO ₄
81689	1.626 Å	Gonzalez-Silgo, C.; Solans, X.; Ruiz-Perez, C.; Martinez-Sarrion, M. L.; Mestres, L. <i>Ferroelectrics</i> 1996 , 177, 191-199. K ₂ SeO ₄
81690	1.626 Å	Gonzalez-Silgo, C.; Solans, X.; Ruiz-Perez, C.; Martinez-Sarrion, M. L.; Mestres, L. <i>Ferroelectrics</i> 1996 , 177, 191-199. K ₂ SeO ₄

LORYAT	1.626 Å	Janczak, J.; Perpetuo, G. J. <i>Acta Crystallogr., Sect. E</i> 2009 , 65, o121.
54168	1.627 Å	Fukami, T.; Chen, R.-H. <i>Acta Phys. Pol., Ser. A</i> 1998 , 94, 795-801. $K_3Na(SeO_4)_2$
WULSAY01	1.627 Å	Wen Zhang; Li-Zhuang Chen; Ren-Gen Xiong; Nakamura, T.; Huang, S. D. <i>J. Am. Chem. Soc.</i> 2009 , 131, 12544.
158790	1.628 Å	Krivovichev, S. V. <i>Ukrain. Dokl. Kristallogr.</i> 2006 , 135, 106-113. $[Al(H_2O)_6]_2(SeO_4)_3(NO_3) \cdot 4H_2O$
250316	1.628 Å	Krivovichev, S. V. <i>Zapiski Vserossiyskogo Mineralogicheskogo Obshchestva</i> 2006 , 135, 106-113. $[Al(H_2O)_6]_2(SeO_4)_3 \cdot 4H_2O$
419776	1.628 Å	Grzechnik, A.; Brezewski, T.; Friese, K. <i>J. Solid State Chem.</i> 2008 , 181, 2914-2917. Tl_2SeO_4
81691	1.630 Å	Gonzalez-Silgo, C.; Solans, X.; Ruiz-Perez, C.; Martinez-Sarrion, M. L.; Mestres, L. <i>Ferroelectrics</i> 1996 , 177, 191-199. K_2SeO_4
94517	1.630 Å	Troyanov, S. I.; Kosterina, E. V.; Kemnitz, E. <i>Zh. Neorg. Khim.</i> 2001 , 46, 1496-1502. $Cs_4(SeO_4)(HSeO_4)_2 \cdot HF$
160681	1.630 Å	Smirnov, L. S.; Melnyk, G.; Zink, N.; Wozniak, K.; Dominiak, P.; Pawlukoje, A.; Loose, A.; Shuvalov, L. A. <i>Poverkhnostnye Fizika, Khimiya, Mekhanika</i> 2007 , 73-79. $(NH_4)_2(SeO_4)_2$
281276	1.630 Å	Johnston, M. G.; Harrison, W. T. A. <i>Acta Crystallogr., Sect. E</i> 2003 , 59, i25-i27. $Li_2SeO_4 \cdot H_2O$
710013	1.630 Å	Euler, H.; Barbier, B.; Meents, A.; Kirfel, A. Z. <i>Kristallogr. - New Crystal Struct.</i> 2009 , 224, 360-364. $Tl_2[Zn(H_2O)_6](SeO_4)_2$
RUXWIQ	1.630 Å	Nemec, I.; Gyepes, R.; Micka, Z.; Trojanek, F. <i>Mat. Res. Soc. Symp. Proc.</i> 2002 , 725, 213. $(C_5H_{12}NO_2)_2SeO_4 \cdot 2H_2O$. K. Marchewka, J. Janczak, S. Debrus, J. Baran, H. Ratajczak
60928	1.631 Å	Takahashi, I.; Onodera, A.; Shiozaki, Y. <i>Acta Crystallogr., Sect. C</i> 1987 , 43, 179-182. Rb_2SeO_4
73463	1.631 Å	Fabry, J.; Brezewski, T.; Petricek, V. <i>Acta Crystallogr., Sect. B</i> 1993 , 49, 826-832. $K_3Na(SeO_4)_2$
150083	1.631 Å	Wildner, M.; Stoilova, D.; Georgiev, M.; Karadjova, V. <i>J. Mol. Struct.</i> 2004 , 707, 123-130. $[Be(H_2O)_4]SeO_4$
710012	1.631 Å	Euler, H.; Barbier, B.; Meents, A.; Kirfel, A. Z. <i>Kristallogr. - New Crystal Struct.</i> 2009 , 224, 360-364. $Tl_2[Ni(H_2O)_6](SeO_4)_2$
PRACSE10	1.631 Å	Morosin, B.; Howatson, J. <i>Acta Crystallogr., Sect. B</i> 1970 , 26, 2062. $[Cu(H_2N(CH_2)NH_2)_2]SeO_4 \cdot H_2O$
27656	1.632 Å	Mehrotra, B. N.; Hahn, T.; Eysel, W.; Roepke, H.; Illguth, A. <i>Neues Jahrbuch fuer Mineralogie. Monatshefte</i> 1978 , 408-421. Na_2SeO_4

61183	1.632 Å	Kruglik, A. I. <i>Dokl. Akad. Nauk SSSR</i> 1976 , 229, 853-855. Na(NH ₄)(SeO ₄)·2H ₂ O
158480	1.632 Å	Krivovichev, S. V. <i>Ukrain. Dokl. Kristallogr.</i> 2006 , 135, 80-87. [Mg(H ₂ O) ₄] ₂ (SeO ₄) ₂ ·H ₂ O
200912	1.632 Å	Mukhtarova, N. N.; Rastsvetaeva, R. K.; Ilyukhin, V. V.; Belov, N. V. <i>Kristallografiya</i> 1979 , 24N, 1184-1192. Na[In(H ₂ O) ₆](SeO ₄) ₂
250370	1.632 Å	Krivovichev, S. V. <i>Zapiski Vserossiyskogo Mineralogicheskogo Obshchestva</i> 2006 , 80-87. [Mg(H ₂ O) ₄] ₂ (SeO ₄) ₂ ·H ₂ O
710008	1.632 Å	Euler, H.; Barbier, B.; Meents, A.; Kirfel, A. Z. <i>Kristallogr. - New Crystal Struct.</i> 2009 , 224, 360-364. Tl ₂ [Mg(H ₂ O) ₆](SeO ₄) ₂
RANYEK	1.632 Å	Havlicek, D.; Plocek, J.; Nemec, I.; Gyepes, R.; Micka, Z. <i>J. Solid State Chem.</i> 2000 , 150, 305. (C ₆ H ₁₆ N ₂)SeO ₄ ·2H ₂ O
WUYXIX	1.632 Å	Marchewka, M. K.; Janczak, J.; Debrus, S.; Baran, J.; Ratajczak, H. <i>Solid State Sci.</i> 2003 , 5, 643. (C ₃ H ₇ N ₆) ₄ (SeO ₄) ₂ ·3H ₂ O
82757	1.633 Å	Micka, Z.; Prokopova, L.; Cisarova, I.; Havlicek, D. <i>Coll. Czech. Chem. Commun.</i> 1996 , 61, 1295-1306. Rb ₂ [Mg(H ₂ O) ₆](SeO ₄) ₂
174115	1.633 Å	Sawae, S.; Nakashima, T.; Shigematsu, H.; Kasano, H.; Mashiyama, H. <i>J. Phys. Soc. Jpn.</i> 2005 , 74, 2748-2753. (K _{0.52} Rb _{0.48}) ₂ SeO ₄
240671	1.633 Å	Ling, J.; Albrecht-Schmitt, T. E. <i>Inorg. Chem.</i> 2007 , 46, 346-347. K ₂ SeO ₄ ·2HIO ₃
710000	1.633 Å	Euler, H.; Barbier, B.; Meents, A.; Kirfel, A. Z. <i>Kristallogr. - New Crystal Struct.</i> 2009 , 224, 351-354. Tl ₂ [Ni(H ₂ O) ₆](SeO ₄) ₂
710009	1.633 Å	Euler, H.; Barbier, B.; Meents, A.; Kirfel, A. Z. <i>Kristallogr. - New Crystal Struct.</i> 2009 , 224, 360-364. Tl ₂ [Co(H ₂ O) ₆](SeO ₄) ₂
RANYAG	1.633 Å	Havlicek, D.; Plocek, J.; Nemec, I.; Gyepes, R.; Micka, Z. <i>J. Solid State Chem.</i> 2000 , 150, 305. (C ₄ H ₁₂ N ₂)SeO ₄ ·H ₂ O
82756	1.634 Å	Micka, Z.; Prokopova, L.; Cisarova, I.; Havlicek, D. <i>Coll. Czech. Chem. Commun.</i> 1996 , 61, 1295-1306. K ₂ [Mg(H ₂ O) ₆](SeO ₄) ₂
152720	1.634 Å	Litaïem, H.; Dammak, M.; Mhiri, T.; Cousson, A. <i>J. Alloys Compd.</i> 2005 , 396, 34-39. (NH ₄) ₂ SeO ₄ ·Te(OH) ₆
158479	1.634 Å	Krivovichev, S. V. <i>Ukrain. Dokl. Kristallogr.</i> 2006 , 135, 96-101. [Al(H ₂ O) ₆](SeO ₄)(NO ₃)·H ₂ O
250369	1.634 Å	Krivovichev, S. V. <i>Zapiski Vserossiyskogo Mineralogicheskogo Obshchestva</i> 2006 , 96-101.

710001	1.634 Å	[Al(H ₂ O) ₆] ₂ (SeO ₄)(NO ₃)·H ₂ O	Euler, H.; Barbier, B.; Meents, A.; Kirfel, A. Z. <i>Kristallogr. - New Crystal Struct.</i> 2009 , 224, 351-354.
710010	1.634 Å	Tl ₂ [Zn(H ₂ O) ₆](SeO ₄) ₂	Euler, H.; Barbier, B.; Meents, A.; Kirfel, A. Z. <i>Kristallogr. - New Crystal Struct.</i> 2009 , 224, 360-364.
710011	1.634 Å	Tl ₂ [Cu(H ₂ O) ₆](SeO ₄) ₂	Euler, H.; Barbier, B.; Meents, A.; Kirfel, A. Z. <i>Kristallogr. - New Crystal Struct.</i> 2009 , 224, 360-364.
ISOMOT	1.634 Å	Tl ₂ [Mn(H ₂ O) ₆](SeO ₄) ₂	Matulkova, I.; Cihelka, J.; Fejfarova, K.; Dusek, M.; Pojarova, M.; Vanek, P.; Kroupa, J.; Sala, M.; Krupkova, R.; Nemec, I. <i>CrystEngComm</i> 2011 , 13, 4131.
51079	1.635 Å	Troyanov, S. I.; Morozov, I. V.; Rybakov, V. B.; Stiewe, A.; Kemnitz, E. J. <i>Solid State Chem.</i> 1998 , 141, 317-322. Cs ₄ (SeO ₄)(HSeO ₄) ₂ ·H ₃ PO ₄	Pietraszko, A.; Lukaszewicz, K.; Augustyniak, M. A. <i>Acta Crystallogr., Sect. C</i> 1992 , 48, 2069-2071.
67234	1.635 Å	Li ₂ SeO ₄	Baran, J.; Lis, T.; Marchewka, M.; Ratajczak, H. J. <i>Mol. Struct.</i> 1991 , 250, 13-45.
71786	1.635 Å	Na ₄ (SeO ₄)(SeO ₃)·H ₂ O	Micka, Z.; Prokopova, L.; Cisarova, I.; Havlicek, D. <i>Coll. Czech. Chem. Commun.</i> 1996 , 61, 1295-1306. Cs ₂ [Mg(H ₂ O) ₆](SeO ₄) ₂
82758	1.635 Å	Micka, Z.; Prokopova, L.; Cisarova, I.; Havlicek, D. <i>Coll. Czech. Chem. Commun.</i> 1996 , 61, 1295-1306. (NH ₄) ₂ [Mg(H ₂ O) ₆](SeO ₄) ₂	Euler, H.; Meents, A.; Barbier, B.; Kirfel, A. Z. <i>Kristallogr. - New Cryst. Struct.</i> 2003 , 218, 265-268.
82759	1.635 Å	Rb ₂ [Mg(H ₂ O) ₆](SeO ₄) ₂	Euler, H.; Barbier, B.; Meents, A.; Kirfel, A. Z. <i>Kristallogr. - New Cryst. Struct.</i> 2003 , 218, 405-408.
409719	1.635 Å	Troyanov, S. I.; Morozov, I. V.; Rybakov, V. B.; Kemnitz, E. <i>Kristallografiya</i> 2000 , 45, 441-447.	Matulkova, I.; Cihelka, J.; Fejfarova, K.; Dusek, M.; Pojarova, M.; Vanek, P.; Kroupa, J.; Sala, M.; Krupkova, R.; Nemec, I. <i>CrystEngComm</i> 2011 , 13, 4131.
409750	1.635 Å	Rb ₂ [Zn(H ₂ O) ₆](SeO ₄) ₂	Zuniga, F. J.; Brezczewski, T.; Arnaiz, A. <i>Acta Crystallogr., Sect. C</i> 1991 , 47, 638-640. Cs ₂ SeO ₄
411002	1.635 Å	Rb ₂ SeO ₄ ·H ₃ PO ₄	Euler, H.; Meents, A.; Barbier, B.; Kirfel, A. Z. <i>Kristallogr. - New Cryst. Struct.</i> 2003 , 218, 265-268.
ISOMUZ	1.635 Å		
66526	1.636 Å		
409722	1.636 Å		

409747	1.636 Å	Rb ₂ [Zn(H ₂ O) ₆](SeO ₄) ₂
409748	1.636 Å	Euler, H.; Barbier, B.; Meents, A.; Kirfel, A. Z. <i>Kristallogr. - New Cryst. Struct.</i> 2003 , 218, 405-408. Rb ₂ [Mn(H ₂ O) ₆](SeO ₄) ₂
171281	1.637 Å	Euler, H.; Barbier, B.; Meents, A.; Kirfel, A. Z. <i>Kristallogr. - New Cryst. Struct.</i> 2003 , 218, 405-408. Rb ₂ [Co(H ₂ O) ₆](SeO ₄) ₂
171282	1.637 Å	Simmons, C. J.; Stratemeier, H.; Hitchman, M. A.; Riley, M. J. <i>Inorg. Chem.</i> 2006 , 45, 1021-1031. K ₂ [Cu(H ₂ O) ₆](SeO ₄) ₂
246302	1.637 Å	Simmons, C. J.; Stratemeier, H.; Hitchman, M. A.; Riley, M. J. <i>Inorg. Chem.</i> 2006 , 45, 1021-1031. Pertlik, F.; Fuith, A. H. <i>Acta Crystallogr., Sect. C</i> 1989 , 45, 158-159. Li ₂ SeO ₄
409591	1.637 Å	Fleck, M.; Kolitsch, U. Z. <i>Kristallogr. - New Cryst. Struct.</i> 2002 , 217, 15-16. Rb ₂ [Ni(H ₂ O) ₆](SeO ₄) ₂
409591	1.637 Å	Fleck, M.; Kolitsch, U. Z. <i>Kristallogr. - New Cryst. Struct.</i> 2002 , 217, 15-16. Rb ₂ [Cu(H ₂ O) ₆](SeO ₄) ₂
409669	1.637 Å	Euler, H.; Meents, A.; Barbier, B.; Kirfel, A. Z. <i>Kristallogr. - New Cryst. Struct.</i> 2003 , 218, 9-10. [Mn(H ₂ O) ₄](SeO ₄)·H ₂ O
409720	1.637 Å	Euler, H.; Meents, A.; Barbier, B.; Kirfel, A. Z. <i>Kristallogr. - New Cryst. Struct.</i> 2003 , 218, 265-268. Rb ₂ [Co(H ₂ O) ₆](SeO ₄) ₂
409749	1.637 Å	Euler, H.; Barbier, B.; Meents, A.; Kirfel, A. Z. <i>Kristallogr. - New Cryst. Struct.</i> 2003 , 218, 405-408. Rb ₂ [Ni(H ₂ O) ₆](SeO ₄) ₂
QIXPES	1.637 Å	Maubert, B. M.; Nelson, J.; McKee, V.; Town, R. M.; Pal, I. <i>J.Chem.Soc., Dalton Trans.</i> 2001 , 1395. (C ₃ H ₆ N ₈) ₅ SeO ₄ (ClO ₄) ₄ ·H ₂ O
FAKVEU	1.637 Å	Kammoun, O.; Loulou, N.; Rezik, W.; Naili, H.; Mhiri, T.; Bataille, T. <i>J. Chem. Cryst.</i> 2012 , 42, 103.
89440	1.638 Å	Pietraszko, A.; Bronowska, W. <i>Solid State Commun.</i> 1999 , 111, 205-209. Rb ₂ Li ₄ (SeO ₄) ₃ ·2H ₂ O
150084	1.638 Å	Wildner, M.; Stoilova, D.; Georgiev, M.; Karadjova, V. <i>J. Mol. Struct.</i> 2004 , 707, 123-130. [Be(H ₂ O) ₄](SeO ₄)
150706	1.638 Å	Fukami, T.; Chen Rueyhong <i>J. Phys. Soc. Jpn.</i> 2003 , 72, 3299-3300. Na ₂ SeO ₄
171280	1.638 Å	Simmons, C. J.; Stratemeier, H.; Hitchman, M. A.; Riley, M. J. <i>Inorg. Chem.</i> 2006 , 45, 1021-1031. K ₂ [Cu(H ₂ O) ₆](SeO ₄) ₂
409648	1.638 Å	Fleck, M.; Kolitsch, U. Z. <i>Kristallogr. - New Cryst. Struct.</i> 2002 , 217, 471-473.

409721	1.638 Å	(NH ₄) ₂ [Co(H ₂ O) ₆](SeO ₄) ₂ Euler, H.; Meents, A.; Barbier, B.; Kirfel, A. Z. Kristallogr. - New Cryst. Struct. 2003 , 218, 265-268. Rb ₂ [Mn(H ₂ O) ₆](SeO ₄) ₂
409746	1.638 Å	Euler, H.; Barbier, B.; Meents, A.; Kirfel, A. Z. Kristallogr. - New Cryst. Struct. 2003 , 218, 405-408. Rb ₂ [Mg(H ₂ O) ₆](SeO ₄) ₂
419776	1.638 Å	Grzechnik, A.; Brezewski, T.; Friese, K. J. Solid State Chem. 2008 , 181, 2914-2917. Tl ₂ SeO ₄
154512	1.639 Å	Dammak, M.; Mhiri, T.; Cousson, A. J. Alloys Compd. 2006 , 407, 176-181. K ₂ SeO ₄ ·Te(OH) ₆
200156	1.639 Å	Mukhtarova, N. N.; Rastsvetaeva, R. K.; Ilyukhin, V. V.; Belov, N. V. Dokl. Akad. Nauk SSSR 1977 , 235, 575-577. Na[In(H ₂ O) ₆](SeO ₄) ₂
201893	1.639 Å	Yamada, N.; Ono, Y.; Ikeda, T. J. Phys. Soc. Jpn. 1984 , 53, 2565-2574. K ₂ SeO ₄
280788	1.639 Å	Kolitsch, U. Acta Crystallogr., Sect. E 2002 , 58, 3-5. [Mg(H ₂ O) ₆](SeO ₄) ₂
409649	1.639 Å	Fleck, M.; Kolitsch, U. Z. Kristallogr. - New Cryst. Struct. 2002 , 217, 471-473. (NH ₄) ₂ [Zn(H ₂ O) ₆](SeO ₄) ₂
KARFIU	1.639 Å	Daszkiewicz, M.; Marchewka, M. M. Vibr. Spectr. 2011 , 57, 326.
201740	1.640 Å	Mascherpa-Corral, D.; Ducourant, M. B.; Fourcade, R.; Mascherpa, G.; Alberola, S. J. Solid State Chem. 1986 , 63, 52-61. K ₂ SeO ₄ ·2SbF ₃ ·H ₂ O
60929	1.641 Å	Takahashi, I.; Onodera, A.; Shiozaki, Y. Acta Crystallogr., Sect. C 1987 , 43, 179-182. Rb ₂ SeO ₄
171279	1.641 Å	Simmons, C. J.; Stratemeier, H.; Hitchman, M. A.; Riley, M. J. Inorg. Chem. 2006 , 45, 1021-1031. K ₂ [Cu(H ₂ O) ₆](SeO ₄) ₂
280783	1.641 Å	Kolitsch, U. Acta Crystallogr., Sect. E 2001 , 57, 104-105. [Cu(H ₂ O) ₄](SeO ₄)·H ₂ O
163455	1.642 Å	Amri, M.; Zouari, N.; Mhiri, T.; Gravereau, P. J. Alloys Compd. 2009 , 477, 68-75. Cs ₄ (SeO ₄)(HSeO ₄) ₂ ·H ₃ AsO ₄
201882	1.642 Å	Yamada, N.; Ikeda, T. J. Phys. Soc. Jpn. 1984 , 53, 2555-2564. K ₂ SeO ₄
DEHQIR	1.642 Å	Jun-Jieh Wang; Tessier, C.; Holm, R. H. Inorg. Chem. 2006 , 45, 2979. (C ₈ H ₂₀ N) ₂ SeO ₄ ·CH ₃ CN
838	1.644 Å	Carter, R.; Koertgen, C.; Margulis, T. N. Acta Crystallogr., Sect. B 1977 , 33, 592-593. (NH ₄) ₂ SeO ₄
154671	1.644 Å	Dammak, M.; Litaïem, H.; Mhiri, T. J. Alloys Compd. 2006 , 416, 228-235. Na ₂ SeO ₄ ·Te(OH) ₆ ·0.5H ₂ O
171283	1.644 Å	Simmons, C. J.; Stratemeier, H.; Hitchman, M. A.; Riley, M. J. Inorg. Chem. 2006 , 45, 1021-1031.

		K ₂ [Cu(H ₂ O) ₆](SeO ₄) ₂
WULSAY	1.644 Å	Wen Zhang; Li-Zhuang Chen; Ren-Gen Xiong; Nakamura, T.; Huang, S. D. <i>J. Am. Chem. Soc.</i> 2009 , <i>131</i> , 12544.
WULSAY02	1.644 Å	Wen Zhang; Li-Zhuang Chen; Ren-Gen Xiong; Nakamura, T.; Huang, S. D. <i>J. Am. Chem. Soc.</i> 2009 , <i>131</i> , 12544.
DGLYSE	1.645 Å	Olejinik, S.; Lukaszewicz, K.; Lis, T. <i>Acta Crystallogr., Sect. B</i> 1975 , <i>31</i> , 1785. (C ₂ H ₆ NO ₂) ₂ SeO ₄
OKOKOP	1.645 Å	Custelecan, R.; Bock, A.; Moyer, B. A. <i>J. Am. Chem. Soc.</i> 2010 , <i>132</i> , 7177.
202659	1.646 Å	Mascherpa-Corral, D.; Ducourant, M. B.; Alberola, S. <i>J. Solid State Chem.</i> 1988 , <i>76</i> , 276-283. K ₂ SeO ₄ ·2SbF ₃ ·0.5H ₂ O
LATUMS	1.648 Å	Kono, Y.; Takeuchi, S.; Yonehara, H.; Marumo, F.; Saito, Y. <i>Acta Crystallogr., Sect. B</i> 1971 , <i>27</i> , 2341. (C ₁₀ H ₁₂ NO)SeO ₄
15816	1.649 Å	Naray-Szabo, I.; Argay, G. <i>Acta Chim. Acad. Sci. Hung.</i> 1963 , <i>39</i> , 85-92. Na ₂ SeO ₄
99384	1.653 Å	Friese, K.; Goeta, A. E.; Leech, M. A.; Howard, J. A. K.; Madariaga, G.; Perez-Mato, J. M.; Brezewski, T. <i>J. Solid State Chem.</i> 2004 , <i>177</i> , 1127-1136. Tl ₂ SeO ₄
16042	1.654 Å	Kalman, A.; Cruickshank, D. W. J. <i>Acta Crystallogr., Sect. B</i> 1970 , <i>26</i> , 436-436. Na ₂ SeO ₄
160682	1.671 Å	Smirnov, L. S.; Melnyk, G.; Zink, N.; Wozniak, K.; Dominiak, P.; Pawlukoje, A.; Loose, A.; Shuvalov, L. A. <i>Poverkhnostnye Fizika, Khimiya, Mekhanika</i> 2007 , <i>73-79</i> . (NH ₄) ₂ (SeO ₄) ₂
Mean 1.634 Å/108		

Hydrogenselenate ion, HSeO₄⁻

SAQHOH	1.587+1.695 Å	Baran, J.; Barnes, A. J.; Marchewka, M. K.; Pietraszko, A. J.; Ratajczak, H. <i>J. Mol. Struct.</i> 1997 , <i>416</i> , 33. (C ₅ H ₁₂ NO ₂)(HSeO ₄) ₂ (C ₅ H ₁₁ NO ₂)·H ₂ O
163455	1.596+1.730 Å	Amri, M.; Zouari, N.; Mhiri, T.; Gravereau, P. <i>J. Alloys Compd.</i> 2009 , <i>477</i> , 68-75. Cs ₄ (SeO ₄)(HSeO ₄) ₂ ·H ₃ AsO ₄
SUVQAB	1.597+1.685 Å	Slouf, M.; Cisarova, I. <i>Acta Crystallogr., Sect. C</i> 1999 , <i>55</i> , 9900003. (C ₁₃ H ₁₀ N)(HSeO ₄) ₃ ·H ₂ O
31997	1.603+1.714 Å	Waskowska, A.; Czaplá, Z. <i>Acta Crystallogr., Sect. B</i> 1982 , <i>38</i> , 2017-2020. RbDSeO ₄
AJEROX	1.605+1.693 Å	Akriche, S.; Rzaigui, M. <i>Acta Crystallogr., Sect. E</i> 2009 , <i>65</i> , o3009.

LEJCN	1.607+1.696 Å	Hamilton, E. E.; Fanwick, P. E.; Wilker, J. J. <i>J. Am. Chem. Soc.</i> 2006 , <i>128</i> , 3388. (C ₂₄ H ₂₀ P) ₃ (CH ₂ O ₈ Se ₂)(HSeO ₄)
NASQIH	1.608+1.688 Å	Baran, J.; Drozd, M.; Lis, T.; Sledz, M.; Barnes, A. J.; Ratajczak, H. <i>J. Mol. Struct.</i> 1995 , <i>372</i> , 29. (C ₅ H ₁₂ NO ₂)(HSeO ₄) ₂ ·H ₂ O
51079	1.609+1.735 Å	Troyanov, S. I.; Morozov, I. V.; Rybakov, V. B.; Stiewe, A.; Kemnitz, E. <i>J. Solid State Chem.</i> 1998 , <i>141</i> , 317-322. Cs ₄ (SeO ₄)(HSeO ₄) ₂ ·H ₃ PO ₄
HESNAV	1.609+1.716 Å	Fleck, M. <i>Acta Crystallogr., Sect. E</i> 2006 , <i>62</i> , o4939. CH ₆ N ₃ (HSeO ₄)
51080	1.610+1.670 Å	Troyanov, S. I.; Morozov, I. V.; Rybakov, V. B.; Stiewe, A.; Kemnitz, E. <i>J. Solid State Chem.</i> 1998 , <i>59150141</i> , 317-322. Cs ₃ (HSeO ₄) ₂ (H ₂ PO ₄)
XINBEB	1.610+1.725 Å	Zakharov, M. A.; Troyanov, S. I.; Rybakov, V. B.; Aslanov, L. A.; Kemnitz, E. <i>Kristallografiya</i> 2001 , <i>46</i> , 1057. (C ₄ H ₁₂ N)(HSeO ₄)
XINBEB01	1.610+1.725 Å	Zakharov, M. A.; Troyanov, S. I.; Rybakov, V. B.; Aslanov, L. A.; Kemnitz, E. <i>Kristallografiya</i> 2001 , <i>46</i> , 1057. (C ₄ H ₁₂ N)(HSeO ₄)
35456	1.611+1.692 Å	Brach, I.; Jones, D. J.; Roziere, J. <i>J. Solid State Chem.</i> 1983 , <i>48</i> , 401-406. RbHSeO ₄
YOVPJI	1.611+1.701 Å	Akriche, S.; Rzaigui, M. <i>Acta Crystallogr., Sect. E</i> 2009 , <i>65</i> , o1648.
HESNAV01	1.611+1.712 Å	Drozd, M.; Baran, J.; Pietraszko, A. <i>Spectrochim. Acta, Part A</i> 2005 , <i>61</i> , 2775. CH ₆ N ₃ (HSeO ₄)
85082	1.615+1.718 Å	Hanashiro, K.; Koyano, N.; Machida, M. <i>Kyoto Daigaku Genshiko Jikkensho Gakujutsu Koenkai Hobunshu</i> 1997 , <i>31</i> , 189-192. KHSeO ₄
88883	1.615+1.700 Å	Troyanov, S. I.; Morozov, I. V.; Zakharov, M. A.; Kemnitz, E. <i>Kristallografiya</i> 1999 , <i>44</i> , 607-611. Cs(HSeO ₄)·H ₂ SeO ₄
TIPNAI	1.616+1.704 Å	Krivovichev, S. V.; Tananaev, I. G.; Myasoedov, B. F. <i>Compt. Rend. Chim.</i> 2007 , <i>10</i> , 897.
88882	1.616+1.719 Å	Troyanov, S. I.; Morozov, I. V.; Zakharov, M. A.; Kemnitz, E. <i>Kristallografiya</i> 1999 , <i>44</i> , 607-611. K(HSeO ₄)·H ₂ SeO ₄
88893	1.617+1.727 Å	Zakharov, M. A.; Troyanov, S. I.; Rybakov, V. B.; Aslanov, L. A.; Kemnitz, E. <i>Kristallografiya</i> 1999 , <i>44</i> , 448-453. NaHSeO ₄
51081	1.617+1.635 Å	Troyanov, S. I.; Morozov, I. V.; Rybakov, V. B.; Stiewe, A.; Kemnitz, E. <i>J. Solid State Chem.</i> 1998 , <i>141</i> , 317-322. Cs ₅ (HSeO ₄) ₃ (H ₂ PO ₄) ₂
65810	1.618+1.715 Å	Makarova, I. P.; Rider, E. E.; Sarin, V. A.; Aleksandrova, I. P.; Simonov, V. I. <i>Kristallografiya</i> 1989 , <i>34</i> , 853-861. RbHSeO ₄

72534	1.618+1.715 Å	Makarova, I. P. <i>Acta Crystallogr., Sect. B</i> 1993 , 49, 11-18. RbHSeO ₄
168569	1.618+1.701 Å	Fukami, T.; Miyazaki, J.; Tomimura, T.; Chen R.-H. <i>Cryst. Res. Technol.</i> 2010 , 45, 856-862. Na ₅ D ₃ (SeO ₄) ₄ ·2H ₂ O ₂
IGABIC	1.618+1.705 Å	Maalej, W.; Elaoud, Z.; Mhiri, T.; Daoud, A.; Driss, A. <i>Acta Crystallogr., Sect. E</i> 2008 , 64, o2172.
72535	1.619+1.693 Å	Makarova, I. P. <i>Acta Crystallogr., Sect. B</i> 1993 , 49, 11-18. NH ₄ HSeO ₄
168568	1.619+1.700 Å	Fukami, T.; Miyazaki, J.; Tomimura, T.; Chen R.-H. <i>Cryst. Res. Technol.</i> 2010 , 45, 856-862. Na ₅ H ₃ (SeO ₄) ₄ ·2H ₂ O ₂
300018	1.620+1.707 Å	Waskowska, A.; Olejnik, S.; Lukaszewicz, K.; Czapla, Z. <i>Cryst. Struct. Commun.</i> 1980 , 9, 663-669. Rb(HSeO ₄)
31998	1.621+1.715 Å	Waskowska, A.; Czapla, Z. <i>Acta Crystallogr., Sect. B</i> 1982 , 38, 2017-2020. (ND ₄)DSeO ₄
65809	1.622+1.694 Å	Makarova, I. P.; Rider, E. E.; Sarin, V. A.; Aleksandrova, I. P.; Simonov, V. I. <i>Kristallografiya</i> 1989 , 34, 853-861. RbHSeO ₄
71198	1.622+1.694 Å	Makarova, I. P.; Muradyan, L. A.; Rider, E. E.; Sarin, V. A.; Alexandrova, I. P.; Simonov, V. I. <i>Ferroelectrics</i> 1990 , 107, 281-286. RbHSeO ₄
72533	1.622+1.694 Å	Makarova, I. P. <i>Acta Crystallogr., Sect. B</i> 1993 , 49, 11-18. RbHSeO ₄
411282	1.622+1.723 Å	Zakharov, M. A.; Troyanov, S. I.; Kemnitz, E. Z. <i>Kristallogr.</i> 2001 , 216, 172-175. Cs(HSeO ₄)
72536	1.624+1.690 Å	Makarova, I. P. <i>Acta Crystallogr., Sect. B</i> 1993 , 49, 11-18. NH ₄ HSeO ₄
20794	1.626+1.694 Å	Kruglik, A. I.; Misyul', S. V.; Aleksandrov, K. S. <i>Dokl. Akad. Nauk SSSR</i> 1980 , 255, 344-348. (NH ₄)HSeO ₄
20829	1.626+1.686 Å	Aleksandrov, K. S.; Kruglik, A. I.; Misyul', S. V.; Simonov, M. A. <i>Kristallografiya</i> 1980 , 25N, 1142-1147. (NH ₄)HSeO ₄
94517	1.626+1.715 Å	Troyanov, S. I.; Kosterina, E. V.; Kemnitz, E. <i>Zh. Neorg. Khim.</i> 2001 , 46, 1496-1502. Cs ₄ (SeO ₄)(HSeO ₄) ₂ ·HF
XOMVAX	1.626+1.724 Å	Lorenc, J.; Bryndal, I.; Marchewka, M.; Kucharska, E.; Lis, T.; Hanuza, J. <i>J. Raman Spectrosc.</i> 2008 , 39, 863.
2437	1.631+1.712 Å	Waskowska, A.; Olejnik, S.; Lukaszewicz, K.; Glovyak, T. <i>Acta Crystallogr., Sect. B</i> 1978 , 34, 3344-3346. RbHSeO ₄
59150	1.631+1.735 Å	Baran, J.; Lis, T. <i>Acta Crystallogr., Sect. C</i> 1986 , 42, 270-272. KHSeO ₄

Mean	1.615+1.705 Å/40 (Mean 1.638 Å/40)	
Selenic acid, H ₂ SeO ₄		
88883	1.590+1.687 Å	Troyanov, S. I.; Morozov, I. V.; Zakharov, M. A.; Kemnitz, E. <i>Kristallografiya</i> 1999 , 44, 607-611. Cs(HSeO ₄)·H ₂ SeO ₄
88882	1.603+1.685 Å	Troyanov, S. I.; Morozov, I. V.; Zakharov, M. A.; Kemnitz, E. <i>Kristallografiya</i> 1999 , 44, 607-611. K(HSeO ₄)·H ₂ SeO ₄
Mean	1.597+1.686 Å/2 (Mean 1.642 Å)	