

Tellurium(IV)

Tellurite structures in solution are best written as TeO_3^{2-} , HTeO_3^- , H_2TeO_3 and $\text{Te}(\text{OH})_3^+$. Other notations can be found in the literature.

Reaction	Baes and Mesmer, 1976	Filella and May, 2019 ^a
$\text{TeO}_3^{2-} + \text{H}^+ \rightleftharpoons \text{HTeO}_3^-$		9.928
$\text{HTeO}_3^- + \text{H}^+ \rightleftharpoons \text{H}_2\text{TeO}_3$		6.445
$\text{H}_2\text{TeO}_3 \rightleftharpoons \text{HTeO}_3^- + \text{H}^+$	-2.68	
$\text{H}_2\text{TeO}_3 \rightleftharpoons \text{TeO}_3^{2-} + 2 \text{H}^+$	-12.5	
$\text{H}_2\text{TeO}_3 + \text{H}^+ \rightleftharpoons \text{Te}(\text{OH})_3^+$	3.13	2.415

$\text{TeO}_2(\text{s}) + \text{H}_2\text{O} \rightleftharpoons \text{H}_2\text{TeO}_3$		-4.709
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^aThe number of significant figures are retained to minimise propagation of round-off errors; they should not be taken to indicate the relative uncertainty of the values, which is always at least one order of magnitude less than indicated.

C.F. Baes and R.E. Mesmer, *The Hydrolysis of Cations*. Wiley, New York, 1976.

M. Filella and P.M. May, The aqueous chemistry of tellurium: critically-selected equilibrium constants for the low-molecular-weight inorganic species. *Environ. Chem.* 16, 289–295 (2019). doi:10.1071/EN19017