[Diprotonated adeninium diperchlorate hydrate at 120 K](https://scripts.iucr.org/cgi-bin/paper?dn6064)

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Description

In the title compound, C5H9N52+·2ClO4−·H2O, the structure can be described as alternating layers of C5H9N52+ and ClO4− ions along the a axis. Layers of adeninium cations and perchlorate anions are linked by strong anion–cation and anion–water hydrogen bonds via the sandwiched water molecules. This three-dimensional complex network of hydrogen bonds (N—H⋯O) reinforces the cohesion of the ionic structure.