A package for writing chemical formulae and names

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Currently, the macro file chemicals.tmac allows the user to invoke the names of 2550 substances. For 2007 of them CAS numbers are given, and for 2233 of them the correct notation is reproduced. For substances without ratio numbers, no presentation form is given; think of sodium chloride which is NaCl, in contrast to ozone which is O_3 .

The mechanism is simple. A string definition with the name BaSiF6, when used without prefix, generates the molecular formula. When prefixed by N: the name is produced, and when prefixed by C: the corresponding CAS number is produced.

The lion's share of the substances in https://en.wikipedia.org/wiki/Glossary_of_chemical_formulae is covered by this macro file. If there is more than one synonym for a given substance, only the first name is shown.

Input: The substance $\[N:BaSiF6]\]$ has the formula $\[BaSiF6]\]$ and the CAS number $\[C:BaSiF6]\]$.

Result: The substance barium hexafluorosilicate has the formula $BaSiF_6$ and the CAS number 17125-80-3.