A quaternary ammonium salt is an ionic compound that has the following general structural formula.

\[
\left( \begin{array}{c}
R^1 \\
N^+ \\
R^3 \\
R^4 \\
\end{array} \right) \left( A^- \right)_n
\]

\( n = \) positive whole number

\( R^1, R^2, R^3, \) and \( R^4 \) could be hydrogen atoms, alkyl groups, aryl groups, or any combination thereof. \( A^- \) could be any anion present in salt.

eg:

The word “salt” in quaternary ammonium salt is a misnomer because a quaternary ammonium salt can not be prepared by an acid-base reaction.

see also quaternary ammonium ion, primary ammonium salt, secondary ammonium salt, tertiary ammonium salt

Contributors

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