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**Wolfgang Guggemos**

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web these ions are called spectator ions because they do not participate in the actual reaction canceling the spectator ions gives the net ionic equation which shows only those species that participate in the chemical reaction

$$2\text{Ag}^+(\text{aq}) + \text{Cr}_2\text{O}_7^{2-}(\text{aq}) + 14\text{H}^+(\text{aq}) \rightarrow 2\text{Ag}(\text{s}) + \text{Cr}_2\text{O}_7^{2-}(\text{s}) + 7\text{H}_2\text{O}(\text{l})$$

web chemical equation in which all dissolved ionic reactants and products including spectator ions are explicitly represented by formulas for their dissociated ions molecular equation chemical equation in which all reactants and products are

web jan 29 2020 the ionic form of this reaction is  $2 \text{Na}^+ \text{aq} + 2 \text{Cl}^- \text{aq} + \text{Cu}^{2+} \text{aq} + \text{SO}_4^{2-} \text{aq} \rightarrow 2 \text{Na}^+ \text{aq} + \text{SO}_4^{2-} \text{aq} + \text{CuCl}_2 \text{s}$  the sodium ions and sulfate ion are the spectator ions in this reaction they appear unchanged in both the product and reactant side of the equation

web mar 11 2014 solution ionic equation  $\text{h}^+ \text{aq} + \text{cl}^- \text{aq} + \text{na}^+ \text{aq} + \text{hco}_3^- \text{aq} \rightarrow \text{na}^+ \text{aq} + \text{cl}^- \text{aq} + \text{h}_2\text{o} \text{l} + \text{co}_2 \text{g}$  the spectator ions are cl and na  
net ionic equation  $\text{h}^+ \text{aq} + \text{cl}^- \text{aq} + \text{na}^+ \text{aq} + \text{hco}_3^- \text{aq} \rightarrow \text{na}^+ \text{aq} + \text{cl}^- \text{aq} + \text{h}_2\text{o} \text{l} + \text{co}_2 \text{g}$   $\text{h}^+ \text{aq} + \text{hco}_3^- \text{aq} \rightarrow \text{h}_2\text{o} \text{l} + \text{co}_2 \text{g}$  here is a video on spectator ions  
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web the six no 3 aq ions and the six na aq ions that appear on both sides of the equation are spectator ions that can be canceled to give the net ionic equation  $3\text{Ba}^{2+}(\text{aq}) + 2\text{PO}_4^{3-}(\text{aq}) \rightarrow \text{Ba}_3(\text{PO}_4)_2(\text{s})$

web these spectator ions whose presence is required to maintain charge neutrality are neither chemically nor physically changed by the process and so they may be eliminated from the equation to yield a more succinct representation called a

web practice problems on net ionic equations page 2 of 3 answer key to practice problems on net ionic equations 1 molecular  
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total ionic equations so you know in a case chemical reactions are described with chemical equations which symbolically present the starting materials end products

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web net ionic equations an equation for a reaction in solution showing only those particles that are directly involved in the chemical change spectator ions an ion that is not directly involved in a chemical reaction an ion that does not change oxidation number or composition during a reaction products

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web the equation below is the final net ionic equation after elimination of the spectator ions which yields water  $\text{h}^+ \text{aq} + \text{oh}^- \text{aq} \rightarrow \text{h}_2\text{O} \text{l}$  the spectator ions in  $\text{KOH} \text{aq}$  and  $\text{HNO}_3 \text{aq}$  are  $\text{K}^+ \text{aq}$  and  $\text{NO}_3^- \text{aq}$  how to identify and list the

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web the  $\text{Ag}^+ \text{aq}$  and  $\text{Cl}^- \text{aq}$  ions become  $\text{AgCl} \text{s}$  but the  $\text{Na}^+ \text{aq}$  ions and the  $\text{NO}_3^- \text{aq}$  ions stay as  $\text{Na}^+ \text{aq}$  ions and  $\text{NO}_3^- \text{aq}$  ions these two ions are examples of spectator ions ions that do nothing in the overall course of a chemical reaction

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web aug 8 2022 a spectator ion is an ion that does not take part in the chemical reaction and is found in solution both before and after the reaction the net ionic equation is the chemical equation that shows only those elements compounds and ions that are directly involved in the chemical reaction

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web the new format requires students to write balanced chemical equations showing only the reacting substances excluding spectator ions for three different sets of reactants and to answer a short question requiring no calculator about each reaction the questions are intended to test the students understanding of the meaning of the reactions

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web jun 2 2023 the spectator ions are cut out from a reaction hence the net ionic equation for the above reaction would be  $2\text{Cl}^- + \text{Cu}^{2+} + 2\text{Cl}^- + \text{Cu}^{2+} \rightarrow 2\text{Cl}^- + \text{Cu}^{2+} + 2\text{Cl}^- + \text{Cu}^{2+}$  these spectator ions are not actively involved in the reaction the existence of spectator ions affects the debye length