

Material Shift

Performed BEFORE the I.C.E. Equilibrium Solution
...when a strong/large equilibrium shift is predicted.

Converting Products to Reactants

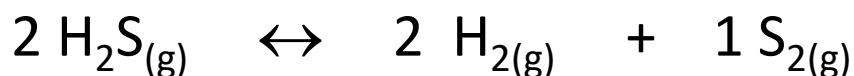
Converting Reactants to Products

Makes equilibrium mathematics much more easily solved

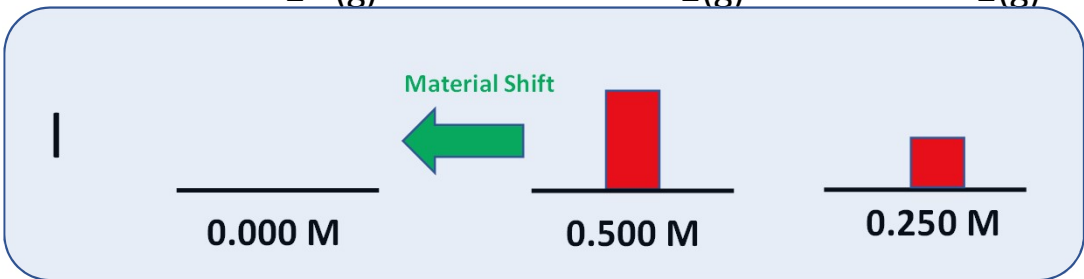


How does a Material Shift work?

Favors Reactants!



$$K_c = 1.67 \times 10^{-7}$$

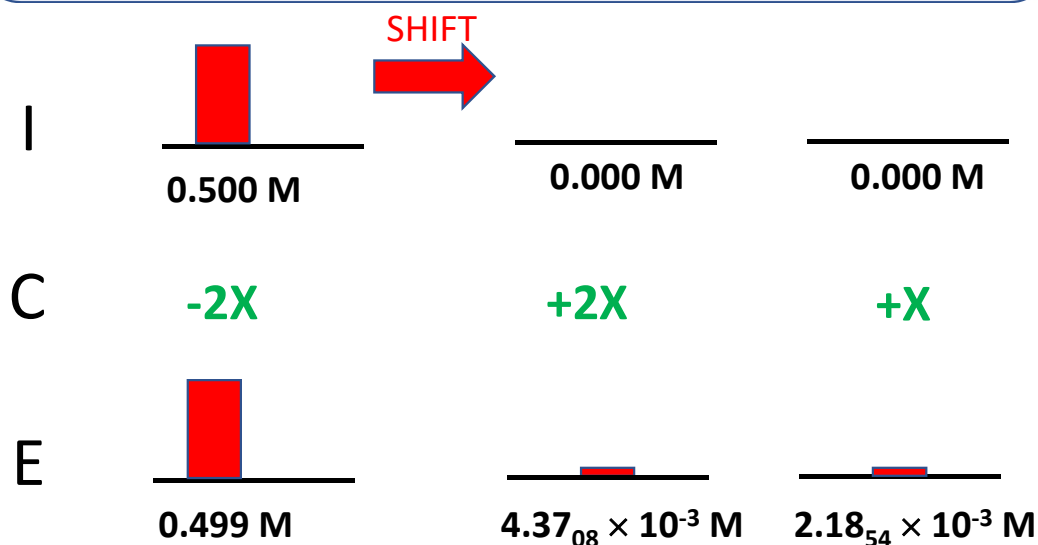


Material Shift is performed before the I.C.E. equilibrium problem is attempted.

Material Shift uses reaction stoichiometry (mole ratios) to convert products into reactants.

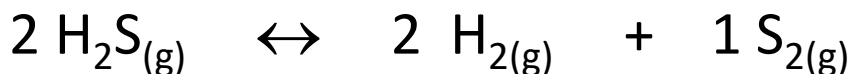
In this case, H_2 and S_2 initial concentrations are in a 2:1 ratio ...

...and all are converted into H_2S

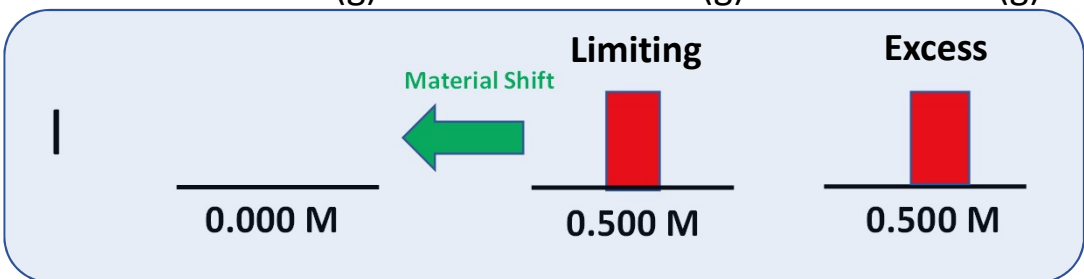


How does a Material Shift work?

Favors Reactants!

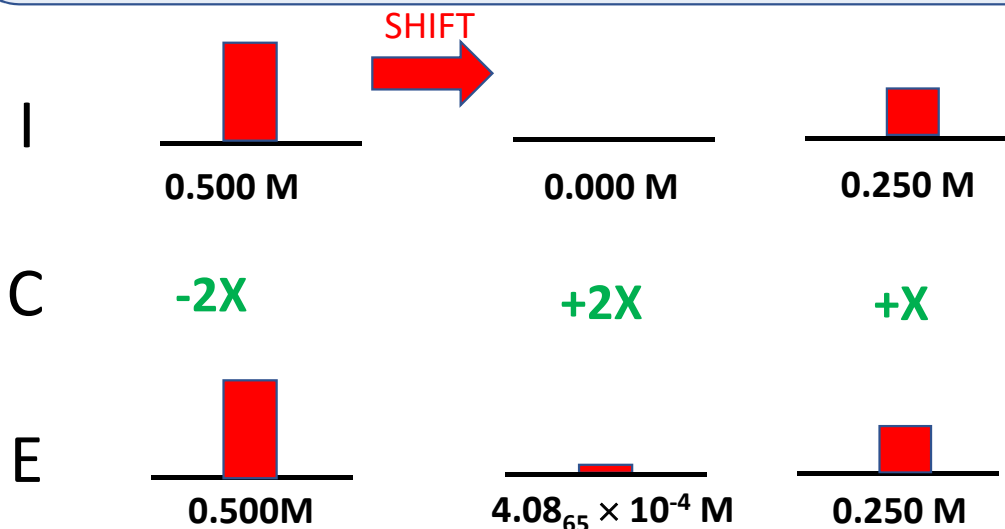


$$K_c = 1.67 \times 10^{-7}$$



Material Shift uses reaction stoichiometry (mole ratios) to convert products into reactants.

Material Shift is performed before the I.C.E. equilibrium problem is attempted.



In this case, H₂ and S₂ initial concentrations are NOT in a 2:1 ratio ...

0.500 M H₂ is "Limiting" ...used up completely.

0.500 M S₂ is "Excess" ...leftovers.

