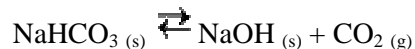


Chem 534
Take-Home Lab

Name _____

Purpose: to calculate the K_p (based on pressure) and K_c (regular K based on concentration) for



1. Go to

<http://www.chm.davidson.edu/ChemistryApplets/equilibria/EquilibriumConstant.html>

2. Scroll down to the bottom of the page until you see a flask. (part 1 only, not part 2)
3. Click the "Add Sodium Hydrogen Carbonate" button.
4. Click the "Evacuate Bulb" button.
5. Click the "Heat the system" button. It will bring you to 800K.
6. Now read the equilibrium pressure off the manometer (u-shaped tube) by subtracting the right-hand column reading from the left-hand column. Record it here _____
- _____ = _____
7. Convert mm of Hg to kPa by multiplying by 101.3 / 760.
8. If the number of gas molecules were the same on each side of the equation, then $K_p = K_c$.
 K_p = equilibrium constant based on pressure.
 K_c = normal equilibrium constant based on concentration.

In our case $K_p = \text{Pressure of CO}_2 =$ _____
(note: if you check your answer, it will not match numerically because they are not using kPa)

9. To calculate K_c , use $K_p = K_c (RT)^{\Delta n}$
Where Δn = difference in gaseous moles between the right side and left hand side of the equilibrium equation.

$K_c =$

10. Write a conclusion. _____

