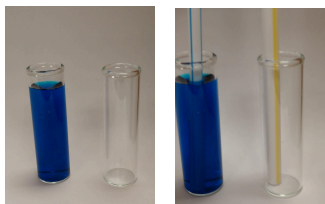


Straw Equilibrium **DRYLAB DATA**

Procedure:

A) Fill one vial nearly to the top with water. This represents the **reactants**. We will call it **Vial A**. The other vial (Vial B) represents the products, and should be empty.

B) *The straw of smaller diameter (Straw A) represents the forward reaction. Vial A is the home-vial for the smaller straw. The straw of larger diameter (Straw B) represents the reverse reaction. Vial B is the home-vial for the larger straw.* Insert the straws in the appropriate vials.

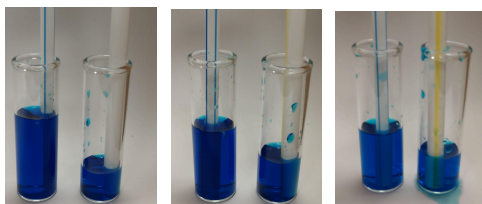


C) With the bottoms of the straws at the bottom of the vials, seal the top end of each straw with a finger. Remove the straws from the vials while keeping the top sealed. This will enable you to “pick up” the column of water in each straw. (On the first transfer, straw B will be empty, because there are not yet any products.)

D) Hold each straw over the vial which it does NOT belong to. Release the liquid held in each straw into the vial below. (“Straw A” is emptied into “Vial B” and vice versa.)

E) Return the (now empty) straws to their home-vials (the vials where they began). Repeat steps B-D **until water levels stabilize** (stop changing) in both vials. (With small vials, this takes approximately 20 transfers.)

Every time Straw A moves water from Vial A to Vial B, the “forward reaction” has occurred.
Every time Straw B moves water from Vial B to Vial A, the “reverse reaction” has occurred.



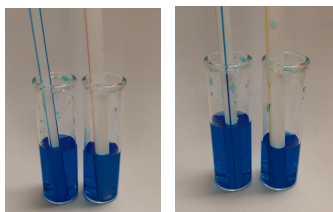
F) Add one drop of food coloring to Vial A.

G) Do five more transfers.

The food coloring gets distributed evenly throughout the two vials-- proving that even though the water levels have stopped changing, water *is* still being transferred. (The reactions are still occurring.)

H) Pour water from one vial to the other to make the levels in the two vials identical.

I) Repeat steps B-E of the original procedure.



J) Pour all the water from Vial A down the sink. Repeat steps B-E of the original procedure again.



K) Empty Vial A completely. Fill Vial B. Now you have lots of products and no reactants.

