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## Parts Per Million Lab

Purpose: To understand how solutions are diluted. To understand the math concept of parts per million

## Overview:

What is a $10 \%$ salt solution?

## Materials:

Chem Plate
2 Medicine droppers
Water
Food coloring
Stirring rod

## Procedure:

Use the stirring rod to mix and use one medicine dropper for the clear water and one for colored water so as not to contaminate your solutions!!

1) Put one drop of food coloring in tray slot 1 . Add 9 drops of water to slot 1 .
2) Using the medicine dropper, transfer one drop of the solution in tray slot $l$ to tray slot
2. Add 9 drops of water to solution. Record color
3) Transfer one drop from tray slot 2 to tray slot 3 . Add 9 drops of water to slot 3 .

Record color
4) Continue the process until you have completed the data table.
5) The class will determine the concentration $\&$ percent of pesticide of each solution.

| Slot \# | Color | Concentration <br> Parts per $\qquad$ | Concentration <br> In percent |
| :---: | :---: | :---: | :---: |
| 1 |  | 1: 10 |  |
| 2 |  | $1:$ |  |
| 3 |  | $1:$ |  |
| 4 |  | 1 : |  |
| 5 |  | $1:$ |  |
| 6 |  | $1:$ |  |
| 7 |  | $1:$ |  |
| 8 |  | $1:$ |  |
| 9 |  | $1:$ |  |

## Conclusions:

1) In which slot \# did the solution first appear to be colorless?
2) What is the concentration of food coloring in the first colorless solution? \{Give answer in parts per $\qquad$
3) Do you think there is any food coloring present in the first colorless solution? Why or why not?
4) Is all clear water chemical free or clean? Why or why not?
