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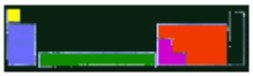
HONORS LAB 12c: Acid Base Indicators



Aim To make some indicators to identify some acids and bases

Apparatus test tube, pipets, spot plate, pestle and mortar, test tube rack, funnel, filter paper

Chemicals 11 unknown solutions, 3 known solutions, rubbing alcohol, vegetable/plant matter

Method

1. Select some vegetable/plant matter and grind it with a little rubbing alcohol using a pestle and mortar. Filter. Make enough solution to approx. ¼ fill one test tube. This is your indicator solution.

2. Place a few drops of the 'known acid' into a well on a CLEAN spot plate. Using a pipette add a few drops of your indicator to it.

3. Repeat step #2 for the 'known neutral' and the 'known base'. Use the three wells you have created as references.

4. Place a few drops each of the 'unknowns' into separate wells on another CLEAN spot plate. Add a few drops of your indicator to each one.

5. Record all your observations in the result tables.

6. Repeat steps #1 through #5 with a different type of plant or vegetable matter indicator.

Results

First indicator

Known solution	Color with indicator
Acid	
Neutral	
Base	

Unknown solution	Color with indicator	Acid or Base
A		
B		
C		
D		
E		
F		
G		
H		
I		
J		
K		

Second indicator

Known solution	Color with indicator
Acid	
Neutral	
Base	

Unknown solution	Color with indicator	Acid or Base
A		
B		
C		
D		
E		
F		
G		
H		
I		
J		
K		

Conclusion/Calculation

1. Complete the following table.

	Color in acid	Color in neutral	Color in base
First			
Second			

2. Of the two indicators you chose, which would you consider to be the best and why?

3. In general, what features would you consider to be essential for a good indicator?