

Solution to Chemical Riddle #2

Tom Kuntzleman | Wed, 05/07/2014 - 10:18



Congratulations to Andres Tretiakov who solved Chemical Riddle #2

(<http://www.jce.divched.org/blog/chemical-riddle-2>). In this particular riddle, we presented a twist on the famous “Disappearing Rainbow

(<http://www.flinnsci.com/Documents/demoPDFs/Chemistry/CF0591.00.pdf>)”

demonstration. You can purchase a pre-packaged version of this demonstration (<http://www.flinnsci.com/store/Scripts/prodView.asp?idproduct=17355>) from Flinn Scientific (<https://www.flinnsci.com>).

To conduct this demonstration, six beakers are arranged with different acid-base indicator mixtures as follows:

Beaker 1 contains an indicator mixture that is red in base and colorless in acid.

Beaker 2 contains an indicator mixture that is orange in base and colorless in acid.

Beaker 3 contains an indicator mixture that is yellow in base and colorless in acid.

Beaker 4 contains an indicator mixture that is green in base and colorless in acid.

Beaker 5 contains an indicator mixture that is blue in base and colorless in acid.

Beaker 6 contains an indicator mixture that is violet in base and colorless in acid.

Prior to the start of this experiment a very small amount of acid is poured into each beaker, rendering the contents of each beaker colorless. To start the demonstration, a solution of base is poured into each beaker, which causes the color of each indicator mixture to be displayed. After this, a sponge paint brush that has been soaked in acid is swirled into the contents of each beaker. Of course the contents of each beaker turn colorless as a result. Finally, a sponge paint brush that contains base is swirled into the contents of each beaker and the color returns!

Concepts: acid/base (/category/concepts/acid-base)

Collection: Acid Base (</category/collection/acid-base>)

Demonstrations (</category/collection/demonstrations>)

Community:

high school (</category/community/high-school>)

two-year college (</category/community/two-year-college>)



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