

Haskap makes a great a food dye!

Part 3: Haskap Cupcakes with Icing

By Dr. Bob Bors

Cupcakes, 1st attempt

For this demonstration we used No Name TM white cake mix. The instructions on the box were followed except whole eggs with their yolks were used instead of egg whites. (A student didn't know about separating egg yolks). Also, we substituted one cup of haskap juice for one cup of water that was called for in the instructions. The resulting batter was shockingly brilliant purple (Figure 1).



Figure 1. White cake mix batter with a cup of haskap juice substituting for one cup of water.

For some of the batter, baking soda was added until it turned green while another portion had lemon juice added until it turned pink/red. 'Psychedelic' cupcakes were attempted by mixing the 3 batters together and by adding extra haskap juice to the centre of one cupcake. (See figure 2). Exact measurements were not done when adding lemon juice or baking soda.

When baking soda was added air bubbles formed causing the batter to rise but after a few minutes later the batter sank. Later when baked, the cupcake with the extra baking soda (the

green one) seemed to have collapsed slightly during the baking process. The extra baking soda did not seem to affect the flavour.



Figure 2. Cupcakes made using haskap juice. The left pan shows unbaked batter while the right photo show the same pan after baking. Top row: Stock recipe where haskap juice was substituted for water. Middle row left: stock + baking soda. Middle row right: stock + Lemon juice. Bottom row left: the 3 previous batters slightly swirled. Bottom row right: Stock + extra haskap juice swirled in the centre.

The baked cupcakes retained the original colours inside and out (figure 3). The attempt at 'Psychedelic' cupcakes showed that the individual colours could be retained within the same cupcake, but I had swirled them too much so they weren't very photogenic. Perhaps pouring one colour on the bottom and another on top would have been a better idea. Or one colour on the left and another on the right. On first seeing the green cupcakes I thought of penicillin mold and I wondered if people would ever want that colour for a cupcake. But maybe that green colour might be great for roughrider fans, army get-togethers, or paired with red cupcakes for Christmas?



Figure 3. Cupcakes made with haskap juice were purple (top right). Adding lemon juice to the batter resulted in bright pink colour (top left) while adding baking soda resulted in forest green colour (bottom).

Cupcakes, 2nd attempt

For the second attempt, white cake mix was made with egg whites separated, and also yellow cake mix was used. Some batter was removed to make pure white or yellow cupcakes but juice was added to the batter as in the 1st attempt. Lemon juice and baking soda were added at various amounts in an attempt to make different shades of pink, purple, blue, blue/green and green then batter was measured with a pH meter. To make a green cupcake a teaspoon of baking soda was required! Results showed that a wide range of colours was possible as seen in figure 3.

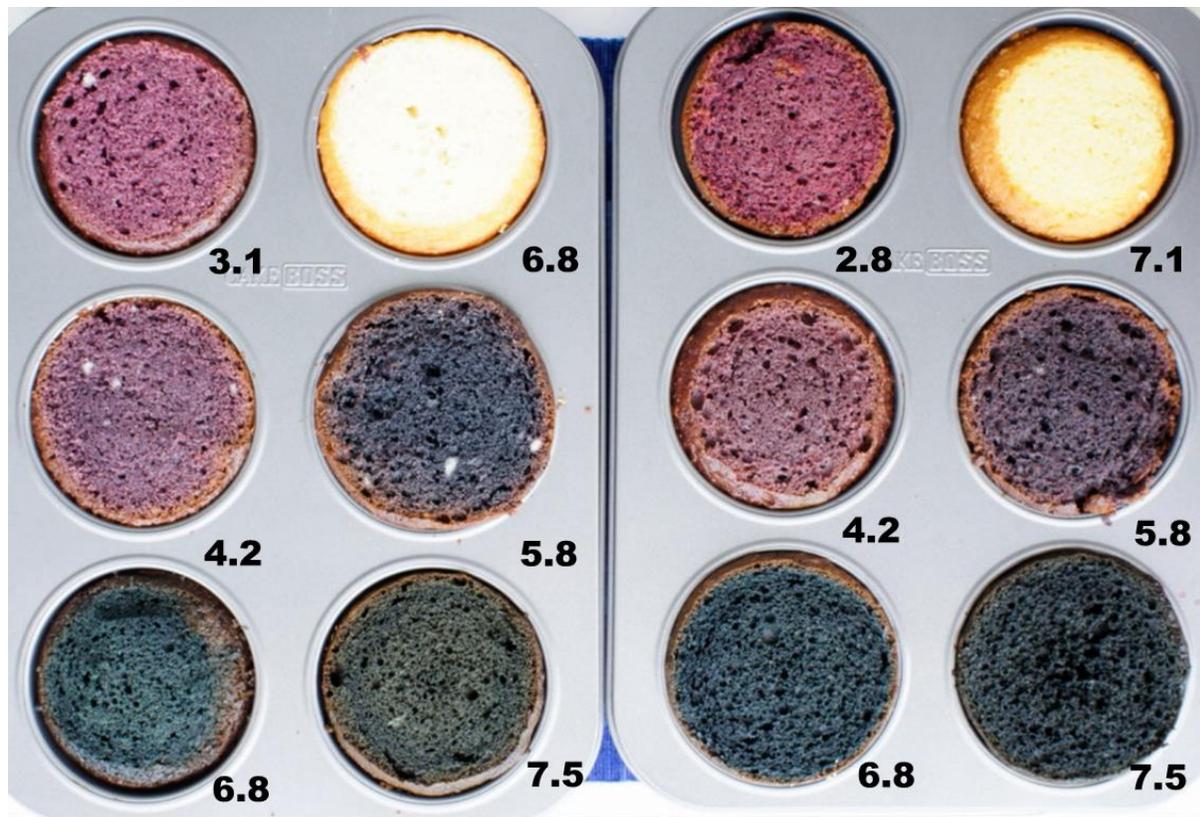


Figure 4. Haskap cupcakes of different pH levels. Cupcakes in the left pan were made with white cake mix; cupcakes on the right were made with yellow cake mix. Cupcakes in the upper right of each pan had no haskap added. All other cupcakes had similar amounts of haskap juice added (10 mls) and vary in colour. pH was altered using lemon juice or baking soda. Numbers below and to the right of each cupcake show the pH level of the batter. The tops of the cupcakes were shaved off to better show the interior colour.

Haskap Icing

Classy cupcakes need icing, but we weren't classy enough to make icing from scratch (neither did we make the cupcakes from scratch). We used premade white icing, added haskap puree or juice. pH was altered with lemon juice or baking soda as described in figure 5.

Aesthetically, I thought that the added texture of the puree in the icing was more desirable than the smooth texture of using juice.

When baking soda was added to the haskap + icing mix it caused a reaction whereby the icing swelled. For a while it became purple but with stirring it became a brilliant blue. The icing had a lighter texture and I wonder if it would have stayed light or if it would have shrunk if left overnight. I suspect that natural blue colour for a food dye may be very rare. A quick search of the internet that ended in Wikipedia (see Natural_Dye) indicated mostly tropical plants were used for blue colouring of clothes and no fruits were mentioned for blue.

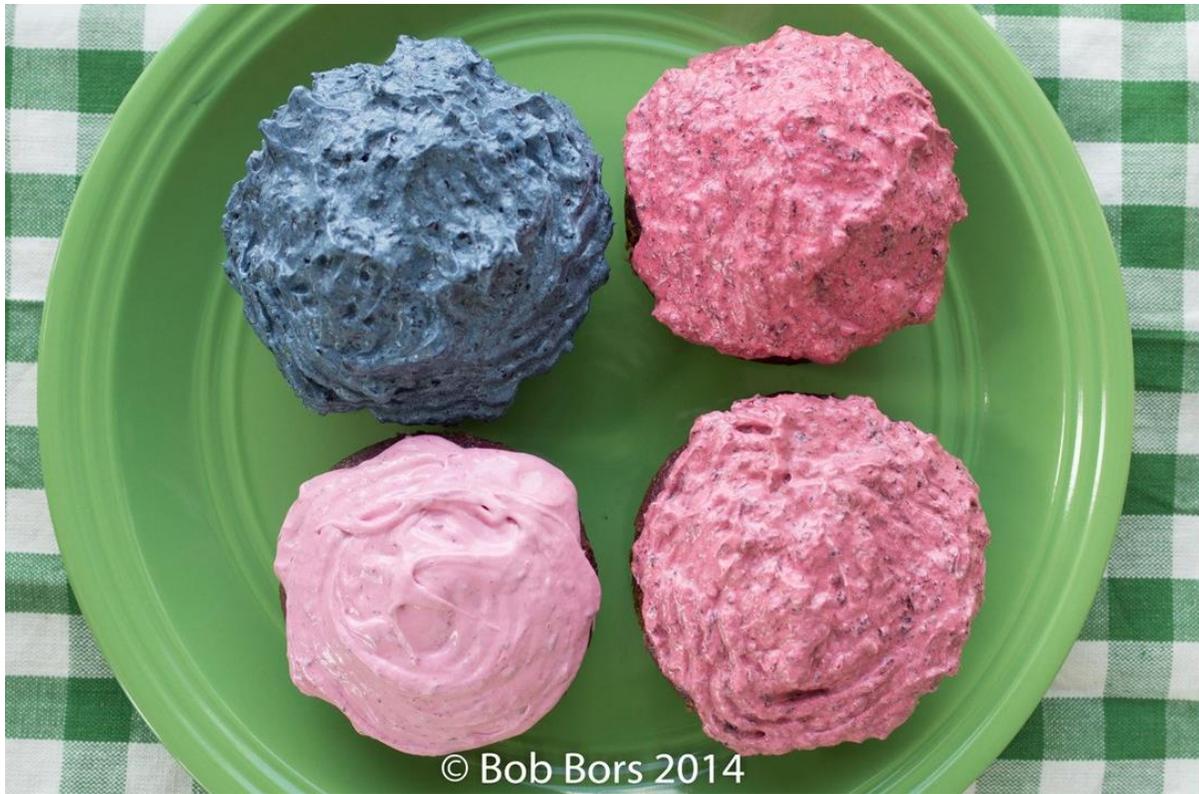


Figure 5. Icing coloured with Haskap puree or juice. $\frac{1}{4}$ cup of icing had the following additional ingredients, starting with the upper left going clockwise: 1 tablespoon puree + $\frac{1}{4}$ teaspoon baking soda; 1 Tablespoon puree + 1 teaspoon lemon juice; 1 tablespoon puree; 1 tablespoon juice.

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