Moving Colors
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Abstract: To attract children's interest in Chemistry, the authors on behalf of the youngSCS composed this easy science experiment about chromatography. It shows in a beautiful and simple way the science behind colors and explains a common laboratory technique. To best reach its target audience this experiment was published in “Kaleio”, a bimonthly Swiss girl's magazine.

Keywords: Chromatography ∙ Colors ∙ Experiments for children ∙ youngSCS ∙ Kids

We here provide an English version for a paper chromatography experiment conceived and prepared[2] by the youngSCS and published in the magazine “Kaleio”.[1] This experiment can be performed by children with easily accessible items found in most households. We therefore invites you to try out this experiment with your school class, kids, nephews, nieces alone and/or grandchildren.

1. The Experiment
What you need:

- white filter paper
- an empty glass
- water-soluble pens
- glass of water
- scissors

Tip: The experiment also works if you use blotting paper cut in a circle, you just need more patience. Other solvents, like disinfectant or oil can be used to further explore the behavior of colors.

2. How Does it Work?
The Mixture Is Important
You probably know color mixtures: e.g., blue and yellow afford green. In this experiment, you did the opposite: You separated a color mixture into the individual dyes it was composed of. As an example, the black pen from the photo (Figure 1, Step 2) contains mainly two dyes: blue and red. On the filter paper the black circle separates into these two colors (Figure 1, Step 5). If you did the experiment using more than one color and/or pens from different brands you may have noticed that not all colors separate in the same way. The same color mixture can be com-

Fig. 1. Experimental set-up visualized in six steps.

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Make the Invisible Visible

Chromatography is a technique that is used every day in many laboratories around the world. For example, environmental scientists use this technique to look for dangerous pollutants in water. As in your color experiment, the various substances and pollutants in the water can be separated and detected. Nothing remains hidden!

Reaching the Target Audience

To reach children all over Switzerland and excite their interest for chemistry, the youngSCS collaborated with the Swiss girl’s magazine “Kaleio”. This experiment was published in German and French in their May/June issue. Should you be interested in more fun experiments and child-oriented reports about psychology, environment, science, and society, please visit their website at www.kaleiomag.ch to check out their current and past issue.

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[1] M. Gut, M.D. Scheidt, C. Papadimou, S. Linker, *Kaleio*, 2022, 9, 28.
[2] Farben trennen mit Papierchromatographie - Experiment, https://www. entdeckerlab.de/blog/papier-chromatographie-experiment/, accessed June 1, 2022.