

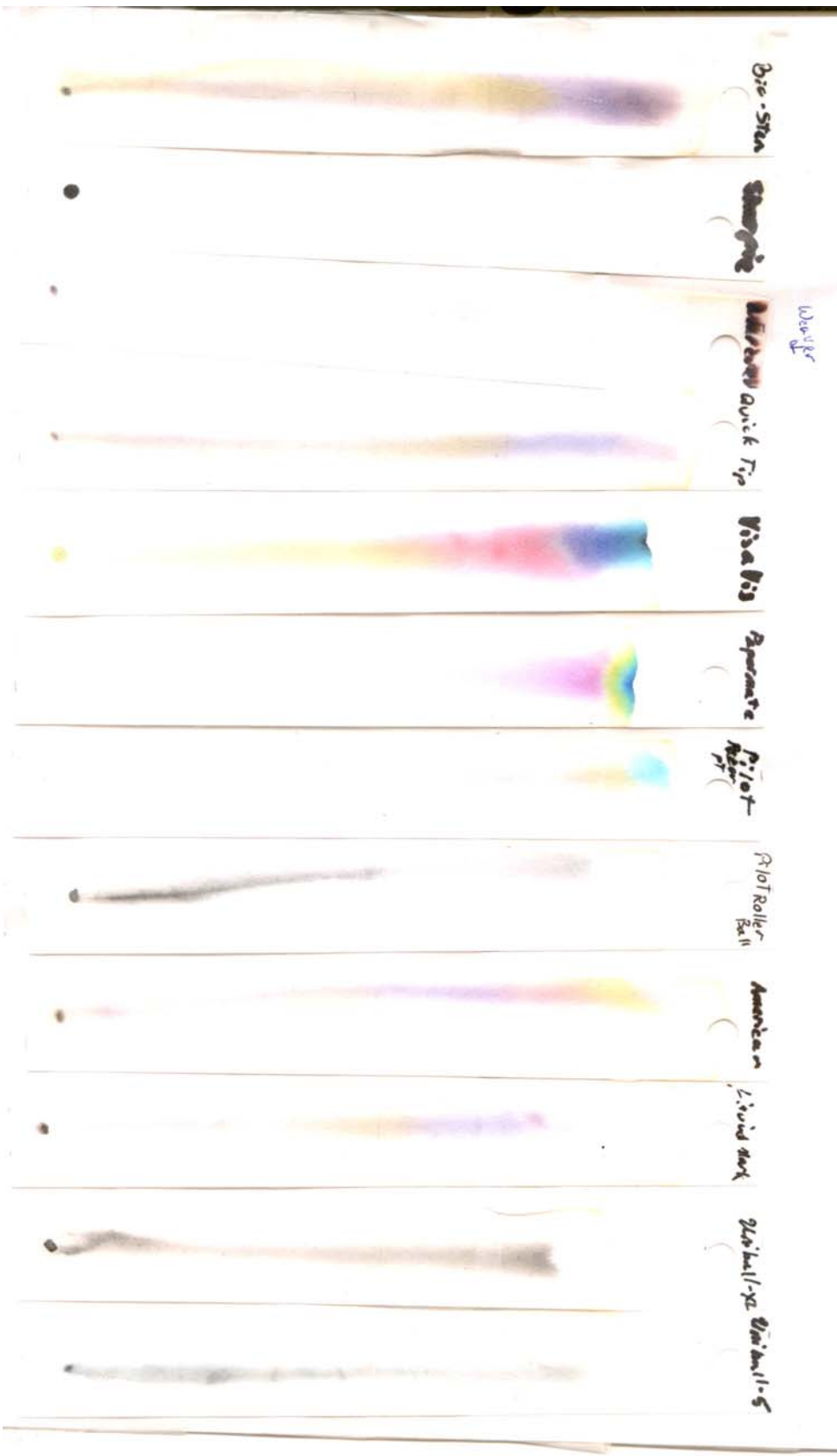
## Notes on Chromatography

Chromatograms of the inks of watercolor pens and juices still work the best, especially at the Middle School age. You will be looking for pens whose inks are water-soluble and some type of juices. Pens first. These are mostly the pens with the felt tips. Gel pens are not water-soluble. I suggest you purchase several different pens and try them yourself. I have found the Papermate pen gives a lovely pink at the top. Vis-à-vis also gives a beautiful chromatogram. Of course you can use colored pens, but black will most likely be the color used in competition. I will often use indelible ink in the suspect pens, just to make things interesting.

I suggest making a page of chromatograms of the various pens you have purchased. You will find it very helpful. I have included some examples at the bottom of this page, but as pens keep changing, you will want to update it.

For the juice chromatograms to work well, I suggest using the concentrates of the juices that can be found in the grocer's freezers or concentrates made with Kool-aid. The advantage of the Kool-Aid is that it is very inexpensive and does not require any refrigeration. The best chromatograms are made when several applications of small dots of the juice are placed right over each other with fifteen seconds to a minute of drying time between applications of the juice. If you use the Kool-aid, and make it concentrated enough, it is not necessary to use several dots in one place. The best thing to use to apply the juice is a toothpick. An eyedropper puts too much juice on the paper at one time.

For practicing chromatograms, coffee filters work well. They are cheap and readily available if your school does not have access to chromatography paper.



Die-Sta

Sharpie

Wet

~~Sharpie~~  
Sharpie Quick Tip

Vivaldi's

Apronate

Pilot  
Rider

Pilot Roller Ball

American

Liquid Mark

Sharpie-ge  
Sharpie

Watermelon  
Strawberry

Cranberry

Watermelon  
Grape

Watermelon  
Grape

Watermelon  
Wild Peach

Watermelon  
Grape

Watermelon  
Wild Peach

Watermelon  
Grape

Watermelon  
Grape

Bubble Gum