Chromatography of sweets

This resource accompanies the article **Spoiling our Funfetti** in *Education in Chemistry* which can be viewed at: [rsc.li/3IXqcI5](https://rsc.li/3IXqcI5)

Equipment

Per group:

* Beaker, 250 cm3
* Small soft paint brush
* Two paper clips (preferably plastic-coated)
* Chromatography paper, approximately 20 cm x 10 cm
* Pencil
* Ruler
* Communal hairdryer (optional)
* Supply of M&M’s® of various colours
* Access to tap water in a beaker to use with the paint brush

Preparation

* You can supply the sweets on a spotting tile for stability. As an alternative to using a paint brush, learners can add three drops of water to each sweet on the spotting tile and transfer the coloured liquid to the chromatography paper using melting point tubes.



* Whatman® chromatography paper works best for this experiment but, if unavailable, large sheets of ordinary filter paper can be cut up instead.
* If M&M’s® are unavailable, this experiment can be carried out with liquid food colourings or powdered food colourings dissolved in water (available from scientific suppliers only). **Do not use gel food colouring.** Chromatography of Smarties® is less successful as they use natural food colourings.

Safety and hazards

[Read our standard health and safety guidance](https://edu.rsc.org/resources/explaining-our-health-and-safety-guidance/1752.article) and carry out a risk assessment before running any live practical. Teachers have a responsibility to carry out their own risk assessment.

Hazard classification may vary depending on supplier.

* Learners should wear safety glasses.
* Do not use Peanut M&M’S® due to the risk of allergic reaction from peanuts.
* Learners should not attempt to eat or lick the sweets which are for laboratory use only.
* Check packaging for any possible allergy or hazard if you are using a different type of sweets or food colouring.

Disposal

* Dispose of used chromatography paper and waste sweets with general waste.
* Wash and reuse melting point tubes (if used).
* Dispose of waste liquid food colouring suitable for food consumption (if used as an alternative) down the drain with plenty of water.