29: Investigating Shampoos

Look in any pharmacy or supermarket and you will see a wide range of different shampoos on offer: shampoos for dry hair, greasy hair, coloured or damaged hair, baby shampoos, anti-dandruff shampoos, or shampoos with built-in conditioner. There is a big variation in price, but are the products really different? If they are, what makes them different?

This investigation suggests some activities to find out.

What you will need

You will need at least six different shampoos to test.

Your test shampoos should include:
- baby shampoo
- shampoo for greasy hair
- shampoo for dry hair
- anti-dandruff shampoo
- shampoo with built-in conditioner
- herbal shampoo

A: Comparing the pH of different shampoos

1. Look at the shampoo labels. Do they give any instructions about keeping the shampoo out of your eyes? Or do they claim to be kind to eyes?

2. What causes some shampoos to make your eyes sting? Try testing the pH of each of your test shampoos. Do your results explain what is written on each of the labels?

B: Comparing the flow properties of different shampoos

1. Some shampoos are thick and have to be squeezed out of the bottle, others are much runnier and flow more easily. Are these differences reflected in the price of the shampoo?

2. What are the advantages and disadvantages of thick or runny shampoo?

3. Work out a method to test the flow properties of different shampoos. Discuss your plan with your teacher before starting.
PUPILS’ WORKSHEET

29: Investigating Shampoos (contd)

C: Investigation to find which shampoo makes the most lather

1. Which of your test shampoos do you think will make the most lather? Does the temperature of the water affect the amount of lather produced? What are the drawbacks of having too much lather?

2. Work out a method to compare the amount of foam each shampoo produces. Discuss your plan with your teacher before starting.

3. Do the thicker shampoos produce more lather than the runnier ones? Do the more expensive shampoos produce more lather than the cheaper ones?

D: Comparing the grease-removing properties of different shampoos

1. Which shampoo would you expect to be most effective at removing grease? Do you think the more expensive shampoos will remove grease better? How does baby shampoo compare with adult shampoo? How does the temperature of the water affect grease-removing properties?

2. Work out a method to compare the grease-removing properties of each shampoo. Discuss your plan with your teacher before starting.

3. Do the shampoos which produce most lather have better grease-removing properties?

Eye protection must be worn.