

KS3
science and food technology

Timing - 15 - 20 minutes

Pupil activity sheet I6 accompanies this activity.

I6. Finding the additives

Pupils read the information and answer the questions.

To answer Q9, pupils may need access to some information about food additives. You may wish to supply the pupils' sheet I4 *What can be added to the food you buy?* and the E number lists, page 30.

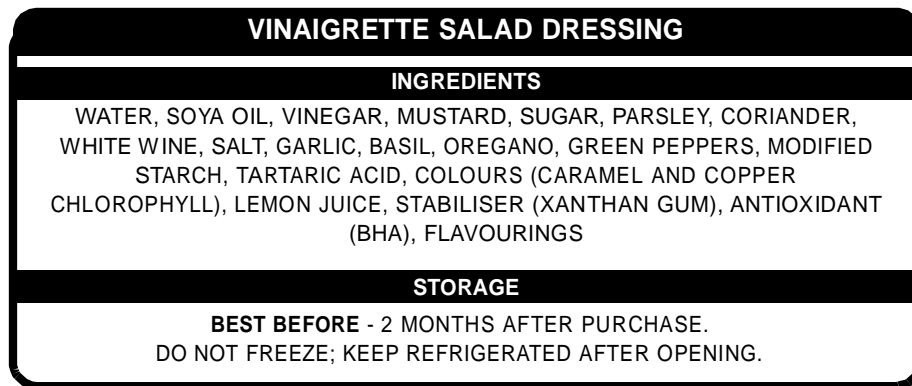
Answers to Pupil activity sheet I6

1. water
2. flavourings
3. 12 substances are present in smaller quantities than salt; 3 of garlic, basil, oregano, green peppers, modified starch, tartaric acid, colours (caramel and copper chlorophyll), lemon juice, stabiliser (xanthan gum), antioxidant (BHA), flavourings.
4. At first glance, there don't appear to be any because the letter 'E' and numbers are not present. Some pupils are likely to be 'suspicious' about some of the ingredients.
All the additives appear after salt.
5. They must be present in very small quantities.
6. 2 months after purchase, assuming it has not been opened.
7. Not very long! A few days only and certainly not 2 months.
8. Xanthan gum is an effective stabiliser and suspending agent for water based foods such as salad dressings.

You may like to ask pupils to think about why the bought dressing will stay fresh for 2 months.

Answer: The packaging prevents the entry of microorganisms. The antioxidant delays the oil from going rancid.

This is the label from the packet of a vinaigrette salad dressing.



1. What is the ingredient present in the largest amount?
2. What is the ingredient present in the smallest amount?
3. How many ingredients are present in smaller quantities than salt? Write down 3 of them.
4. Are there any additives in this food? At first glance, there are no E-numbers, but the following additives are present:

tartaric acid	E334	caramel	E150
copper chlorophyll	E141	xanthan gum	E415
BHA-Butylated hydroxyanisole	E320		

Flavourings: do not have to be listed individually

Modified starch: modified starches are food additives but they do not have to be listed individually

Find these again on the table. Do they appear before or after salt?

5. What does this tell you about them?
6. How long after buying this food would it still be safe to eat?
7. Imagine you made a similar dressing at home using only ingredients that you can buy easily. How long, approximately, would you expect it to stay fresh?
8. Find out what job/function xanthan gum (E415) has in this food.