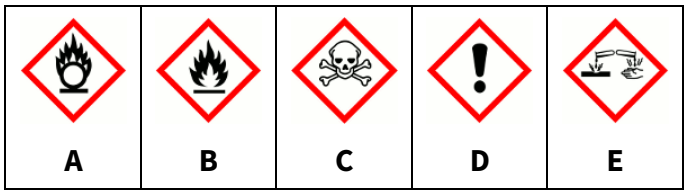
# Using hazard symbols

Containers in the lab often have hazard symbols. These symbols are important because they show the dangers of the substances inside, and they let people know about how to use substances safely.

1. The table below shows five common symbols used to label hazardous substances.




corrosive
flammable
harmful
oxidising
toxic

Match each symbol to the correct meaning from the list in the box on the right.
For example, if you think symbol **A** means flammable, write:

A – flammable

2. Write the name of the hazard symbol you should find on a bottle of:

   (a) concentrated sulfuric acid

   (b) petrol

   (c) cyanide

3. The extract below comes from a newspaper report written near the end of the last century.

**Wine contaminated with methanol – 12 dead**

A 52-year-old man died in Genoa yesterday. He is one of twelve people known to have been killed in the past two weeks by contaminated Italian wine.

Twelve more people are in hospital in northern Italy after drinking the wine. Some of them are expected to be left blind by the methanol. This was added to the wine, either by the wine makers or by the company that bottles the wine.

Magistrates have arrested the wholesalers who sold the wine to shops. Over a million bottles of wine have been taken off the shelves.

Doctors said that the 52-year-old man came to the hospital last week saying he had gone blind after drinking the wine. He suddenly collapsed, went into a coma and died of a heart attack. The hospital said that significant traces of methanol were found in his blood and urine.

   (a) Using the newspaper report, name the hazard symbol that methanol bottles should have.

   (b) Methanol is harmful when it touches the skin. Draw the correct hazard symbol for this.

   (c) Methanol can be used as a fuel in dragster racing cars.
   Name a hazard symbol, other than the ones used in parts (a) and (b), that should be used.

   (d) Do you think that the people who added the methanol to the wine knew it was dangerous?
   Explain your answer.

4. These labels come from two bottles in the laboratory.


Explain why these two substances should be stored separately from each other.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# Using hazard symbols – ANSWERS

1. A – oxidising
   B – flammable
   C – toxic
   D – harmful
   E – corrosive

2. (a) Corrosive
   (b) Flammable
   (c) Toxic

3. (a) Toxic
   (b) Sketch of the Harmful symbol, e.g. 
   (c) Flammable
   (d) Yes, because it would have a hazard symbol on the containers. Named hazard symbol, e.g. Toxic, Harmful, Flammable.

4. Potassium manganate(VII) is oxidising and ethanol is flammable. Description of the problem:
   - if the ethanol set on fire, the potassium manganate(VII) would make it burn more fiercely, or
   - the potassium manganate(VII) could cause the ethanol to set on fire if they were mixed.

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1. A – oxidising
   B – flammable
   C – toxic
   D – harmful
   E – corrosive

2. (a) Corrosive
   (b) Flammable
   (c) Toxic

3. (a) Toxic
   (b) Sketch of the Harmful symbol, e.g. 
   (c) Flammable
   (d) Yes, because it would have a hazard symbol on the containers. Named hazard symbol, e.g. Toxic, Harmful, Flammable.

4. Potassium manganate(VII) is oxidising and ethanol is flammable. Description of the problem:
   - if the ethanol set on fire, the potassium manganate(VII) would make it burn more fiercely, or
   - the potassium manganate(VII) could cause the ethanol to set on fire if they were mixed.

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