

Acids Alkalis

KS3 Chemistry · Follows the national curriculum

Name _____ Class _____ Date _____

1. Worked example

Lemon juice tastes sour and turns blue litmus red. Is it an acid or an alkali?

Step 1 · Litmus

Acids turn blue litmus red; alkalis turn red litmus blue.

Step 2 · Conclusion

Lemon juice is acidic (it contains citric acid).

Answer: An acid

Check: Never taste substances in the lab to test them — use an indicator.

2. Now try one with the steps

How do chemists define an alkali?

Step 1 · Neutralisation

Step 2 · Solubility

Answer:

3. Practice

Show your working. The marks tell you how much is expected.

1. Name ONE acid found in the kitchen. [1]

2. Name ONE alkali or base used at home. [1]

3. What colour does acid turn blue litmus paper? [1]

4. What colour does an alkali turn red litmus paper? [1]

5. What is a base? [1]
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6. What is an alkali? [1]
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7. What does the hazard word 'corrosive' mean? [1]
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8. What is the difference between a concentrated and a dilute acid? [2]
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9. What happens when an acid and an alkali are mixed in the right amounts? [2]
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10. Why should you never taste or touch chemicals to find out if they are acids? [1]
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11. Copper oxide neutralises acids but does not dissolve in water. Is it a base, an alkali, or both? [1]
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12. Give TWO safety precautions when using dilute hydrochloric acid. [2]
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13. Farmers spread lime (calcium hydroxide) on fields. Suggest why. [2]
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14. A student says, 'all acids are dangerous'. Use examples to evaluate this. [2]
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4. Before you hand it in

"Alkalis are safe because they're not acids."

Strong alkalis such hydroxide are corrosive and especially dangerous to eyes.

Using 'strong' to mean 'concentrated'.

Concentration is how much acid is in the water. Strength (GCSE) is about how the acid behaves in water. At KS3, use 'concentrated' and 'dilute'.

"Every base is an alkali."

Alkalis are the bases that dissolve in water.

"Dilute acid is completely safe."

Dilute acids are usually irritants: still wear goggles.