

Aqueous solution- Acid-base property

Warmer

1. Which methods can we use to distinguish(區分) aqueous solutions ?

We can use our eyes, nose and litmus paper, but we can't taste and touch.

2. Fill in the correct solution

Baking soda(小蘇打水)	Vinegar	Salt water
Lime water(石灰水)	Soda	Sugar Water (糖水)

Vinegar	Acidic and yellowish in color with an unpleasant smell.
Sugar water	Neutral and clear solution, smells sweet.
soda	Acidic, with bubbles in water, transparent and colorless.
salt water	Neutral clear solution, no smell.
Baking soda	Alkaline, transparent and colorless.
Lime water	Alkaline, with a layer of white substance on the surface, clear solution.

Language

acidic 酸性	alkaline 鹼性	vinegar 醋
litmus paper 石蕊試紙	red	blue

1. I add a little vinegar to the dumplings(水餃).
2. Litmus paper is red in acid solution.
3. Lemon juice is acidic.
4. Litmus paper is blue in alkaline solution.
5. Soap is usually alkaline.
6. litmus paper is a test for acidity and alkalinity.

Experiment

Please confirm the following properties and fill in the correct solution name.

	Lemon Juice (檸檬汁)	Rainwater (雨水)	Soapy (肥皂水)	Detergent (洗潔劑)	Dredge (疏通劑)	Alcohol (酒精)
litmus paper	Blue: <u>red</u>	Blue: <u>blue</u>	Blue: <u>blue</u>	Blue: <u>blue</u>	Blue: <u>blue</u>	Blue: <u>blue</u>
	Red: <u>red</u>	Red: <u>red</u>	Red: <u>blue</u>	Red: <u>red</u>	Red: <u>blue</u>	Red: <u>red</u>
universal test paper	<u>orange</u> 2	<u>green</u> 7	<u>blue</u> 9	<u>green</u> 7.5	<u>purple</u> 10	<u>green</u> 7
Acid-alkaline	<u>Acidic</u>	<u>Neutral</u>	<u>alkaline</u>	<u>Neutral</u>	<u>Alkaline</u>	<u>Neutral</u>

Aqueous solution- Acid-base property

Warmer

1. Which methods can we use to distinguish(區分) aqueous solutions ?

We can use our eyes, nose, but we can't taste and touch.

2. Fill in the correct solution

and litmus paper

Baking soda(小蘇打水)	Vinegar	Salt water
Lime water(石灰水)	Soda	Sugar Water (糖水)

Vinegar	Acidic and yellowish in color with an unpleasant smell.
sugar water	Neutral and clear solution, smells sweet.
soda	Acidic, with bubbles in water, transparent and colorless.
salt water	Neutral clear solution, no smell.
Baking soda	Alkaline, transparent and colorless.
Lime water	Alkaline, with a layer of white substance on the surface, clear solution.

Language

acidic 酸性	alkaline 鹼性	vinegar 醋
litmus paper 石蕊試紙	red	blue

- I add a little vinegar to the dumplings(水餃).
- Litmus paper is red in acid solution.
- Lemon juice is acidic.
- Litmus paper is blue in alkaline solution.
- Soap is usually alkaline.
- litmus paper is a test for acidity and alkalinity.

Experiment

Please confirm the following properties and fill in the correct solution name.

	Lemon Juice (檸檬汁)	Rainwater (雨水)	Soapy (肥皂水)	Detergent (洗潔劑)	Dredge (疏通劑)	Alcohol (酒精)
litmus paper	Blue: <u>red</u>	Blue: <u>blue</u>	Blue: <u>blue</u>	Blue: <u>blue</u>	Blue: <u>blue</u>	Blue: <u>blue</u>
	Red: <u>red</u>	Red: <u>red</u>	Red: <u>blue</u>	Red: <u>red</u>	Red: <u>blue</u>	Red: <u>red</u>
universal test paper	<u>orange</u> 2	<u>green</u> 7 or 5	<u>blue</u> 9	<u>green</u> 7.5	<u>purple</u> 10	<u>green</u> 7
Acid-alkaline	<u>Acidic</u>	<u>Neutral</u>	<u>alkaline</u>	<u>Neutral</u>	<u>Alkaline</u>	<u>Neutral</u>

Aqueous solution- Acid-base property

Warmer

1. Which methods can we use to distinguish(區分) 水溶液 aqueous solutions?

I can use my nose and my eyes.

2. Fill in the correct solution I can't use my finger and my mouth

Baking soda(小蘇打水)	Vinegar	Salt water
Lime water(石灰水)	Soda	Sugar Water (糖水)

<u>Vinegar</u>	Acidic and yellowish in color with an unpleasant smell.
<u>sugar water</u>	Neutral and clear solution, smells sweet.
<u>soda</u>	Acidic, with bubbles in water, transparent and colorless.
<u>salt water</u>	Neutral clear solution, no smell.
<u>Baking soda</u>	Alkaline, transparent and colorless.
<u>Lime water</u>	Alkaline, with a layer of white substance on the surface, clear solution.

Language

acidic 酸性	alkaline 鹼性	vinegar 醋
litmus paper 石蕊試紙	red	blue

- I add a little vinegar to the dumplings(水餃)
- Litmus paper is red in acid solution.
- Lemon juice is acidic.
- Litmus paper is blue in alkaline solution.
- Soap is usually alkaline.
- Litmus paper is a test for acidity and alkalinity.

Experiment

Please confirm the following properties and fill in the correct solution name.

	A Lemon Juice (檸檬汁)	B Rainwater (雨水)	C Soapy (肥皂水)	D Detergent (洗潔劑)	E Dredge (疏通劑)	F Alcohol (酒精)
litmus paper	Blue: <u>·</u> Red: <u>✓</u>	Blue: <u>✓</u> Red: <u>·</u>	Blue: <u>無</u> Red: <u>無</u>	Blue: <u>無</u> Red: <u>無</u>	Blue: <u>✓</u> Red: <u>·</u>	Blue: <u>無</u> Red: <u>無</u>
universal test paper	<u>orange</u> 2	<u>green</u> 5	<u>blue</u> 9	<u>green</u> 7.5	<u>purple</u> 10	<u>green</u> 7
Acid-alkaline	<u>酸性</u>	<u>中性</u>	<u>鹼性</u>	<u>中性</u>	<u>鹼性</u>	<u>中</u>

Aqueous solution- Acid-base property

Warmer 分法

1. Which methods can we use to distinguish (區分) aqueous solutions ?

1. I can use ^{our} eyes - nose - litmus paper.

2. Fill in the correct solution ^{2. I can't use fingers - mouth to taste and touch.}

Baking soda (小蘇打水)	Vinegar	Salt water
Lime water (石灰水)	Soda	Sugar Water (糖水)

Vinegar	Acidic and yellowish in color with an unpleasant smell.
Sugar Water	Neutral and clear solution, smells sweet.
Soda	Acidic, with bubbles in water, transparent and colorless.
Salt Water	Neutral clear solution, no smell.
Baking soda	Alkaline, transparent and colorless.
Lime water	Alkaline, with a layer of white substance on the surface, clear solution.

Language

acidic 酸性	alkaline 鹼性	vinegar 醋
litmus paper 石蕊試紙	red	blue

- I add a little vinegar to the dumplings (水餃).
- Litmus paper is red in acid solution.
- Lemon juice is acidic.
- Litmus paper is blue in alkaline solution.
- Soaps usually alkaline.
- Litmus paper is a test for acidity and alkalinity.

Experiment

Please confirm the following properties and fill in the correct solution name.

	Lemon Juice (檸檬汁) ^A	Rainwater (雨水) ^B	Soapy (肥皂水) ^C	Detergent (洗潔劑) ^D	Dredge (疏通劑) ^E	Alcohol (酒精) ^F
litmus paper	Blue: <u>red</u> Red: <u>X red</u>	Blue: <u>X blue</u> Red: <u>X red</u>	Blue: <u>X blue</u> Red: <u>blue</u>	Blue: <u>X blue</u> Red: <u>X red</u>	Blue: <u>X blue</u> Red: <u>blue</u>	Blue: <u>X blue</u> Red: <u>X red</u>
universal test paper	<u>orange</u> 2	<u>green</u> 5~7	<u>blue</u> 9	<u>green</u> 7.5	<u>purple</u> 10	<u>green</u> 6~7
Acid-alkaline	<u>Acidic</u>	<u>neutral</u>	<u>alkaline</u>	<u>neutral</u>	<u>alkaline</u>	<u>neutral</u>

A++

Aqueous solution- Acid-base property

Warmer

1. Which methods can we use to distinguish(區分) aqueous solutions ?

I can use my nose and my eyes

2. Fill in the correct solution I can't use finger and my mouth.

Baking soda(小蘇打水)	Vinegar	Salt water
Lime water(石灰水)	Soda	Sugar Water (糖水)

Vinegar	Acidic and yellowish in color with an unpleasant smell.
sugar water	Neutral and clear solution, smells sweet.
soda	Acidic, with bubbles in water, transparent and colorless.
salt water	Neutral clear solution, no smell.
Baking soda	Alkaline, transparent and colorless.
Lime water	Alkaline, with a layer of white substance on the surface, clear solution.

Language

acidic 酸性	alkaline 鹼性	vinegar 醋
litmus paper 石蕊試紙	red	blue

- I add a little vinegar to the dumplings(水餃).
- Litmus paper is red in acid solution.
- Lemon juice is acidic.
- Litmus paper is Blue in alkaline solution.
- Soap is usually alkaline.
- litmus paper is a test for acidity and alkalinity.

Experiment

Please confirm the following properties and fill in the correct solution name.

	Lemon Juice (檸檬汁)	Rainwater (雨水)	Soapy (肥皂水)	Detergent (洗潔劑)	Dredge (疏通劑)	Alcohol (酒精)
litmus paper	Blue:	Blue: /	Blue: 無	Blue: 無	Blue: ✓	Blue: 無
	Red: ✓	Red: ✓	Red: 無	Red: 無	Red:	Red: 無
universal test paper	change 2	green 5	blue 9	greer 7.5	purple 10	green 7
Acid-alkaline	酸	中	鹼	中	鹼	中

Aqueous solution- Acid-base property

Warmer

1. Which methods can we use to distinguish(區分) aqueous solutions? I can use eyes and nose.
I can't use mouth and hand.

2. Fill in the correct solution

Baking soda(小蘇打水)	Vinegar 醋	Salt water 食鹽水
Lime water(石灰水)	Soda 汽水	Sugar Water (糖水)

Vinegar	Acidic and yellowish in color with an unpleasant smell.
Sugar water	Neutral and clear solution, smells sweet.
soda	Acidic, with bubbles in water, transparent and colorless.
salt water	Neutral clear solution, no smell.
Baking soda	Alkaline, transparent and colorless.
Lime water	Alkaline, with a layer of white substance on the surface, clear solution.

Language

acidic 酸性	alkaline 鹼性	vinegar 醋
litmus paper 石蕊試紙	red	blue

- I add a little vinegar to the dumplings(水餃).
- Litmus paper is red in acid solution.
- Lemon juice is acidic.
- Litmus paper is blue in alkaline solution.
- Soap is usually alkaline.
- litmus paper is a test for acidity and alkalinity.

Experiment

Please confirm the following properties and fill in the correct solution name.

	Lemon Juice F (檸檬汁)	Rainwater E (雨水)	Soapy D (肥皂水)	Detergent X (洗潔劑)	Dredge B (疏通劑)	Alcohol A (酒精)
litmus paper	Blue:	Blue:	Blue:	Blue:	Blue:	Blue:
	Red:	Red:	Red:	Red:	Red:	Red:
universal test paper	color: ? PH 3	PH 6	PH 6	PH 5	PH 10	PH 5
Acid-alkaline	Acidic	Neutral	Neutral	Neutral	alkaline	Neutral

Aqueous solution- Acid-base property

Warmer

1. Which methods can we use to distinguish (區分) aqueous solutions? 水溶液

I can use my eyes and my nose!
I can't use my finger and my mouth!

2. Fill in the correct solution

Baking soda(小蘇打水)	Vinegar	Salt water
Lime water(石灰水)	Soda	Sugar Water (糖水)

<u>vinegar</u>	Acidic and yellowish in color with an unpleasant smell.
<u>Sugar water</u>	Neutral and clear solution, smells sweet.
<u>Soda</u> 碳酸	Acidic, with bubbles in water, transparent and colorless.
<u>Salt water</u>	Neutral clear solution, no smell.
<u>Baking soda</u>	Alkaline, transparent and colorless.
<u>Lime water</u> 鹼	Alkaline, with a layer of white substance on the surface, clear solution.

Language

<u>acidic</u> 酸性	<u>alkaline</u> 鹼性	<u>vinegar</u> 醋
<u>litmus paper</u> 石蕊試紙	<u>red</u>	<u>blue</u>

- I add a little vinegar to the dumplings(水餃).
- Litmus paper is red in acid solution.
- Lemon juice is acidic.
- Litmus paper is blue in alkaline solution.
- Soap is usually alkaline.
- litmus paper is a test for acidity and alkalinity.

Experiment

Please confirm the following properties and fill in the correct solution name.

	Lemon Juice (檸檬汁)	Rainwater (雨水)	Soapy (肥皂水)	Detergent (洗潔劑)	Dredge (疏通劑)	Alcohol (酒精)
litmus paper	Blue: <input type="checkbox"/>	Blue: <input checked="" type="checkbox"/>	Blue: <u>NO</u>	Blue: <u>NO</u>	Blue: <input checked="" type="checkbox"/>	Blue: <u>NO</u>
	Red: <input checked="" type="checkbox"/>	Red: <input type="checkbox"/>	Red: <u>NO</u>	Red: <u>NO</u>	Red: <input type="checkbox"/>	Red: <u>NO</u>
universal test paper	<u>orange</u> 2	<u>green</u> 5 or 7	<u>blue</u> 9	<u>green</u> 7.5	<u>purple</u> 10	<u>green</u> 6 or 7
Acid-alkaline	<u>酸性</u>	<u>中性</u>	<u>鹼性</u>	<u>中性</u>	<u>鹼性</u>	<u>中性</u>

↓
Alkaline
Acidic

↓
Acidic
Alkaline

↓
Acidic
Alkaline

Aqueous solution- Acid-base property

Warmer

1. Which methods can we use to distinguish (區分) ^{水溶液} aqueous solutions ?

I can use my nose and my eyes
I can't use my finger and my mouse

2. Fill in the correct solution

Baking soda(小蘇打水)	Vinegar ✓	Salt water
Lime water(石灰水)	Soda ✓	Sugar Water (糖水)

Vinegar	Acidic and yellowish in color with an unpleasant smell.
sugar water	Neutral and clear solution, smells sweet.
soda	Acidic, with bubbles in water, transparent and colorless.
salt water	Neutral clear solution, no smell.
Baking soda	Alkaline, transparent and colorless.
Lime water	Alkaline, with a layer of white substance on the surface, clear solution.

Language

acidic 酸性	alkaline 鹼性	vinegar 醋
litmus paper 石蕊試紙	red	blue

- I add a little vinegar to the dumplings(水餃).
- Litmus paper is red in acid solution.
- Lemon juice is acidic.
- Litmus paper is blue in alkaline solution.
- Soap is usually alkaline.
- Litmus paper is a test for acidity and alkalinity.

Experiment

Please confirm the following properties and fill in the correct solution name.

	Lemon Juice (檸檬汁)	Rainwater (雨水)	Soapy (肥皂水)	Detergent (洗潔劑)	Dredge (疏通劑)	Alcohol (酒精)
litmus paper	Blue: ✓	Blue: NO	Blue: ✓	Blue: NO	Blue: ✓	Blue: NO
	Red: ✓	Red: NO	Red: ...	Red: NO	Red: ✓	Red: NO
universal test paper	orange 2	green 5	blue 9	green 7.5	purple 10	green 7
Acid-alkaline	酸	中	鹼	中	鹼	中

Aqueous solution- Acid-base property

Warmer

1. Which methods can we use to distinguish(區分) aqueous solutions? *I can use eyes and nose, I can't use my finger and my mouth.*

2. Fill in the correct solution

Baking soda(小蘇打水)	Vinegar	Salt water
Lime water(石灰水)	Soda	Sugar Water (糖水)

<i>Vinegar</i>	Acidic and yellowish in color with an unpleasant smell.
<i>suger water</i>	Neutral and clear solution, smells sweet.
<i>soda</i>	Acidic, with bubbles in water, transparent and colorless.
<i>salt water</i>	Neutral clear solution, no smell.
<i>Baking soda</i>	Alkaline, transparent and colorless.
<i>Lime water</i>	Alkaline, with a layer of white substance on the surface, clear solution.

Language

acidic 酸性	alkaline 鹼性	vinegar 醋
litmus paper 石蕊試紙	red	blue

- I add a little vinegar to the dumplings(水餃).
- Litmus paper is red in acid solution.
- Lemon juice is acidic.
- Litmus paper is blue in alkaline solution.
- Soap is usually alkaline.
- Litmus paper is a test for acidity and alkalinity.

Experiment

Please confirm the following properties and fill in the correct solution name.

	Lemon Juice A (檸檬汁)	Rainwater B (雨水)	Soapy C (肥皂水)	Detergent D (洗潔劑)	Dredge E (疏通劑)	Alcohol F (酒精)
litmus paper	Blue: ✓	Blue:	Blue:	Blue:	Blue:	Blue: ?
	Red: ..	Red:	Red: ✓	Red:	Red: ✓	Red:
universal test paper	<i>orange</i> PH 2	<i>green</i> PH 5 or 7	<i>blue</i> PH 9	<i>green</i> PH 7.5	<i>purple</i> PH 10	<i>green</i> PH 6
Acid-alkaline	<i>acidic</i>	<i>neutral</i>	<i>alkaline</i>	<i>neutral</i>	<i>alkaline</i>	<i>Neutral</i>

Aqueous solution- Acid-base property

Warmer

1. Which methods can we use to distinguish(區分) aqueous solutions ?

鼻子和眼睛可以用

2. Fill in the correct solution

Baking soda(小蘇打水)	Vinegar	Salt water
Lime water(石灰水)	Soda	Sugar Water(糖水)

<u>Vinegar</u>	Acidic and yellowish in color with an unpleasant smell.
<u>Sugar water</u>	Neutral and clear solution, smells sweet.
<u>Soda</u>	Acidic, with bubbles in water, transparent and colorless.
<u>Salt water</u>	Neutral clear solution, no smell.
<u>Baking soda</u>	Alkaline, transparent and colorless.
<u>Lime water</u>	Alkaline, with a layer of white substance on the surface, clear solution.

Language

acidic 酸性	alkaline 鹼性	vinegar 醋
litmus paper 石蕊試紙	red	blue

- I add a little vinegar to the dumplings(水餃).
- Litmus paper is red in acid solution.
- Lemon juice is acidic.
- Litmus paper is blue in alkaline solution.
- Soap is usually alkaline.
- red is a test for acidity and alkalinity.
litmus paper

Experiment

Please confirm the following properties and fill in the correct solution name.

	Lemon Juice (檸檬汁)	Rainwater (雨水)	Soapy (肥皂水)	Detergent (洗潔劑)	Dredge (疏通劑)	Alcohol (酒精)
litmus paper	Blue: <u>red</u>	Blue: <u>blue</u>	Blue: <u>blue</u>	Blue: <u>blue</u>	Blue: <u>blue</u>	Blue: <u>blue</u>
	Red: <u>red</u>	Red: <u>blue</u>	Red: <u>red</u>	Red: <u>red</u>	Red: <u>blue</u>	Red: <u>red</u>
universal test paper	<u>orange</u> 2	<u>green</u> 5-7	<u>blue</u> 9	<u>green</u> 7.5	<u>purple</u> 10	<u>green</u> 7
Acid-alkaline	<u>Acid</u>	<u>neutral</u>	<u>alkaline</u>	<u>neutral</u>	<u>alkaline</u>	<u>neutral</u>

acidic Neutral Alkaline Neutral Alkaline Neutral

Aqueous solution- Acid-base property

Warmer

1. Which methods can we use to distinguish (區分) aqueous solutions ?

I can't do see, smell, litmus paper
I can't do touch, taste

2. Fill in the correct solution

Baking soda(小蘇打水)	Vinegar	Salt water
Lime water(石灰水)	Soda	Sugar Water (糖水)

vinegar	Acidic and yellowish in color with an unpleasant smell.
Sugar water	Neutral and clear solution, smells sweet.
Soda	Acidic, with bubbles in water, transparent and colorless.
salt water	Neutral clear solution, no smell.
Baking soda	Alkaline, transparent and colorless.
Lime water	Alkaline, with a layer of white substance on the surface, clear solution.

Language

acidic 酸性	alkaline 鹼性	vinegar 醋
litmus paper 石蕊試紙	red	blue

- I add a little vinegar to the dumplings(水餃).
- Litmus paper is red in acid solution.
- Lemon juice is acidic.
- Litmus paper is blue in alkaline solution.
- Soap is usually alkaline.
- litmus paper is a test for acidity and alkalinity.

Experiment

Please confirm the following properties and fill in the correct solution name.

	Lemon Juice (檸檬汁)	Rainwater (雨水)	Soapy (肥皂水)	Detergent (洗潔劑)	Dredge (疏通劑)	Alcohol (酒精)
litmus paper	Blue: Red	Blue: blue	Blue: blue	Blue: blue	Blue: blue	Blue: blue
	Red: Red	Red: Red	Red: blue	Red: red	Red: red	Red: red
universal test paper	orange 2	Green 5-7	blue 9	green 7-5	purple 10	green 7
Acid-alkaline	Aid	neutral	Acidic	neutral	Alkaline	Neutral

Acidic

Alkaline

Aqueous solution- Acid-base property

A

Warmer

1. Which methods can we use to distinguish(區分) aqueous solutions ?

I can : see

I can't : smell, touch, taste

2. Fill in the correct solution

Baking soda(小蘇打水)	Vinegar 醋	Salt water 食鹽水
Lime water(石灰水)	Soda 汽水	Sugar Water (糖水)

vinegar	Acidic and yellowish in color with an unpleasant smell.
Sugar Water	Neutral and clear solution, smells sweet.
soda	Acidic, with bubbles in water, transparent and colorless.
salt water	Neutral clear solution, no smell.
Baking soda	Alkaline, transparent and colorless.
Lime water	Alkaline, with a layer of white substance on the surface, clear solution.

Language

acidic 酸性	alkaline 鹼性	vinegar 醋
litmus paper 石蕊試紙	red	blue

- I add a little vinegar to the dumplings(水餃).
- Litmus paper is acidic in acid solution.
- Lemon juice is red acidic.
- Litmus paper is blue in alkaline solution.
- Soap is usually red alkaline.
- litmus paper is a test for acidity and alkalinity.

Experiment

Please confirm the following properties and fill in the correct solution name.

	Lemon Juice (檸檬汁)	Rainwater (雨水)	Soapy (肥皂水)	Detergent (洗潔劑)	Dredge (疏通劑)	Alcohol (酒精)
litmus paper	Blue: <u>red</u>	Blue: <u>blue</u>	Blue: <u>blue</u>	Blue: <u>blue</u>	Blue: <u>blue</u>	Blue: <u>blue</u>
	Red: <u>red</u>	Red: <u>red</u>	Red: <u>blue</u>	Red: <u>red</u>	Red: <u>blue</u>	Red: <u>red</u>
universal test paper	orange 2	green 5~9	blue 9	green 7.5	purple 10	green 7
Acid-alkaline	<u>Acid</u>	<u>Neutral</u>	<u>alkaline</u>	<u>neutral</u>	<u>alkaline</u>	<u>neutral</u>

Aqueous solution- Acid-base property

Warmer

1. Which methods can we use to distinguish(區分) aqueous solutions ?

I CAN 可以用你的肉眼觀察 I CAN'T 不可以用你的鼻子

2. Fill in the correct solution

Baking soda(小蘇打水)	Vinegar	Salt water
Lime water(石灰水)	Soda	Sugar Water (糖水)

Vinegar	Acidic and yellowish in color with an unpleasant smell.
Sugar water	Neutral and clear solution, smells sweet.
Soda	Acidic, with bubbles in water, transparent and colorless.
Salt water	Neutral clear solution, no smell.
Baking soda	Alkaline, transparent and colorless.
Lime water	Alkaline, with a layer of white substance on the surface, clear solution.

Language

acidic 酸性	alkaline 鹼性	vinegar 醋
litmus paper 石蕊試紙	red	blue

- I add a little vinegar to the dumplings(水餃).
- Litmus paper is red in acid solution.
- Lemon juice is acidic.
- Litmus paper is blue in alkaline solution.
- Soap is usually alkaline.
- litmus paper is a test for acidity and alkalinity.

Experiment

Please confirm the following properties and fill in the correct solution name.

	Lemon Juice (檸檬汁)	Rainwater (雨水)	Soapy (肥皂水)	Detergent (洗潔劑)	Dredge (疏通劑)	Alcohol (酒精)
litmus paper	Blue: <u>red</u>	Blue: <u>blue</u>	Blue: <u>blue</u>	Blue: <u>blue</u>	Blue: <u>blue</u>	Blue: <u>blue</u>
	Red: <u>red</u>	Red: <u>red</u>	Red: <u>blue</u>	Red: <u>red</u>	Red: <u>blue</u>	Red: <u>red</u>
universal test paper	<u>orange</u> 2	<u>green</u> 5	<u>blue</u> 7.5	<u>green</u> 7.5	<u>purple</u> 10	<u>green</u> 6
Acid-alkaline	<u>Acidic</u>	<u>neutral</u>	<u>alkaline</u>	<u>neutral</u>	<u>alkaline</u>	<u>neutral</u>

A++

Aqueous solution- Acid-base property

Warmer

1. Which methods can we use to distinguish(區分) aqueous solutions ?

We can use eyes and nose. ~~eyes~~
 we can't use mouth to eat. ~~eyes~~

2. Fill in the correct solution

Baking soda(小蘇打水)	Vinegar ✓	Salt water ✓
Lime water(石灰水)	Soda ✓	Sugar Water (糖水) ✓

Vinegar	Acidic and yellowish in color with an unpleasant smell.
Sugar water	Neutral and clear solution, smells <u>sweet</u> .
soda	Acidic, with bubbles in water, transparent and colorless.
salt water	Neutral clear solution, no smell.
Baking soda	Alkaline, transparent and colorless.
Lime water	Alkaline, with a layer of white substance on the surface, clear solution.

Language

acidic 酸性 ✓	alkaline 鹼性 ✓	vinegar 醋 ✓
litmus paper 石蕊試紙	red ✓	blue ✓

- I add a little vinegar to the dumplings(水餃).
- Litmus paper is red in acid solution.
- Lemon juice is acidic.
- Litmus paper is blue in alkaline solution.
- Soap is usually alkaline.
- litmus paper is a test for acidity and alkalinity.

Experiment

Please confirm the following properties and fill in the correct solution name.

	Lemon Juice (檸檬汁)	Tap water (自來水)	Soapy (肥皂水)	Detergent (洗潔劑)	Dredge (疏通劑)	Alcohol (酒精)
litmus paper	Blue: red	Blue: Blue	Blue: Blue	Blue: Blue	Blue: Blue	Blue: Blue
	Red: red	Red: red	Red: Blue	Red: red	Red: Blue	Red: red
universal test paper	orange 2	green 5~7	blue 9	green 7.5	purple 10	green 6~7
Acid-alkaline	acid	neutral	alkaline	neutral	alkaline	neutral

Aqueous solution- Acid-base property

Warmer

1. Which methods can we use to distinguish(區分) aqueous solutions?

我可以看、聞 我不能摸、吃。 ✓ ← try in English

2. Fill in the correct solution

Baking soda(小蘇打水)	Vinegar	Salt water
Lime water(石灰水)	Soda	Sugar Water(糖水)

Vinegar	Acidic and yellowish in color with an unpleasant smell.
sugar water	Neutral and clear solution, smells sweet.
soda	Acidic, with bubbles in water, transparent and colorless.
salt water	Neutral clear solution, no smell.
Baking soda	Alkaline, transparent and colorless.
Lime water	Alkaline, with a layer of white substance on the surface, clear solution.

Language

acidic 酸性	alkaline 鹼性	vinegar 醋
litmus paper 石蕊試紙	red	blue

- I add a little vinegar to the dumplings(水餃).
- Litmus paper is red in acid solution.
- Lemon juice is acidic.
- Litmus paper is blue in alkaline solution.
- Soap is usually alkaline.
- litmus paper is a test for acidity and alkalinity.

Experiment

Please confirm the following properties and fill in the correct solution name.

	Lemon Juice (檸檬汁)	Rainwater (雨水)	Soapy (肥皂水)	Detergent (洗潔劑)	Dredge (疏通劑)	Alcohol (酒精)
litmus paper	Blue: <u>red</u>	Blue: <u>blue</u>	Blue: <u>blue</u>	Blue: <u>blue</u>	Blue: <u>blue</u>	Blue: <u>blue</u>
	Red: <u>red</u>	Red: <u>red</u>	Red: <u>blue</u>	Red: <u>red</u>	Red: <u>blue</u>	Red: <u>red</u>
universal test paper	<u>orange</u> 2	<u>5.0</u> green	<u>9</u> blue	<u>7.5</u> green	<u>10</u> purple	<u>7</u> green
Acid-alkaline	<u>酸</u>	<u>中</u>	<u>鹼</u>	<u>中</u>	<u>鹼</u>	<u>中</u>

A++

Aqueous solution- Acid-base property

Warmer

1. Which methods can we use to distinguish(區分) aqueous solutions ?

I can 用 eyes and nose.
I can't 用 mouth and hand!

2. Fill in the correct solution

Baking soda(小蘇打水)	Vinegar	Salt water
Lime water(石灰水)	Soda	Sugar Water (糖水)

Vinegar	Acidic and yellowish in color with an unpleasant smell.
sugar water	Neutral and clear solution, smells sweet.
Soda	Acidic, with bubbles in water, transparent and colorless.
Salt water	Neutral clear solution, no smell.
Baking soda	Alkaline, transparent and colorless.
Lime water	Alkaline, with a layer of white substance on the surface, clear solution.

Language

acidic 酸性	alkaline 鹼性	vinegar 醋
litmus paper 石蕊試紙	red	blue

- I add a little vinegar to the dumplings(水餃).
- Litmus paper is red in acid solution.
- Lemon juice is acidic.
- Litmus paper is blue in alkaline solution.
- Soap is usually alkaline.
- litmus paper is a test for acidity and alkalinity.

Experiment

Please confirm the following properties and fill in the correct solution name.

	Lemon Juice (檸檬汁)	Rainwater (雨水)	Soapy (肥皂水)	Detergent (洗潔劑)	Dredge (疏通劑)	Alcohol (酒精)
litmus paper	Blue: red	Blue: blue	Blue: blue	Blue: blue	Blue: blue	Blue: blue
	Red: red	Red: red	Red: blue	Red: red	Red: blue	Red: red
universal test paper	2 orange	5 green	9 blue	green 6	purple 10	green 11
Acid-alkaline	酸性	中	鹼性	中	鹼性	中

Aqueous solution- Acid-base property

Warmer

1. Which methods can we use to distinguish(區分) aqueous solutions ?

I can 用 eyes and nose!

I can't 用 mouth and hands! 0

2. Fill in the correct solution

Baking soda(小蘇打水)	Vinegar	Salt water
Lime water(石灰水)	Soda	Sugar Water (糖水)

Vinegar	Acidic and yellowish in color with an unpleasant smell.
sugar Water	Neutral and clear solution, smells sweet.
Soda	Acidic, with bubbles in water, transparent and colorless.
Salt water	Neutral clear solution, no smell.
Baking soda	Alkaline, transparent and colorless.
Lime water	Alkaline, with a layer of white substance on the surface, clear solution.

Language

acidic 酸性	alkaline 鹼性	vinegar 醋
litmus paper 石蕊試紙	red	blue

- I add a little vinegar to the dumplings(水餃).
- Litmus paper is red in acid solution.
- Lemon juice is acidic.
- Litmus paper is blue in alkaline solution.
- Soap is usually alkaline.
- litmus paper is a test for acidity and alkalinity.

Experiment

Please confirm the following properties and fill in the correct solution name.

	Lemon Juice (檸檬汁)	Rainwater (雨水)	Soapy (肥皂水)	Detergent (洗潔劑)	Dredge (疏通劑)	Alcohol (酒精)
litmus paper	Blue: red	Blue: blue	Blue: blue	Blue: blue	Blue: blue	Blue: blue
	Red: red	Red: red	Red: blue	Red: red	Red: blue	Red: red
universal test paper 通用	orange 2	green 5	blue 9	green 6	purple 10	green 6
Acid-alkaline	酸 Acidic	中 Neutral	鹼 alkaline	中 Neutral	鹼 alkaline	中 Neutral

Aqueous solution- Acid-base property

Warmer

1. Which methods can we use to distinguish(區分) aqueous solutions? ^{水溶液} I can see and smell. I can't taste and fingers.

2. Fill in the correct solution

Baking soda(小蘇打水)	Vinegar	Salt water
Lime water(石灰水)	Soda 氣水	Sugar Water (糖水)

Vinegar	Acidic and yellowish in color with an unpleasant smell.
Sugar water	Neutral and clear solution, smells sweet.
Soda	Acidic, with bubbles in water, transparent and colorless.
Salt water	Neutral clear solution, no smell.
Baking soda	Alkaline, transparent and colorless.
Lime water	Alkaline, with a layer of white substance on the surface, clear solution.

Language

acidic 酸性	alkaline 鹼性	vinegar 醋
litmus paper 石蕊試紙	red	blue

- I add a little Vinegar to the dumplings(水餃).
- Litmus paper is red in acid solution.
- Lemon juice is acidic.
- Litmus paper is blue in alkaline solution.
- Soap is usually alkaline.
- litmus paper is a test for acidity and alkalinity.

Experiment

Please confirm the following properties and fill in the correct solution name.

	Lemon Juice (檸檬汁)	Rainwater (雨水)	Soapy (肥皂水)	Detergent (洗潔劑)	Dredge (疏通劑)	Alcohol (酒精)
litmus paper	Blue: red	Blue: blue	Blue: blue	Blue: blue	Blue: blue	Blue: blue
	Red: red	Red: red	Red: blue	Red: red	Red: blue	Red: red
universal test paper	orang 2	green 5-7	blue 9	green 6	purple 10	green 6
Acid-alkaline	酸	中	鹼	中	鹼	中性

Aqueous solution- Acid-base property

Warmer

1. Which methods can we use to distinguish (區分) aqueous solutions (水溶液)? I can see and smell, I can't taste and fingers.
2. Fill in the correct solution

Baking soda(小蘇打水)	Vinegar	Salt water
Lime water(石灰水)	Soda	Sugar Water (糖水)

Vinegar	Acidic and yellowish in color with an unpleasant smell.
Sugar Water	Neutral and clear solution, smells sweet.
Soda	Acidic, with bubbles in water, transparent and colorless.
Salt water	Neutral clear solution, <u>no smell</u> .
Baking soda	Alkaline, transparent and colorless.
lime water	Alkaline, with a layer of white substance on the surface, clear solution.

Language

acidic 酸性	<u>alkaline</u> 鹼性	vinegar 醋
litmus paper 石蕊試紙	red	blue

- I add a little vinegar to the dumplings(水餃).
- Litmus paper is red in acid solution.
- Lemon juice is acidic.
- Litmus paper is blue in alkaline solution.
- Soap is usually alkaline.
- litmus paper is a test for acidity and alkalinity.

Experiment

Please confirm the following properties and fill in the correct solution name.

	Lemon Juice (檸檬汁)	Rainwater (雨水)	Soapy (肥皂水)	Detergent (洗潔劑)	Dredge (疏通劑)	Alcohol (酒精)
litmus paper	Blue: <u>red</u>	Blue: <u>blue</u>	Blue: <u>blue</u>	Blue: <u>blue</u>	Blue: <u>blue</u>	Blue: <u>blue</u>
	Red: <u>red</u>	Red: <u>blue</u>	Red: <u>blue</u>	Red: <u>red</u>	Red: <u>blue</u>	Red: <u>red</u>
universal test paper	<u>orange</u>	<u>green</u>	<u>blue</u>	<u>green</u>	<u>purple</u>	<u>green</u>
Acid-alkaline	<u>酸</u>	<u>中</u>	<u>鹼</u>	<u>中</u>	<u>鹼</u>	<u>中</u>

Att

Aqueous solution- Acid-base property

Warmer

1. Which methods can we use to distinguish(區分) aqueous solutions? 水: 溶液

I can to do my eyes, noes, ear

2. Fill in the correct solution I can't ~ ?

Baking soda(小蘇打水)	Vinegar	Salt water
Lime water(石灰水)	Soda	Sugar Water (糖水)

Vinegar	Acidic and yellowish in color with an unpleasant smell.
Sugar water	Neutral and clear solution, smells <u>sweet</u> . 甜
Soda	Acidic, with bubbles in water, transparent and colorless.
Salt water	Neutral clear solution, no smell.
Baking soda	Alkaline, transparent and colorless.
Lime water	Alkaline, with a layer of white substance on the surface, clear solution.

Language

acidic 酸性	alkaline 鹼性	vinegar 醋
litmus paper 石蕊試紙	red	blue

- I add a little Vinegar to the dumplings(水餃).
- Litmus paper is red in acid solution.
- Lemon juice is acidic.
- Litmus paper is blue in alkaline solution.
- Soap is usually alkaline.
- litmas paper is a test for acidity and alkalinity.

Experiment

Please confirm the following properties and fill in the correct solution name.

	Lemon Juice (檸檬汁)	Rainwater (雨水)	Soapy (肥皂水)	Detergent (洗潔劑)	Dredge (疏通劑)	Alcohol (酒精)
litmus paper	Blue: red	Blue: blue	Blue: blue	Blue: blue	Blue: blue	Blue: blue
	Red: red	Red: red	Red: blue	Red: red	Red: blue	Red: red
universal test paper	orange 2	5 green	9 blue	6 green	purple 10	green 6
Acid-alkaline	酸性	中	鹼性	中	鹼性	中

Aqueous solution- Acid-base property

Warmer

1. Which methods can we use to distinguish(區分) aqueous solutions ?

We can use our eyes to see

2. Fill in the correct solution
 We can't use hands to touch and use mouth to taste. ✓

Baking soda(小蘇打水)	Vinegar	Salt water
Lime water(石灰水)	Soda	Sugar Water (糖水)

Vinegar	Acidic and yellowish in color with an unpleasant smell.
suger water	Neutral and clear solution, smells sweet.
soda	Acidic, with bubbles in water, transparent and colorless.
Salt water	Neutral clear solution, no smell.
Baking soda	Alkaline, transparent and colorless.
Lime water	Alkaline, with a layer of white substance on the surface, clear solution.

Language

acidic 酸性	alkaline 鹼性	vinegar 醋
litmus paper 石蕊試紙	red	blue

- I add a little vinegar to the dumplings(水餃).
- Litmus paper is red in acid solution.
- Lemon juice is acidic.
- Litmus paper is blue in alkaline solution.
- Soap is usually alkaline.
- litmus paper is a test for acidity and alkalinity.

Experiment

Please confirm the following properties and fill in the correct solution name.

	Lemon Juice (檸檬汁)	Rainwater (雨水)	Soapy (肥皂水)	Detergent (洗潔劑)	Dredge (疏通劑)	Alcohol (酒精)
litmus paper	Blue: <u>red</u>	Blue: <u>blue</u>	Blue: <u>Blue</u>	Blue: <u>blue</u>	Blue: <u>Blue</u>	Blue: <u>Blue</u>
	Red: <u>red</u>	Red: <u>red</u>	Red: <u>blue</u>	Red: <u>red</u>	Red: <u>Blue</u>	Red: <u>red</u>
universal test paper	<u>orange</u> 2	<u>green</u> 7	<u>blue</u> 9	<u>green</u> 11.5	<u>purple</u> 10	7
Acid-alkaline	Acid	Neutral	Alkaline	Neutral	alkaline	Neutral

Aqueous solution- Acid-base property

Warmer

1. Which methods can we use to distinguish(區分) aqueous solutions ?

We can use our eyes, nose and litmus paper.

2. Fill in the correct solution *but we can't to taste and use hand to touch*

Baking soda(小蘇打水)	Vinegar	Salt water
Lime water(石灰水)	Soda	Sugar Water (糖水)

<i>vinegar</i>	Acidic and yellowish in color with an unpleasant smell.
<i>suger water</i>	Neutral and clear solution, smells sweet.
<i>soda</i>	Acidic, with bubbles in water, transparent and colorless.
<i>salt water</i>	Neutral clear solution, no smell.
<i>baking soda</i>	Alkaline, transparent and colorless.
<i>Lime water</i>	Alkaline, with a layer of white substance on the surface, clear solution.

Language

acidic 酸性	alkaline 鹼性	vinegar 醋
litmus paper 石蕊試紙	red	blue

- I add a little vinegar to the dumplings(水餃).
- Litmus paper is red in acid solution.
- Lemon juice is acidic.
- Litmus paper is blue in alkaline solution.
- Soap is usually alkaline.
- Litmus paper is a test for acidity and alkalinity.

鹼: blue
酸: red

Experiment

Please confirm the following properties and fill in the correct solution name.

<i>菓子 培養皿</i> ✓	Lemon Juice A (檸檬汁) ✓	Rainwater B (雨水) ✓	Soapy C (肥皂水) ✓	Detergent D (洗潔劑) ✓	Dredge E (疏通劑) ✓	Alcohol F (酒精) F
litmus paper	Blue: <u>red</u>	Blue: <u>Blue</u>	Blue: <u>Blue</u>	Blue: <u>Blue</u>	Blue: <u>Blue</u>	Blue: <u>Blue</u>
	Red: <u>red</u>	Red: <u>red</u>	Red: <u>red</u>	Red: <u>red</u>	Red: <u>Blue</u>	Red: <u>red</u>
✓ universal test paper	<u>orange</u>	<u>green</u>	<u>blue</u>	<u>green</u>	<u>purple</u>	<u>green</u>
	<u>2</u>	<u>7 or</u>	<u>9</u>	<u>7.5</u>	<u>10</u>	<u>7</u>
Acid-alkaline	<u>acidic</u>	<u>Neutral</u>	<u>alkaline</u>	<u>Neutral</u>	<u>alkaline</u>	<u>Neutral</u>

Aqueous solution- Acid-base property

Warmer

1. Which methods can we use to distinguish(區分) aqueous solutions ?

We can use our eyes, nose and litmus paper to distinguish.
We can't use our mouth, and finger to touch and taste it.

2. Fill in the correct solution

Baking soda(小蘇打水)	Vinegar	Salt water
Lime water(石灰水)	Soda	Sugar Water (糖水)

vinegar	Acidic and yellowish in color with an unpleasant smell.
Sugar water	Neutral and clear solution, smells sweet.
soda	Acidic, with bubbles in water, transparent and colorless.
salt water	Neutral clear solution, no smell.
baking soda	Alkaline, transparent and colorless.
lime water	Alkaline, with a layer of white substance on the surface, clear solution.

Language

acidic 酸性	alkaline 鹼性	vinegar 醋
litmus paper 石蕊試紙	red	blue

- I add a little vinegar to the dumplings(水餃).
- Litmus paper is red in acid solution.
- Lemon juice is acidic.
- Litmus paper is blue in alkaline solution.
- Soap is usually alkaline.
- Litmus paper is a test for acidity and alkalinity.

Experiment

Please confirm the following properties and fill in the correct solution name.

	Lemon Juice (檸檬汁)	Rainwater (雨水)	Soapy (肥皂水)	Detergent (洗潔劑)	Dredge (疏通劑)	Alcohol (酒精)
litmus paper	Blue: <u>red</u>	Blue: <u>blue</u>	Blue: <u>blue</u>	Blue: <u>blue</u>	Blue: <u>blue</u>	Blue: <u>blue</u>
	Red: <u>red</u>	Red: <u>red</u>	Red: <u>blue</u>	Red: <u>red</u>	Red: <u>blue</u>	Red: <u>red</u>
universal test paper	<u>orange</u> 2	<u>green</u> 7	<u>blue</u> 9	<u>green</u> 7.5	<u>purple</u> 10	<u>green</u> 7
Acid-alkaline	<u>Acidic</u>	<u>Neutral</u>	<u>Alkaline</u>	<u>Neutral</u>	<u>Alkaline</u>	<u>Neutral</u>