**Use your data booklet to complete the following.**

Identify whether the substance is an acid or a base and indicate the colour the pH indicator will turn.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Substance** | **pH value** | **Acid or Base** | **Methyl Orange** | **Bromothymol Blue** | **Litmus** |
| **Lemon** |  |  |  |  |  |
| **Ammonia** |  |  |  |  |  |
| **Milk** |  |  |  |  |  |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Substance** | **pH value** | **Acid or Base** | **Methyl Red** | **Phenolphthalein** | **Indigo Carmine** |
| **Tomato** |  |  |  |  |  |
| **Oven Cleaner** |  |  |  |  |  |
| **Egg** |  |  |  |  |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Substance** | **pH value** | **Acid or Base** | **pH indicator** | **Colour of pH indicator** |
| **Black coffee** | **5** |  | **Litmus** |  |
| **Battery acid** | **0** |  | **Bromothymol blue** |  |
| **Sea water** | **8** |  | **Indigo Carmine** |  |
| **Orange Juice** | **3** |  | **Methyl Orange** |  |

**Classify each of the following as an acid or a base.**

1. H3PO4 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 2. Mg(OH)2 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3. NH4OH \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 4. Has a pH of 4 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

5. has a pH of 9 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 6. Sulphurous acid \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

7. hydrogen bromide \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 8. Potassium hydroxide \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

9. causes methyl orange to turn red \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

10. causes phenolphthalein to turn pink \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

11. causes bromothymol blue to turn yellow \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_