

# GENERAL CHEMISTRY

## STANDARD 12.8

**12.8: Identify common indicators and the pH range they are used for**

# DEFINITIONS

- **pH indicator:** A solution that, when added in small amounts to a solution of unknown pH, the relative pH of the unknown solution will become visually apparent through a change in color of the indicator

# INDICATORS

Indicator Name	Low pH Color	Low pH Value	High pH Value	High pH Color
Bromothymol Blue	Yellow	6.0	7.6	Blue
Methyl Orange	Red	3.1	4.4	Yellow
Methyl Red	Red	4.4	6.2	Yellow
Phenolphthalein	Colorless	8.3	10.0	Pink
Phenyl Red	Yellow	6.4	8.0	Red
Thymol Blue	red	1.2	2.8	Yellow

**12.8: Identify common indicators and the pH range they are used for**

# EXAMPLES

- What pH indicator should be used when the equivalence point is near 6.6?
- What pH indicator should be used in a solution with a pH of 10.0?
- Which pH indicator(s) is/are yellow in a solution with a pH of 6.5?

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**Bromothymol Blue**
- What pH indicator should be used in a solution with a pH of 10.0?  
**Phenolphthalein**
- Which pH indicator(s) is/are yellow in a solution with a pH of 6.5?  
**Methyl Red, Phenyl Red, Thymol Blue, Methyl Orange**