

# DL 2150 system

## DL 2150-CH

### Kit of components for the study of **chemistry**

#### Composed of:

##### Sensors:

- Gas pressure sensor  
rubber-stopper assembly  
20 mL syringe  
plastic tubing with two connectors
- Temperature probe
- pH sensor
- Cables (for sensors connection)

##### Glassware and laboratory supplies:

- 125 ml Erlenmeyer flasks (2 off)
- 1 liter beakers (4 off)
- 400 ml beaker (2 off)
- 250 ml beaker
- 100 ml beaker
- test tubes (with different diameters)
- 100 ml graduated cylinder
- 50 ml graduated cylinder
- 10 ml graduated cylinder
- glass stirring rod
- pipette
- pipette bulb
- Styrofoam cup



#### List of experiments:

1. Vapor pressure of liquids
2. Freezing and melting of water
3. The Molar Mass of a volatile liquid
4. Acid dissociation constant,  $K_a$
5. Determining the enthalpy of a chemical reaction
6. Timed-release Vitamin C tablets
7. Household Acids and Bases
8. Endothermic and exothermic reactions
9. Effect of temperature on solubility of a salt
10. Determining the phosphoric acid content in soft drinks

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*The following accessories, not supplied, must be available in the school laboratory:*

Equipment:

- ring stand
- utility clamp (2 off)
- hot plate
- analytical balance
- magnetic stirrer (if available)
- fume hood
- stirring bar

Chemicals and similar elements:

- one 500 mg regular vitamin C tablet
- one 500 mg timed-release vitamin C tablet
- red and blue litmus paper
- methanol
- ethanol
- HC<sub>2</sub>H<sub>3</sub>O<sub>2</sub>
- 2.0 M hydrochloric acid, HCl, solution
- 2.0 M sodium hydroxide, NaOH, solution
- 2.0 M ammonium chloride, NH<sub>4</sub>Cl, solution
- 2.0 M ammonium hydroxide, NH<sub>4</sub>OH, solution
- citric acid, H<sub>3</sub>C<sub>6</sub>H<sub>5</sub>O<sub>7</sub>, solution
- baking soda, NaHCO<sub>3</sub>
- potassium nitrate, KNO<sub>3</sub>
- magnesium, Mg
- salt
- unknown volatile liquid fume hood

Other elements:

- wash bottle
- aluminium foil
- tissues or paper towels
- distilled water
- ice
- water
- needle

