

**ACETONE Ph.Eur SPECIFICATION**

| Sr.No.                | Test                        | Specifications                                                                                                                                                   |
|-----------------------|-----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1                     | Appearance                  | Volatile, clear, colourless liquid.                                                                                                                              |
| 2                     | Solubility                  | Miscible with water and with ethanol (96%).                                                                                                                      |
| 3                     | Identification              |                                                                                                                                                                  |
|                       | a) Relative density at 20°C | 0.790 to 0.793 at 20°C                                                                                                                                           |
|                       | b) Chemical test            | An intense red colour is produced which becomes violet with the addition of 3.5ml of acetic acid R.                                                              |
|                       | c) Chemical test            | A greenish-blue colour should be produced.                                                                                                                       |
| 4                     | Appearance of solution      | The solution is clear and colourless.                                                                                                                            |
| 5                     | Acidity or alkalinity       | On addition of 0.5 ml of 0.01M sodium hydroxide, solution should be pink.<br>On addition of 0.7 ml of 0.01M hydrochloric acid, solution should be red or orange. |
| 6                     | Relative density at 20°C    | 0.790 to 0.793 at 20°C                                                                                                                                           |
| 7                     | Reducing substances         | The mixture should not be completely decolourised.                                                                                                               |
| 8                     | Related substances (By GC)  |                                                                                                                                                                  |
|                       | a) Impurity A (Methanol)    | Not more than 0.05% v/v                                                                                                                                          |
|                       | b) Impurity B (IPA)         | Not more than 0.05% v/v                                                                                                                                          |
|                       | c) Impurity C (Benzene)     | Not more than 2 ppm v/v                                                                                                                                          |
| d) Any other impurity | Not more than 0.05% v/v     |                                                                                                                                                                  |
| 9                     | Matter insoluble in water   | The solution should be clear.                                                                                                                                    |
| 10                    | Residue on evaporation      | Maximum 50 ppm                                                                                                                                                   |
| 11                    | Water                       | Maximum 3 g/L                                                                                                                                                    |
| 12                    | Residual solvents (By GC)   |                                                                                                                                                                  |
|                       | a) Benzene                  | Not more than 2 ppm v/v                                                                                                                                          |
|                       | b) Methanol                 | Not more than 3000 ppm v/v                                                                                                                                       |
| c) 2-Propanol         | Not more than 5000 ppm v/v  |                                                                                                                                                                  |