**Chocolate**

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| **Chocolate** | **Parameter** | **Instrument** | **Chemical/Reagents** | **Standard limit** | **Reference** |
| Moisture | Vacuum Oven |  | NMT 1.5% | AOAC Official method 931.04  IS: 6287-1985 (Reaffirmed 2010) Methods of Sampling and Analysis for Sugar Confectionery] |
| Fat | Buchner funnel  Soxhlet apparatus | 8 M Hydrochloric acid  Petroleum ether  Sodium sulphate | NLT 25% | AOAC Official method  963.15  I.S 1163: 1971 Specification for Chocolate / I.S.I Handbook of Food Analysis (Part IX) 1984 page 20] |
| Non fat milk solids | Hot air oven | Petroleum ether  Sodium oxalate  Glacial acetic acid  Tannic acid solution  Methyl red indicator solution  Sodium hydroxide  Sulphuric acid | NLT 12% | AOAC Official method  939.02  I.S 1163: 1971 Specification for Chocolate / I.S.I Handbook of Food Analysis  (Part IX) 1984 Page 23] |
| Rancidity |  | Phloroglucin dihydrate |  |  |
| Acid Insoluble Ash in dilute HCl | Bunsen Burner  Muffle furnace | Dilute HCl | NMT 0.5% | AOAC Official method  932.03  IS: 3077-1972 Specification for roasted and ground coffee/ IS: 1163- 1992 (Reaffirmed 2009) Specification for chocolates/ I.S.I. Handbook of Food Analysis (Part IX) 1984 page 52] |
| Milk fat | Soxhlet extraction | Hydrochloric acid  Petroleum ether  Sodium sulphate | NLT 25% | AOAC Official method  989.05  IS: 1163-1992 (Reaffirmed 2009) Specification for chocolates and IS: 548- 1964 Sampling, Physical and Chemical Tests for Oils & Fats] |
| Cocoa solids | Centrifuge  Oven  Desiccator | Sodium oxalate  Ether | NLT 35% | A.O.A.C 18 th edn, 2005 Official Method 931.05 Cocoa solids of chocolate liquor] |
| Reducing sugars |  | Fehling A  Fehling B  Neutral lead acetate  Potassium Oxalate solution  Methylene blue indicator |  |  |
| Sucrose |  | Hydrochloric acid  Sodium hydroxide  Sodium carbonate | NMT 55% |  |
| Edible wholesome substances | Oven | Trichloroethylene |  | IS: 1163-1992 (Reaffirmed 2009) Specification for Chocolates] |
| Total protein | Kjeldahl flask | Sodium sulphate  Copper sulphate  Concentrated sulphuric acid  Sodium hydroxide  Ammonia  Methyl red indicator solution | NLT 20% | AOAC Official method  991.20  IS: 6287-1985 (Reaffirmed 2010) Methods of Sampling and Analysis for Sugar Confectionery] |
| Pb, Cu, Zn | Atomic absorption spectrophotometer Crucibles  Hot plate  Calibrated weighing balance  Muffle Furnace | Nitric acid  Water  Hydrochloric acid — (1:1)  Standard stock solution | Pb- NMT  2.5 mg/kg.  Cu- NMT  30 mg/kg.  Zn- NMT  50 mg/kg. | A.O.A.C 18th edn, 2005 Official Method 999.11 |