

Titration method	Electrode (pH/ISE& reference electrode)	Remark
Aqueous solution neutralization	Glass + saturated calomel	Glass electrode: Immerse it in water for more than 24h before use, wash it immediately after use and immerse it in water for storage. Saturated calomel electrode: the rubber plug of the small hole at the upper end of the electrode must be pulled out to prevent the diffusion potential from affecting the determination result. There shall be no air bubbles in the potassium chloride solution in the electrode to prevent open circuit. Make sure the saturation of the KCl solution.
	Antimony + saturated calomel	The surface of the antimony electrode shall be polished with fine sandpaper before use, and shall be washed and dried after use.
Oxidation-reduction method	Platinum + saturated calomel	Before use, pay attention that there is no greasy dirt on the surface of the electrode. If necessary, dip it in acetone or chromic acid solution, and then wash it with water and dry it.
	Platinum + tungsten	Tungsten electrode
Argentometry (Precipitation titration)	Silver+ double bridge saturated calomel	Before using the silver electrode, polish the surface with fine sandpaper, and then immerse it in the nitric acid solution (1+1) containing a small amount of sodium nitrate until the gas is released. Take it out and wash it with water. Reference electrode: The salt bridge sleeve is filled with saturated ammonium nitrate or potassium nitrate solution, and other precautions are the same as those of the saturated calomel electrode.
Complexometric titration	Mercury or ISE + saturated calomel	ISE includes calcium, copper, zinc, aluminum, etc.
Acidimetry of non-aqueous solution	Glass + double bridge type saturated calomel (Glacial acetic acid as solvent)	Use of glass electrode is the same as that of aqueous solution neutralization method. The salt bridge sleeve is filled with anhydrous ethanol solution of saturated potassium chloride, and other precautions are the same as those of the saturated calomel electrode.
Alkalimetry of non-aqueous solution	Glass + double bridge saturated calomel (Alcohol or acetonitrile as solvent)	Glass electrode and double bridge saturated calomel electrode are used in the same way as the nonaqueous acidometry
	Antimony + glass (Diethylamine, etc. As solvent)	The use of antimony electrode is the same as that of aqueous solution neutralization method.

Application	Electrode (pH/ISE& reference electrode)
Acid-base titration	PH composite electrode or separate electrodes
Water quality-Determination of alkalinity, bicarbonate and carbonate Reference standard: T/BHES 2 + 2023	PH composite electrode or separate electrodes
Determination of total acid in foods Automatic potentiometric titration Reference standard: GB/T 12456 + 2021	PH composite electrode or separate electrodes
Animal and vegetable fats and oils-determination of acid number and acidity-potentiometric method Reference standard: GB/T 5530 + 2018	PH composite electrode or separate electrodes
Petroleum products, determination of acid number Potentiometric method Reference Standard: ASTM D664 + 17	PH composite electrode or separate electrodes
Milk products-determination of acidity Reference standard: ISO 11285:2004	PH composite electrode or separate electrodes
Industrial circulating cooling water, determination of total alkali and phenolphthalein alkalinity Reference standard: GB/T 15451 + 2006	PH composite electrode or separate electrodes
Industrial circulating cooling water determination of carbonate alkalinity Reference standard: GB/T 20780 + 2006	PH composite electrode or separate electrodes
Standard Test Method for Acidity or Alkalinity of Water Reference: ASTM D1067 + 92 (1996)	PH composite electrode or separate electrodes
Volatile organic liquids for industrial use; Determination of acidity, Titration method Reference standard: ISO 750:1998	PH composite electrode or separate electrodes
Determination of acid value and acidity of plasticizer Reference standard: GB/T 1668 + 2008	PH composite electrode or separate electrodes
Glyoxal for industrial use, determination of acidity Reference standard: HG/T 3884 + 2006	PH composite electrode or separate electrodes
Seawater, determination of alkalinity-pH potentiometric titration method Reference standard: HY/T 178 + 2014	PH composite electrode or separate electrodes
Water quality, determination of chloride-Silver nitrate potentiometric titration method Reference standard: DB 61/T 1036 + 2019	Ag composite electrode or Ag indicator electrode + reference electrode
Water quality, determination of chloride--Mercuric nitrate titration method Reference standard: HJ/T 343 + 2007	Mercury composite electrode or mercury indicator electrode + reference electrode
Titration of Silver Ion with Thiocyanate Reference standard: GB/T 11067 1 + 2006	Ag composite electrode or Ag indicator electrode + reference electrode
Water quality, determination of barium Potentiometric titration method Reference standard: GB/T 14671 + 1993	Tetraphenylborate ion electrode & double liquid junction reference electrode
Determination of arsenic content Ammonium ferrous sulfate titrimetric method Reference standard: YS/T 240.8 + 2024	Platinum electrode + saturated calomel electrode

Methods for analysis of ground water quality determination of sulfide, iodometric method Reference standard: DZ/T 0064.66 + 2021	Platinum electrode + saturated calomel electrode
Methods for chemical analysis of tin concentrates Determination of iron content, Cerium sulfate titrimetric method Reference standard: GB/T 1819.3-2004	Platinum electrode + saturated calomel electrode
Water quality, determination of chemical oxygen demand Dichromate method Reference standard: HJ 828-2017	Platinum electrode + saturated calomel electrode
Iron ores, determination of total iron content Titrimetric method after reduction of titanium trichloride Reference standard: GB/T 6730.5-2016	Platinum electrode + saturated calomel electrode
Determination of Vitamin C by Iodometry	Platinum electrode + saturated calomel electrode
Determination of calcium in food Reference standard: GB/T 5009.92 + 2016	Calcium ion selective electrode & Saturated calomel electrode
Water quality, determination of calcium EDTA titrimetric method Reference standard: GB/T 7476-1987	Calcium ion selective electrode & Saturated calomel electrode
Determination of Chloride Ion Content in Waste Acid	Ag composite electrode or Ag indicator electrode + reference electrode
Determination of chlorite in water-chlorite	Platinum electrode + saturated calomel electrode
Determination of mercaptan sulfur in oil	Ag-S composite electrode
Determination of base number of petroleum	PH composite electrode or separate electrodes
Determination of titanium dioxide content	Platinum electrode + saturated calomel electrode
Determination of peroxide value of curry paste	Platinum electrode + saturated calomel electrode
Curry pastes-determination of acid value	PH composite electrode or separate electrodes
Determination of Calcium Content in Compound Calcium Granules II	Copper composite electrode
Determination of acid value of soybean oil	PH composite electrode or separate electrodes
Determination of citric acid	Platinum electrode + saturated calomel electrode
Determination of chlorite in water Non-volatile residual chlorine	Platinum electrode + saturated calomel electrode
Determination of carbonate content in alkaline battery electrolytes	PH composite electrode or split electrodes
Determination of the content of ferrous gluconate	Platinum electrode + saturated calomel electrode
Determination of total chromium content in chrome-manganese reagent	Platinum electrode + saturated calomel electrode
Determination of Total Iron Content in High Titanium Slag	Platinum electrode + saturated calomel electrode
Taurine content determination	PH composite electrode or split electrode