



C3.5.2 CONDUCTOMETRIC TITRATIONS

C3.5.2.2
Conductometric titration of a
hydrochloric acid solution with
pH measurement

Conductometric titration of a hydrochloric acid solution with pH measurement (C3.5.2.2)

Cat. No.	Description	C3.5.2.2
524 013	Sensor-CASSY 2	1
524 220	CASSY Lab 2	1
524 0671	Conductivity adapter S	1
529 670	Conductivity sensor	1
524 0672	pH adapter S	1
667 4172	pH sensor with plastic shaft, BNC	1
607 105	Magnetic stirrer mini	1
604 592	Stirring magnet, PTFE, oval, l = 40 mm, 20 mm diam.	1
664 103	Beaker, DURAN, 250 ml, squat	1
665 754	Measuring cylinder 100 ml, with plastic base	1
665 975	Bulb pipette, 10 ml, one mark	1
666 003	Pipetting ball (Peleus ball)	1
665 845	Burette, clear glass, 25 ml	1
665 816	Burette filling funnel plastic, 35 mm Ø	1
666 559	Burette clamp for 1 burette, roller clamp	1
300 02	Stand base, V-shaped, small	1
666 523	Stand rod, 450 x 12 mm diam., M10 thread	1
300 11	Saddle base	1
300 41	Stand rod, 25 cm, 12 mm Ø	1
666 543	Double, crossed boss head, 0...16 mm	2
666 555	Universal clamp 0...80 mm	2
674 6950	Hydrochloric acid, 0.1 mol/l, 500 ml	1
673 8410	Sodium hydroxide solution, 0.1 mol/l, 500ml	1
674 4640	Buffer solution pH 4.00, 250 ml	1
674 4670	Buffer solution pH 7.00, 250 ml	1

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	additionally required: PC with Windows XP/Vista/7/8/10 (x86 or x64)	1

In conductometric titrations, the equivalence point is determined by measuring the conductivity. This technique relies on the fact that dissolved salts dramatically increase the conductivity of a solution. Acid-base titrations or precipitation titrations can be tracked conductometrically.

In experiment C3.5.2.2, along with conductivity, the change in pH is also traced. It becomes clear that the two measurement methods determine the same equivalence point. This is attributable to the fact that the same chemical process is measured in different ways.