



C3.5.2 CONDUCTOMETRIC TITRATIONS

C3.5.2.1_p
Conductometric titration of a hydrochloric acid solution

C3.5.2.1_s
Conductometric titration of a hydrochloric acid solution using stand material

Conductometric titration of a hydrochloric acid solution (C3.5.2.1_p)

Cat. No.	Description	C3.5.2.1_p	C3.5.2.1_s
666 425	Panel frame C50, two-level, for CPS	1	
666 4659	Adhesive magnetic board 500 mm	2	
666 4662	Holder, magnetic, size 2, 11...14 mm	3	
524 0036	Holder for Mobile-CASSY 2, CPS	1	
524 005W	Mobile-CASSY 2 WiFi	1	1
524 220	CASSY Lab 2	1	1
524 0671	Conductivity adapter S	1	1
529 670	Conductivity sensor	1	1
607 105	Magnetic stirrer mini	1	1
604 592	Stirring magnet, PTFE, oval, l = 40 mm, 20 mm diam.	1	1
664 103	Beaker, DURAN, 250 ml, squat	1	1
665 975	Bulb pipette, 10 ml, one mark	1	1
666 003	Pipetting ball (Peleus ball)	1	1
665 845	Burette, clear glass, 25 ml	1	1
665 816	Burette filling funnel plastic, 35 mm Ø	1	1
300 76	Laboratory stand II	1	
674 6950	Hydrochloric acid, 0.1 mol/l, 500 ml	1	1
673 8410	Sodium hydroxide solution, 0.1 mol/l, 500ml	1	1
666 559	Burette clamp for 1 burette, roller clamp		1
300 02	Stand base, V-shaped, small		1
300 42	Stand rod, 47 cm, 12 mm diam.		1
666 543	Double, crossed boss head, 0...16 mm		1
666 555	Universal clamp 0...80 mm		1
	additionally required: PC with Windows 7 or higher with WIFI or USB connection	1	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 C3.5.2.1, an acid-base titration is performed in which a hydrochloric acid solution is titrated with sodium hydroxide. Because hydronium ions and hydroxide ions have very high conductivity, the equivalence point is easy to determine. During the titration, the conductivity falls at first because more and more hydronium ions are neutralised.



Beginning exactly from the equivalence point, it starts to rise again because then there is a surplus of hydroxide ions.