

Ethanolamines/Glycol Ethers

Tier 3 Procedure

Section Number: 642
Issue Number: 1.5
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Revision Date: 03-13-98
Title: Running A Catalyst Concentration Titration
References: Glossary Of Equipment Identification (Text # 114)

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642 Running A Catalyst Concentration Titration

1.0 Objective:

1.1 To provide step by step instructions necessary to properly conduct catalyst concentration titration analysis.

2.0 Responsibility:

2.1 It is the responsibility of the operator performing the task to ensure that this procedure is executed in a safe and efficient manner.

3.0 Special Notations:

3.1 Rubber gloves are recommended but not required.

4.0 Get Ready: Titrator Switches And Dials Should Be Set As Follows:

- 4.1 1. Power on; I1 on
- 4.2 2. L2 off; stop mode
- 4.3 3. L3 on; stand by mode.
- 4.4 4. Pen up.
- 4.5 5. Mm/100% vol at 200.
- 4.6 6. Stop % u off.
- 4.7 7. Auto control at 5
- 4.8 8. Min/100% vol at 15
- 4.9 9. Mv x 100 at ph = 7 (scale at right side)
- 4.10 10. Du/dvol setting.

- 4.11 11. Set at ph = 10.
- 4.12 12. Mv/ph normally 95-100.
- 4.13 13. U (cal. Factor) re-set at calibration.
- 4.14 14. Degrees c normal room temperature.
- 4.15 15. Damper switch in back of console must be on
- 4.16 16. Install the plug in reservoir/buret unit containing the appropriate acid.

5.0 Titration:

- 5.1 By squeezing the release trigger under the electrode assembly arm, raise the electrode(s) out of the electrolyte or buffer solution.
- 5.2 Place an empty beaker under the electrode(s)
- 5.3 Rinse the electrode with deionized water only.
- 5.4 Discard the rinses
- 5.5 Draw up 10.0 ml sample and put into a clean titration beaker containing a stirring bar.
- 5.6 Add 40 ml deionized water.
- 5.7 Secure the acid dispenser tube in the swivel ring holder at the front of the electrode assembly arm.
- 5.8 Position the dispenser tip even with the bottom of the electrode bulb.
- 5.9 Place titration beaker with sample under the Electrode(s) and lower the electrode/dispenser assembly into the beaker.
- 5.10 Turn on the magnetic stirrer (speed 3); make sure bar does not hit electrode(s).
- 5.11 Depress stand-by/measure switch (#3) so that I3 is off.
- 5.12 Allow pen to stabilize near 10% of scale (may take a minute or so).
- 5.13 Lower pen (depress switch #4) and roll chart paper forward so the pen is directly on a heavy line.
- 5.14 Mark this starting position on the chart.

- 5.15 Depress record/stop switch (#2) so I2 is on. This starts the titration.
- 5.16 When titration is completed depress record/stop switch (#2) so that I2 is off and I3 is on. (pen should be up and return to center position.)
- 5.17 Raise electrode/dispenser assembly above titration beaker.
- 5.18 Push refill switch on titration stand to refill buret.
- 5.19 Rinse electrodes in the 5 step procedure.
- 5.20 Place the electrode(s) in the ph 7 buffer solution.
- 5.21 To determine the results of the titration refer to the calculations section (page b-2) of the potentiograph e 536 manual.

6.0 Revisions:

Revision No. 1	02-19-93	Changed 642.5.5 to read: draw up 10.0 ml sample and put into a clean titration beaker containing a stirring bar. Changed: 642.5.7, 642.5.8, 948.5.9 & 642.5.17 took out pipette and inserted dispenser.
Revision No. 2	12-21-94	Yearly Review
Revision No. 3	03-29-95	Deleted the letter (X) in 5.9
Revision No. 4	04-27-95	Deleted 3.1 and 3.2 .Added safety note 3.1 "Rubber gloves recommended not required"
Revision No. 5	03-13-98	Deleted 2.1 Modified new 2.1 and 5.3