

Figure 17: Leakage Layer

10.4 Maintenance of the cathode chamber

When dismantling the cathode chamber (see Fig. 18), handle carefully to avoid touching the platinum wire, platinum mesh, or the hole walls. If the cathode chamber is contaminated, it may reduce electrolytic efficiency, prolong electrolytic time, increase blank current due to moisture absorption, or cause unstable titration. To clean, rinse the glass exterior and platinum mesh with acetone (avoid damaging the platinum parts), inject acetone into the chamber, seal the drying tube, and shake thoroughly — repeat as needed. Finally, pour acetone over the outer glass. Do not clean the electrode lead. If dirt remains, immerse the cathode chamber in vitriol as shown in Fig. 19.

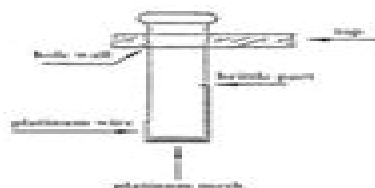


Figure 18: Dismantling of the cathode chamber

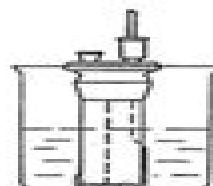


Figure 19: Immersion of the cathode chamber

Use a dryer with hot air to thoroughly dry the cathode, especially in areas where moisture is hard to remove (see Fig. 20). If any residual moisture remains, place the cathode chamber in a vacuum dryer and dry it for over 11 hours.

Karl Fischer DI 38 Operating Manual

Georg-Wilhelm Oetjen, Peter Haseley



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Annual Book of ASTM Standards ASTM International, American Society for Testing and Materials, 2003

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