

Figure 11.4. A plot of t/V versus V is used in filtration to calculate α and r_m .

specific cake resistance decreases as the concentration of filter aid increases. The filterability of fermentation broth is also affected by fermentation conditions. The pH, viscosity, and composition of the medium affect the cake resistance. Figure 11.6 depicts the effect of pH on cake resistance. Specific cake resistance decreases with decreasing pH. The coagulation of mycelial protein with heat treatment improves the filterability of the

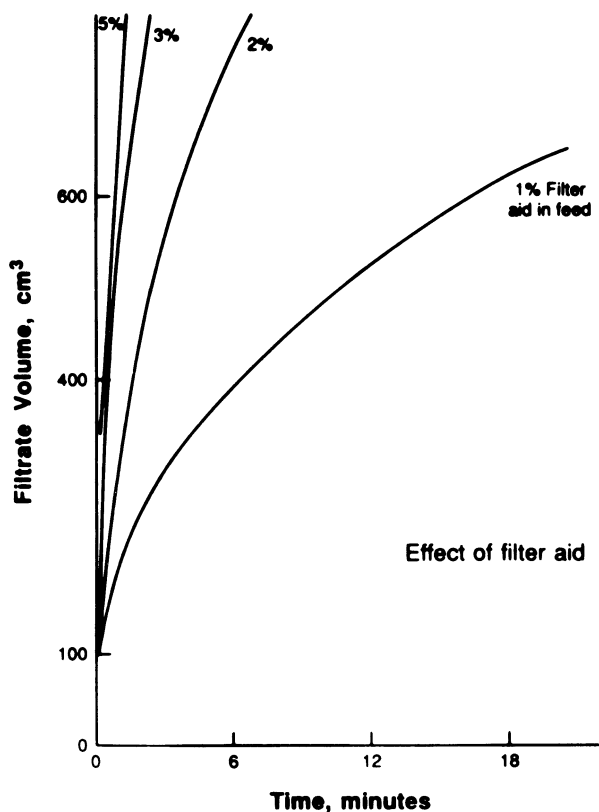


Figure 11.5. Effect of filter aid on the specific resistance to filtration of *Streptomyces griseus* broth (pH = 3.7 to 3.8). (With permission, from P. A. Belter, E. L. Cussler, and W-S. Hu, *Bioseparations: Downstream Processing for Biotechnology*, John Wiley & Sons, New York, 1988, p. 19.)