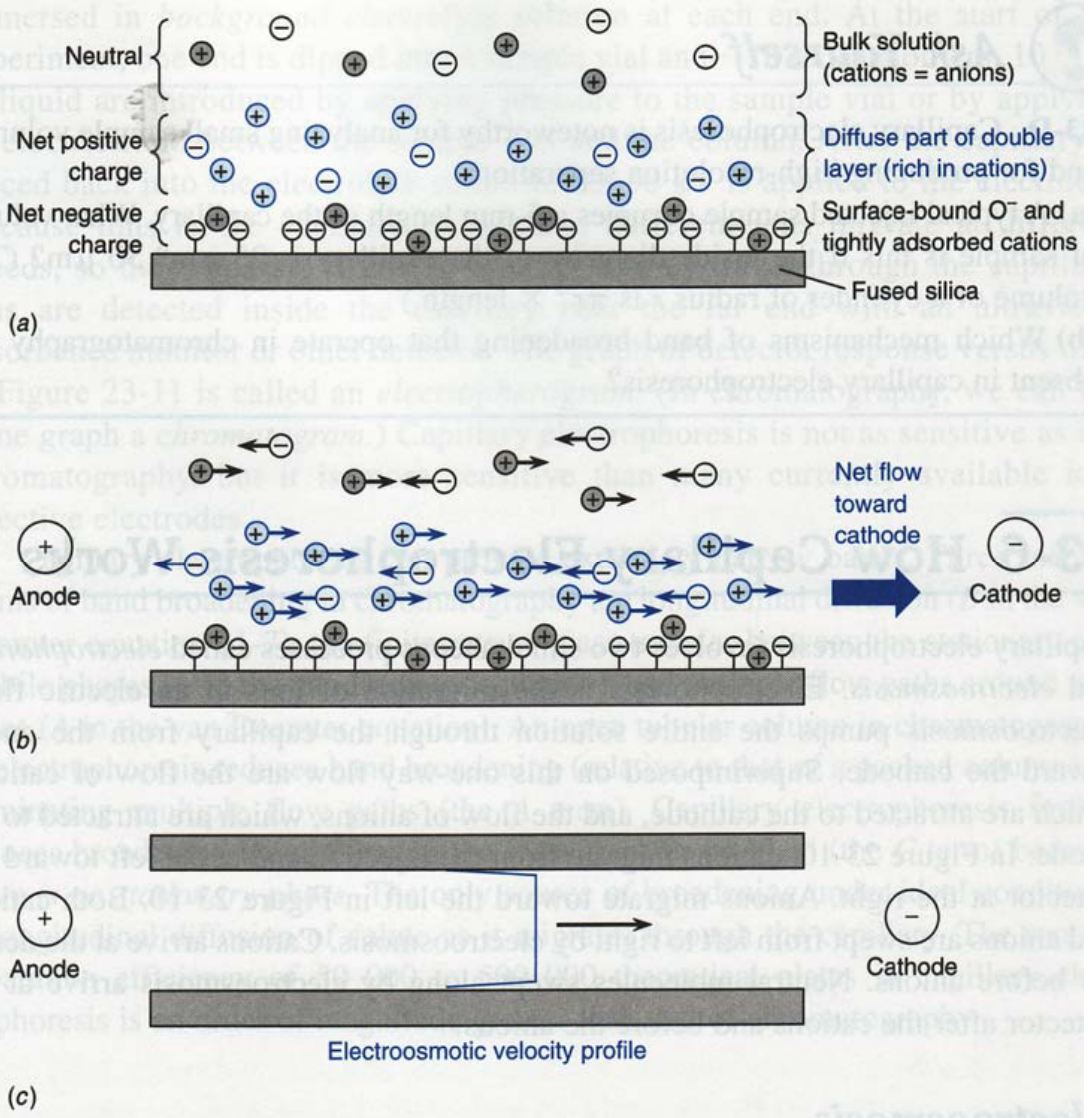

Figure 23-12 (*a*) Electric double layer is created by negative silica surface and excess cations in the diffuse part of the double layer in the solution near the wall. The wall is negative and the diffuse part of the double layer is positive. (*b*) Predominance of cations in diffuse part of the double layer produces net electroosmotic flow toward the cathode when an external field is applied. (*c*) Electroosmotic velocity profile is uniform over more than 99.9% of the cross section of the capillary. A capillary is required to maintain constant temperature in the liquid. Temperature variation in larger-diameter tubes causes bands to broaden.