Cleaning and Sanitizing Milk Lines, Milkers, Reservoirs

i) Soils -
   Organic - Fat, Protein, Sugar
   Mineral - Calcium

ii) Cleaners -
   Alkaline - good vs. organic
   add chlorine - becomes a chlorinated cleaner - breaks up film.
   Acid - good vs. inorganic soil
   Never use soaps.
   Effectiveness dependent on:
   Concentration
   Temperature
   Time
   Water hardness

iii) Sanitizers -
   Kills bacteria
   Follows cleaning cycle - just before next milking
   Chlorines:
   Less effective at alkaline pH
   Stores poorly
   Iodine:
   Less effective at alkaline pH
   Temperature sensitive (above 120° F)
   Quats (Quaternary Ammonium):
   Leads to off flavors if residue left
   Inhibits milk culture

iv) Procedure -
   • Pre-rinse - lukewarm water
   • Clean - alkaline (chlorinated) 140° F. Start at 160° F to keep temperature up.
   • Acid rinse 100° - 125° F
   • Sanitize

See UI College of Agriculture, Info Series #623, Milk Quality Reports, Fig. 3