

Filters, Water & Instrumentation, Inc.

Water Cycles of Concentration



Additive and Evaporative Cycles Of Concentration

Cycling Up or Down

While Cycles of Concentration is a simple concept to understand, it is a powerful concept in application within water treatment.

Cycles Up: Contaminant Level Increases

Cycles Down: Process Water Loses its Strength

Additive Cycles

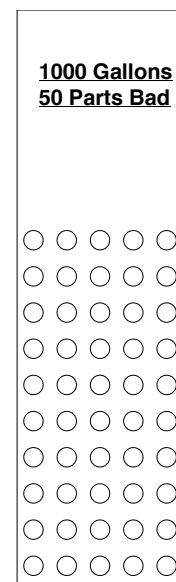
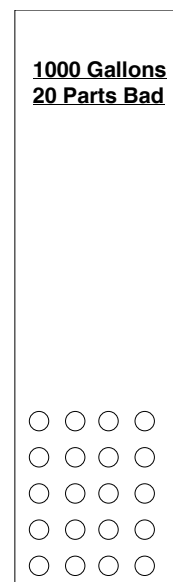
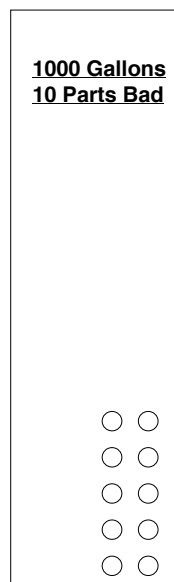
Additive Cycles are a steady increase in contaminant from the outside, which over time disturbs the process. A cooling tower which continually picks up dust from the air is a classic application of additive cycles. (See Cooling Water Systems). Another similar example is using a filter on a recirculation bath to remove the increase of particle and/or organic contaminant to extend the life of the bath.

1000 Gallons & 10 Parts is 1%.

1000 gallons & 20 Parts is 2 %.

1000 gallons & 50 Parts is 5 %.

Same Volume - Increased Number - Concentration Up



Evaporative Cycles

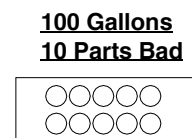
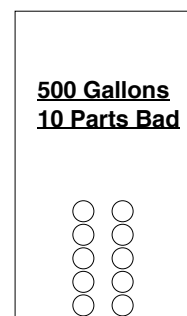
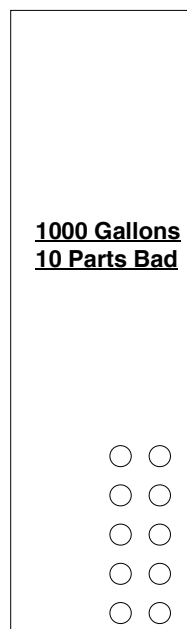
Evaporative Cycles happen every day. When water evaporates the dissolved minerals in the water remain behind and build up in the water over time. Staining and scale build-up result from the precipitation of the dissolved minerals- typically white or light colored. Deionized or Softened water is used to minimize this scale build up and staining. (See Ion Exchange Page).

1000 Gallons & 10 Parts is 1%.

500 gallons & 10 Parts is 2 %.

100 gallons & 10 Parts is 10 %.

Same Number - Reduced Volume - Concentration Up



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