STEUMA

Instruments

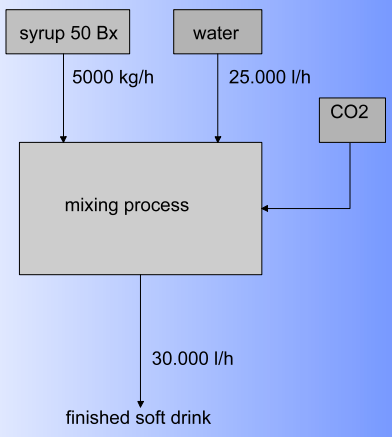
Financial Benefits of Syrup Saving

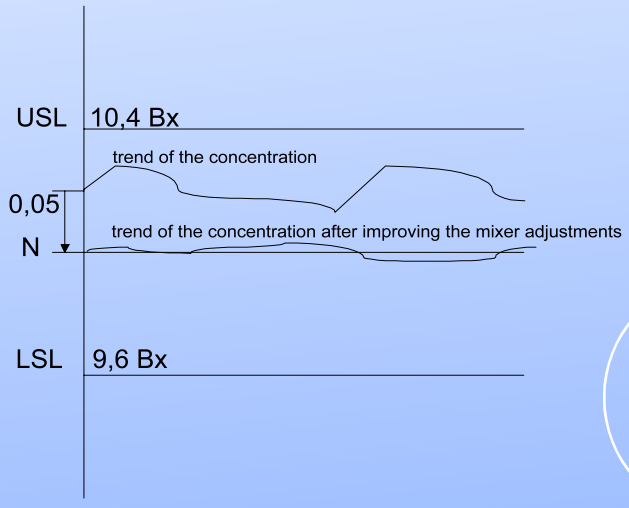
Behavior of the Mixing Process

Normally the adjustments of a mixing process are slightly higher than the optimum needed.
This is to ensure that no out of spec product will reach the filler.
This cautious approach must be taken because the behavior and deviations of the concentration at the point of mixing are unknown.

What can the Procan Beverage Monitor do ?

When the trend of the mixing process is measured and displayed the technicians are able to optimize the mixing process with the result that deviations in concentrations are minimized (increasing the Cpk value of the process). Now the average of the concentration can be set lower (to the default value).
Also the Lower Specified Limit (LSL) and Upper Specified Limit (USL) are controlled. The moment that the concentration exceeds one of these limits the Procan will provide an alarm and will stop the filling process. This eliminates the risk of faulty production.





Example of Calculation: for a standard mixing process

In this example:	
Target concentration of the soft drink	10,00 Bx
Nominal mixer settings including security range:	10,05 Bx

The Procan presents the characteristics of the mixing process and monitors continuously the LSL and USL of the product. This enables a lower mixer setting. It is reasonable to assume that the user can save at least 0,05 Brix .

So the average saving of syrup is:	0,05 Bx
This decreased average concentration of the soft drink brings a reduction of approx. 0,5% of use of syrup:	=> 0,005 * 5000 kg = 25 kg / hour
For a 16 hour production run:	=> 16 * 25 kg = 400 kg / production day.
Estimated syrup cost price: € 1,50 (normally the cost price will be higher)	=> €1,50 * 400 = € 600,00 / day
40 production weeks a year:	=> 40 * 5 * € 600,00 = **€ 120.000,00 / year**

Saving on syrup is only one of the benefits !!!! What about dCO2, dO2, Alcohol concentration, cleansing agent concentration (CIP)…..

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