Anton Paar

HACCP and Product Safety: Cover your critical points with Anton Paar

Relevant for: **All food and beverage manufacturers, mPDS 5 users, Davis 5 users**

Everyone's nightmare: CIP chemicals in your product!

Thankfully, it doesn't happen often, yet every manufacturer's nightmare remains a possibility. Components, safeguards and humans, can fail or make mistakes. Fortunately, a low cost conductivity sensor is the perfect option to prevent CIP contamination inline, when it's connected to Anton Paar's mPDS 5 Evaluation Unit and Davis 5 Data Acquisition Software.

Simple alarm settings save the day!

Dilute CIP solutions may produce similar alcohol and extract values to beer or soft drinks, even when no product is in the line. However, as shown in the table on the right, beer and soft drink conductivity is much lower than CIP solutions. Should a 0.2% NaOH CIP solution (~10 mS/cm) contaminate the product inline, a critical limit of only 3 mS/cm ensures control.

While product specific limits will ensure your process is truly under control and as nightmare free as possible, contamination can still occur downstream and only an organized HACCP plan can truly mitigate further hazards.

What is HACCP and how can mPDS 5 and Davis 5 help?*

- **Hazard analysis (HA):** Identify measures to prevent hazards.
  You know the hazards best and only you can really identify them.
- **Identify critical control points (CCP):** A CCP is any manufacturing point where specific controls can prevent hazards.
  You know the process; our sensors are installed at the CCP.
- **Establish critical limits:** A critical limit is the maximum or minimum value that must be controlled to prevent a hazard.
  You set the limits in the mPDS 5 and Davis 5.
- **Establish CCP monitoring:** Monitoring ensures the process is under control at each CCP.
  The mPDS 5 monitors the process, records data and displays alarms.
- **Establish corrective actions:** You define and explain the actions taken when critical limits are exceeded.
  Davis and mPDS issue alarms, stop production and warn employees.
- **Establish validation procedures:** Validation ensures the HAACP plan does what it was designed to do; ensure safe product.
  Davis 5 reports deliver the information you need to make decisions.
- **Establish record keeping procedures:** HACCP regulations require specific documentation of every aspect of the HACCP plan.
  Davis 5 archives all data on your server, safe and sound.

*For more information please see the mPDS 5 and Davis 5 manuals.

Typical Conductivity Ranges

Beer	1.2 … 2.3 mS/cm
Soft drinks	1 … 3 mS/cm
Milk	3 … 6 mS/cm
H_2O	~ 0.5 mS/cm
NaOH CIP	2% ~100 mS/cm 5% ~200 mS/cm
HNO_3 CIP	3% ~180 mS/cm 5% ~270 mS/cm

Other Related Anton Paar Instruments

Process Instruments

- mPDS 5 Evaluation Unit
- Davis 5 Data Software
- Inline Beer Monitor
- Cobrix 5 Inline Beverage Analyzer

Laboratory Instruments

- All Beverage Analysis Systems

Do you have any questions?

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