

Real-time analytical control of your API synthesis process

Is your API crystallization process truly under control between laboratory analyses?

In API manufacturing, what is not measured in real-time is often discovered too late. This self-assessment helps you evaluate your actual level of control over crystal form, conversion rate, and operator safety while identifying analytical blind spots within your process.

Checklist	Yes	No
Can you detect a polymorphic change during the crystallization reaction without waiting for lab analysis?	☐	☐
Do you monitor the reaction endpoint in real-time?	☐	☐
Have you ever lost a batch due to an undetected partial conversion from one polymorph to another during synthesis?	☐	☐
Is residual solvent concentration available in real-time within the reactor, without relying on sampling and delayed offline laboratory analysis?	☐	☐
Are process adjustments made during the reaction based on real-time data rather than waiting for laboratory results?	☐	☐
Does routine sampling create operator exposure or containment challenges within your process?	☐	☐
Do you know exactly when a polymorphic transition is likely to occur within your crystallization process?	☐	☐
If a process deviation were to occur between scheduled samples, could you identify it before the process step was completed?	☐	☐
Are most intermediate analytical checks performed inline or online, without relying primarily on offline analysis with delayed feedback?	☐	☐
Have you already evaluated the feasibility of a Process Analytical Technology to monitor one of your API synthesis processes?	☐	☐

How to interpret your score

8–10 Yes answers – Your analytical control strategy is already mature. Let's discuss where inline Raman spectroscopy could further strengthen your existing processes.

5–7 Yes answers – Analytical blind spots remain. A 30-minute discussion could help identify which process step would benefit most from real-time monitoring.

0–4 Yes answers – Your process currently relies heavily on delayed analytical feedback. Organizations in this category often gain the greatest value from inline Raman deployment. It is well worth evaluating seriously.

Discuss the feasibility of
Raman spectroscopy for
your API crystallization
process with an
Endress+Hauser expert.

Contact us today

Endress+Hauser 

People for Process Automation