

API-Mix

Real-time Multi-point Monitoring
for Mixing and Blending

Whole batch
homogeneity

Turbidity
& mean
particle size

Chemical
concentration

3D
mapping



Most pharma and chemical products are obtained by mixing and/or blending of solids and liquids. This can involve complex processes such as sedimentation, emulsification and dissolution. Large volume vessels are often used which can complicate the validation of the process, and lead to out-of-specification product, large volume losses and over estimated processing and mixing times.

The only solution is to perform **multi-point analysis** into and during the process. **API-Mix®** is the **only commercially available solution able to provide the required QC**. Processing times will be faster with **significant cost and processing benefits**.

Single vessel inspection

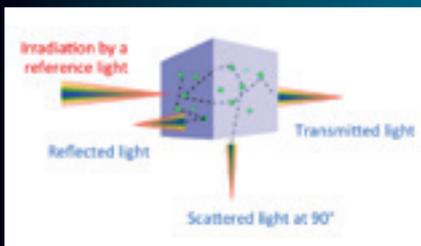


- Immediate analysis of multiple critical points.
- Automatic evaluation of **homogeneity**.
- **Detection of sedimentation**
- Mapping of mean particle size vs/depth
- **Mapping** of chemical concentration vs/depth.
- Ideal in process dev for mixing design (blade shape/speed/vessel) and scale up phase.

Continuous inspection from mixing to filling



- **Full inspection of the vessel, filling, processing & packaging.**
- **Sedimentation/unmixing identification within the pipe.**
- Optimisation of **cleaning time** for the full line.
- Particularly suited to flexible production lines : switch time and validation of **changes from product A to B**
- Product identification and flow monitoring in continuous processes



API-Mix at a glance

- SAM-Spec® and SAM-Flex® are a patented NIR-SRS optical technology
- Scattering of photons at different wavelength provide physical information
- Absorption provide the chemical information of the product
- Comparison of signals between different probes provides homogeneity level within the tank

typical Performances

Turbidity range	0->15000 NTU
Concentration accuracy	Typical 1% to 100 %
Mean Particle size	Min 200nm to 1000µm

21CFR Part 11 compliance
Full IQ/OQ/PQ support
GMP compliance

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