



caleva

PRODUCT INFORMATION SHEET

LABORATORY AND PRODUCTION

CALEVA

MIXER TORQUE RHEOMETER

Characterize the consistency of your wet mass
for **Formulation Development and Quality Control**

PRODUCT INFORMATION



WOULD IT HELP YOU IN WORK IF YOU COULD...

- Reduce your formulation development time?
- Optimize quickly the characteristics of your formulation?
- Confirm that products from different suppliers behave in the same way in your formulations
- Monitor small samples taken from production batches from your granulator for quality control?

You can do this when you are able to quickly, accurately and repeatably characterize the consistency of your wet-mass?

DESCRIPTION

The Caleva MTR provides quantitative data on the characteristics of granulations, regardless of whether they are simple or complex formulations, with different binders and different mixing times. It generates reproducible figures that can be incorporated into formulation development and production quality control saving both time and significant cost. The data can be used as part of scale-up and the instrument can also be used for quality control in production.

The MTR comprises a mixing bowl containing two horizontal, contra-rotating mixing blades. The secondary blade rotates at twice the speed of the primary blade. Since the bowl pivots about the primary drive shaft, the action of mixing a wet powder mass generates a torque, which is detected via a torque arm by a load cell.



The torque generated is directly related to the consistency of the wet powder mass in the bowl. The instrument is programmed via the PC to mix the wet powder mass for user defined time periods. The instrument can also be programmed to prompt for binder additions at user-defined intervals. The use of a automatic binder addition module removes the requirement for user intervention during such a test. This will free up operator time for other activities during the process.

DO YOU USE THE HAND SQUEEZE TEST?



IT'S QUICK, BUT...

- How can you work with something you can't accurately measure?
- Is this the way you determine the consistency of your granulation?
- Does it really tell you all you need to know about your product?
- Is this acceptable for you in the 21st century ?

- The MTR-3 is designed to help you to quantify the characteristics of your wet mass to allow you to optimize your formulation
- This will help you in your development work and your production profitability

IN YOUR FORMULATION DEVELOPMENT

- You can develop and test formulations **faster**
- You can look at formulations, using different binders and mixing times to solve formulation problems **quickly**
- You can **optimize** formulations to compensate for batch variations between excipients

FOR YOUR SCALE UP

- You can generate quantitative data to be used in a structured **scale-up** program for process development

QUALITY CONTROL FOR YOUR PRODUCTION

- Your QC can **routinely** test batches for consistency in a few minutes without any delay in your production increasing the effective use of your capital equipment
- Easy** to dismantle and clean, the MTR-3 uses a limited amount of bench space whilst being a powerful work horse for product development

HAVE YOU HAD SIMILAR ISSUES?

- Contact Caleva for more information about what the Mixer Torque Rheometer can do for you!

SEE HOW THE MTR-3 HAS HELPED OTHERS BY REVIEWING THESE APPLICATION NOTES BELOW

- A case study: [Problems with tablet friability](#)
- Application of mixture torque rheometer (MTR) as a tool in the [pre-formulation assessment of excipients](#)
- [Yield problems](#) in production and quality control
- [Save time and cost](#) in your product development
- [How reproducible](#) can I expect my MTR results to be?
- [How much product should be used](#) in an MTR and how accurate is it?
- Having problems with [inconsistent extrusion / spheronization](#) when using a difficult active ingredient?
- Determination of [moisture requirement to prepare spheroids](#) by extrusion and spheronization using the Mixer Torque Rheometer

FOLLOW THE QR CODE TO FIND THE APPLICATION NOTES ON YOUR COMPUTER OR MOBILE DEVICE



TALK TO US

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