INCIPIENTUS™

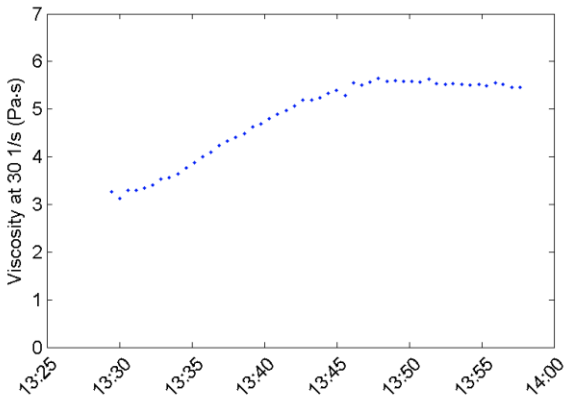
Chocolate

The tempering process is the most critical quality control step in chocolate production

Molten chocolate is a non-Newtonian suspension strongly affected by fat crystals formed during chocolate cooling and solidification. Chocolate flow behavior is extensively studied, and it is known that chocolate texture and stability is strongly affected by the presence of these fat crystals. Consequently, the flow of chocolate needs to be accurately measured and the process must be continuously adjusted to ensure product quality.

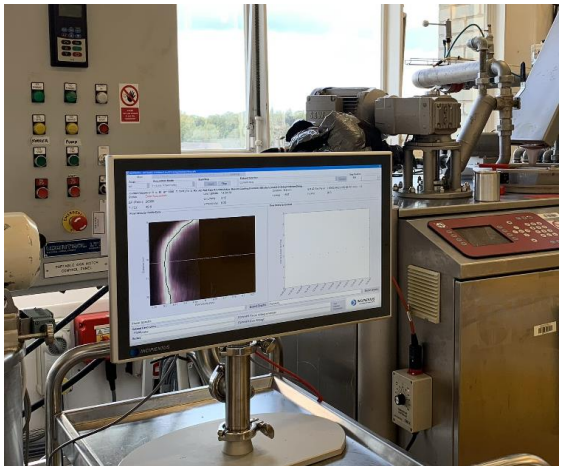
Incipientus has successfully completed a Proof-of-Concept test with a global snack foods company. Rheological characterization was achieved for tempered and untempered chocolate suspensions. By monitoring the viscosity the degree of temper can be determined in line and in real time.

"Instant results during dynamic processes"



Tempering process

Our ILR instrument was used to measure viscosity of tempered and untempered milk chocolate under real processing conditions in a chocolate manufacturing plant. The viscosity was monitored between ±42°C and ±30°C.



Industrial installation

Our instrument is installed with ease and is easy to use under industrial conditions. The flow image and complete rheograms are visualized in real time and data can be exported by a push of a button.

Benefits

In-line measurements of chocolate quality – no more off-line sampling.

Monitoring of tempering process.

Track chocolate throughput.

Acoustic properties linked to tempering process.