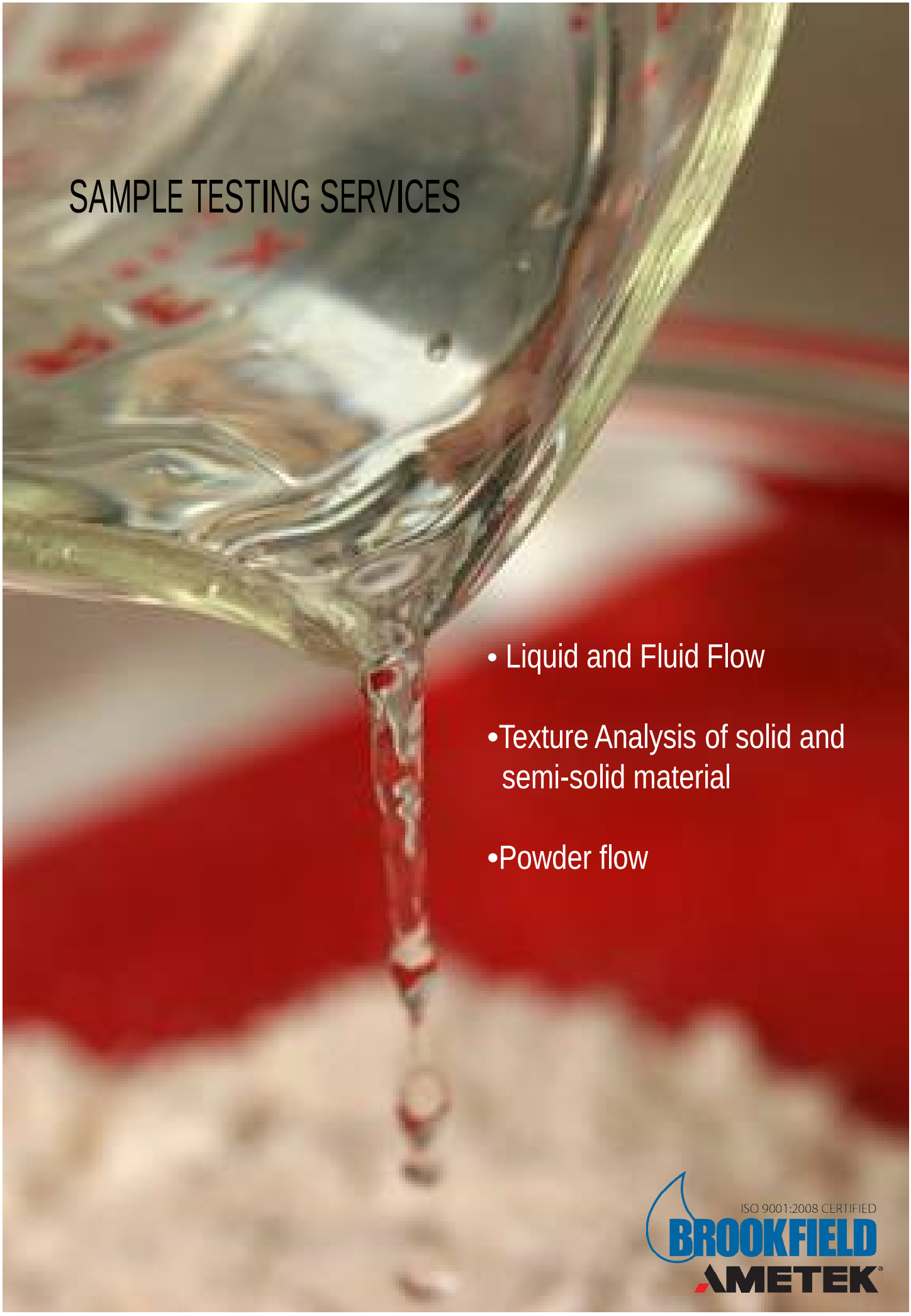
SAMPLE TESTING SERVICES
• Liquid and Fluid Flow
•Texture Analysis of solid and semi-solid material
•Powder flow
ISO 9001:2008 CERTIFIED
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Brookfield Sample Testing Services

Brookfield is now providing a testing service for all aspects of Viscosity, Rheology, Texture Analysis and Powder Flow. Our versatile instruments with various fixtures and accessories means that we are able to test a wide range of samples ranging from pharmaceuticals, cosmetics and personal care, food products, chemical materials and much more.

1. Viscometry / Rheology

As a world leader in viscosity measurements, it is no surprise that our fully trained staff have extensive experience in viscosity testing of a wide range of materials from liquids to pastes. Our fully equipped laboratory aims to provide the following services:

Fluid Profiling
To determine the flow properties of your fluid samples using our standard viscometers (DV-E, DV-1 Prime, DV2T, DV3T and CAP2000 viscometers) and investigate the Newtonian and non-Newtonian behaviour

For more sophisticated rheological measurements, we have our RST series of touch screen rheometers (RST-CPS cone/plate rheometer, RST-SST Soft Solid Tester, and RST-CC Coaxial Cylinder rheometer). These rheometers operate in both Controlled Shear Rate (CSR) and Controlled Shear Stress (CSS) modes providing simple single-point viscosity tests to more comprehensive rheological profiling.

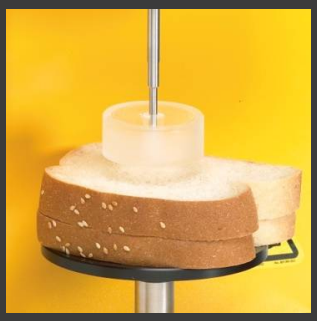
Temperature Profiling
To determine the effects of changing temperature on the flow properties of fluids

Yield & Creep Measurements
To evaluate material behaviour from initial yield stress through to the full flow curve at variable shear rates as well as obtain relaxation, recovery and creep properties

2. Texture

Is your product too firm or not tacky enough?
Do you wish to know how crush resistant your packaging materials are?
Is it the flexibility or elastic properties of your product that you're more concerned about? Or do you wish to objectively quantify how chewy or gummy your product is?

Whatever your texture requirements are, look no further for the CT3 Texture Analyser with its wide choice of accessories and fixtures can determine the textural and structural attributes of most products and raw materials across most industries. Its test mode of compression and tension makes it applicable to almost any solid or semi-solid material.



Springiness and firmness of bread

Set Strength of a gel

Burst strength of a blister pack

The Texture Analysis Testing Services will provide the following:

Texture Profile Analysis
A two-cycle test for the primary characteristics (firmness and adhesiveness) and secondary characteristics (chewiness, gumminess, cohesiveness, springiness, etc) of a product

Compression Testing
For the firmness, consistency, and adhesiveness of a material as well as the flexibility and fracturability for more solid-like materials

Tension Testing
For assessing the tensile strength of a material under investigation

Rupture
For the rupture force of solid-like materials

3. Powder Flow Analysis

A classic problem with powders is their failure to discharge reliably from storage containers such as silos, bins and hoppers. The powders may also incur unpredictable flow in dosing machines, feeders, and packaging machines. These flow obstructions can reduce the product quality due to variations in the mixture or variations in pack weight. Flow obstructions will also reduce productivity as the plant may need to shut down to correct the flow restrictions.

Avoiding flow obstructions requires using the right material for the plant. This will mean selecting the right raw material from your supplier. Powder quality will vary from multiple suppliers due to the variability in particle size and distribution, moisture content and ingredients used. The selection process of raw materials is therefore essential in quality control to overcome blockages during powder discharge. The Brookfield Powder Flow Tester (PFT) can be used to predict potential flow obstructions for a given powder thus enabling the manufacturer to be better informed when selecting raw materials.

The Powder Flow Tester (PFT) can also be used in product development. Formulators are constantly adjusting powder formulations in order to provide *new* and *improved* products that will meet and satisfy customer demands be it a better coating action for paints; increased solubility of chemical compounds or even enhanced flavourings in spices. In either case, modifying the powders ultimately means changing the flow properties. The Brookfield Powder Flow Tester can predict these changes therefore keeping the formulator well informed on any potential production problems stemming from these changes.

The Brookfield Powder Flow Tester will measure the flow properties of bulk solid materials ranging from food powders, chemical powders e.g., paint components (titanium dioxide), pharmaceuticals, construction materials (e.g., cement and gypsum), cosmetics, starch and many more.

The Powder flow testing service will provide the following:

Flow Function
For the measurement of the cohesive strength of a powder under varying consolidation stresses

Time Consolidation Flow Function
For the measurement of the strength of powder over time simulating storage conditions

Wall Friction
For measuring the friction between the powder and wall material interface for gravity discharge

4. Test Results

For any testing we do for you, a fully written report will be provided showing the following:

- Test Method used
- A display of the results in graphical format
- Analysis of the results
- Raw data as acquired from our instruments

We already have an extensive list of customers currently using our services for Viscosity measurements, Texture Analysis and Powder Flow.

To use our testing services, please contact Dr Claire Freeman at claire@brookfield.co.uk

For all other enquiries please contact our sales office at sales@brookfield.co.uk

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CT3 TEXTURE ANALYZER
CAP 2000+ VISCOMETER
WARNING
Pinch Point.
Keep hands and fingers clear.

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