



DIA-STRON
DELIVERING MEASUREMENT SOLUTIONS

Contract Testing Services



At Dia-Stron, our dedicated hair testing laboratory was established to provide local or global customers with a wide range of fibre/tress testing services to substantiate product claims. Our skilled laboratory staff and purpose-built instrumentation range enable us to conduct entire studies, big or small, in-house, and we are constantly evolving our instruments and techniques to meet the demands of new product innovations.

Our contract testing service provides an evidence-based claims support package, substantiating claims referring to the efficacy, benefits or improvements in hair attributes as a result of using your hair care products.

Our testing methodologies have been developed by experts with a wealth of practical experience in the hair care industry. If you have specific testing needs, we will also work with you to create a methodology that fulfils your requirements whilst meeting the highest globally-accepted testing standards. Our measurement methods are based on peer-reviewed scientific publications, and can be adapted to suit all hair ethnicities.

The Dia-Stron contract testing service is an **efficient, cost-effective way** to ensure you receive **valid, reliable and reproducible** results to support your product claims and benefit your customers.



What's included in our contract testing service:

- You can either send us hair samples pre-treated with your products/device, or send a sample of the product/device for us to treat high quality hair sourced by Dia-Stron.
- We will test hair tresses/fibres in line with pre-agreed methodologies that fulfil your requirements.
- You will receive a full test report including statistical analysis.
- Our industry experts can also provide additional feedback to help you evaluate your product's performance.





Claims Support

Hair Tresses

- Ease of combing/conditioning claims
- Detangling claims
- Manageability claims
- Softness/suppleness claims
- Curl retention claims
- Combability after styling claims
- Styling hold/flexibility claims
- Long lasting claims

Single Hair Fibres

- Anti breaking/strength claims
- Thickening claims
- Damage prevention/repair claims
- Hydration/moisturising claims
- Repeated grooming claims
- Heat protection claims
- Elasticity claims
- Depilatory cream claims



Tress Testing



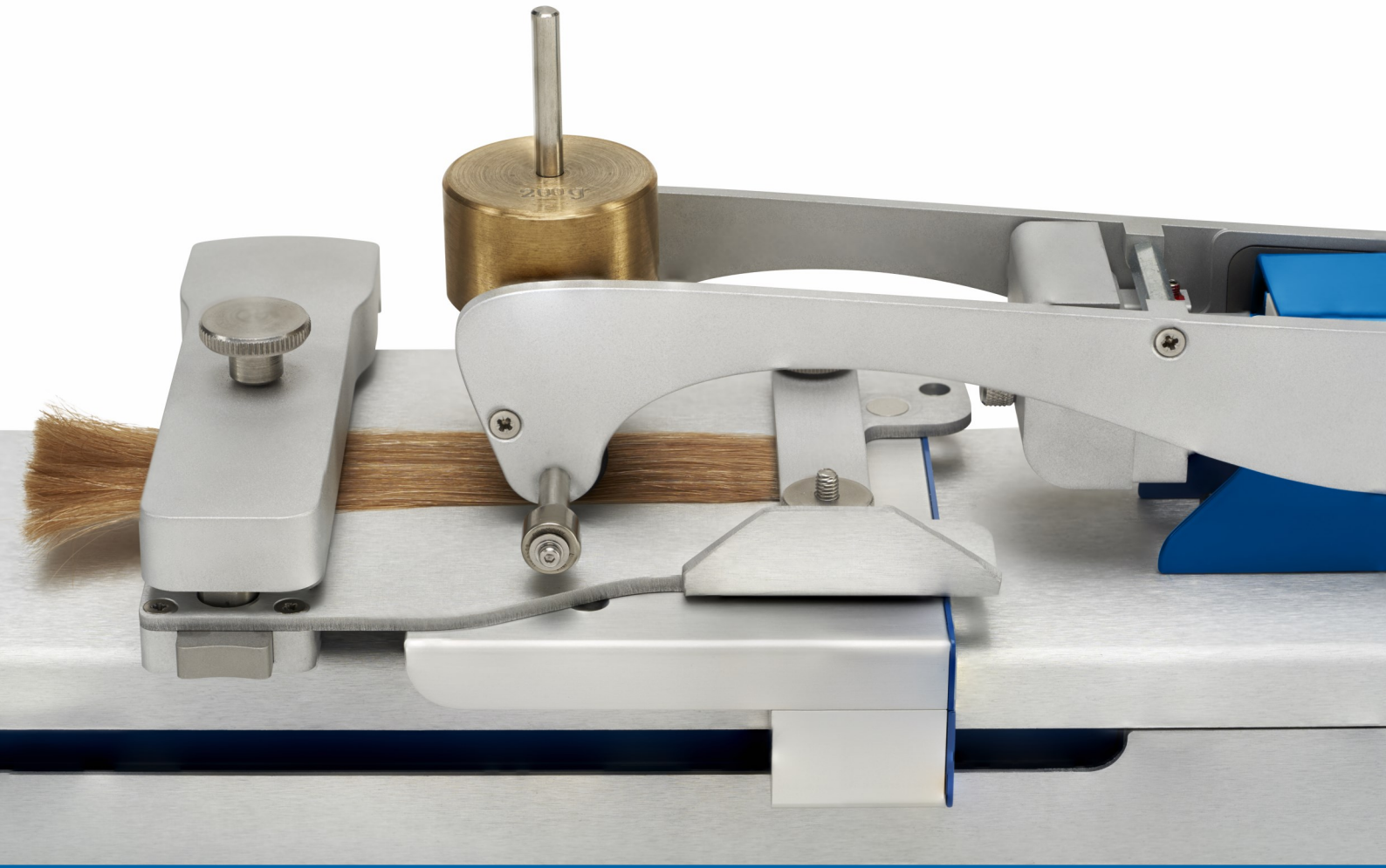
Combing

Combing studies are quick to conduct and provide information about the conditioning performance of a product. Hair combing properties correlate well with consumer attributes e.g. “ease of combing”, “manageability” or “detangling”. Can be performed on both wet and dry hair tresses.

3-point bending

Measures flexural properties of hair tresses. Commonly used for styling claims such as “hold”, “stiffness” or “feel” in the claims packages for styling polymers, hair gels and hair sprays.





Friction

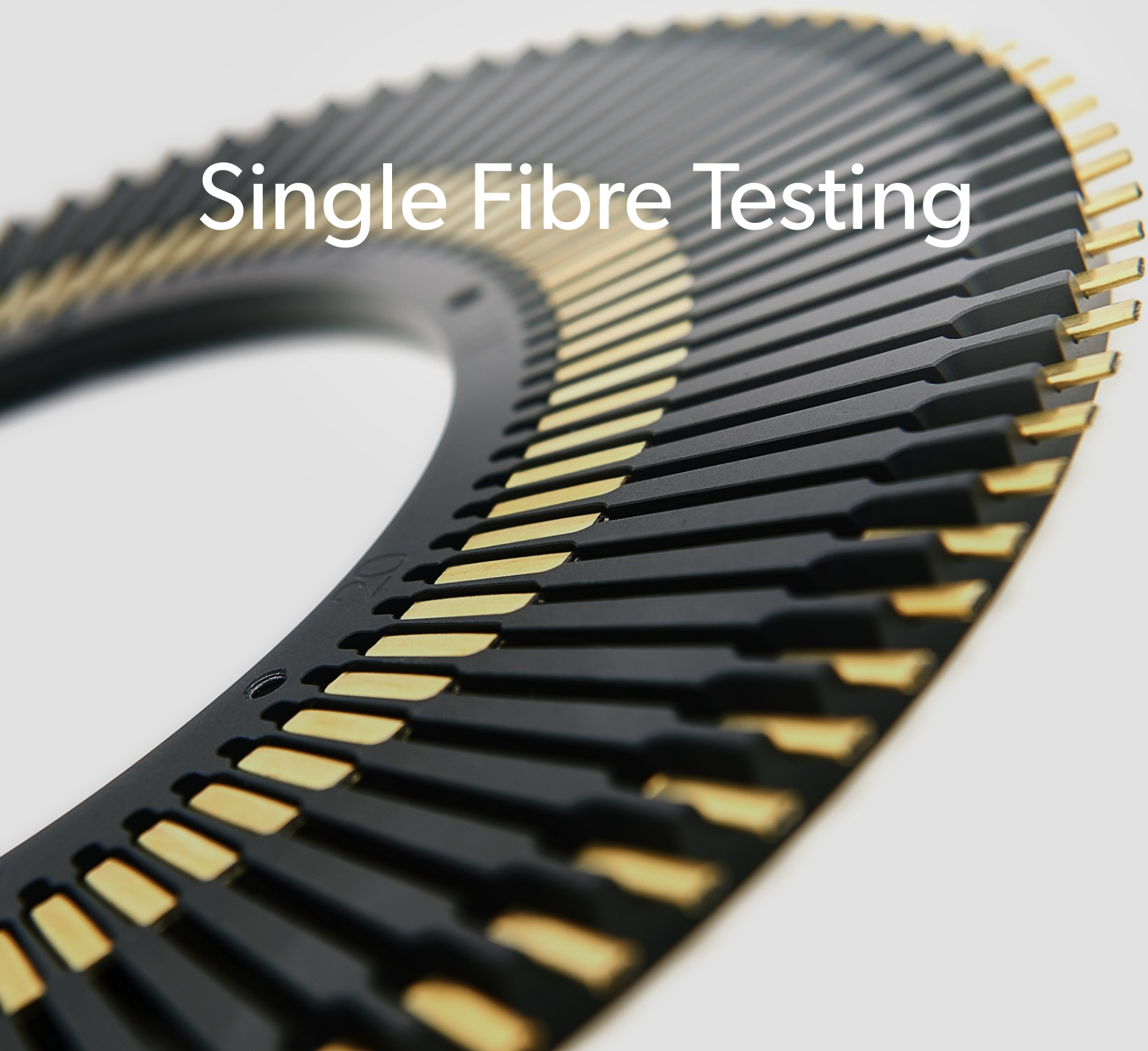
Combines a rubber probe which mimics hand/skin compliance and texture properties, and a base plate with mechanism for secure and quick hair clamping. Hair friction properties correlate well with consumer attributes such as “smoothness” or “surface damage” (e.g. heat, bleaching).

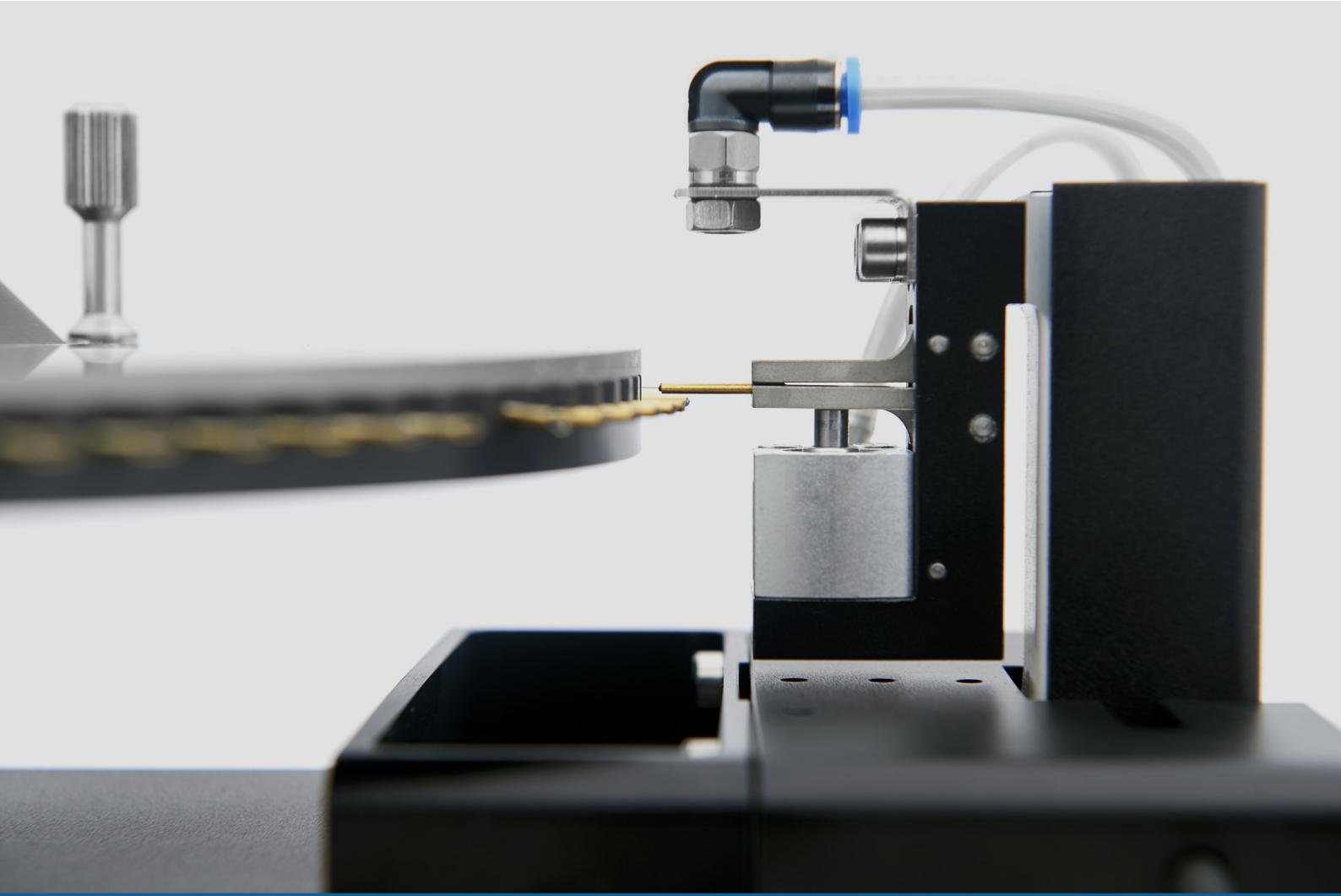
Curl compression

Measures the compression properties of circular hair curls formed from hair tresses as a technical test, predictive of consumer hair curl sensory feel. This method is perfect for “softness” or “curl retention” claims, for styling products such as hair gels, mousses, hair sprays, pomades as well as wash and care products.



Single Fibre Testing



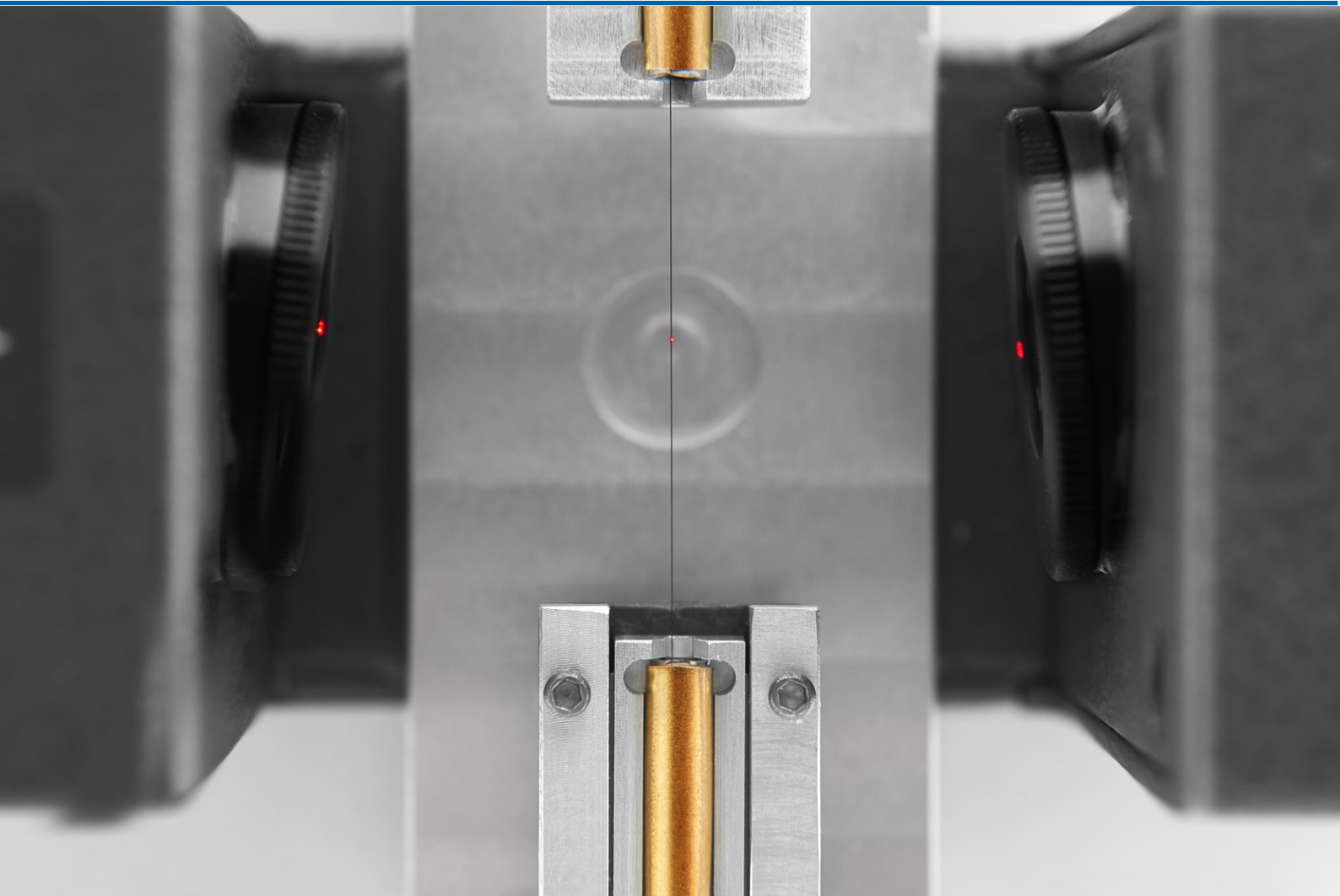


Tensile

Measures the tensile properties of single hair fibres by stretching them to a specified percentage or to failure. Can perform measurements on wet or dry fibres and is used to substantiate “strengthening”, “hydrating”, “elasticity”, “moisturisation” and “damage repair” claims.

Dimensional

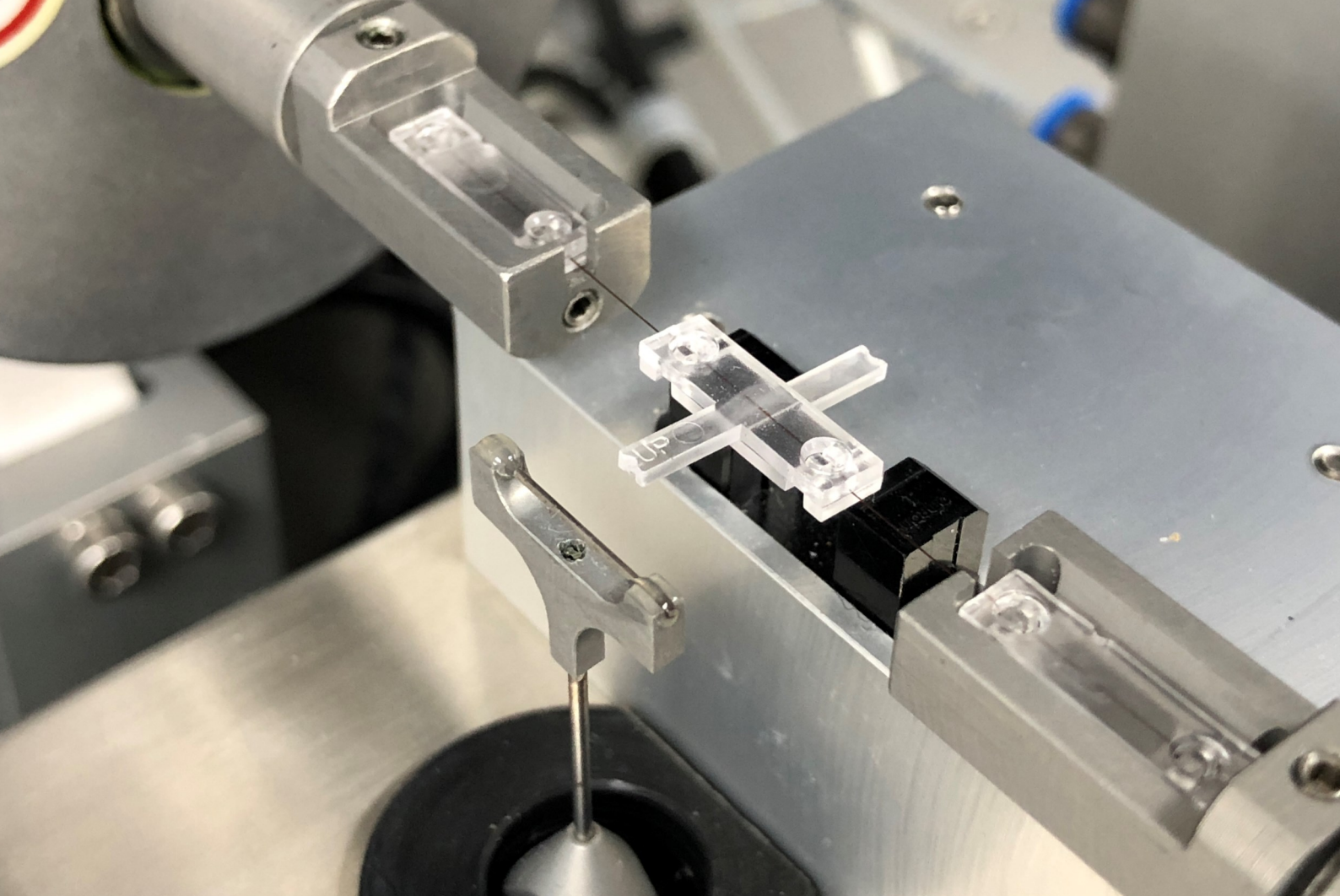
Dimensional properties of single hair fibres are measured using a laser scanning micrometer taking multiple readings as the fibre is rotated and translated, with the option to then calculate cross sectional area. A Dynamic Swelling Module (DSM770) can be incorporated for swelling and wet diameter measurements. Primarily used for “thickening” product claims or wettability performance, and to normalise mechanical testing with fibre dimensional data.





Cyclic Fatigue

Measures the dynamic strength of hair fibres by repeatedly stressing them to lower levels than required to break, simulating repeated grooming. An ideal technique for evaluating the damage caused by treatments (such as heat or chemical damage), and for claims relating to “strengthening” or “damage protection/prevention”.



Torsion

Hair fibres are pulled taught and twisted up to 360° against a balance, directly measuring torsional properties. Torsion is particularly useful to measure the impact of products and treatments on the hair fibre cuticle layers and cortex matrix e.g. oil treatments making hair fibres softer.

Bending

Based on the single cantilever method, where the fibre specimen is bent against a pin and the bending force is measured using a micro-balance. Applications include measuring how cuticle damage affects hair bending stiffness, impact of styling products on fibre rigidity and formulation development for mascaras and shaving products.





Whatever your needs, we can work with you to devise the most appropriate testing protocols for your requirements, including multiple treatments and heat damage. Our testing services are priced per group of samples, with prices varying according to the group quantity.

Prices are fully inclusive of: provision of hair fibres or tresses, sample mounting and consumables, treatment and/or damage and all testing requested.

Our timescales are extremely competitive, contact us today for a bespoke quotation and lead time!

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