



7 *tough questions
you should ask*

*before
you buy a
Texture
Analyser*



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“... not just a question of instrument specification versus cost...”

Introduction

Buying a Texture Analyser is not just a question of instrument specification versus cost. There are other factors which need your careful consideration before you place your order.

Among the most important of these are the issues of ongoing support and advice, custom test capability, versatility and software provision.

Obviously there are many unique aspects of your particular requirement, and which solution you choose may be a complicated decision; but in this document you may discover answers to at least some of the questions you have in mind. We hope that you will find it useful.



TOUGH
QUESTION #

1


Once I've bought the Texture Analyser, what support is available and how much will it cost?

So your Texture Analyser arrives and you're eagerly waiting to employ it to test your samples.

If you've never used a Texture Analyser before, you'll need help getting started, having someone to guide you through the features of the instrument and the possibilities within the software. You'll naturally need help from Texture Experts, to make sure you develop the most repeatable method for your product – with a clear understanding of how to analyse your results and meaningfully relate them to the questions they are trying to answer. After all, you have purchased the texture analyser for one or more of the following reasons:

“If you've never used a Texture Analyser before, you'll need help getting started...”

- To assess changes during storage or transportation
- Assess raw materials or excipients, semi-finished goods, packaging and finished products
- Determine the effects of formulation or processing variables on end product acceptability
- Determine the physical properties of your 'gold standard' product for future consistent quality control
- Substantiate your product claims
- Compare with competitive products
- Provide an objective quantifiable result which can be archived and retrieved for future viewing should you ever need to check back and compare with historical data.



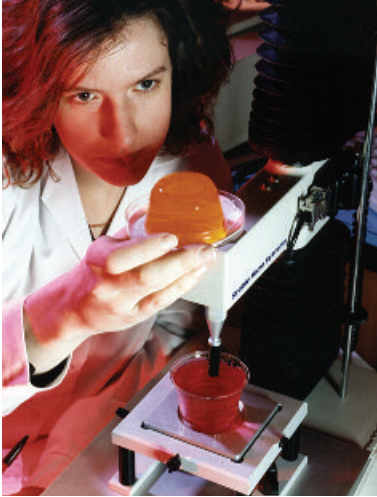
STABLE MICRO
SYSTEMS'
ANSWER #

1

Our promise to you – **FREE Technical Support** throughout the life of your instrument!

It doesn't get much better than that. We don't just manufacture texture analysers; we strive to provide our users with continual support to enhance their instrument understanding and to get the most universal use from their new tool.

What if you need help developing a method for your product? Our **Application Studies Library** is perhaps of primary importance to you. These studies demonstrate a viable test method for a wide range of specific products, and also act as an ideal starting point for studying



“What if, in the distant future, you need to assess a newly developed product?”

similar products. Detailed reports present typical results and interpretation. Test methods can be chosen by Product Type, by Probe/Fixture available, by Textural/Physical property or according to a Standard Method. And if you can't find something close enough to your own sample, then just contact us.

What if, in the distant future, you need to assess a newly developed product that clearly requires a different method? Just contact us, we'll be delighted to help you develop your new protocol and analysis project. Our online [Testing Advice Service](#) helps you get the most from your Texture Analyser by enabling direct contact to our in-house application laboratory, where all of our [Application Development](#) takes place and from which useful test advice can be given confidentially. We are confident that our laboratory services demonstrate our commitment to the 'complete system' philosophy.

Often customers have a requirement to train new staff, and coupled with the rapid advancement in computers and their operating systems, customers have the need to call us for technical advice. Our team of [Software Development and Support Engineers](#) are available to troubleshoot your software problems.

So, you've built up your confidence and have started developing methods of your own. Great - you're on your way to becoming a Texture Expert. However, you might just like us to check you're on the right track, and to ensure that your analysis makes sense and is optimised to your curve type. If you would like us to help you write a macro or special sequence for your Texture Analyser, our online [Macro/Sequence Writing Service](#) form will enable you to supply us with your bespoke analysis requirements, and receive a quick response to your question or issue.

Maybe you're a Texture Expert already and would just like to stay connected to us to keep abreast of new developments in the field of texture analysis that could be of interest to you. No problem - we extend our information branches from our [Twitter](#) feed, [LinkedIn](#) groups, [Texture Analysis YouTube Channel](#) and our [monthly newsletter](#). We make every effort to keep you informed.

Oh, and did we mention - it's **ALL FREE OF CHARGE!**



TOUGH
QUESTION #

2

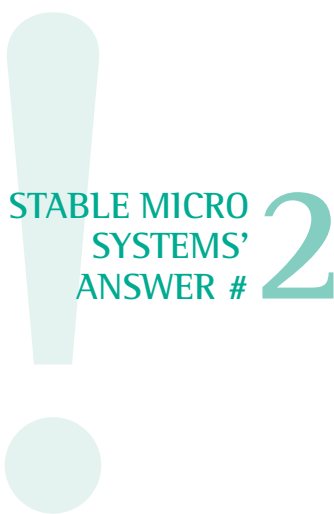
What if I need a special texture analysis solution to my specific texture related problem?

Many texture analysis tests, such as the Bloom Strength test for gelatin gels, are International Standards, whereas others are recognised as standard tests within an industry, such as Texture Profile Analysis for many food products.

To be successful, all of these tests depend upon the integrity of the Texture Analyser and the selection of the correct testing method, the manufacturing precision of the probe or attachment used and the accuracy of the analytical software to provide the results in a clear, concise format.

The main goal of many texture studies is to devise one or more mechanical tests with the capacity to replace human sensory evaluation as a tool to assess texture. Measurements that yield both fundamental and empirical product characteristics are well developed, whilst wide-ranging imitative tests procedures are also becoming increasingly important. Their relevance is in imitating a real-life situation, which permits far simpler data interpretation.

“The main goal... is to devise one or more mechanical tests...”



STABLE MICRO
SYSTEMS'
ANSWER #

2

Our Texture Analyser range with its wealth of application methods and the range of over 200 probes and attachments are the result of decades of experience in the design and manufacture of this equipment.

Whether you require routine measurements or undertake fundamental research, Stable Micro Systems provide you with an unmatched array of precision accessories – and the most comprehensive, unrivalled texture analysis software package available, to ensure the validity of your test results.

The choice of probe or fixture that you use will depend upon the sample's form, the property that you wish to measure or the action that you wish to perform. Fixtures are available to provide the required action of compression, extrusion, cutting, extending or bending the sample or to support, anchor or deform the sample in a customer-specific way.

Above all, we listen to you, the user, and constantly work to improve our products to suit your requirements. We are always enthusiastic to hear from users with suggestions on how we could improve or extend our range of accessories. In-house mechanical, electronic and software

engineers also provide us with the ability to design bespoke probes and fixtures to solve new testing requirements, or according to customer specification.

As a Texture Measurement professional, you may notice how frequently the inventions and innovations of Stable Micro Systems are copied by our imitators. However, such imitations often lose the subtlety and elegance of the original design and, in all cases, the application background and development understanding required for successful implementation. That is why, since 2007, all of Stable Micro Systems' original probes and fixtures

have been filed as European Community Registered Designs. We are the only texture analyser manufacturer to hold any texture analysis Community Registered Designs.

Our network of hand-picked distributors will be able to support your testing needs – but we also travel the globe to meet you.

No-one can design the solutions to meet your testing challenges like we can...



“Above all, we listen to you, the user...”




TOUGH
QUESTION #

3

What else will I be able to measure alongside Force, Distance and Time?

Typical Texture Analysis involves the collection and interpretation of Force, Distance and Time data. But you will, of course, want your instrument to be as universal as possible, regardless of your initial requirements.

After all, do you know what you might be asked to test next? So instead of just shopping for an instrument to meet your needs today, consider the additional measurement options that might be available to you. What if there were a whole host of optional attachments that could be connected to your Texture Analyser, allowing you to collect additional measurements simultaneously, or even to transform your instrument to perform another measuring function?



STABLE MICRO
SYSTEMS'
ANSWER #

3

Our *Plus* Texture Analyser range has been designed to incorporate multi-channel data acquisition ports to allow you to plug in peripherals for other measuring options.

This allows for many other measuring devices to be used in conjunction with your Texture Analyser and their data simultaneously collected and optionally plotted via a second y-axis. [Temperature and Humidity Modules](#) (for control and measurement), [PT100 Temperature Probes](#), an [Extensometer](#), an [Acoustic Envelope Detector](#) (for the collection of sound, for e.g. crispiness assessment), a [Video Synchronisation System](#) - all of these are easily connected to the back of the instrument.

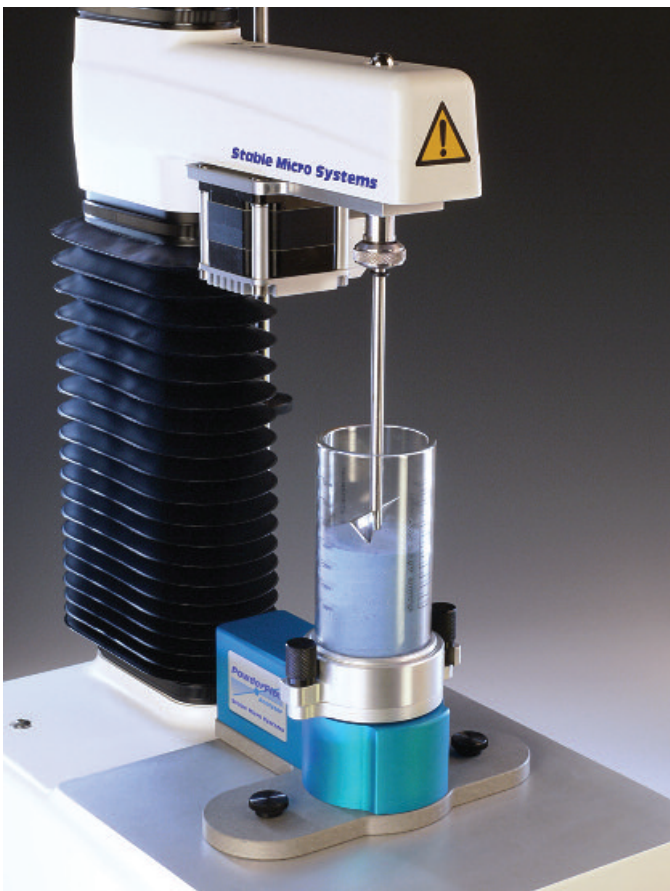
*“This allows
for many other
measuring
devices to be
used...”*

A [Vernier](#) (allowing linear distance measurements to be fed directly into *Exponent* software as part of the test sequence) or [Barcode Scanner](#) (enabling a product barcode to be scanned to automatically select the correct project ready for testing, allowing automation and reducing user error) may both easily be connected to your PC and are able to communicate with *Exponent* to effectively perform their task.

The ability to automate your testing, with an [Integrated Sample Indexing System](#) to speed up your sample measurement throughput, may be a future efficiency decision. Later, you may wish to provide additional safety measures by performing your Texture Analysis within a [Safety Interlock Cabinet](#).

“... so much more than Force...”

For complete testing transformation, attach a **Powder Flow Analyser** and you can measure the flow properties of powders. For bakery research, a **Dough Inflation System** allows pressure information to indicate the bi-axial extensional properties of dough.



Whatever data you collect, you can plot in almost any axis arrangement you wish (so long as it obviously makes sense to) with a wide range of unit options.

The quality of the data will also be extremely important to you which is why we provide data acquisition rates of 500 points per second. If you're looking to test samples that fracture or have events that occur quickly during a test you'll need to collect as much test detail as possible. Alternative texture analysers providing low data acquisition rates will not be able to measure fracture quickly enough. The same is true for the measurement of stickiness if this product property is important to you. This parameter will also require the ability to accurately control the force applied to the sample before pulling away. The lack of applied force control will make the measurement of adhesive characteristics impossible. You'll need to make sure that the instrument you have in mind is suited to the measurement application and provides the

accuracy and repeatability that you require to make informed decisions regarding your product quality.

No other instrument is as versatile or adaptable as ours – we measure so much more than Force...

TOUGH
QUESTION # 4

Will you be able to teach me everything I need to know about texture analysis?

So you are up and running with your instrument and have built up the confidence to start investigating new testing possibilities and branch out from your initial experience.

You'll probably want to see what others are doing in the field of texture analysis, try out new data analysis techniques and investigate different ways of expanding the use of your instrument. If you're quite new to texture analysis, you're most likely to want to increase the foundation of your knowledge by reading background material within this field. You'll also be interested in what resources are available to you to better understand this area of science and its principles.

STABLE MICRO
SYSTEMS'
ANSWER # 4

No-one knows more about Texture Analysis than we do... introducing the *Education Zone*.

Our unique [Education Zone](#) consists of comprehensive learning material in Help File format, and contains animations to make the explanations as simple as possible. As well as the hundreds of unrivalled built-in testing [projects and methods](#) which we have developed as [Application Studies](#), we collate as much as possible of the internationally published data which uses a Stable Micro Systems Texture Analyser in its methodology. These references are highlighted to you as [Abstracts](#) and split by industry and specific products. Equally important to us, this enables us to keep abreast of new methodologies and data analysis techniques. In this way, we ensure that we continuously improve the capability of the range of instruments and software, to meet the needs of our users and their ongoing requirements and developments.

“You'll probably want to see what others are doing...”



Our section on [Data Analysis Techniques](#) will give guidance on understanding the ways to analyse your curves and the calculation options available to you. The range of data analysis techniques is unmatched anywhere in the world. [Tutorials](#) will guide you through basic procedures of using the software step-by-step, whilst our [Video Library](#) will allow you to access a comprehensive collection of tests or fixture arrangements that you may not have seen before.

When you're ready to teach others about your work and present your data, you may also include these in your presentations – be our guest!

TOUGH
QUESTION #

5

Will I be able to test all my current products with your equipment and meet future needs?

“... your passport to the advancing world of texture analysis...”

At the time of shopping for the right Texture Analyser for you, you might be purchasing to meet a specific current testing need – or be constrained by a certain budget.

At this point, however, it's important to not be focussed exclusively on today's needs when you'll want your Texture Analyser to last you well into the future – including potential projects, of whose requirements you are not yet aware.

You'll need to know what you can add in the future to expand your possibilities. After all, you're sure to want the best value for your money.

STABLE MICRO
SYSTEMS'
ANSWER #

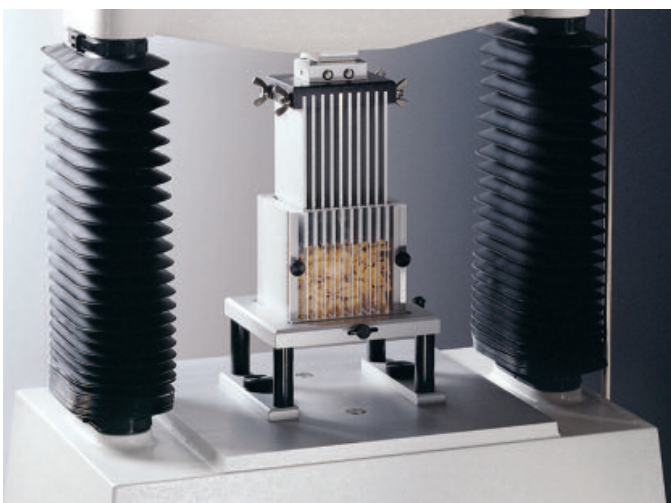
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On so many occasions, we have met with people who went for the cheapest texture analysis solution that seemed to fit their short-term testing needs at the time.

At a later date when they've tried to increase their envelope of testing for new projects, they have realised the limitations of their choice.

Buying a **Plus model Texture Analyser** is your passport to the advancing world of texture analysis. Our range of Texture Analysers is internationally recognised as **the “complete” instrument**, and our customer satisfaction is unrivalled. We've designed our Texture Analyser range to accommodate interchangeable load cells from 0.5kg up to 750kg (for twin column models), allowing attachment of the widest range of probes, fixtures and attachments in the field, to provide flexibility and universal application of your Texture Analyser for all of the things you need to test.

Because we are constantly evolving our software, you can be sure that new features and techniques will be incorporated and at your disposal in the future, to keep you at the forefront of texture analysis. Hundreds of sample projects are in place for customers to use, modify or extend, to optimise their specific testing and analysis requirements.



TOUGH QUESTION # 6

Can I easily share and compare my data with my overseas colleagues?

You're probably either the only person in the lab in a small company, or part of a team within a national or international corporation.

“...you'll need to report your data...”

Either way, at some point you're likely to need to report your data, share your results or compare your texture analysis with other testing locations. The ability to send your data in a wide range of formats to others without texture analysis software, or receive data of all ages to overlay and compare with your own, will be important to you. You'll also either want a quick way of emailing a curve or report, or options available to you to display, manipulate and design layouts for your data to be presented or archived in a certain format.

STABLE MICRO SYSTEMS' ANSWER # 6

Exponent software has data sharing, sending, comparing and displaying as fundamental issues of its use.

We allow you to design projects, macros, result spreadsheets and reports to suit your requirements and always assume that at some point you will want to share, distribute and overlay your historical data for comparison purposes. We've inserted 'Mail To' buttons wherever possible and provided a wide range of file formats for curves (.jpg, .bmp) spreadsheets (.xml, .html, .tab) and reports (.pdf, .rtf) so that recipients, who maybe

don't have *Exponent* software, have other options available to view your data.

Comparing your data with others, or data you obtained months ago, by overlaying curves, is of key importance to your analytical use of the software – that's why the number of curves you can fit onto one axes is endless (and not limited to the viewing of one curve at a time like alternative texture analysis software) and you'll always be able to read your data – no matter how old it is.



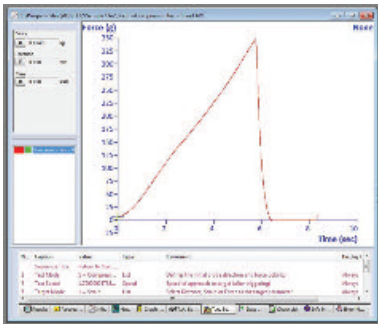
TOUGH QUESTION # 7

What are my software options and will the software be updated regularly?

If you've ever bought software before, you'll probably be aware that whatever version you buy today may be superseded by another version in the future.

You'll be wondering if future versions will be at any cost to you and whether you will need to buy any additional features – for example, more data analysis options.

If you're new to texture analysis, you may prefer to go for a more basic, no-frills software package, but be aware that once your understanding in this field increases, it's only a matter of time before you'll want to branch out and incorporate some more sophisticated measurements or data analysis techniques. You'll need to make sure that you have the option to do this or – if you know your limits – be comfortable that your existing software type will last you well into the future, as new PC technologies and operating systems forge ahead.



STABLE MICRO SYSTEMS' ANSWER # 7

We have long recognised the need to constantly expand the wealth of possibilities of testing, presentation formats and analytical solutions in our *Exponent* software.

However, we also recognise that a considerable percentage of users require a simple test and data analysis solution, that users may be testing in a high-throughput production environment at varying skill levels, or that users require a quick, easy-to-operate method on an infrequent basis. For this reason we offer two software options: *Exponent* (offers sophistication and flexibility) or *Exponent Lite* (offers simplicity, while permitting an upgrade to *Exponent* at a later date if required).

Regardless of what package you initially choose, we can assure you of unmatched, continuously-enhanced software – with updates available to download free of charge from our website. If you're on our newsletter mailing list, we'll email you automatically to tell you there's a new version available to download. Updates include new features that have been suggested by our users, additional application studies written for your interest, sample project files included for your use and extension of our abstracts that highlight the use of the Texture Analyser in scientific research.

Stable Micro Systems can guarantee that *Exponent* software is operational in the latest Windows operating systems. This is important to consider as, when your laboratory computer goes down and a new one is installed, you're likely to have a newer Windows operating system. As far as we know, alternative texture analysis software does not operate with Windows 7 and higher – but we're checking the future is fully-functional for you all of the time!

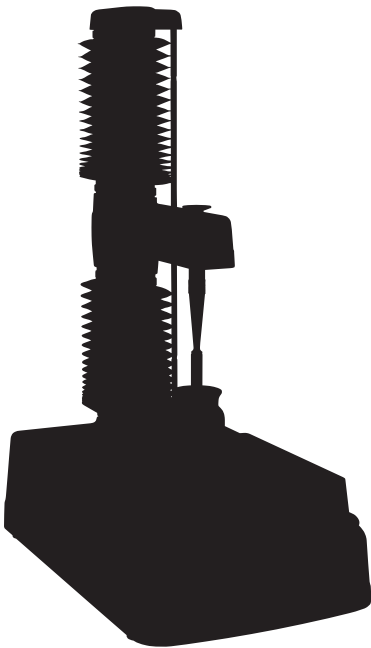


Conclusions

The world of texture analysis is one of constant development, and scientific discovery. Always advancing into new and often unexpected fields of testing, it is an exciting and absorbing area of research, and one which is also of considerable commercial importance.

Whatever your requirements, whether at the most complex end of the product development spectrum, or in the demanding if repetitive area of quality assurance, you need to think carefully about how you can achieve the best possible value for your budget. Bear in mind that the availability of in-depth education, specialised test design services and free testing advice is especially important as you start work on your early texture analysis projects. While there may be alternatives which are apparently cheaper, there is no real substitute for many years of scientific study, engineering development and ground-breaking software authoring.

In short, Stable Micro Systems' *Plus* Texture Analysers and *Exponent* software offer you a blend of capability, expandability and value for money which is quite simply unmatched anywhere in the world.



The Author

Jo Smewing has worked for Stable Micro Systems since 1994. She has managed the application laboratory, where she has developed specific texture analysis methods for the food industry.

Now, as Business Development Director, she heads the development team of the company, which involves co-ordination of electronic, software and mechanical engineers in the generation of new products.

Jo regularly writes magazine features across a range of industries including food, pharmaceuticals, cosmetics and adhesives and has published several papers based on texture analysis.

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