

Many technologies are available for measuring protein size and choosing the right one for each individual circumstance can be challenging.

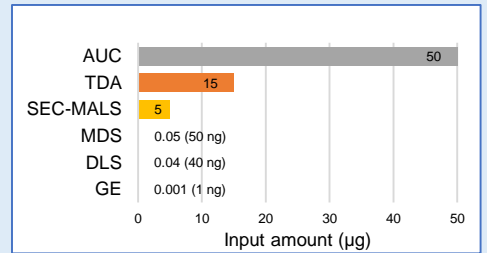
It is always appealing to use whatever method is available; however, it is always worth considering what other technologies are available and whether they may be more suited to your specific requirements, whether that is speed, ease-of-use, sample amount available or another factor.

To help support your decision making, we have created this simple technology comparison guide, incorporating a number of commonly used protein sizing techniques and their key attributes.

How much sample is required?

### Sample amount

The amount of sample required can be a limiting factor for many protein sizing technologies. For example, AUC typically requires as much as 50 µg of sample for accurate analysis. For precious samples, technologies such as gel electrophoresis (GE), DLS and MDS, which require >1 ng, 40 ng and 50 ng of sample respectively are more suitable.



### Speed

Speed of analysis can be important in certain circumstances such as QC.

A number of protein sizing technologies are now available that offer protein sizing within just 15 minutes (e.g. MDS, DLS and TDA), providing rapid access to results.

How quickly do I need an answer?

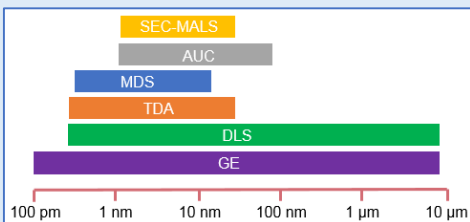
How much experience do I need?

### Ease of use

Protein analysis technologies are generally becoming more integrated and easier to use, with less hands on time required; however, some of the most commonly used technologies are still cumbersome and require complex interpretation.

For example, MDS analysis provides a simple, fully integrated solution for measuring protein size and concentration. Simply pipette 5 µL onto a disposable chip and insert into the instrument. Size and concentration are reported directly on screen in 8 minutes.

EASY	MEDIUM	HARD
MDS	SEC-MALS	AUC
TDA	GE	
DLS		



### Protein size

Another key consideration when considering which protein sizing technology to use, is the expected size of the protein being analyzed. As shown in the chart, there are marked differences in the size of proteins that can be detected using each technology.

What size proteins can I analyze?

Do I want to analyse native proteins?

### Native sample conditions

Some techniques require proteins be denatured prior to analysis, for example in SDS-PAGE gels, while others rely on interaction of the protein with a matrix (e.g. SEC) which can affect its properties and behaviour.

Depending on the reason for your analysis you may need to consider this when interpreting your results.

Native	Non-native
MDS	SEC-MALS
DLS	GE
AUC	
TDA	

We hope that this guide helps you on your journey to obtaining accurate protein sizing for your specific application and protein(s) of interest.

For more information on the specific strengths and limitations of the techniques listed here, please see our recent blog visit [www.fluidic.com](http://www.fluidic.com).

For more information about MDS and the Fluidity One device, which provides rapid, accurate and streamlined analysis of protein size and concentration using near-native sample conditions, please visit [this page](#) or [contact us](#).