

*Accurate, Reliable Measurement of Protein Concentration & Total Mass*

TESTA Analytical Solutions e.K. announce that their HK Series Differential Refractive Index (DRI) detector is being used to provide accurate and **reliable measurement of the absolute concentration and total mass of protein in a sample.**



**Quantifying the amount of protein**

is highly desirable before processing protein samples for isolation, separation and analysis using chromatographic techniques.

**Refractive index**

is one of the most commonly used detectors in GPC/SEC and HPLC systems. A key parameter for translating RI detector output to exact sample concentration is the  $dn/dc$  value, or specific refractive index increment. The  $dn/dc$  value is unique for each sample-solvent combination, as it represents the difference in refractive index between the sample and the solvent.

**The HK Series DRI detector**

is an exceptionally stable differential refractometer, operating from room temperature to 80°C, that may be used in either static or dynamic mode. In static mode, the specific refractive index increment ( $dn/dc$ ) of dissolved protein samples can be easily and precisely determined in just a few minutes.



### **The specific refractive index increment**

is also a critical parameter required to determine absolute molecular weight using static light scattering (SLS) detectors. This is because a relatively small error in  $dn/dc$  determination will lead to twice the error in calculating molecular weights. It is important also to determine the  $dn/dc$  value at the same wavelength as the SLS detector laser or a further error will be introduced, as  $dn/dc$  is strongly dependent on operating wavelength. The HK Series DRI detector offers a large number of wavelength options to enable precise matching of your SLS detector laser operating wavelength, thereby ensuring reliable and reproducible results every time.

### **Where the $dn/dc$ value**

of your protein sample is already known, the HK Series DRI detector can be used for precise and sensitive protein concentration determination. The protein sample used for this measurement can usefully easily be collected, saved and used for further investigations.

### **For further information**

on the HK Series Differential Refractive Index (DRI) detector please visit <https://www.testa-analytical.com/gpc-sec-chromatography.html> or contact Testa Analytical Solutions on +49-30-864-24076 / [rcarano@testa-analytical.com](mailto:rcarano@testa-analytical.com).

### **Testa Analytical Solutions e.K.**

is a company dedicated to supplying the best possible instrumental solutions for characterization of polymers, particles, nanomaterials and proteins. Drawing upon over 30 years' experience of technologies serving these markets, the staff at Testa Analytical are happy to share their knowledge with researchers worldwide to help provide them with a working solution for even the most demanding applications.

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