

## *Differential Refractometer for Polymer & Protein Analysis*

### **The new HK Series Differential Refractometer**

from Testa Analytical Solutions e.K sets a benchmark for precise determination of specific refractive index increment ( $dn/dc$ ) - an important parameter for polymer and protein molecular weight determination using light scattering techniques.



### **The specific refractive index increment ( $dn/dc$ )**

is one of the most underestimated parameters in material science. The assumption that using the approximate values for many polymers and proteins in published literature will not have a huge impact on molecular weight values determined by light scattering experiments, with or without GPC/SEC separation is incorrect. Because  $dn/dc$  is a squared term in the Debye Constant of the Zimm equation, any error in determining  $dn/dc$  will result in introducing considerable errors into molecular weight determination. In addition to this, precise determination of  $dn/dc$  within a GPC/SEC application, is extremely useful in order to calculate mass-balance of the separation, and therefore determine presence of absorption on the column which can again negatively influence any results calculated.

### **The HK Series $dn/dc$ Differential Refractometer**

is a flexible device that may be used in either static or dynamic mode. In static mode, the specific refractive index ( $dn/dc$ ) of dissolved samples can be easily and precisely determined in just a few minutes. Beneficially, the new system offers a large number of wavelength options enabling precise matching of your light scattering detector laser operating wavelength, thereby ensuring reliable and reproducible results every time.

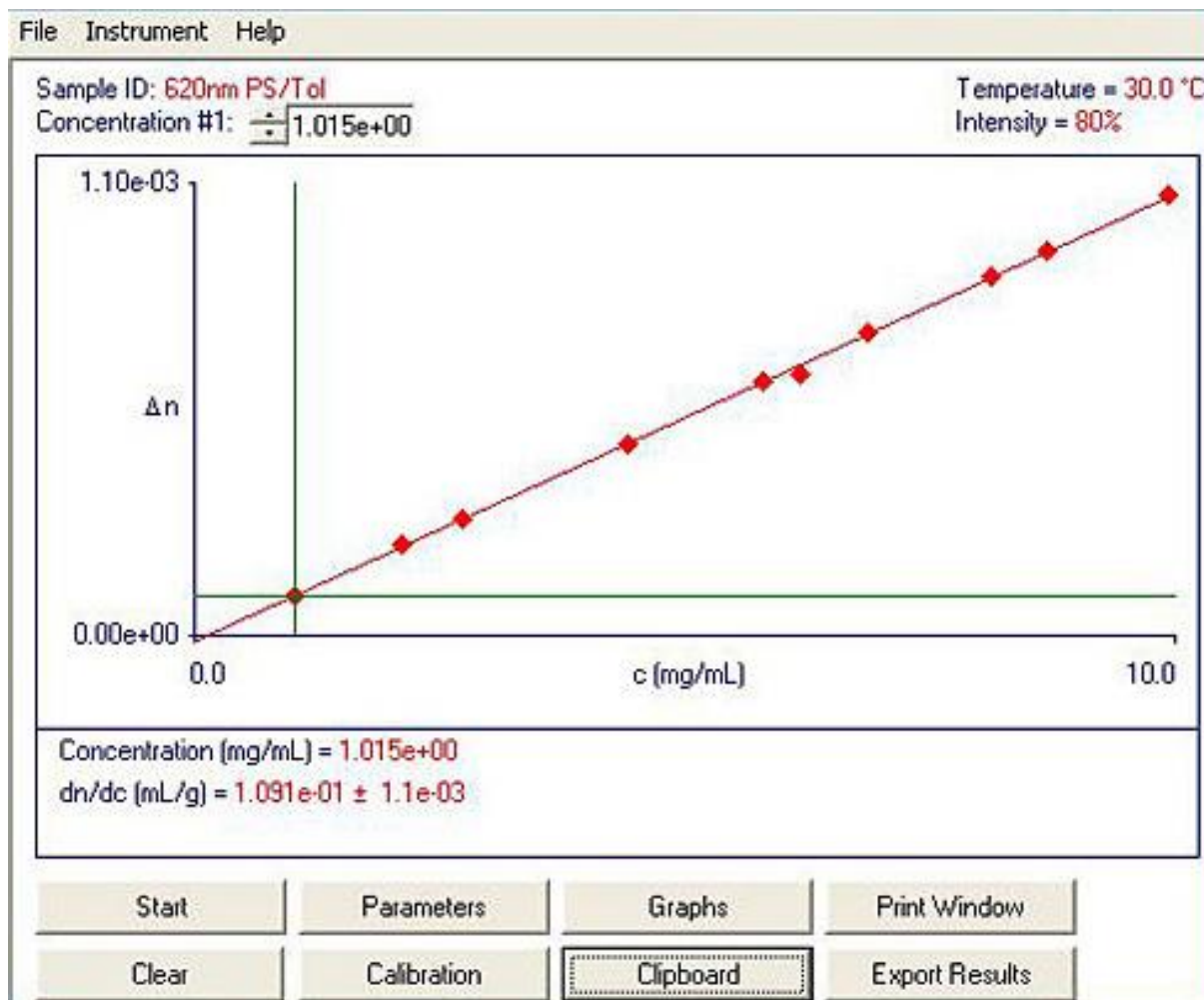
### **Where the $dn/dc$ value of the sample**

is already known, the HK Series  $dn/dc$  differential refractometer can be used for precise and sensitive concentration determination. The amount of sample used for this can also be easily recollected and therefore utilized for further investigations.

### **For further information**

on the new HK Series  $dn/dc$  Differential Refractometer please visit <https://www.testa-analytical.com/gpc-sec-chromatography.html> or contact the company on on +49-30-864-24076 or [info@testa-analytical.com](mailto:info@testa-analytical.com).

**Backed by decades of experience**, Testa Analytical has created a range of high-performance GPC/SEC detectors, GPC/SEC Pumps, accessories and software products customizable to meet your exact needs. Our team of knowledgeable technical and engineering staff are also available to discuss your OEM needs and to provide seamless integration of our technology into your existing or new product.



### 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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