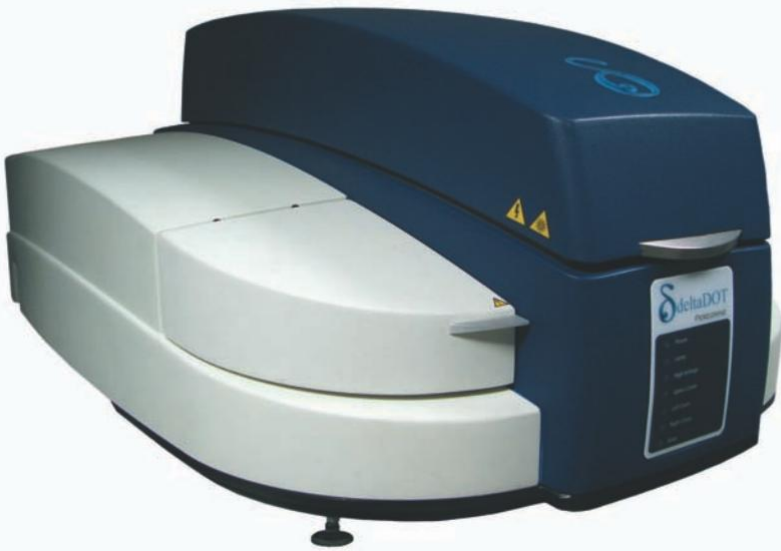


# Integrated Label Free Process Analytical Technology



deltaDOT  
see the molecule

deltaDOT applies molecular biology and particle physics technology to the needs of biomolecular separation, including protein, DNA and RNA analysis.

The company has a strong proprietary position and extensive expertise in instrumentation, molecular biology, microfluidics, automation, computing and analysis which will contribute to improvements in knowledge, profitability and process time throughout drug discovery and general life sciences research.

# PEREGRINE 1

## High Performance Capillary Electrophoresis

Label Free Intrinsic Imaging: LFII® systems enable higher quality separations than existing CE technologies enabling the direct monitoring of unlabelled biomolecules, reducing the cost and time per analysis.

LFII® is adaptable to several modes of capillary electrophoresis, including capillary gel electrophoresis (CGE) and capillary zone electrophoresis (CZE).

CGE analysis can analyse protein quantification, fragmentation and solubility.

Higher resolution analysis such as post-translational modification assays can also be performed in longer microfluidic channels or capillaries, with optimised separation parameters.

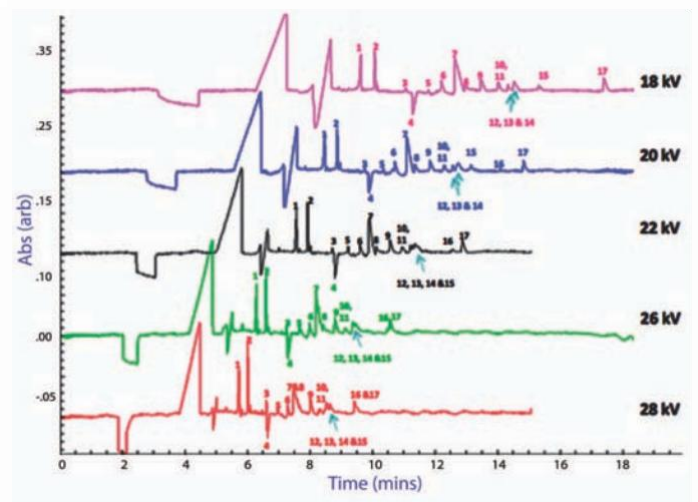
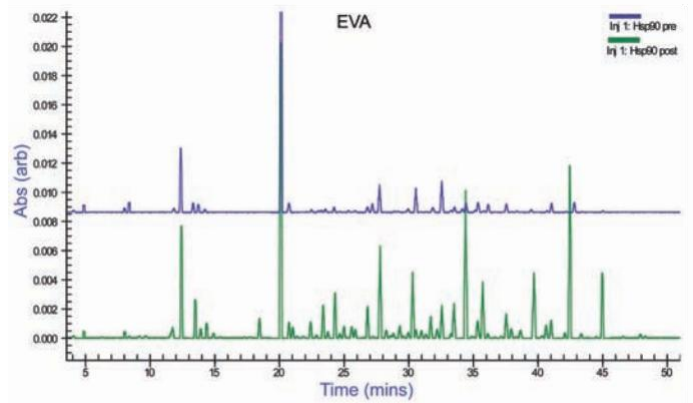
CZE is used for charge-based analysis of the protein by its migration allowing estimation of the conformation and therefore functionality of the protein.

**Market leading analytical specifications** – LFII® increases data quality in resolution, quantification, sensitivity and reproducibility of analysis to provide the best quality data possible.

**Label-free detection** - Eliminates potential effects of detection labels on molecular behaviour and reduces the cost of analysis.

**Analysis of most biomolecules** - PEREGRINE 1 is able to perform routine analysis of proteins, small molecules, nucleic acids and expression vectors/pathogens such as bacteria and viruses.

**Easy to use** - This high specification instrument can be used by the broadest spectrum of laboratory personnel with set protocols for the most common applications.



Amino acid analysis in CZE

### Universal analysis to streamline your Bioprocess PAT requirements.

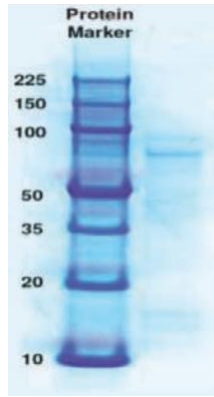
deltaDOT Ltd is the world leader in Label Free Intrinsic Imaging (LFII®) for minimum-biased bioprocess analytics. PEREGRINE 1 is totally independent of sample-specific labels and can monitor the bioprocess from DNA cloning to protein QA/QC, looking not just at protein production, but also at small molecules such as amino acids or even ionic salts present in the growth media.

PEREGRINE 1's LFII® technology provides rapid quantitative and qualitative analytical data on the status of the expression of proteins in the bioreactor system allowing a "fail fast, fail cheap" philosophy.

# Current Technology

Traditional 1-Dimensional Polyacrylamide gel electrophoresis

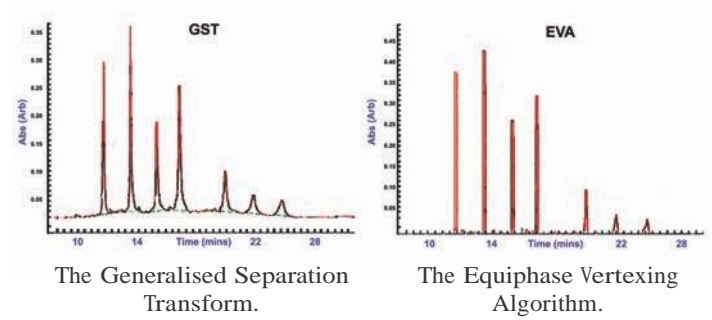
- 1-D gels are 1950's Technology
- They take hours to run
- They take hours to stain
- They take hours to destain
- They take hours to dry
- They take hours to analyse
- They take hours to document



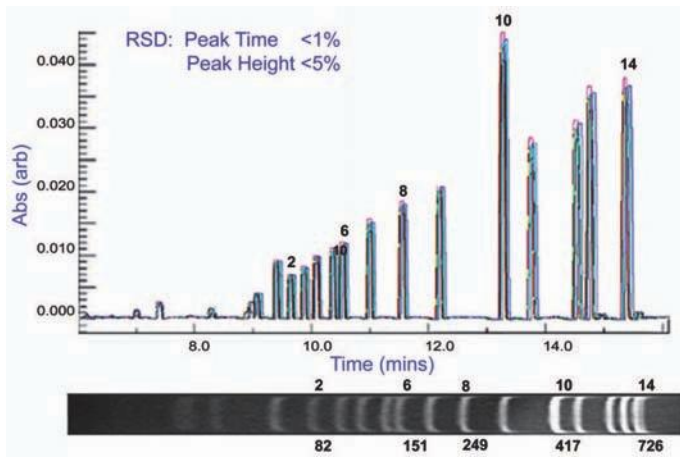
# deltaDOT of LFII®

Advantages of Capillary LFII®

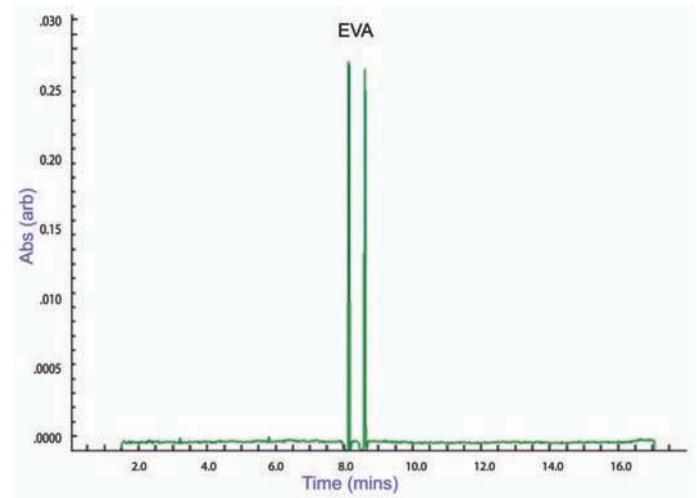
Using technology from Particle Physics LFII® is fast, accurate, inherently digital, quantitative, reproducible and high resolution. LFII® has two analysis modes.



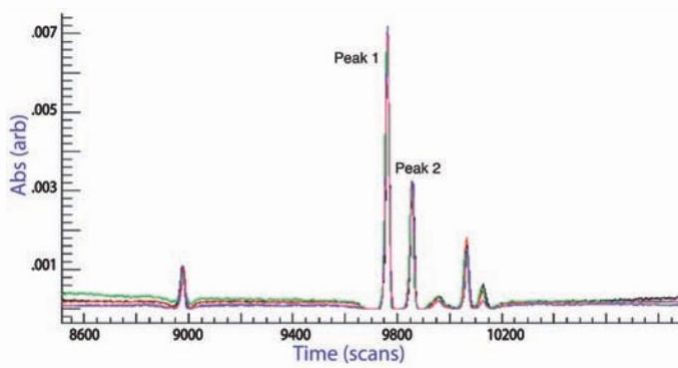
# LFII® Data at various steps of the Bioprocess



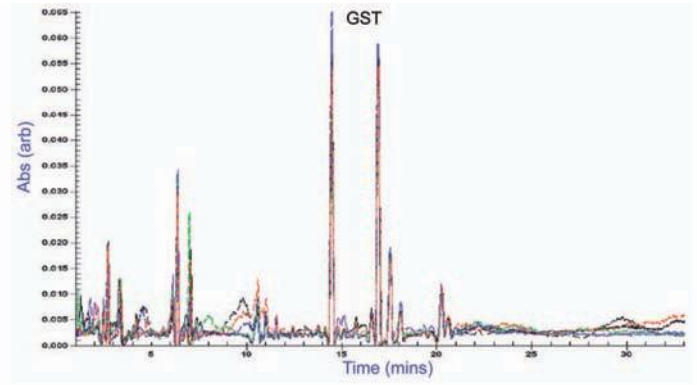
DNA analysis



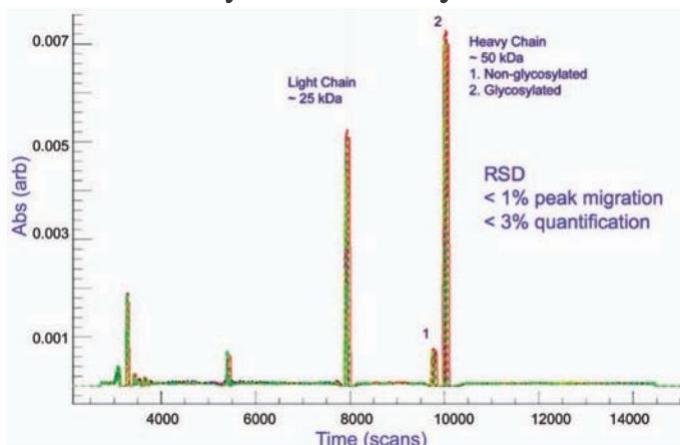
Enantiomeric small molecule analysis



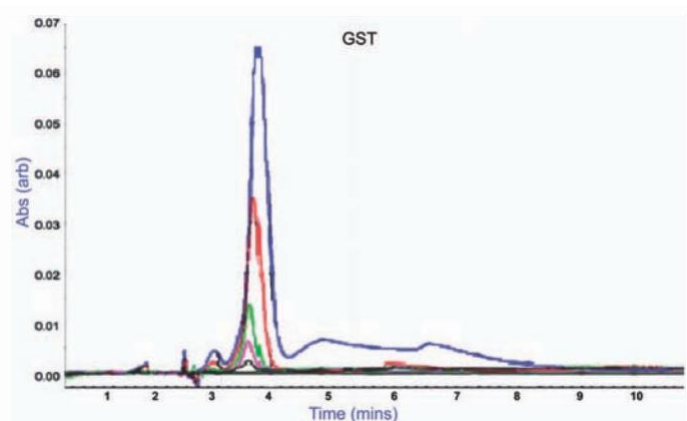
Glycoform analysis



Complex lysate analysis



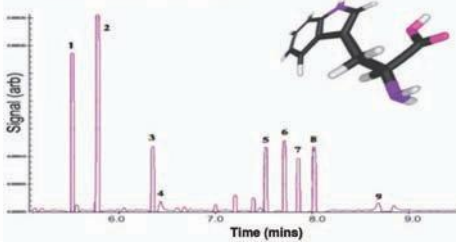
Antibody analysis



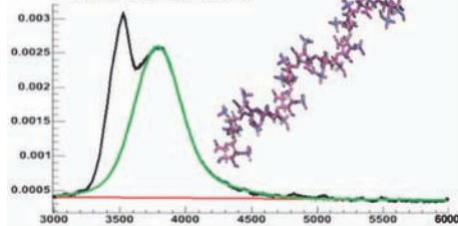
Baculovirus titre



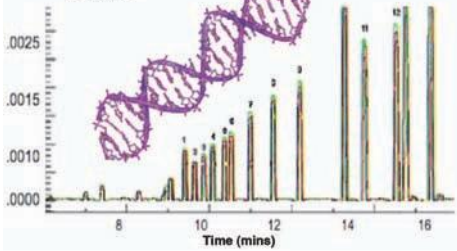
**AMINO ACIDS**



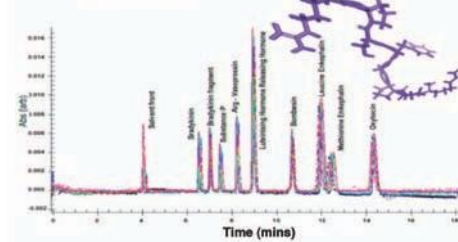
**CHEMICALS**



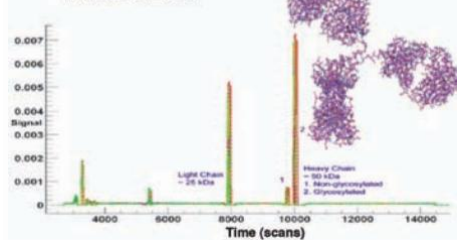
**DNA**



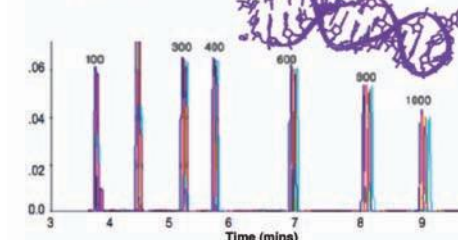
**PEPTIDE**



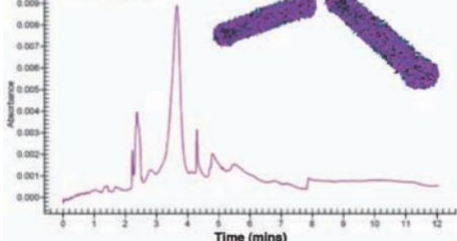
**PROTEIN**



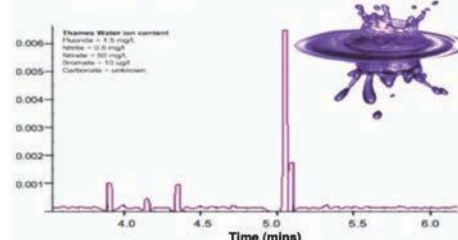
**RNA**



**VIRUS**



**WATER**



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