YPSO Ionic®

Open up a new world of opportunities
for your chromatographic processes

YPSO
Your Process Secured & Optimized
FACTO®

Ypso-Ionic® is a software solution for designing chromatographic processes. It maximizes the value of experimental data and makes predictive simulation a game changer.

WHY "IONIC"?

Does pH matter in your separation process? Do you work with mineral ions? With organic buffers? With proteins, peptides, or oligonucleotides whose retention behaviour is dramatically impacted by their charge?

If yes, properly dealing with ions and thus using IONIC is a must!

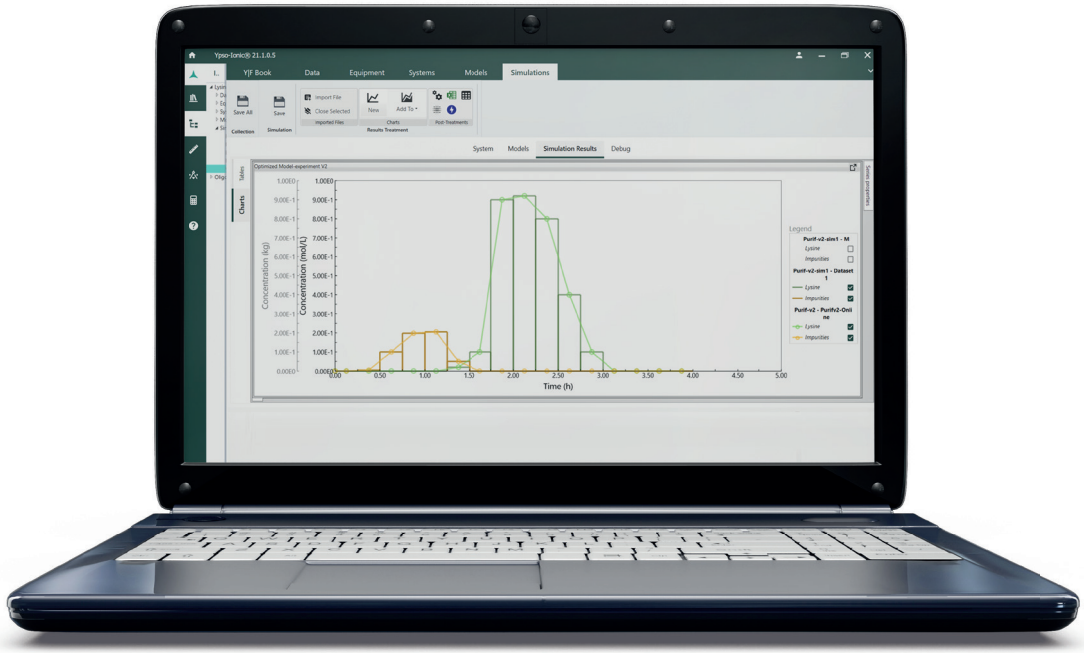
If no, that's also fine, this will just make the calculations easier!

IONIC KEY STRENGTH

A unique feature of Ionic is the way it deals with ions: it offers the possibility to account for solution equilibria (e.g., acid-base or complexation) in combination with a rigorous description of interaction mechanisms with the solid media.

A WIDE RANGE OF APPLICATIONS

- **Ionic can be used for various types of chromatography:**
Ion exchange, adsorption, affinity, hydrophobic interactions, size exclusion, ion exclusion, chelation, etc
- **… from the simplest to the most complex molecules:**
mineral ions, sugars, organic acids, amino acids, oligonucleotides, proteins, monoclonal antibodies, etc
- **… with any kind of process configuration:**
single-column or multicolumn, isocratic or gradient, backflush, with or without recycling, etc



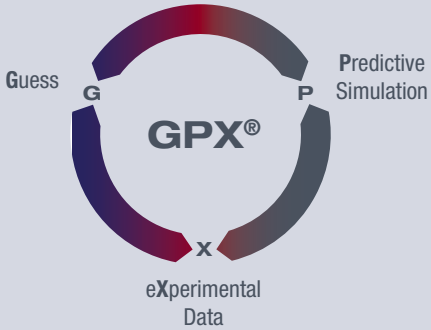
Two complementary means to address your challenges: experimental data (X) and predictive simulations (P)

MAXIMIZE THE VALUE OF YOUR DATA

- **collect and structure experimental data to ensure data completeness and reusability:** our YIF Data format associates the experimental protocol (column dimensions, raw materials composition, flowrates, etc) with clearly labelled measured results (UV, pH, conductivity, species concentration, etc)
- **visualize experimental results thanks to flexible graph tools –** possibly overlaying online measurements with offline fraction analyses
- **easily extract relevant information from experimental data:** check mass balance, calculate purity of mock pools, estimate productivity and eluent consumption, etc.

EMBRACE THE POWER OF MECHANISTIC SIMULATION

- **enjoy the predictive capabilities** of the most advanced mechanistic models in a user-friendly interface
- **simulate outlet concentration profiles** as well as signals like pH and conductivity
- **apply automatic post-treatments** to calculate fractograms, mock pools, performance indicators (purity, yield, productivity, eluent consumption)
- **easily compare experiments with simulations**
- **investigate the impact of key operating parameters** (loading, flowrate, pH, salt concentration, gradient slope, column dimensions, etc) and predict behaviours in non-explored regions
- **use our Buffer preparation tool to get recipes based on specified targets** (e.g., target pH and concentration)



GPX® Concept - Leveraging 3 complementary means to address your challenges.

Guess – the ability of the experts to propose, anticipate, imagine... some routes or performances

Predictive Simulation – for a better understanding of your process, to anticipate issues and make rational decisions

eXperimental data – the hard foundation of the project, which needs to be well targeted, structured and analyzed.

Empower your lab and get the most of your data with Ionic®

Enjoy working in a virtual lab	Save time thanks to automatic post-treatments	Boost your creativity
Select your raw materials, prepare buffers, pack columns, define separation protocols… as if you were in your own lab! Then, either store your experimental measurements or click Run and predict the results.	Focus on your field of expertise and let the software perform the tedious work of data treatment, be it for experimental or simulated data.	Simulation significantly broadens the range of possibilities – explore new process configurations in a few clicks.

Get the most of your experimental data	Reduce experimental workload	Maximize process performances

EXAMPLES OF USE

- Transform data into knowledge
- Quantify the impact of key operating parameters
- Train your team on chromatographic processes
- Optimize technical performances
- Identify the design space
- Use simulation as a troubleshooting tool

WHAT'S MORE?

Ypso-Ionic® is the chromatography unit operation App within **Ypso-Proxima®**, our collaborative software suite for chemical and bioprocess development, optimization, and evaluation. Ionic is compatible with the other Apps of Proxima – making Ionic results directly exploitable to perform an economic evaluation.

Contact us for a demo!

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