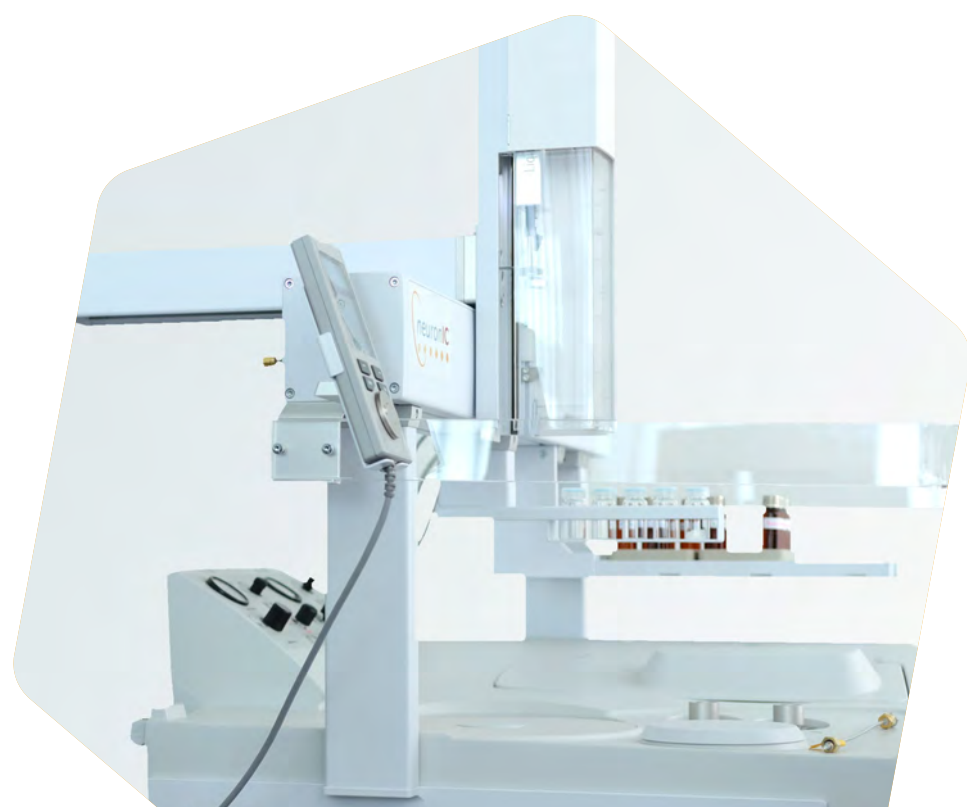




A set of solutions allowing productive
and fully repeatable materials characterizations





Smart and efficient characterizations

Developed in order to characterize the materials and their interaction abilities, NeuronIC is a global and unique set of solutions aimed at optimizing your Inverse Gas Chromatography (IGC) analyses and thus answering your needs.

Advanced and suitable instruments

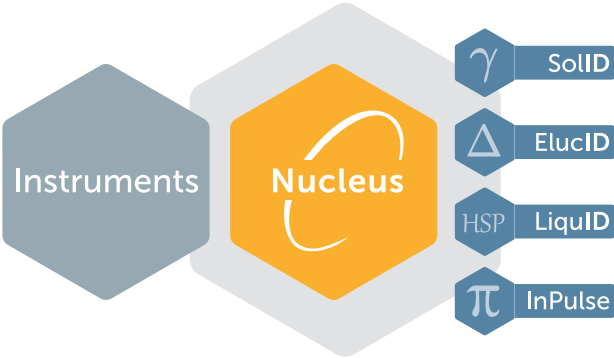
- We offer you...
- ...tailored solutions...
 - Needs' analysis and understanding
 - Appropriated answer
 - ...through customized and improved analyses...
 - Wide choice of molecular probes (till 45 and beyond)
 - Optimized protocols
 - ...that are easy to implement...
 - Easy to use instruments
 - Understandable softwares
 - ... and scalable
 - Investigation of unexplored application fields thanks to the addition of new modules

Applications and uses

- | | |
|-------------------------------|---|
| Intended for the | Research & Development departments
Quality control departments |
| To analyse | Organic, mineral and hybrid materials |
| In the form of | Powders, fibres, liquids, films or sheets |
| And thus allow | Batch comparison
Stability follow-up
Surface treatment follow-up
HSP determination
and more... |
| For industry segments such as | Pharmaceuticals: API and excipients
Fine chemicals
Bioproduction
Textile and paper
Materials
Energetic materials |

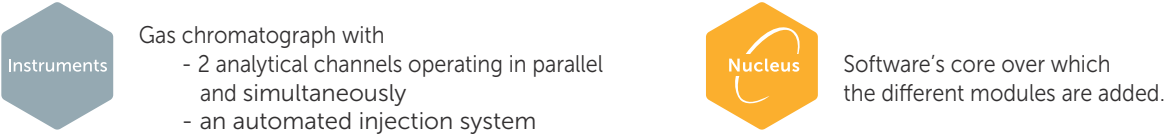
Modular solutions dedicated to IGC

The NeuronIC set includes a gas chromatograph, an automated injection system and a workstation equipped with software modules chosen according to the targeted applications fields.



According to your needs

Thanks to the modularity of the solution, we can suggest you the solution that perfectly fits with your needs.

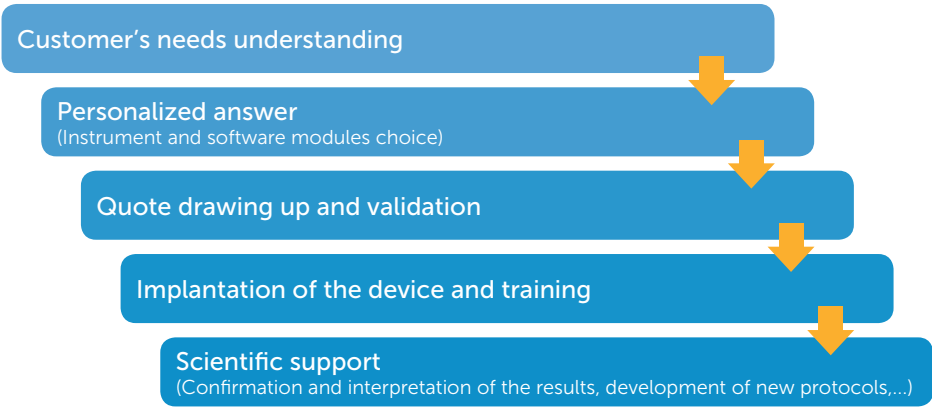


The data processing modules enable the determination of the following features:

- | | | |
|--|----------------|---|
| | SolID | Surface energy, nanoroughness, acid-base character of solids' surface |
| | ElucID | Enthalpy variation, entropy variation, glass transition temperature, diffusion coefficients |
| | LiquID | Hansen Solubility Parameters (HSP) |
| | InPulse | Desorption isotherms, specific surface, surface heterogeneity |

Steps to build your solution

Suggesting the best appropriated and relevant solution has always been our overriding goal. To ensure a quality answer, your request will follow the steps below:



Life cycle

After a collaborative evaluation of your application requirements (User Requirements Specification - URS), the implementation will be carried out as follows: during the **installation** of the device (keep in mind that our solutions' implantation can also be adapted to existing instruments), you take advantage of two days of **training** carried out in your lab and including topics such as the preparation of the column, the measurements realization, the chromatographic data treatment...

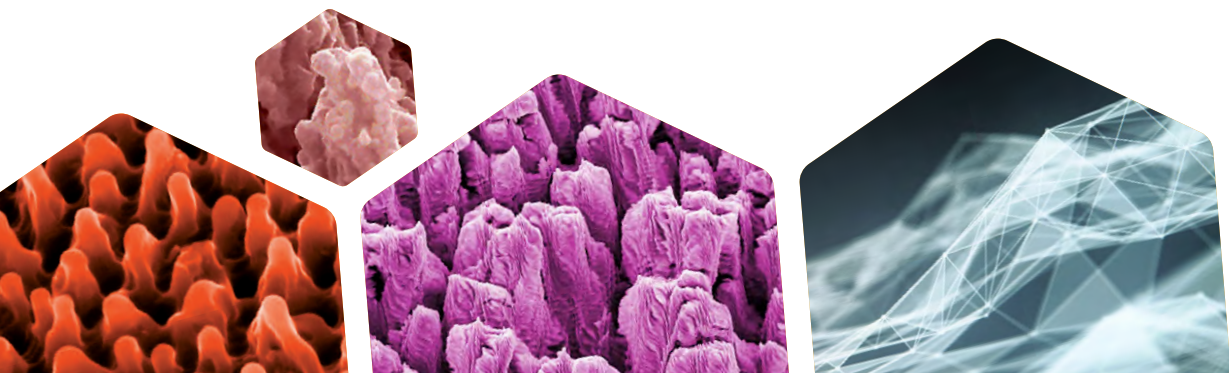
Later, for questions related to the implementation, **we support you** free of charge within the first 3 months after the training. Likewise, the **softwares' updates** are free during the first 5 years.

We also suggest you a **follow-up** and a **scientific support** to develop new analysis protocols, to confirm the measurements or even to interpret the obtained results.

Quality aspects

Through NeuronIC, Adscientis displays its excellence in the IGC:

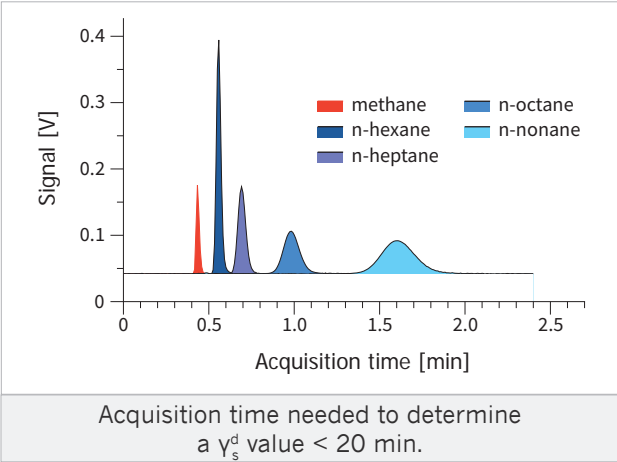
- Credibility** The used methods are based on scientific theories and mathematical formulas.
- Repeatability** The measurement uncertainty has been reduced through optimized protocols.
- Interpretation** You benefit from expert's results explanations.
- Traceability** Our softwares modules are developed according to the 21 CFR 11 requirements.
- Sustainability** Our recognition has been internationally established for 17 years.



Technical performances and benefits

Time saving and increased yield

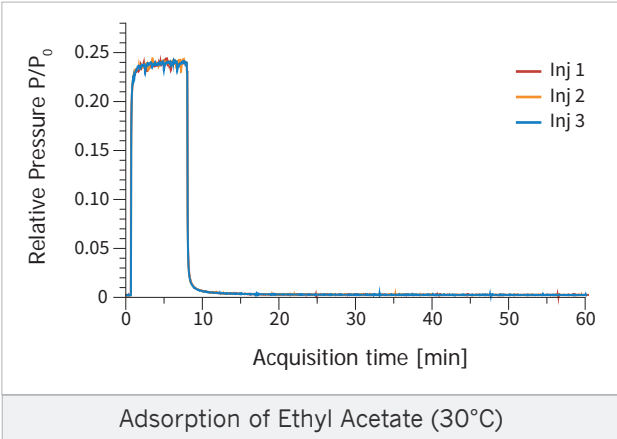
Benefit from a higher productivity and an autonomous working thanks to the automated injection system and the automatic peak's end detection.



The above example shows that twenty minutes are sufficient to get the retention times of a homologous series of n-alkanes and then the resultant dispersive component of the surface energy. Indeed, the device is able to stop the analysis once the first probe has been fully detected and inject the next one without any human intervention. This allows the operator to handle other tasks within this automatic cycle.

Continuous and mastered injection

Take advantage of a unique injection method allowing a one-step analysis.

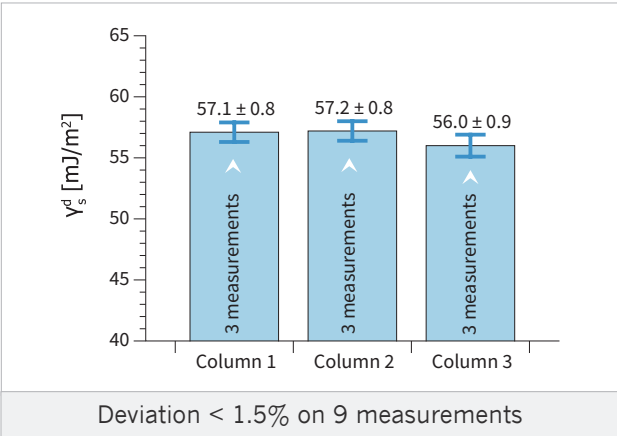


The automated injection system provides a continuous and controlled flow of probe molecules thus avoiding successive injections. In this example, 60 minutes are sufficient to get several hundred experimental points. Moreover, this innovative method leads to a repeatability level which was not achievable before.

Guaranteed repeatability

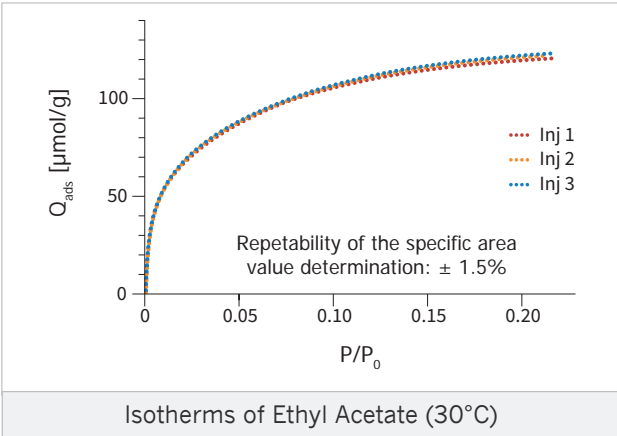
The reliability of the measurements has been proved through several repeatability studies such as the two examples below:

For the surface energy:



When computing the dispersive component of the surface energy through the Infinite Dilution method, in 3 different columns and with 3 replicas each time, an average standard deviation of less than 1 % is observed.

For the specific area value:



When determining the specific area value using the Finite Concentration method and the adsorption isotherms, the mean standard deviation computed after three measurements does not exceed 1.5 %.

Customers



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