



FORAGES PRODUCERS

AGRICULTURAL SECTOR

THE REFERENCE SENSOR FOR FORAGES
QUALITY MONITORING



POLISPEC.COM

polispec

GETTING INSIGHT

Those who contact us have the opportunity to meet a partner able to offer:



KNOW-HOW



EXTREME SPECIALISATION



COMPLETE DESIGN
AND PRODUCTION, "turnkey"

Spectrophotometry and applied electronics

We are a dynamic and creative company founded in 2012, **specialising in spectrophotometry and applied electronics**. We use our theoretical and practical knowledge and methodologies to design and **build electronic systems and measuring instruments**. Our core business is applied spectrophotometry, in its various forms and for each application sector. We work to design and build systems for rapid and non-destructive measurements, **suitable for all contexts where precise, immediate and multiparametric information is required**. This allows us to study and obtain technological solutions for various fields of application, to manage the variables necessary for the integration of systems in different environments and to solve the specific needs of each production process.

We are versatile and multisectoral,
our ideas have no boundaries.

Polispec NIR

Getting insight

We have created **POLISPEC NIR (Portable and On-Line SPECTrophotometer)**, a compact spectrophotometer with an industrial design, designed and built both for portable use and for online installation. Its operation is based on the interaction of a light source with the molecules and with the chemical bonds that characterise the matrix to be analysed, thus performing both quantitative and qualitative measurements.

Polispec NIR is designed to ensure intensive use in all agricultural processes in which immediate and precise measures are required for the management of variables and for self-control systems.



polispec
GETTING INSIGHT

THE REFERENCE SENSOR FOR
FORAGES QUALITY MONITORING

TECHNOLOGICAL ADVANTAGES



. DESIGN

- ⊕ COMPACTNESS
- ⊕ RESISTANCE

Polispec NIR is simple and intuitive, suitable for multiple uses and designed for intensive use on a large variety of matrices.



. QUALITY

- ⊕ RELIABILITY
- ⊕ PRECISION

Polispec NIR is a robust and reliable instrument, designed for use in the field and in demanding environmental conditions (temperature, vibrations, atmospheric agents, etc.).



. SOFTWARE

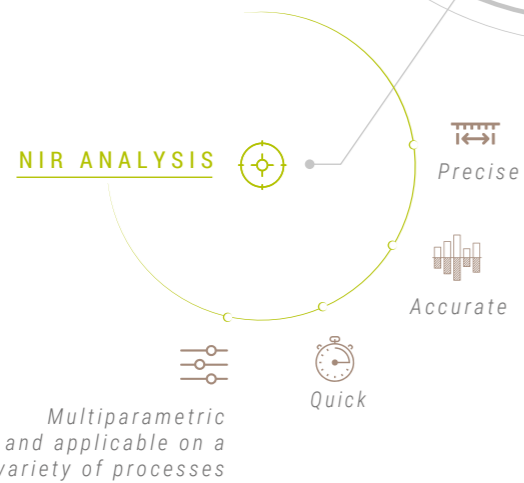
- ⊕ INNOVATION
- ⊕ COMPLETENESS

Polispec NIR is equipped with software that allows it to be used in many contexts, both **as a manual system** and as an **integrated tool to agricultural machinery.**



Polispec's NIR (Near Infra Red) analysis is the method that measures products as they are with extreme precision, providing immediate results and without the need for highly qualified personnel to perform the analysis operation.

- . MEASUREMENT VERSATILITY
- . ANALYSIS PRECISION
- . IMMEDIATE DATA

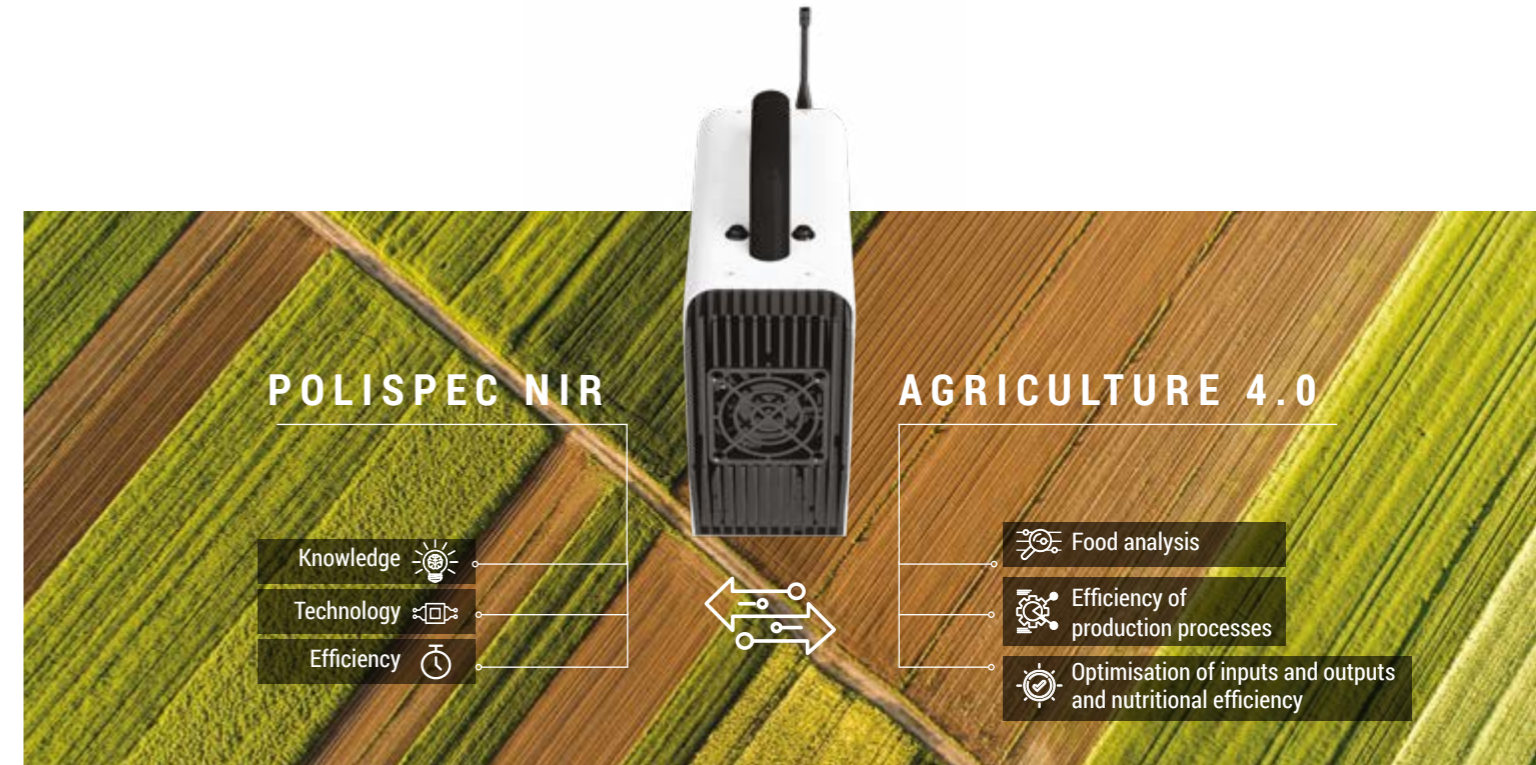


- . TECHNICAL QUALITY .
- . TIME OPTIMISATION .
- . OPERATIONAL CONVENIENCE .

This technology is suitable for use as both a manual tool and applied in-line. Its application versatility is used to measure a multiplicity of products in an immediate and direct way.

TECHNOLOGICAL ADVANTAGES

Success is the harmonic fusion between power and technology, between strength and intellect. Today in agriculture all this is possible because the entire sector now has the skills and means to make work better, more efficient and more profitable. This is how **Polispec NIR** was conceived, because to know, it is necessary to measure and to act and improve it is necessary to know.



. CHARACTERISTIC

Polispec NIR is an innovative tool dedicated to the agriculture and precision feeding sectors.



. TECHNOLOGY

Polispec NIR is highly performing in terms of sensitivity, operating dynamics and signal cleanliness.



. SOFTWARE

Polispec NIR can be used in a single version for each application area.

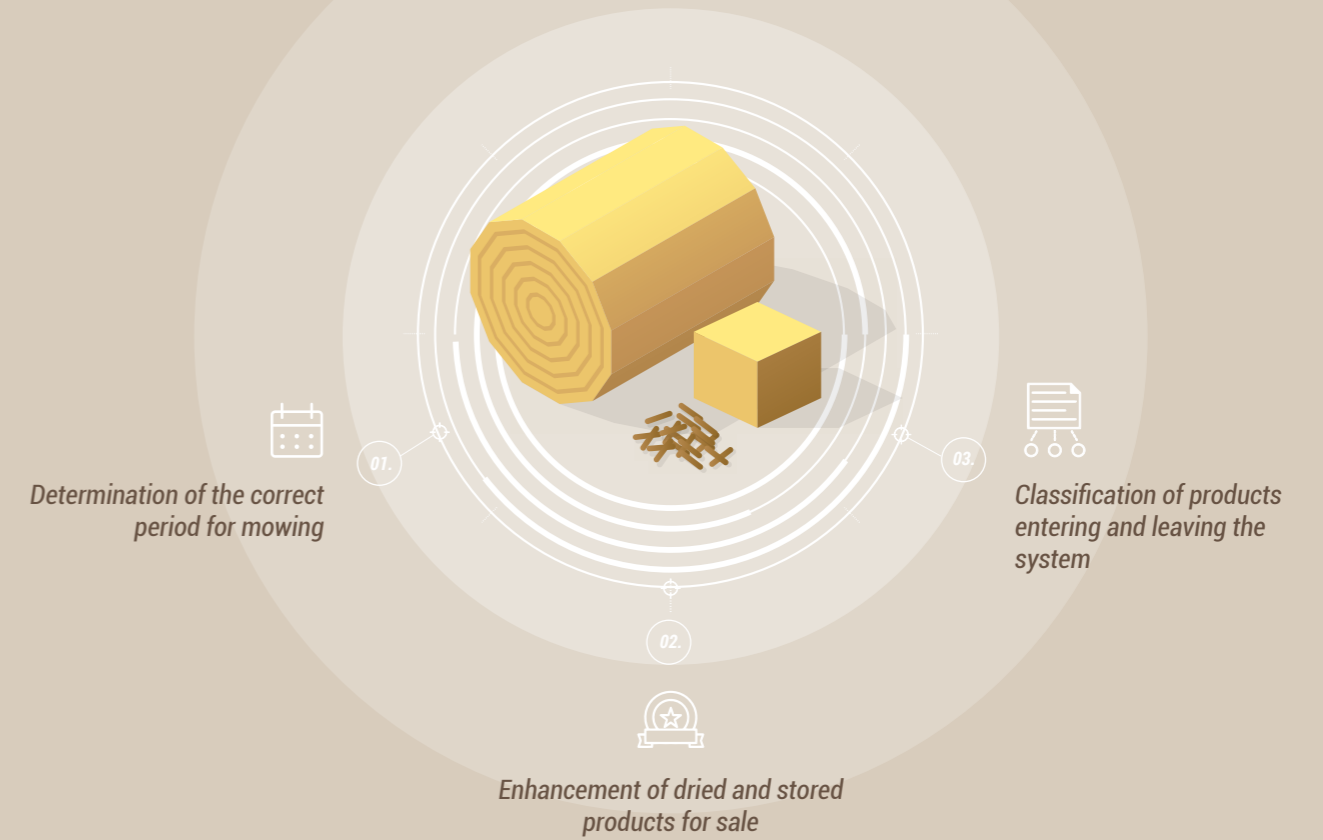
POLISPEC NIR


Many of the performances of animals reared for the production of milk and meat depend on forages, but very often this noble feed becomes difficult to manage due to its enormous variability and the great qualitative differences that risk making its use not particularly user-friendly.



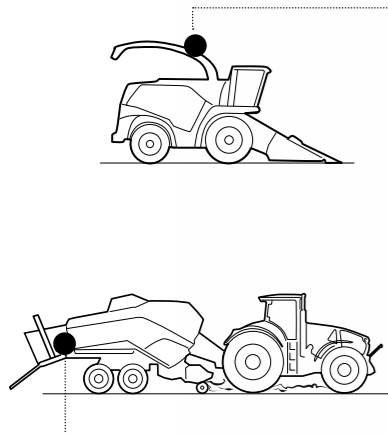
FORAGES

Polisppec NIR is the perfect tool for monitoring the protein and fibrous qualities of forages.



		
MANAGING VARIABILITY TO REDUCE WASTE	QUALITY IMPROVEMENT	GREATER VALUE FOR SELLERS AND BUYERS
<p>Forages are a precious and very important feed in animal nutrition, but also very rich in a natural variability of its nutritional properties. Measuring and managing this variability makes it possible to ensure a constant nutritional and economic value to the productions, satisfying the producer and the buyer</p>	<p>The constant monitoring of the nutritional quality of the forages during the drying, mixing and/or transformation phases enables regulating of the processes and the obtaining of homogeneous batches of product that fully satisfy the customer's needs</p>	<p>A healthy and controlled forage product from a nutritional point of view translates into a safe investment for the feeder or for the farmer who must base their recipes and diets on recognised and constant characteristics of the raw materials. Being able to guarantee homogeneous and controlled batches is therefore an essential advantage both for sellers and buyers</p>

ANALYSIS OF
THE PROCESSING
PROCESS



DIRECT IN-FIELD
SURVEY

Polispec NIR is a sensor specially developed to allow analysis directly in the field, on sections or bales, significantly reducing not only response times but also all the complicated and extremely variable sampling operations that are often risky because they are not always reliable.

Polispec NIR is therefore an excellent system for monitoring the protein and fibrous quality of forages, extremely useful for determining the correct period for mowing, also available for installation on harvesting machines, for classification and for the management of the entire harvest.



DIRECT SURVEY
IN THE SYSTEM

Polispec NIR, like all instruments in the Polispec range, are available for installation on drying, pressing and pelleting systems.

The simplicity and modularity of the installation make **Polispec NIR** the most suitable tool for on-line monitoring of humidity and protein and fibrous qualities of forages, for the classification of products entering and leaving the systems and for the enhancement of stocks ready for sale.

DEVELOPMENT AND INNOVATION 

CUSTOMIZATION 

SPECIALIST TEAM 

AVAILABLE FOR INSTALLATION ON MODULAR 

SYSTEMS 

CONTINUOUS IN-LINE ANALYSIS 

OUR SOFTWARE

Polispec NIR is extremely versatile because it is equipped with software systems designed by us that allow us to make this device technologically performing and customised on the peculiar characteristics of the activity of each forages producer.

POLIPROCESS

PLC version

It is our main software for system analysis. In this configuration, the software user interface is available via the panel and the commands can be set from the PLC and the data collected can be transmitted to it.

All PLCs using the modbus protocol (TCP-IP) and Siemens S7 are supported.

The configurations of the registers used can be customised as desired.



poliPROCESS

ISObus version

It is our main software for analysing agricultural machinery. In this configuration, the software user interface is available through a UT application compatible with all native or applied ISObus terminals.

The simple and optimised interface for use on the terminal:






- is available in various languages (English, Italian, German, French, Spanish, Portuguese, Polish, Dutch and Hungarian)
- is used to select the product under analysis and to view the measured data
- the start of data storage is automatic and is managed by the normal recording activity of the operator panel (VT Terminal)
- the data are saved together with the GPS coordinates

(geo-referencing) in the standard ISOXML format (Task Data) *

- the data is normally available both for export via USB stick and remotely to the cloud
- at any time, **the average of the analysis of the entire session is available through totalisers.** This means that the user will find the average values of the constituents in the activity information

** ISOXML (Task Data): universal format for the generation (with specific software or platforms) of agronomic maps, of production or prescription maps.*

poliDATA

-  Different sampling modes
-  Immediate results
-  Archiving system
-  Custom setting
-  Guided diagnostics and calibration

Supplied pre-installed on a touch tablet, the poliDATA software can be installed on any computer with a Windows® 8 or 10 operating system.



It is our main software for the portable use of Polispec instruments and offers an interface designed for use on both tablets and desktops. It is an application designed for control on touch devices and is particularly simple and intuitive to use.

It is available in several languages and its main features are:

- **Analysis:** by choosing a chemometric model, it is possible to analyse a product with different sampling methods (swiping on the product, multiple swiping, multi-point) designed to reduce the sampling error and to increase the representativeness of the analysis
- **Qualitative indices:** the software has innovative systems for assessing the quality of the analysed product. For example, the index for assessing the quality of the

FORAGES before mowing is available

- **Results:** the analysis results are **instantly visible** and can be **exported in various formats and saved in an archive**
- **Analysis reports:** the analysis results can be exported to customised reports with your logo and company information. Additional parameters calculated on the results can be added to the report
- **Sharing of results:** results can be easily shared using a smartphone and sent via email and Whatsapp
- **Analysis archive:** it is used to keep and consult the data generated and saved, to print reports and to compare analyses on the same type of product
- **Instrument diagnostics:** the software contains tools for instrument diagnostics and remote assistance

AGRICULTURAL FIELD

HARVESTING

REARING

STORAGE

SEWAGE

POLISPEC NIR CAN BE USED WITH EFFECTIVE RESULTS IN ALL PHASES RELATED TO FIELD AND FARM.

polispec
GETTING INSIGHT

THE CIRCLE IS COMPLETELY CLOSED

Directly in the field, during the harvesting of agricultural products, throughout the farming chain or on the materials in storage, **Polispec NIR** is the ideal tool for obtaining valuable data to improve your professional activity.



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I T P H O T O N I C S . C O M