

# Take measures into your own hands



**AURA® handheld NIR from ZEISS –  
the portable spectrometer solution**

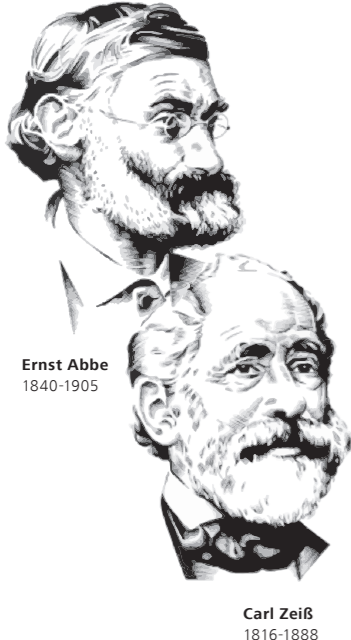


Seeing beyond

# A broad spectrum of quality

## ZEISS – over 140 years of experience in spectroscopy

Ernst Abbe developed the world's first spectrometer for a company that Carl Zeiss founded 28 years earlier in Jena in 1874. Today, over 140 years after Abbe's spectrometer, ZEISS is one of the world's leading technology companies in the optical and optoelectrical industry with over 30,000 employees in nearly 50 countries and approximately 120 distribution, service, production and development facilities.

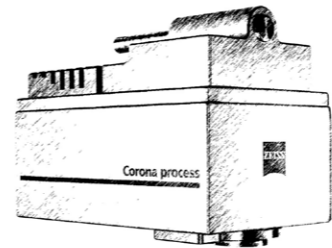


From the beginning, the name ZEISS has stood for continuity and foresight as well as for passion and responsibility. Most importantly of all, the name has stood for globally leading optical measurement technology. Our vision is the perfection of spectroscopy solutions for process and quality control. We've always been the first to bring high-quality technology to the marketplace. Like in 1924, when we developed a photometer that allowed us to measure colors. Or in 1968, when we created the SPECORD series of two-beam spectral photometers for laboratory analyses. Or in 1999, when we set new standards for the agricultural industry with an NIR spectrometer mounted onto a harvester.

Throughout our history, we have always developed new technology that has made processes reproducible and minimized production losses. By fulfilling the quality expectations for products "Made in Germany", we've helped our clients to fulfill their promises to their own customers. This has led to the development of a business area specializing in material analysis, spectroscopy and process analytics, which now plays a key role in the company's global success.

ZEISS spectrometers are as versatile as they are accurate, providing unparalleled performance. Regardless of whether they are a permanent fixture in your production, such as Corona® extreme and Corona® process from ZEISS or whether they are mobile and used in the field, such as AURA® handheld NIR from ZEISS, you can obtain the best results in almost any environment and our spectrometers are tailored to your process. This means that our solutions are not only sought after in areas such as food production and agriculture, but also beyond our own atmosphere: ZEISS high-performance gratings are used in satellites that monitor the air quality on earth, for example.

From food production to harvesting and space, the use of ZEISS equipment provides a technological edge. This is also what drives us every day: maximum efficiency and sustainability as well as long-term success and satisfaction for our customers.



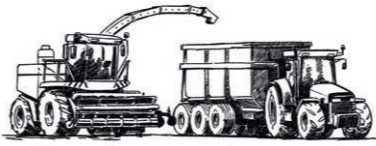
2019

The first connected spectrometer with real time access to data for defined product quality



2013

The first process spectrometer with the highest level of robustness and long-term stability



1999

The first process spectrometer on a harvesting machine



1997

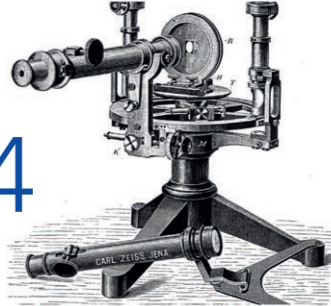
The first NIR spectrometer for the near infrared wavelength

1968

The first SPECORD series two-beam spectral photometer for analyses in the laboratory

1933

The first quartz spectrograph for spectral analyses in the ultraviolet wavelength



1874

The first spectrometer for the spectral fracture of light with a prism system

# Laboratory spectrometer quality on the move and in the field

## Portable ZEISS performance

There are no limits to what AURA® handheld NIR can do. It provides the same performance as a full-size ZEISS spectrometer. This biggest difference is how small and portable it is. Get reliable, lab-quality results on the move and bring your spectrometer to the sample. AURA® handheld NIR is easy to use and can even be operated by novices, offering you high levels of performance and connectivity at low cost.

## For maximum accuracy and convenience

Built around you and your spectroscopy needs, AURA® handheld NIR provides a wide variety of application possibilities and several different measurement parameters. Regardless of the environment, AURA® handheld NIR gives you the results you need to optimize your process and monitor quality in a more flexible way.



AURA Handheld NIR in the hand of a nutritionist or farmer to measure the quality of the feed for an optimal feed mixture.

# Bring the benefits with you everywhere you go

AURA® handheld NIR offers you a multitude of advantages for the widest variety of environments.



Bring the spectrometer to the sample and measure where you want, when you want



Upload and store results from anywhere, thanks to WiFi connectivity



Get accurate, lab-quality results in the field and on site in just about any weather conditions



Take advantage of performance that is on par with larger, stationary spectrometers



Maximize measuring time, thanks to long battery life and quick changes



React to quality variations immediately and get the results you need to optimize your process and monitor raw materials



Give anyone in your team the power of spectroscopy, with simple operation, even for non-experts



Rely on unshakeable quality with a sapphire window and rugged housing

# Measure beyond boundaries

## Get lab-quality results anywhere but the lab

Sometimes you simply can not wait to take a sample to the lab – when it comes to measuring quality and making decisions on the spot, portable spectroscopy is the way to go. AURA® handheld NIR is the ideal solution for precise, lab-like results in just about any conditions. Robust, ergonomic and easy to use even for non-experts, take advantage of the power of mobile spectroscopy from ZEISS.



### Adaptable, accurate and dependable

#### Touchscreen

user-friendly, easy to operate, clear software interface with a large result display

#### Full-scale spectrometer

to cover a wavelength range from 950 to 1650 nm

#### Sapphire window

virtually unbreakable and scratch proof – as hard as a diamond

#### Start measurement button

in an ergonomically sensible position, can be operated intuitively

#### Robust housing

degree of protection: IP54  
operating temperature: 5 to 40 °C  
storage temperature: -20 to 60 °C



#### Two status LEDs

show the current operational status of the system and battery

#### Interfaces

data exchange between AURA® handheld NIR and storage media or PCs is possible via Ethernet or USB 2.0 when WiFi is unavailable

#### Power ON button

performance at your fingertips, instantly ready to go

#### Battery pack

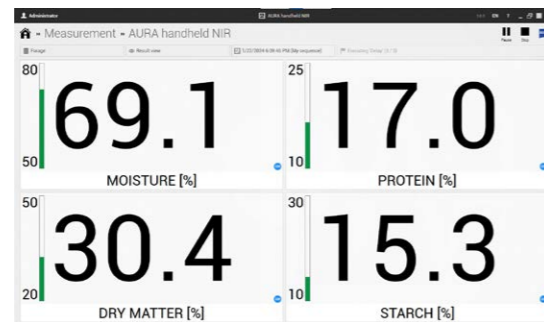
durable (2 hours of measurement possible), replaceable

# Software to make sense of hard data

Good software should be as powerful and versatile as it is intuitive and easy to use. Our InProcess software is designed not just to provide you with all the information you need quickly and easily, but also to fit around your specific needs, thanks to a range of customization options. InProcess provides the ideal platform to profit from connected spectroscopy and access your measurements from anywhere, at any time, thanks to easy cloud integration.

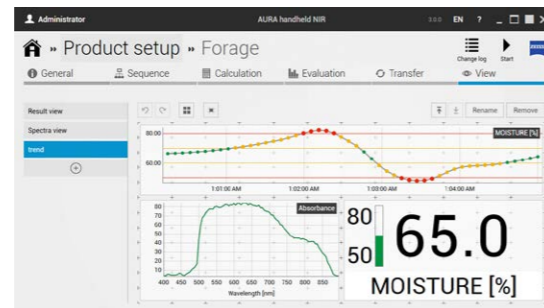
## Sample measurement

Single or multiple measurements are very easy to carry out. The results of the ingredients are automatically determined according to the application from the measured NIR spectra. The results are arrangible on the display and can be quickly captured and pre-assessed.



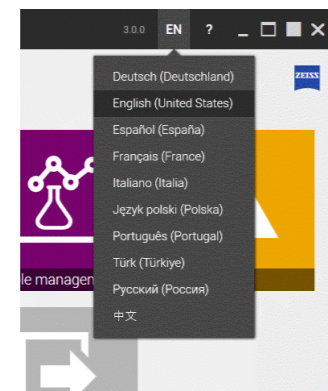
## Product Setup

InProcess allows you to individually configure measurement behavior, calculation results and representation graphs and tailor these to your specific needs. Calibration can be performed with the support of common chemometrics software, such as GRAMS IQ™, Aspen Unscrambler™, SL Calibration Wizard or UCal™.



## System Settings

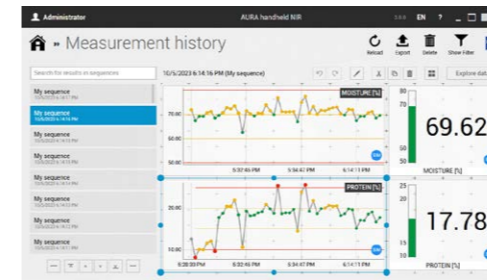
Create and manage groups of users with various levels of access and use InProcess in many different languages. Customer-specific configuration and basic settings for the software like the storage of data/ results can be defined.



Sample ID	Timestamp	Username	Comment	inline quality check A	inline quality check B	ingredient 1
BWA-REV-2UP	7/5/2023 9:45:21 A.	Administrator		45.011	13.511	45.01
SMP-2M-900	7/5/2023 9:45:22 A.	Administrator		45.201	13.511	45.2
LMR-2M-707	7/5/2023 9:45:23 A.	Administrator		45.193	13.545	45
SMP-2M-420	7/5/2023 9:45:24 A.	Administrator		45.206	13.596	45.1
QFS-475-097	7/5/2023 9:45:25 A.	Administrator		44.808	13.308	44
OKU-800-156	7/5/2023 9:45:26 A.	Administrator		41.61	11.91	41
KMT-MCT-83P	7/5/2023 9:45:27 A.	Administrator		44.185	12.465	47.2
ZTW-827-494	7/5/2023 9:45:28 A.	Administrator		46.071	13.371	46.2
SMP-2M-874	7/5/2023 9:45:29 A.	Administrator		44.961	13.361	44.9
SMP-2M-610	7/5/2023 9:45:30 A.	Administrator		45.011	13.511	45.2
PPD-141-C-18	7/5/2023 9:45:31 A.	Administrator		44.083	12.983	46
ZZZ-3M5-RDL	7/5/2023 9:45:32 A.	Administrator		43.798	12.248	47.5
VXX-4KX-VDR	7/5/2023 9:45:33 A.	Administrator		45.014	13.514	47.2

## Sample management

Single or multiple measurements are very easy to carry out. The results of the ingredients are automatically determined according to the application from the measured NIR spectra. The results are arrangible on the display and can be quickly captured and pre-assessed.

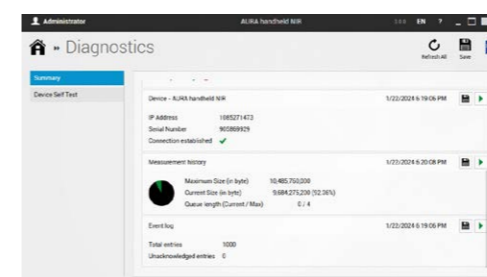
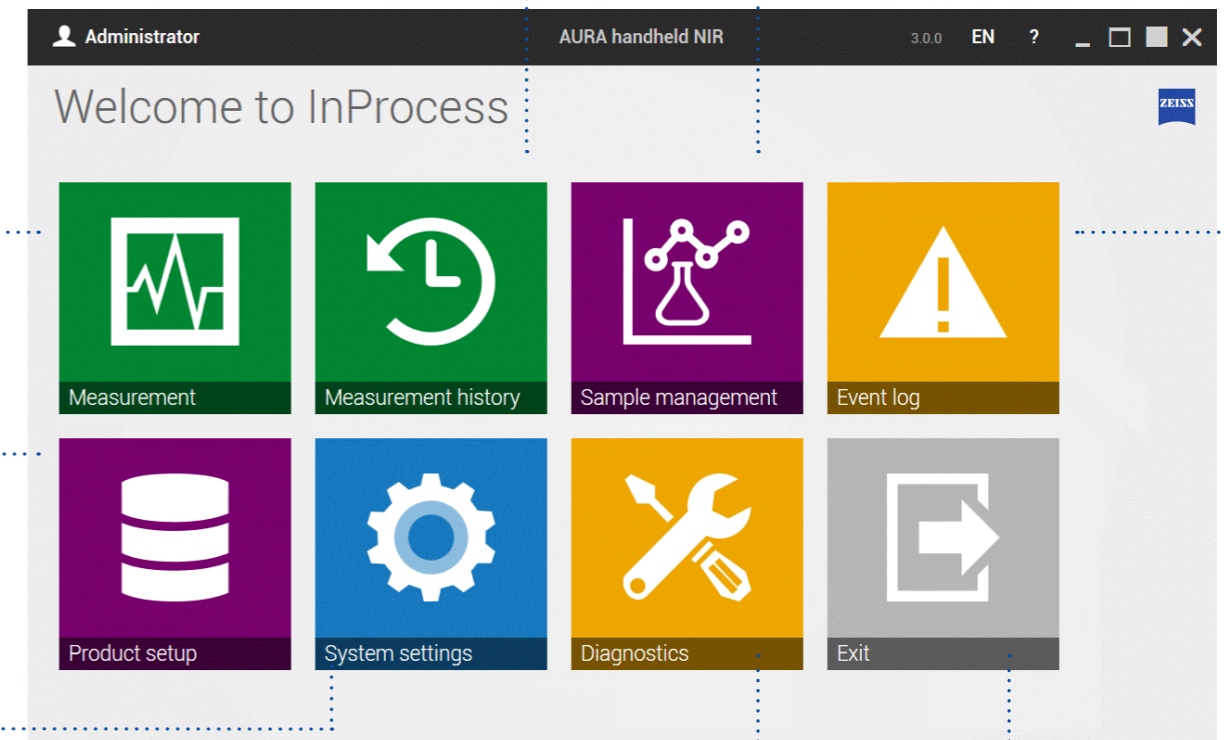


## Measurement history

Access all previous measurements and results as well as spectrum data exports, measurement values and sample information.

## Event log

See all the events that have occurred while InProcess has been in use and access all the relevant information, filtered by text search, levels and the state of the device. All entries can be exported, so that advanced error information can be sent to ZEISS customer service.



## Diagnostics

Spectrometer functionality can be verified with a self-test and important service information is available at the touch of a button and can instantly be sent to ZEISS Service for evaluation.

## Exit

Software can be shut down when performing revision or maintenance work as well as during planned downtimes to conserve energy and resources.

# Get a grip on your measurements in the field

## AURA® handheld NIR technical specifications

Everything a large spectrometer can do, the AURA® handheld NIR can do too, but all in the palm of your hand and so easily that anyone can operate it. To fit all uses and preferences, we offer two different handles: the standard handle and the slanted handle. Discover the differences here at a glance and choose the version that suits you best.

	Standard handle	Slanted handle
<b>Mechanical Parameters</b>		
Dimensions (W x H x D)	234 x 298 x 100 mm	234 x 350 x 74 mm
Weight	2.58 kg (incl. battery)	2.58 kg (incl. battery)
<b>Environmental Parameters</b>		
Operating temperature	+ 5 °C to + 40 °C	+ 5 °C to + 40 °C
Storage and transport temperature	- 20 °C to + 60 °C	- 20 °C to + 60 °C
Protection class (IP)	IP54	IP54
<b>Electrical Parameters</b>		
Power supply (internal battery)	14.4 V DC, 3450 mAh, 49.7 Wh (Battery RRC2054)	10.8 V DC, 6900 mAh, 74.52 Wh (Battery RRC2040-02)
Power supply (external)	19.0 V DC	19.0 V DC
Maximum power	24 W	24 W
<b>Interfaces</b>		
Communication	Ethernet 1.000 MBit/s, 2x USB, Wifi	Ethernet 1.000 MBit/s, 2x USB, Wifi
<b>Optical Specifications</b>		
Usable spectral range	950 – 1,650 nm	950 – 1,650 nm
Wavelength accuracy	≤ 1.0 nm	≤ 1.0 nm
Light source	Halogen lamp 20,000 h (Replaceable only by authorized ZEISS partners)	Halogen lamp 20,000 h (Replaceable only by authorized ZEISS partners)
Measuring spot diameter	13.5 mm	13.5 mm



Standard handle



Slanted handle

# Quality is measured by service. And vice versa.

We're there for you –  
for the lifetime of a device

Good quality goes beyond product performance – it's about the level of service you receive as well. We're more than just a provider to our clients, we're partners, which is why the service we offer is as important to us as the product we manufacture. We're with you every step of the way, from first consultation to final purchase and then for the entire life cycle of the product.

We also understand that every client is different, which is why we can develop individual service packages that are tailored to your company, facility, process, or specific project. That's what we mean by partnership and service quality: a relationship based on trust and a detailed understanding of individual needs and circumstances.

Furthermore, you can rely on our global distribution and service network. Regardless of whether it's gratings, modules, spectrometers or solutions, hardware, software, or calibration, we're the only ones who develop and offer all spectrometer components from a single source. Exclusive service packages



guarantee optimal performance, increase service life and provide many years of reliable and precise results. You can also profit from our digital maintenance services, which provide you with user-friendly, location-independent solutions with no waiting times. And if something does need to be repaired on site, then our service technicians can be with you in next to no time.

## Our expert service at a glance:

- Installation of equipment and software
- Application support for the whole product lifetime
- Preventive maintenance
- Customer-specific maintenance contracts
- On-site and in-house repairs
- Remote diagnostics, maintenance and repair



## The partner that will accompany you anywhere

AURA® handheld NIR puts ZEISS performance in the palm of your hand. Regardless of whether you need to measure the quality of raw materials before processing or need to inspect parameters out in the field – in wind, rain and any weather, AURA® handheld NIR is the ideal, portable solution you can take anywhere. That's why Ag Optix swears by AURA® handheld NIR.

»With AURA® handheld NIR from ZEISS, food producers can get accurate lab-quality results – anywhere and anytime they need them. From raw bulk goods to finished products, AURA® provides instant quality assurance and validation to food processes around the globe. This handheld device offers intelligent flexibility, accuracy and reliability that you can depend on.«

Jeff Lorton  
Ag Optix (USA)



Scan now to find out more  
about AURA® handheld NIR  
from ZEISS

# When the going gets tough, Corona<sup>®</sup> extreme gets going

From operating temperatures of -15 °C to 50 °C and shocks of up to 50 times the force of gravity, Corona<sup>®</sup> extreme from ZEISS is at home in difficult conditions. All the while providing accurate, repeatable and dependable real-time measurements results. From applications where the device needs to be in direct contact with samples, such as in closed transport systems for agricultural produce or food production lines and laboratories, Corona<sup>®</sup> extreme is designed for full flexibility and durability. Regardless of whether you need measurements in the lab or in-line and under constantly variable conditions, Corona<sup>®</sup> extreme allows you to optimize your processes and maximize efficiency, no matter how tough the going gets.

## Your benefits:

- **Full-scale spectrometer** for the measurement of fat, dry mass, protein and more in the **950 to 1,650 nm wavelength range**.
- Measures in **direct contact** with the sample **without damaging it**
- Measures **various parameters** at the same time – **in real time**
- **Easily integrated** into the widest variety of spaces, from pipelines to trough chain conveyors
- Ideal for use **directly at the process line**, thanks to **IP protection level 66**



Scan now to find out  
more about Corona<sup>®</sup> extreme  
from ZEISS

# Almost immeasurable opportunities with Corona<sup>®</sup> process

Corona<sup>®</sup> process from ZEISS gives you an almost unlimited number of measurement possibilities and can simultaneously evaluate the vast quantity of information that exists in the 380 to 1,650 nm wavelength range. With other forms of measurement, the filter or even the device itself needs to be changed, whereas our spectrometer can measure fat, color, salt, dry mass and spices precisely, consistently and irrespective of measurement distance. Ideal for use in the food industry, Corona<sup>®</sup> process allows you to monitor important quality parameters in real time, so that you can optimize production quality, while saving costs and energy.

## Product highlights:

- **Full-scale in-line** spectrometer that covers both **visible and NIR wavelength ranges**
- Measure several **important quality parameters** at the **same time**, in real time, such as **fat, moisture, protein, sugar and color**
- **Two lamps** with automatic switching provides for **high levels of process security** and **no unplanned downtime**
- **Real time results** thanks to high measurement frequency
- Ideal for the measurement of **food products** on open transport systems, such as **conveyor belts** thanks to **hygienic design**



Scan now to find out  
more about Corona<sup>®</sup> process  
from ZEISS



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