

Diode Array 7200

NIR Analysis System



Easy-to-Use



Grains, Oilseeds and Meals



Feeds, Forages and more



6 Seconds Analysis

Fast, Accurate, Easy-to-use, Versatile

Perten
INSTRUMENTS

Diode Array 7200 NIR Analysis System

Fast: The DA 7200 is fast; it performs multi-component analysis in 6 seconds and requires little to no sample preparation or clean-up after analysis. Easy handling and fast analysis significantly reduce workload during any given week. The speed increases lab throughput and frees operators for other tasks. Most critically, it provides information to monitor your entire process in essentially real-time.

Accurate: To produce accurate results an NIR instrument must accomplish three tasks: analyze a representative sample, perform a precise measurement and prevent user errors.



- The large spot size and dish and multiple spectra collection ensure that a representative sample is analyzed – even for very heterogeneous samples.
- Solid state optics, wavelength stabilization and individual detectors for each wavelength remove instrument noise from the measurement thereby improving accuracy. In addition, the DA 7200 performs a self check prior to every analysis.
- The DA 7200 optimizes sample presentation while minimizing operator influence. There are no variable glass sample cups to pack improperly.

Improved accuracy saves money by allowing users to decrease safety margins and improve quality.

Easy to Use: The DA 7200 was designed for routine operation incorporating a touch screen and 2-button analysis. Simply pour the sample, strike off excess, place under the instrument, and press analyze.

The ease of use allows any operator to perform accurate analysis, and as a result, quality testing can be performed 24 hours a day. Its simplicity of operation means new staff can be brought up to speed quickly with minimal training.

Versatile: The ability to analyze many different sample types for many different parameters makes the DA 7200 extremely valuable. Analyze whole grains, meals, powders, pellets, finished goods, slurries, pastes and liquids – all on one instrument. Perten Instruments can supply many pre-developed calibrations for a multitude of products.

These features combine to create the fastest, easiest-to-use, most operationally accurate and most versatile analysis system available.

Specifications

Power Requirement: 115/230 V, 50/60 Hz, 115 W.

Dimensions (HxDxW): 556x375x370x mm with touch screen in top position

Net Weight: 21 kg

Operating Environment: Temp: 5–35°C, Humidity: 35–80 %

Products: Grains, Pellets, Slurries, Liquids, Pastes, Meals, Powders etc.

Parameters: Moisture, Protein, Fat/Oil, Fibre, Amino Acids, Starch, Fatty Acids, Sugars, Ethanol and many others

Diode Array 7250

At-line & Lab NIR Analysis System



Fast



At-line Ruggedness



Connectivity



Easy-to-Use

Accurate Analysis – Anything, Anywhere, Anytime, Anybody.

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INSTRUMENTS

Accurate Analysis:

Any Anything Anywhere
Any Anywhere Anytime
Any Anytime Anybody
Any Anybody Anytime

Fast, Accurate, Easy-to-use, Versatile, Robust.



The most powerful solutions are often the most simple and elegant. The DA 7250 is our 3rd generation diode array based instrument and embraces this concept whole heartedly. We chose DA technology as it offers many benefits to instrument design that lead to more accurate analysis and simplicity of use.

Diode Array 7250

At-line & Lab NIR Analysis System

Accurate Analysis –

The DA 7250 simply makes sense. It's fast, accurate, easy-to-use, versatile and robust. Our years of experience and expertise have gone into its design – optics, housing, sample presentation, workflow and software simplification. It comes in two versions – one for general use and a stainless steel, sanitary design version, for use in the food industry.

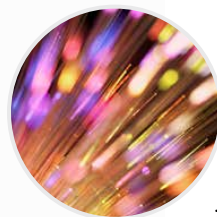


Robust and reproducible Diode array technology allowed us to create an instrument with no moving optical components. This improves accuracy and stability, and means that hardware can be standardized, minimizing instrument differences. The DA 7250 sets new standards in calibration transferability. It also removes sources of potential failure as there are no expensive monochromators to wear out and no wiggling mirrors that can be subject to vibration.



Fast and accurate spectra

The DA 7250 uses a sensor with excellent signal/noise ratio and sensitivity. In combination with the outstanding energy throughput, the DA 7250 collects many spectra per second, as the sample moves. The speed allows the instrument to automatically standardize the wavelength and absorbance scales on every single analysis. This improves accuracy, corrects for changes in ambient conditions and alerts users to potential problems.



Connectivity Our software platform is designed for optimal connectivity and data is readily exchanged with other programs. We offer innovative WEB report-

ing for data viewing from anywhere using a web browser. Ethernet and USB ports are provided while devices such as a Wi-Fi dongle or cellular/mobile modem are supported. The instrument can be remotely administered through Team Viewer and supports any Windows peripherals including printers and bar code readers.



Anything, Anywhere,

Anything

Grains, powders, pellets, pastes, slurries and liquids – nearly any type of sample – can be analyzed on the DA 7250, with no requirement for expensive, cumbersome modules. A large, representative sample area is analyzed meaning little or no sample preparation is required. The use of open-faced dishes removes tedious and time consuming cleaning between analyses. Available factory calibrations cover a wide variety of products and parameters and are built from our global database which encompasses hundreds of thousands of samples. The DA 7250 is ISO 12099 compliant, ensuring analysis that follows international standards.

Grains, powders, pellets, pastes, slurries and liquids

Anywhere

The DA 7250 is as at home in the lab as it is at-line in processing environments. It uses no moving optical components and employs a solid state drive (SSD) making it vibration resistant. It is IP65 certified (dust proof/water resistant) and temperature stabilized for consistent results. The DA 7250 excels in dusty, dirty and otherwise challenging environments. In food production areas the stainless steel Sanitary Design model meets hygienic requirements. It is designed with an open analysis area and without sharp corners, making it easily cleaned.

In the Lab & At-line



Anytime, Anybody.



Anytime

Test samples anytime, with optimized workflow, little or no sample preparation, in just 6 seconds. When analysis results are needed, the DA 7250 provides them immediately. It automatically performs background standardization tests ensuring accuracy. Not only can samples be analyzed in essentially real-time, but analysis results are available anytime from any location around the world when attached to the company network.

Industries: Grain and Oilseed Processing, Dairy, Meat Processing, Animal Feed, Flour Milling, Petfood, Snackfoods, Starch Production, Sugar Production, Bakeries, Ethanol Production, Wood-based Products.

Parameters: Moisture/Dry Matter, Solids, Protein, Fat/Oil, Ash, Fiber, Starch, Amino Acids, Fatty Acids, Sugars, Brix, Lactose, and more.

Anybody

Plant personnel to experienced chemists find the DA 7250 easy-to-use yet powerful. Its large touch screen with intuitive user interface and straightforward sample handling ensures rapid operator confidence. It's designed to eliminate sources of operator error producing accurate results regardless as to who performs the analyses. Accurate analysis is available at all times, enabling you to optimize and verify product quality 24/7, improving efficiency and reducing scrap.





Sanitary Design (SD) Model: The DA 7250 SD is designed for placement in labs and production areas where sanitary designs are required. The sanitary design limits surfaces, crevices and other locations where food material could adhere. The design is simple to clean, thereby reducing opportunities for microbial growth. The DA 7250 SD uses the same optics and calibrations and provides a case free of sharp edges, cracks, and crannies.

Lab, At-line and Process: The DA 7250 can be used in the lab and at-line. For continuous process analysis we offer two sensor models. The DA 73 series is used for in-line analysis and the DA 74 series for over-the-belt on-line analysis. As they are based on the same NIR technology, many calibrations can be transferred between the models.



Key features

- 6-second analysis of all types of samples
- Easy touch-screen operation
- IP65 certified for dust- and water resistance
- Accurate – automated self-test before every analysis
- Anytime access to results via web browser

Specifications

Analysis time: 6 seconds

Sample types: Grains, Pellets, Powders, Pastes, Slurries, Liquids and more

Sample area analyzed: Up to 108 cm²

Sample volume: Flexible 1-400 ml, depending on sample type

Display: 12" color touch screen

Language: Multiple languages included. English, Chinese, Thai, Russian and many more

Interfaces: USB and Ethernet

Operating temperature range: 5 to 40°C

Ingress Protection per IEC60529: IP65 certified

Wavelength Range: 950-1650 nm

Detector: Indium Gallium Arsenide (InGaAs)

Wavelength Accuracy: < +/-0.05 nm

Power requirements: 115 or 230 V, 50 or 60 Hz (specify by order)

Dimensions (HxWxD): 517 x 370 x 390

Net Weight: 20 kg

Accessory List

DA 7200/7250



Accessories to Optimize Value and Versatility

Accessories & Consumables

DA 7250 and DA 7200

Sample presentation accessories



Large Sample Dish

The Large Dish is the standard form of sample presentation for most samples. It maximizes analysis area for grains, pellets, meals, granules, flakes and other solids - 400ml /US liquid oz. 13.7. (Ø 140 mm)

Part # 23562 (DA 7250)

Part # 720506 (DA 7200)



Half-depth Dish

The best results for heterogeneous samples are obtained when a large surface area is analyzed. The Half-depth Dish maximizes surface while minimizing sample volume requirements - 220 ml /US liquid oz. 7.5. (Ø 140 mm)

Part # 25024 (DA 7250)

Part # 723301 (DA 7200)



Small Sample Dish

Suitable for small sample volumes of homogeneous samples which do not require a large sample surface - 110 ml /US liquid oz. 3.8. (Ø 75 mm)

Part # 24118 (DA 7250)

Part # 720504 (DA 7200)



Small Sample Cups (set of 3 pcs.)

When only a small sample volume available, a Small Sample Cup is an excellent way to present the sample. It comes in a package of three cups with volumes of 13, 22 and 43 ml respectively (US liquid oz. 0.44, 0.73 and 1.47). For use in DA 7250 the Rotary Accessory Holder is required.

Part # 729996



Micro Mirror Cup

The Micro Mirror Cup is specifically designed for extremely small volumes of seed or powder. Its unique design enhances the signal from very small samples providing accurate analysis. An Accessory Tray is required for use in DA 7250 or 7200.

Part # 721180



Disposable Cups (set of 250)

Analyze slurries, pastes, manures and other difficult sample types. Requires minimal sample handling and no clean-up. Requires an Accessory Tray for use in DA 7250 or 7200.

Part #720545



Transflectance Cup

For analysis of liquids with low light absorbance, such as oils and other transparent non water-based liquids. Requires Accessory Tray and a pipette for 0-5 ml for use in DA 7250 or 7200.

Part # 720580



Clear Liquid Cup

Designed for analysis of samples with high absorbance such as water based liquids. Requires Accessory Tray, Filter pads, and a pipette for 0-2 ml for use in DA 7250 or 7200.

Part #729984



Filter pads (set of 100)

Filter pads for the Clear Liquid Cup.

Part # 729981



Syrup Cup

The Syrup Cup is an accurate, easy-to-use accessory for analysis of syrups and other high viscosity products. Requires Accessory Tray for use in DA 7250 or 7200.

Part # 729970

**Closed Quartz Cup**

The Closed Quartz Cup allows for analysis through a fused silica surface. While not as optimal as analyzing a sample in a non-contact, open-faced device, this cup is useful for users accustomed to analysis with closed cups. For use in DA 7250 the Rotary Accessory Holder is required.

Part # 722002**Compression Plate for large dish**

Used for packing the sample surface of springy materials such as organic plant material.

Part # 24196**Accessory Tray for DA 7250**

Required for use with many sample presentation accessories. Only for use with DA 7250; does not fit DA 7200.

Part # 26023**Accessory Tray for DA 7200**

Required for use with many sample presentation accessories. Only for use with DA 7200; does not fit DA 7250.

Part # 729979**Rotating Accessory Holder**

Required in DA 7250 for certain accessories such as Small Sample Dishes.

Part # 22890

Other accessories

**Barcode reader**

Enter sample information expressed as bar codes automatically into the DA 7250 and 7200.

Part #723320**Stylus pen for touch screen**

For operation of instrument through the touch screen.

Part # 720507**Sample Preparation Tray**

Convenient for filling sample into dishes.

Part # 727777**Reference Check Cell**

The Reference Check Cell is an inert, stable material that provides a method to monitor instrument stability over time. Requires an Accessory Tray for use in the DA 7250 or 7200.

Part # 24229

Consumables

**Filter pads (set of 100)**

Filter pads for the Clear Liquid Cup.

Part # 729981**Filter for fan**

For DA 7200. DA 7250 does not have a cooling fan.

Part # 721032**Spare lamp**

User exchangeable spare lamp.

**Part # 23313 (DA 7250)
Part # 723230 (DA 7200)**

Software

**Unscrambler MVA**

Software for calibration development for DA 7250 and 7200. Created by Camo A/S, Norway.

Part # 708820

Specialists in Quality Control and Process Relevant Information

In 1962, Harald Perten founded Perten Instruments on the innovation of the Falling Number method, and we have continued to innovate ever since. Harald Perten's mission was to help customers improve product quality by providing analytical methods that were affordable, easy to use and interpret. This remains the cornerstone of our business.

Our vision is to offer complete solutions that provide fast and accurate results, and are developed specifically to meet the needs of food and agriculture processors. Implementing Perten Instruments systems must be beneficial for the overall objective of companies and research organizations; gaining knowledge or creating financial value.

We are active in nearly every part of the world. We serve you through our direct offices and our extensive network of highly qualified, experienced and trained distributors. Our distributors are an important part of Perten Instruments team and many have been with us for more than 25 years.



- Perten Office
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