

Next Generation NIR Analyzer

- Innovative sample handling
- Transfer your existing databases
- Ideal for at-line and in the lab
- Rapid analysis
- Internal drift protection
- Flexible data handling
- User friendly software
- Little to no sample prep
- Small footprint
- Blue Sun Guarantee

The new Phoenix NIR Analyzer is an ideal solution for manufacturers and laboratories that require rapid, accurate and reliable analysis.

The Phoenix employs a scanning monochromator, which is the NIR technology most trusted by agriculture and food companies and laboratories around the world.

It can simultaneously measure multiple parameters including moisture, protein, fat, fiber, starch, sugar, ash in addition to many others.

The Phoenix is available in both a top window configuration for NIR operators that require sample flexibility as well as a side loader configuration with an optional autosampler for NIR operators seeking a high throughput analyzer.

EXPLORE THE PHOENIX TOP WINDOW



All Phoenix instruments are manufactured at Blue Sun Scientific's headquarters in Jessup, Maryland.

Easy to Use Interface

- 12.3" Microsoft Surface Touchscreen
- Simple tab design
- Fast access to results
- Flexible data handling



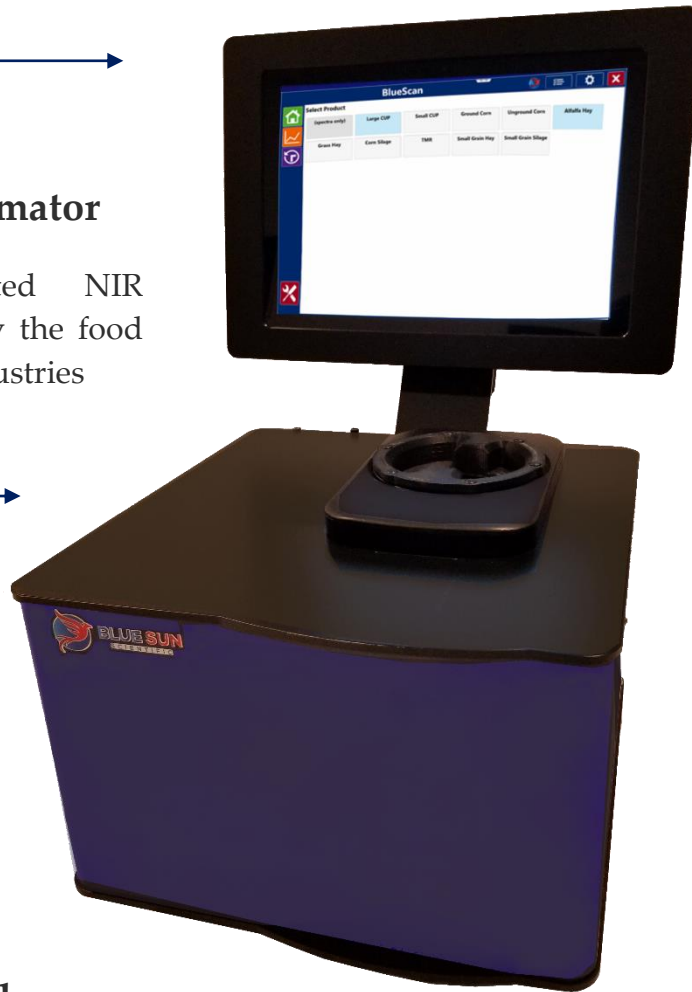
NIR Monochromator

The most trusted NIR technology used by the food and agriculture industries



Innovative Sample Car

- Scans large and small cups
- Scans entire sample cup
- Integrated standards



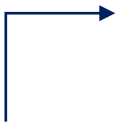
Easy to Access Lamp

The 5k-10k hour lamp can be replaced in under 5 minutes with no special tools needed.



Fully Sealed

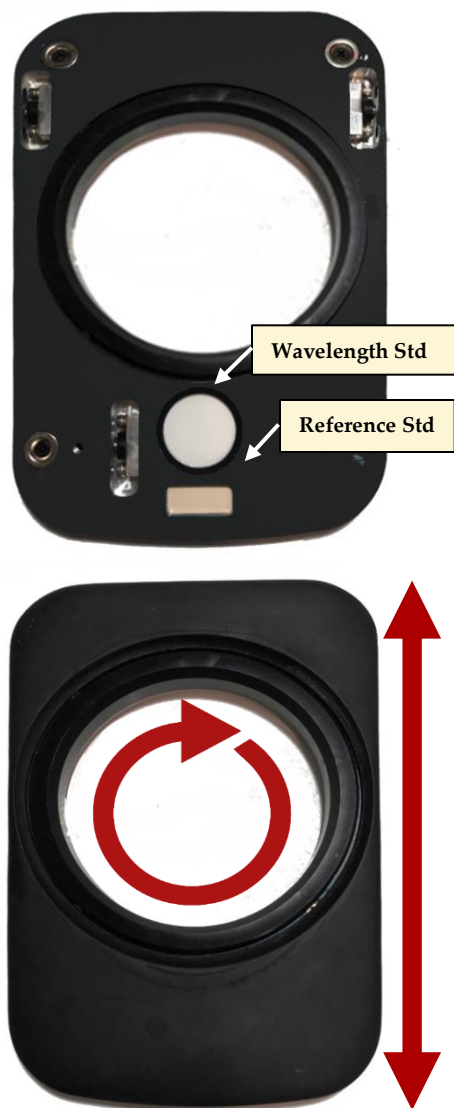
- Rugged and robust
- Ideal for in-lab or at-line analysis



HIGHLY ACCURATE, RUGGED AND EASY TO MAINTAIN

Innovative Sample Car with IDP

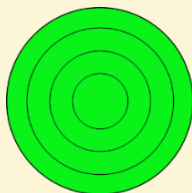
The Phoenix sample car offers internal drift prevention (IDP) which improves accuracy and consistency and reduces the need for bias adjustments.



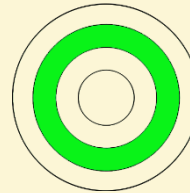
1. IDP Embedded Standards: The sample car contains embedded wavelength and reference standards, which are measured at the sample plane. This ensures your reference standards are never lost or damaged.

2. IDP Automatic Reference Scans: Reference scans can be programmed to be taken before each analysis or at regular intervals to ensure consistent, reliable results.

3. Scans the Entire Sample Cup: The sample car moves both laterally as well as rotates, allowing you to scan the entire sample cup compared to less than 25% on other NIR instruments. This reduces sampling error and improves repeatability in your testing.



Phoenix Scan Area



Other Instruments' Scan Area

Sample Flexibility

The Phoenix is compatible with multiple sample cups for a variety of sample types.



Large cups for unground and heterogeneous samples



Small cups for ground and homogeneous samples



Custom cups for unique or disposable samples

Phoenix Sideloader with Autosampler

Autosampler

- 30 or 50 cup capacity
- Easy to load and unload samples
- Rugged and robust

Phoenix Sideloader

- High throughput solution when paired with autosampler
- Same optical precision as Phoenix Top Window
- Compatible with ring cups



Innovative Sample Carousel

- Embedded standards
- RFID reader/writer

For high throughput testing, the Phoenix 5000 is available in a sideloading configuration with optional autosampler. Operators can streamline NIR testing with this highly automated and reliable solution.

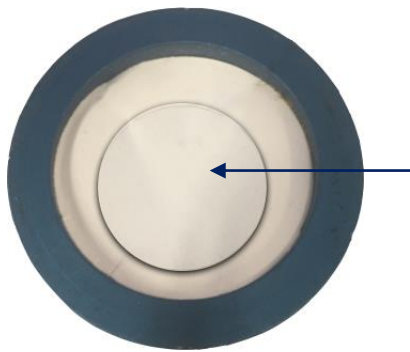
Samples can be easily loaded into the autosampler and NIR testing runs can be quickly programmed so that the instrument can be left to run unattended.

A built in RFID tag system ensures results are captured correctly.

Autosampler RFID Tag System

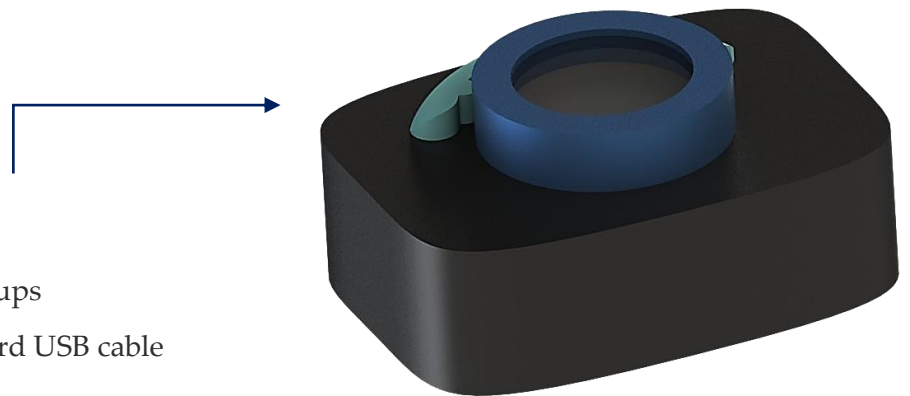
The Phoenix's RFID tag system ensures the highest throughput and consistent results by eliminating the need for work lists or tracking the order of sample cups.

Small RFID tags are affixed to the sample cup cardboard backs and are programmed via an external RFID reader/writer.



RFID Tag

- Attaches to sample cup back
- Contains sample ID and product type
- Programmed via RFID reader/writer
- Reusable



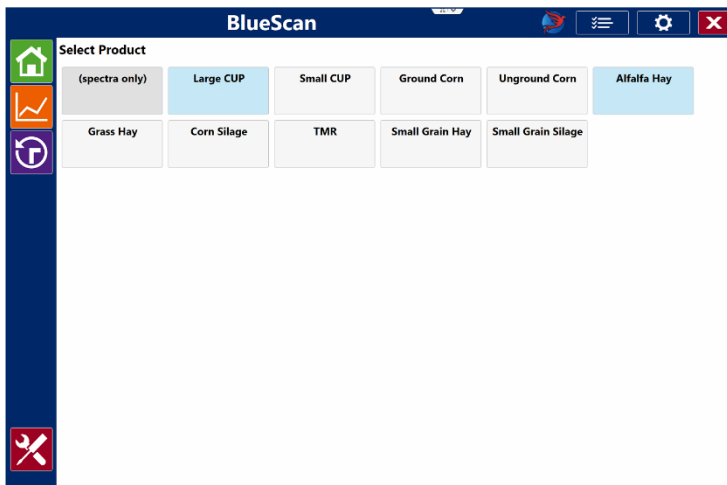
RFID Reader/Writer

- Easy to program sample cups
- Connects to PC via standard USB cable

1. After the RFID tag is programmed, sample cups can be loaded directly onto the autosampler via the upper rail in any order.
2. The Phoenix Sideloader has an integrated RFID reader which reads the sample information from the RFID tag before scanning the sample cup.
3. The Phoenix applies the correct calibration for each sample to ensure correct results.
4. After each analysis, the sample cups are released onto the lower rail of the autosampler for easy removal.

Introducing BlueScan

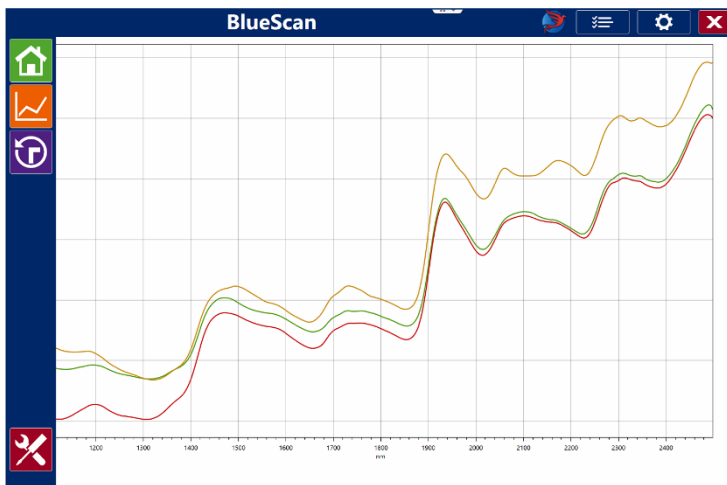
Software Designed for Ease of Use



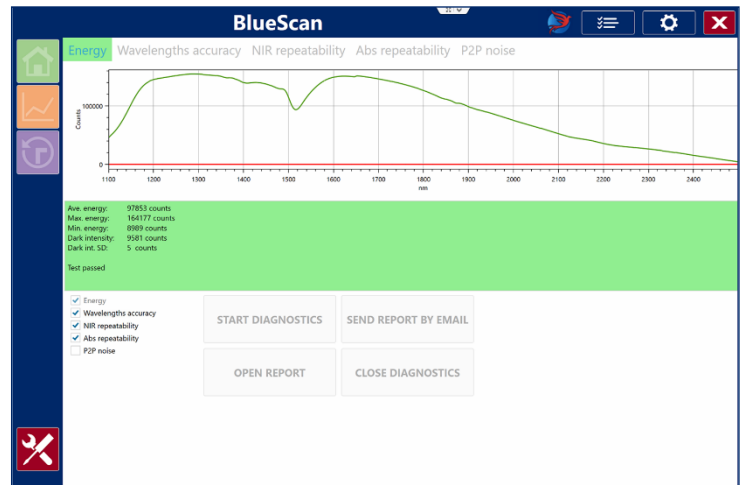
Easily switch between multiple sample types

Selected	Name	Description	Date	PROTEIN	ADF	ADP	P	CA	K	MG	DM	NDF	INSOLUBLE H	
<input type="checkbox"/>	272		2019-08-28 17:04:30	23.71	33.81	1.08	0.20	1.51	3.11	0.18	90.75	26.44	14.40	9.56
<input type="checkbox"/>	271		2019-08-28 17:03:35	23.74	33.62	1.07	0.20	1.52	3.08	0.18	90.73	26.41	14.41	9.63
<input type="checkbox"/>	270		2019-08-28 17:02:42	23.68	33.60	1.06	0.20	1.51	3.07	0.18	90.72	26.56	14.39	9.62
<input type="checkbox"/>	269		2019-08-28 17:01:47	23.67	33.85	1.07	0.20	1.51	3.06	0.18	90.75	26.77	14.40	9.72
<input type="checkbox"/>	268		2019-08-28 17:00:53	23.70	33.66	1.06	0.20	1.51	3.09	0.18	90.73	26.70	14.38	9.56
<input type="checkbox"/>	267		2019-08-28 17:00:00	23.71	33.86	1.07	0.20	1.52	3.07	0.18	90.71	26.82	14.40	9.61
<input type="checkbox"/>	266		2019-08-28 16:59:05	23.74	33.98	1.07	0.20	1.53	3.07	0.18	90.71	26.84	14.40	9.67
<input type="checkbox"/>	265		2019-08-28 16:58:11	23.70	33.56	1.06	0.20	1.51	3.08	0.18	90.69	26.64	14.39	9.61
<input type="checkbox"/>	264		2019-08-28 16:57:18	23.66	33.76	1.07	0.20	1.51	3.11	0.18	90.71	26.72	14.35	9.57
<input type="checkbox"/>	263		2019-08-28 16:56:23	23.74	33.88	1.08	0.20	1.51	3.09	0.18	90.72	26.68	14.43	9.59
<input type="checkbox"/>	262		2019-08-28 16:55:29	23.70	33.57	1.06	0.20	1.51	3.10	0.18	90.70	26.33	14.38	9.62
<input type="checkbox"/>	261		2019-08-28 16:54:35	23.69	33.87	1.08	0.20	1.52	3.07	0.18	90.74	26.51	14.39	9.65
<input type="checkbox"/>	260		2019-08-28 16:53:41	23.70	33.63	1.08	0.20	1.51	3.10	0.18	90.75	26.43	14.40	9.57
<input type="checkbox"/>	259		2019-08-28 16:52:47	23.68	33.68	1.07	0.20	1.51	3.10	0.18	90.74	26.76	14.40	9.56
<input type="checkbox"/>	258		2019-08-28 16:51:53	23.81	33.61	1.06	0.20	1.52	3.09	0.18	90.72	26.54	14.43	9.54
<input type="checkbox"/>	257		2019-08-28 16:50:59	23.79	33.54	1.06	0.20	1.52	3.10	0.18	90.73	26.48	14.40	9.60
<input type="checkbox"/>	256		2019-08-28 16:50:06	23.67	33.83	1.07	0.20	1.51	3.10	0.18	90.73	26.70	14.37	9.64
<input type="checkbox"/>	255		2019-08-28 16:49:11	23.82	33.48	1.07	0.20	1.53	3.09	0.18	90.71	26.09	14.41	9.56
<input type="checkbox"/>	254		2019-08-28 16:48:16	23.67	33.94	1.07	0.20	1.51	3.10	0.18	90.75	26.93	14.38	9.50
<input type="checkbox"/>	253		2019-08-28 16:47:24	23.78	33.82	1.07	0.20	1.52	3.10	0.18	90.70	26.34	14.38	9.59
<input type="checkbox"/>	252		2019-08-28 16:46:29	23.79	33.63	1.07	0.20	1.52	3.07	0.18	90.71	26.52	14.40	9.52
<input type="checkbox"/>	251		2019-08-28 16:45:35	23.77	33.60	1.07	0.20	1.52	3.07	0.18	90.73	26.62	14.38	9.53
<input type="checkbox"/>	250		2019-08-28 16:44:41	23.78	33.64	1.07	0.20	1.52	3.07	0.18	90.71	26.69	14.41	9.52
<input type="checkbox"/>	249		2019-08-28 16:43:47	23.80	33.70	1.07	0.20	1.52	3.09	0.18	90.69	26.85	14.38	9.60
<input type="checkbox"/>	248		2019-08-28 16:42:53	23.81	33.82	1.08	0.20	1.52	3.09	0.18	90.72	26.92	14.41	9.58
<input type="checkbox"/>	247		2019-08-28 16:41:59	23.74	33.75	1.06	0.20	1.51	3.10	0.18	90.69	26.45	14.38	9.56
<input type="checkbox"/>	246		2019-08-28 16:41:05	23.69	34.02	1.07	0.20	1.51	3.11	0.18	90.71	26.47	14.36	9.63
<input type="checkbox"/>	245		2019-08-28 16:40:11	23.78	33.78	1.07	0.20	1.52	3.09	0.18	90.71	26.44	14.38	9.50

View historical data to monitor trends



Examine and compare spectra



Rapid built-in diagnostics

The Phoenix NIR analyzer is powered by BlueScan. This custom software has been designed to simplify routine analysis and is packed with features making it ideal for research and development, monitoring quality and optimizing production.

BlueScan's tab-based interface ensures your information is always a click away. You can easily view results, historical data, spectra, generate reports and run diagnostics with the press of a button.. A diagnostic protocol can be run in seven minutes. This rapid tool ensures your instrument is properly aligned and that your results can always be trusted.

Database Options

The Phoenix NIR Analyzer has flexible database options for standard and custom applications.



Transfer an existing database: The Phoenix is compatible with customer owned legacy databases from many other NIR manufacturers.



Develop your own: We can assist you in developing your own custom databases using Alligator, our proprietary chemometric software.



Blue Sun Guarantee

The Blue Sun Guarantee is the NIR industry's most comprehensive service and warranty program. It guarantees you start up quickly and avoid downtime and repairs. Every Blue Sun instrument comes standard with the Blue Sun Guarantee, which includes:



Free
Phone
Support



Free
Remote
Support



Free
Software
Upgrades



6 Months
Calibration
Development
& Monitoring



1 Year
Warranty
On Parts

Specifications

Hardware		
Dimensions	Top Window(TW): 14.0 in x 15.0 in x 20.75 in ; 356 mm x 381 mm x 527 mm (LxWxH) Sideloader(SL):	
Weight	TW: 24 lbs ; 11 kg ; SL:	
IP Rating	TW:62 ; SL: N/A	
Power Connection	Via external power supply; Input:100-240VAC, 50/60Hz, 65watt Output: 24VDC, 2.7A.	
Light Source	Tungsten Quartz Halogen Lamp, MTBF 5k-10k hours	
Measurement Mode	Reflectance or Transflectance	
Detector	High Performance InGaAs extended ranged detector(s)	
Wavelength Selection	Scanning diffraction grating monochromator with nominal bandwidth of 10nm (FWHH). Configurable Data presented in 0.5nm, 1nm or 2nm increments	
Performance		
Spectral Resolution	0.5 nm, 1.0 nm or 2.0 nm	
Absorbance Range	Up to 4 absorbance units (scan and wavelength dependent)	
Analysis Time	10-60 seconds (24 scans / sample = 32 seconds)	
Wavelength Reproducibility	< 0.02 nm (based on Blue Sun Scientific specific diagnostic test)	
Wavelength Accuracy	< 0.3 nm for Blue Sun selected published peak positions of NIST SRM 1920a standard	
Photometric Noise	< 15 μ Au in standard range	
Phoenix Models	Phoenix 5000	Phoenix 6000
Wavelength Range	1100-2500 nm	600-2500 nm
Number of Data Points	Up to 2800	Up to 3800
Number of Detectors	1	2
User Interface		
Operating System	Windows 10	
Display	12.3" Microsoft Surface Pro Touch Screen	
Data Export Options	LIMS, Modbus, Excel	
Installation Requirements		
Ambient Temperature	10-40°C	
Storage Temperature	-20-40°C	
Ambient Humidity	< 85% RH	
Mechanical Environment	Stationary during use	
EMC environment	Laboratory use, Industry requirements	