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<b>NIR-Online XTwo</b> UV   VIS Spectrometer High resolution CCD camera Resolution	Two online system 350 - 920 nm 350 - 920 nm; UV   VIS 80 µm
<b>NIR-Online XThree</b> Spectrometer Spectrometer	Three online system NIR, UV  VIS 950 - 1750 nm; NIR 350 - 920 nm; UV   VIS
<b>NIR-Online XFour</b> Spectrometer Spectrometer High resolution CCD camera Resolution	Four online system NIR, UV   VIS 950 - 1750 nm; NIR 350 - 920 nm; UV   VIS 80 µm
<b>NIR-Online XBeam</b> Spectrometer Max. Distance to product Optical measuring surface Special features	Beam online system NIR 950 - 1750nm; NIR Approx. 40 cm Approx. d = 10 cm Variable distance between sample and optics: 0 – 40 cm
<b>NIR-Online XBeam</b> UV   VIS Spectrometer Spectrometer Max distance to product Optical measuring surface Special features	Beam online system NIR, UV   VIS 950 – 1750 nm; NIR 350 – 920 nm; UV  VIS Approx. 50 cm Approx. d = 10 cm Variable distance between sample and optics: 0 – 40 cm
<b>NIR-Online XView</b> Without spectrometer High resolution CCD colour camera Resolution	View only online system CCD 80 um
<b>NIR-Online XLight</b> For large-area measurements with Internal reference Measuring distance Measuring spot Appropriate for conveyer belts Automatic referencing For NIR-Online XOne only Traverse frame, not included	Light only From 20 to 40cm From 10 to 30 cm across

For further details and a no-obligation discussion about your process control requirements, please contact:

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# NIR-Online Process Analyser

INFORMATION SHEET



## NIR-ONLINE PROCESS ANALYSER :

- Online moisture analysis
- Online multi parameter measurement of concentrates
- Homogeneity measurement
- Completeness of mixture check
- Sample ID
- For process monitoring and control
- Purity testing of compounds
- Monitoring of visual characteristics



**NIR-Online**<sup>®</sup>  
SECURE YOUR FUTURE

# NIR-Online Process Analyser

## Product Profile

Robust NIR-Online analysers from Suffolk Automation are designed for integrated monitoring and product analysis through vital stages of intake and product processing

Intelligent software calculates information from a selection of detectors. Concentrations of ingredients such as water, moisture, fat, protein, ash, speck count and colour are then analysed and accurately determined

At intake data from the raw material can be compared with product specification in the analyser database enabling operators to determine the ideal result of the blending and mixing process

The NIR-Online analysers enable lab technicians and operators a complete insight and control of the vital stages of product processing thereby limiting any fluctuations to an acceptable level

Thanks to extremely quick data gathering and analysis even products conveyed at extremely high speeds can be accurately determined.

The industrial quality of the stainless steel equipment ensures excellent reliability. All analysers are ATEX approved and are rated within IP65 protection class

A comprehensive range of adapters and accessories ensure that hardware can be integrated into most processing plants

The highly intelligent software is windows based and produces full documentation and traceability and will integrate with existing ERP and process control systems

For the laboratory a comprehensive range of accessories will also allow the analyser to fully integrate into your daily laboratory routine.

## Application

Complete control of individual ingredients is vital particularly during the mixing process. Supported by a library of stored spectra data in the analyser each individual component and ingredient is checked. If an ingredient stored in the library data is found to be missing or is out of a determined range processing will be stopped

End point determination in the mixing process is equally important, in other words detecting the degree of homogeneity of the completed mixture. During this process, measurement of the variances in the mixtures spectrum using NIR-online takes place contact free, at a distance of up to 50cm. If these variances are outside predefined tolerances the mixing process can be stopped at the exact time unacceptable variance occurred. This early detection prevents expensive product waste and/or time consuming reworking

In addition online monitoring gives more transparency to the mixing process and allows for detailed documentation

Identification and quality testing of materials at intake is an important area that NIR-online analysers will monitor. Analysis of all the incoming substance is analysed and compared with the data stored in the spectral library of the analyser. If the data deviates beyond allowable limits an alarm will be triggered and acceptance of the incoming goods will be automatically interrupted. This ensures that only material acceptable to the quality of the end product will be accepted

The NIR-Online analyser is also available with an optional high-resolution digital camera. The camera detects optical features of a sample, for instance speck count, size and colour.

## Advantages

Online monitoring supplements laboratory analysis by performing in-process measurement and whole measurement of the incoming goods (not just a laboratory samples). Calibration using existing reference methods produces constant monitoring of the product with the range set for acceptability. With results generated in split seconds, processes can be monitored and automatically controlled in real time. This ensures that many of the important stages of processing are now transparent and fluctuation in quality is kept strictly within acceptable levels. Efficiency is enhanced, production cost reduced and process reliability vastly improved.

## Technical Specifications All Products

Dimensions (W x D x H)	220x220x135mm
Weight	7kg
Operating temperature range	-10.....+40C
Humidity	Highest relative Humidity <90%, non-condensing
Operating pressure	30 bar
Vibrations	0.2 G at 0.1 – 150 Hz
Light source type: Lifetime	2 tungsten halogen light sources: MTBF > 18,000 h
Interfaces	Blue Tooth up to 10m RS-232 RS-422 up to 2km
Protection class	ATEX: EX II D ½ IP65 T80 Upon request: ATEX : EX II G ½ IP67 T80
Measuring time	10ms, typical
Optical measuring surface (except for NIR Beam and light)	d=4cm
Special features	Automatic referencing Black/white comparison

## Product Range

<b>NIR-Online XOne</b>	One online system 950 - 1750 nm
Spectrometer	950 - 1750 nm; NIR
<b>NIR- Online XOne UV   VIS</b>	One online system 350 - 920 nm
Spectrometer	350 - 920 nm; UV   VIS
<b>NIR-Online XTtwo</b>	Two online system 950 - 1750 nm + CCD
Spectrometer	950 - 1750 nm; NIR
High resolution CCD camera	
Resolution	80µm

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