

### Technical data sheet

# ProxiMate™ Essential

Depending on specification the BUCHI ProxiMate™ Essential is an NIR or visible light plus NIR spectrometer based on diode array technology. ProxiMate™ Essential is designed especially to work in the food and feed environments. The stainless steel case is designed to prevent corrosion when acidic, basic or chlorine detergents are applied.



## Order code

Choose the configuration according to your needs:

1 1 P E 1 0 1 0 0 0 0

Spectrometer Type

- 1 NIR
- 2 VIS & NIR

Software Package

- 1 NIRWise™ Operator Software
- 2 NIRWise™ Operator Software including NIRWise™ PLUS Chemometrics Suite

## Scope of delivery

All configurations are supplied ready to use.



### NOTE

The scope of delivery depends on the configuration of the purchase order.

Accessories are delivered as per the purchase order, order confirmation, and delivery note.

Component	Specifications supplied
ProxiMate™ Essential	1
including white reference standard, spacers and positioning plate	
Operation Manual	1
Quick Guide	1

## Technical data

### ProxiMate™ Essential

Specification	ProxiMate™ Essential
Dimensions (W × D × H)	260 × 433 × 142
Weight	13 kg
Power consumption	35 W
Connection voltage	12 VDC ± 10 %
Overvoltage category	I
Pollution degree	2
Appliance classes	III
EMC environment	Basic environment
EMC emission class	Class B
EMC standard	IEC 31326-2-3
Detector NIR	Thermoelectrically cooled InGaAs

Specification	ProxiMate™ Essential
Detector VIS	Si
Wavelength range NIR	900 - 1700 nm
Resolution NIR	7.0 nm
NIR Data Resolution	3.1 nm
Wavelength range VIS	400 - 900 nm
Resolution VIS	Better than 15 nm
VIS Data Resolution	2 nm
Up view illumination spot size	8 mm
Approval	CE
Lamp type	Tungsten-halogen

## Ambient conditions

For indoor use only.

Max. altitude above sea level	2000 m
Ambient temperature	5 - 40 °C (25 °C)
Maximum relative humidity	80% for temperatures up to 31 °C decreasing linearly to 50 % relative humidity at 40 °C
Storage temperature	max. 45 °C

## Description of function

ProxiMate™ Essential is an NIR spectrometer that can be used to determine the concentration of different parameters in food and feed samples in a nondestructive way.

ProxiMate™ Essential is supplied in different versions. Dependent on the version specified, ProxiMate™ Essential is either an NIR or combined NIR and visible spectrometer.

The instrument generates a beam of NIR (and visible) light which is focused onto the sample under investigation. Light reflected from the sample is collected and spatially separated by a diffraction element. The diffracted light is directed onto a diode array detector. Signals from the detector are processed and a reflectance spectrum is constructed. This spectrum undergoes further processing to calculate the constituents required.

## Data processing

The NIR light interacts with the sample material in different ways, leaving a characteristic fingerprint on the spectrum. Spectra from both liquids and solids can be measured with ProxiMate™ Essential. The spectra of solid samples are collected directly, liquid samples require the use of a transreflectance adapter.

## Up view mode

The up view mode directs and collects light from the underside of the sample. The NIR light passes through the base of a sample dish before interacting with the sample under evaluation. Up view measurement has the advantage that a more consistent surface is presented to the ProxiMate™ Essential ensuring accurate measurement output. Glass petri dishes are recommended to enable best performance. Additionally, when used in conjunction with a transreflectance adapter, it is also possible to measure liquids using the up view option.

## Spare parts and accessories

Use only genuine BUCHI consumables and spare parts in order to ensure correct, safe and reliable operation of the system.

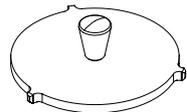
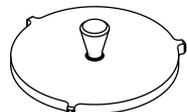
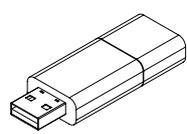


### NOTE

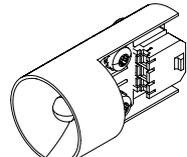
Any modifications of spare parts or assemblies are only allowed with the prior written permission of BUCHI.

## Accessories

	Order no.	Image
External White Reference	11067547	
White reference spacer for up view	11067377	
White reference locating plate	11067391	
Glass petri dishes 10 pcs. (up view) Not suitable for use with Transflectance Cover	11072073	
Large sample carrier	11067691	
High Performance Sample Cup	11067399	
Robust cup	11055058	

	Order no.	Image
Transflectance cover 0.3 mm Not suitable for use with robust cup	041636	
Transflectance cover 2.0 mm For measurement of crude palm oil. Not suitable for use with robust cup.	11067919	
Transflectance cover for robust cup	11055998	
Performance test standards kit (7 pcs.)	11067545	
Recertification of performance test standards kit	11070905	
NIRWise PLUS Chemometrics suite	11068025	

## Spare parts

	Order no.	Image
Spare lamp	11065441	
Replacement Window HPSC	046246	

## Maintenance kits

	Order no.
Kit Customer ProxiMate Frequently used wear and spare parts for self-servicing your device, conveniently gathered in one kit	11062670



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