

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 % |
| Appliance classes | III |
| Detector NIR | Thermoelectrically cooled InGaAs |
| 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 |

| Specification | ProxiMate™ Essential |
|--------------------------------|----------------------|
| 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 transmittance 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 transmittance adapter, it is also possible to measure liquids using the up view option.

Spare parts and accessories


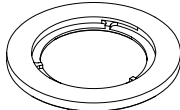
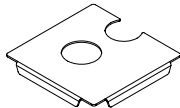
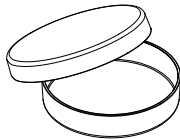
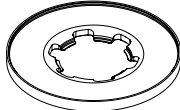
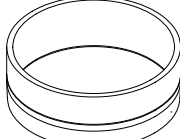
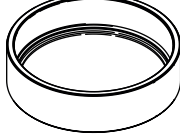
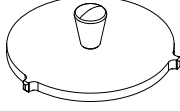
Use only genuine BUCHI consumables and spare parts in order to ensure correct, safe and reliable operation of the system.

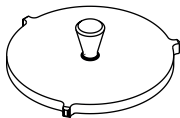
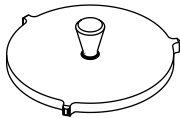

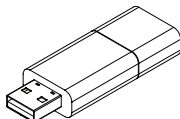


NOTE

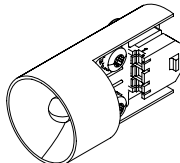

Any modifications of spare parts or assemblies are only allowed with the prior written permission of BUCHI.

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 |  |
| Transflectance cover 0.3 mm Not suitable for use with robust cup | 041636 |  |

| | Order no. | Image |
|---|-----------|--|
| 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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Quality Systems ISO 9001

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