OPERATING GUIDELINES

ANALYSE
OPTIMISE
MAXIMISE

Powered by AUNIR
REAL-TIME ANALYSIS IN THE PALM OF YOUR HAND

NIR4 analyses the nutritional composition of forage and animal feed. It provides real-time analysis whilst in the field, allowing the user to optimise their nutritional decision-making.

HELP AND ADVICE
For assistance with NIR4 please contact your distributor. Alternatively email us at:
support@nir4.co.uk
9am – 5pm UK time, Monday – Friday

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In addition to reading these guidelines please view our user videos at www.aunir.com/products/nir4/how-to-videos for further information.

These Operating Guidelines can be found on our Web Portal (see Section 9 for access details).
CONTENTS OF YOUR NIR4 PRODUCT

NIR4 carry case

NIR4 spectrometer with ruggedised micro USB cable

Sampling bowl

Reference cap

NIR4 tablet

Inside the carry case, underneath the tablet

Charging cable

Mains plug with USB socket

USB car charger

SECTION 1 NAVIGATING THE TABLET

1. Turn the tablet on by pressing and holding the power button.

2. To lock the screen, press the power button once. The tablet will go into sleep mode but will not turn off completely. The screen display will lock after a period of time.

3. To unlock the screen, press the power button once to bring the tablet out of sleep mode and enter your PIN which will be supplied with your NIR4 product. If you forget your PIN, contact the NIR4 support team.

4. It is important that you turn the NIR4 product completely off when not in use to conserve battery life. To turn the tablet off, press and hold the power button, select ‘Power off’ from the menu that appears and then tap OK.

5. At certain times when using your NIR4 product you will need to type information into the tablet. A keyboard will appear on the screen at these times. The on-screen keyboard operates in the same way as a conventional computer keyboard.
SECTION 2 CONNECTING AND CHARGING

Charging the tablet: to charge your NIR4 tablet, first connect the USB cable into the plug body and connect the other end to the tablet.

The USB car charger can be used in a vehicle with a 12V socket. When connected, the NIR4 logo will light up.

If your tablet has been supplied with a charging station, position the tablet into the station and connect the power.

3-pin plug body (UK version)

The charging cable is specific to the version of the tablet.

Mini USB connection for charging the green/black tablet

Micro USB connection for charging the grey/black tablet

Once charged, turn the tablet on by pressing and holding the power button.
Connecting the spectrometer: before you start to use your NIR4 device, turn the tablet on and open the NIR4 app, then connect the spectrometer to the tablet. Do this by connecting the spectrometer cable into the USB port on the side of the tablet.

The spectrometer cable has a different USB connection for the tablet depending on the tablet version.

Hold the cable at 90 degrees to the tablet and insert into the tablet port without twisting or bending.

The cable should remain securely connected to the spectrometer at all times.

When you have finished using your NIR4 device, please disconnect the spectrometer from the tablet, turn the tablet off completely and replace in the case.

The NIR4 home screen has three areas: My Samples, My Account and Settings.

'My Samples' is where you can set up a new sample or location and start a new scan. You can also view your previous results here.
‘My Account’ is where your account information is stored. You can also see your advisor information and a record of your recent token transactions by selecting the option from the menu bar on the left of the screen. To make changes to your account or advisor information please log onto the NIR4 Web Portal.

In ‘Settings’ you can change the length of the countdowns for the baseline scan and the sample analysis scan. The default countdown time is three seconds. If you wish to change this time interval, tap on the number that appears beside ‘Countdown timer’ and the number keyboard will appear. Delete the current time and then type in the new time.

Results, tokens and calibrations can all be synchronised to the web portal from within this section if necessary.

Tap on ‘Send logs’ if prompted by a member of the Customer Support team: system information needed to investigate issues will be sent when the tablet is connected to WiFi.

To return to the home screen from the ‘Settings’ area, tap on the ‘Home’ button in the top left of the screen.
22 The ‘Help’ button shows links to documents. To return from the Help screen to the NIR4 home page, tap on the home button in the top left hand corner of the screen. You can also find some useful videos on using your NIR4 device at www.aunir.com/products/nir4/how-to-videos

23 The home page displays how many tokens you have left to use. To buy more tokens, first make sure you have an internet connection and then tap on ‘Buy more tokens’. This will take you to the Web Portal where you will be guided through the process. You can also purchase more tokens by logging into the Web Portal on your desktop or laptop computer.

SECTION 4 SETTING UP A NEW SAMPLE

24 To set up a new sample, enter the ‘My Samples’ area and click on the ‘Add new sample’ button in the bottom left of the screen.
Begin by adding the name and location of the new sample. Do this by tapping the section next to ‘Name’ and then ‘Location’. If you have typed the name or location before, it will automatically appear in a drop-down list for you to select from. If you want to change these details, tap on the name, use the keyboard to delete and then enter the correct name.

In the ‘Product’ section, choose the correct product from the drop-down list according to the sample you are analysing. It is very important you select the right product type.

Next enter the ‘Sample ID’. This should include information to help you and your advisor identify the sample. This might include storage area, address or section. The Sample ID should be unique to each sample. You can set up as many new samples as necessary to fit your sampling requirements.

Enter any notes or descriptions in the final ‘Description’ section if necessary.

To complete your sample set-up, tap on the ‘Save’ button and your new sample will be saved. You will automatically be returned to the sample list.

Once you have a sample set up, you can add as many new scans to it as required. To add to an existing sample, tap on the correct sample from the sample list each time before you tap on ‘Start Scan’.

SECTION 5 MANAGING YOUR SAMPLES

Tap on ‘Edit sample’ and you will be taken to a screen where you are able to change the name, location, sample ID and any descriptive information. You are able to change the product only if no scans have been completed for that sample. Once you have finished editing the information, tap on ‘Save’ in the top right corner and you will automatically return to the sample list.

To remove samples from the Tablet and Web Portal, select ‘Archive’.

If you later want to reinstate an archived sample, you can do so by emailing support@nir4.co.uk.
SECTION 6 PREPARING AND SCANNING YOUR SAMPLE

34 There are two stages to analysing your sample. The first is to scan the baseline using the reference cap provided in your NIR4 carry case (see contents on page 3).

35 Before scanning the baseline, make sure your sample is prepared and close by. After the baseline scan is complete you have thirty seconds to start scanning your sample. If you do not start scanning your sample within thirty seconds of the baseline scan being completed you will be asked to scan the baseline again.

36 For guidance in preparing different types of samples please refer to our video library at www.aunir.com/products/nir4/how-to-videos

37 Once you are ready to start the scanning process, place the reference cap over the end of the spectrometer and click it into place. Then tap on ‘Start Baseline Scan’ in the bottom right of the screen. The on-screen timer will count down before the scan is taken.
If the baseline scan did not complete correctly you will see an error message on the screen. Check that the white part of the reference cap is thoroughly clean, then securely fit the reference cap to the spectrometer before re-scanning. If you see this issue repeatedly please contact Customer Support.

Once the baseline scan is complete, you will automatically be taken to the ‘Prepare to scan’ screen. At this point, return the reference cap to the carry case and place the spectrometer on top of your sample within the sampling bowl. Once the spectrometer is in place, tap ‘Start scanning’ in the bottom right of the screen.

Once started, the spectrometer will take five replicate scans, one after the other. Each of the scans will take 200 readings, giving a total of 1000 readings. The average of these readings is calculated as your result.

Throughout the scanning process, it is recommended that you copy the scanning technique shown in the relevant NIR4 video for your sample type. These can be found on the NIR4 website www.aunir.com/products/nir4/how-to-videos

Should you need to pause the scanning process at any time, select ‘Pause scanning’.

During the pause you can choose to ‘Rescan Previous’ to redo the last scan taken, ‘Start from Scratch’ to begin all five scans again or select ‘Continue Scanning’.
If you have paused the scanning process and are now ready to continue, select ‘Continue scanning’ from the bottom left of the screen to continue taking the remaining scans.

When the scanning process is complete you have three options; ‘Rescan Previous,’ ‘Start from Scratch’ or ‘Display Results.’

After tapping ‘Display Results,’ the results of the analysis will immediately appear on the tablet. If the results are outside the limits of the calibration, a message will appear on the screen. Check that the correct product was selected, then press ‘Rescan’ to start the scanning process again. If you see this issue repeatedly, please contact Customer Support.

SECTION 7 REVIEWING AND SENDING RESULTS

Once you choose to Display your Results, a token will be deducted from your account and the results of the analysis displayed on the screen.
Against each parameter is a traffic light icon. The traffic lights (red/amber/green) are activated when six scans of the same sample have been completed.

The traffic lights demonstrate how each parameter is changing over time for the selected sample (note that they do not indicate the quality of the sample).

Green: indicates that the sample is within the change limits of the calibration. No action is required because the sample hasn’t changed compared to the previous sample, or compared to the average of the previous 5 samples.

Amber: indicates that the sample could be changing. Action could be considered because the sample is different, either compared to the previous sample, or compared to the average of the previous 5 samples.

Red: indicates that the sample has changed. Action should be taken because the sample is different, both compared to the previous sample, and compared to the average of the previous 5 samples.

On the results screen you have the option to contact your Advisor. By tapping on ‘Contact Advisor’ you will be able to send the results and a message to the Advisor you have set up in your account. This message will send immediately if you are connected to WiFi. If not, the message will be stored and it will be sent when you are next connected to WiFi.

You can add a message by typing into the box that appears on the screen.

If you wish to send further copies of the results, you can do so through the Web Portal. See section 9 – Using the Web Portal for more information.

If you do not want to include the set of results in your statistics, de-select the ‘Use in Stats’ box in the middle at the bottom of the screen. If you de-select, this result is still viewable but will not be used as part of the traffic light change indicators.
SECTION 8  AFTER YOUR SCAN IS COMPLETE

54 Once you have finished scanning your sample and viewing your results, you can choose to scan a new sample, or alternatively, return to the sample list by tapping on ‘Back to sample’.

55 It is recommended you use a wet wipe and then a dry cloth to clean and dry the spectrometer between each scan. Please do not put the spectrometer in water to clean it.

56 If you want to see a specific set of results before scanning a new sample, you can do so from the ‘My Samples’ screen. Find the appropriate sample and then tap on ‘Display last results’ on the right of the screen.

This will take you to the results display page where you can move between different results by using the arrows at the top left of the screen or by swiping your finger horizontally across the screen.
SECTION 9 USING THE WEB PORTAL

57 On the Web Portal you can download, view, search, share and report your sample analysis results. To access the Web Portal, users of NIR4 Farm should visit results.nir4farm.com whilst users of NIR4 Feed should visit results.nir4feed.com. We recommend that you use the latest version of your browser when using the Web Portal and view using a desktop or laptop computer.

58 Once on the Web Portal, click on ‘Log In’.

59 Enter your username in the top box, and your password in the bottom box. Once complete, click on ‘Log In’ in the bottom right corner.

60 This will take you to your NIR4 Web Portal home page.

61 Scroll down the page to view individual sample results.

62 If your NIR4 product is online whilst you are scanning your samples, the scan data will upload to the Web Portal automatically. Refresh your web browser to update the information shown on the screen.

63 If you have been set up as an Advisor on the system, you will have received an email containing a set of unique login details. These will allow you to access the Advisor area of the Web Portal in order to view and manage results for multiple users. Click on ‘Advisor login’ at the bottom of the login screen and login with your details.

64 For each sample result you have five options which are displayed on the right hand side of the grey bar above each sample.

65 You can add a comment to the sample analysis by clicking on this icon. Comments will also appear on the reports when generated.
You can download a report of your sample using the ‘Download Report’ icon.

You can open the report as a PDF which can be saved or printed as required. If you need to email your report to anyone, you can do so by saving the report and attaching it to an email.

You can use the ‘Contact Advisor’ icon to send a message directly to the Advisor you set up in your account (see point 71).

If you would like to share your results by email, use the share icon. This will generate a link that can be emailed to another contact.

When you click on ‘Share’ your email client will open (automatically if using Microsoft Exchange). Click on ‘allow’ on any message boxes that appear. An email will be created ready for you to type in the address of the recipient. You can add any other attachments you wish, and compose your own message.

Once received, the email will contain a link to download or view the sample report through the internet. The recipient cannot access any of your other results stored on the Web Portal.

You can exclude the sample results from your statistics by clicking on the dustbin icon.

Any excluded results will appear at the bottom of the screen on the Web Portal. If you want to include them again, click on the ‘Include In Stats’ icon.

If you would like to export your results to Excel, you can do so using the Export Samples link in the top navigation bar on the Web Portal.

After clicking on Export Samples you can apply the required filters to find the results you want:

Once your search is complete, a list of all the results relevant to that search will be displayed. Tick the box on the right hand side next to all the results you want to export, and choose either Excel export (Excel format) or ration export (.csv format). If you choose the ration export you will be able to import these files directly into rationing programmes.

Please note that the excel export functionality will only work on your laptop or desktop computer and not directly from the NIR4 tablet.
In the Web Portal you can also change your settings. Click on the ‘Settings’ option in the top navigation bar of the Web Portal to open the settings screen.

From here you can update your name, address, phone number and Advisor email. You can also add a logo or photograph if you wish. Any logo or photograph you load will appear on your Tablet, on the home screen of your Web Portal, and on your Analysis Report. You can also change your Web Portal password from this screen.

SECTION 10 PURCHASING TOKENS

The number of tokens available is displayed at the bottom of the home screen and the top right corner of every other screen.

If you have purchased the ‘annual token buy-out’ package, tokens are unlimited on your account and indicated by the infinity symbol: ∞

Tokens are purchased from the Web Portal on the ‘Buy more tokens’ tab. This can be accessed from your laptop or the NIR4 tablet, both need to be online to undertake the process.

Enter the amount of tokens you need and the total cost will be calculated. The minimum number of tokens that can be purchased in one transaction is 50. If you are happy with this, select ‘Pay’.

You will then be shown an order summary confirming the quantity, the total cost and the price per token. If you are happy to proceed, tap ‘Confirm’. Or tap ‘Cancel’ to return to the Web Portal.

The tokens will then be added to your account automatically and you will receive an invoice for the cost of the tokens from your distributor. If you have any queries please contact your distributor or email support@nir4.co.uk

All token orders are subject to credit limits and the terms of payment set out in the NIR4 terms and conditions.
SECTION 11  CONNECTING TO WIFI AND TROUBLESHOOTING

When the tablet is connected to WiFi, the app will automatically update your results to the Web Portal. When you are connected, ‘Online’ will appear in the top menu bar in the app.

To connect your tablet to WiFi, tap on the WiFi icon on the top right hand corner of the screen. This will take you to the WiFi settings screen.

Alternatively tap on the ‘Home’ button to take you to the main home screen and select ‘WiFi Settings’. This will take you to the WiFi settings screen.

From here, connect to your WiFi and enter any necessary security access passwords for your chosen router.

Once connected, use the back arrow in the bottom left of the screen to return to NIR4, or the tablet home screen where you can tap on the NIR4 icon to continue using your NIR4 product. The NIR4 home screen will show if you are connected to WiFi as described above.

Please note that the app cannot connect to a public WiFi if accessed through a web browser.

If a triangular warning symbol appears in the top bar of the screen, this means there is an NIR4 calibration update available. If a calibration update is available you will be prompted; please install this before continuing to use NIR4. Prompt updates will ensure the smooth running of your NIR4 product and continued accuracy of results.

You must install the update as soon as they are available by following the on-screen instructions.

We recommend that you connect your NIR4 device to WiFi at least weekly to allow your results to be uploaded and any calibration updates to be accessed.
SECTION 12 CLEANING AND MAINTAINING

Please do not unscrew the cable from the top of the spectrometer; the cable and the spectrometer should always stay connected, even when stored in the carry case.

The spectrometer is a sensitive instrument so please do not use it outside in the rain, high humidity, excessive cold, extremes in temperature or restricted ventilation. All of these conditions may affect the product.

Clean the spectrometer and reference cap regularly to avoid a build-up of residue. Use a damp cloth or wet wipe, followed by a dry cloth.

Please disconnect the tablet and the spectrometer before storing them back in the carry case. Ensure the tablet is charged and turned off before storing.

This product does not contain any serviceable parts. If your product fails to operate, please contact us.

We cannot accept liability for any damage or failure of the product if it has not been properly cared for.

Failure to use or maintain the NIR4 product as described in these guidelines could result in impaired protection to the user.

HELP AND ADVICE

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9am – 5pm UK time, Monday – Friday
Fast Real-time results for instant decisions
Reliable Using Aunir calibrations for greater control
Innovative Cutting-edge technology on a hand-held device
Simple Easy-to-use with a dedicated support service

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