

A stylized sunburst or fan-like graphic composed of numerous overlapping, semi-transparent, light gray segments radiating from a central white circle, creating a sense of motion and energy.

# **Hemp AgriNIR™**

## **Portable NIR Analyzers**

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## SECTION 1 - SETTINGS

### BASIC PARAMETERS

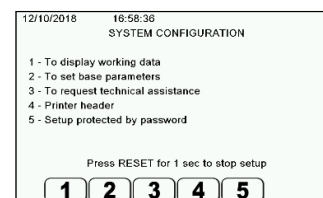
- 1) Switch on the device and, when the message "System Initialization, Please Wait..." appears, keep pressed the <ENTER> key to get into the configuration menu of the system.
- 2) Enter into the configuration menu n° 2 – *To set base parameters* in order to enter/change the parameters.  
Please refer to the Operator Manual for the complete list of Basic Parameters.

Press <RESET>  to get into the main page.

A)







B)



## SECTION 2 – INITIAL OPTIC TEST

The initial optic test has to be carried out every day before starting to use your **Hemp AgriNIR™**.

- 1) Attach the CHECK CELL on the upper part of the fodder box with the white rectangle facing upwards (Picture A).
- 2) Insert the fodder box and the Check cell **with its glass part facing downwards** inside the compartment in your **Hemp AgriNIR™** (Picture B).
- 3) Press  in the main screen to enter the **Hemp AgriNIR™ OPTIC TEST** (Picture C).
- 4) Follow the procedure as shown on the screen. Press  to start the test or  to go back.
- 5) **Do not move the fodder box** during the test.
- 6) After 40 seconds the **Hemp AgriNIR™** system shows the report of the optic test. If the test fails, it is possible to save the optical spectrum on a USB stick by pressing  in order to send the data to the Dinamica Generale customer support.

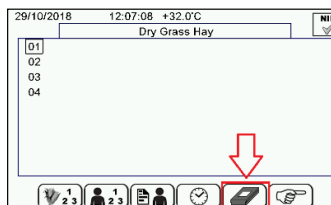
A)



B)






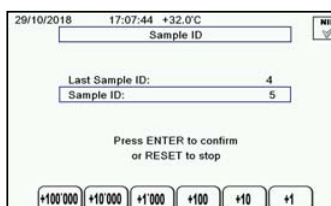
C)











**Consult the operator's manual to have more information on any of the above-mentioned points.**

## SECTION 3 – IDENTIFYING SAMPLES TO ANALYZE

- 1) Press .
- 2) Set the Sample ID (the code that identifies the sample to analyze).
- 3) Press  to start the analysis or  to go back.



## SECTION 4 – CUSTOMER DATA MANAGEMENT

- 1) Press .
- 2) Select the CUSTOMER CODE for the client by pressing  , then press <ENTER>  to confirm or <RESET>  to go back.
- 3) To register a new client, pick a number which is not yet associated to any client and press <ENTER> . **Hemp AgriNIR™** goes back to the previous screen where you can press  to enter the information about the new client; then, press  to save.



29/10/2018 11:55:53

CUSTOMER CODE

Set the customer code: 0

Company:  
Contact:  
Address:  
Country / City:

ENTER to confirm - RESET to cancel

+100 +10 +1



29/10/2018 12:19:11 +32.0°C

CUSTOMER CODE

Set the customer code: 0

Company: DINAMICA  
Contact: GENERALE  
Address: V. Mondadori 15  
Country / City: ITALY

ENTER to confirm - RESET to cancel

+100 +10 +1

## SECTION 5 – INITIAL VERIFICATION PROCEDURE









This procedure is required in order to improve the accuracy of your **Hemp AgriNIR™** minimizing differences between predictions of your analyzer with reference values of your reference laboratory. In order to optimize the accuracy of your instrument is necessary to follow this procedure right after the purchase and to repeat it on a regular basis in order to keep accurate your analyzer.

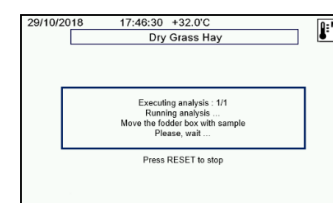
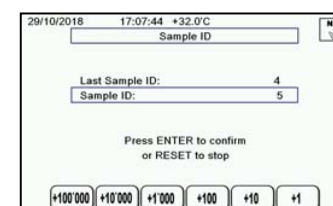
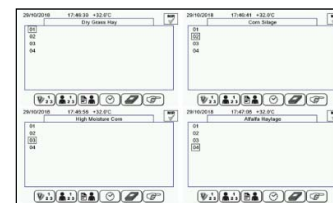
- 1) Conduct material sampling: samples have to be as representative as possible of the variability of ingredients scanned by your **Hemp AgriNIR™** during its working sessions. Be careful to remove parts of material **NOT representative** for the sample.
- 2) Collect 5 samples of Hemp (for each family in your analyzer) – ½ liter (0.1 gal). Analyze each sample with your **Hemp AgriNIR™** first and then ship samples to your local laboratory.
- 3) Follow **SECTION 6 – USE OF THE Hemp AgriNIR™ ANALYSIS SYSTEM** to start this procedure.
- 4) Seal each sample in the appropriate plastic bag and extract air as much as you can. Apply to every sample its own SampleID# number provided by your **Hemp AgriNIR™**.
- 5) Ship the samples to the laboratory within a maximum of 72 hours. Samples with a DM percentage lower than 85% must be preserved in a freezer up until the very moment of shipping.
- 6) Transfer the analysis to the USB flash drive in order to transfer the data to your computer.

**Consult the operator's manual to have more information on any of the above-mentioned points.**

## SECTION 6 – USE OF THE Hemp AgriNIR™ ANALYSIS SYSTEM

**NOTE:** follow the initial verification procedure before using the device.

- 1) Understand the correct use of the fodder box containing the sample to analyze.
- 2) Press key  to turn ON the portable **Hemp AgriNIR™**.
- 3) Wait at least 15 minutes before to start the analysis.
- 4) Perform the OPTICS TEST using the CHECK-CELL .
- 5) Perform the identification of the sample (using SAMPLE ID ) and set the customer information (CUSTOMER CODE  and CLIENT INFORMATION ).
- 6) Prepare the sample inside the fodder box and starts to execute the analysis. It is necessary:
  - the fodder has to be moved front and rear with a uniform speed spending about **2 seconds for a complete scanning cycle**: 1 sec to front and 1 sec to rear;
  - the fodder profile has to be always inside the **Hemp AgriNIR™** box.
- 7) After preparing the box, enter the sample identification number.
- 8) Press <ENTER>  to confirm the Sample ID and continue with analysis execution or press <RESET>  to quit immediately the analysis (without executing) and return to the main screen.
- 9) After confirming the sample ID, a screen appears with which to decide the type of analysis to be performed:
  - SINGLE: please start IMMEDIATELY to move the fodder box as soon as you press <RESET>;
  - MULTIPLE: enter the number of analyses to be performed after start IMMEDIATELY to move the fodder box.
- 10) If you want to quit immediately the analysis, press <RESET>  during the analysis execution.
- 11) In case of MULTIPLE ANALYSIS execution mode, screens will show the number of the actual ongoing analysis and wait for a confirmation before start the next individual analysis.
- 12) At the end of the analysis executions (single or multiple), you can proceed scanning the next sample restarting from step nr. 5 above.
- 13) As soon as you have scanned all the your samples, save all data on the USB key and proceed with the next step reported at section 7 below.



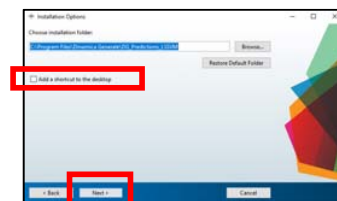
**Please refer to the Operator Manual for further details on the points above.**

## SECTION 7 – INSTALLATION OF DG\_Predictions TOOL (required only if the PC's tool has never been installed before on your PC)

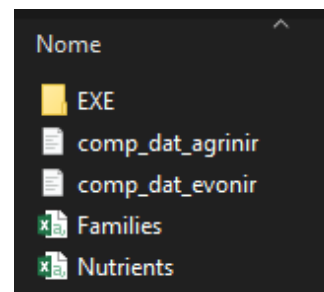
- 1) Switch on your PC and log in as a PC administrator having the rights for installing a new software on it.
- 2) Connect the USB stick provided to you in bundle with your **Hemp AgriNIR™**;
- 3) Double click on “File Explorer” on your PC and open the installation folder on the USB key: “**EXE\DG\_Predictions\_LSSVM\for\_redistribution**”.
- 4) Double click on the executable file: **MyAppInstaller\_mcr.exe**: in order to start the installation process.
- 5) Press <NEXT> in order to move forward with the installation process
- 6) We suggest to keep the default path and check the flag for creating a link on the desktop. Press <NEXT>.
- 7) Press <NEXT> to start the download of the Runtime libraries and wait until the end of installation process.
- 8) When the process is finished, open the initial folder on your USB key: there always will be three files with extension “.csv”:
  - a. **Families.csv**;
  - b. **Nutrients.csv**;
  - c. **comp\_dat\_agrinir.h**

You must copy these files in folder where you have installed the program. **C:\Program Files\Dinamica Generale\DG\_Predictions\_LSSVM\applications** is the default one.

Now the installation has been completed.



8)



## SECTION 8 – RUN DG\_Predictions TOOL for managing predictions: verify spectra, save, show and print samples predictions & spectra.

- 1) Connect the USB stick with .json file to the PC and open DG\_Predictions software.
- 2) Press <EXTRACT>; a second window will appear. Enter the folder where spectra (all files with “.json” extension) are saved and press <OK>.
- 3) Select the family/families you are working with and press <RUN>. In order to have evidence for each sample of meta-information as date and time, set the flag on “**Extract with Date-Time**”. As soon as the process of spectra extraction is finished, close the window.
- 4) Now, in the original folder where “.json” files, were saved there are the following added pieces of information:

- a. A new Folder: **Spectra1ZZNNNXX\_YYY** where the naming convention is the following:

- i. 1ZZNNNXX: the serial number of your **Hemp AgriNIR™**;
- ii. YYY: string not important.

Inside the folder there are a number of “.txt” files equal to the number of families selected with all spectra saved.

- b. **NIRLog.txt**: file that includes for each sample an “execution code” equal to:

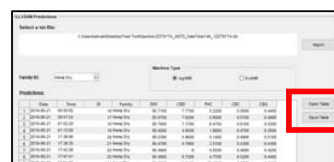
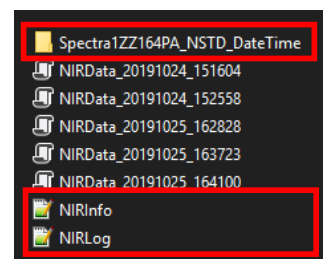
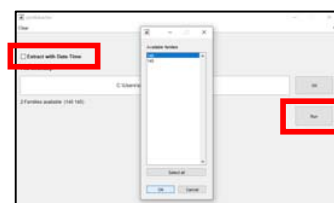
- i. “0” if the extraction process is OK;
- ii. “NN” if a specific control on applied on the “.json” file failed (see the legend in order to understand the cause).

- c. **NIRInfo.txt**: file reporting all meta-information about:

- i. S/N of the analyzer;
- ii. Family Id;
- iii. Revision calibration curves;
- iv. spectra IDs with date and time.

- 5) Press the <IMPORT> key on the home screen and select the .txt file with spectra of samples you want to calculate predictions for. “AgriNIR” is the right machine type to select and press <OK>.
- 6) For each sample of the incoming file the table on your screen reports meta-information (date/time, Sample ID, family) and predictions. Press <OPEN TABLE> to open the table in a second window and eventually to copy it. Press <SAVE TABLE> to save the table in excel format (specifying path and name).

In order to save spectra for statistical analysis in future, we suggest to start creating a new directory on the hard-disk of your PC, applying a meaningful naming convention and copying all “.json” files in this new directory. In this way you can work directly on your PC creating during the time an important historical datasets. It needs a regular back up in accordance with you backup strategy applied to your data.





**WARNING**

1. For a correct functioning of the device, it will be necessary to put the AgriNIR™ on a horizontal surface allowing the user to move easily the fodder box containing the sample to analyze.



2. The AgriNIR™ device must be supplied with a tension between 9,5 – 32 VDC through the suitable connector put on the upper of the case. That can be done through:
  - Power Supply (output at 12 VDC) provided with the device;
  - Supply cable (optional) with plug for car lighter supply.

*In case other supply sources were used, dinamica generale is not responsible for damages to people or the AgriNIR™ device.*



3. For a correct functioning verify:
  - In case of supplying through a 12 VDC supplier, that the cable for the supplier is connected to a tension between 100-240 VAC;
  - In case of supplying through the plug for car lighter, that the battery has a tension always higher then 9,5 Volts.



4. During delivery of the AgriNIR™ it is important:
  - Not to put mobile and/or sharpened objects inside the case preventing the electronic/optoelectronic (graphical display, printer, communication cable, optical fiber protected by a black sheath put at the bottom of the case) device from being broken or wrongly hurt.
  - To fasten the accessories (fodder box, accessories for the fodder box, power supplier, supply cable, supply cable with plug for car lighter, clearing accessories) to prevent them from moving inside the case or the electronic/optoelectronic device from being broken.

*If it is not the case, dinamica generale is not responsible for damages to the AgriNIR™.*



5. DO NOT POWER the AgriNIR™ device (by supply power cable for car lighter) during transporting by car.

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6. Disconnect the supply cable from the device before servicing and/or clearing the AgriNIR™.

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7. To clean the AgriNIR™ correctly:
  - for the upper part (display, keyboard, printer, reading glass) use a soft and slightly wet cloth;
  - for the bottom part (chassis of the fodder box and reading window of the unit optic) use pressurized air or a soft and slightly wet cloth.

DO NOT use neither alcohol nor other solvents!

DO NOT wet with water!

*If it is not the case, dinamica generale is not responsible for damages to the AgriNIR™.*



8. For a correct functioning of the sampling fodder box, use a soft cloth or pressurized air or flowing water. DO use neither alcohol nor other solvents!

*If it is not the case, dinamica generale is not responsible for damages to the device.*





9. After switching ON the AgriNIR™, dinamica generale recommends strongly to wait at least **15 minutes** before executing the analysis. That will allow the optimization of the exercise temperature of the optoelectronic device.



10. For a correct functioning of the optoelectronic device contained in the AgriNIR™, it is better to monitor the temperature of the place where it is used. While working the device must not exceed the temperature range between 0°C and +40°C.

*If it is not the case, dinamica generale is not responsible for damages to the AgriNIR™.*

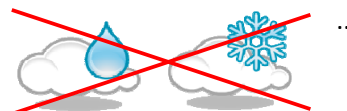


11. If ambient temperature is 35°C or upper, DO NOT keep the AgriNIR™ device turned on for more than 2 hours time.

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12. In case of use of the device outside, it SHOULD NOT be exposed directly to climatic agents such as rain, snow, hail



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13. In case AgriNIR™ were supplied through the suitable supply cable (optional) with plug for car lighter, disconnect this cable when the vehicle's battery is being charged.

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14. Disconnect the supply cable from the device before servicing and/or clearing the AgriNIR™.

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15. For a correct functioning verify:

- In case of supplying through a 12 VDC supplier, that the cable for the supplier is connected to a tension between 100-240 VAC;
- In case of supplying through the plug for car lighter, that the battery has a tension always higher then 9,5 Volts.



16. DO NOT use USB extension cables LONGER than 1 meter to connect the USB memory key to the USB connector available on the front unit of AgriNIR™ device.



17. Dinamica Generale CANNOT be considered responsible for damages to people or things because of a misuse of the device.



18. Dinamica Generale DOES NOT assume the responsibility for the result provided by AgriNIR™ in case there were not correspondence between the material analyzed and the one declared by the system.

## ENVIRONMENT: Rules for disposal



This symbol on the product, or on the package, indicates that this device cannot be disposed of with household waste. The user must dispose of this equipment correctly in accordance with current regulations and directives.

Electronic equipment, that can no longer be used, must be collected separately and disposed of in an environmentally correct manner.

Do not leave any of the components of the device, including the spare parts, in the environment.

The manufacturer shall not be held responsible for any damage to the environment deriving from failure to comply with the regulations in force concerning disposal/recovery.



## WARRANTY

The supplier guarantees, for 12 months from the delivery date, the good quality of materials used, the excellent construction and the steady functioning of the instrument they have manufactured and that bears the trademark or the production serial number. During the warranty period the supplier undertakes to repair or replace, free supplier's head office, faulty parts due to poor materials or faulty construction, provided that such parts are delivered free port supplier's head office.

Shortcomings and defects due to incorrect use of instruments, inadequate maintenance, changes carried out without the supplier's approval, normal wear are not included in this guarantee.

Liability and compensations by the supplier due to direct or indirect damages to persons, objects or production, even as a consequence of faulty functioning of the supplied instruments or of material or construction defects, are not included in this warranty.

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**KONFORMITÄTSERKLÄRUNG - DÉCLARATION DE CONFORMITÉ - DECLARACION DE**  
**CONFORMIDAD - ДЕКЛАРАЦИЯ О СООТВЕТСТВИИ**

**Nr 58/17**

**ENG**

- IT** Il sottoscritto, designato a legale rappresentante della Dinamica Generale s.p.a., via Mondadori 15, Poggio Rusco (MN) - Italy, dichiara che i prodotti sottoelencati:
- EN** The undersigned, an authorized officer of Dinamica Generale s.p.a., via Mondadori 15, Poggio Rusco (MN) - Italy, hereby declares that the products listed hereunder:
- D** Der Unterzeichner, rechtlicher Vertreter der Dinamica Generale s.p.a., via Mondadori 15, Poggio Rusco (MN) – Italy, erklärt, daß die nachstehend beschriebenen Produkte:
- FR** Je soussigné, représentant légal désigné de Dinamica Generale s.p.a., via Mondadori 15, Poggio Rusco (MN) - Italie, déclare que les produits énumérés ci-après:
- ES** El suscrito, nombrado representante legal de la Dinamica Generale s.p.a. , via Mondadori 15, Poggio Rusco (MN) - Italy, declara que los productos indicatos a continuación:
- RU** Нижеподписавшийся, являющийся законным представителем компании Dinamica Generale s.p.a., расположенной по адресу via Mondadori 15, Poggio Rusco (MN) – Italy, заявляет, что продукция ниже

**AgriNIR**

- IT** Sono conformi a quanto prescritto dalle seguenti direttive:
- EN** Are compliant with the following directives:
- D** Mit den Vorschriften konform sind, die in den folgenden Richtlinien:
- FR** Sont conformes aux prescriptions des directives suivantes:
- ES** Respetan las prescripciones contenidas en las siguientes directivas:
- RU** Соответствует требованиям следующих директив:

**2014/30/EU**

- IT** E dalle seguenti norme:
- EN** And with the following standards:
- D** Und Normen stehen:
- FR** Et aux normes ci-apres:
- ES** Y en las siguientes normas:
- RU** И следующих стандартов:

**Main Standards:**

**EN 61326-1 (2013-01)**

**EN 61326-2-3 (2013-01)**

- IT** E, in applicazione a quanto previsto dalle direttive citate, sono stati dotati di marcatura CE ed è stato predisposto un adeguato fascicolo tecnico presso la ns. sede.
- EN** And, pursuant of the above-mentioned directives, the CE mark has been applied. Furthermore, adequate technical file has been prepared and is available from our offices.
- D** Und daß sie in Übereinstimmung mit den Vorschriften der obengenannten Richtlinien mit dem CE-Zeichen versehen sind und daß dafür ein angemessenes technisches Heft erstellt wurde, das bei uns in der Firma zur Verfügung steht.
- FR** En application des directives citées, ils portent la marque CE et un dossier technique est déposé auprès de notre siège.
- ES** Y, conforme con lo previsto en las citadas directivas, han recibido la marca CE. Existe asimismo un específico prospecto técnico relativo disponible en nuestra sede.
- RU** И, в исполнении данных директив, был нанесен знак CE и соответствующее техническое досье было заведено в нашем офисе.

Poggio Rusco, 26/05/2016

Andrea GHIRALDI

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# Service & Support

## Weighing & Sensors

Technical support through our ticketing system (8.30 to 18.00 CET):

<https://osticket.dinamicagenerale.com>

or via e-mail: [help@dinamicagenerale.com](mailto:help@dinamicagenerale.com)

24/7 hotline for critical breakdown support:

+39 346 96 55 640 or [service@dinamicagenerale.com](mailto:service@dinamicagenerale.com)

## NIR & Software

Tech support: 8.30 to 18.00 CET

NIR Support: Phone +39 0386 52134 E-mail [nir.support@dinamicagenerale.com](mailto:nir.support@dinamicagenerale.com)

Software Support: Phone +39 0386 741459 E-mail [support@dinamicagenerale.com](mailto:support@dinamicagenerale.com)



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