



# ACTIVE CARBON USER MANUAL

USR -05

Issue 1

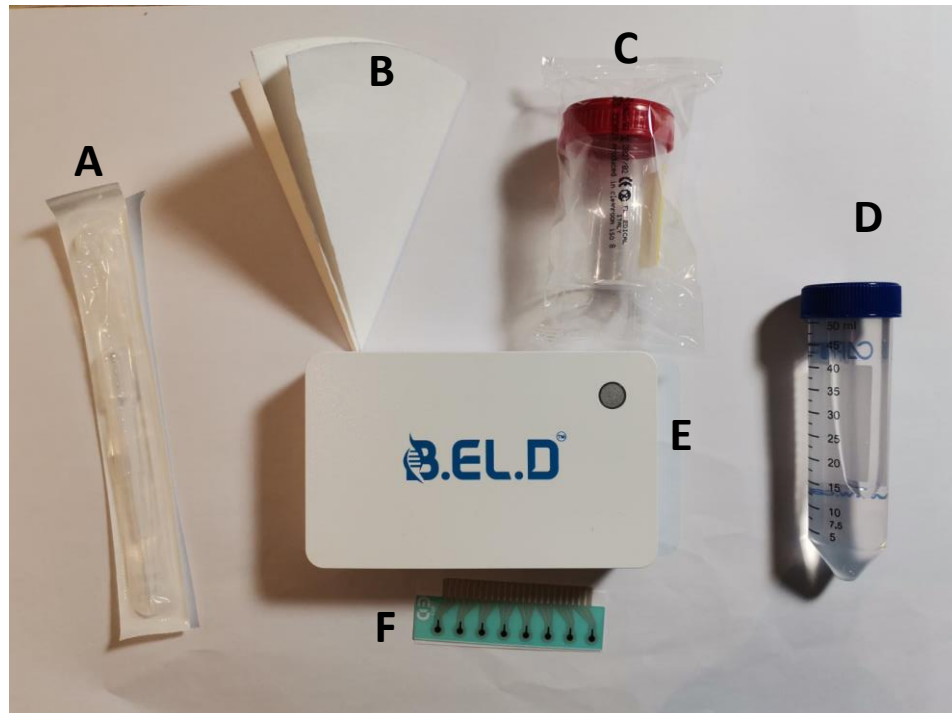
19/12/2022

Pages: 11

Reviewed by: Theofylaktos Apostolou

Approved by: Konstantinos Loizou

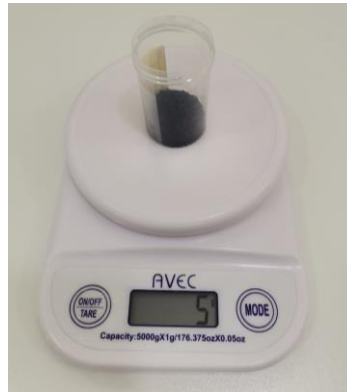
## B.EL.D Kit Components



- A. Disposable plastic pipette
- B. Filter paper 240 ø
- C. Sample container 60ml
- D. 50ml disposable plastic test tube with 50 ml distilled water
- E. B.EL.D Device
- F. Electrode

## Sample preparation and handling

- A. Weight 5gr of dry carbon sample in the sample container (C)



- B. Place the 50 ml of distilled water (D) in the sample container (C) and mix with the carbon

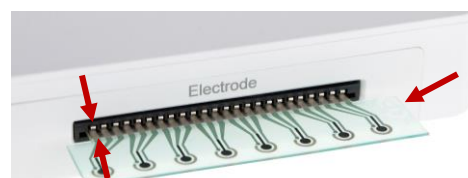


- C. Place the filter paper 240 ø (B) into the 50ml disposable plastic test tube (D) and filter the mixture from the sample container (C)



## Test procedure

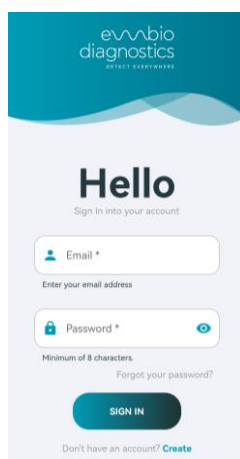
- A. Remove the plastic cover of the electrode and connect the screen-printed electrode with the device. Be sure that the electrode is aligned with the pins of the connector. The logo on the electrode must be always on your right.



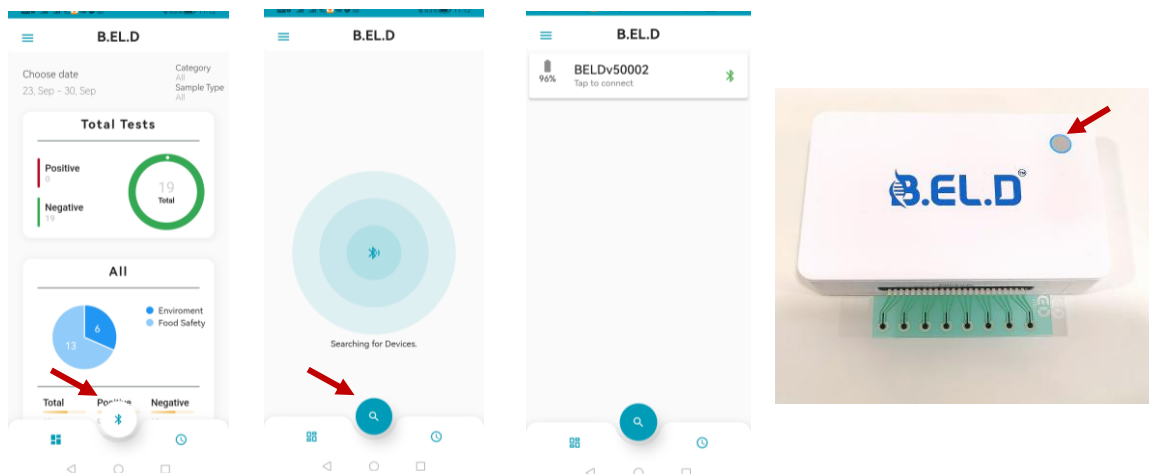
- B. Press the multi-functional button of the device for approximate 8 seconds, until the led indicator becomes white. The device now is discoverable, you can connect to the B.E.L.D device using our mobile application.



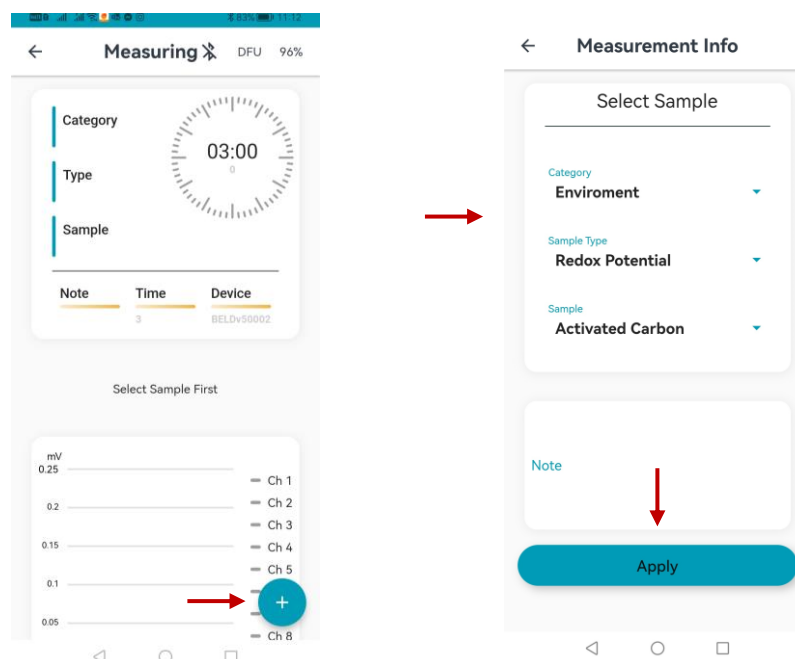
- C. Turn on the Bluetooth functionality and location services on your mobile phone, open the application and login.



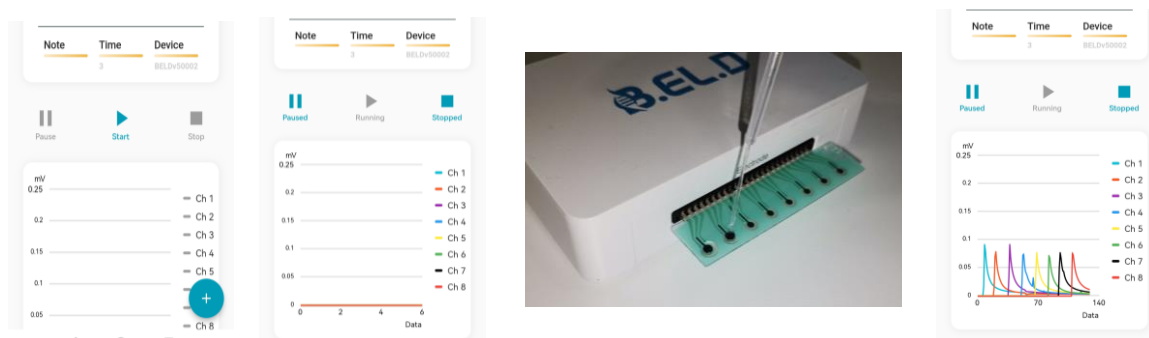
- D. Press the Bluetooth button and then the search command and connect the application to the device. Once the device is connected to the application, the indicator becomes blue.



- E. Tap the “+” button and fill the measurements info in the appropriate fields (select your Category, Sample Type and Sample). Press Apply.

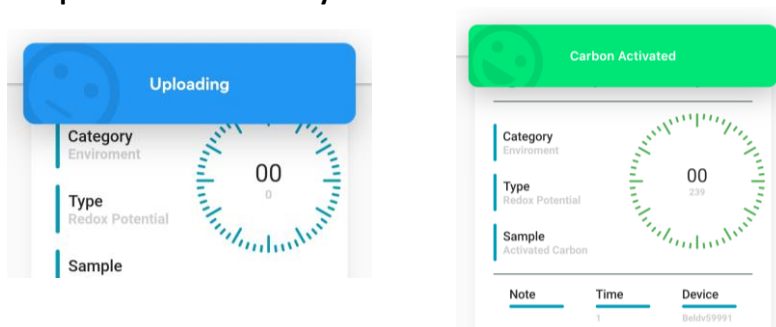


F. **START** the measurement and then add two drops of the filtered sample onto each channel 1- 8 with disposable plastic pipette (G).



**ATTENTION**, if the lines on the chart do not appear after pressing the start button do not add the sample. Stop the measurement and start it again. Ensure that the lines are visible in the chart and they all start at 0 mV before adding the sample. In case lines do not start at 0 mV stop the measurement and start it again.

G. After the **END** of the measurement, the result will appear on your mobile screen and the data will be uploaded automatically.

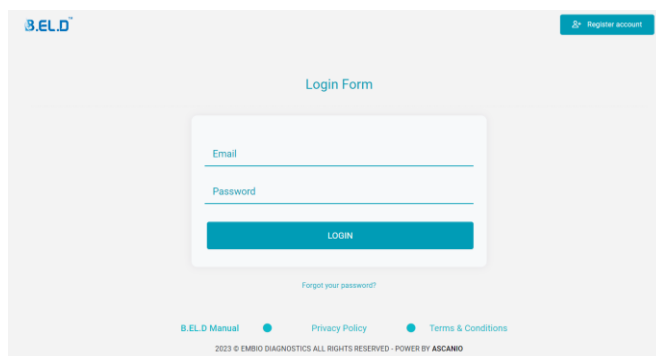


| Result / Performance indicator                      |                                                          |                                                           |                               |                                                                 |
|-----------------------------------------------------|----------------------------------------------------------|-----------------------------------------------------------|-------------------------------|-----------------------------------------------------------------|
| Optimum                                             | Performing Excellent                                     | Performing Well                                           | Poor performance              | Regeneration                                                    |
| Activated carbon is working in optimum performance. | Activated carbon is working in an excellent performance. | Activated carbon is working well. Shows saturation signs. | Carbon reaching its lifespan. | Carbon reached its lifespan. <b>Regeneration</b> may be needed. |

- H. For each new measurement press Restart and then press “+” to add new information for the next sample. You will now be ready to start the next measurement.



- I. Visit BELD dashboard (<https://beldashboard.azurewebsites.net/Account/Login>) using the same credential as for the app to view measurements results and download raw data.



## Warnings and precautions

- Use appropriate precautions in the collection, handling, storage, and disposal of samples.
- Use of Nitrile, Latex (or equivalent) gloves is recommended when handling samples.
- Test electrodes are for one use only.
- To obtain accurate results, the Package Insert instructions must be followed.
- Inadequate or inappropriate sample collection, storage, and transport may yield false test results.
- Sample collection and handling procedures require specific training and guidance.
- Use the appropriate Fixed Volume Pipette in accordance with test procedures.
- To obtain accurate results, the test should not be used inside a laminar flow hood or in a heavily ventilated area.
- Testing should be performed in an area with adequate ventilation.
- Dispose of containers and unused contents in accordance with local regulatory requirements.



- Wash hands thoroughly after handling.

## Troubleshooting

| Faults                                                                                                             | Actions                                                                                                                                                                                                                                    |
|--------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| User enters false Credentials                                                                                      | Error message appears. User must enter the right credentials.                                                                                                                                                                              |
| User forgot his password                                                                                           | Can press "Forgot Password?" button to restore the password.                                                                                                                                                                               |
| User (email) already exists                                                                                        | Error message appears. Must use a different password.                                                                                                                                                                                      |
| Wrong password. a) Password does not meet the requirements (e.g. short length) b) Confirm password does not match. | Error message appears. Must enter Password that meets the requirements.                                                                                                                                                                    |
| Wrong information accidentally entered                                                                             | Completed measurements can be found in the results tab. Edit is available.                                                                                                                                                                 |
| Bluetooth is off                                                                                                   | Turn on Bluetooth                                                                                                                                                                                                                          |
| Location Permission disabled                                                                                       | User must navigate to app permissions and enable Location.                                                                                                                                                                                 |
| No results found                                                                                                   | Check if there are active BELD devices nearby. Beld device must not be connected to another mobile app.                                                                                                                                    |
| Cannot connect to BELD device                                                                                      | a) BELD Must not run on low battery b) BELD device must be in close proximity (<2m) to the mobile phone and no obstacles located between them c) If a and b does not fix the problem then restart both the BELD and mobile app.            |
| Accidentally wrong parameters                                                                                      | a) Sample code and Sample Level can be edited after the measurement has finished. b) If the sample is incorrect, the measurement must run again (each sample corresponds to a different algorithm) c) Measurement time must be >3 minutes. |
| The chart remains empty after the start button is pressed                                                          | a) Stop measurement and check if BELD is still connected. If it is connected press start again. If it is disconnected or pressing start does not fix the problem then start again with a new measurement.                                  |













|                                          |                                                                                                                                |
|------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| Result is stuck in "Uploading"           | a) Check your internet connection b) If no result appears in 2 minutes, the measurement must be taken from the beginning.      |
| User enters wrong email data             | If "share via email screen" is still open a new email can be sent, otherwise the measurement must be taken from the beginning. |
| User enters wrong phone number           | If "share via email screen" is still open a new sms can be sent, otherwise the measurement must be taken from the beginning.   |
| Email or SMS has not arrived             | Email and phone must be in the correct form.                                                                                   |
| Possibility of accessing the user's data | Only non-sensitive data is stored and encrypted in the database. Communication via the application is also encrypted via SSL.  |



## Symbols glossary

|                                                                                     |                                                                                                       |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|
|    | Temperature limitation                                                                                |
|    | Manufacturer                                                                                          |
|    | Catalogue Number                                                                                      |
|    | Contains sufficient for 12 or 24 or 48 Tests                                                          |
|    | Refer to instructions for use                                                                         |
|   | Lot Number                                                                                            |
|  | Use-by Date – indicates the date after which the unopened IVD/Quality Control Material cannot be used |
|  | Do not re-use                                                                                         |

### EMBIO Diagnostics Ltd customer services:

For product enquiries please contact **EMBIO Diagnostics Ltd** Customer Services at [info@embiodiagnostics.eu](mailto:info@embiodiagnostics.eu) or for further contact details please visit [embiodiagnostics.eu](http://embiodiagnostics.eu). Any adverse results experienced with the use of this product and/or quality problems should also be reported to **EMBIO Diagnostics Ltd** Customer Services by email: [k.loizou@embiodiagnostics.eu](mailto:k.loizou@embiodiagnostics.eu).

### Return policy:

Please contact **EMBIO Diagnostics Ltd** Customer Services for terms and conditions.

### Limited warranty:

Please contact **EMBIO Diagnostics Ltd** Customer Services for terms and conditions.

### Manufacturer Information:

**EMBIO Diagnostics Ltd**, Athalassas Avenue 8B, Nicosia, Cyprus.

