

SunSens Biosensor System For Processed Potatoes

From the SunSens family from
SunChemical

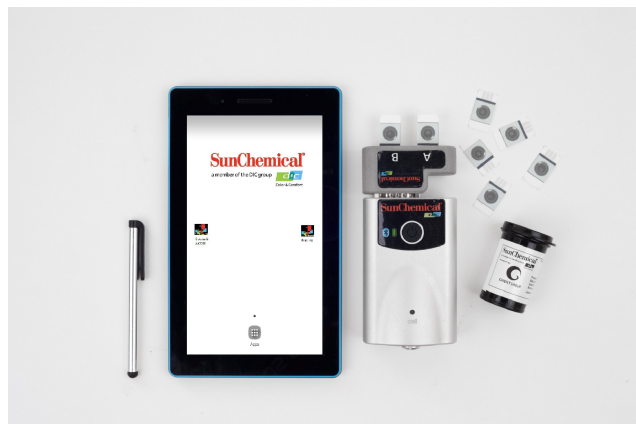
1. Description

Sun Chemical has produced a range of biosensors, aimed towards the agricultural market. The biosensors are designed to work with the SunChemical Potentiostat and the appropriate android application.

The android application is supplied on a preloaded tablet. Each biosensor works with its own unique application.

[Potentiostat Demonstration Video](#)

[Potentiostat Information Video](#)



2. Potentiostat & Application features

- Step-by-step on screen guidance
- Bluetooth connectivity between tablet and potentiostat, making the device portable and easy to handle
- Data storage of tests, including a date-stamp and personalised sample labelling, onto the tablet. Easily transferred to a PC
- Self sensor calibration carried out with QR-code scanning, using the tablet's front camera. Avoiding the user from carrying out calibrations and saving time
- Progress bar, showing the overall status of the measurement
- The software can be modified to display the data in the units desired by the user (modification of software carried out by SunChemical).
- The application converts the concentration to percentage, adjusting accordingly with the dry matter percentage (manual input by the user, an assumption of 20% dry matter is also an option).

3. Product Range

3.1 **BIO-GLU-A1**

Low Level Potato Glucose Biosensors

The product provides a simple and rapid approach to measuring low level glucose, in potatoes. The measurement is carried out in conjunction with the Sun Chemical Potentiostat, which guides the user through each step of the process. Each sensor is a single shot disposable biosensor.

The system comes with a sample preparation manual, providing the user with the best results.

The sensors have a range of 0.010mM to 0.600mM. Higher concentrations can be measured using a dilution step (software adjusts the end value according to the dilution factor).

Each pot of contains 20 sensors, package with desiccant.



Benefits

- 40 µl of test sample is require per test.
- Can be used with or without the Low Level Potato Sucrose Biosensor (BIO-SUC-A1).
- Requires Sun Chemical Potentiostat and Tablet.
- Each test (from applying test solution to strip) has a measurement time of 3 - 4 minutes.

3.2 BIO-SUC-A1**Low Level Potato Sucrose Biosensors**

The product provides a simple and rapid approach to measuring low level sucrose, in potatoes. The measurement is carried out in conjunction with the Sun Chemical Potentiostat, which guides the user through each step of the process. Each sensor is a single shot disposable biosensor.

The system comes with a sample preparation manual, providing the user with the best results.

The sensors have a range of 0.010mM to 0.600mM. Higher concentrations can be measured using a dilution step (software adjusts the end value according to the dilution factor).

Each pot of contains 20 sensors, package with desiccant.

Benefits

- 40 µl of test sample is require per test.
- **Must be used in conjunction** with the Low Level Glucose Biosensor (BIO-GLU-A1).
- Requires Sun Chemical Potentiostat and Tablet.
- Each test (from applying test solution to strip) has a measurement time of 3 - 4 minutes.

3.2 BIO-FRU-A1**Low Level Potato Fructose Biosensors**

The product provides a simple and rapid approach to measuring low level fructose, in potatoes. The measurement is carried out in conjunction with the Sun Chemical Potentiostat, which guides the user through each step of the process. This product is a one shot disposable dual biosensor.

The system comes with a sample preparation manual, providing the user with the best results.

The sensors have a range of 0.025mM to 0.800mM. Higher concentrations can be measured using a dilution step (software adjusts the end value according to the dilution factor).

Each pot of contains 20 sensors, package with desiccant.

Benefits

- 40 µl of test sample is require per test.
- Requires Sun Chemical Potentiostat and Tablet.
- Each test (from applying test solution to strip) has a measurement time of 3 - 4 minutes.



4. General Handling

4.1 Storage and Shipping

For long time storage - keep between 1 – 10°C / 34 – 50°F. Sensors should be stored in the container provided, ensuring the lid is securely closed.

When in usage – keep container out of direct sunlight. The container can be at room temperature for 3 hours (for every 24 hours). Sensors should be stored in the container provided, ensuring the lid is securely closed between removal of sensors.

4.2 Waste disposal

This should be carried out in accordance with good industrial practice, observing all the appropriate regulations and guidelines.

4.3 Manual Handling

Gloves should be used when handling the sensors. Avoid contact with the operational area (defined by the mesh).

5. Processing for Produce

5.1 Juice Extraction Techniques



SunChemical offers two approaches to the extraction of potato juice.

- For manual extraction, SunChemical can provide a manual powered juice extractor protocol, which can then be used on the sensors.
- For electronic extraction, SunChemical can provide a hand-held blender protocol

The application can be adapted to accommodate pre-existing protocols, already carried out by the user.

5.2 Typical Varieties

Agria, Almera, Arsenal, Atlantic, Colleen, Courage, Erntestolz, Fianna, Gabriel, Hermes, Highland Burgundy Red, Horizon, Joshua, Lady Claire, Lady Jo, Lady Rosetta, Markies, Mayan Gold, Orwell, Record, Royal, Saturna, Setanta, Vales Everest, Zahov



6. Disclaimers

This information has been carefully compiled from experience gained in field conditions and extensive laboratory testing. However, the products' performance and its' suitability for the customers' purpose depend on the particular conditions of use and the material being tested. We recommend that customers satisfy themselves that each product meets their requirements in all respects before commencing a production run. Since we cannot anticipate or control the conditions under which our products are used, it is impossible to guarantee their performance. All sales are also subject to our standard terms and conditions.

7. Technical Assistance / Contacts

Sun Chemical are an international company, and as such can offer technical, engineering and sales support to our customers worldwide.

For further information regarding this product, or any of our extensive range of materials please contact your local Sun Chemical team or visit the Technical Help Desk at website:
<http://www.sunchemicalhelpdesk.com>

Our Products are intended for sale to professional users. The information herein is general information designed to assist customers in determining the suitability of our products for their applications. All recommendations are made without guarantee, since the application and conditions of use are beyond our control. We recommend that customers satisfy themselves that each product meets their requirements in all respects before commencing testing. There is no implied warranty of merchantability or fitness for purpose of the product or products described herein. In no event shall Sun Chemical be liable for damages of any nature arising out of the use or reliance upon this information. This would allow Sun Chemical to modify the product for reason of improvement without prior notice to the customer.

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