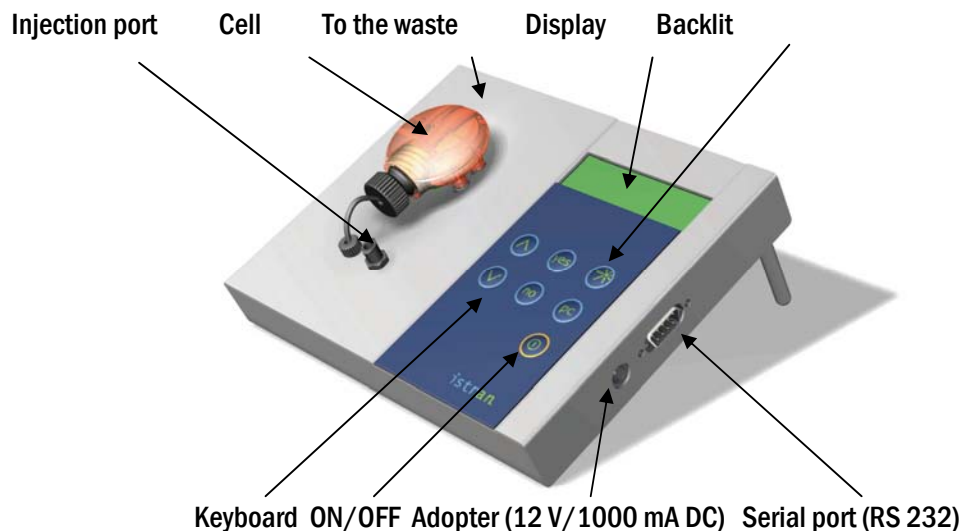


## Portable coulometric analyser of Ascorbic Acid (C vitamin)

### DETERMINATION OF ASCORBIC ACID CONTENT IN BEVERAGES, VEGETABLES, FRUITS AND FOODS

#### Operation principle

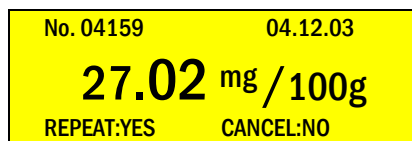
The analyser utilises the *In-Electrode Coulometric Titration* method based on a selective electro-chemical oxidation of ascorbic acid to dehydroascorbic acid inside a porous electrode. The content of the ascorbic acid is calculated from the electrical charge consumed for this oxidation.



#### Solutions

*Reagent solution R-020:* 0.1 mol/l NaCl, 5 g/l oxalic acid

*Standard solution:* 10 mg/l of ascorbic acid in the reagent solution. Use a fresh solution every day.



#### Sample preparation

*Liquid samples:* Adjust 5.0 ml of the sample to 50 ml with the reagent solution and analyse it immediately.

*Solid samples:* Add 50 ml of the reagent solution to 1.0 g of the sample and mix it for 1 min. Filter the mixture through a suitable filter to obtain a clear solution and analyse it immediately.

#### Analysis

**PCA C-Vit is a portable instrument** rechargeable battery operated. This enables simple and quick analyses in the field or in the laboratory.

The sample is aspirated into the disposable syringe containing the reagent solution and on mixing the content is injected into the measuring cell. The calibration is carried out in a similar way.

Up to 20 results are stored in the memory and then they can be transferred to a PC.

The instrument communicates with any common personal computer by making use of the delivered PCA-software through the serial interface. The PC can be used for:

- Input of a new parameter set into the PCA (there is only one analytical method in the memory of the PCA at the time.)
- adjustment of time and date
- transfer of measured results from PCA into the computer

#### Features

- Portable instrument for fast analyses in the field and the laboratory
- Broad linear concentration range of 0.1 to 100 mg/100 g
- Simple handling, sample-preparation and dosing
- Average measurement duration: 1 – 5 min
- Start-up for the measurements: 10 min
- No problems with coloured solutions, Fe
- Rugged case on request making the system ideal for outdoor use
- Built-in NiH batteries allow an 8-hour battery operation

- Communication with PC enables download of software upgrades
- Communication with PC enables simple data transfer
- Advantageous price and low running costs
- One simple reagent solution is used only.
- No toxic gases or waste can be formed at the analysis

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