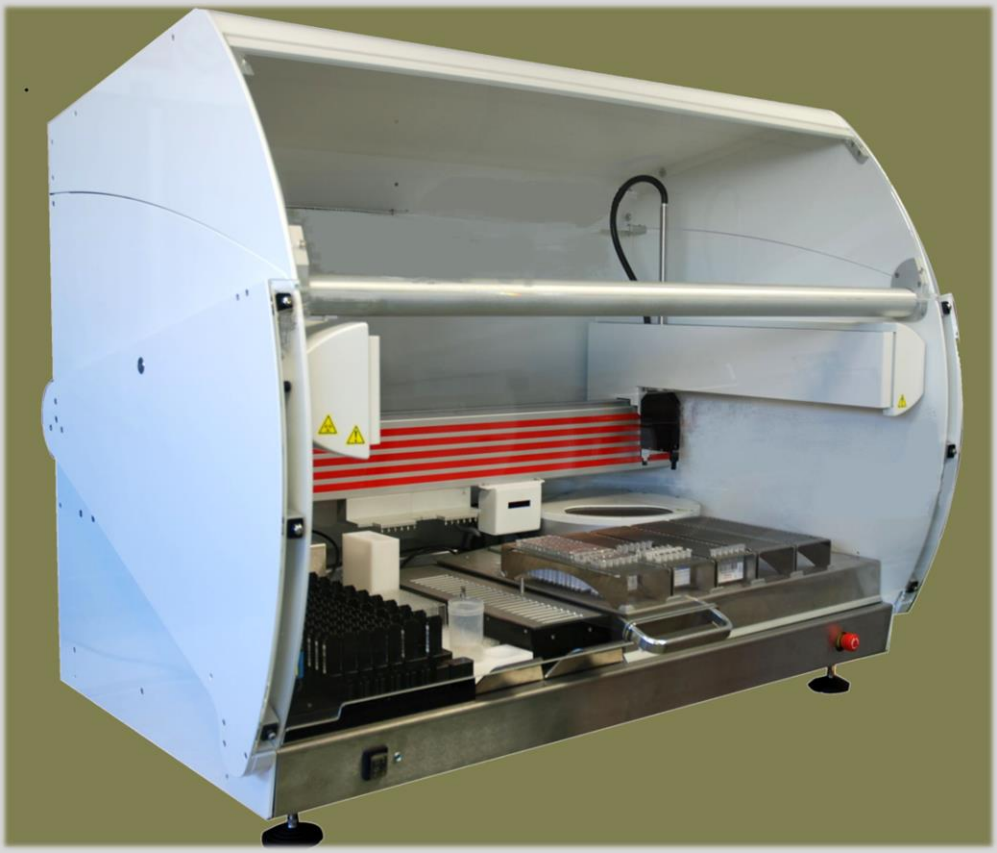
GC -Processor

Walk-away analyzer for Immuno-hematology applications in GEL CARDS



Main features

Suitable for ABO/Rh grouping, antibody screening, phenotyping and cross match testing

Multi probe fast pipetting system

Safe processing through the on-board barcode reading and consistency checks

Fully programmable test layouts

High resolution Gel Card image capturing and storage in archive repository

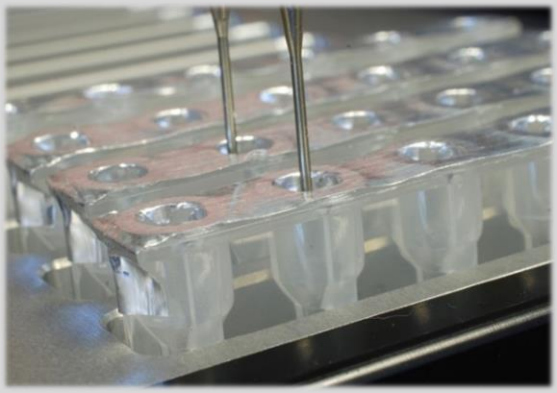
Automatic result interpretation for standard and proprietary reactions type

User-friendly windows base interface

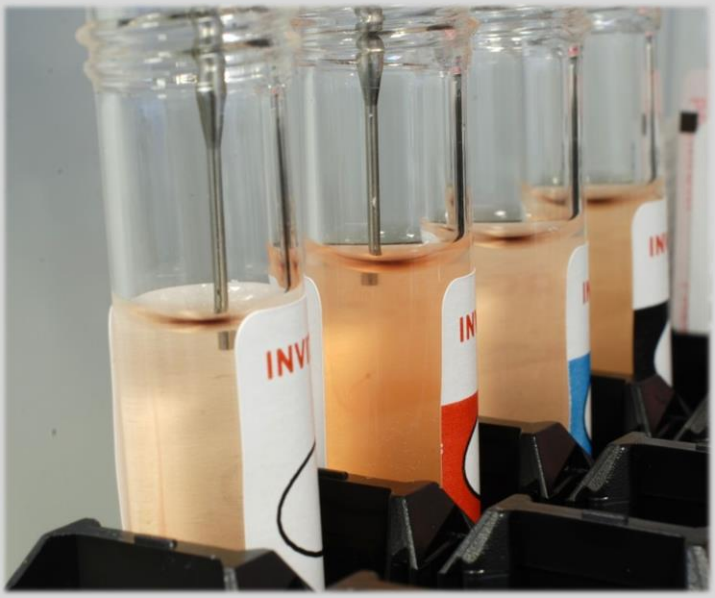
Local worklist and communication with host PC

Throughput and processing

Available with 2 or 4 pipetting probes, GC Processor is a suitable solution for medium labs requiring a safe and fast processor hosting 80 samples and 120 gel cards in 112 cm long platform.



The washable tips are fully independent on Y / Z axis, provided with a capacitive liquid detection sensor.



Samples are sourced from primary tubes through predilution performed in deep well tubes or standard microtiter plate format.

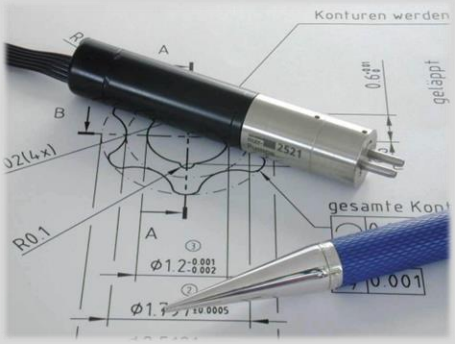
A robotic handler installed on an independent arm moves the gel cards from the loading area through all the modules required for the assay processing, Gel Card foil piercing included.

The assay run is optimized by the processing of “batch” with up to 24 Gel Cards. Each batch is moved to the centrifuge after the dispensing in order to allow the simultaneous dispensing of a new batch of Gel Cards.

The incubation of the Gel Card takes place in a dedicated device which hold the entire column at 37°C temperature.

Safety and precision

The excellent pipetting precision is guaranteed by the innovative “mini toothed wheel” pumps, which don’t require maintenance or replacement parts. The sample and reagents dispensing is “carry-over” free through a secure decontamination procedure of the dispensing tips.

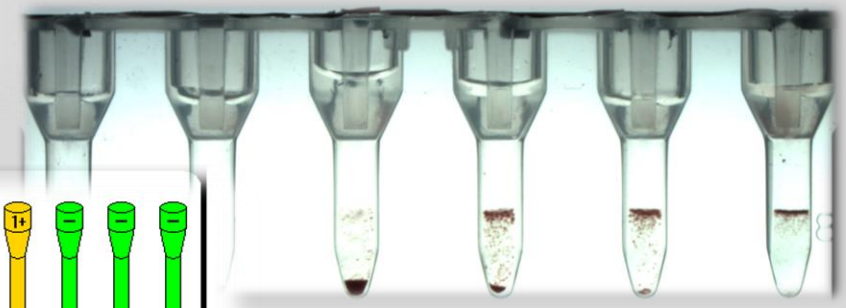


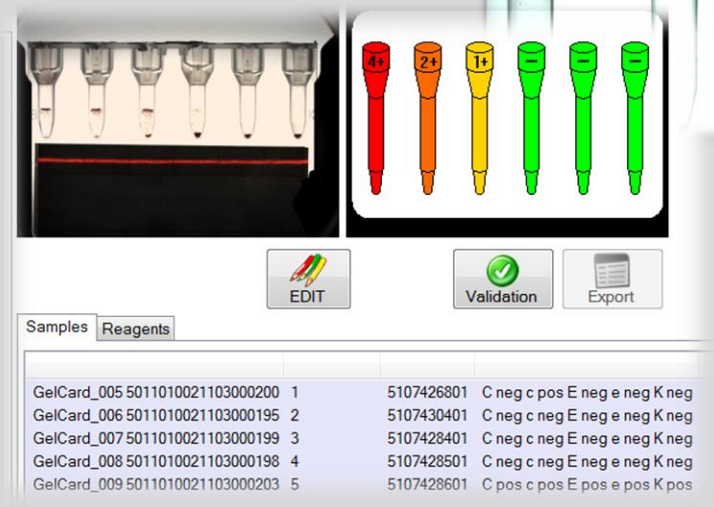
The on-board barcode scanners allows a safe of samples testing, alerting the user when incorrect or expired reagents/Gel Cards mismatching the worklist in process.

The front protection shield is connected to a locking system sensor which stops the analyzer processing when opened.

High resolution pictures

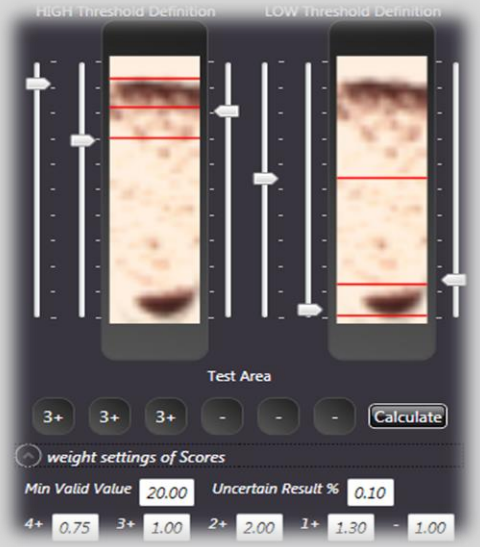
A sophisticated “telecentric “ optical lens connected to a high resolution CCD camera (5Mpixels) allows the capturing of the Gel Card picture in a single file, in compressed format.





Pictures repository

The reactions are automatically evaluated after the picture capturing and stored with the results interpretation in the Archive repository. The Gel Card pictures remain stored in the archive and available for further verifications after the result validation.



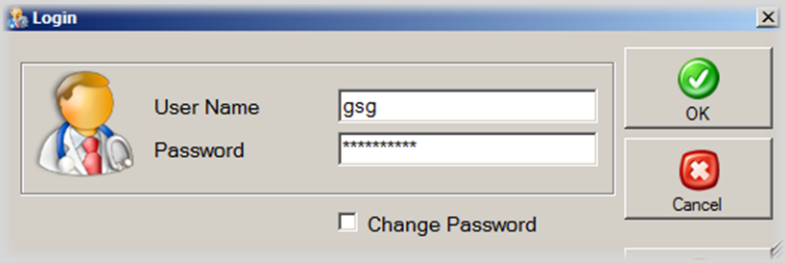
Flexible Interpretation

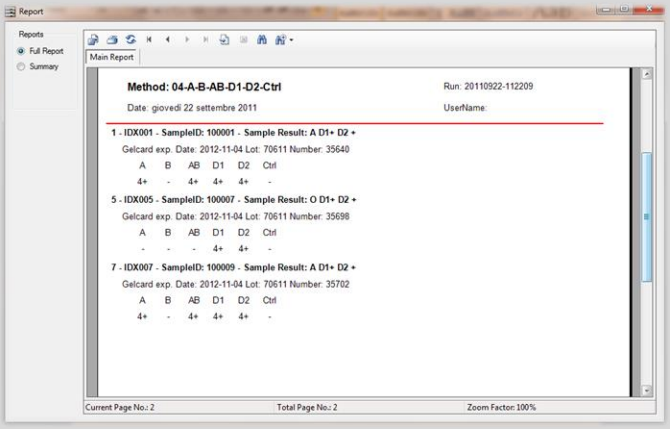
The result interpretation is based on a flexible algorithm whose parameters can be adapted to different type of agglutination reaction.

A dedicated interpretation settings can be assigned specifically to each Gel Card type, depending on the sensitivity of the reagents and related reaction scores.

Protected data

The access to the application interface (login) is protected by user ID and PW. Different user and privilege can be defined by the GSG LogInManager program.





Validation and reporting

The result elaboration can be confirmed or modified through a validation process before to generate the reporting or send the result to an external host-PC.

The result print out is available in different format customizable by Crystal Report software. Reporting can be also saved as a file in the most common file format (PDF, XLS, DOC etc.).

Technical specifications

BAR CODE READING	Semi-automatic system for BARCODE identification for sample tubes, reagents. Automatic BC reading for Gel Cards. Most commercially available bar codes can be read. Max digits: 20.
SAMPLES	80 to 100 sample tubes (depending the configuration), in linear rack with 20 tubes each. Tubes size between 10 to 16 mm.
REAGENTS	Up to 20 reagents on 2 linear rack (barcode reading available on demand). 2 becher style (120 ml) and 3 trough (50ml) for sample diluent containers.
TIPS	2 or 4 washable tips (dispensing probes), Tips are fully independent on Y and Z axis. Variable Tips Spacing from 9 to 350 mm.
LIQUID DETECTOR	Capacitance, independent detector for each tip. Liquid, bubble and clot detection.
CARRY-OVER	Around 10-6 according to the washing cycles and the reagents typology.
PUMPS	4 High precision mini toothed wheel pumps for precision liquid handling. Volumes from 1µl to 1ml.
VOLUMES	Minimum sample/reagent volume 5µl. Maximum sample/reagent volume 1ml.
INCUBATOR	24 Gel Cards positions at 37°C .
CENTRIFUGE	24 positions Gel Cards, between 100….1.200 rpm selectable by software. Centrifugation time (5…..32.400 seconds).
GEL CARD READER	5 M pixel CCD camera connected to a “telecentric” optic.
COMPUTER REQUIREMENTS	Dual core i5/i7 or higher – 2 USB port min. Windows XP or Windows 7 operating system.
OPERATING CONDITIONS	Temperature: 15°C to 30°C/60°F to 85°F. Relative humidity: 10 – 85% at 30°C/85°F or below.
INTERFACE	Through 2 USB plugs (analyzer control and Gel Card reader’s camera).
WEIGHTS AND	Net Wt. Kg 80.
DIMENSIONS	Width 1120, Depth 850, Height 850. NOTE: PC not included.

a new experience in lab automation

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