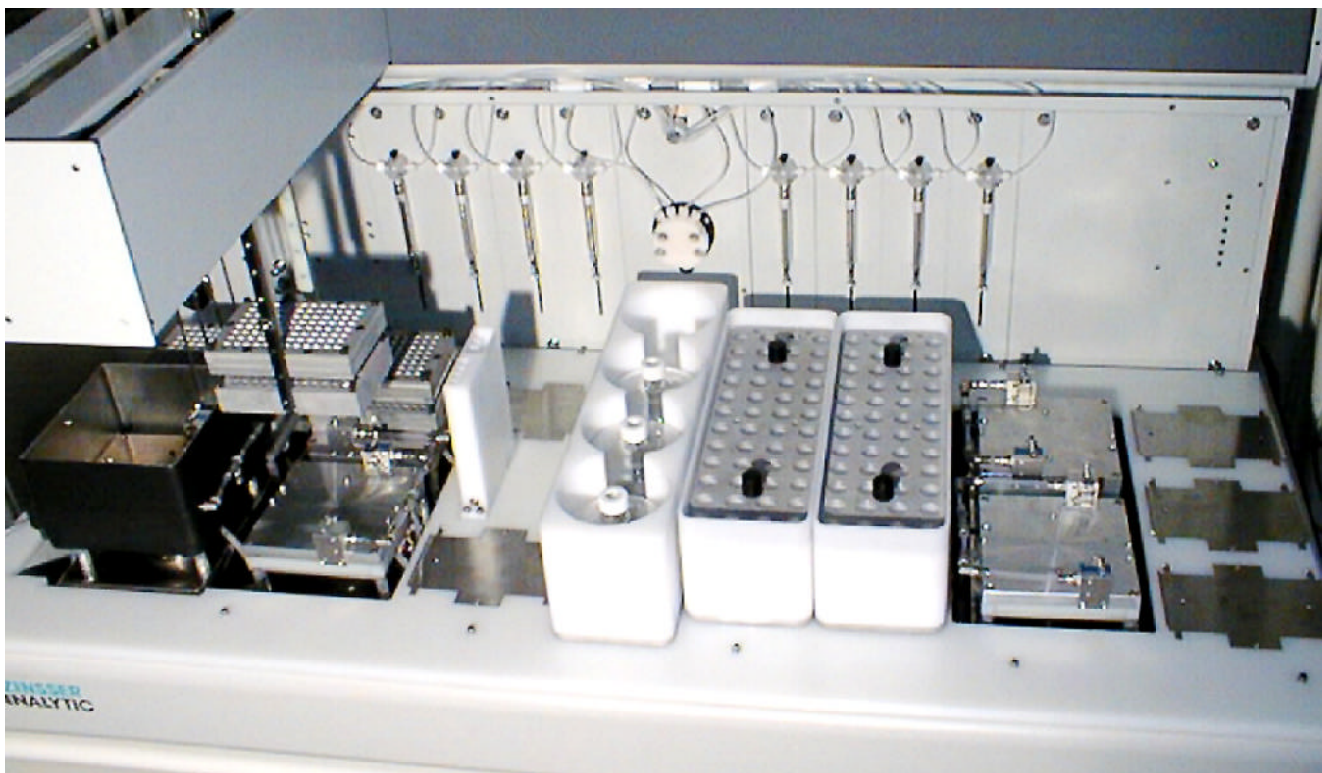


SOPHAS M

Solid Phase Synthesiser



SOPHAS represents a new generation of automatic modular solid phase synthesisers capable of many hundred syntheses in a single run. It comprises of an automatic workbench with liquid handling tools and an integrated robotic handler, which provides maximum freedom in the choice of reactors ranging from 96 well plates to 25 ml reaction vessels. This enables the use of various strategies and chemistries for organic synthesis. The synthesis can be carried out in any kind of reaction vessel, such as 96 well plates, tubes or vials made of any suitable material i.e. glass, plastic, ceramics, stainless steel, titanium. These vessels are placed on aluminium carriers and transported by the integrated robotic arm to the various stations, heating, cooling, washing or parking on the workbench.

For high-throughput parallel synthesis, a special 96-well-reactor system has been developed using glasstubes of 1.1ml volume or a solid glassblock with 96 cavities of 1.8ml volume. Contamination and unwanted atmospheric reactions are prevented by multiple layers of pierceable septa above the reactors which act as gas barriers as well as pressure vents.

The system uses 4 independent pipetting probes. These are designed especially for the needs of solid phase chemistry, by allowing filtration from the top of the reactors without loss of resin. A newly developed „resin-wash“ mode takes advantage of the three independent liquid channels of the probe. The channels simultaneously aspirate, add washing solution and nitrogen. The system can distribute

six different system liquids and inert gases.

The system provides fast heating and cooling between -40°C (-80°C optional) and +150°C along with mechanical agitation by newly developed high-speed, low noise vortexers at any stage of the synthesis and at any position of the workbench. Speeds and temperatures can be set individually and are totally software controlled. As an option, pick-up tools can be supplied with sensors for level detection, temperature measurement and pH control to monitor the chemical reactions.

WinSoph©32-bit Windows®NT software controls Sophas and organizes any parallel organic synthesis. The graphic user interface displays the actual layout of the workbench and shows each individual step of the synthesis. The powerful database stores all synthesis parameters such as solvents, building blocks, reagents, reactor positions, status of synthesis, compounds in each reactor, time parameters, procedures for washing, agitation, heating, cooling etc. By simple „drag and drop“ techniques the user can easily generate procedures for their individual synthesis and test them in a simulation run without the synthesiser in operation. Arrays of building blocks and complete synthesis instructions can be imported from existing databases, also final synthesis results (compound positions) can be exported to peripheral systems. The software scheduler organizes the parallel handling of the reaction blocks. Each step of the synthesis is documented in a logfile. In case of an interruption (power failure) the synthesis can proceed without any problem.

Features

Robotic System

- liquid handling system with 4 independent multichannel probes and one integrated robotic arm
- modular workbench with effective workarea of 1000 x 290mm (2000 x 290mm optional)
- high speed (1.800 rpm), low noise, low vibration vortexers with pneumatic clamps for safe positioning of the reactionblocks. Heating, cooling, stopping and positioning computer controlled
 - 4 vortexers with built-in heater (+150°C)
 - 1 vortexer with cold plate (-40°C or -80°C)
- 8 dilutors for 0,5 to 5ml syringes
- 6-way high throughput valve (6 inlets, 4 outlets)
- "lock-in" ports for inert gas supply on all reaction positions and for all racks

Reaction blocks

- 6 aluminium reactorkits (128 x 86mm) for 96 disposable glassreactors (1.1ml) with PTFE-coated sealing lids, frames and pierceable septa, with flooding-chamber for inert gas atmosphere
- solid borosilicate glass reactorblock with 96 wells 1.5ml with sealing lids, frames and pierceable septa (optional)
- reactorkits for 4,12, 24 and 48 reaction vessels with sealing lids, frames and septa (optional)



Transportation of Reaction Block

Software

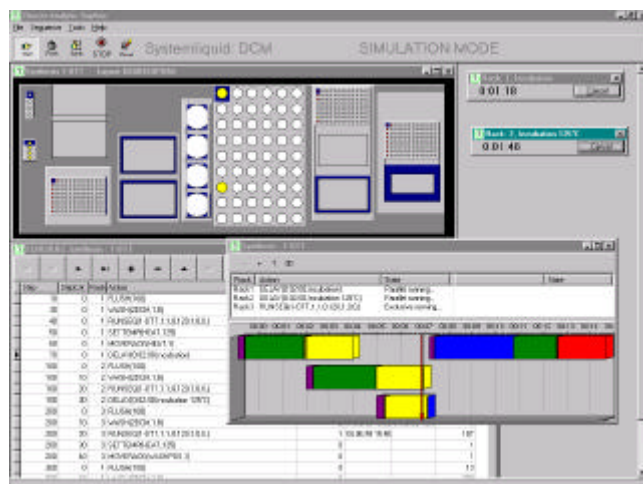
- 32-bit WINDOWS® NT-based graphic user interface
- calculation of volumes for all necessary reagents, solvents and building blocks
- import/export of data files
- time scheduler for parallel processing (optional)
- synthesis check by process simulation
- multi tasking including all RS232 ports
- full documentation of synthesis runs
- restart function after system failure

Dimensions/Weight

- 600 x 1180 x 710 mm (H x L x D)
- 95 Kg

Power requirements

- 110-230 Volts, 50/60 Hertz, 2.000 Watts



WinSoph© 32-bit control software

ZINSSER
ANALYTIC

D-60460 Frankfurt/Main, Eschborner Landstr. 135, Tel.: 069/789106-0, Fax: 069/789106-80
Email: info@zinsser-analytic.com, Internet: <http://www.zinsser-analytic.com>
GB-M Maidenhead, Berks SL6 1AP, Ho warth Road, Tel.: +44 1628 773202, Fax: +44 1628 672199