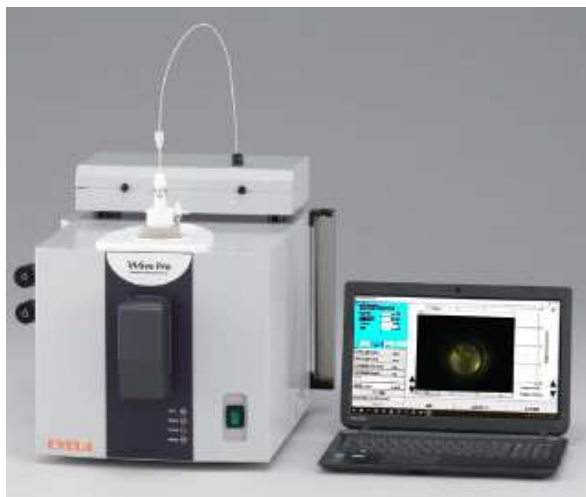


**A reaction device capable of microwave irradiation while cooling the periphery by means of a thermostatic bath, enabling reactions to be carried out at lower temperatures than conventional devices.**

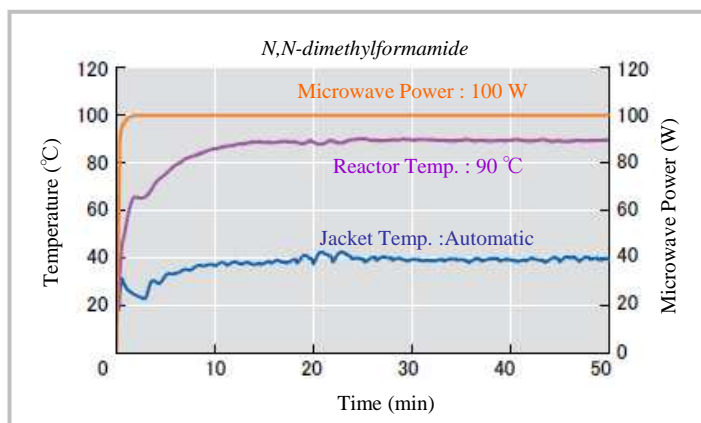
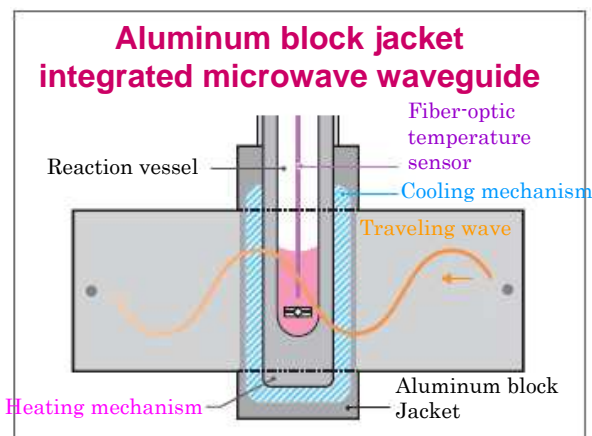
## Microwave Synthesizer

## GPS-1100C

## Wave Pro™



- A new microwave system equipped with an aluminum block jacket thermostat.
- Quantitative heating by the traveling wave of a single mode by a semiconductor microwave oscillator.
- Reaction can be carried out at a temperature lower than usual due to constant temperature response from -13 to 200 ° C.
- It is possible to perform synthesis experiments by eliminating the thermal effects of microwaves.
- The reaction temperature is controlled while the microwave is continuously irradiated.

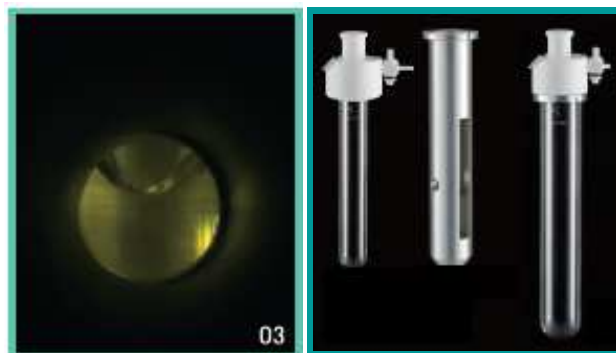


### Designed to maximize the "selective heating" characteristics of microwave.

The molecules are selectively heated by microwaves by introducing the microwave absorbing molecules into the non-polar solvent or the microwave-permeable solvent. The solvent is thus efficiently cooled to keep the temperature low.

The molecular temperature is gradually raised to a high temperature by continuous irradiation of the microwave owing to the permanent heat removal of the reaction vessel.

While the microwave is continuously irradiated, the reaction temperature is controlled by cooling the aluminum block Jacket.



CCD Camera

Reaction Vessel

## Specifications

<b>Product name</b>	Microwave synthesizer				
<b>Model</b>	GPS-1100C				
<b>Product Code No.</b>	274609				
<b>Reaction Scale (Select)</b>	Glass reaction vessel				Pressure vessel
<b>Vessel Diameter</b>	φ15	φ24	φ30	φ35	φ15
<b>Solution Volume</b>	1 – 5 ml	5 – 10 ml	10 – 30 ml	30 – 50 ml	3 – 5 ml
<b>Computer Compatibility</b>	Included laptop computer controls all system functions. System can perform all functions with ethernet connection to external PC.				
<b>Controlled Software</b>	Check/Monitors microwave power & temperature, microwave power control, temperature control, stirrer control, states/operation, safety interlocks.				
<b>Temperature control mode</b>	Jacket mode, Reactor mode, Calorie mode, Reflux mode				
<b>Data export &amp; Report</b>	Data export (CSV format), report creation (pdf format)				
<b>Reaction observation</b>	By Built-in CCD camera (Glass reaction vessel only)				
<b>Temperature</b>	-13 – 200 °C				0 – 200 °C
<b>Pressure</b>	ATM. Press.				0 – 25 Bar
<b>Aluminum block jacket heating and cooling, with microwave Heating</b>	Heating and cooling of solid-state aluminum jacket, microwave heating of the sample				
<b>Temperature Control accuracy</b>	Solid-state aluminum Jacket temperature control: ±0.5 °C of set point Solvent temperature control: ±0.5 °C of set point (water)				
<b>Microwave power output</b>	0, 1 – 100 Watts, continuous output				
<b>Microwave temperature rising speed</b>	1.7 – 2.9 K/sec (φ15 glass vessel, Water 1 – 5 ml, microwave 100 W)				
<b>Fuses</b>	10 AMP Fuse				
<b>Stirring</b>	Built-in magnetic stirrer, 0, 100 – 2000 rpm				
<b>Microwave oscillation frequency</b>	2450 MHz Semiconductor oscillator, single mode TE <sub>10</sub>				
<b>Microwave applicator</b>	Aluminum block Jacket integrated microwave waveguide				
<b>Cooling chiller connection</b>	Outer diameter φ12.7mm Hose nipples, Thermal fluid based on silicone oil				
<b>Ambient temperature, humidity, altitude</b>	18 – 28 °C, 35 – 65%, 2000 m or less				
<b>Dimensions</b>	380 mm (460 mm)W x 580 mmD x 442 mmH				
<b>Weight</b>	Approx.45 kg				
<b>Electrical requirements</b>	1150VA at AC115V, AC115-120V (±10%) 50/60Hz				

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### Corporate Headquarters

TN Koishikawa Bldg.  
1-15-17 Koishikawa  
Bunkyo-ku, Tokyo  
112-0002, Japan  
Phone: +81-3-6757-3378  
Fax: +81-3-3868-6571  
Web: <http://www.eyelaworld.com/>

### For further information, please contact our US distributor.

IKA Works, Inc.  
2635 Northchase Parkway SE,  
Wilmington, NC 28405, USA  
Phone: +1 910 452 7059  
Fax: +1 910 452 7693  
E-mail: [cameron.rambone@ika.net](mailto:cameron.rambone@ika.net)  
Web: <http://www.ika.com>

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