

## Five reaction vessels with individual temperature and stirring control

# Personal Organic Synthesizer



Reaction vessels and liquid temperature sensors are not included.

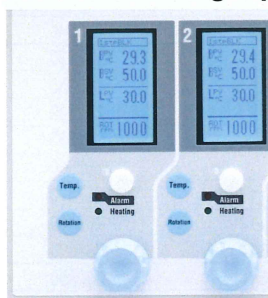
### ChemiStation™ Model PPM-5512A

This organic synthesizer with 5 reactors enables quickly and efficiently perform a wide variety of liquid-phase application research. In addition to the standard functions and performance of individual temperature control and the ability to use a variety of vessels, individual stirring and solvent temperature measurement and control are also possible.

- Stirring speed and temperatures can be set individually on each reaction vessel, allowing independent reaction experiments to be performed for each vessel.
- The set values can be saved, so there is no need to enter them again for each experiment. 2-step program function allows reactions to be performed at two different temperature settings.
- Like the model PPS-5511, the synthetic scale is 0.5 to 60 mL, vessel size and type can be freely selected from an extensive list of vessels.
- The frost and condensation reduction function ensures the block temperature remains at the set temperature (0 to 30°C) when the temperature control is terminated and thus reduces frosting and condensation on the block. This function can also be used for storage temperature after the reaction is completed.

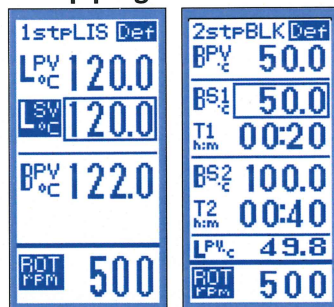
Full range of functions including individual stirring, liquid temperature measurement and control.

#### Individual stirring capability



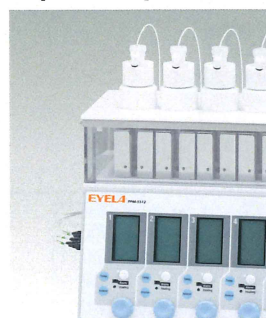
Stirring speed and time can be set independently for each reaction vessel. The setting values can be saved, so there is no need to enter them again for each experiment.

#### 2-step program function



2-step temperature control is possible. A second-order reaction with different temperature can be controlled by 2-step program function.

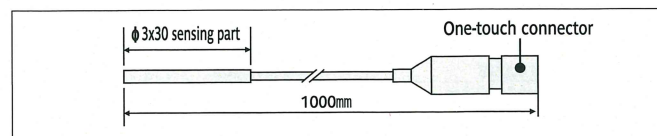
#### Liquid temperature measurement and control



Liquid temperature can be measured and controlled by using an optional liquid temperature sensor. Liquid temperature control provides highly reliable reaction results. The wetted parts of the sensor are Teflon® molded.

Liquid temperature sensor (for model PPM-5512A)  
Cat. No.282970

Liquid temperature sensor clamp (5 pcs.)  
Cat. No. 263170



#### Frosting and condensation reduction function

Frosting and condensation reduction function is provided. When the reduction function is turned on, the block temperature remains at the set temperature (0 to 30°C) even after the temperature control is terminated, thus reducing frosting and condensation on the block. This function can also be used for storage temperature after the reaction is completed.



Model		PPM-5512A
Cat. No.		283177
Stirring unit		Ferromagnetic stirrer
Performance	Reaction vessel/pcs	Various reaction vessels, 1 to 5 pcs (max. 20 pcs)
	Synthesis scale	0.5 to 60mL (depending on reaction vessel used)
	Temp. control range (during block control)	-20 to 160°C (up to 130°C for 50 to 60mL), individual temp. control x 5 ※Low temp. circulator required (see footnote)
	Temp. control accuracy	±0.5°C (during block control)
	Stirring speed range	300 to 2000 rpm (at 1 mL of water) Individual stirring x 5 ※Maximum stirring speed range varies depending on liquid volume, liquid type, and the shape of stirring bar
Functions	Temp. setting/display	Dial key input, digital display (-20.0 to 160.0°C)
	Stirring setting/display	Dial key input, digital display (200 ~ 2000 rpm)
	Liquid temperature measurement/control	Liquid temperature sensor (option)
	Program function	2-step program
	Gas exchange	By vacuum and introducing inert gases (depending on the container)
	Reflux	None/reflux adapter, manifold (option)
	Reagent addition	Pipette, syringe, dropping funnel (with taper joint) (Reagent can be added under inert condition)
	Reaction observation	View through the slits in the aluminum block
	Safety function	Earth leakage/overcurrent breaker, thermal fuse, dual chamber, Temp. controller self-diagnostic function (variable upper temp. limit, sensor error), drop tray, fuse, motor overload protection
	Standard	Wetted part material
Coolant inlet port diameter		Cooling cartridge: OD10.5mm hose mouth
Ambient temp. range		5 to 35°C
External dimension (mm)/weight		370Wx261(331)Dx323H / 19 kg
Power supply		3.2A, 700VA 220VAC 50Hz

※Specifications are based on room temperature of 20°C, rated power supply voltage, no load and using cooling water circulator (Model NCB-2410). ※For temperature control or reflux below room temperature, connection to a low temperature circulator (Model CCA-1112A, Model CA-1116A/1330: -10°C or Model NCB-2410 (anti-freeze medium: ethanol from -20°C) is required. Between adjacent blocks, the temperature setting may be limited within certain conditions. ※Manifold Model PPS-55M1 (option, Cat. No. 226510) is useful for batch gas displacement or reflux with cold water circulation (up to 1 hPa). ※Various reaction vessels, glass parts, test tubes, reflux adapter, and liquid temperature sensor are sold separately.  
※Dimensions in parentheses ( ) include protrusions.

### Improve efficiency of synthesis, including new reactions and synthesis of samples

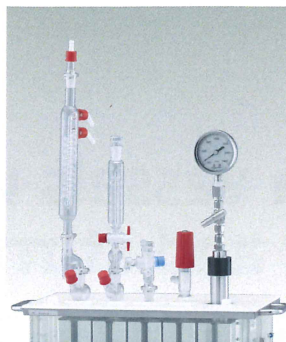
Reaction vessel with Teflon cap (φ 35×135H mm) system

System code: SYS13132



Product name	Model	Cat. No.
Personal organic synthesizer	Model PPM-5512A	283177
Reflux adapter	φ 35× 5pcs	245910
Drip-proof cover	φ 35×5 pcs	245890
Teflon cap (5 pcs)	PPS-35TC1	245950
Test tube (with lip, 10 pcs)	φ 35×135H mm	245930
Liquid temp. sensor x 5 pcs		282970
Clamp for liquid temp. sensor (5 pcs)		263170
Cross-shaped stirring bar	ST-3X (10 pcs)	212680
Insulated hose set 2mx2 pcs	CT-2S	201830
Low temperature circulator	Model CCA-1112A	268458

### ※Versatile development with a wide range of optional parts



The size and number of reaction vessels can be changed by selecting a test tube adapter. A wide range of synthetic scales from 0.5 to 60 mL and number of tubes from 1 to 20 are available.

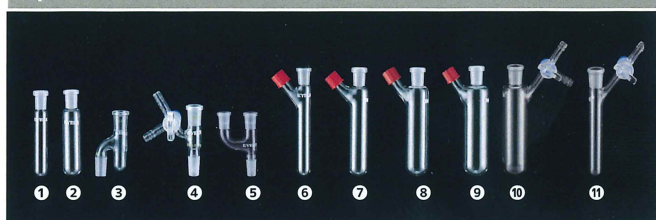


### ※Adapters, cooling tubes, drip-proof covers, compatibility chart for genuine reaction vessels

Test tube adapter		Reflux adapter	Drip-proof cover	Cooling tube	Reaction vessels							
OD (φ)	Number of rack	Standard volume (mL)	Availability	OD (φ12-35)	Availability	Test-tube	Standard reaction vessel	Reaction vessel w/branch	Sealed reaction vessel	On-head pressure resistant vessel	Vessel w/ Teflon cap	Reaction Vessel w/cock
12	4	1.2	○	○	×	○						
13	3	2	○	○	×							
13	1		○	○	×							
15	3	4	○	○	×	○						
15	1		○	○	×	○					○	
16	1	4	○	○	×				○			
16.5	1	6	○	○	×							
18	1	7	○	○	○		○	○				○
20	1	10	○	○								
21	1	10	○	○								
24	1	10	○	○					○			
24	1	12.5	○	○	○		○	○			○	○
25	1	14	○	○								
30*	1	14	×	○						○		
30	1	30	○	○							○	
30	1	30	×	○	○			○				○
34	1	60	×	○	○			○				○
35(No adapter required)	1	60	○	○							○	

※Pressure resistant vessel adapter φ 30

### Option



	Product name	Cat. No.
①	Standard reaction vessel (φ 18, \$ 15/25)	262820
②	Standard reaction vessel (φ 24, \$ 15/25)	262830
③	Dean-Stark trap (\$ 15/25)	262840
④	Addition port with 3-way cock (\$ 15/25)	262850
⑤	Multi adapter (\$ 15/25, 2 ports)	262860
⑥	Reaction vessel with branch (φ 18, \$ 15/25, GL14)	262870
⑦	Reaction vessel with branch (φ 24, \$ 15/25, GL14)	262880
⑧	Reaction vessel with branch (φ 30, \$ 15/25, GL14)	262890
⑨	Reaction vessel with branch (φ 34, \$ 15/25, GL14)	262900
⑩	φ 18 Reaction vessel with 3-way cock	264110
	φ 24 Reaction vessel with 3-way cock	264120
	φ 30 Reaction vessel with 3-way cock	264130
	φ 34 Reaction vessel with 3-way cock	264140
⑪	φ 18 Reaction vessel with stop cock	264150
	φ 24 Reaction vessel with stop cock	264160
	φ 30 Reaction vessel with stop cock	264170
	φ 34 Reaction vessel with stop cock	264180

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※The appearance and specifications of the products are subject to change without notice.