

# SPRAY DRYER MODEL SD-1000

# PRINCIPLE

Sample solution is atomized and blown through hot air flow and is collected in the form of dried uniform powder.

## **ADVANTAGES**

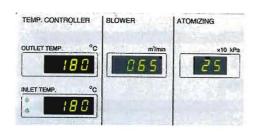
Very short drying time enables the treatment of heat sensitive samples.

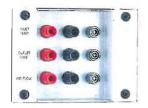
You can obtain the dried uniform powder within a few minutes.

You can save the time consuming procedure such as concentration or filtration.



TOKYO RIKAKIKAI CO., LTD. TOKYO JAPAN





# Easy setting/check-up/recording of data

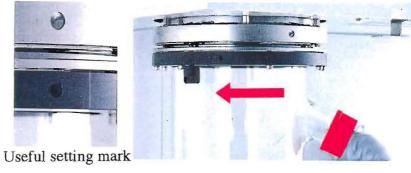
Indicator shows both themp. at inlet and outlet and spraying air pressure. They are also output on recorder

# Easy disassemble/cleaning/reassemble

Easily detatches/attaches evaporating tube. One touch coupling of cyclon /suction blower line













Suction filter at inlet

Airfilter at outlet





Efficient layout of plumbing line Shortest plumbing line for efficiency.

#### **SPECIFICATIONS**

#### SD-1000

Type

Drying capacity

Temp range accuracy Dried air volume range

Spray air pressure range

Feed pump volume range

Sample stirrer rpm capacity
Inlet temp\_setting Display

Outlet temp.display

Dried air flow rate setting

Feed pump flow rate setting Sprayed air pressure setting

Stirring speed setting

Safety device

Sprayed air line cleaning device

Additional function
Recorder output terminal

Heater

Feed pump Spray nozzle

Air pump for spray

Drying tube Cyclone tube

Powder collecting container

Stirrer for sample Suction blower

Dimension of tubing

Dimension of connector for air for spraying

Air pressure for spraying

Dimensions of Exhaust connector

Interval timer

Ambient temp, range for operation Overall dimensions(mm): Weight

Power requirement

2 way nozzle type Spray nozzle

Max.approx.1500ml/h

40~200°C (Temp. at inlet) ±1°C

0.2~0.65m3/min

49~245kPa (0.5~2.5kg/cm2)

102~1800ml/h

100~1000rpm 50ml~2L (water)

Membrane switch Digital

Digital

Variable resistance Digital display

Variable resistance

Variable resistance Digital display

Variable resistance

Cover for drying tube, Self-diagnostic device,

(Temp. error, Air flow error, Damaged heater,

Flow pressure error)

Automatic by interval timer

Sprayed air line valve ON-OFF switch

0~10mV (Inlet temp., Outlet temp. Dried air

flow)
3kW

Peristaltic pump

2 way nozzle (ID 0.4mm)

Air compressor for spray (optional)

Hard glass Hard glass

Hard glass (600ml)

DC brushless motor 6W, Cobalt magnet Commutator blower, Max0.65m3/min

Flow controllable ID3.15mmxOD5.2mm

ID4mmxOD6mm Union for soft urathane

294kPa (3kg/cm2), Flow rate more than 25L/min

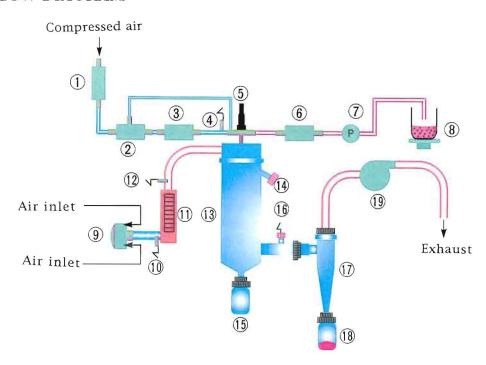
Exhaust OD50mm

OFF or 1~20min (Automatic)

5~35°C

700Wx620Dx1500H · Approx.110kg 21A, 4.2kVA · AC-200V ø1, 50/60Hz

## **FLOW DIAGRAM**



- 1. Sprayed air line valve (Solenoid valve)
- 2.3 way solenoid valve
- 3. Regulator
- 4. Pressure sensor (sprayed air)
- 5. Spray nozzle
- 6. Pump pressure sensor
- 7. Pump
- 8. Sample stirrer (magnetic stirrer)
- 9. Suction filter
- 10. Sensor (wind)
- 11. Heater
- 12. Sensor (Inlet temp.)
- 13. Drying tube
- 14. Spray nozzle purification orifice
- 15. Separator
- 16. Sensor (outlet)
- 17. Cyclone tube
- 18. Powder collecting flask
- 19. Suction blower

# TOKYO RIKAKIKAI CO.,LTD.

Nihonbashi Hon-cho Bldg. 6F, 3-3-4 Hon-cho, Nihonbashi, Chuo-ku, Tokyo, Japan Ph: 81/3-5201-6462 Fax: 81/3-3241-0177