



Yamato Rotary Evaporator Application Notes

Yamato Model: **REV-202MA / 212MA**

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Yamato Scientific
America

YAMATO ROTARY EVAPORATOR **REV SERIES (with Vacuum Controller)**



Glassware A
Diagonal Condenser



Glassware B
Vertical Condenser



Glassware C
Cold-finger, Vertical Condenser

REV Series Rotary Evaporator Application Notes

Distillation of WATER - Single Set Point Control

SET COMPOSITION

Part No.	Description
REV202MA	Rotary evaporator with vacuum controller
RG202B	Glassware set B (vertical condenser)
BM302A	Water bath
CF303Y	Water circulator (chiller)
221581	Insulation hose 2 pcs.
N820GKIT	Diaphragm vacuum pump & hose
255783	Vacuum pump control unit G (OVR26)

SAMPLE

■ WATER

PARAMETERS

Settings	Values
Single set point control (vacuum pressure)	31 hPa
Rotation speed	100 rpm
Bath temperature	60°C
Chiller temperature (trap temperature)	5°C
Flask size	1000 ml
Sample volume	500 ml

RESULTS

Settings	Values
Recovery rate	99.8%
Distillation speed	44 min



REV Series Rotary Evaporator Application Notes

Distillation of WATER - Auto Distillation Control

SET COMPOSITION

Part No.	Description
REV202MA	Rotary evaporator with vacuum controller
RG202B	Glassware set B (vertical condenser)
BM302A	Water bath
CF303Y	Water circulator (chiller)
221581	Insulation hose 2 pcs.
N820GKIT	Diaphragm vacuum pump & hose
255783	Vacuum pump control unit G (OVR26)

SAMPLE

■ WATER

PARAMETERS

Settings	Values
Auto distillation control (vacuum pressure)	25 hPa
Rotation speed	100 rpm
Bath temperature	60°C
Chiller temperature (trap temperature)	5°C
Flask size	1000 ml
Sample volume	500 ml

RESULTS

Settings	Values
Recovery rate	99.2%
Distillation speed	40 min



REV Series Rotary Evaporator Application Notes

Distillation of ACETONE - Single Set Point Control

SET COMPOSITION

Part No.	Description
REV202MA	Rotary evaporator with vacuum controller
RG202B	Glassware set B (vertical condenser)
BM302A	Water bath
CF303Y	Water circulator (chiller)
221581	Insulation hose 2 pcs.
N820GKIT	Diaphragm vacuum pump & hose
255783	Vacuum pump control unit G (OVR26)

SAMPLE

■ **ACETONE**

PARAMETERS

Settings	Values
Single set point control (vacuum pressure)	196 hPa
Rotation speed	100 rpm
Bath temperature	40°C
Chiller temperature (trap temperature)	5°C
Flask size	1000 ml
Sample volume	400 ml

RESULTS

Settings	Values
Recovery rate	95%
Distillation speed	12 min



REV Series Rotary Evaporator Application Notes

Distillation of ACETONE - Auto Distillation Control

SET COMPOSITION

Part No.	Description
REV202MA	Rotary evaporator with vacuum controller
RG202B	Glassware set B (vertical condenser)
BM302A	Water bath
CF303Y	Water circulator (chiller)
221581	Insulation hose 2 pcs.
N820GKIT	Diaphragm vacuum pump & hose
255783	Vacuum pump control unit G (OVR26)

SAMPLE

■ **ACETONE**

PARAMETERS

Settings	Values
Auto distillation control (vacuum pressure)	211 hPa
Rotation speed	100 rpm
Bath temperature	40°C
Chiller temperature (trap temperature)	5°C
Flask size	1000 ml
Sample volume	400 ml

RESULTS

Settings	Values
Recovery rate	98.5%
Distillation speed	14 min.



REV Series Rotary Evaporator Application Notes

Distillation of ETHANOL - Single Set Point Control

SET COMPOSITION

Part No.	Description
REV202MA	Rotary evaporator with vacuum controller
RG202A	Glassware set A (diagonal condenser)
BM302A	Water bath
CF303Y	Water circulator (chiller)
221581	Insulation hose 2 pcs.
N820GKIT	Diaphragm vacuum pump & hose
255783	Vacuum pump control unit G (OVR26)

SAMPLE

■ **ETHANOL**

PARAMETERS

Settings	Values
Single set point control (vacuum pressure)	43 hPa
Rotation speed	100 rpm
Bath temperature	40°C
Chiller temperature (trap temperature)	5°C
Flask size	1000 ml
Sample volume	400 ml

RESULTS

Settings	Values
Recovery rate	99.3%
Distillation speed	23 min



REV Series Rotary Evaporator Application Notes

Distillation of ETHANOL - Auto Distillation Control

SET COMPOSITION

Part No.	Description
REV202MA	Rotary evaporator with vacuum controller
RG202A	Glassware set A (diagonal condenser)
BM302A	Water bath
CF303Y	Water circulator (chiller)
221581	Insulation hose 2 pcs.
N820GKIT	Diaphragm vacuum pump & hose
255783	Vacuum pump control unit G (OVR26)

SAMPLE

■ ETHANOL

PARAMETERS

Settings	Values
Auto distillation control (vacuum pressure)	42 hPa
Rotation speed	100 rpm
Bath temperature	40°C
Chiller temperature (trap temperature)	5°C
Flask size	1000 ml
Sample volume	400 ml

RESULTS

Settings	Values
Recovery rate	99.3%
Distillation speed	24 min.



REV Series Rotary Evaporator Application Notes

Distillation of HEXANE - Single Set Point Control

SET COMPOSITION

Part No.	Description
REV202MA	Rotary evaporator with vacuum controller
RG202A	Glassware set A (diagonal condenser)
BM302A	Water bath
CF303Y	Water circulator (chiller)
221581	Insulation hose 2 pcs.
N820GKIT	Diaphragm vacuum pump & hose
255783	Vacuum pump control unit G (OVR26)

SAMPLE

■ **HEXANE**

PARAMETERS

Settings	Values
Single set point control (vacuum pressure)	128 hPa
Rotation speed	100 rpm
Bath temperature	40°C
Chiller temperature (trap temperature)	5°C
Flask size	1000 ml
Sample volume	350 ml

RESULTS

Settings	Values
Recovery rate	97%
Distillation speed	7 min



REV Series Rotary Evaporator Application Notes

Distillation of HEXANE - Auto Distillation Control

SET COMPOSITION

Part No.	Description
REV202MA	Rotary evaporator with vacuum controller
RG202A	Glassware set A (diagonal condenser)
BM302A	Water bath
CF303Y	Water circulator (chiller)
221581	Insulation hose 2 pcs.
N820GKIT	Diaphragm vacuum pump & hose
255783	Vacuum pump control unit G (OVR26)

SAMPLE

■ **HEXANE**

PARAMETERS

Settings	Values
Auto distillation control (vacuum pressure)	144 hPa
Rotation speed	100 rpm
Bath temperature	40°C
Chiller temperature (trap temperature)	5°C
Flask size	1000 ml
Sample volume	350 ml

RESULTS

Settings	Values
Recovery rate	98%
Distillation speed	8 min.



REV Series Rotary Evaporator Application Notes

Distillation of TOLUENE - Single Set Point Control

SET COMPOSITION

Part No.	Description
REV202MA	Rotary evaporator with vacuum controller
RG202A	Glassware set A (diagonal condenser)
BM302A	Water bath
CF303Y	Water circulator (chiller)
221581	Insulation hose 2 pcs.
N820GKIT	Diaphragm vacuum pump & hose
255783	Vacuum pump control unit G (OVR26)

SAMPLE

■ TOLUENE

PARAMETERS

Settings	Values
Single set point control (vacuum pressure)	38 hPa
Rotation speed	100 rpm
Bath temperature	40°C
Chiller temperature (trap temperature)	5°C
Flask size	1000 ml
Sample volume	450 ml

RESULTS

Settings	Values
Recovery rate	99.5%
Distillation speed	20 min



REV Series Rotary Evaporator Application Notes

Distillation of TOLUENE - Auto Distillation Control

SET COMPOSITION

Part No.	Description
REV202MA	Rotary evaporator with vacuum controller
RG202A	Glassware set A (diagonal condenser)
BM302A	Water bath
CF303Y	Water circulator (chiller)
221581	Insulation hose 2 pcs.
N820GKIT	Diaphragm vacuum pump & hose
255783	Vacuum pump control unit G (OVR26)

SAMPLE

■ **TOLUENE**

PARAMETERS

Settings	Values
Auto distillation control (vacuum pressure)	20 hPa
Rotation speed	100 rpm
Bath temperature	40°C
Chiller temperature (trap temperature)	5°C
Flask size	1000 ml
Sample volume	450 ml

RESULTS

Settings	Values
Recovery rate	99.3%
Distillation speed	14 min.



REV Series Rotary Evaporator Application Notes

Distillation of WATER / ETHANOL MIXTURE 1:1 - Single Set Point Control

SET COMPOSITION

Part No.	Description
REV202MA	Rotary evaporator with vacuum controller
RG202A	Glassware set A (diagonal condenser)
BM302A	Water bath
CF303Y	Water circulator (chiller)
221581	Insulation hose 2 pcs.
N820GKIT	Diaphragm vacuum pump & hose
255783	Vacuum pump control unit G (OVR26)

SAMPLE

■ **WATER AND ETHANOL MIXTURE (1:1)**

PARAMETERS

Settings	Values
Single set point control (vacuum pressure)	43 ---> 23 hPa
Rotation speed	100 rpm
Bath temperature	40°C
Chiller temperature (trap temperature)	5°C
Flask size	1000 ml
Sample volume	460 ml

RESULTS

Settings	Values
Recovery rate	97%
Distillation speed	60 min



REV Series Rotary Evaporator Application Notes

Distillation of WATER / ETHANOL MIXTURE 1:1 - Auto Distillation Control

SET COMPOSITION

Part No.	Description
REV202MA	Rotary evaporator with vacuum controller
RG202A	Glassware set A (diagonal condenser)
BM302A	Water bath
CF303Y	Water circulator (chiller)
221581	Insulation hose 2 pcs.
N820GKIT	Diaphragm vacuum pump & hose
255783	Vacuum pump control unit G (OVR26)

SAMPLE

■ **WATER AND ETHANOL MIXTURE (1:1)**

PARAMETERS

Settings	Values
Auto distillation control (vacuum pressure)	40 ----> 23 hPa
Rotation speed	100 rpm
Bath temperature	40°C
Chiller temperature (trap temperature)	5°C
Flask size	1000 ml
Sample volume	460 ml

RESULTS

Settings	Values
Recovery rate	97%
Distillation speed	66 min.



REV Series Rotary Evaporator Application Notes

Distillation of WATER / ETHANOL MIXTURE 1:4 - Single Set Point Control

SET COMPOSITION

Part No.	Description
REV202MA	Rotary evaporator with vacuum controller
RG202B	Glassware set B (vertical condenser)
BM302A	Water bath
CF303Y	Water circulator (chiller)
221581	Insulation hose 2 pcs.
N820GKIT	Diaphragm vacuum pump & hose
255783	Vacuum pump control unit G (OVR26)

SAMPLE

■ **WATER AND ETHANOL MIXTURE (1:4)**

PARAMETERS

Settings	Values
Single set point control (vacuum pressure)	41 ---> 23 hPa
Rotation speed	100 rpm
Bath temperature	40°C
Chiller temperature (trap temperature)	5°C
Flask size	1000 ml
Sample volume	430 ml

RESULTS

Settings	Values
Recovery rate	98%
Distillation speed	45 min



REV Series Rotary Evaporator Application Notes

Distillation of WATER / ETHANOL MIXTURE 1:4 - Auto Distillation Control

SET COMPOSITION

Part No.	Description
REV202MA	Rotary evaporator with vacuum controller
RG202B	Glassware set B (vertical condenser)
BM302A	Water bath
CF303Y	Water circulator (chiller)
221581	Insulation hose 2 pcs.
N820GKIT	Diaphragm vacuum pump & hose
255783	Vacuum pump control unit G (OVR26)

SAMPLE

■ **WATER AND ETHANOL MIXTURE (1:4)**

PARAMETERS

Settings	Values
Auto distillation control (vacuum pressure)	41 ----> 23 hPa
Rotation speed	100 rpm
Bath temperature	40°C
Chiller temperature (trap temperature)	5°C
Flask size	1000 ml
Sample volume	430 ml

RESULTS

Settings	Values
Recovery rate	98%
Distillation speed	47 min.



REV Series Rotary Evaporator Application Notes

Distillation of WATER / ETHANOL MIXTURE 4:1 - Single Set Point Control

SET COMPOSITION

Part No.	Description
REV202MA	Rotary evaporator with vacuum controller
RG202B	Glassware set B (vertical condenser)
BM302A	Water bath
CF303Y	Water circulator (chiller)
221581	Insulation hose 2 pcs.
N820GKIT	Diaphragm vacuum pump & hose
255783	Vacuum pump control unit G (OVR26)

SAMPLE

■ **WATER AND ETHANOL MIXTURE (4:1)**

PARAMETERS

Settings	Values
Single set point control (vacuum pressure)	43---> 23 hPa
Rotation speed	100 rpm
Bath temperature	40°C
Chiller temperature (trap temperature)	5°C
Flask size	1000 ml
Sample volume	480 ml

RESULTS

Settings	Values
Recovery rate	97%
Distillation speed	82 min



REV Series Rotary Evaporator Application Notes

Distillation of WATER / ETHANOL MIXTURE 4:1 - Auto Distillation Control

SET COMPOSITION

Part No.	Description
REV202MA	Rotary evaporator with vacuum controller
RG202B	Glassware set B (vertical condenser)
BM302A	Water bath
CF303Y	Water circulator (chiller)
221581	Insulation hose 2 pcs.
N820GKIT	Diaphragm vacuum pump & hose
255783	Vacuum pump control unit G (OVR26)

SAMPLE

■ **WATER AND ETHANOL MIXTURE (4:1)**

PARAMETERS

Settings	Values
Auto distillation control (vacuum pressure)	32----> 23 hPa
Rotation speed	100 rpm
Bath temperature	40°C
Chiller temperature (trap temperature)	5°C
Flask size	1000 ml
Sample volume	480 ml

RESULTS

Settings	Values
Recovery rate	97%
Distillation speed	83 min.

