



# When a problem happen

Please check the following points, and if the problem persists, stop using the product immediately and contact the distributor.

Failure Description	Possible Causes	Measures Method
RPM display panel "0" and mode display panel "E" were displayed.	<ul style="list-style-type: none"><li>Cup holders and cup covers are not securely attached.</li></ul>	<ul style="list-style-type: none"><li>Attach it back on correctly. ( Refer to page 5.)</li></ul>
Vibration is high. RPM display section "0" or mode display section "0"/"F" were displayed.	<ul style="list-style-type: none"><li>Sample is stuck in the cutter.</li><li>Sample is too large.</li><li>The amount of sample is too much.</li></ul>	<ul style="list-style-type: none"><li>Remove the power plug and the cup</li><li>Remove stuck sample</li><li>Make the sample smaller</li><li>Decrease the amount of sample</li></ul>
Materials leak.	<ul style="list-style-type: none"><li>Loose attachment of each cup and cup holder</li></ul>	<ul style="list-style-type: none"><li>Attach it back on correctly. ( Refer to page 5.)</li></ul>
RPM display panel "0" and mode display panel "H" were displayed.	<ul style="list-style-type: none"><li>Continuous use for a long time.</li></ul>	<p>Please let it rest for at least 30 minutes. *Please follow the rated time.</p>
All displays and lights went out.	<ul style="list-style-type: none"><li>The system was not operated for 30 minutes and went into standby mode.</li></ul>	<p>Press the START/STOP button to return.</p>
Smoke is emitted. The power cord is twisted and will not return.		<p>stop using the product immediately and contact the distributor..</p>



Exporters & Importers

OSAKA CHEMICAL CO.,LTD.

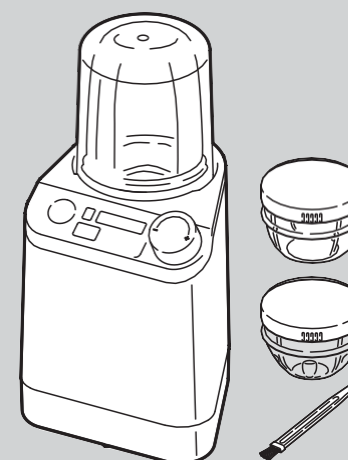
Business  
Purposes

## Portable crusher for laboratory use

P/N : OML-2PL

### User's Manual

Thank you for your purchase.  
Before using the product, be sure to read this instruction manual for proper use. After reading, be sure to keep this manual in a place where the user can access it at any time.



### CONTENTS



Safety Precautions ..... 1  
Names and functions of various parts ..... 3



Operation..... 5



Cleaning Instructions..... 7  
Specification..... 7  
How to replace parts of cup holder... 8  
Example of pulverized sample ..... 9



When a problem occurs ... Back cover



Warranty Card..... Back cover



Exporters & Importers

OSAKA CHEMICAL CO.,LTD.



# Safety Precautions

- Please read this "Safety Precautions" carefully before use and use the product correctly.
- The precautions listed here are intended to ensure the correct and safe use of the product and to prevent injury to the user or other people or damage to property. Please be sure to follow them.
- The cautions are divided into the following categories


## Warning


Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.


## Caution


Indicates a potentially hazardous situation which, if incorrectly handled, may result in injury to persons or damage to property.

### Example of pictorial display


 The symbols inform you of the contents of the "Prohibited Matters".

 (Left figure means "Disassembly Prohibited".)

 The symbols on the left inform you of what you must do (mandatory).

 ( Unplug the power plug from the outlet in the case of the left figure. )

## Warning


 Do not use it for any voltage other than 100 VAC.  
(For use in Japan only)  
There is a risk of ignition.

Do not use when the following conditions are identified

- Moves or stops during use
- The power cord has become twisted and will not return.
- Power cord base is deformed or damaged.
- Loose plugs in electrical outlets
- If the power cord is abnormally hot




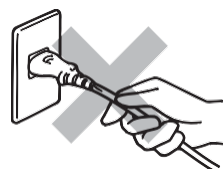
May cause fire, electric shock, burns, or short circuit.


 Do not handle the power cord as follows


- Bend forcibly
- Twisting the power cord
- Pulling the power cord
- Place a heavy object on it
- Bring it close to something hot.
- Clipping the power cord to something
- Remodel
- Use with the cord tied up in a bundle.

There is a risk of fire or electric shock.


 When unplugging the plug from the power outlet, hold the power plug and pull it out.  
It may damage the power cord.




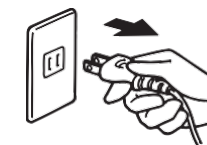
 Never disassemble, repair, or remodel the product except by a repair technician. There is a risk of ignition or electric shock.


 Do not immerse the unit in water. Do not pour water on the unit. Do not plug or unplug the power cord with wet hands. There is a risk of electric shock.

## Caution

 Make sure the cutter has stopped rotating before unplugging the plug. There is a risk of injury.

 Unplug the power plug from the outlet when attaching or removing each part. There is a risk of injury.

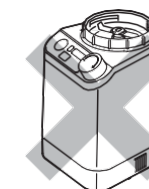


 Do not remove the cup cover until the cutter has completely stopped rotating.


Do not press the safety switch directly.

Do not attach only the cup holder to the main unit.

There is a risk of injury.



# Safety Precautions

 Do not put in more than the maximum capacity of the sample. Do not spin it empty. Do not use extremely small amounts of samples. There is a risk of injury.

〈Maximum capacity〉

Mill cup (L) ... 200ml  
Mill cup (S) ..... 50ml  
Tea cup ..... About 12 g

If the rotation stops due to too much sample or other reasons, do not use it as it is.

That could be a malfunction.



Do not use microwave ovens, ovens, or dishwasher/dryers. Do not place near fire.

It may cause deformation or damage.

No more than 5 minutes of continuous operation at a time.  
(Rest at least 30 minutes before the next movement.)

It may cause malfunction or damage.



Do not use it for any purpose other than sample pulverization.

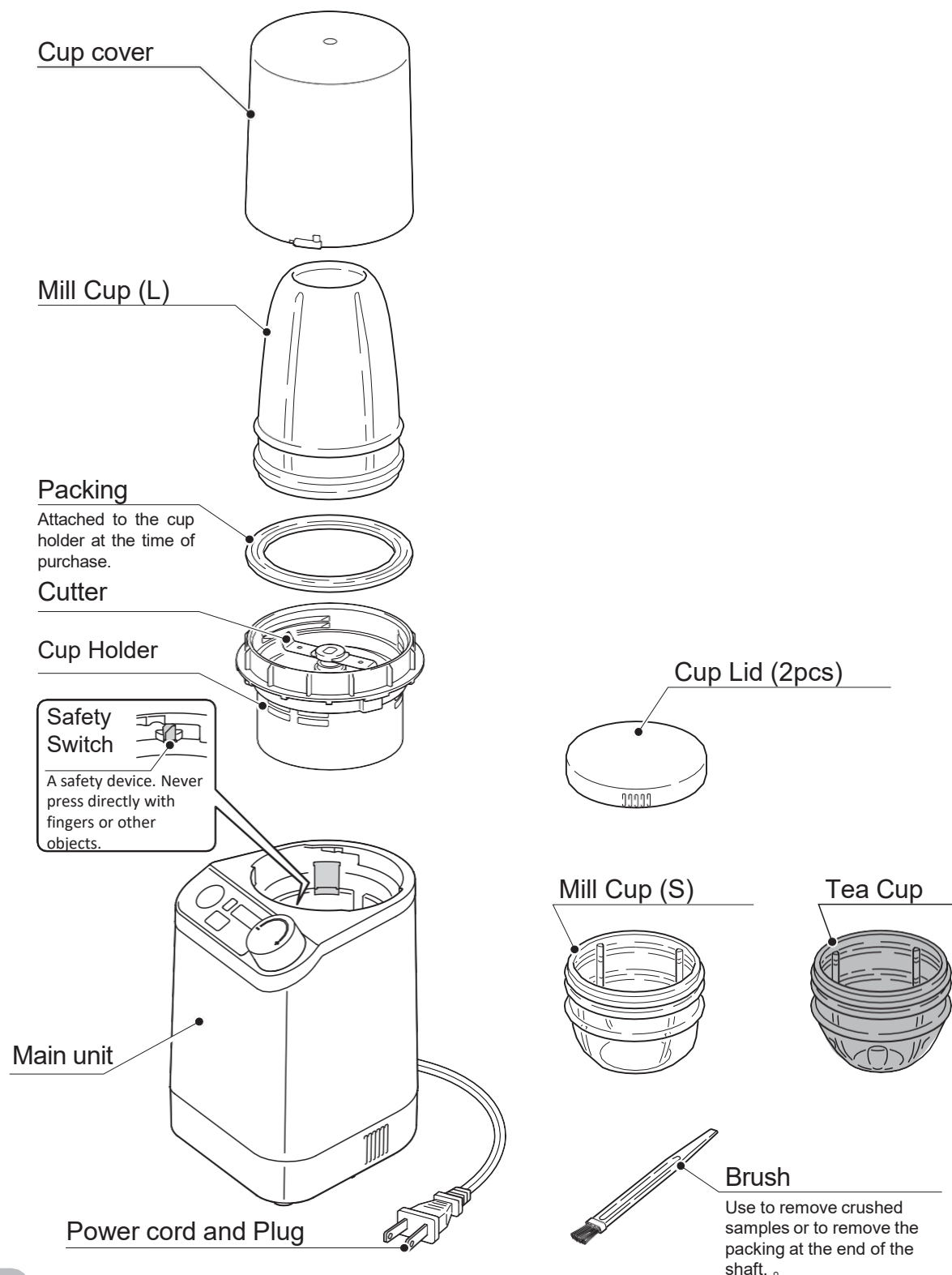
Use for other purposes may damage this product.

※ Illustrations of safety precautions differ from the actual product.

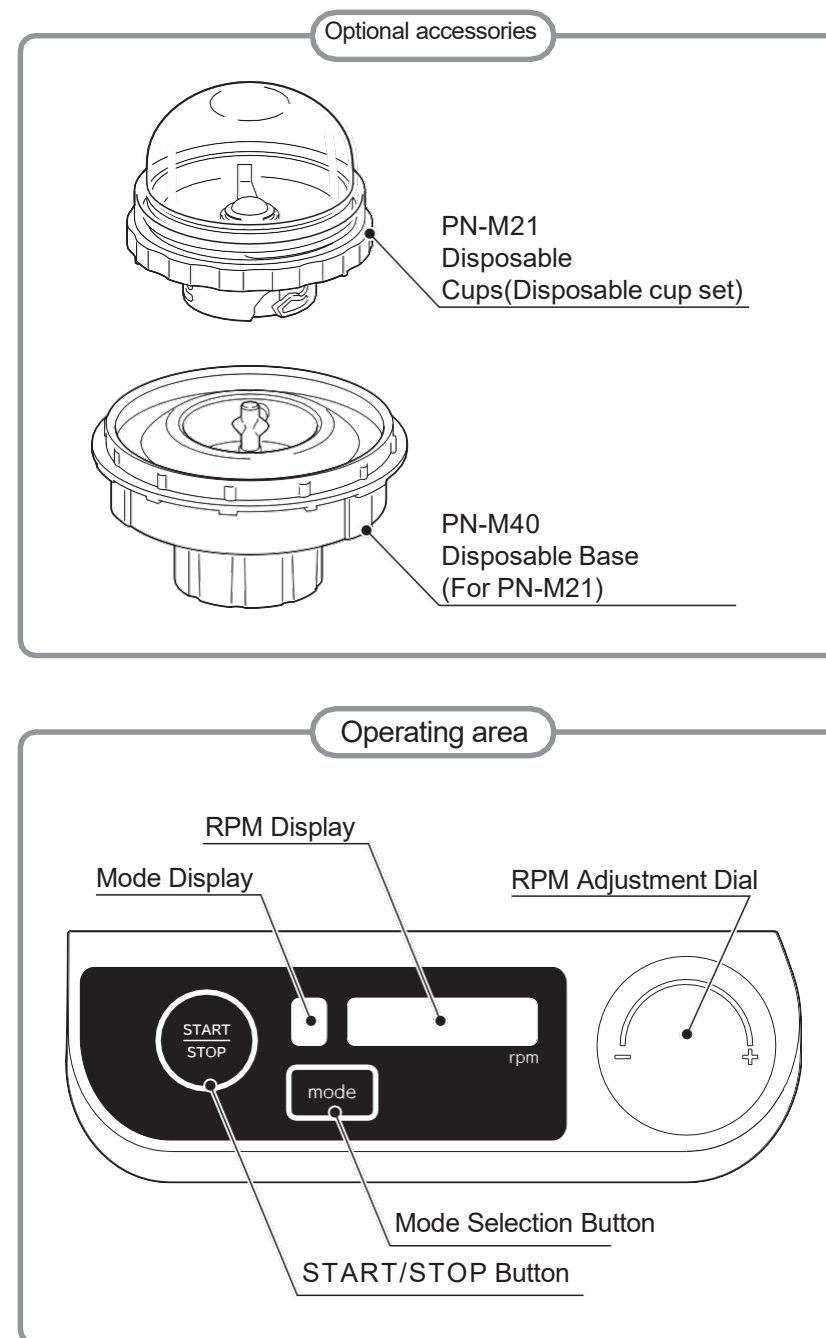


## Name and function of each part

Please make sure that all parts and accessories are included in the package. For optional parts, please contact the distributor.



## Name and function of each part





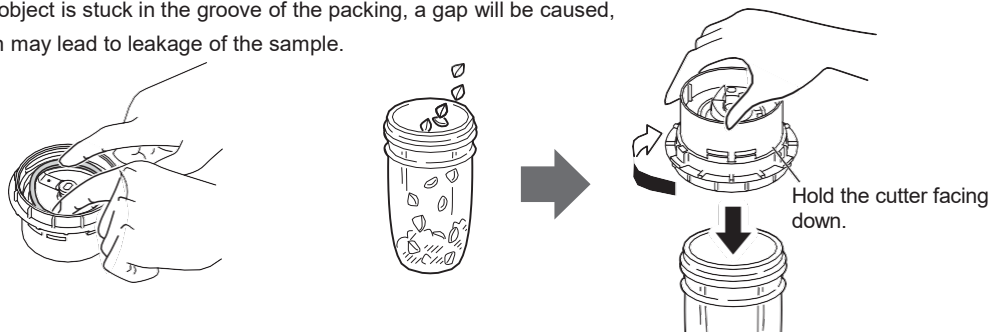
# How to use

## Warning

- Make sure to attach the packing.
- Attach each parts correctly. If the attachment is not correct, the unit will not operate.

- 1 Attach the packing to the cup holder.  
Load the sample to be crushed and attach the cup holder by turning it in the direction of the arrow shown in the figure.

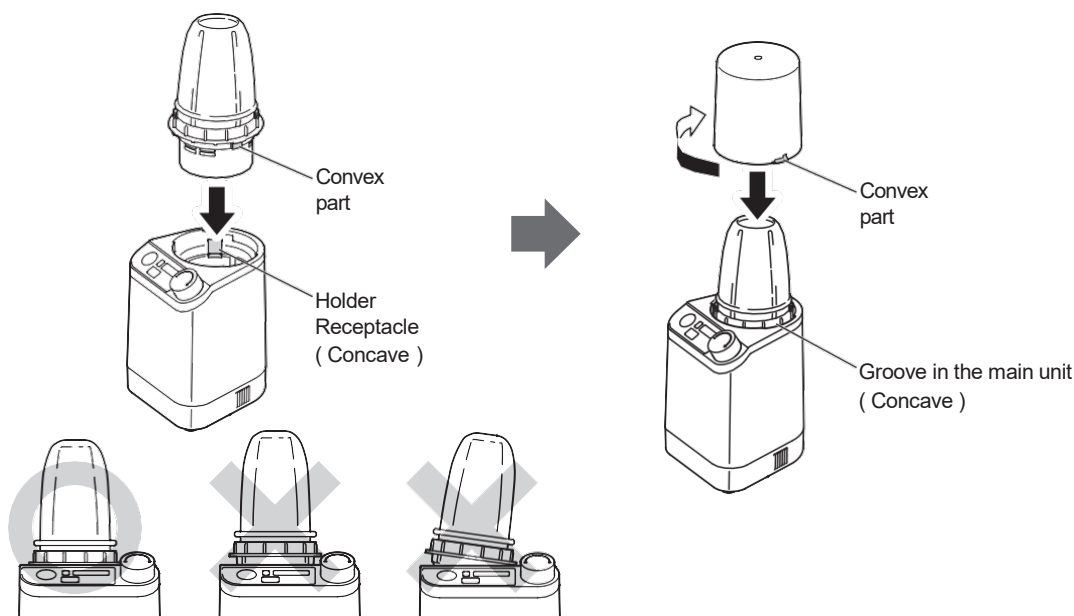
- The packing firmly fits into the inner groove of the cup holder.
- If an object is stuck in the groove of the packing, a gap will be caused, which may lead to leakage of the sample.



- 2 Align the convex part of the cup holder with the holder receptacle on the main unit and put it in.

Fit the convex part of the cup cover into the groove on the body and turn it in the direction shown in the figure until it stops.

The cup cover cannot be installed if the cup holder is lifting or tilting from the body.



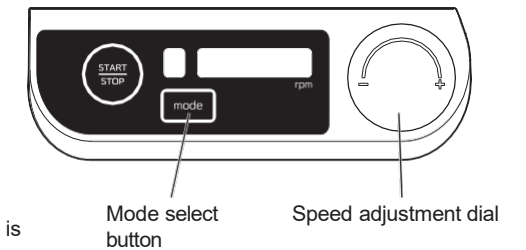
# How to use

- 3 Insert the power plug into the outlet.

- The mode display and RPM display light up.  
The light will turn off and switch to standby mode 30 minutes after the last operation. To return from standby mode, press the START/STOP button.

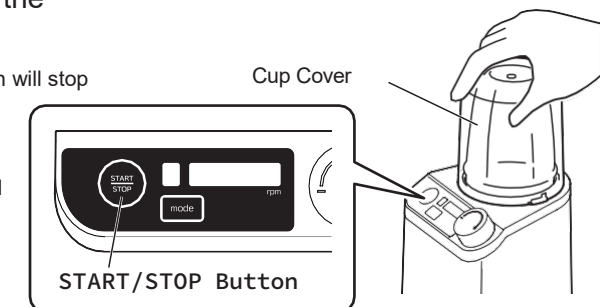
- 4 Press the mode button to select the mode.  
Turn the speed adjustment dial to select the number of rotations.

- Mode changes each time the mode button is pressed.
- 1 : The cutter rotates only while the START/STOP button is pressed.
- 2 : The cutter rotates for 30 seconds.
- 3 : The cutter rotates for 60 seconds.
- 4 : The cutter rotates for 90 seconds.
- The rotation speed is set to 10000 times/minute when the power is turned on. It can be set in the range from 10000 to 20000 revolutions/minute, in increments of 500 revolutions/minute. RPM can be adjusted during operation.



- 5 Hold the cup cover by hand and press the START/STOP button to operate.

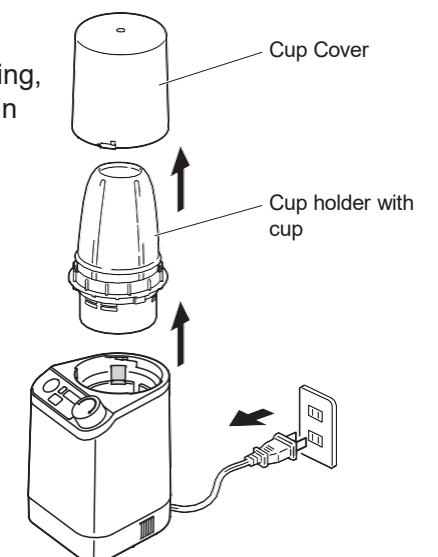
- Pressing the START/STOP button during operation will stop the timer. When stopped, the timer in the selected mode will reset.
- During operation, the actual RPM data is displayed on the RPM display.
- ※It may take several seconds to reach the set RPM.



- 6 Unplug the power plug from the outlet after the cutter has completely stopped rotating.  
Remove the cup cover in the reverse order of attaching, and remove the cup and the cup holder from the main unit.

## Consecutive use

For continuous use, the total operating time should not exceed 5 minutes.  
When the total time of continuous operation reaches 5 minutes, please rest the device for at least 30 minutes before use.







# Instructions for maintenance and cleaning

Unplug the power plug from the outlet for cleaning.

## Main unit, cup cover

Soak a soft cloth in "soapy water" or "Neutral detergent diluted with water" and squeeze it well before wiping off any dirt and stains.

## Packing, each cup, cup lid

Wash with a sponge with a neutral detergent and after that wipe dry.

## Cup holder

- Wash with a sponge with a neutral detergent and after that wipe dry.
- When sterilizing, disinfect by boiling in hot water for 5 minutes.

## Warning

- Do not use a dishwasher or dish dryer.
- After cleaning the cup holder, dry it thoroughly. Otherwise, they may rust.
- Never use benzene, thinner, metal scrubbers, polishing powder, bleach, or chemical cleaning products to remove stains.

## Specifications

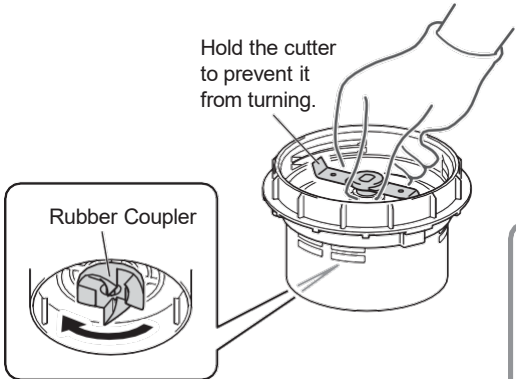
Product name	Portable laboratory mill	Max. capacity	Mill cup(L)..... 200ml Mill cup(S)..... 50ml Tea cup..... About 12 g
Part Number	OML-2PL		
Power	100V 50/60Hz	Cord length	1.7m
Electricity Consumption	235W		
RPM	10,000 to 20,000 times/min.	Container Material	Mill cup (L): soda-lime glass Mill cup (S): soda-lime glass Tea cup : AS Resins
Dimension	Height 285 x Width 180 x Depth 145 (mm)		
Weight	1.7kg (With Mill cup (L) )		
Rated time	5-min. operation, 30 min. pause		



# Instructions for replacing parts of the cup holder

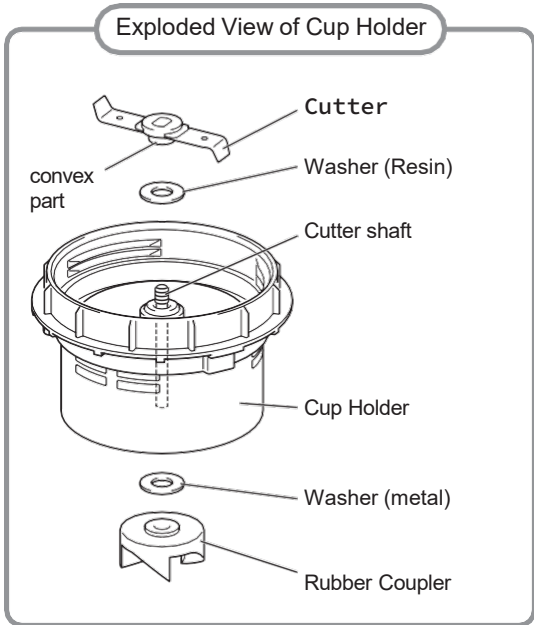
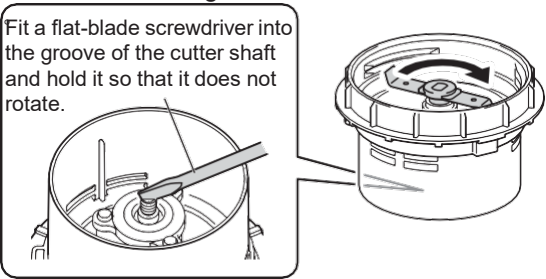
## Instructions for disassembly

- 1 Hold down the cutter and turn the rubber coupler on the back side of the cup holder in the direction of the arrow in the figure to remove it.
  - When touching the cutter, cover the cutter with a cloth or wear gloves and do not touch it directly.



- 2 Fix the cutter shaft on the back side of the cup holder with a flat-blade screwdriver, etc., and turn the cutter in the direction of the arrow in the figure to remove it

Fit a flat-blade screwdriver into the groove of the cutter shaft and hold it so that it does not rotate.



## Instructions for attaching



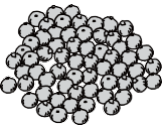
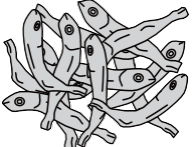


- 1 Fit a washer (made of resin) on the convex part of the cutter, fix the cutter shaft with a flat-blade screwdriver etc., and turn the cutter in the opposite direction from when removing it.
- 2 Fit the washer (metal) onto the cutter shaft from the back side of the cup holder, hold the cutter, and turn it in the opposite direction from when removing the rubber coupler.

- ※Never remove parts except for replacement.
- ※Before use, make sure the cutter is securely attached.
- ※Continued crushing of hard materials may make it difficult to remove the cutter.
- ※Be sure to clean or boil the cup holder while the cutter is still attached. If water gets inside, it may cause a malfunction.



## Example of pulverized sample


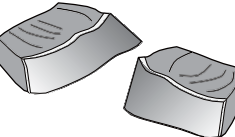

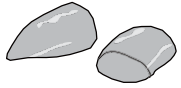

### Example of pulverized sample with MILL CUP (S)



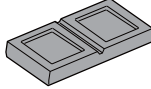
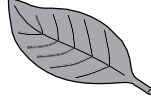

Sample	Milling amount	Milling period
Tablets 	5g	60sec
Adzuki beans 	10g	60sec
Black Pepper 	5g	60sec
Dried small fish 	5g	60sec
Rice 	5g	60sec
Wheat 	5g	60sec

## Example of pulverized sample

### Example of pulverization using dry ice in a disposable container

※ Salmon, chicken, pork, etc. require sufficient cooling prior to pulverization.

Sample	Milling amount	Milling period
Cabbages 	4g	30sec
2 pieces salmon 	7g	30sec
Sausage 	6g	30sec
2 pieces of chicken 	8g	30sec
Lettuce 	4g	30sec

Sample	Milling amount	Milling period
Pork 	5g	30sec
(hard) Candy 	1 piece	20sec
Chocolate 	3g	20sec
Leave 	1piece	20sec
Black Sesame 	2g	20sec