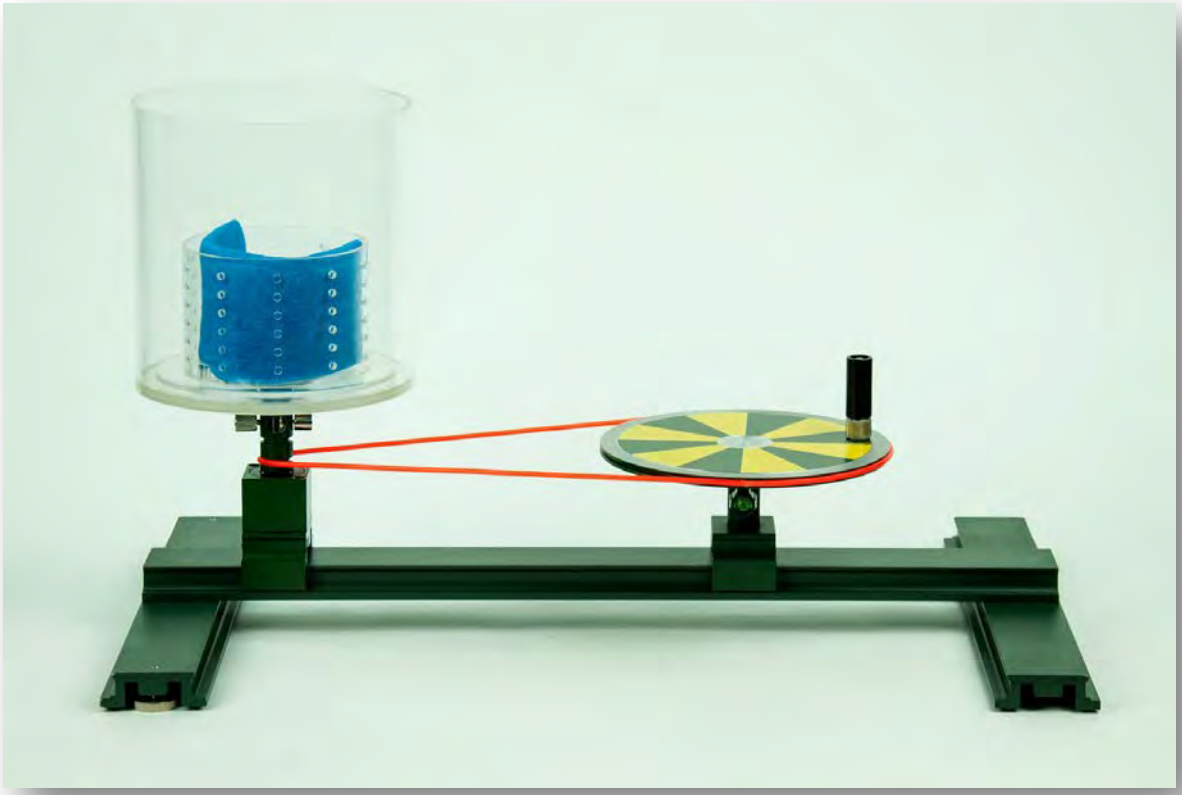
CENTRIFUGAL FORCE – CENTRIFUGE VESSEL

MED 09.04



Material

Item-no.	Qty.	Description
DS101-1G	1	Support base, large, L=500 mm
DS103-3G	1	Sliding saddle, H=34 mm
DS402-3B	1	Pivot bearing with transverse hole,
DS402-3S	1	Drive pulley demo, with ball bearing
DS402-2N	1	Crank pin, L=50 mm
DS401-1A	1	Drive belts, set of 2
DM366-2P	1	Centrifugal vessel, demo
DM367-2Z	1	Centrifuge insert
	1	Sponge cloth

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Purpose
To demonstrate how a centrifuge works.

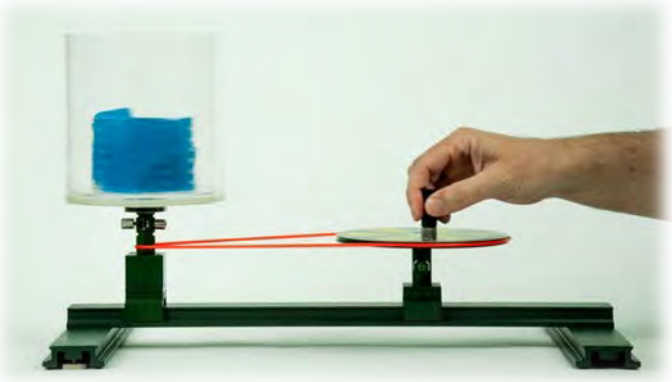
Preparation
Mount the pivot bearing and the sliding saddle on the support base as shown on the image; afterwards screw the crank pin on the drive pulley.

Now insert the drive pulley into the sliding saddle.

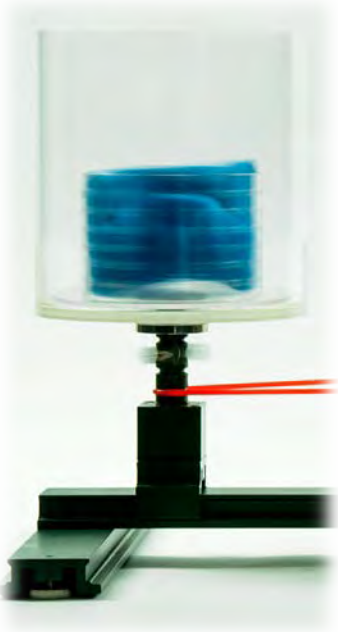
Mount the centrifugal vessel at the pivot bearing and place the centrifuge insert in the vessel.

As shown on the image below taut the long drive belt between the sliding saddle and the pivot bearing.

Experiment
Place a wet sponge cloth (or a wet paper tissue / sponge) in the centrifuge insert.
Set the rotating disk slowly into motion by turning the crank and slowly increase the rotational speed.



Conclusion
The centrifugal force pushes the water through the holes of the centrifuge insert into the outer part of the centrifugal vessel.



Note
The centrifugal force increases with the square of the speed.

Practical reference
Washing machine (spin dryer)
Honey extractor