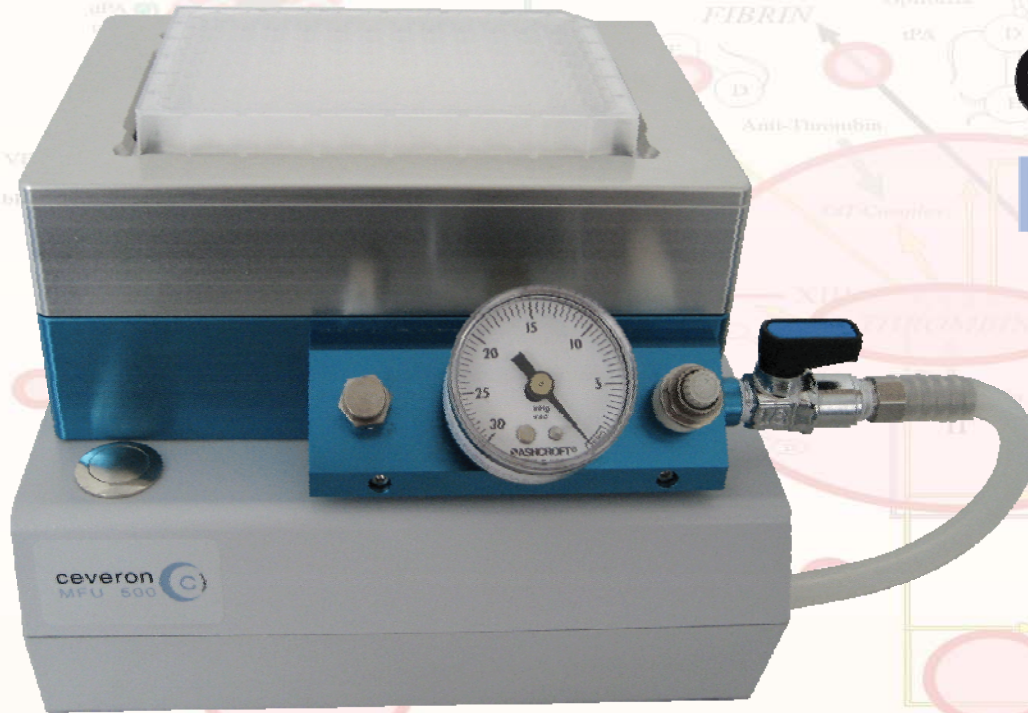


# MICROPARTICLE FILTRATION UNIT

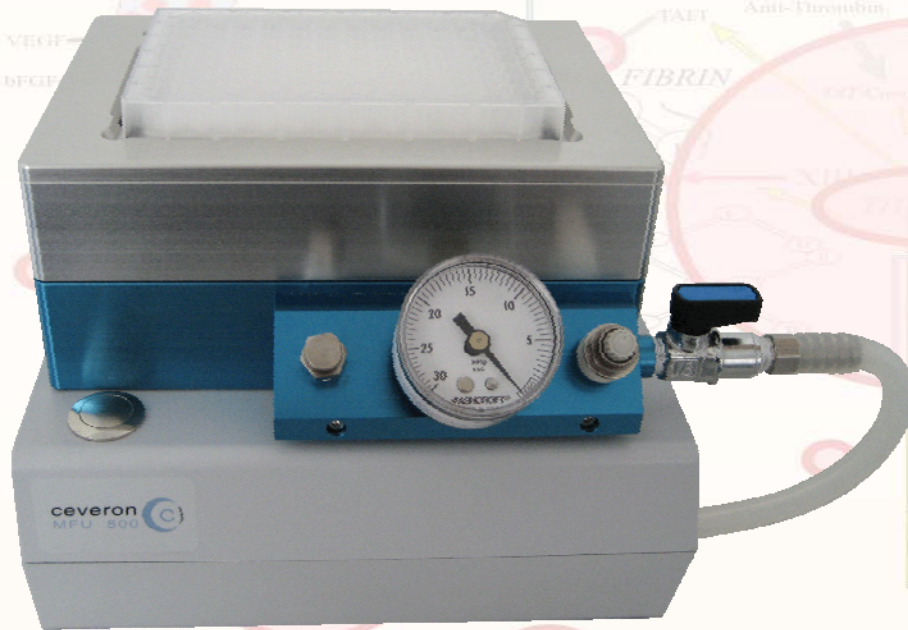
For Research Use Only



ceveron  
MFU 500

## **MICROPARTICLE FILTRATION UNIT**

The new Ceveron® MFU 500 enables easy, quick and standardized removal of **MICROPARTICLES** from platelet poor plasma.



Microparticle free plasma MFP can be obtained:

- as supernatant when PPP is centrifuged for 30 minutes at 15000 x g
- or by 2 minutes filtration with the Ceveron® MFU 500

# Dimensions

**The Ceveron MFU 500 is small and compact**

- Length: 26.00 cm
- Width: 20.00 cm
- Height: 16.05 cm
- Weight: 3.58 kg



# Design

## Ceveron MFU 500 consists of:

1. Filtration unit with vacuum pump and clock timer (not accessible)
2. „START“ button
3. „PRESSURE EQUALIZATION“ button
4. Manometer
5. Microtiter receiver plate for sample collection
6. Microtiter filtration plate with 2 $\mu$  low protein binding filter





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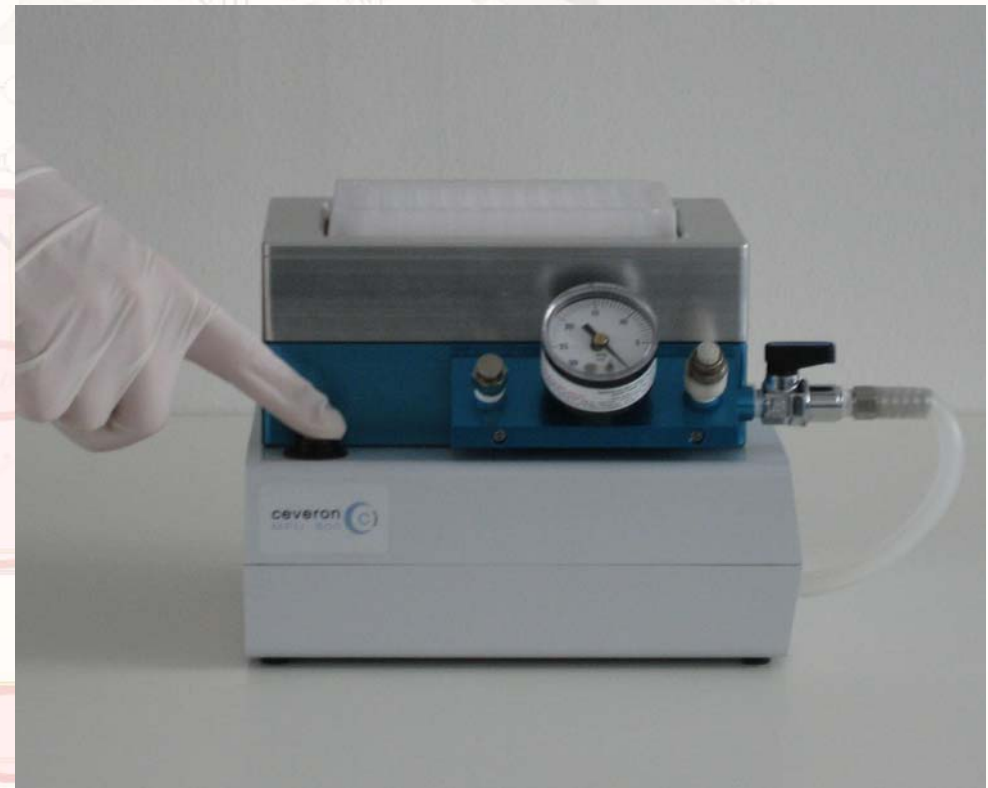
# Principle

1. Pipette sample into the filter plate



## Principle

2. Push „START“ button.  
Filtration starts automatically
3. Samples are filtered with a constant pressure in a definitive time





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# Principle

4. After filtration is finished, push “PRESSURE EQUALIZATION” button

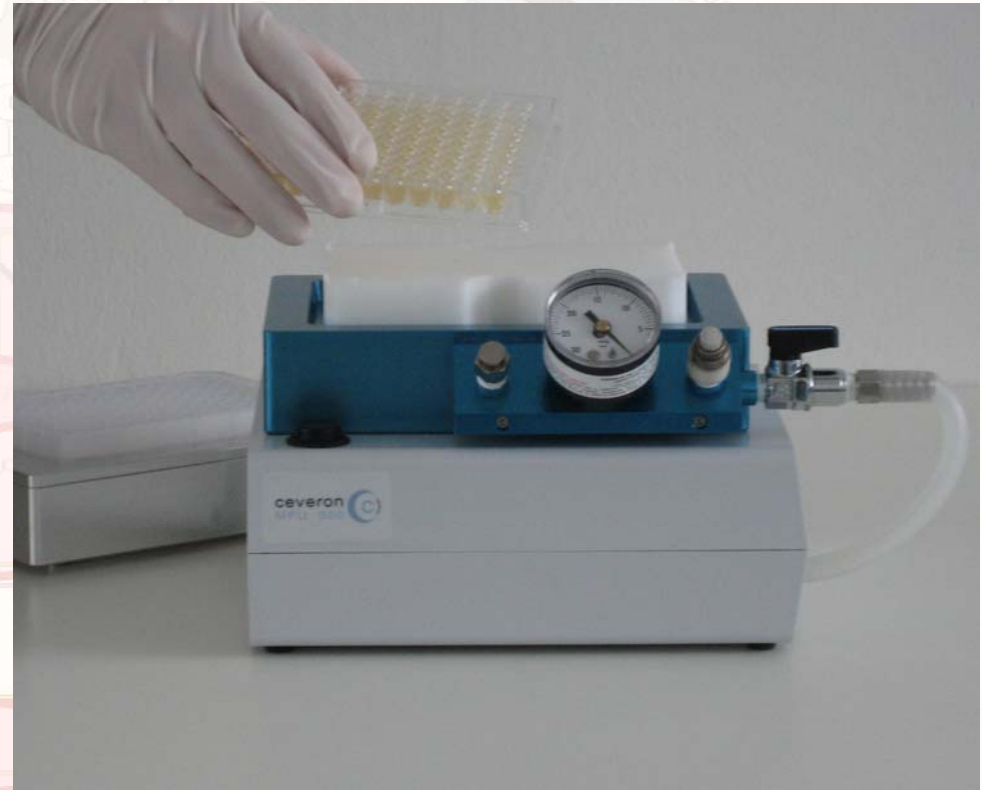




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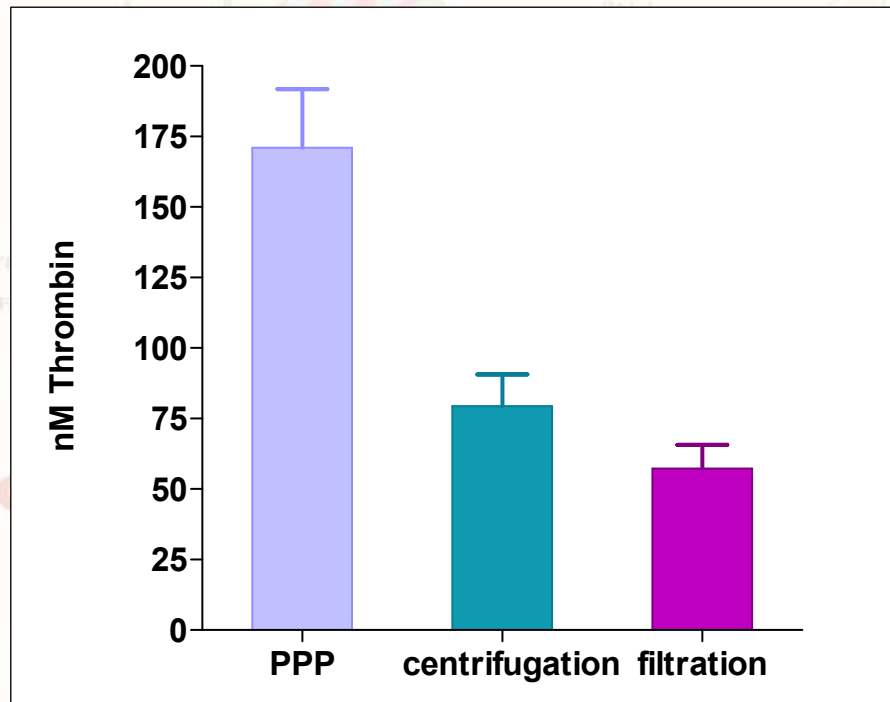
# Principle

5. Filtrated sample is collected in the receiver plate



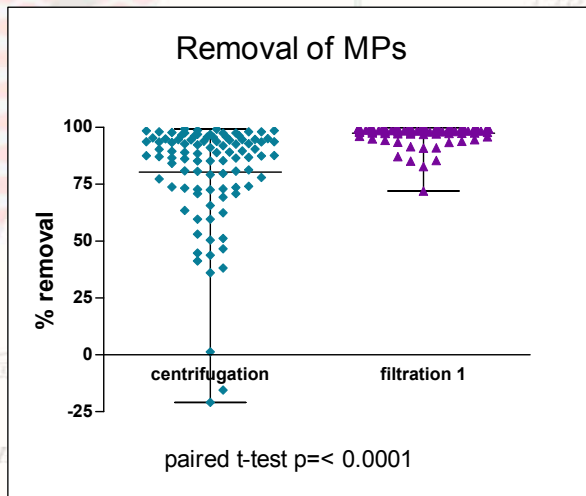


## Advantages of the filtration method



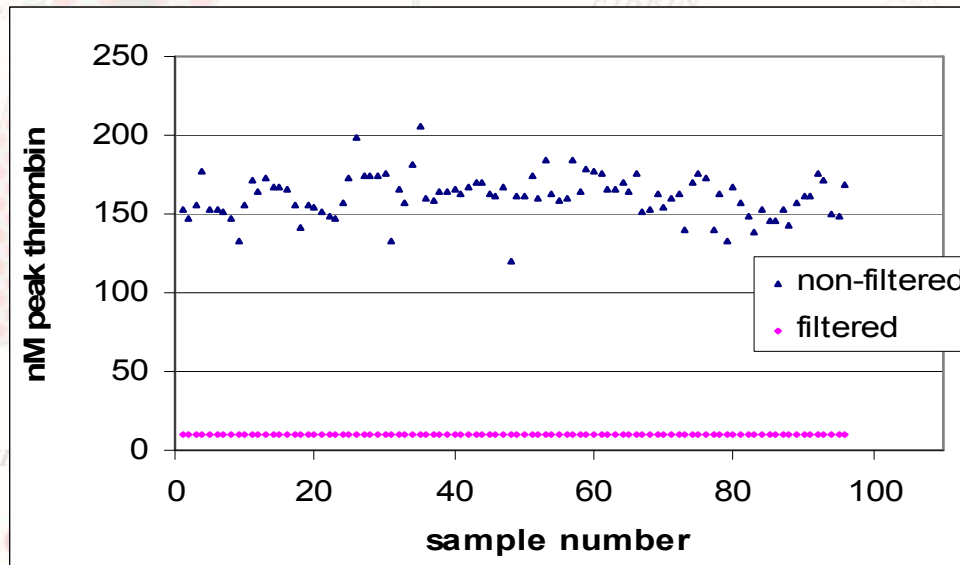
- There are no differences in thrombin generation between centrifuged and filtered MFP samples
- No ultracentrifuge is required
- To prepare 96 MFP samples you need 4 minutes using the MFU 500, compared to 30 min centrifugation time
- The Ceveron MFU 500 is small, quiet and economic

# Advantages of the filtration method



Filtration is significantly more efficient in removal of MPs from plasma than centrifugation.

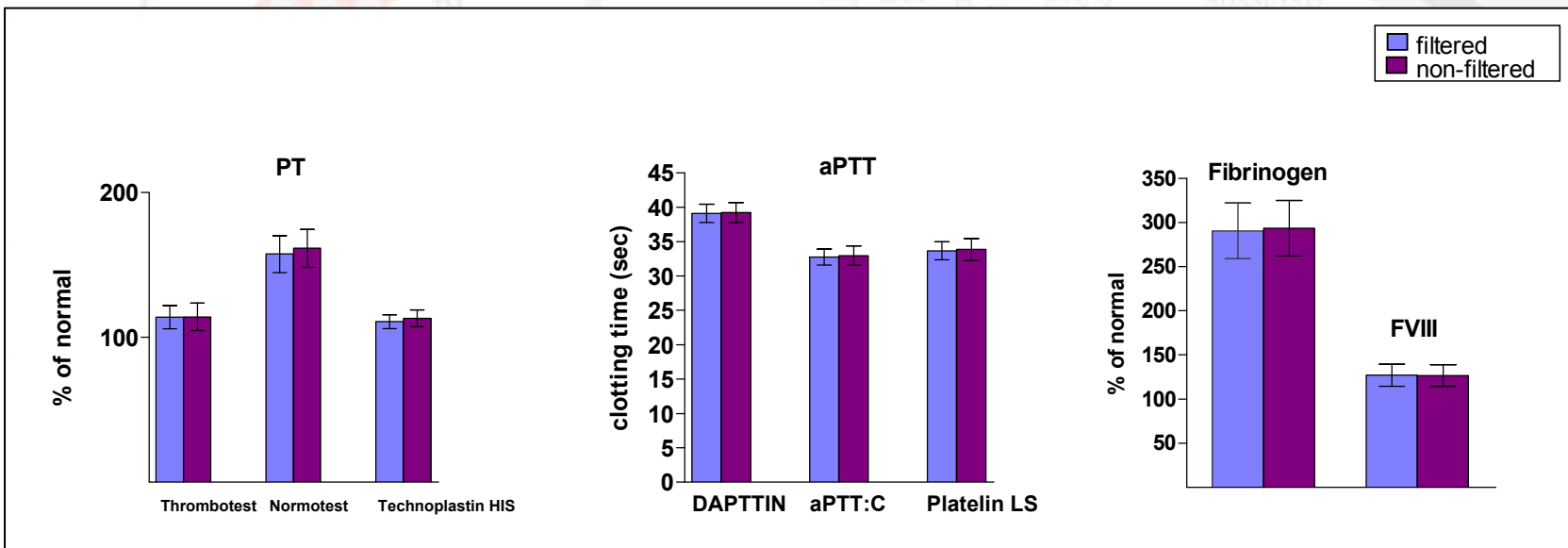
# Advantages of the filtration method



Thrombogenic MPs are efficiently removed by filtration.

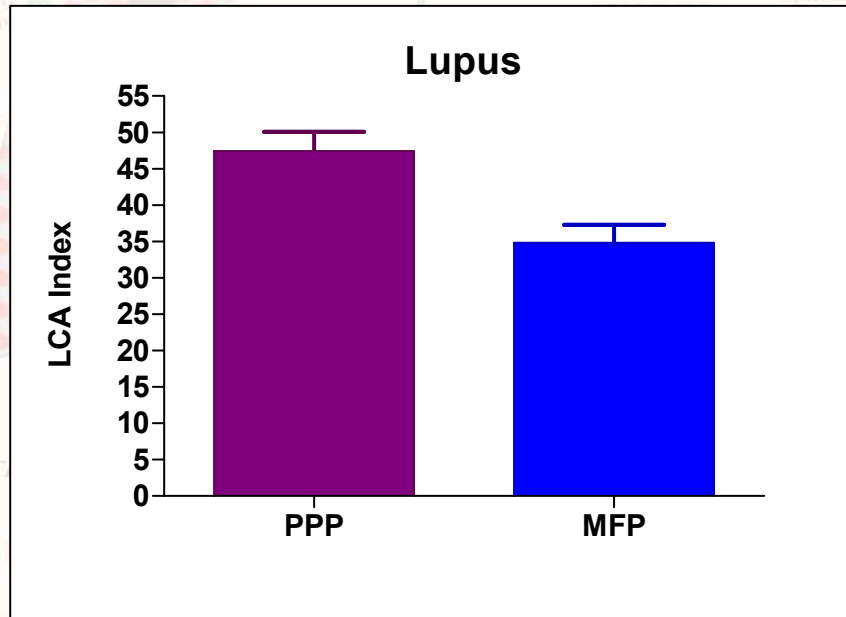
Thrombin Generation was performed without using any trigger.

# Advantages of the filtration method

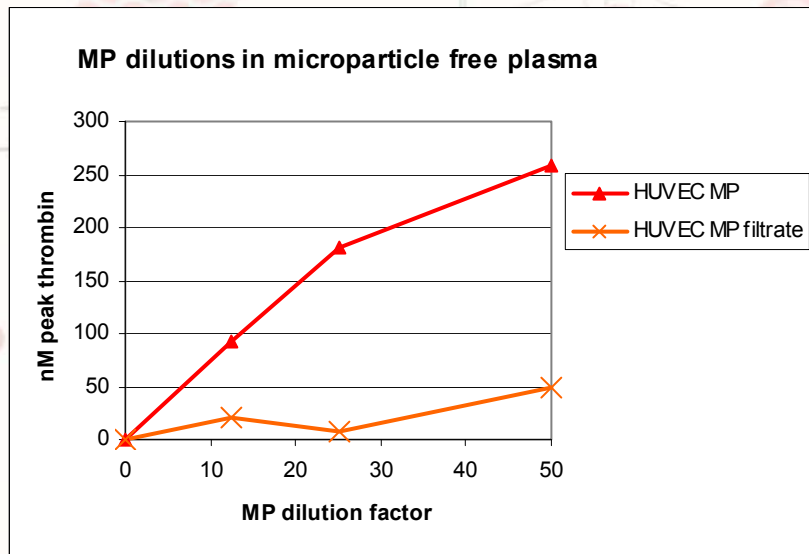


Filtration of plasma neither influences global clotting tests nor Fibrinogen or FVIII levels.

# Advantages of the filtration method



Filtration of plasma significantly reduces Lupus Anticoagulant LCA - Index value (P=0,0046)



The amount of peak thrombin generated increases with the amount of MPs added to MP free plasma.



Thrombin generation is related to the amount of MPs.

# CONCLUSION

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MFU 500



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- Microparticles can be efficiently removed from platelet poor plasma by filtration.
- The reduction of thrombin generation in filtered plasma is not due to loss or damage of clotting factors.
- The thrombogenic effect of microparticles can be quantified by comparing thrombin generation in filtered and non-filtered plasma.

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