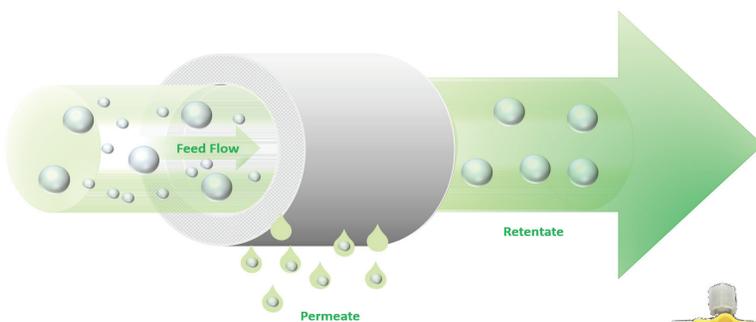


TFF-MV: Tangential flow filter for large EV separation

Separation, concentration and recovery of large microvesicles in one single step

TFF-MV is a filter able to separate large microvesicles (MVs) by size, avoiding the separation by centrifugation at 10000g, which often causes the loss of part of small EVs. TFF-MV retains vesicles larger than 150-200 nm, whereas small EVs and circulating molecules pass in the permeate. Retained MVs can be recovered with a syringe in PBS buffer, without additional purification steps.



TFF-MV is a filter cartridge made of hollow fibers with pores of 200 nm size. It can be used manually with syringes and allows the separation of large microvesicles from small EVs (< 150 nm). It works from a minimal amount of 5 ml of fluids up to liters of fluids.



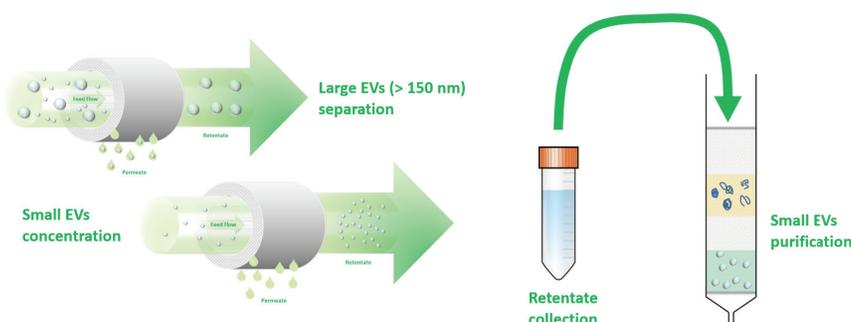
Characteristics

- Hollow fiber filter pores: 200 nm
- Suitable for large EV separation for 5 ml of fluid
- Sterile

Applications

- Separation, concentration and recovery of large microvesicles
- MVs isolation from cell media, biofluids, plant extracts.
- Dialysis and desalting of large MV preparations

TFF-MV, TFF-Easy and SEC for purification of large and small EVs



Advantages

- Easy washable
- Reusable multiple times
- Suitable for manual or mechanical use

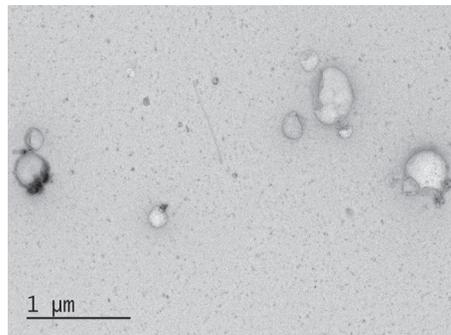


TFF-MV, a step towards the standardization

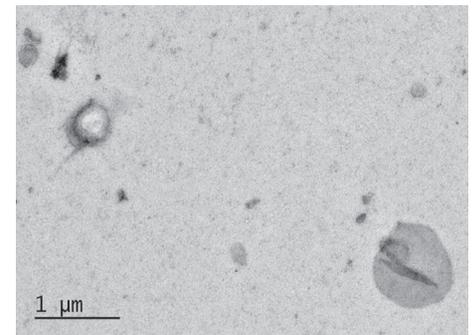
TFF-MV and its application in Extracellular Vesicle research

Microvesicles isolation cleaner, faster and more reproducible than by centrifugation

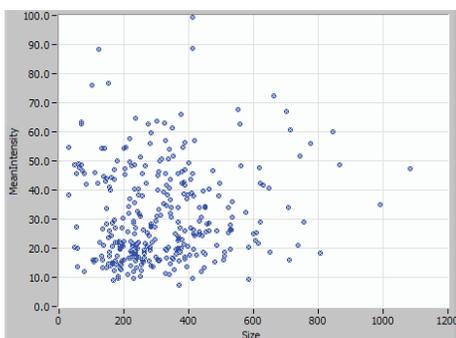
Currently, large MV are isolated or removed from small EVs by centrifugation (10000 g for 30 minutes), which also causes a massive loss of small vesicles. Moreover, different equipment (centrifuges, rotor angle, etc.) impacts on the final results. TFF-MV allows the removal of MV, their concentration and purification in one single step, skipping the centrifugation passage. The isolated MVs result clean and suitable for multiple analyses.



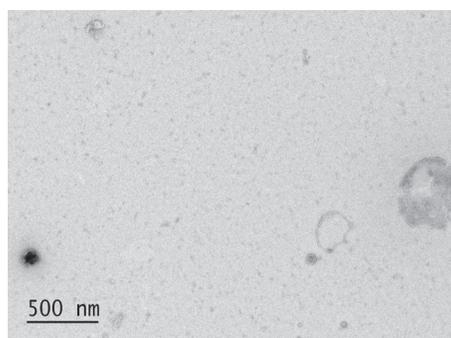
TEM of Microvesicles isolated by TFF-MV (1 µm).



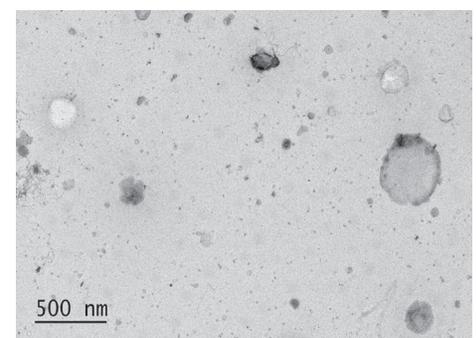
TEM of Microvesicles isolated by TFF-MV (1 µm).



Size distribution of MV isolated by TFF-MV.



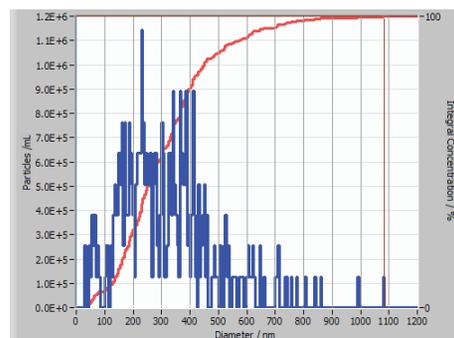
TEM of Microvesicles isolated by TFF-MV (0.5 µm).



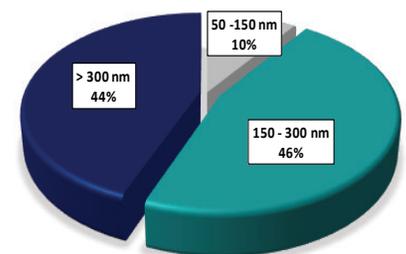
TEM of Microvesicles isolated by centrifugation 10000 g, 30 minutes (0.5 µm).

TFF-MV separate and isolate Microvesicle with minimal loss of small EVs

MVs have been recovered with TFF-MV from 100 ml of cell conditioned media (HCT116 cell) in 2 ml of PBS. The MV morphology was assayed by TEM and NTA (Zetaview, Particle Metrix).



Size distribution of MVs isolated by TFF-MV performed by NTA.



Size distribution of MVs isolated by TFF-MV performed by Electron Microscopy.