

Examples of UF Applications

| Application | Permeate | Concentrate (Retentate) | Benefits of UF |
|---------------------------------------|---|---|---|
| Potable Water | Potable water free of suspended solids, turbidity, bacteria and large viruses | Water, particulate solids | Certified for 4-log removal of bacteria, <i>giardia</i> , <i>cryptosporidium</i> and viruses from drinking water. Turbidity <0.1 NTU |
| Oily Wastewater | Oil free (<50 mg/L) water | Water, suspended solids, insoluble metal hydroxides, etc. | Consistent permeate water quality even when feed composition subject to upsets. Highly concentrated oil emulsion for waste disposal. |
| Electrocoat Paint | Water, dissolved salts and solvents | Water, paint resins and pigments | Allows recovery of valuable paint resins and pigments. |
| Milk | Lactose and salts solution | Protein concentrate | Protein concentration at lower energy cost than evaporation. |
| Whey | Lactose and salts solution | Whey Protein Concentrate (WPC) | Protein concentration at lower energy cost than evaporation. |
| Apple juice clarification | Low turbidity, clear juice | Juice, suspended solids, pulp, colloidal haze particles | Removes suspended solids and turbidity while allowing the passage of juice, sugar and taste. |
| Reuse of municipal wastewater | Water free of suspended solids, bacteria & viruses Turbidity <0.1 NTU SDI ₁₅ < 3 | Water, particulate solids | Polishes biologically treated municipal effluent for discharge, reuse, or feed to reverse osmosis. |
| Industrial MBR, e.g. malting industry | Water containing*: Suspended solids <0.1 mg/liter BOD 2-3 mg/liter COD 100-200 mg/liter N _{total} 1/2 mg/liter P _{total} <1 mg/liter *sample values | Malting wastewater, activated sludge | Meets stringent effluent discharge requirements, eliminates solids, reduces wastewater discharge fees, and requires less space than conventional wastewater treatment |