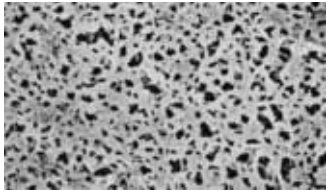
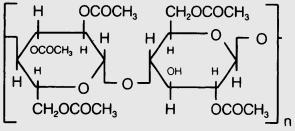
Low Adsorption Cellulose Acetate Membrane Filters, Type 111, for the Filtration of Aqueous Solutions





Cellulose acetate membranes combine high flow rates and thermal stability with very low adsorption characteristics, and are therefore excellently suited for use in pressure filtration devices. The membrane with 0.2 µm is the filter of choice for sterile filtration of aqueous solutions, such as nutrient media, buffers and sera.

The results of publications on adsorption are difficult to correlate, as mostly different test substances, conditions and detection methods were used, and the membranes were tested without previously being sterilized.

Typical perfomance for cellulose acetate membrane filters

Adsorption	Bovine serum albumin <10 µg/cm²
Bubble point acc. DIN 58355	Minimum value for 0.2 µm > 2.9 when measured with an automatic integrity tester, for 0.45 µm = 1.9 bar (190 kPa, 27.5 psi), for 0.65 µm = 1.3 bar (130 kPa, 18.9 psi), for 0.8 µm = 0.8 bar (80 kPa, 11.6 psi)
Chemical compatibility	Resistant to aqueous solutions, pH 4–8, against most alcohols, hydrocarbons and oils.
Extractables with water	Less than 1%
Flow rate for water acc. DIN 58355	Average value per cm² area at Δp = 1 bar (100 kPa, 14.5 psi): 24 ml/min for 0.2 µm, 69 ml/min for 0.45 µm, 130 ml/min for 0.65 µm, 200 ml/min for 0.8 µm pore size
Material	Cellulose acetate
Sterilization	By autoclaving at 121°C or 134°C with γ-radiation, dry heat or ethylene oxide.
Sterilizing filtration	Filters with 0.2 µm pore sizes are validated by Bacteria Challenge Tests.
Thermal stability	Max. 180°C
Thickness acc. DIN 53105	Average value 120 µm