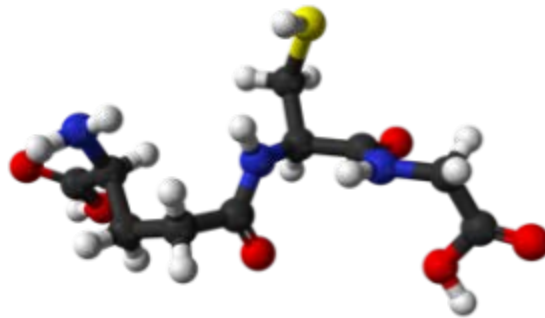


Glutathione (Pharmaceutical) NFX Nanofiltration Membrane

Background

Glutathione [GSH, C₁₀H₁₇N₃O₆S] is a tri-peptide which acts as an antioxidant to help protect cells from reactive oxygen molecules like free radicals and peroxides. Commonly used in health supplements, consistency in purity and concentration are of the utmost importance. With membrane technology established as a reliable method for pharmaceutical production, the NFX membrane was tested for performance in this application.



Molecular Structure of GSH

Feed Solution, Membrane, Operating Conditions

Feed Solution	
Material	GSH (Glutathione)
Molecular Weight (Da)	307.33
Membrane	
Element	NFX-2-8040HF
Spacer Size (mil)	31
Surface Area (sq. ft)	382
Results	
Permeate Flux (GFD)	13
Rejections (%)	99

Test Results & Conclusions

Despite GSH's low molecular weight of 307 Da, Synder's NFX Nanofiltration membrane was retained and concentrated with incredible efficiency. Displaying a rejection rate of 99%, the membrane boasted an average flux rate of 13 GFD. Such performance suggests that the NFX is an excellent choice for efficient and cost effective concentration of GSH and other small, water-soluble molecules.