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***In-situ* ultrasonic cleaning of crossflow sintered tube microfiltration: effect of sonication cycle time**

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A study was conducted to examine the effect of sonication cycle time on the in-situ ultrasonic cleaning of crossflow sintered tube microfiltration. The research involved attachment of vibra-bar transducer onto the membrane housing as a source of ultrasonic wave fields. Two sets of samples were used: yeast which represents the organic solids suspension, and titanium dioxide which represents the inorganic particles suspension. The research showed that the flux of the in-situ ultrasonic cleaning was increased by 58% for yeast suspension at sonication cycle time of 15 minutes, and an increment of 123% for titanium dioxide suspension at sonication cycle time of 10 minutes. The study concluded that application of in-situ ultrasound field in crossflow microfiltration processes managed to increase the filtration rate significantly, irrespective whether the particles are organic or inorganic in nature. The degree of flux improvement was dependent on the characteristics of the particulate suspension and the sonication cycle time. The main mechanism responsible in enhancing the filtration rate was the cavitation activities, caused by the ultrasonic irradiation, occurring near the filtering surface which reduces the overall resistance of permeate flow across the filter medium.