A membrane reactor for the elimination of oxygen in an anoxic medium for microbial growth has been studied. The reactor consists of a reservoir containing a solution of sulfite and cobalt salt where silicone tubing, through which the medium flows, is immersed. Silicone is highly permeable to gases, so oxygen diffuses through the silicone membrane and is absorbed in the sulfite solution. The maximum oxygen removal rate was 1.1 g m$^{-2}$ d$^{-1}$ at 15°C. The advantage of this de-oxygenator is its low cost and the ease with which it can be handled. A calculation method is discussed in relation to the design of the membrane de-oxygenator.
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