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Meisetsu Kajiwarab, Toyoaki Kimurab

^a School of Dentist, Aichi-Gakuin University, ^b Graduate School of Engineering, Nagoya University,

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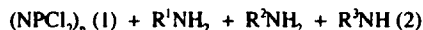
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Oxygen Gas Permeability of Poly(Aminophosphazene) Films in Water

MEISETSU KAJIWARA^a and TOYOAKI KIMURA^b

^a*School of Dentist, Aichi-Gakuin University and* ^b*Graduate
School of Engineering, Nagoya University*

Various gas permeability in dry and oxygen gas permeability in wet conditions with poly(organophosphazene) membranes have been previously reported[1-2]. To prepare the transparent poly(aminophosphazene) having the highest oxygen gas permeability value (D_k) in water, chlorine atoms in polydichlorophosphazene (1) were substituted with amine compounds (2).



The purified and casted polymers had the transparent film, they will be used as contact lens materials. Also, the polymer were cured with cross-linking agent such as neopentyl glycidyl diether (NPG) or trimethylol propane triglycidyl diethylether (TMP) to increase D_k value. D_k of the original polymer [Poly(Di-n-hexylamino)(n-butylamino)(n-butylamino)phosphazene] was higher than those of polymer cured with NPG. On the other hand, D_k of the polymer cured with NPG and TMP was higher than those of the original polymer [Poly(Di-n-hexylamino)(n-butylamino)(n-hexylamino)phosphazene] and [Poly(Di-n-hexylamino)(n-propylamino)(n-hexylamino)phosphazene].

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- [2] M. Kajiwara, *J. Mater. Sci.*, **29**, 4339 (1994).