# ANION EXCHANGE MEMBRANES BASED ON BLOCK COPOLYMERS FOR USE IN ALKALINE ELECTROLYSERS

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Anion exchange membranes based on polymer backbone of block copolymer PSEBS (polystyrene-block-poly(ethylene-ran-butylene)-block-polystyrene) were synthesized, chloromethylated by „indirect method“, cast on Teflon plate and subsequently reacted with amine 1,4-diazabicyclo[2.2.2]octane (DABCO). Obtained membranes show high hydroxide conductivity up to 7.5 S m-1 at 70 °C. Membranes show high stability in concentrated KOH. Same polymer was used as a precursor for binder of catalyst, where it showed higher current densities that PFTE. Prepared membranes were tested in alkaline membrane water electrolyser (AMWE) with current densities over 1 A cm-2 at 2V and 50°C in diluted (0.1M) KOH.

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## References

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