

## PHOTOCHEMICAL SYNTHESIS OF SUPER ABSORBENT POLYMERS USING DIAZO RESIN

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In this study, diazo resin synthesis as crosslinker was carried out as given in the literature [1]. Then, the super absorbent polymer synthesis was successfully achieved by photochemical method using irgacure-2959 as photoinitiator and diazo resin as crosslinker together with acrylamide, acrylic acid and carboxy methyl cellulose mixture. The effect of irradiation time, the amount of acrylamide, carboxymethyl cellulose and diazo resin on the swelling capacity of the hydrogel was investigated. The results indicate that the swelling capacity of the hydrogel increases in direct proportion to the increasing acrylamide, on the contrary, the increased irradiation time had a negative effect on the swelling capacity of the hydrogels. In addition, the effect of urea, pH and salt on the swelling capacity of hydrogels were investigated and the results were recorded.

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[1] Anna Plewa, Wiktor Niemiec, Joanna Filipowska, Anna M. Osyczka, Radosław Lach, Krzysztof Szczubiałka, Maria Nowakowska, Photocrosslinkable diazoresin/pectin films – Synthesis and application as cell culture supports, *European Polymer Journal*, Volume 47, Issue 8, 2011, Pages 1503-1513, ISSN 0014-3057,