

**ENCAPSULATION OF *NAJA* –*NAJA OXIANA* SNAKE VENOM INTO  
POLY (LACTIDE-CO-GLYCOLIDE) MICROSPHERES**

**Zolfagharian H., Mohammadpour dounighi N**

Department of Antivenin and Venomous animals, Razi Vaccine &  
Serum Research Institute, Karaj, Iran

**ABSTRACT**

One small-scale double emulsion technique for incorporation of *Naja*- *Naja oxiana* venom into Poly (lactide-co-glycolide) (PLGA) microspheres were developed and optimized. The effects of high speed homogenization on the double emulsion stability, microsphere size, entrapment efficiency and In vitro release of venom were studied. A stable double emulsion was verified by homogenization method. Slow removal of the organic phase allowed measurement of the size of the emulsion droplets and subsequent predication of the size which resulting microspheres. Microspheres in the size range of 1-10 $\mu$ m were prepared using homogenization technique, but this technique was sensitive to changes in the operating time, speed and volume of outer aqueous phase. Snake venom was released in vitro in a triphasic manner. After immunization of guinea-pig with a single IM injection, the PLGA-venom microspheres elicited an antibody response very high as that elicited with conventional method. These results indicate that the antigenicity of venom was retained after incorporation into PLGA microspheres using homogenization technique.

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