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**MICROSTRUCTURAL CHARACTERIZATION OF A NOVEL METHYL ACRYLATE-ETHYL ACRYLATE COPOLYMER SYSTEM.** M. Olivares (1,2), J. P. Molina(3), F. Vázquez(3), V. M. Castaño(1), Instituto de Física, UNAM, AP 1-1010, Queretaro México, (2) Fac. de Ciencias Químicas e Ingeniería, UAEM, Av. Universidad 1001. Cuernavaca, Mex, 62215. (3) Fac. de Química UAEMex, Paseo Tollacan esq. Paseo Colón, Toluca, Estado de Mexico. *INIS-MX-098*

A number of different compositions of a novel Methyl Acrylate-Ethyl Acrylate copolymer were prepared by emulsion polymerization with potassium persulfate as initiator. The compositions synthesized were: 100/0, 75/25, 50/50, 25/75 and 0/100 on weight of Methyl Acrylate/Ethyl Acrylate at different temperatures and concentrations of initiators. The effect of other conditions were also studied. The samples were analyzed by Transmission Electron Microscopy. It was found that the size of aggregates and dispersion on sizes are controlled by the synthesis conditions, result partially supported by light scattering. Acknowledgments: the authors wish to thanks to R. Hernández, P. Mexia and M. Rentería for the technical assistance.

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