Sensitisation of natural rubber latex by addition of a small quantity of an anionic surfactant prior to the addition of a coacervant results in quick coagulation. The natural rubber prepared by the novel coagulation method shows improved raw rubber characteristics, better cure characteristics in gum and carbon black filled compounds and improved mechanical properties as compared to the conventionally coagulated natural rubber. Compounds based on dried masterbatches prepared by the incorporation of fluffy carbon black in different forms of soap sensitised natural rubber latices such as fresh latex, preserved field latex, centrifuged latex and a blend of preserved field latex and skim latex show improved cure characteristics and vulcanizate properties as compared to an equivalent conventional dry rubber-fluffy carbon black based compound.

The latex masterbatch based vulcanizates show higher level of crosslinking and better dispersion of filler. Vulcanizates based on fresh natural rubber latex- dual filler masterbatches containing a blend of carbon black and silica prepared by the modified coagulation process shows very good mechanical and dynamic properties that could be correlated to a low rolling resistance. The carbon black/silica/nanoclay tri-filler - fresh natural rubber latex masterbatch based vulcanizates show improved mechanical properties as the proportion of nanoclay increased up to 5 phr.

The fresh natural rubber latex based carbon black-silica masterbatch/polybutadiene blend vulcanizates show superior mechanical and dynamic properties as compared to the equivalent compound vulcanizates prepared from the dry natural rubber-filler (conventional dry mix)/polybutadiene blends.

**Key words:** carbon black masterbatch, coacervant, fresh natural rubber latex, surfactant, nanoclay, silica, polybutadiene rubber, quick coagulation