

Removal of proteins from natural rubber with urea and its application to continuous processes

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Abstract:

The removal of proteins from natural rubber through a batch process was studied by the incubation of the rubber latex with urea in the presence of sodium dodecyl sulfate. Under suitable conditions, the total nitrogen content of deproteinized natural rubber (DPNR) decreased from 0.38 to 0.02 wt % after incubation for 10 min; this was similar to that of the rubber deproteinized with a proteolytic enzyme for 12 h. For applications, continuous incubation and centrifugation were individually investigated by the use of a semicircular channel and a continuous centrifuge, respectively, to scale up DPNR preparation. (c) 2007 Wiley Periodicals, Inc.

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