



Using whey protein for producing MDF

Uğur Çelik¹, Saim Ateş^{2,*}, Çağrı Olgun², Ekrem Durmaz²

¹ Kastamonu Entegre A.Ş. Gelindagi Mevkii Organize San .Bol. 37200 Kastamonu, Turkey

² Department of Forest Industrial Engineering, Faculty of Forestry, Kastamonu University, Kastamonu, Turkey.

* Corresponding author: saimates@kastamonu.edu.tr

Abstract: Today, wood based composites (WBC) industries generally use the synthetic resins such as urea-formaldehyde (UF), phenol formaldehyde (PF), melamine formaldehyde (MF), etc., which are petroleum-derived and environmentally harmful adhesives. However, in the near future; it was estimated that, petroleum-derived productions price will be more expensive from the price of raw material supply. For this reason, last decade natural-based adhesives has been become more interested research subject. In this study, it has been determined that the potential utilization of proteins, waste product of cheese factories and called as whey protein, as an UF adhesive additive in the production of MDF are getting important year by year. Consequently, WP can be evaluated in MDF production as a natural resource with petroleum-derived additives.

Keywords: Whey protein (WP), Urea formaldehyde (UF), MDF