The clotting properties of skimmed sheep milk concentrated by ultrafiltration (UF) were evaluated as a function of the volumetric reduction factors (VRF) up to a value of 3.5. The UF process was realized in a pilot unit equipped with a membrane ETNA 10PP (Alfa Laval®), operating at a temperature of 23±1°C and pressure of 1 bar. Samples of concentrate were collected at VRF equal to 1.5, 2.0, 2.5, 3.0 and 3.5; and the permeate flux (J) (L/h.m²) was measured at each 10 minutes. The sheep milk and concentrates were analysed for pH, content of total solids and proteins, while their clotting aptitude was assessed with the Optigraph®. After setting the milk and concentrate temperature to stabilize at 32°C, was added 0.08% aqueous solution rennet powder containing 96±2% of chymosin at each sample. All tests were run for 60 minutes and the studied parameters were R (clotting time, min), firmness measures (Volt) after 40 minutes (A₄₀) of trial, after a 2R (AR) or 3R (A₂R) period and OK20 (rate of firming, min). During 120 minutes of UF the J values decreased from 41.67 to 22.22 L/h.m², while the pH (6.6) did not differ between the samples. The results emphasize a significant increase clotting aptitude of sheep milk concentrated by UF, which certainly are related with increase of total solids (10.53 to 20.60 g/100g) and protein contents (5.15 to 14.71 g/100g). However, the values of Ok20 decreased, indicating a quickly firmness suitable for cutting, brought about a clear improvement of the clotting properties.