Introduction
Milk has been the subject of research for many years and may be classified and defined by its nutritional and neonatal functions or its complex structure and chemical composition. The benefits of the consumption of cow's and human milk are mainly derived from associated quantity and bioavailability of calcium, amino acids and essential fatty acids. In less quantity, but not less importance there are bioactive peptides and some minor proteins present in milk, like growth factor TGF beta.

Objectives
This work aimed to study the effect of heat treatments and microfiltration process on the distribution of TGF beta2 in milk and whey.

Materials and methods
Skimmed milk was firstly microfiltered in 1.4 μm-pore membrane, then part of permeate (MF) was microfiltered in 0.1 μm-pore membrane to separate micellar casein (CN) from whey (WI). Additionally, whole pasteurized milk was used to produce whey (WC) from Minas Frescal cheese. We also tested, raw milk (RM) and whole pasteurized (72°C/15s) milk (MP). The content of TGF beta was evaluated in samples withdraw in each step of milk and whey processing by using Human TGF beta2 quantikine elisa kit. Tree repetitions of the experiment were done.

Results and discussion
Pasteurization and microfiltration had a great effect on the TGF beta2 with 100 % (MP) and 99,1 % (MF), respectively of component transmission. On the other hand, concentration of TGF beta2 was bigger in whey from cheese than WI it was observed loss of 88,6 % (WI) and 91,4 % (WC), respectively.

Conclusions
Heat treatment and microfiltration in milk has the same effect in TGF beta component transmission, since both treatments led to the very small losses. However, in whey processing, heat treatment showed a positive effect in TGF beta concentration, which may be explained by denaturation of proteins and exposure of sulphydryl groups that allow TGF beta linkage.

Acknowledgements: Fapemig, CNPq, Capes

Key Words: TGF beta; milk proteins; membrane technology