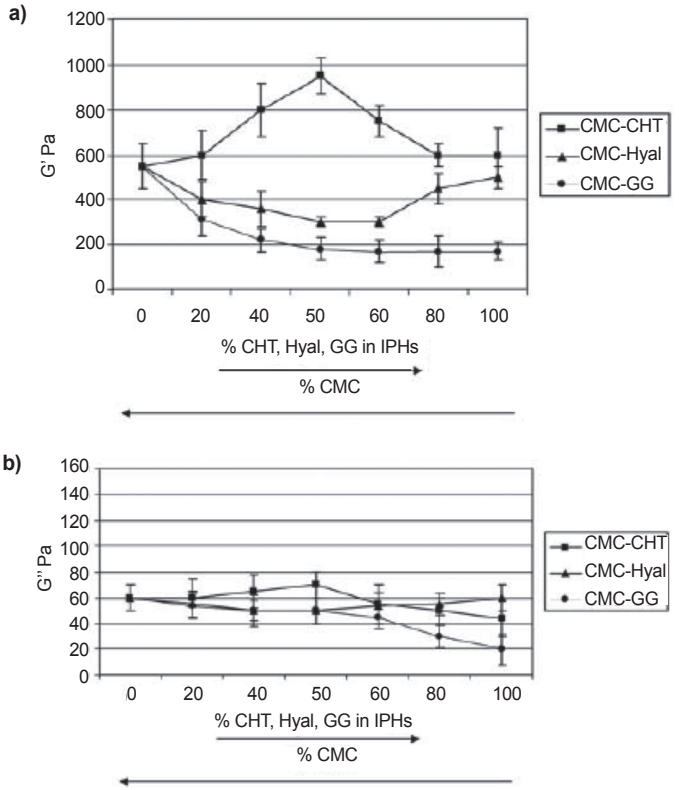

Fig. 9. (a) G' and (b) G'' plotted in relation to the relative percentage of each native hydrogel in the IPHs (Barbucci et al. 2011).

the composition of the hydrogel increased (Fig. 9). The IR spectra of the IPHs show some differences present in the CMC-CHT spectrum with respect to the spectra of each native component. This evidence suggests an interaction between the negatively charged carboxylate groups of CMC and the positively charged amine groups of CHT. On the contrary the spectra of both CMC-Hyal and CMC-GG IPHs containing two negatively charged native hydrogels and a negatively charged polysaccharide CMC with a neutral hydrogel GG respectively, can be considered the sum of the individual spectra of the native hydrogels, indicating the absence of any chemical interaction between the two native components (Barbucci et al. 2011).

If we look now at the behavior of cells on the IPHs, comprised with the native hydrogels, the growth trend of the NIH 3T3, endothelial and fibroblast cells cultured on native and IPH hydrogels was monitored. Figure 10 shows the number of fibroblast cells increased with time with all the IPHs and was constantly higher than that of all the native hydrogels at each time. Cells cultured on the CMC-GG IPH showed the lowest cell proliferation while the CMC-CHT and CMC-Hyal IPHs were the best scaffolds. Of the different compositions of IPHs those containing 50% of each hydrogel component were tested.