

Treatments of collagen and collagen-derived materials by formic acid and tetrafluoroacetic acid

The use of collagen as a biomedical implant raises safety issues towards viruses and prions. Specific chemical agents which inactivate prion infectivity (scrapies) can be applied to collagen implants. Chemical scrapie inactivators such as formic acid (FA) and tetrafluoroacetic acid (TFA) have been found by the inventors to have interesting properties on collagen. This chemically treated collagen offers (i) a sterile material without transmission of prions and viruses (known and unknown), (ii) an adsorption capacity, and (iii) a material that can become translucent or clear in specific conditions. Adsorption capacity can be used to adsorb pharmaceutical drugs such as antibiotics and peptides such as cytokines. Translucent or clear materials can be used in ophthalmology. Furthermore, collagen materials derived from human or animals can be safely used for biomedical purposes.
