The Impact of Beamhouse Processes on Bacterial growth

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Abstract: Various bacterial species including potential pathogens have been isolated from hides and skins. During conventional leather processing, due to the extreme environmental conditions, the probability of bacteria surviving on hides is reduced. Alternatively, total or partial replacement of the hazardous chemicals with non-hazardous chemicals during best available technologies (BAT) processes may provide suitable conditions for bacterial growth. The aim of the present work was to determine the effect of conventional and BAT beamhouse operations on certain bacterial species. Decontaminated calf skin samples were inoculated with a known bacterial species found in hides or skins. A conventional and BAT beamhouse processes was carried out with inoculated skin samples, and bacterial growth was determined at various stages of beamhouse through microbial analysis. Analysis of the bacteria during the beamhouse operations showed that some of the stages of the beamhouse process inhibited the bacterial growth whilst other stages promoted the growth of bacteria.
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