

Potential of heat-induced hemolysis of erythrocytes by external pH and band 3 protein modifiers

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Pig erythrocytes subjected to heating in low pH medium or in the presence of band 3 protein modifiers exhibited greatly increased rate and degree of hemolysis. Using very sensitive test for hemolysis, involving the band 3 protein in this process, we indicated that this band constitutes an important target for heat-induced changes of erythrocytes. It has been suggested that 4,4'-di-isothiocyano-2,2' stilbene disulphonate (DIDS), p-chloromercuribenzoic acid (pCMB) and rutin, binding to the band 3 protein, may affect the structure and function of membrane proteins and modify the response of cells to heat.