The contamination of enterotoxigenic Clostridium perfringens spores on food contact surfaces posses a serious concern to food industry due to their high resistance to various preservation methods typically applied to control foodborne pathogens. In spore suspension, the implementation of AK-induced germination step prior to treatment with disinfectants significantly (p0.05) enhanced the inactivation of spores of FP strain SM101. In this study, we aimed to develop an strategy to inactivate C. perfringens spores on stainless steel (SS) surfaces by inducing spore germination and killing of germinated spores with commonly used disinfectants. The mixture of L-Asparagine and KCI (AK) induced maximum spore germination for all tested C. perfringens food poisoning (FP) and non-foodborne (NFB) isolates.