

Effect of Edta on The Germination of and Outgrowth From Spores of Clostridium botulinum 62-A

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Received 10/19/70; Revised 2/26/71; Accepted 4/7/71

Abstract

SUMMARY—EDTA, in concentrations above 2.5 mM, was found inhibitory to germination of and outgrowth from spores of *C. botulinum* Type A and to toxin production in a fish homogenate. Inhibitory action was influenced by pH of the medium in the range pH 6.5–8.1, the action increasing with pH. It was influenced by Mg and Ca concentrations in the medium, equimolar concentrations of added CaCl₂ or MgCl₂, completely erasing the growth inhibitory action. Initial spore concentration also influenced inhibitory efficacy—the higher the spore concentration, the higher the EDTA concentration required for inhibition. There was no evidence that EDTA, in any concentration used, promoted spore germination. Release of Ca, Mg and DPA from incubating spores was suppressed to varying extents by 5.0 and 10 mM EDTA.