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E-101 Solution

National Cancer Institute

Source

National Cancer Institute. *E-101 Solution*. NCI Thesaurus. Code C114986.

An oxidant-generating coupled-enzyme system-based, topical solution comprised of two enzymes, *Aspergillus niger*-derived glucose oxidase (GO) and porcine myeloperoxidase (p-MPO), as well as glucose, sodium chloride and stabilizing amino acids, with potential broad-spectrum microbicidal activity. Following direct administration of E-101 solution into the surgical incisional wound via microspray, the enzyme GO converts oxygen into hydrogen peroxide (H₂O₂). In turn, p-MPO catalyzes the reaction of H₂O₂ with hypochlorous acid (HOCl), which is formed through oxidation of the chloride ion, to generate singlet oxygen (O₂*). As p-MPO binds to microorganisms, O₂* is able to exert direct oxidative damage to microorganisms, resulting in potent antimicrobial activity. E-101 may act as an anti-bactericidal agent against a variety of microorganisms, including multidrug-resistant strains. This may prevent infection at the surgical site.