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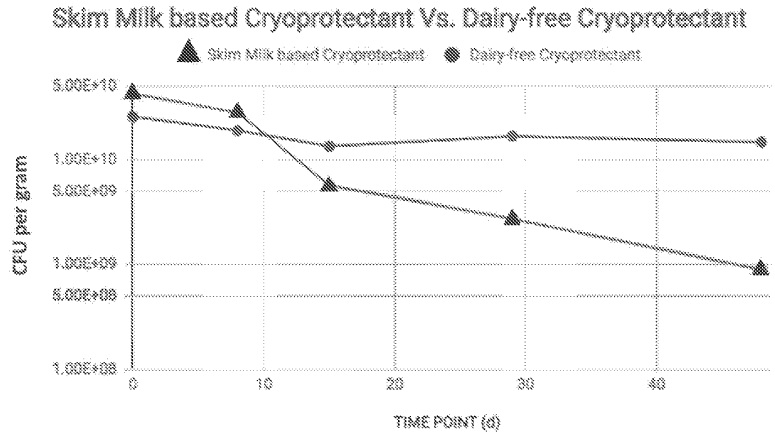


FIG.1

(57) Abstract: Provided herein are methods and compositions comprising microbial populations with increased tolerability and improved shelf life. Disclosed, herein, in some aspects, is a composition comprising at least one powdered microbial population, lactate, and trehalose. In some embodiments, the lactate is a lactate salt. In some embodiments, the lactate is sodium lactate. In some embodiments, the lactate and trehalose are present in sufficient amount to act as a cryoproteclant.

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