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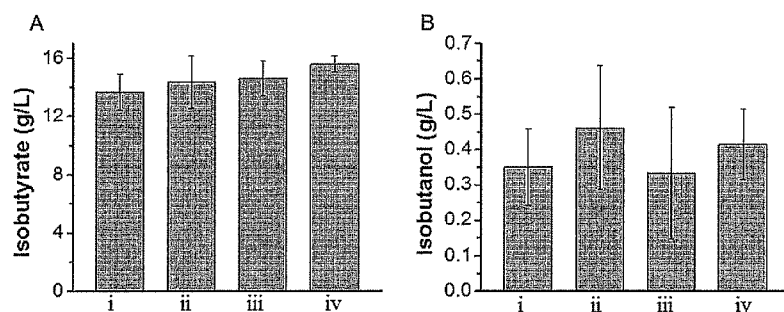
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(54) Title: CELLS AND METHODS FOR PRODUCING ISOBUTYRIC ACID

FIG. 8



(57) Abstract: Disclosed herein are cells and methods for renewably producing isobutyrate. In some cases, the cells can include a heterologous DNA that encodes at least one enzyme that catalyzes the conversion of isobutyraldehyde to isobutyrate. In other cases, the cells can include a genetically modified enzyme that catalyzes the conversion of isobutyraldehyde to isobutyrate to a degree greater than the wild-type version of the enzyme. In other cases, the cells can include one or more enzyme that catalyze the conversion of 2-ketovaline to isobutyrate. Generally, methods include growing the cells in a medium that includes a carbon source that the cells are able to convert to isobutyrate.