

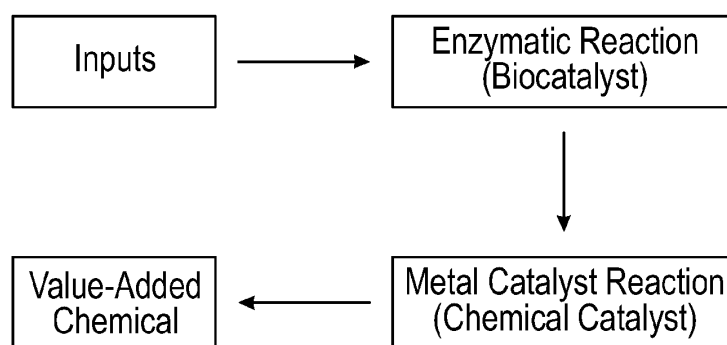


FIG. 1A

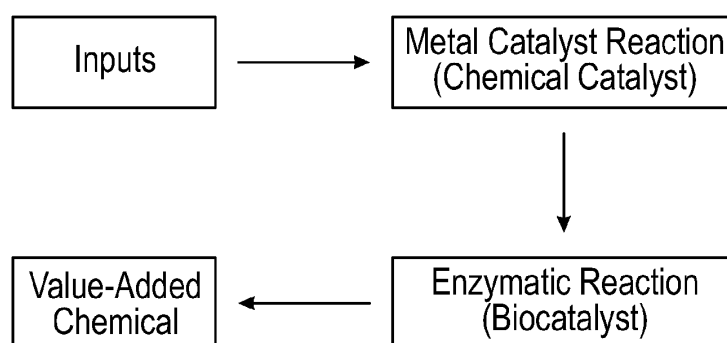


FIG. 1B

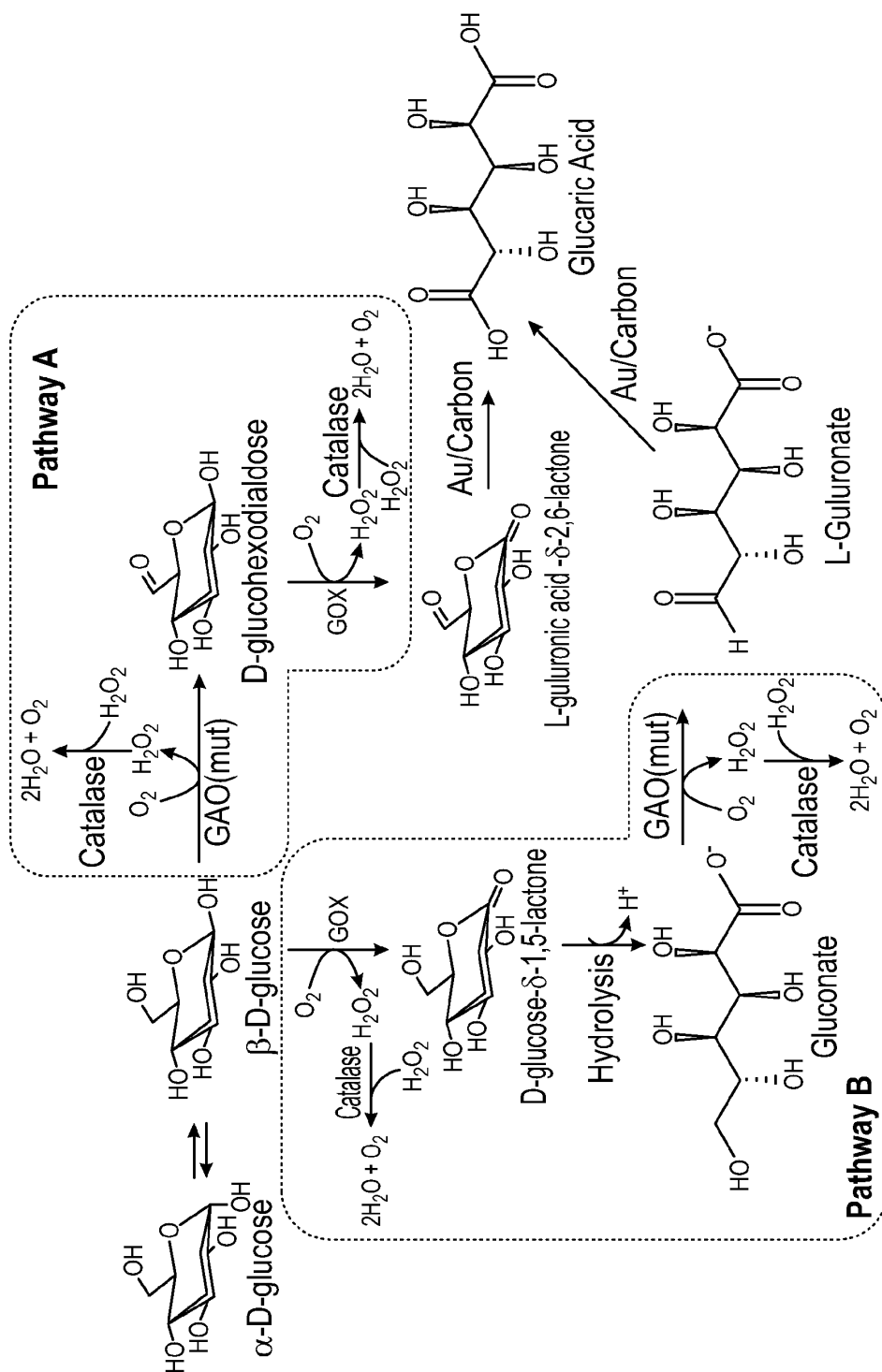


FIG. 2

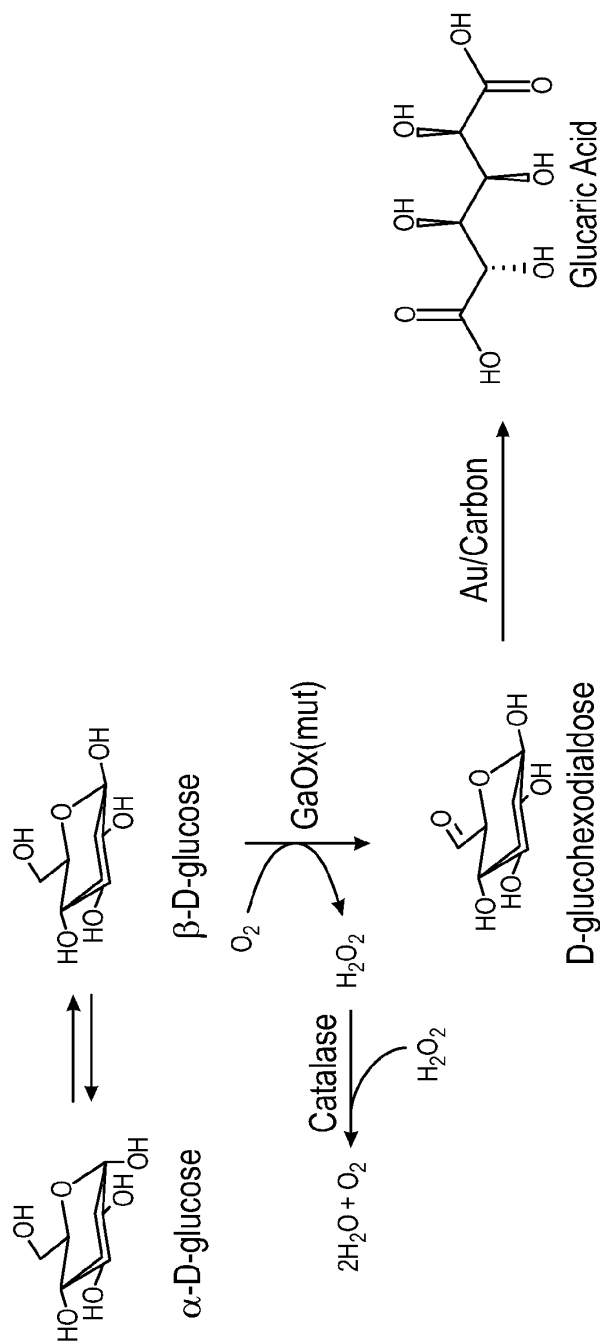


FIG. 3

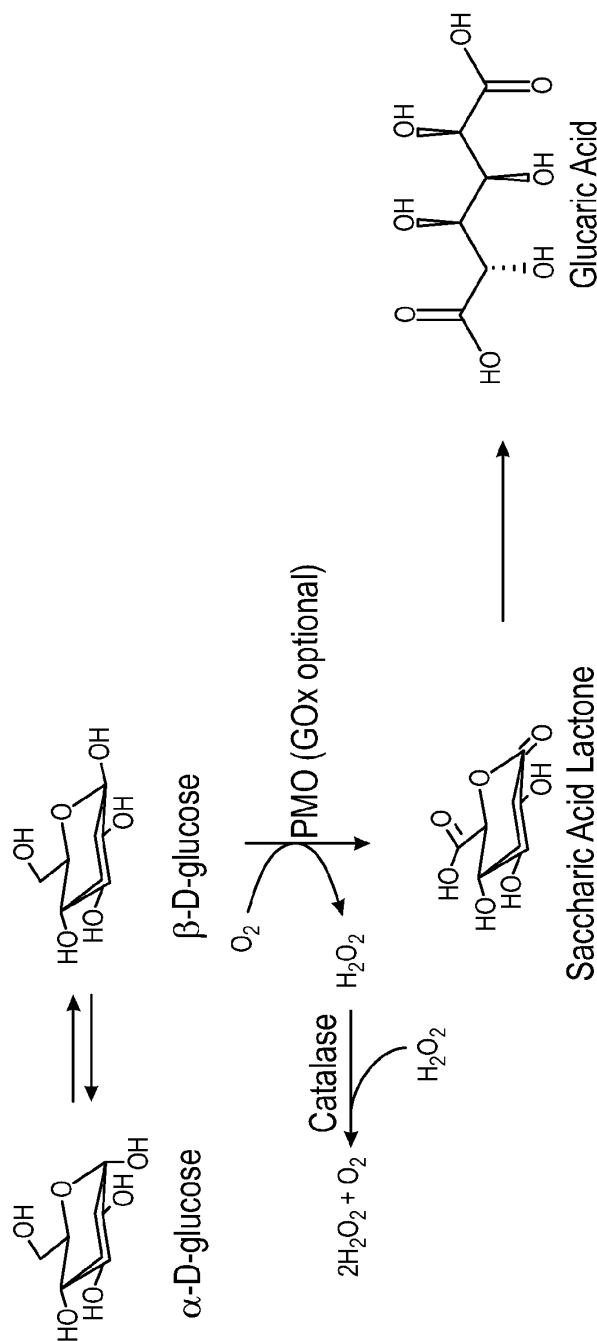


FIG. 4

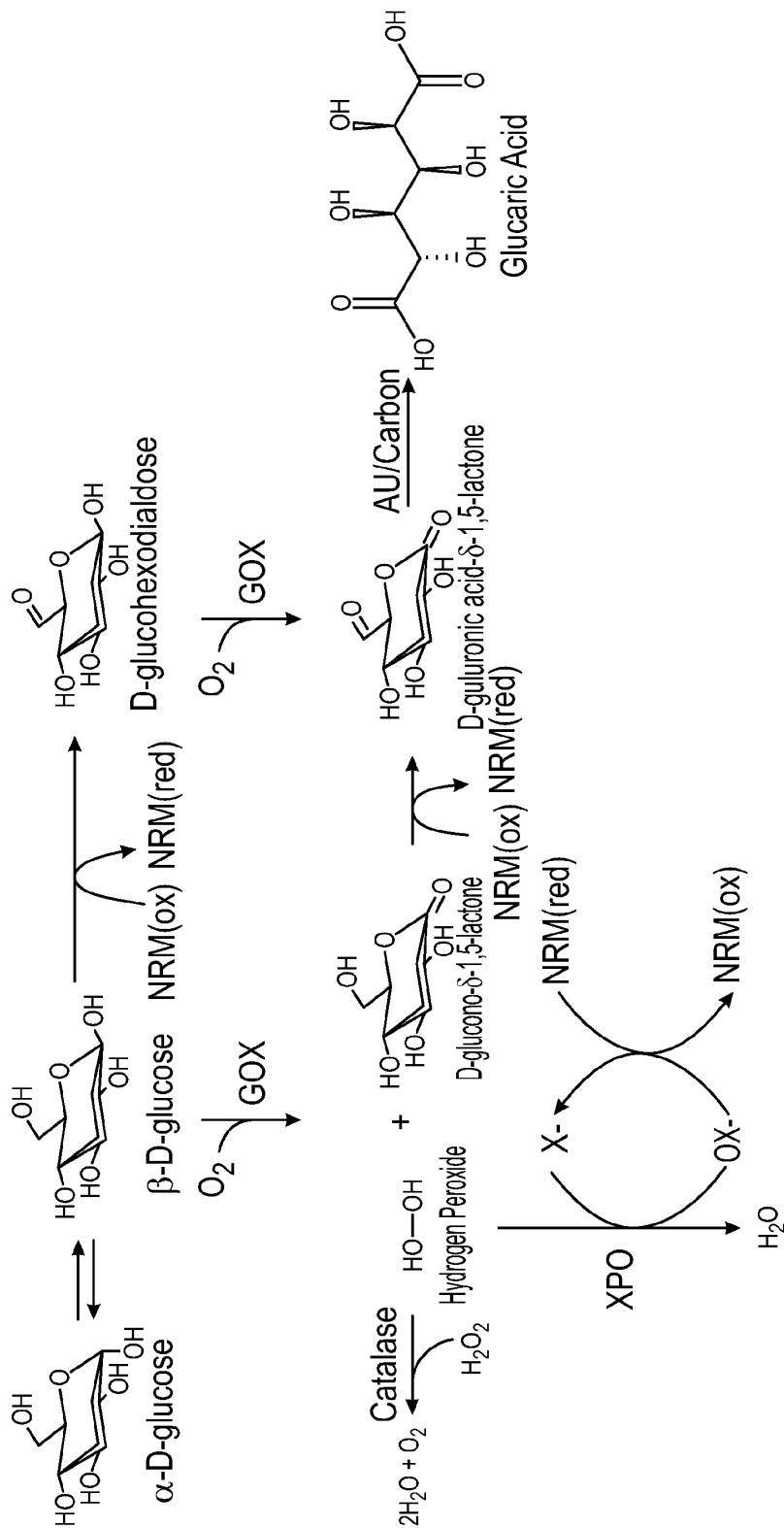


FIG. 5

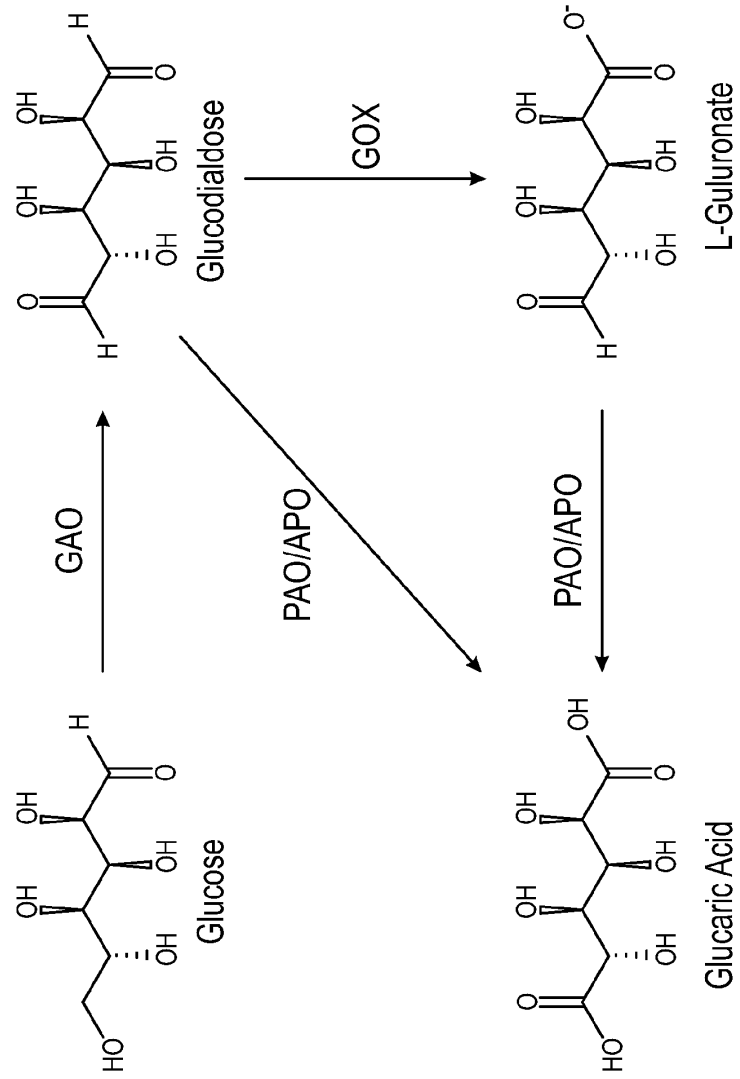


FIG. 6

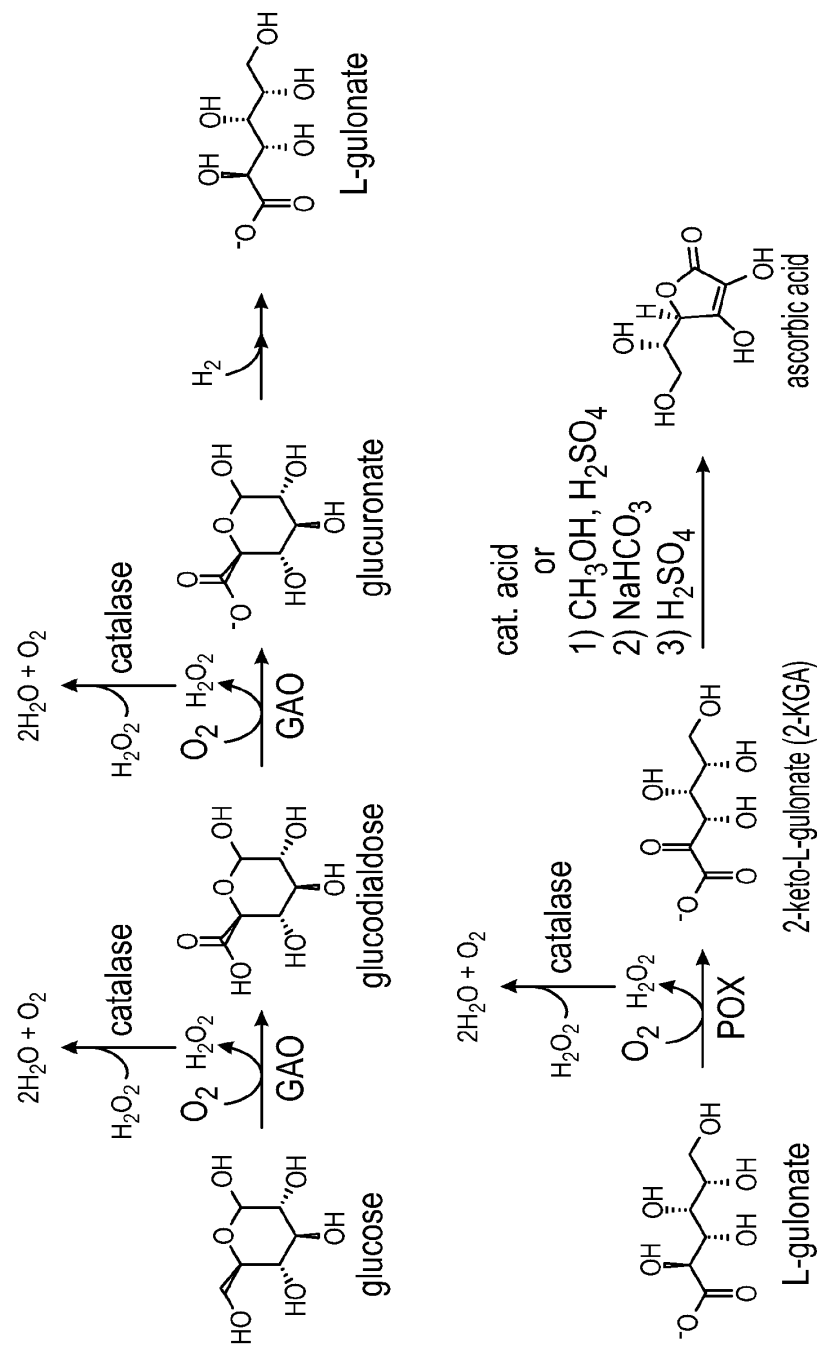


FIG. 7

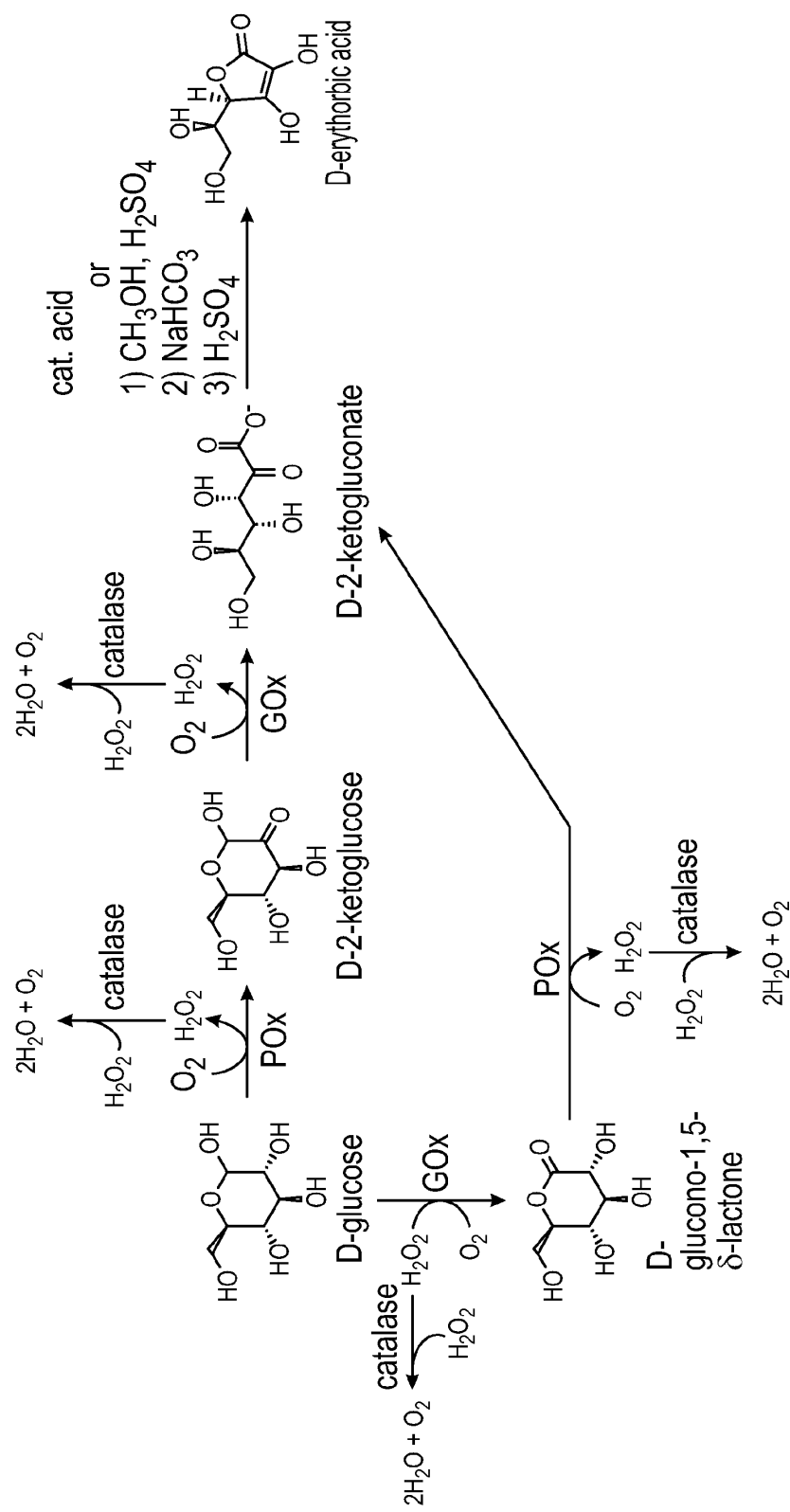


FIG. 8

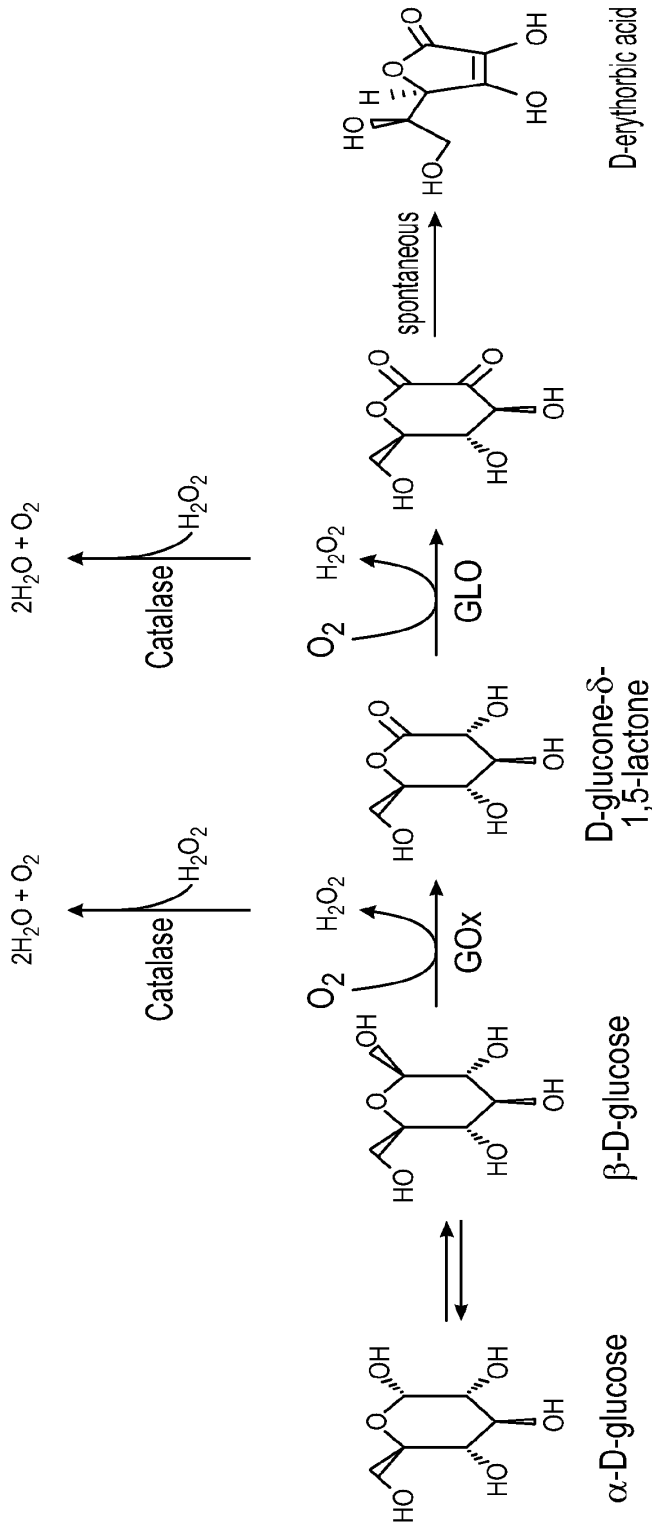


FIG. 9

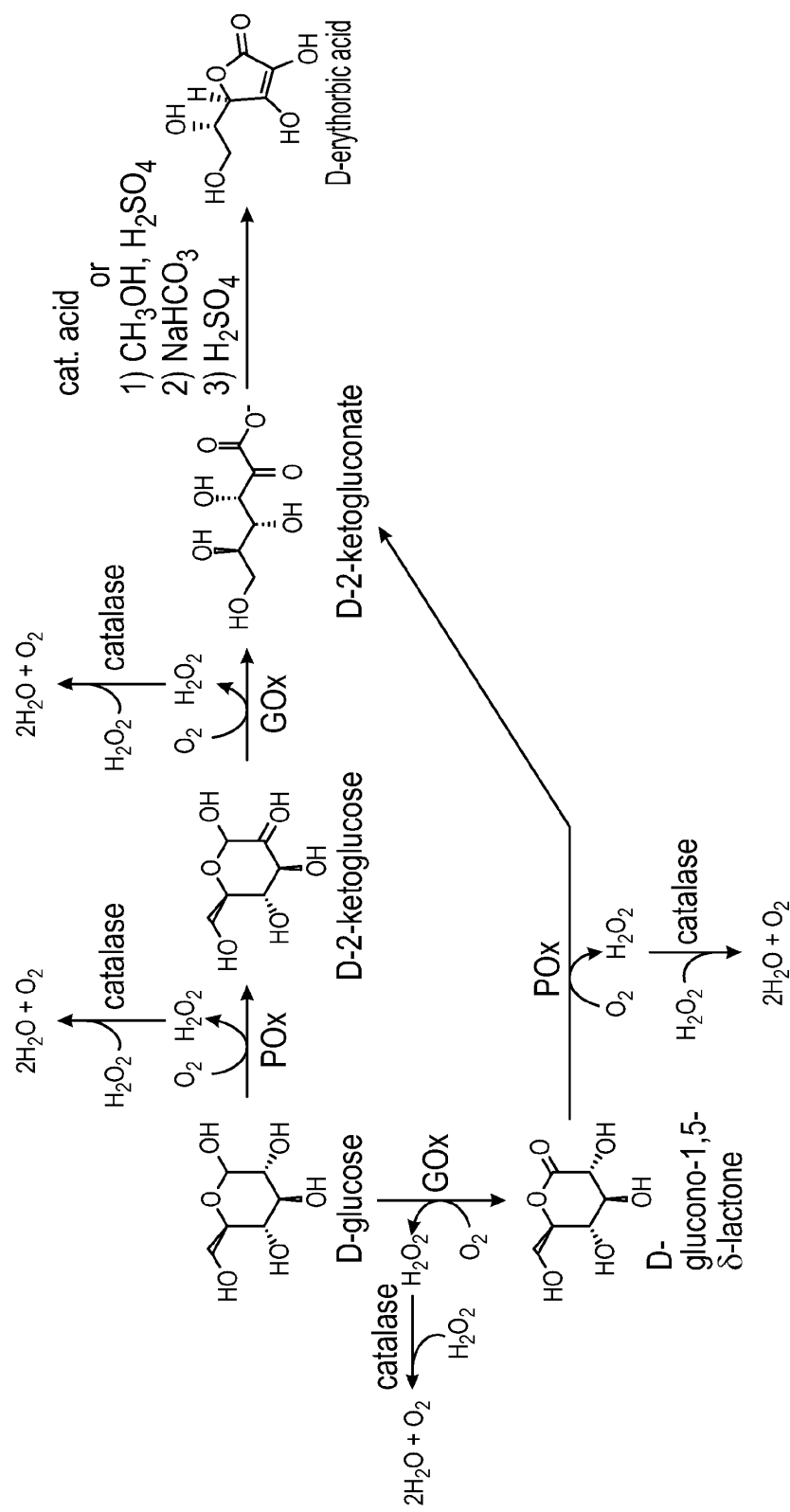


FIG. 10

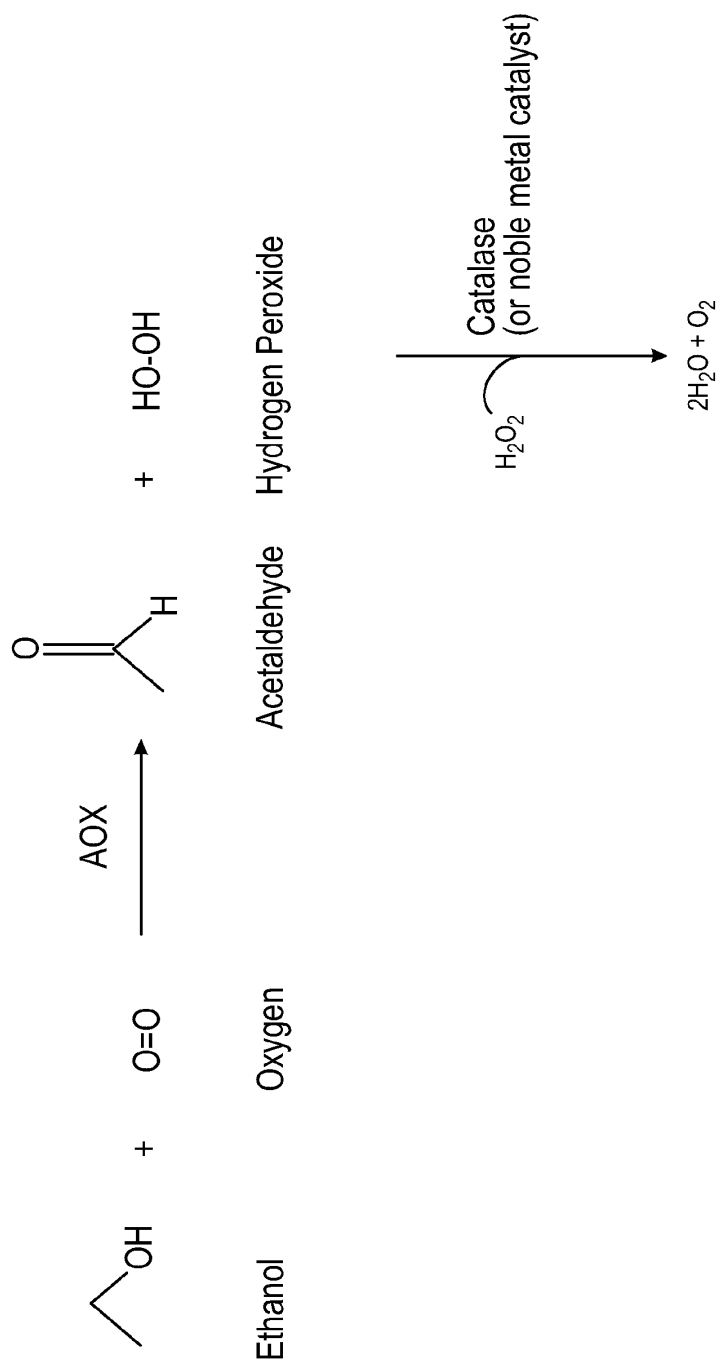


FIG. 11

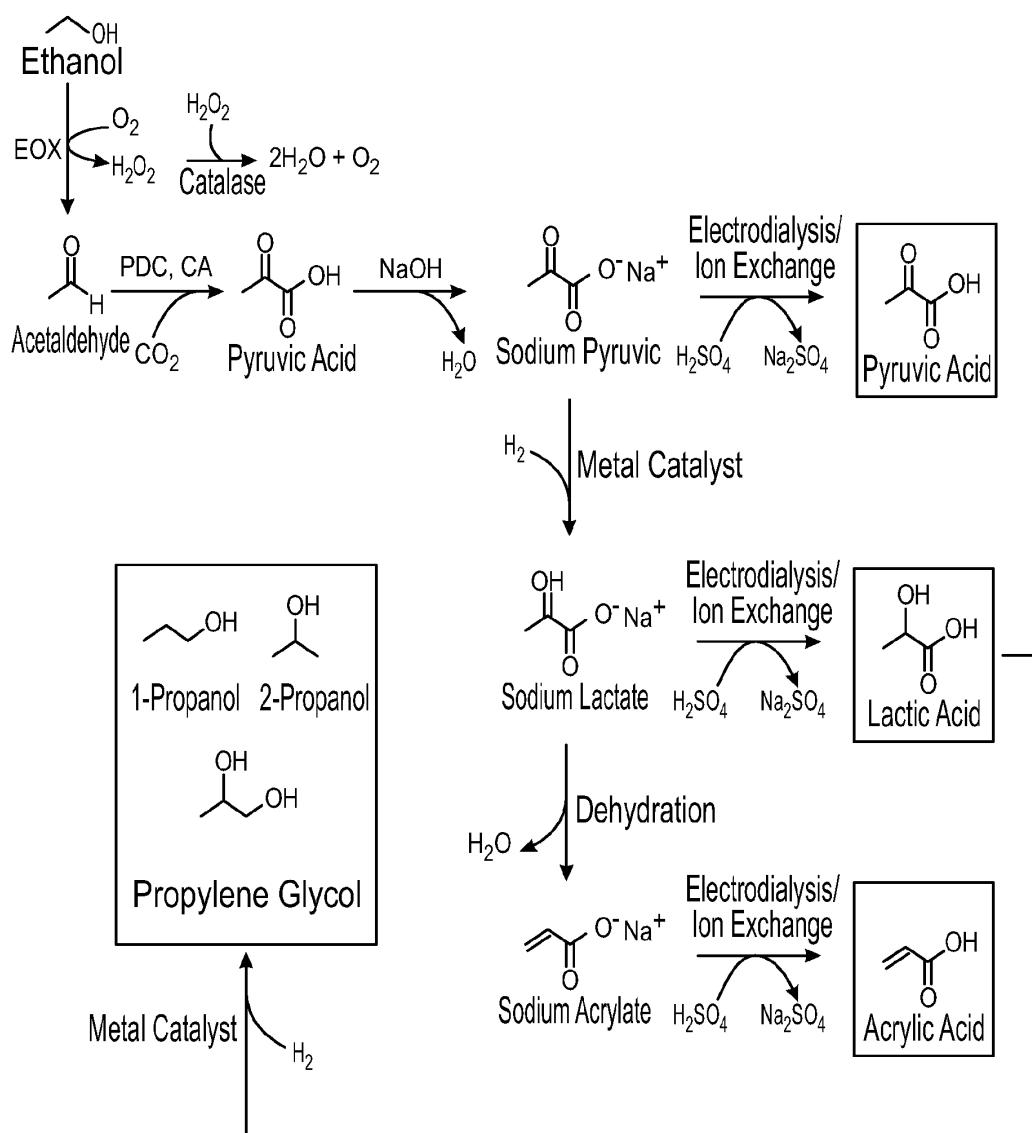


FIG. 12

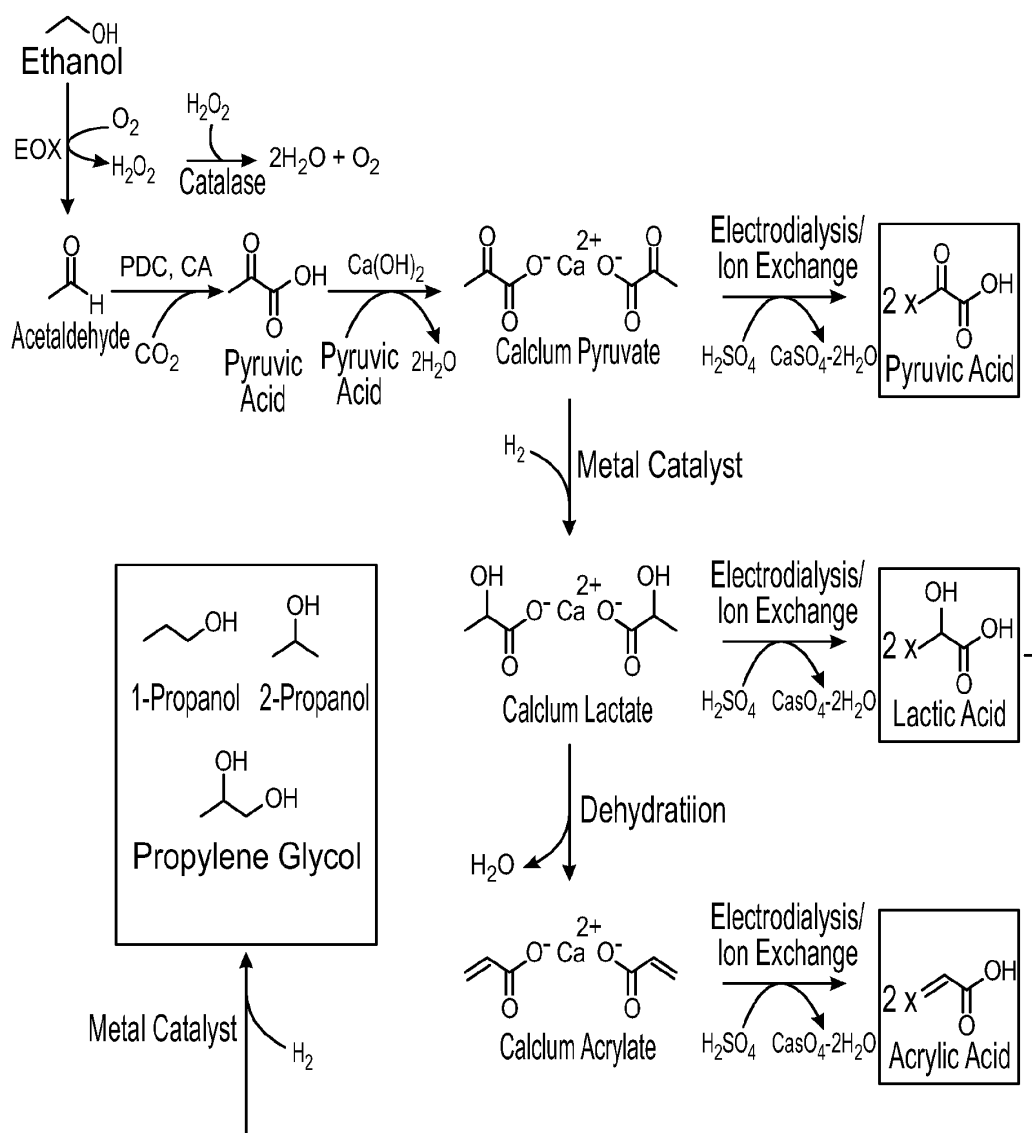


FIG. 13

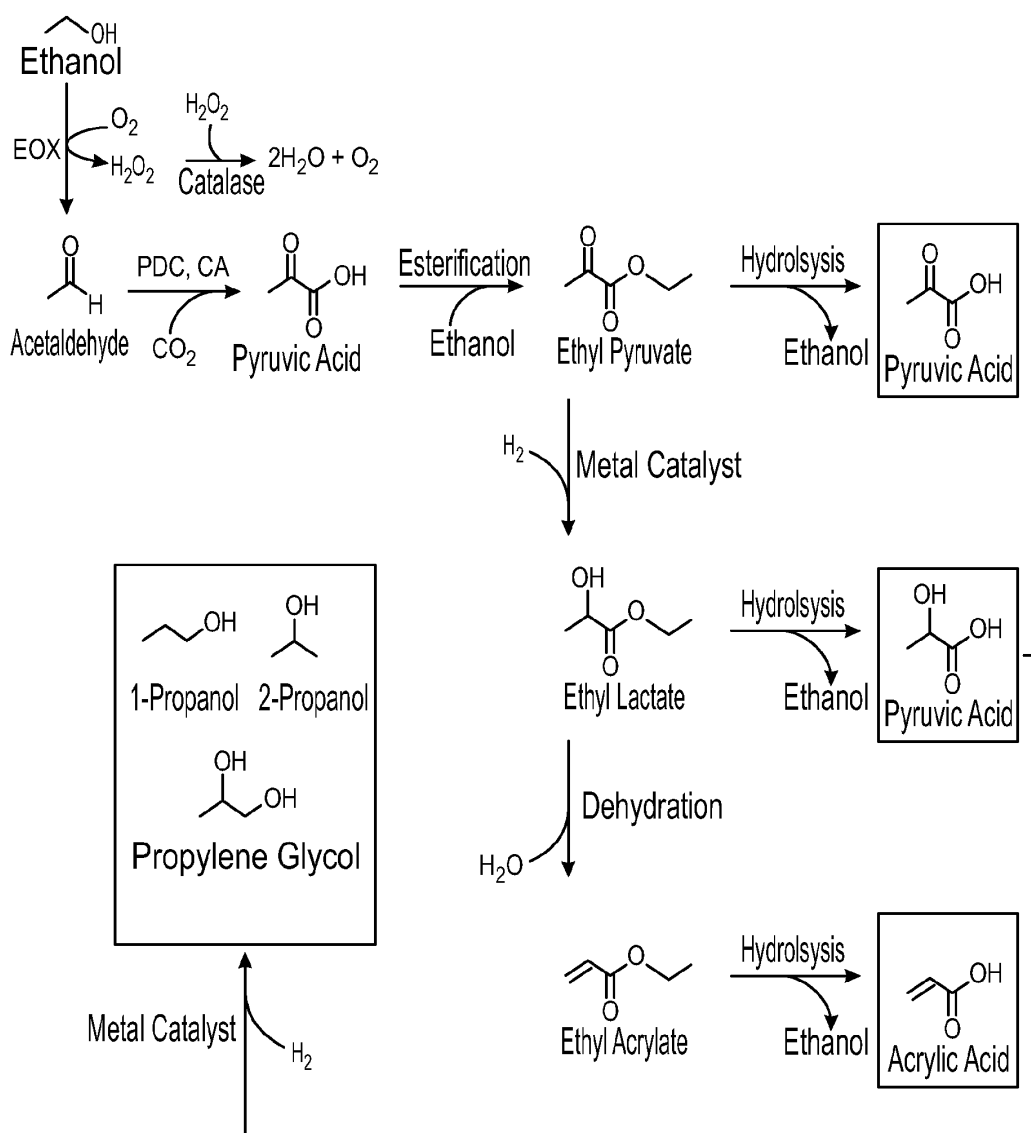


FIG. 14

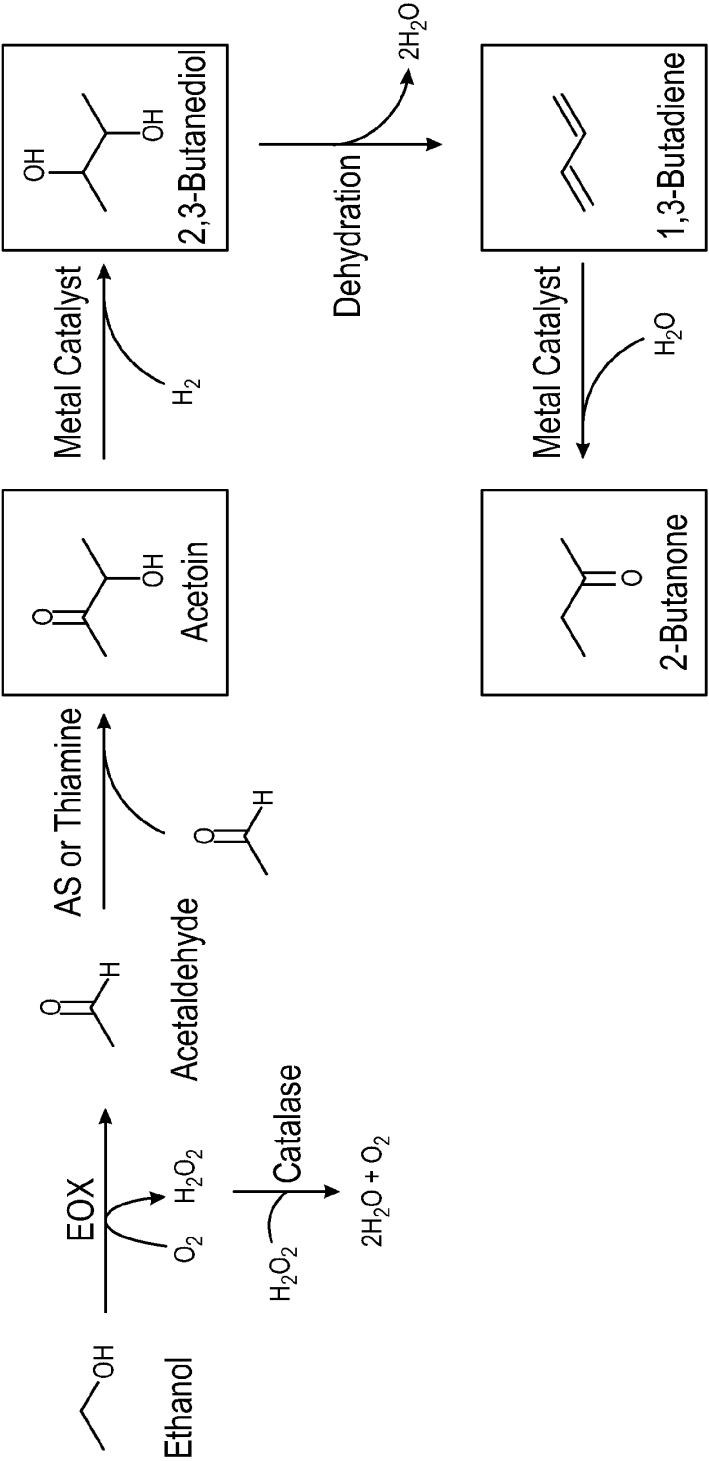


FIG. 15

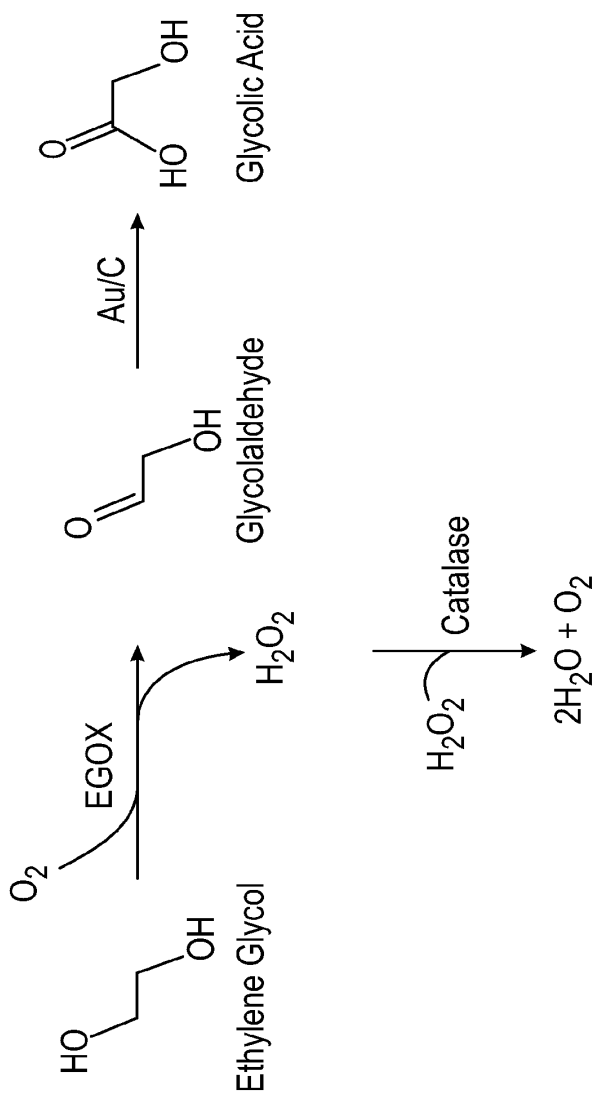


FIG. 16

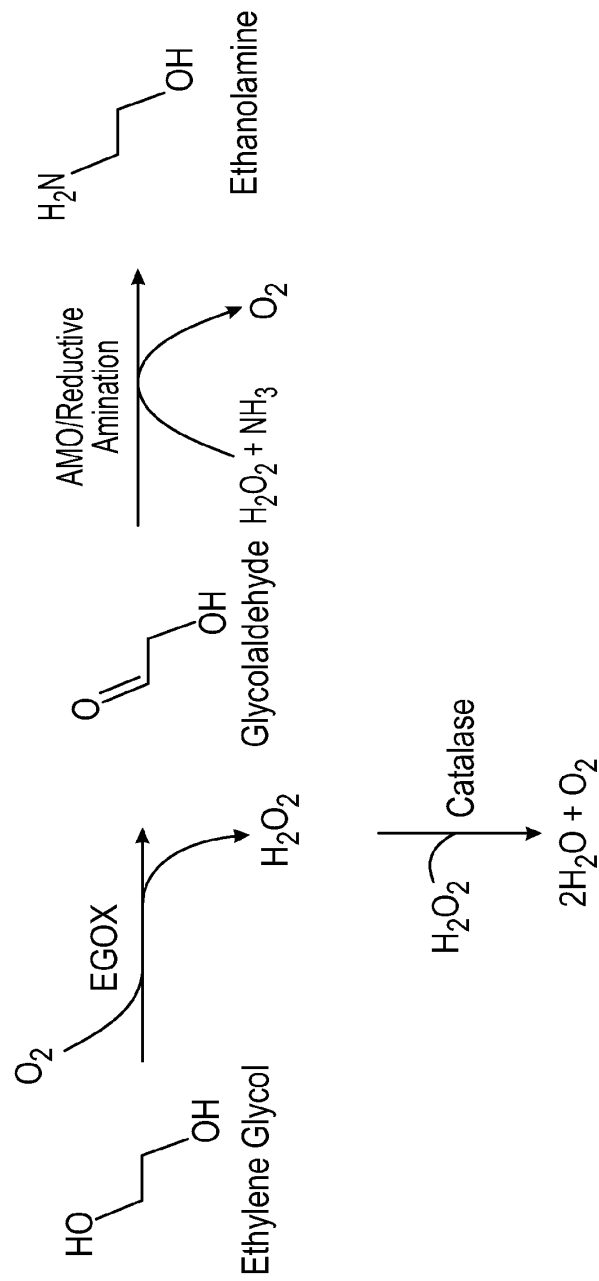


FIG. 17

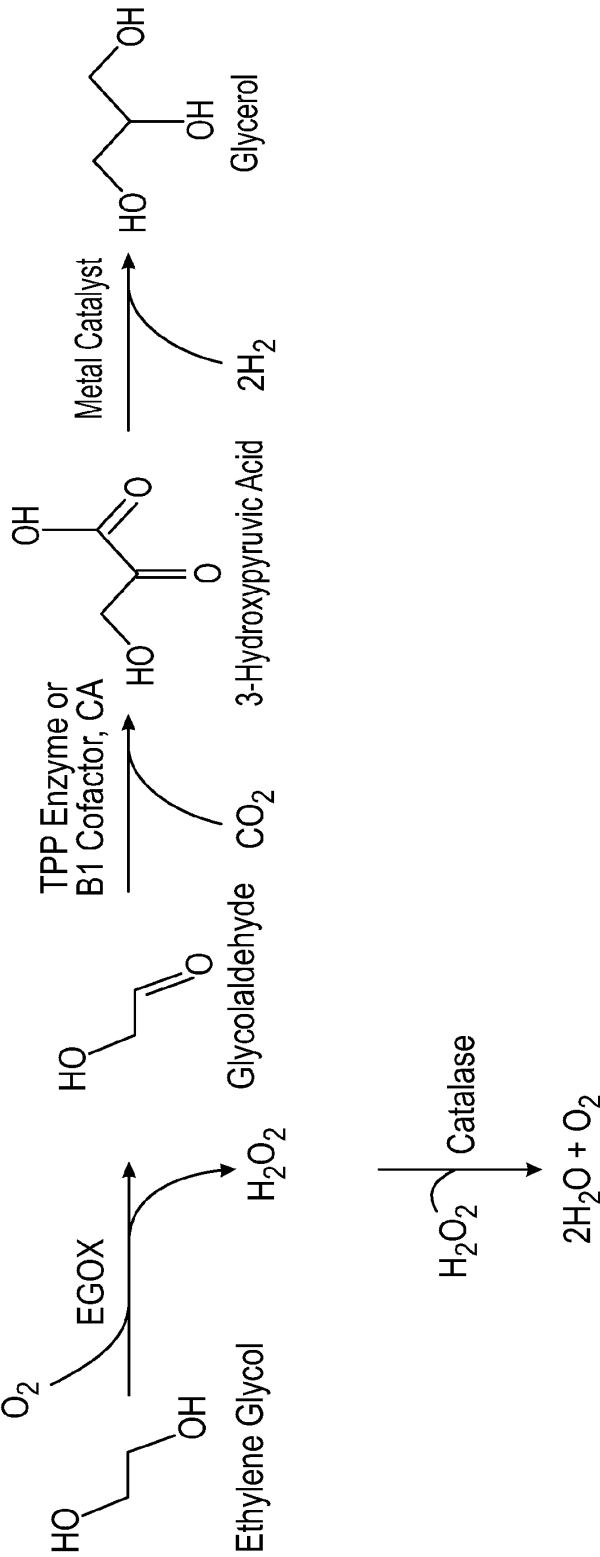


FIG. 18

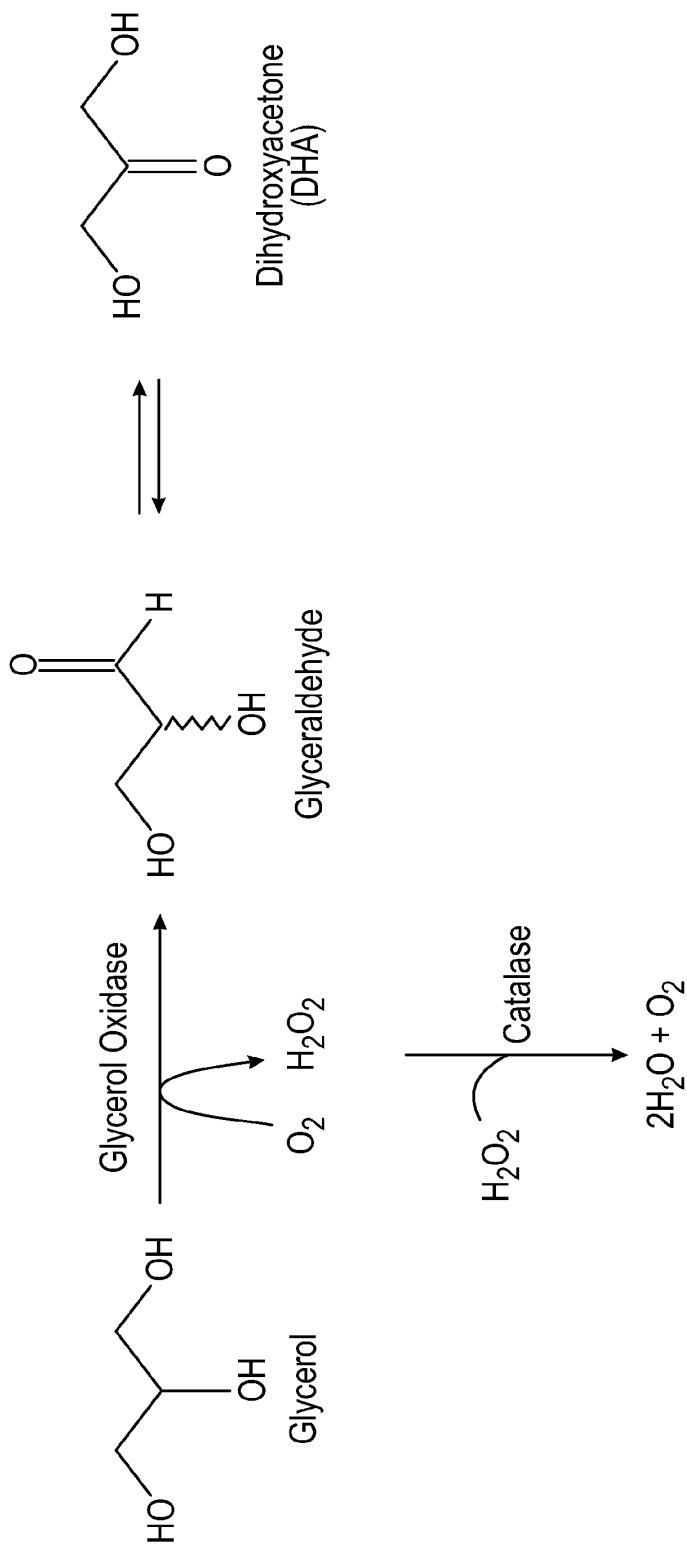


FIG. 19

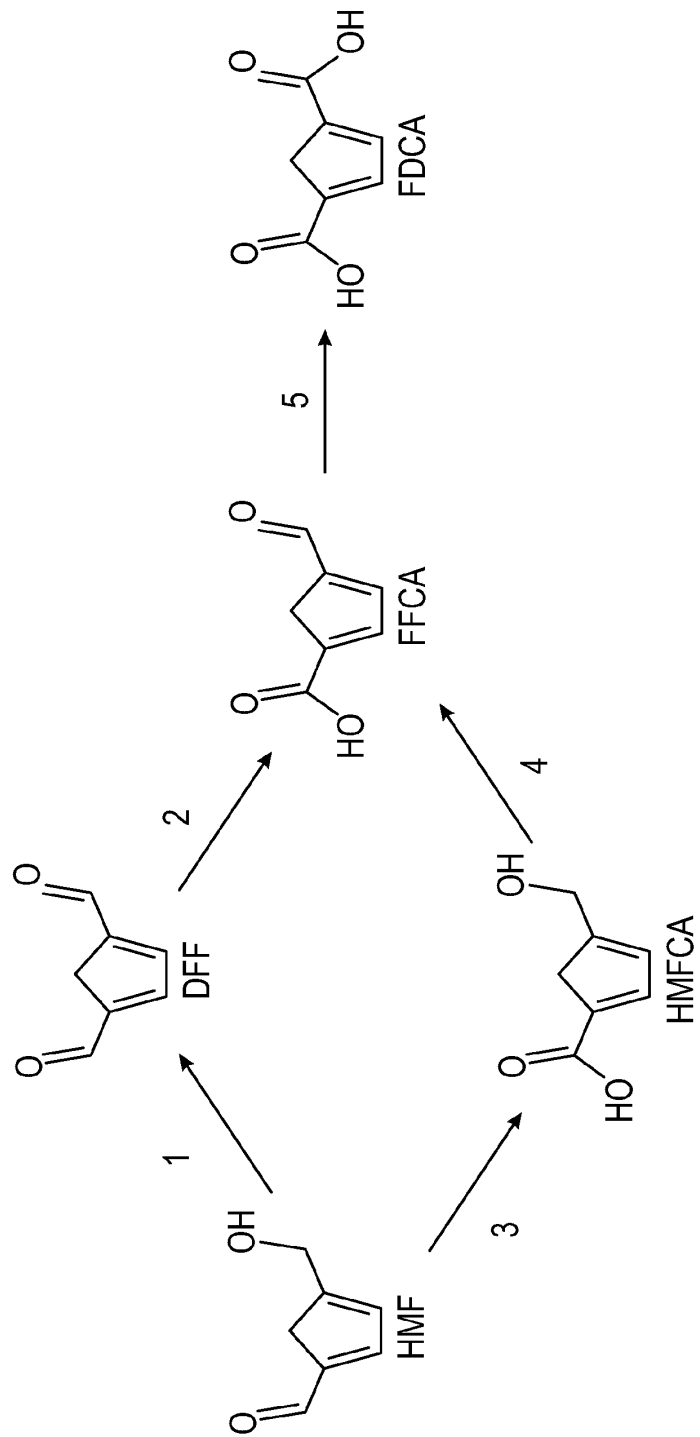
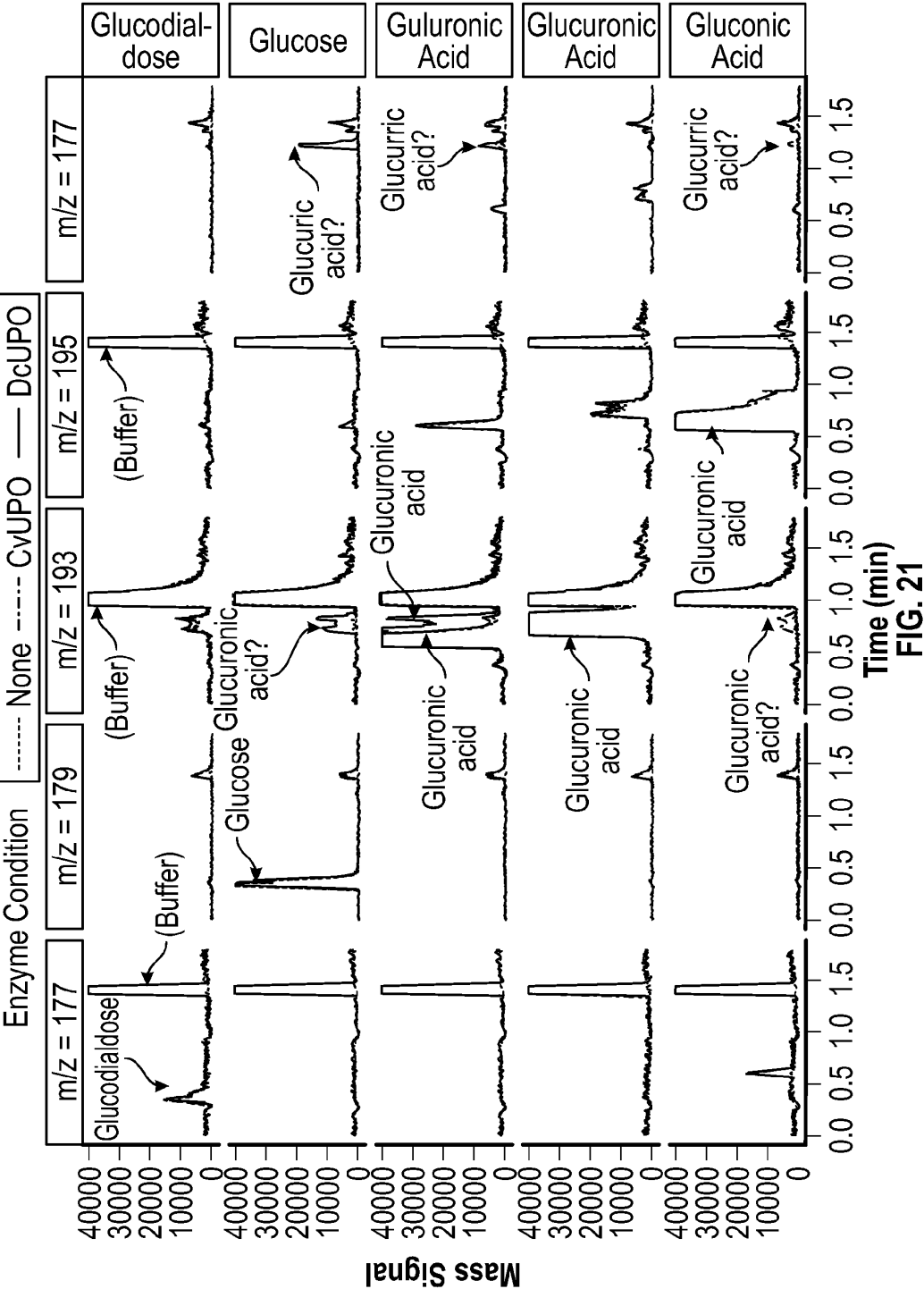


FIG. 20



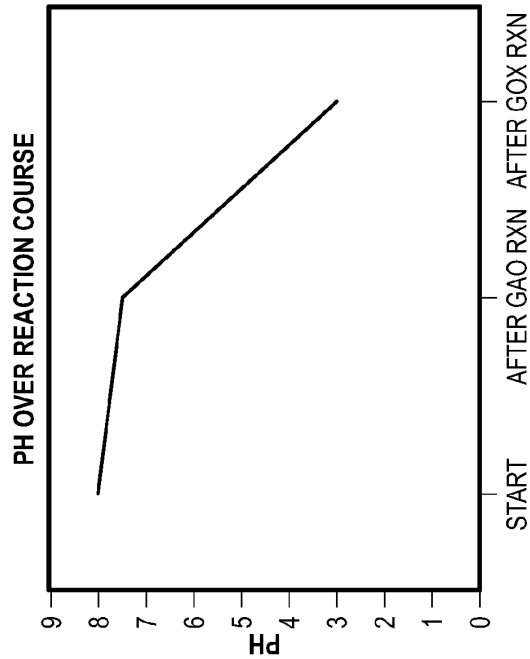


FIG. 22A

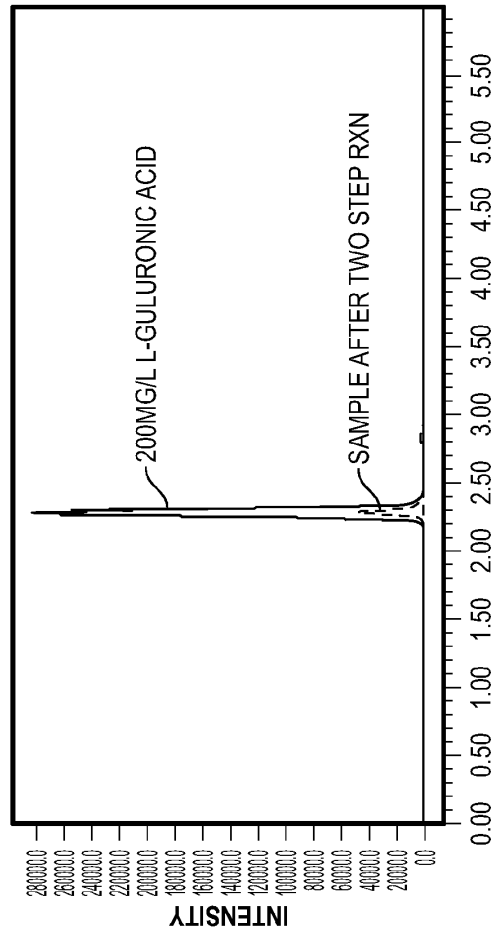


FIG. 22B

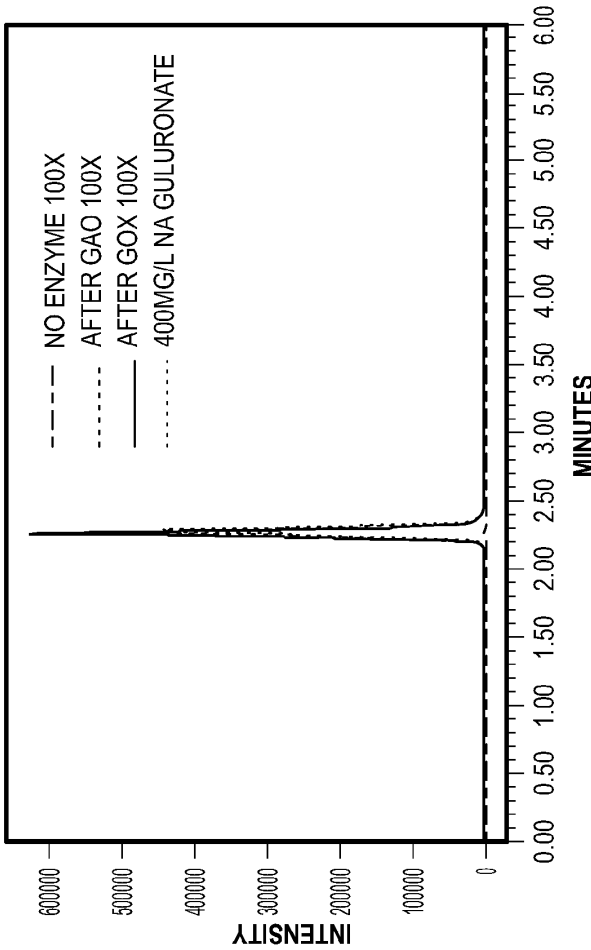


FIG. 23B

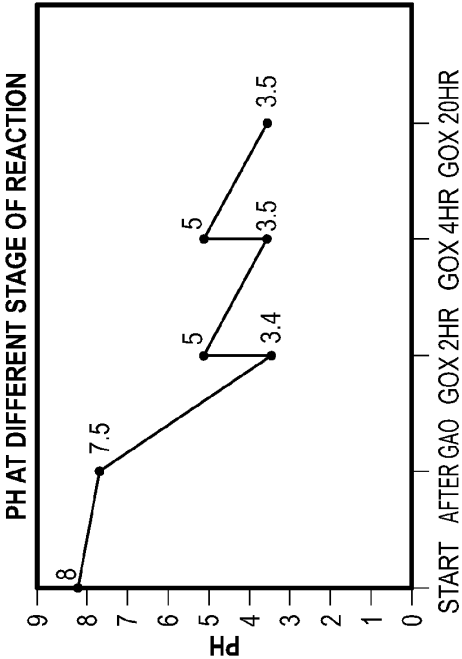
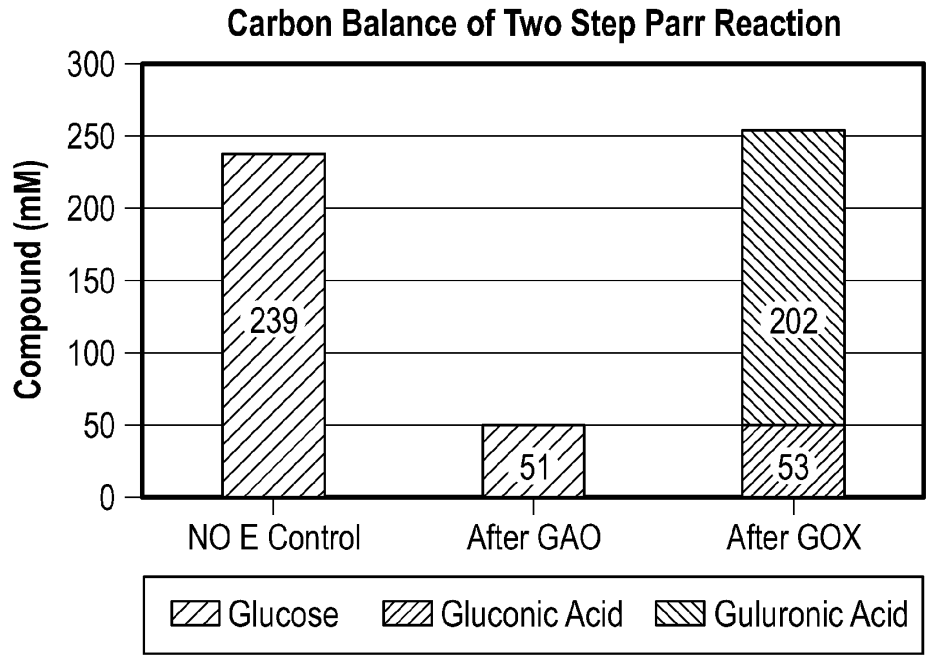


FIG. 23A



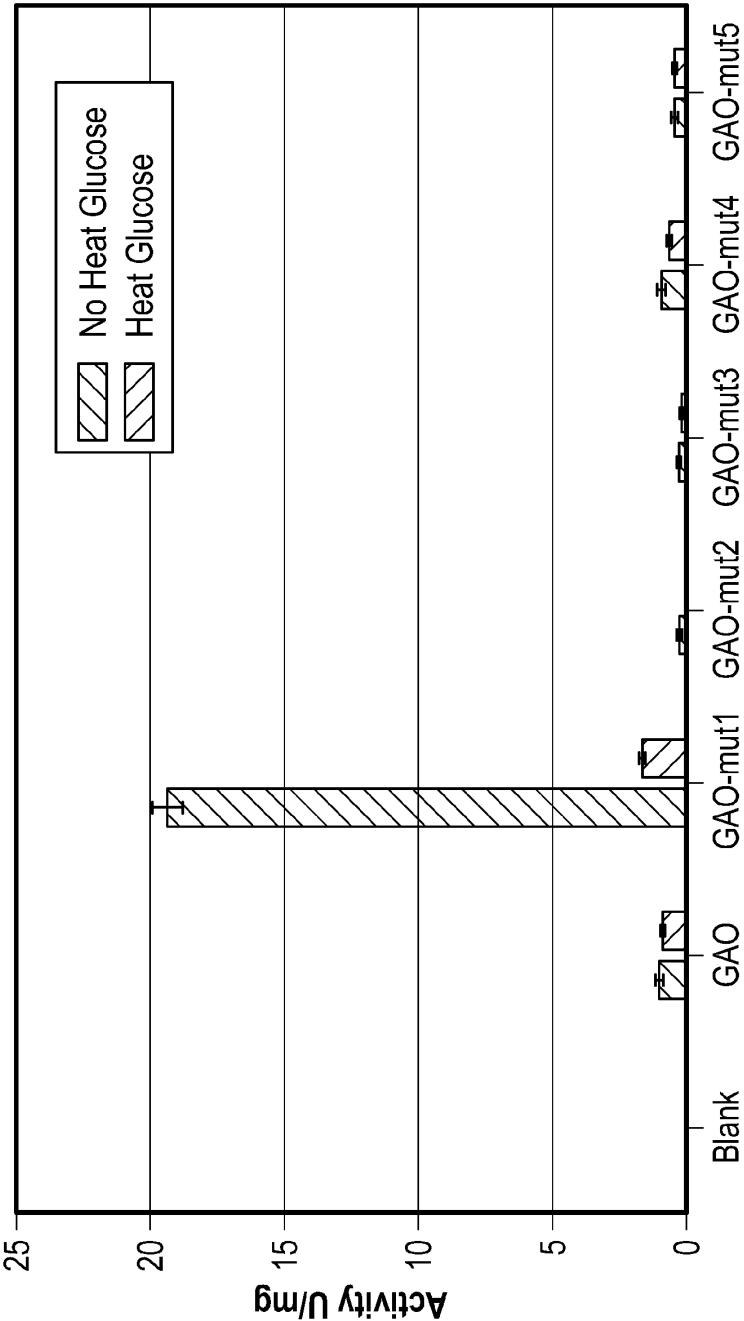


FIG. 25

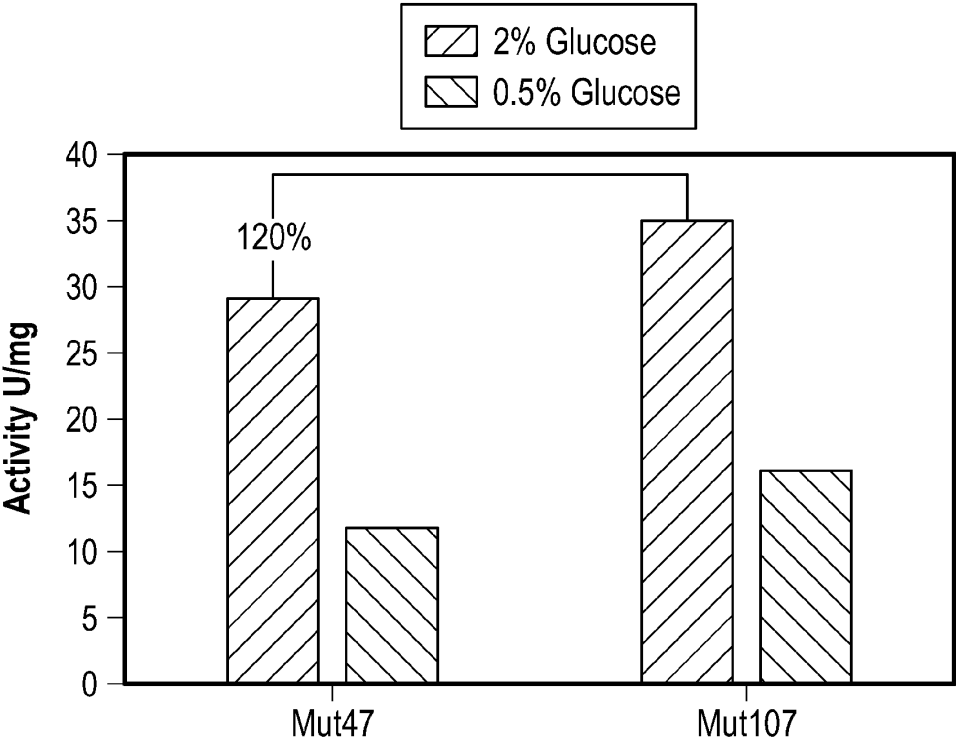


FIG. 26

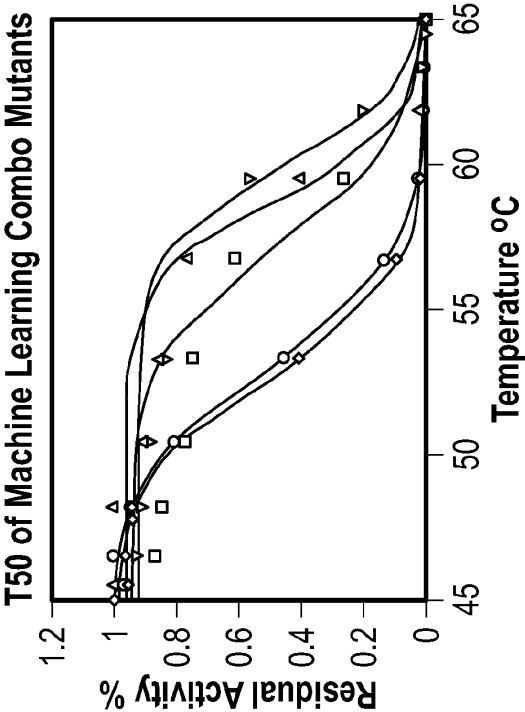


FIG. 27B

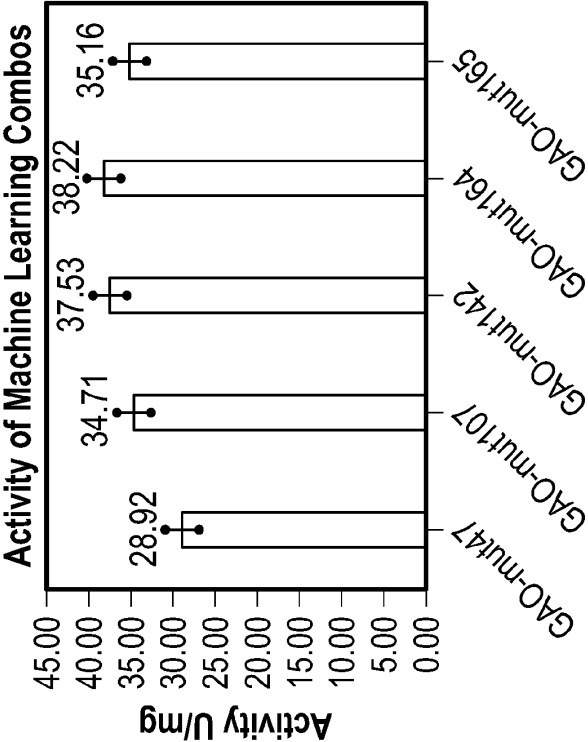


FIG. 27A

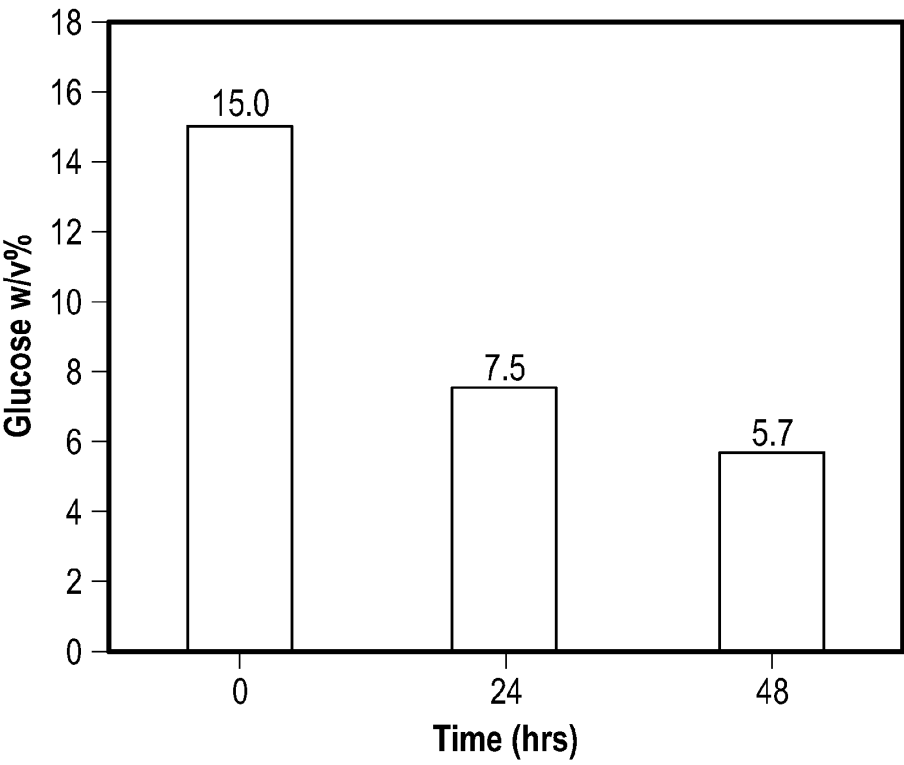


FIG. 28

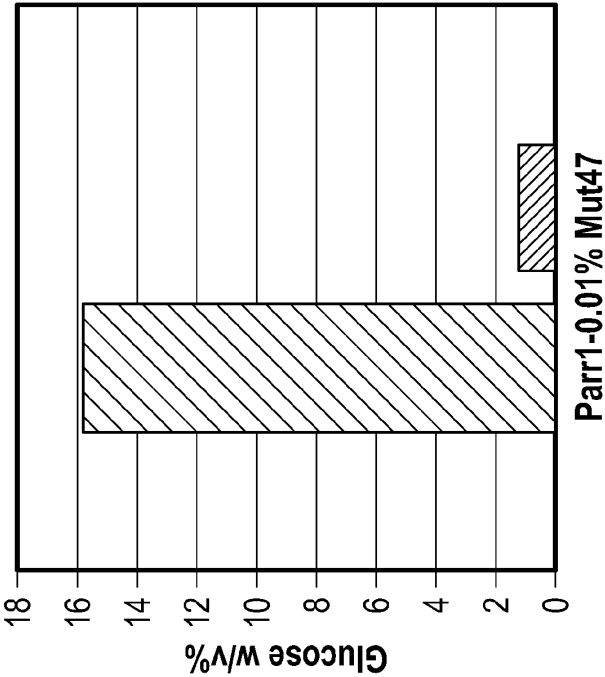


FIG. 29A

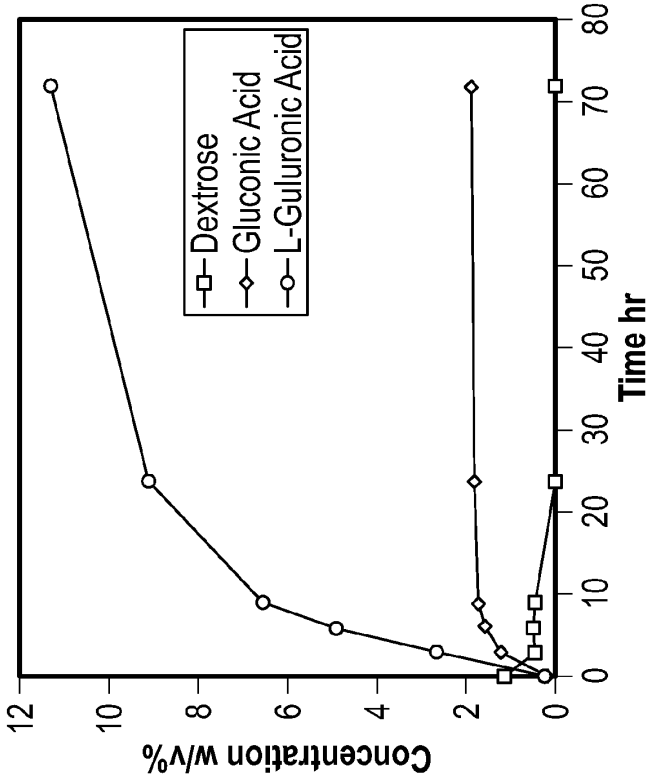


FIG. 29B

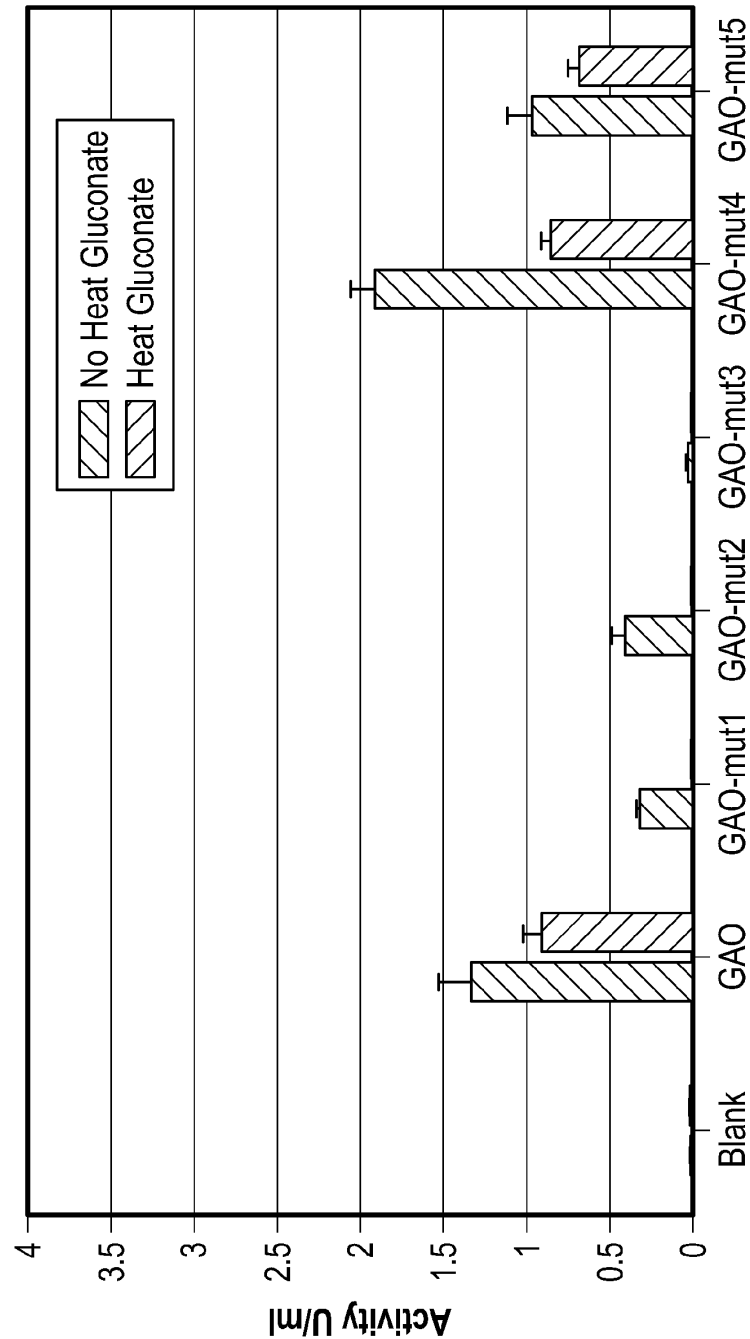


FIG. 30A

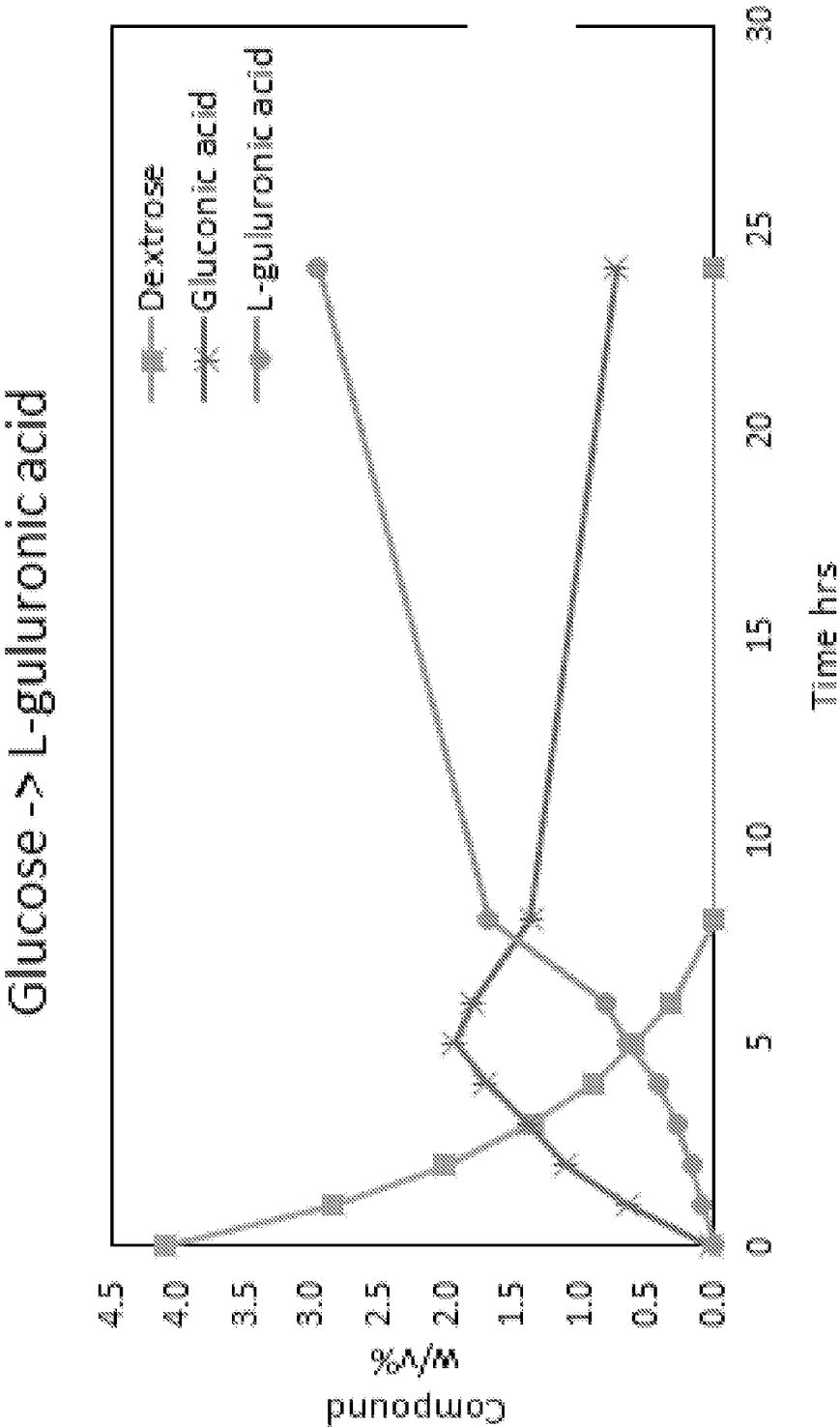


FIG.30B

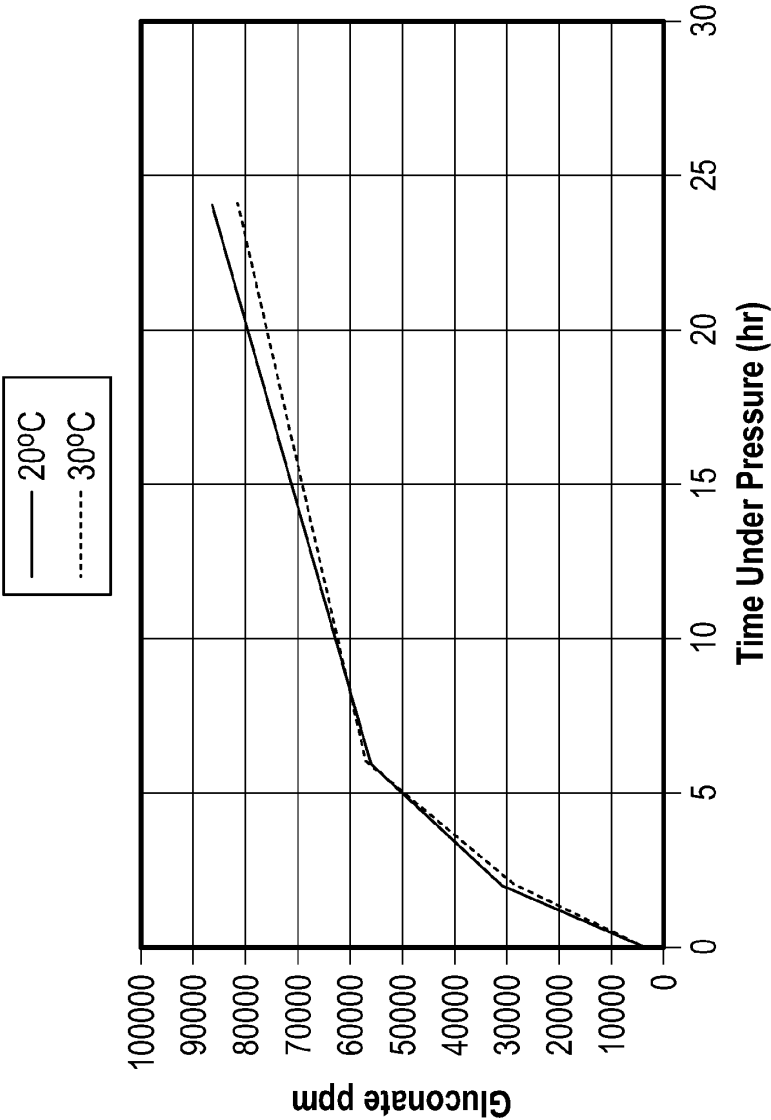
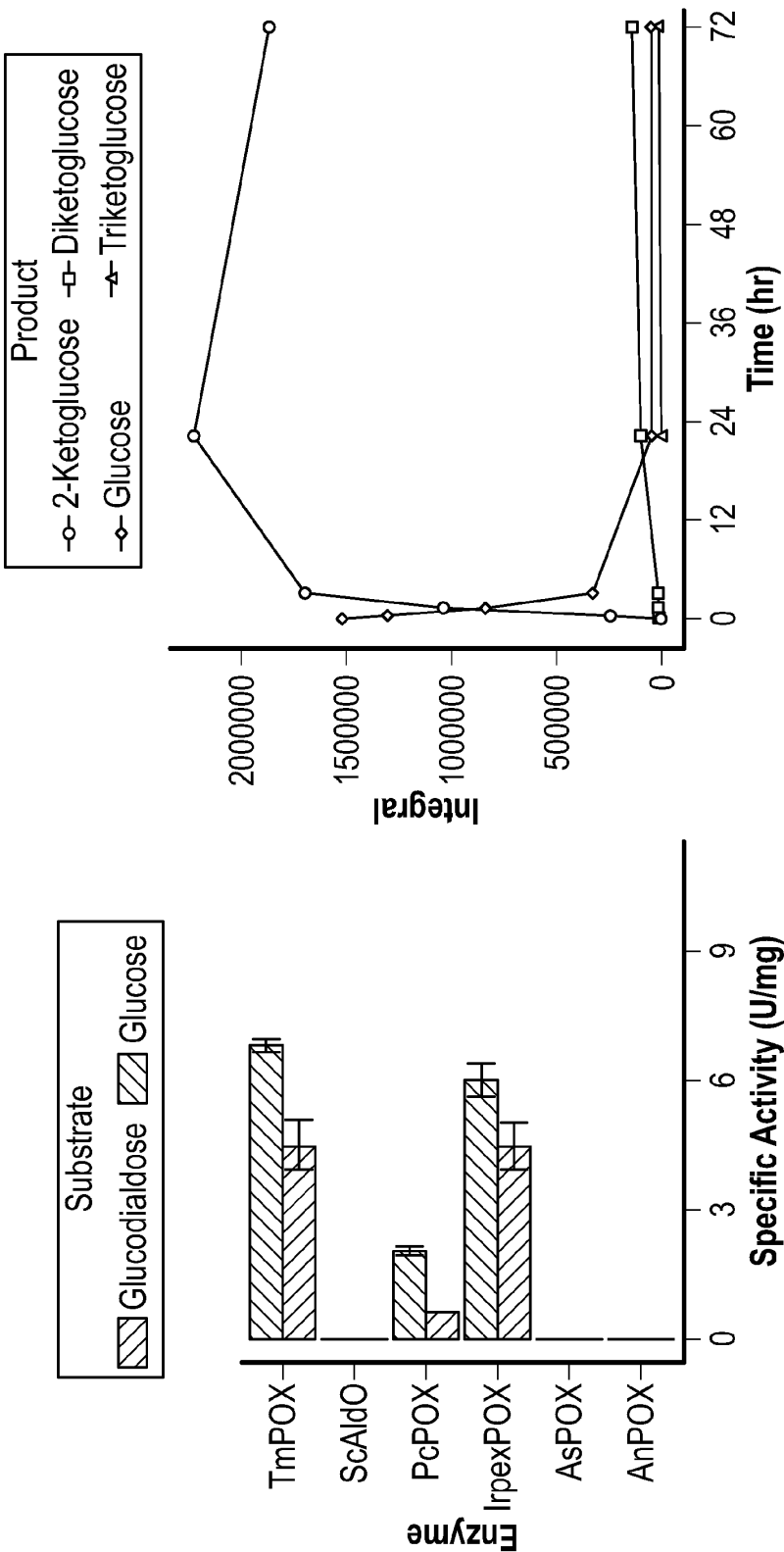


FIG. 31



Production of 2-Ketoglucose with *I. Lacteus* POX vs Reaction Temperature and Time

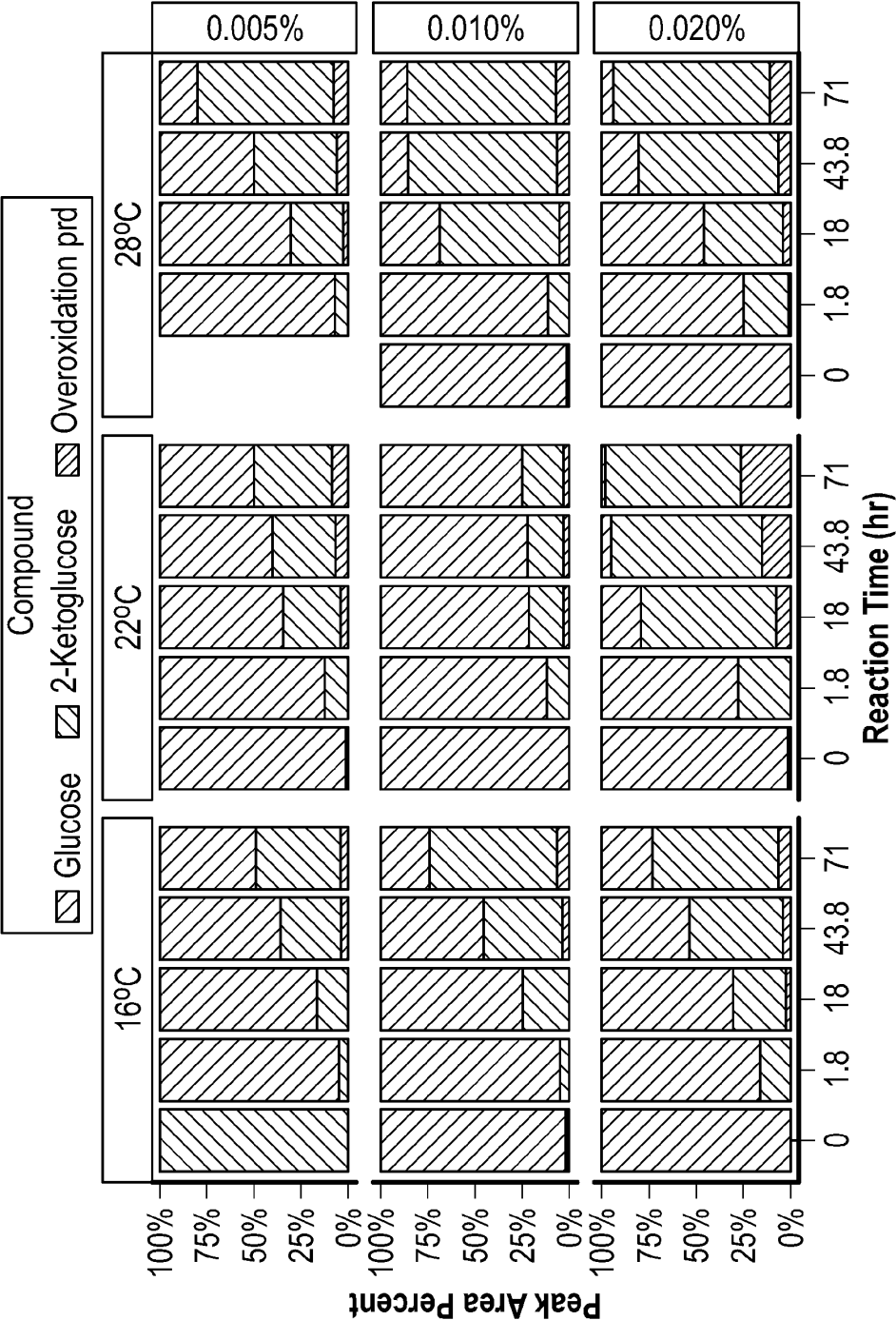


FIG. 33

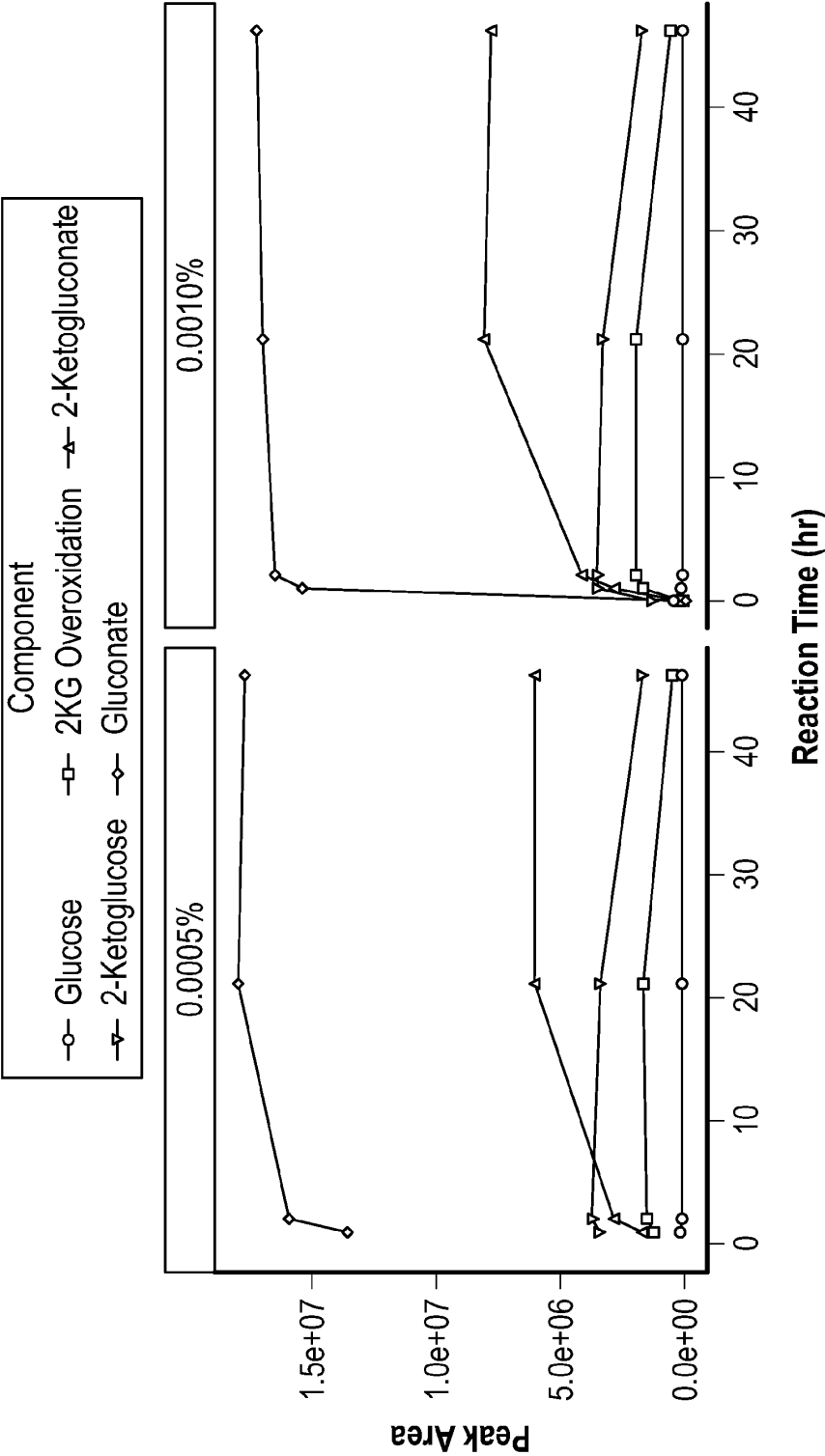


FIG. 34

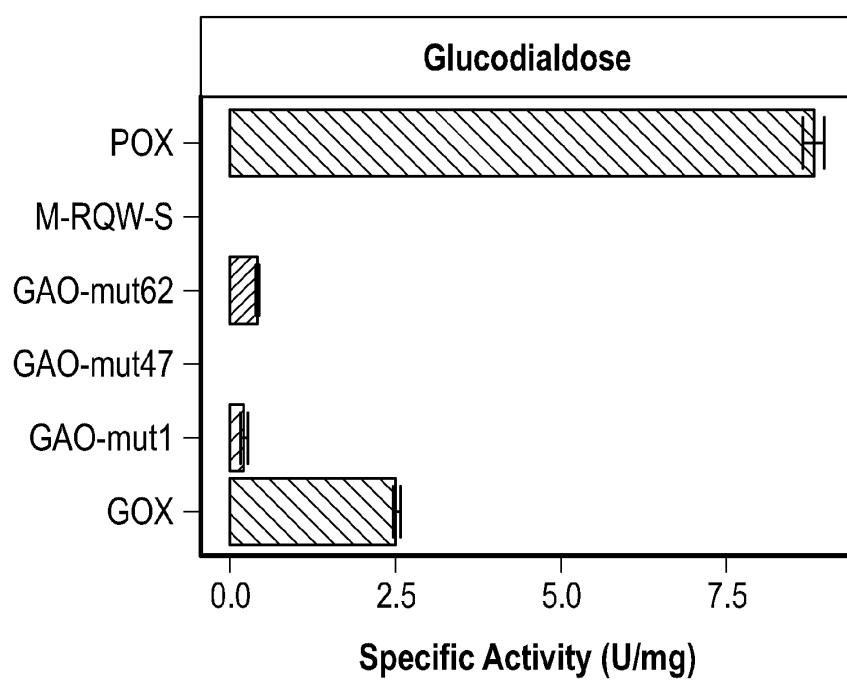


FIG. 35

Production of 5-Keto-4-Deoxyglucarate from Glucarate using a GlucD Catalyst

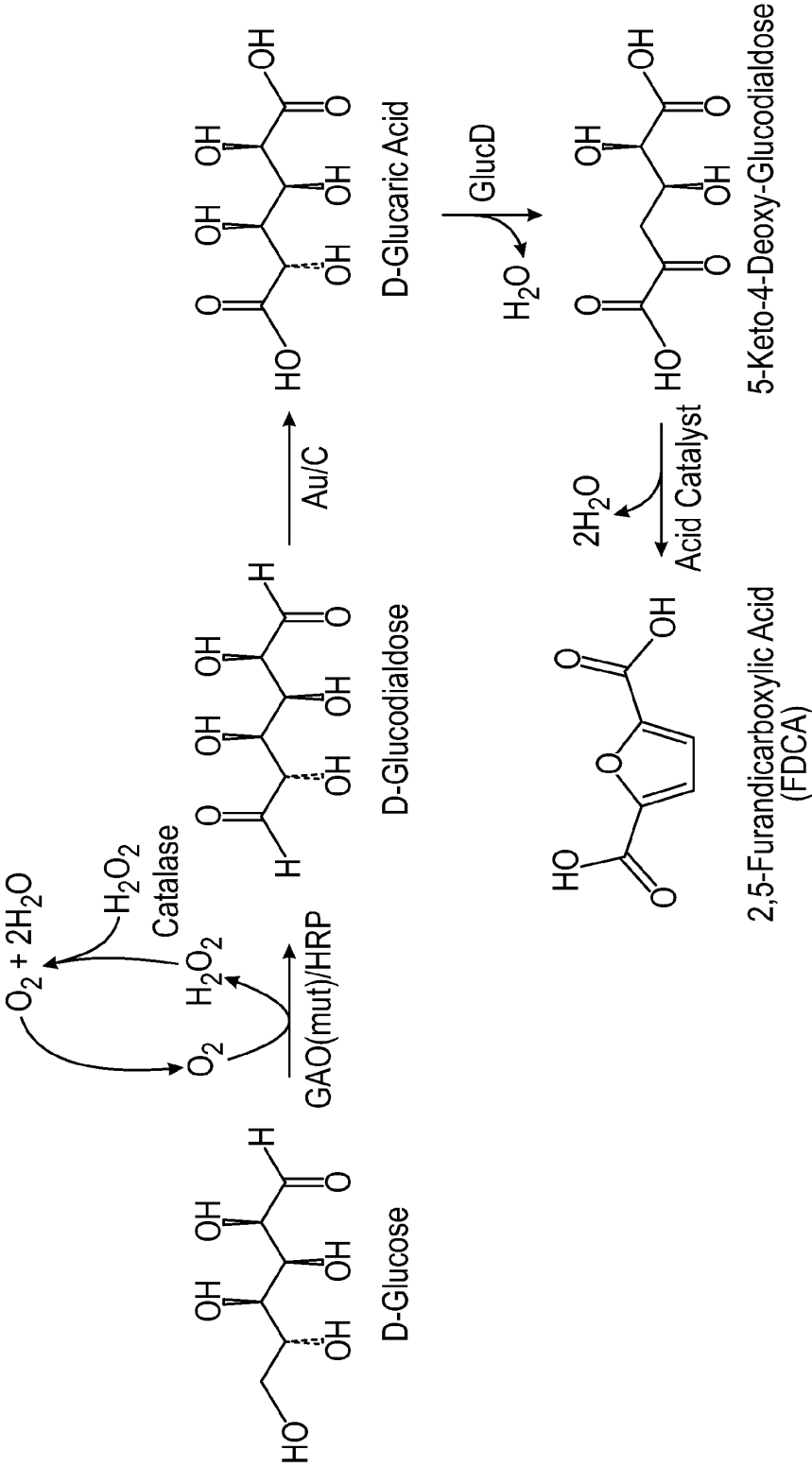


FIG. 36

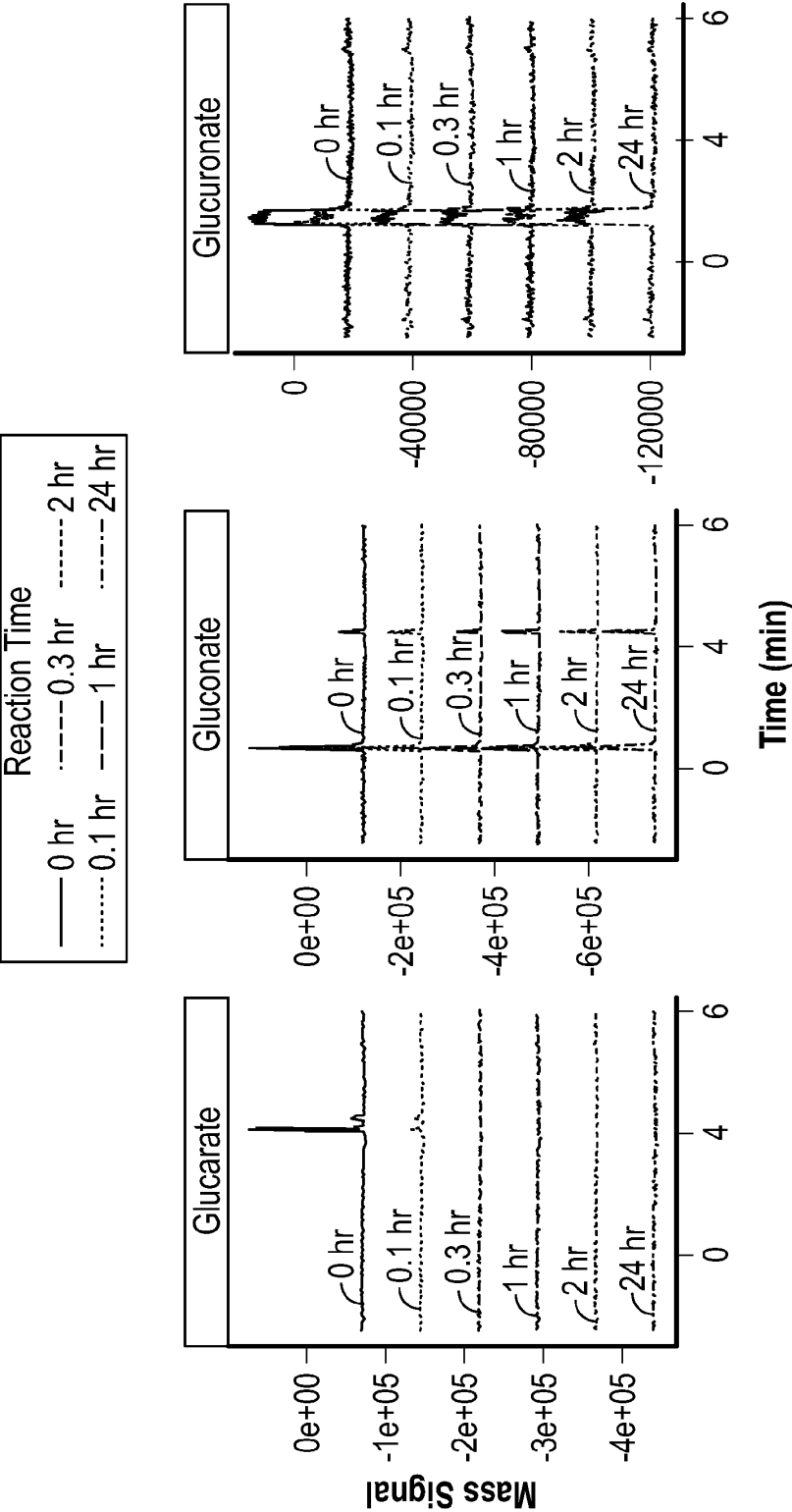


FIG. 37

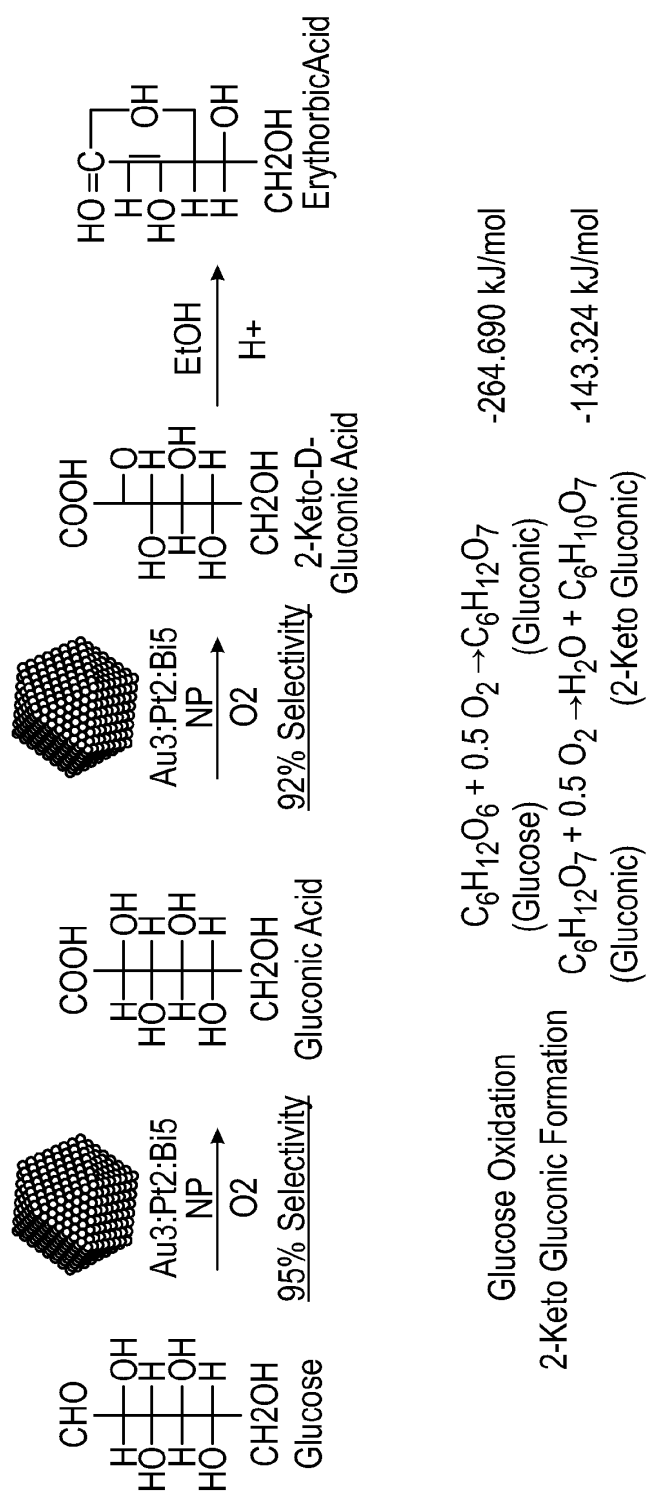
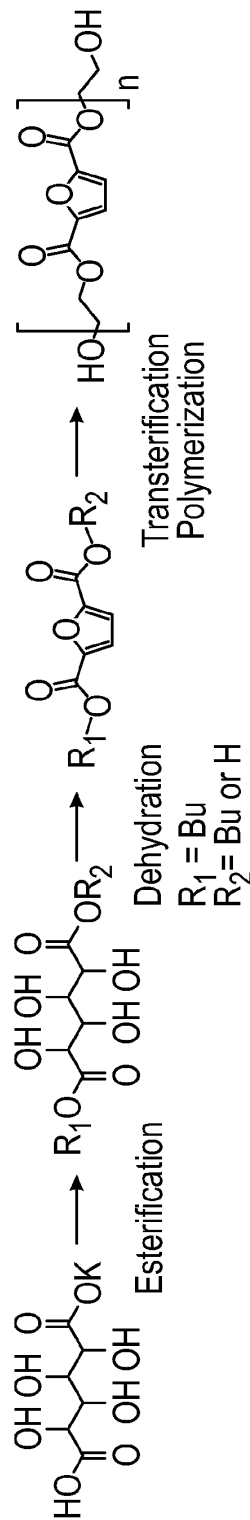


FIG. 38

• Reaction of K-GA to FDCA



• Glucarate Diesters to FDCA

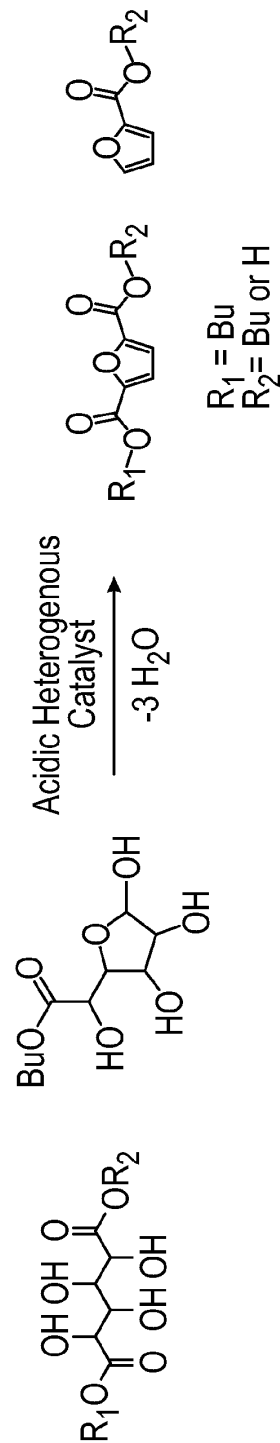


FIG. 39

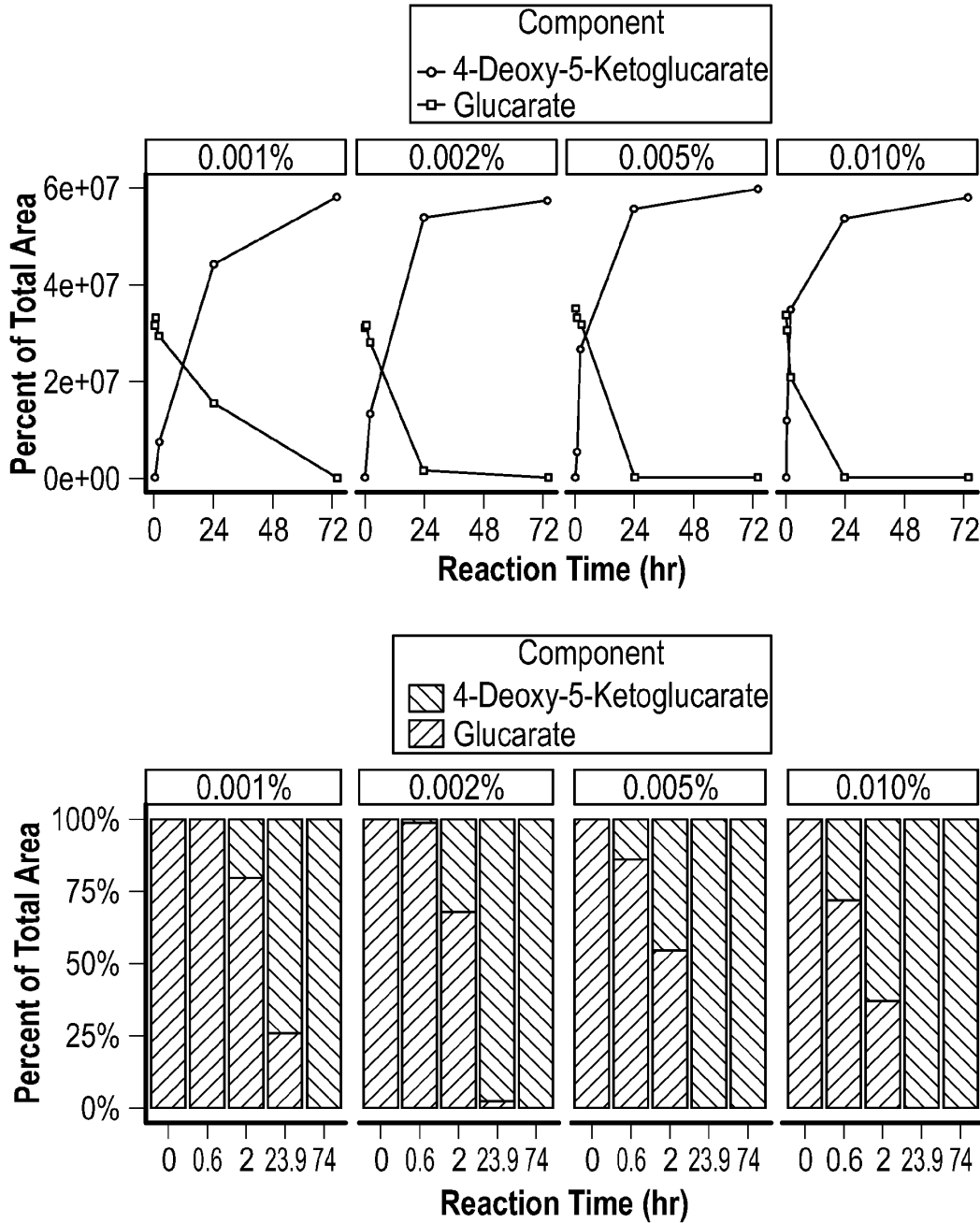


FIG. 40

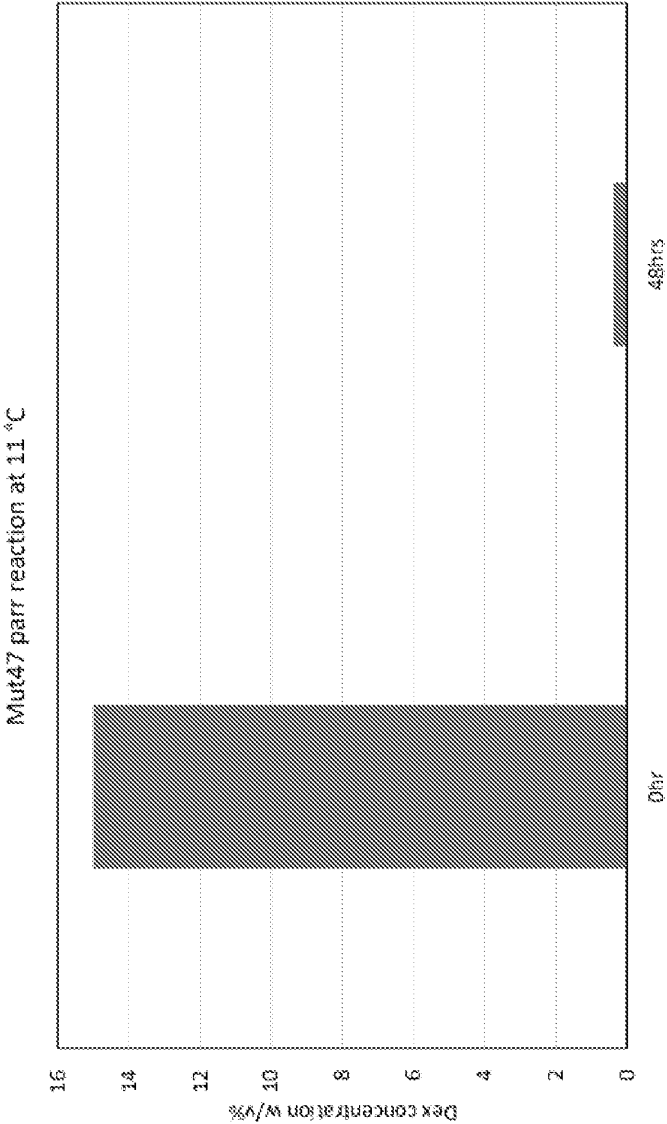


FIG. 41

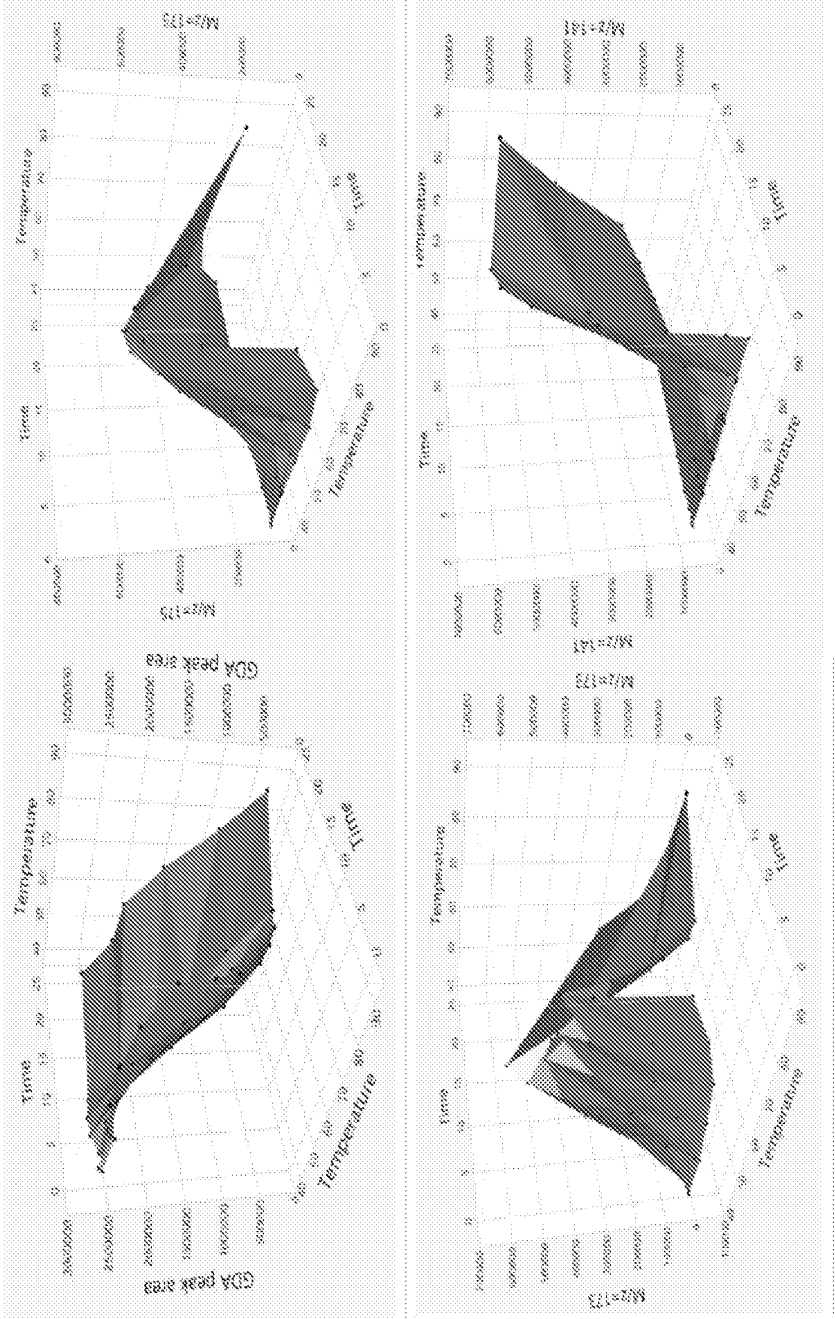
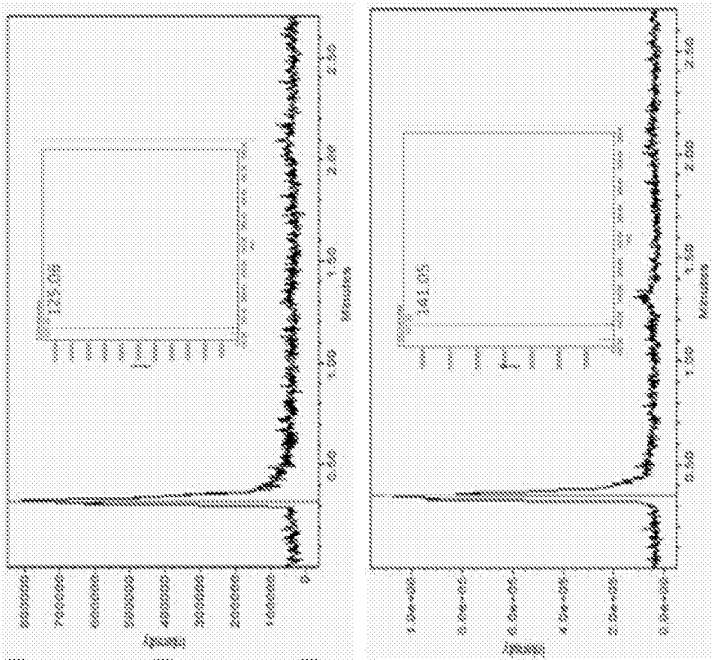


FIG 42



B

	No stain	CAM	KMnO4
EtOAc			
EtOAc:Hex 2:1			

A

FIG. 43

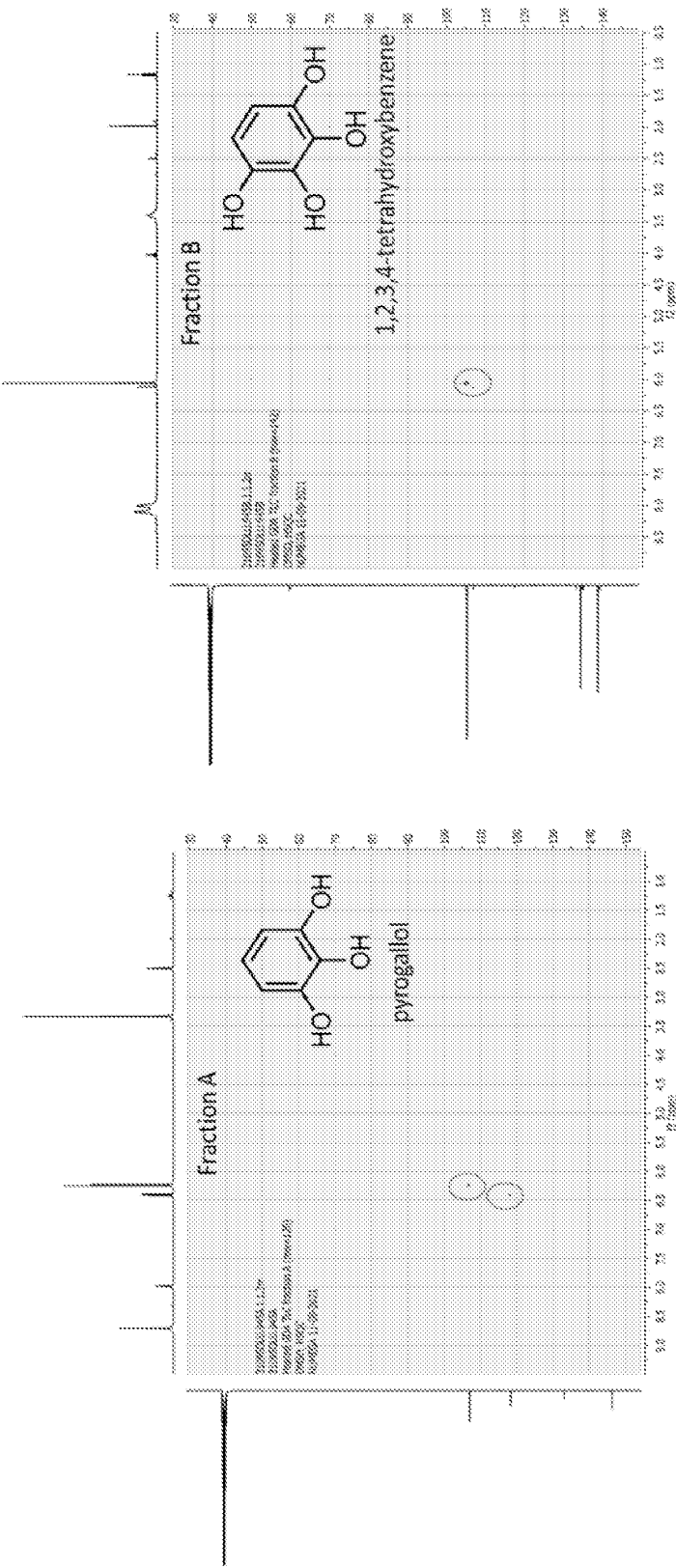


FIG. 44

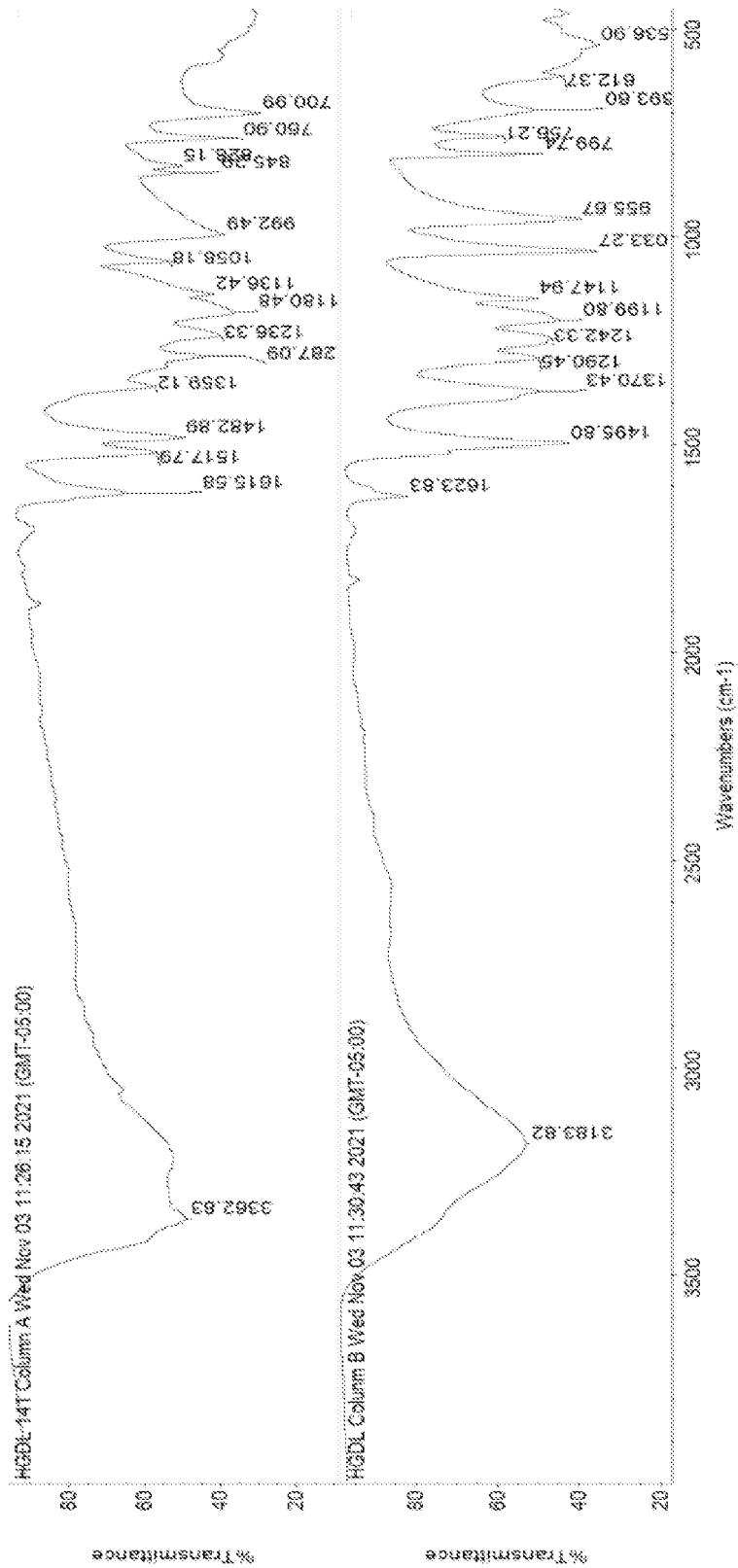


FIG. 45

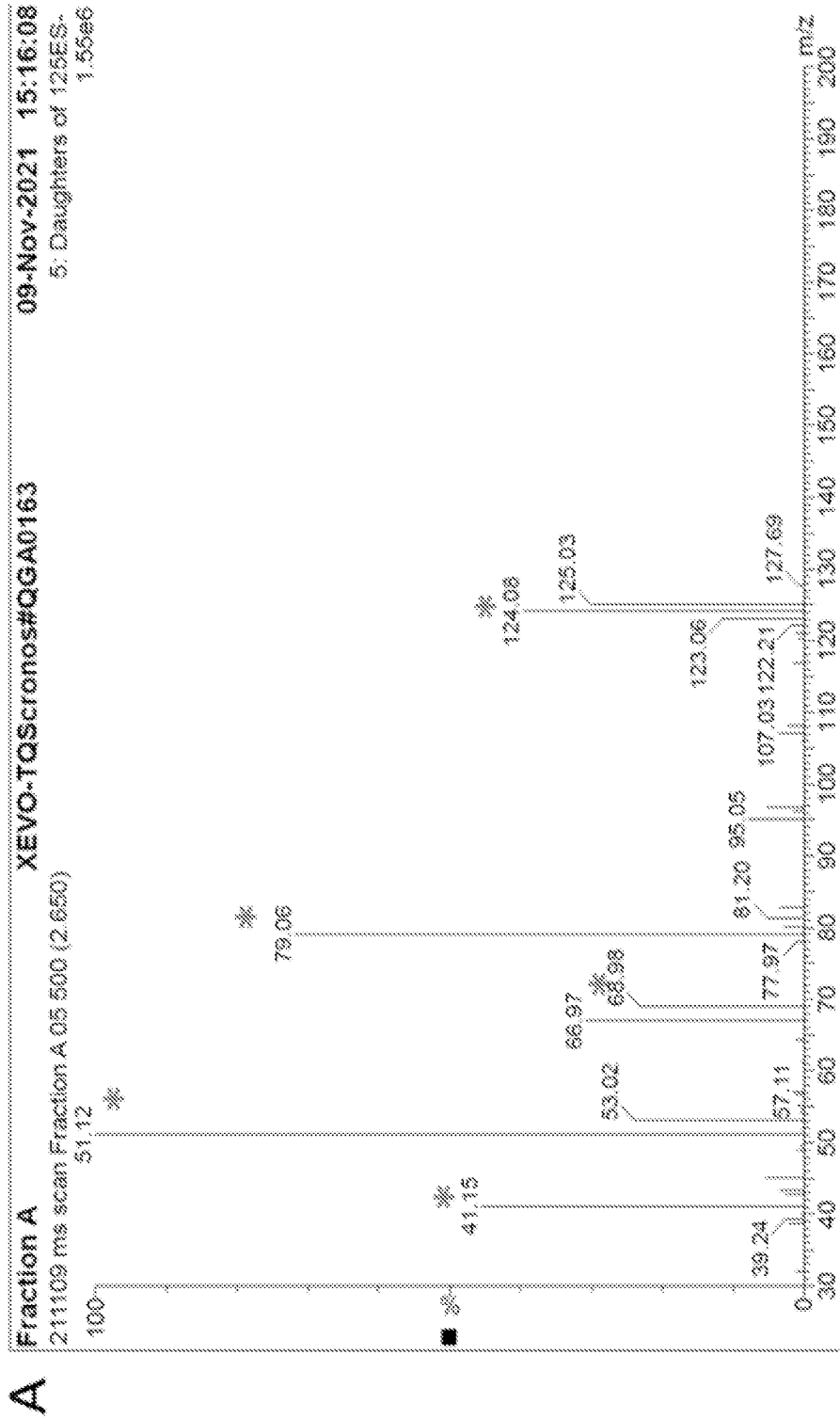


FIG. 46

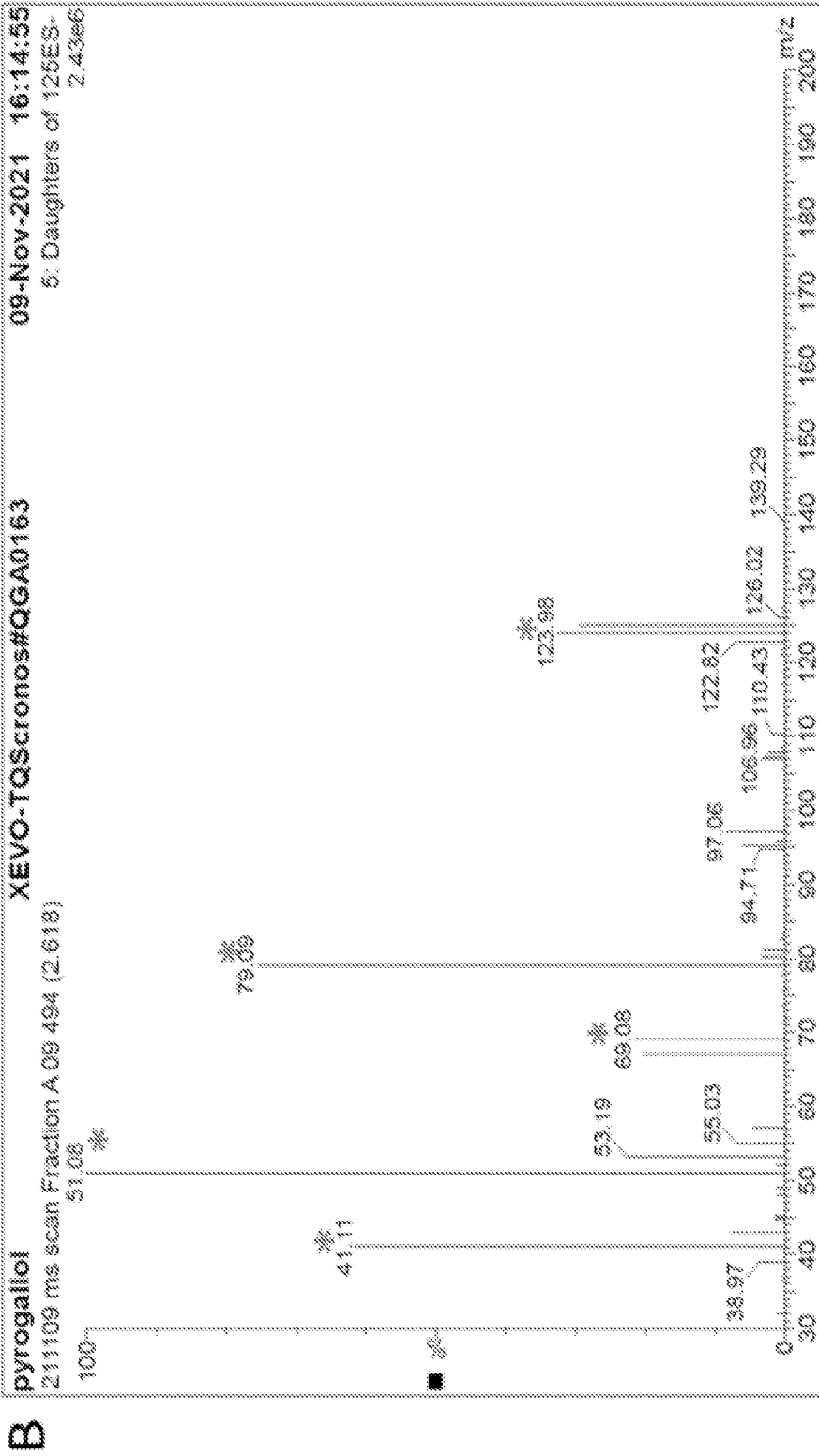


FIG. 47

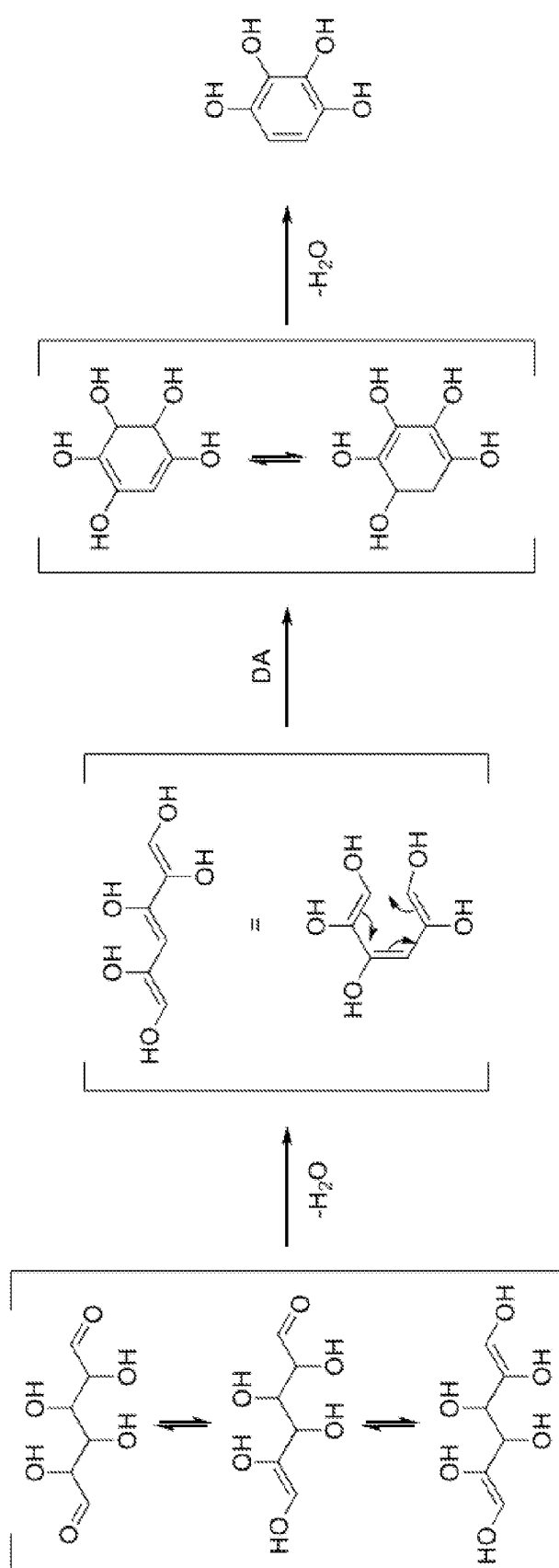


FIG. 48

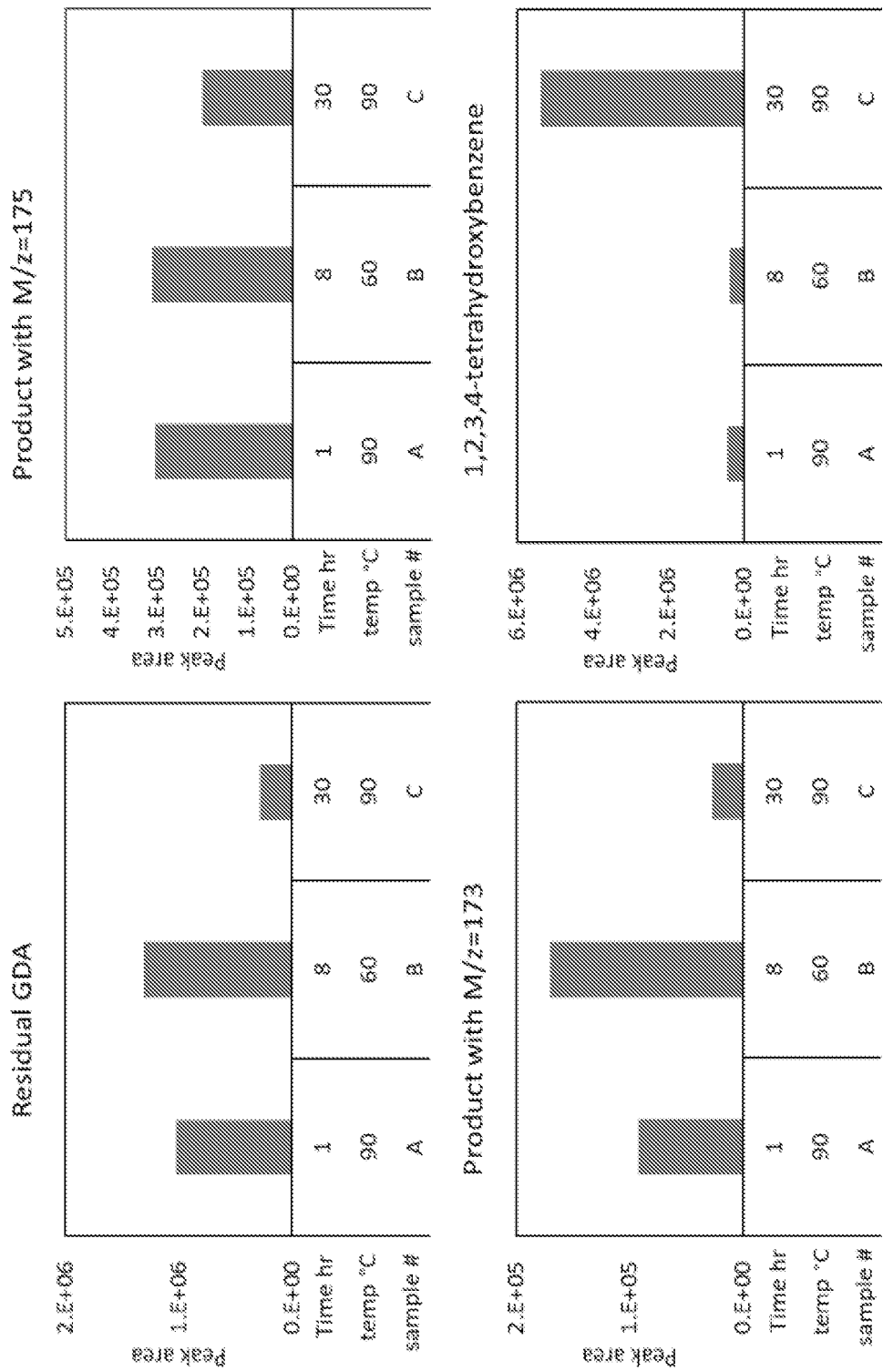


FIG. 49